ATTACHMENTS

ORDINARY COUNCIL

Wednesday 17 March 2021

PORT MACQUARIE HASTINGS COUNCIL

Ordinary Council Meeting

Wednesday, 17 March 2021

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13.06 PP2011 - 9.3: REVISED PLANNING PROPOSAL REQUEST - SOUTH BLACKWOOD STREET, PORT MACQUARIE

APPLICANT/OWNER: VILRO PTY LTD

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1 Leadership and Governance

What we are trying to achieve

A community that works together in decision making that is defined as ethically, socially and environmentally responsible.

What the result will be

We will have:

- A community that has the opportunity to be involved in decision making
- Open, easy, meaningful, regular and diverse communication between the community and decision makers
- Partnerships and collaborative projects, that meet the community's expectations, needs and challenges
- Knowledgeable, skilled and connected community leaders
- Strong corporate management that is transparent

How we will get there

1.1 Inform and engage with the community about what Council does using varied communication channels
1.2 Maintain strong partnerships between all stakeholders - local, state and federal — so that they are affective advocates for the community
1.3 Demonstrate leadership
1.4 Use innovative, efficient and sustainable practices
1.5 Ensure strong corporate and financial management that is transparent and accountable

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The Australian Business Excellence Framework

Dr Clare Allen

10 March 2021

PORT MACQUARIE HASTINGS COUNCIL

The Seven Categories of the ABEF

Figure 1



The Seven Categories of the ABEF

CATEGORY 1:	Leadership
CATEGORY 2:	Strategy & Planning
CATEGORY 3:	Information and Knowledge
CATEGORY 4:	People
CATEGORY 5:	Customers and Other Stakeholders
CATEGORY 6:	Process management, Improvement and innovation
CATEGORY 7:	Results and Sustainable Performance

Category 1: Leadership

Leadership	Leading the Organisational Culture	Society, Community and Environmental Responsibility
• Clarity of purpose and alignment of direction • Implementing good governance • Promoting a leadership system that generates desired competencies • Developing an effective management system	• Relating organisational values to practice • Creating the right culture • Establishing behaviour that demonstrates the values • Recognising the role of senior leadership in modelling desired behaviour • Encouraging creativity and innovation • Providing for organisational adaptation	• Sustaining the environment • Demonstrating corporate social responsibility • Demonstrating legal and ethical behaviour • Promoting equal opportunity

Category 2: Strategy and Planning

Strategic Direction	The Planning Process
• Activating purpose and direction • Defining strategic position • Utilising robust processes for the development of strategy • Creating and Utilising strategic relationships • Anticipating change and contingency planning	• Developing and deploying objectives and related measures • Strategic and business plan development and implementation • Ensuring business plan alignment and integration • Conducting capability gap analysis

Category 3: Information and Knowledge

Generating, Collecting and Analysing the right data to inform decision - making	Creating value through applying knowledge
• Planning data collection and linking it to strategy • Understanding variation • Sharing the data • Ensuring data integrity • Use of technology	• Defining knowledge requirements • Sourcing, creating and enhancing knowledge • Encouraging the application of knowledge

Category 4: People

A great place to work	Building organisational capability through people
• Building trust and respect • Communicating well • Health safety and well-being	• Aligning organisational needs and peoples expectations • Effective leadership and performance management of people • Evaluating and developing individuals • Attracting, recruiting, retaining and redeploying people

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Category 5: Customers and other Stakeholders

Gaining and using knowledge of customers and other stakeholders	Effective management of customer and other stakeholder relationships	Customers and other stakeholders perception of value
• Effective segmentation • Defining current and future values • Using the information for design	• Developing customer and other stakeholder relationships • Ensuring a positive experience • Facilitating and acting on stakeholder feedback	• Measuring value through focused feedback • Measuring the total experience • Leveraging the feedback

Category 6: Process management, improvement and innovation

Identification and management of processes	Process improvement and innovation
• Translating stakeholder requirements and internal capabilities into process design • Managing end-to-end processes • Managing process performance through measurement	• Defining and deploying an appropriate process improvement methodology • Managing innovation processes • Involving staff in the improvement process • Learning from others

Category 7:
Results and Sustainable Performance

Measuring and communicating organisational results	Achieving Sustainable Performance
• Taking a holistic approach • Measuring progress	• Financial and Asset capability • Using Risk Management • Assessing relevance to stakeholders • Organisational capability

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The Nine Principles of Business Excellence

PRINCIPLE 1:	Clear direction and mutually agreed plans enable organisational alignment and a focus on the achievement of goals
PRINCIPLE 2:	Understanding what customers and other stakeholders value, now and in the future, enables organisational direction, strategy and action.
PRINCIPLE 3:	All people in a system. Outcomes are improved when people work on the system and its associated processes.
PRINCIPLE 4:	Engaging people's enthusiasm, resourcefulness and participation improves organisational performance.
PRINCIPLE 5:	Innovation and learning influence the agility and responsiveness of the organisation.
PRINCIPLE 6:	Effective use of facts, data and knowledge leads to improved decisions.
PRINCIPLE 7:	Variation impacts predictability, profitability and performance.
PRINCIPLE 8:	Sustainable performance is determined by an organisations ability to deliver value for all stakeholders in an ethically, socially and environmentally responsible manner.
PRINCIPLE 9:	Leaders determine the culture and value system of the organisation through their decisions and behaviour.

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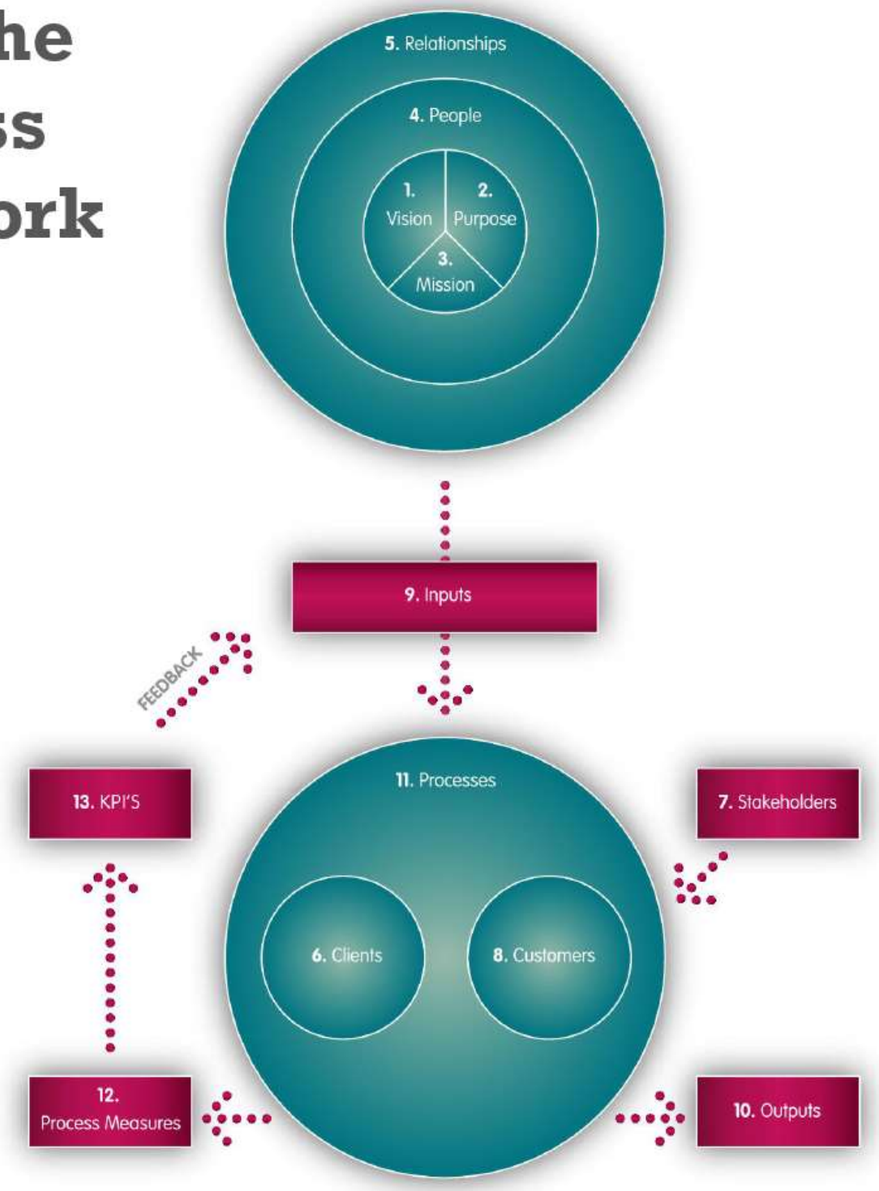
The ADRI Learning Cycle

Approach:	Identifies your organisations intent for an item; the thinking and planning and the strategies, processes and infrastructure designed to achieve the intent and to track progress.
Deployment:	Integrated those planned implementation activities supporting the organisations improvement strategy derived in the Approach.
Results:	The performance indicators (and process by which they are monitored and evaluated) that measure the effectiveness of the Approach and Deployment.
Improvement:	The process by which Approach and Deployment are reviewed and adapted to achieve improved results.

A systems view of the Australian Business Excellence Framework



Sources/ References

1. SAI Global, *"The Australian Business Excellence Framework",* 17 November (2011). Accessed December 2012.

Figure 1: *The Seven Categories of the ABEF*

Available in the world wide web at
http://www.google.com.au/search?q=seven+categories+of+ABEF&hl=en&tbo=d&source=lnms&tbm=isch&sa=X&ei=caLKUPraHafLmgW7goHQBw&ved=0CAcQ_AUoAA&biw=1680&bih=969 courtesy of sai.global.com

PORT MACQUARIE
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DRAFT One Year Operational Plan

2021-2022



PORT MACQUARIE
HASTINGS COUNCIL

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Message from our Chief Executive Officer



Dr Clare Allen
Chief Executive Officer

The CEO's message will be inserted following community feedback on the draft Operational Plan which will be on public exhibition from 18 March 2021 to 16 April 2021.

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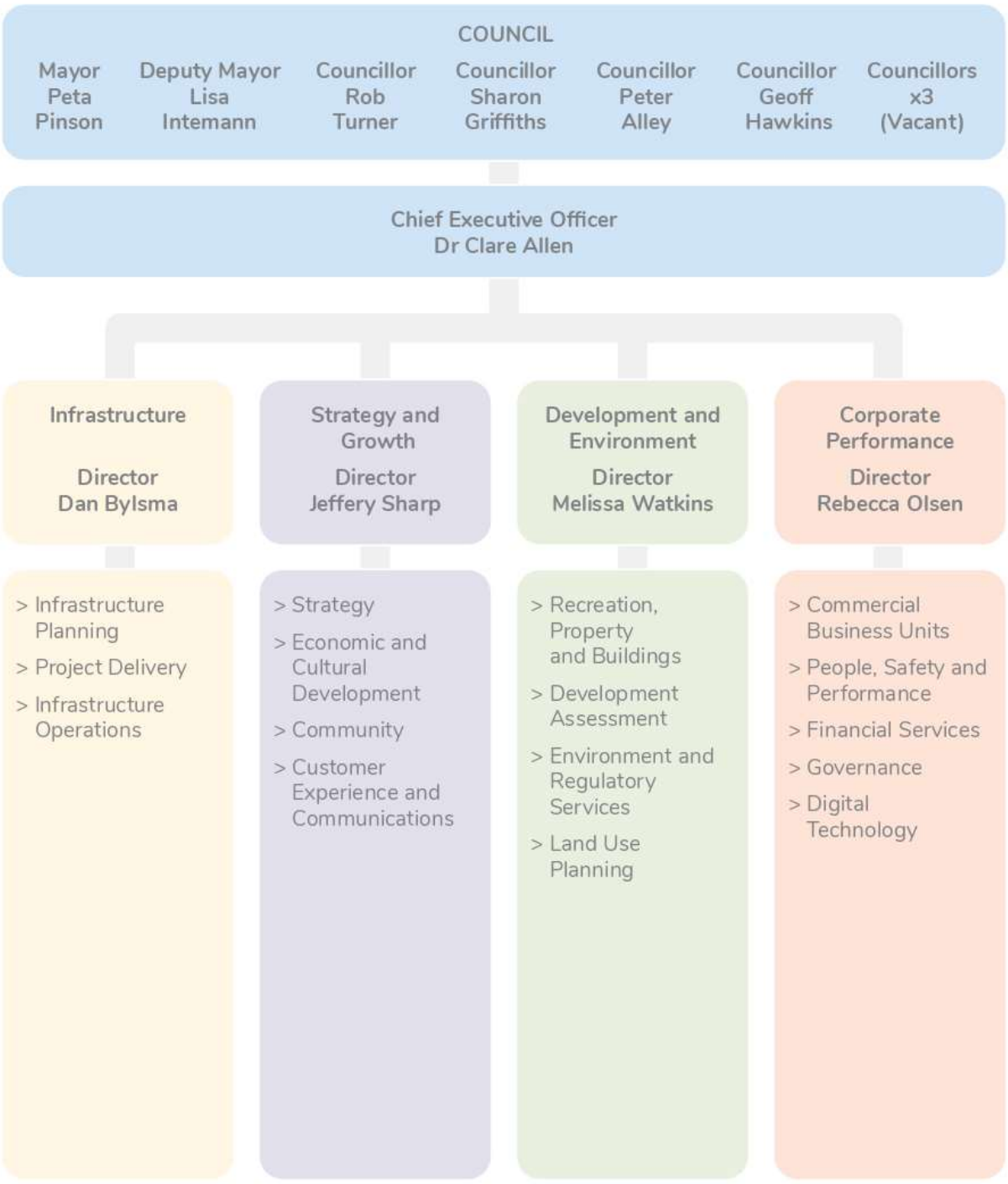
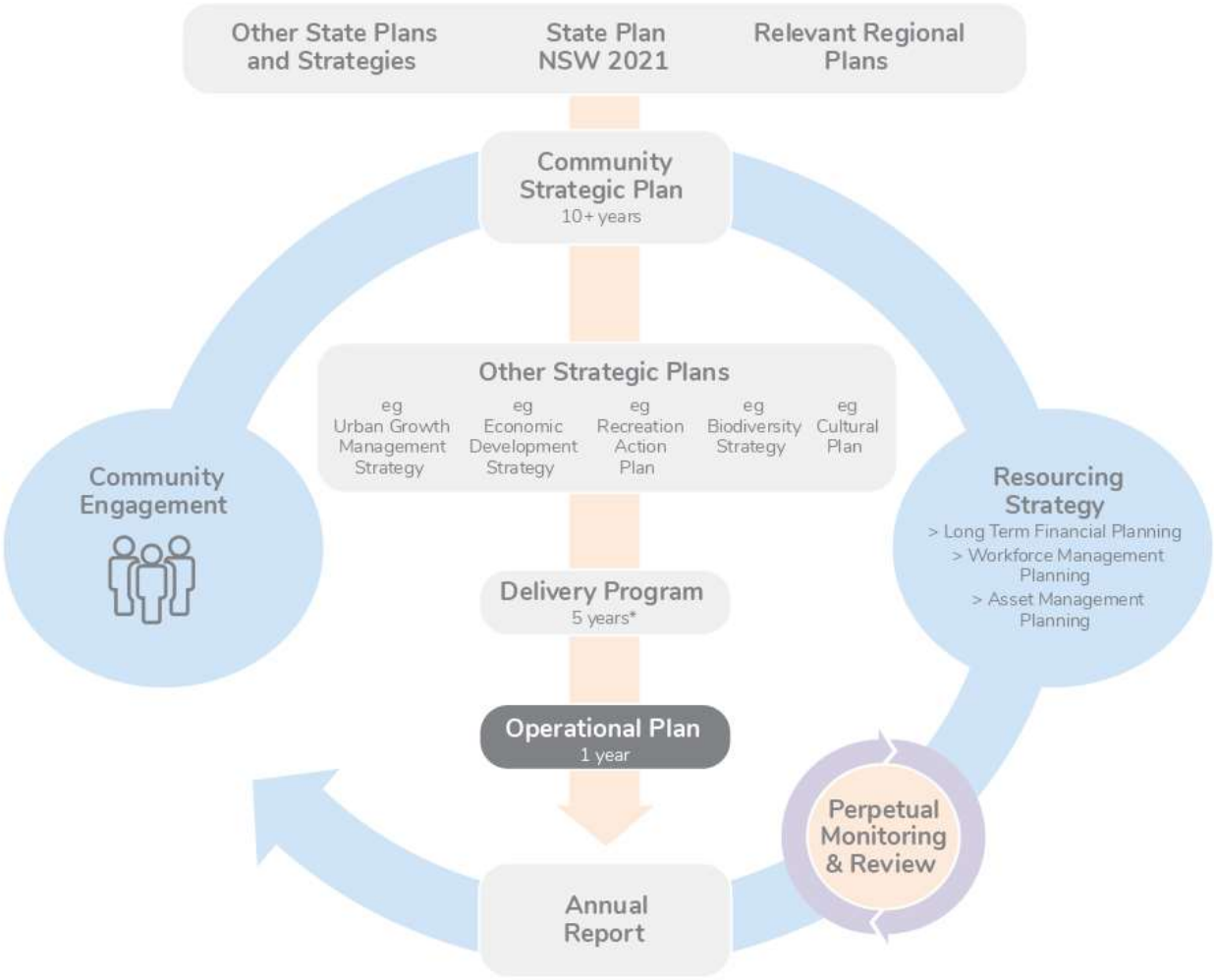
Organisational Structure



What is Integrated Planning and Reporting (IPR)?



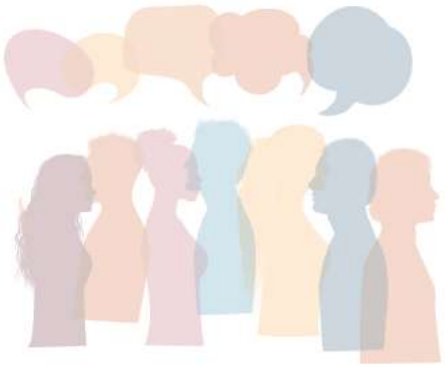
The Integrated Planning and Reporting (IPR) framework contains the elements depicted in the graphic above.

Key to the success of the IPR framework, is ongoing monitoring and review and ensuring that the community is regularly invited to comment and provide feedback through wide ranging engagement opportunities.

**Our Delivery Program has been extended by one year from 2017-2021 to 2022 in accordance with the statutory changes made by the NSW Government in May 2020 in response to the COVID 19 pandemic.*

Integrated Planning and Reporting Framework





What has our community told us?

In almost every week of every year we are out and about talking and listening to our community. We do this in both structured and planned ways often linked to specific projects and we also invite ongoing feedback via our online platforms such as HaveYourSayPMHC, Engage PMH etc.

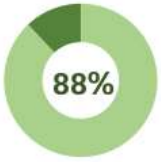
The community wide survey conducted last year by Micromex returned the following results:

Satisfaction with Council Performance:



45/48

services/facilities had a satisfaction rating of 70% or higher



Of residents rated Council current level of communication as 'somewhat satisfied' to 'very satisfied.'

Top Drivers of Overall Satisfaction:

- The level of communication Council currently has with the community
- Strategic planning of the LGA
- Providing strong leadership
- Opportunity to engage with Council

Most Valued Aspects of Port Macquarie - Hastings:

- Natural environment
- Central location
- Community feel
- Lifestyle the area provides

Comparison to the Micromex LGA Benchmark – Largest Importance Gaps



Community Research, Micromex Survey April 2020



Bain Park community engagement workshop, Wauchope

INVOLVING THE COMMUNITY IN WHAT WE DO

Throughout the year, we actively seek input from the community to raise issues of importance and provide feedback on planned projects, activities, strategies and plans.

The engagement program undertaken to inform this plan over the past twelve months has been undertaken predominately online. This has delivered unanticipated benefit as people could participate from the comfort of their homes to meet with us and other community members to help us to plan. Over the past year we have spoken with and listened to over 16,000 community members and extended our reach via our range of social media platforms and posts.

Participation in online forums during 2020 exceeded expectations as our community became more familiar with utilising online engagement platforms.

Community Plans are now completed and endorsed by Council for the Bonny Hills, Comboyne, Telegraph Point, Rollands Plains, Hastings Hinterland, Lake Cathie, Camden Haven, Kew Kendall, Beechwood Pembrooke and Pappinbarra communities. We are continuing to work with the North Shore and Wauchope communities to develop local plans. In 2021 we will commence development of a local community plan for Port Macquarie.

Engagement with these communities has been implemented via a variety of methods to ensure that we reach as many members of the community as possible. This has included, for example, a postcard campaign, community think tanks, family fun days, 'pop-up stalls' and the establishment of a Community Council Action Team (CCAT) for each community to help determine and drive the plans. Participation in online forums during 2020 exceeded expectations as our community became more familiar with utilising online engagement platforms.





ONGOING ENGAGEMENT

Following on from the community planning for all of our towns and villages, in early 2020 Council embarked on a strategic longitudinal piece of engagement to develop our next Community Strategic Plan and the community it represents – Think2050. Think2050 will be the overarching strategic plan that sits at the top of our framework to provide long term direction for us to align delivery of future Delivery and Operational Plans. The plan reflects the aspirations and priorities of our community into the future. Think2050 will integrate with our other significant plans and policies to act as a guide for other stakeholders (organisations, government agencies, business and individuals) in planning and delivering services for our area. The plan also responds to State, metropolitan and regional plans and priorities relevant to our region.

The program of engagement on the Community Strategic Plan commenced in January 2020 with the Think 2050 campaign and includes the introduction of Think 2050 ambassadors from across our community. We have staged over nine community forums, surveys, held a "Future Think" live Facebook forum, staged a Big Ideas Forum, and held two digital round tables, and two youth summits which engaged local high school and primary school students. A recent Minecraft competition to design our place of the future captured the interest of many young people in the region. To date we have had over a thousand community members involved in the process and reached over 10,000 with our online approach. The engagement with our community and with key stakeholders will continue in 2021-22 to ensure that our new strategic plan captures the desires of our community and aligns with relevant government planning documents to ensure that our vision and actions for the next 30 years drives our future place.

Our Services for the Community

Each of Council's services has been represented by its primary alignment to a community theme.

Community Theme 1 – Leadership & Governance

- Business Improvement
- Communications
- Digital Technology
- Emergency Management
- Financial Management
- Fleet & Depot Management
- Governance
- HR & WHS Management
- Integrated Planning and Reporting
- Procurement and Stores

Community Theme 2 – Your Community Life

- Community
- Cultural Development
- Library
- Sports and Recreation

Community Theme 3 – Your Business & Industry

- Airport
- Cemeteries
- Economic Development
- Environmental Testing
- Glasshouse
- Property & Leasing
- Property Investment Portfolio
- Strategic Land Use Planning

Community Theme 4 – Your Natural & Built Environment

- Asset Management
- Building Maintenance
- Compliance
- Development Assessment
- Infrastructure Delivery
- Natural Resource Management
- Roads, Bridges and Transport
- Sewerage
- Stormwater & Drainage
- Waste Management
- Water Supply



How to read this document

The Delivery Program and annual Operational Plan are structured around the four themes that are the foundations of the Community Strategic Plan which are:

- **Theme 1 – Leadership and Governance**
- **Theme 2 – Your Community Life**
- **Theme 3 – Your Business and Industry**
- **Theme 4 – Your Natural and Built Environment**

Each theme relates to:

> a strategy in the Community Strategic Plan,

> an objective in the Delivery Program and

> an action/activity/project in the Operational Plan.

The Delivery Program reflects the period 2017-2022. The Operational Plan attached to this document is for the period 2021-2022.

Activities from the annual Operational Plan are matched to the objectives of the Delivery Program. Every action, activity, project and program is referenced by a number that links back to the relevant theme.

Because we are in the last year of the five-year Delivery Program, missing numbers indicate that actions have been completed.



Playground upgrade, Rocks Ferry Reserve

Funding the Operational Plan

BUDGET OVERVIEW

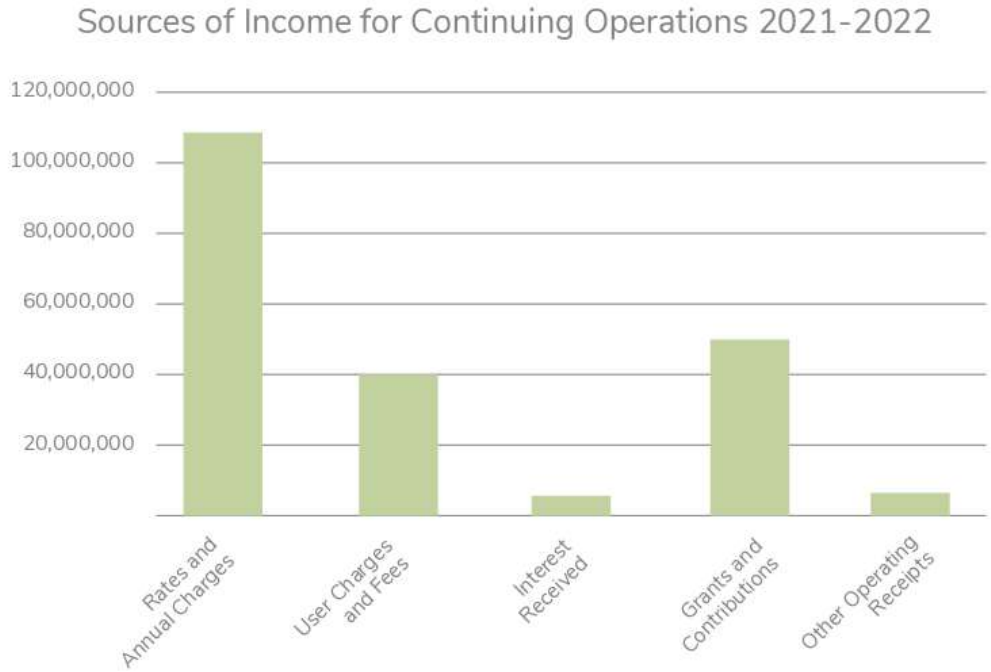
Total expenditure in 2021-2022 will be $194.1m. This includes:

> $116.37m on the ongoing operational costs (excluding depreciation and loss on disposal of assets)
> $58.64m on capital works projects
> $12.59m on the cost of servicing debts (including loan repayments and interest)
> $6.50m on developer provided assets

WHERE DOES THE MONEY COME FROM?

Our projected income for 2021-2022 is expected to be $208.9m, which will come from:

> rates and annual charges ($108.4m or about 52% of the income)
> user charges and fees ($40.m or about 19% of the income) for services such as water, waste management, building and planning, animal registration, airport and library
> Interest income ($5.5m or about 2% of the income)
> grants and contributions ($49.5m or about 24% of the income) made up of state and federal government grants and developer contributions
> other revenue ($5.5m or about 3% of the income) such as waste management income, fines and rental of council facilities



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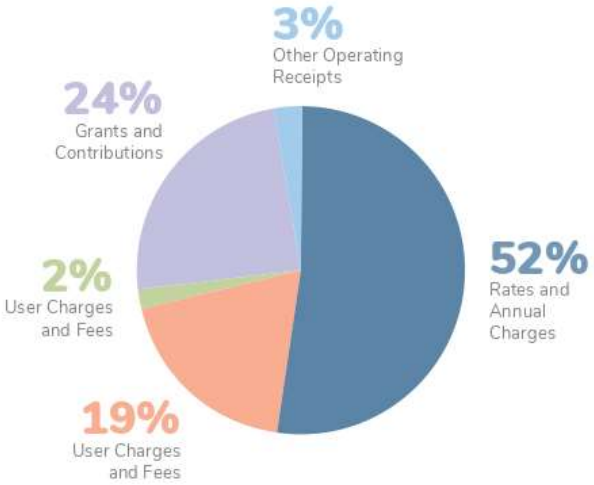
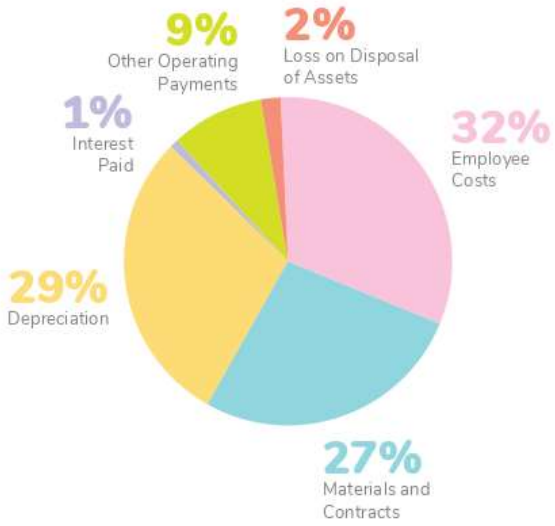
Income from Continuing Operations



Expenses from Continuing Operations





Bold Street, Laurieton



Airport Mural. Title: Guudji Yiigu Birrbayga Barrayga (Welcome to Birpai Country)
Artist: Angela Marr-Grogan

PORT MACQUARIE
HASTINGS COUNCIL

Budget Snapshot 2021-2022

This overview shows what Council will spend in 2021-2022 to deliver priorities the community has identified. It includes operating costs and capital works investment. In a number of areas such as the airport, expenditure is offset by income generation.

ROADS & TRANSPORT
$35.0M

Maintenance and upgrade of sealed and unsealed roads, rural roads and bridges, roadside vegetation and drainage.

SEWERAGE SERVICES
$17.2M

Maintenance and design and construction of system improvements including the small village sewerage scheme.

WATER SUPPLY
$18.4M

Catchment and management of captured resources, reclaimed water, system construction and maintenance.

WASTE MANAGEMENT
$23.6M

Operation of the domestic waste collection service and transfer stations, construction of new facilities, delivery of education programs to reduce waste.

SPORTS & RECREATION
$15.7M

Maintenance and upgrades of playgrounds, maintenance of sports fields, maintenance and upgrades of open recreation space.

GLASSHOUSE
$3.7M*

Facility management and maintenance, cultural programs, community hire subsidy and back of house operations.

AIRPORT
$2.3M*

Operations and facility maintenance of Port Macquarie Airport.

AQUATIC RECREATION
$1.8M

Four swimming pools and lifeguard services across six sites.

NATURAL RESOURCES
$4.8M

Management of weeds and noxious plants, control of feral animals, bush and environmental restoration.

LIBRARIES
$2.6M

Operations and resources for three library locations, mobile lending services and digital collection.

COMMUNITY INCLUSION
$0.9M

Community advocacy, sponsorship of events and new infrastructure to create vibrant and connected places.

FERRIES
$1.2M

Operations and maintenance of two ferry services.

STORMWATER
$4.0M

Monitoring and maintenance of the stormwater network.

ECONOMIC DEVELOPMENT
$2.8M

Tourism marketing, visitor centre operations, industry development programs, major events support.

STREET LIGHTING
$1.2M

Payment to provider for service and maintenance.

CEMETERIES
$0.2M

Maintenance and operations of 11 outlying cemeteries.

*Denotes business unit of Council, expenditure is offset by income generation

Expenditure includes interest on loans but excludes loan principal, overheads, internal transactions, transfers to reserves and depreciation. Shading is colour-coded per above to represent the primary theme with which this activity is located within the Operational Plan.

PORT MACQUARIE
HASTINGS COUNCIL

2021-2022 Budget Statement

INCOME

Rates and Annual Charges – Local taxes levied by Local Government based on the value of property
User Charges and Fees – A charge or fee made in relation to a specified service provided by Council
Interest Received – Interest received from financial institutions on Council investments
Grants – Grants received from other levels of government to assist in the provision of Council services
Contributions – Contributions received from developers etc. towards the provision of Council services
Other Operating Receipts – Other income not included above including Glasshouse receipts and Library charges etc.

Transfer from Restricted Assets – Council puts funds into a restricted asset for future use. This transfer from the restricted asset is the spending of those funds
Transfer to Restricted Assets – This is the transfer of funds into the restricted asset for future use

Proceeds from Borrowings and Advances – This is the amount that Council intends to borrow from financial institutions

Repayment of Borrowings and Advances – This is the repayment of principal on Council loans

Operating Activities Movements	
Income from continuing operations	
Rates & Annual Charges	108,389,830
User Charges & Fees	40,033,187
Interest Received	5,454,711
Grants & Contributions	49,532,407
Other Operating Receipts	5,457,658
Expenses from continuing operations	
Employee Costs	(55,149,843)
Materials & Contracts	(45,306,583)
Depreciation	(50,236,200)
Interest Paid	(2,157,754)
Other Operating Payments	(15,353,740)
Loss on Disposal of Assets	(3,000,000)
Operating result from continuing operations	**37,663,673**
Restricted Asset Movements	
Restricted asset movements receipts	
Transfer from Restricted Assets	41,741,789
Restricted asset movements payments	
Transfer to Restricted Assets	(56,488,314)
Net Revenues Used/(Provided) in Restricted Assets	**(14,746,525)**
Property, plant and equipment movements	
Property, plant & equipment movements receipts	
Sale of Fixed Assets	-
Sale of Real Estate Development Assets	-
Property, plant & equipment movements payments	
Purchase of Assets	(58,638,885)
Developer Provided Assets	(6,500,000)
Net Revenues (Used in)/Provided by property plant & Equipment activity	**(65,138,885)**
Financing activities movements	
Financing activities receipts	
Proceeds from Borrowings & Advances	-
Financing activities payments	
Repayments of Borrowings & Advances	(11,014,463)
Net Revenues Used/(Provided) in Financing Activity	**(11,014,463)**
Net Result (Including Depreciation)	**(53,236,200)**
Add Back: Non Cash Items	53,236,200
Budget Surplus/(Shortfall)	-

EXPENSES

Employee Costs – All costs related to employees including wages and salaries, workers compensation, employee leave entitlements, superannuation, fringe benefits taxation, payroll taxation and travelling etc. but not including employee costs associated with asset construction
Materials and Contracts – Includes all materials and contracts used in delivering operational activities
Depreciation – This is the estimated amount by which Council's assets will deteriorate by in the 2020–2021 financial year
Interest Paid – The amount that is paid to financial institutions for interest on loans made to Council
Other Operating Payments – Includes all payments not included in the above categories including telephone costs, bank charges, electricity, insurance, street lighting and mayoral and councillor fees etc.

Purchase of Assets – This item includes the purchase of assets (such as heavy machinery) along with the construction by Council of assets (such as roads and footpaths)

Budget Surplus/(Deficit) – The balance of income vs expenditure. When this figure is nil, council has a balanced budget which means that its sources of income for the year equals its expenditure for the year

Funding the Capital Works Program

The Capital Works Program for 2021-2022 has been developed to meet future infrastructure needs and reflect the objectives of the Community Strategic Plan.

Investment in new/renewal works will total $58.6 million with individual projects listed in detail under each theme in the Operational Plan.

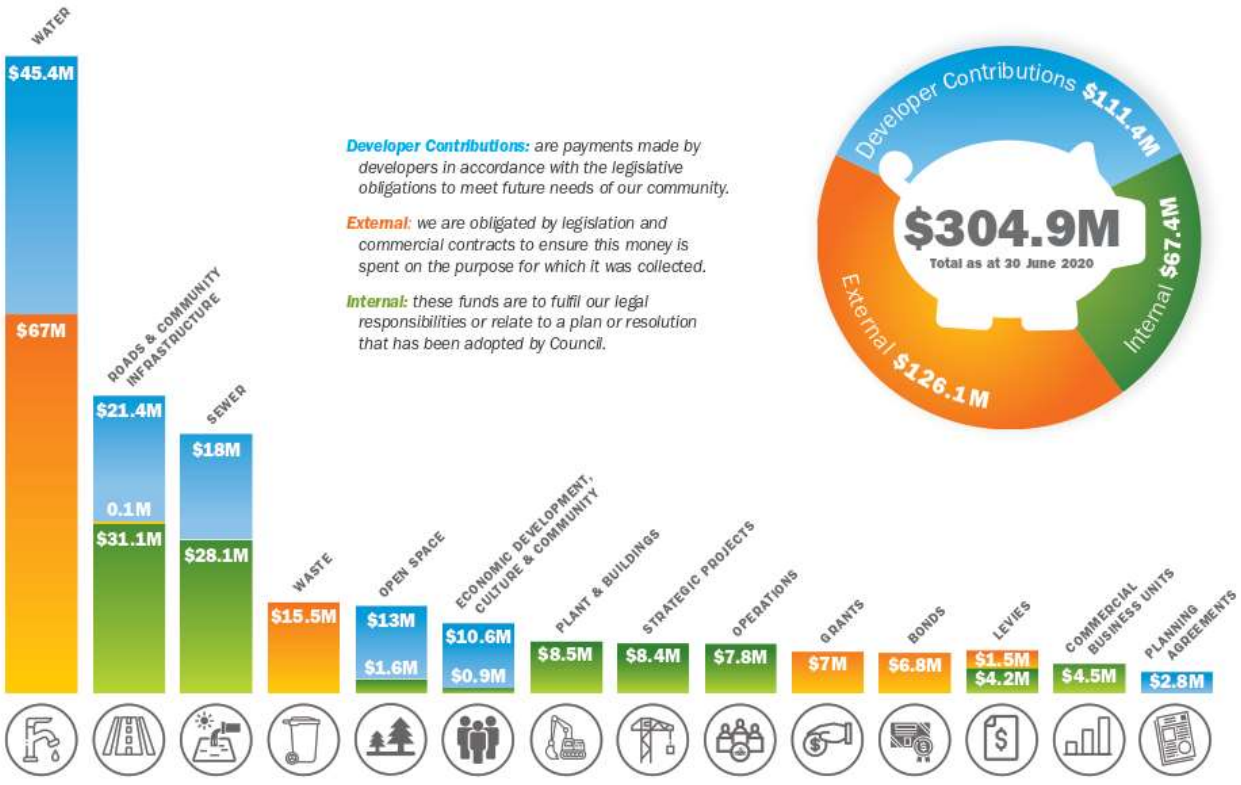
The graph below shows where the funding comes from to carry out these works.

Funds in reserve are made up of funds from previous year's rates that have been saved for future expenditure and loans.

The Port Macquarie Hastings area is a high growth regional centre so we must not only provide services for the existing community and maintain existing assets, but also ensure that we are planning ahead for future generations. As at June 2020, Council held $313 million in cash and reserves. Predominantly, these reserves are all allocated for specific purposes, with approximately 78% legally required to be used for the purpose for which they were collected (for example for water and sewer).

The remaining reserves are held for specific purposes as indicated in the graph below.

The reserves are audited annually and published in Council's financial statements.



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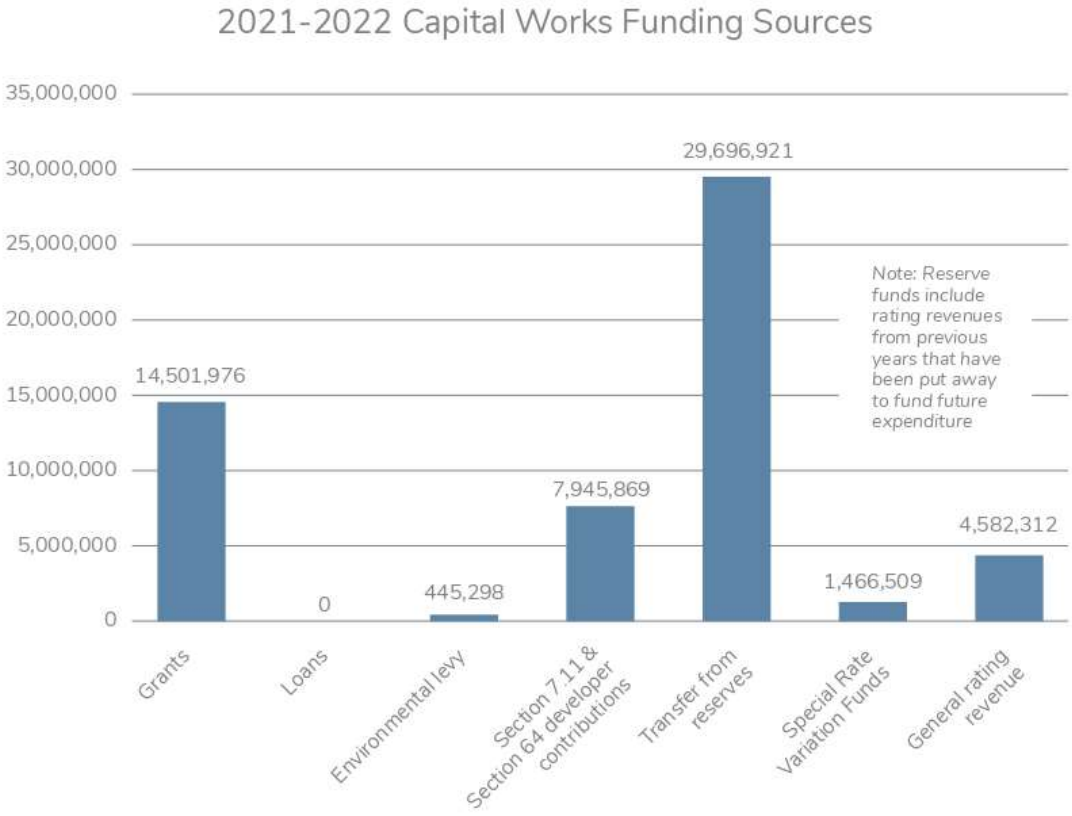



The Ruins Way upgrade, Port Macquarie

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HASTINGS COUNCIL

2021-2022 Capital Works Program

INFRASTRUCTURE RENEWALS SUMMARY

A proportion of Council's capital works program refers to Infrastructure assets. The table below shows the renewal amount related to these assets.

Section	Allocated Amount	Renewal Amount	Estimated Renewal %
Airport	160,000	60,000	37.50%
Facilities	727,300	367,300	50.50%
Parks and Recreation	10,358,978	868,000	8.38%
Drainage	923,186	670,000	72.57%
Waste Disposal	4,310,000	325,000	7.54%
Water Supply	8,534,297	2,735,000	32.05%
Sewerage Services	4,901,154	1,900,000	38.77%
Transport and Traffic	20,850,631	8,991,202	43.12%
Total Infrastructure Assets	**50,765,546**	**15,916,502**	**31.35%**

THE PROGRAM BY COMMUNITY THEME/SERVICE

The tables over the following pages show all the projects and the allocated budget that make up the works program for the 2021-2022 financial year. These projects are listed in the body of the Operational Plan. They are aligned with the relevant Delivery Program objective and show the performance measure and section of Council responsible for delivery. Additional works are shown in the Operational Plan that are continued from previous years. In summary, the sum of 2021-2022 Works Program per theme is $58,638,885 broken down as follows:

Theme		
1	Leadership and Governance	$5,630,000
2	Your Community Life	$12,457,493
3	Your Business and Industry	$165,000
4	Your Natural and Built Environment	$40,386.392
	Total	**$58,638,885**

2021- 2022 CAPITAL WORKS PROGRAM

To support Community Theme 1 - Leadership and Governance, Council will undertake the Capital Works projects listed below.				
Theme 1 - Leadership and Governance				
Council Service: Digital Technology				
Location	**Project Description**	**Multi-Year Project**	**Capital Works (CW) Reference Number**	**2021-22 Allocated Amount**
Various	Undertake delivery of Digital Technology projects (DT - Roadmap Program - multi-year projects) Information and Communications – Projects	✓	1.4.1.1 CW	$1,200,000
Various	Undertake delivery of Digital Technology projects (servers, storage, switches etc)	✓	1.4.1.3 CW	$820.000
			TOTAL	**$2,020,000**

Council Service: Fleet and Depot Management				
Location	**Project Description**	**Multi-Year Project**	**Capital Works (CW) Reference Number**	**2021-22 Allocated Amount**
Port Macquarie	Port Macquarie Depot - Rationalisation of Port Macquarie and Wauchope Council Depot operations		1.3.4.4 CW	$500,000
Various	Ensure plant purchases are in line with the plant replacement program (Plant Purchases and Disposals - multi-year project)	✓	1.5.2.2 CW	$3,000,000
			TOTAL	**$3,500,000**

Council Service: Property and Leasing				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Various	Land and Easement Acquisitions for Council Purposes Survey, Valuation and Land Transactions		1.5.3.8 CW	$30,000
			TOTAL	$30,000

Council Service: Strategy				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Various	Property Management System for management of Council owned assets		1.4.1.6 CW	$80,000
			TOTAL	$80,000

2021- 2022 CAPITAL WORKS PROGRAM

To support Community Theme 2 - Your Community Life, Council will undertake the Capital Works projects listed below.

Theme 2 - Your Community Life

Council Service: Library

Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Various - Port, Laurieton, Wauchope and Mobile Van	Provide a range of library programs and lending services across the local government area. That include the maintenance of the collection, management of the facility and delivery of services, programs and events. Furniture and Fixings.	✓	2.3.5.1 CW	$40,000
Various - Port, Laurieton, Wauchope and Mobile Van	Purchase of Library Books - (multi-year project) To provide book stock at NSW State average per capita as a minimum level	✓	2.3.5.2 CW	$277,000
Various - Port, Laurieton, Wauchope and Mobile Van	Deliver Special Library Projects to enhance library delivery program For the purchase of resources such as books, technology and DVDs		2.3.5.7 CW	$20,000
			TOTAL	**$337,000**

Council Service: Building Maintenance				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Port Macquarie	McInherney Park, Port Macquarie - Contribution to public amenities in new boat storage facility		2.3.2.12 CW	$120,000
Various	Undertake scheduled and reactive maintenance programs of all Council-owned buildings including office furniture replacement		2.3.3.2 CW	$47,700
Various	Undertake building rectification works in line with Council Asset Management	✓	2.3.3.3 CW	$319,600
Laurieton, Camden Haven & surrounds	Camden Haven Surf Club Building – contribution to design and approvals for new facility	✓	2.3.4.24 CW	$40,000
Wauchope, Rural & surrounds	Undertake building rectification for 1 Commerce St Building		2.3.4.36 CW	$100,000
Laurieton, Camden Haven & surrounds	Camden Haven Surf Club Building - connect to sewer		2.3.4.37 CW	$100,000
			TOTAL	$727,300

Council Service: Community				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Various	Town & Village Signage		2.3.4.28 CW	$50,000
			TOTAL	$50,000

Council Service: Sports and Recreation				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Laurieton, Camden Haven & surrounds	Deliver sporting facility renewal and upgrades program across the LGA Vince Imon Sporting Fields – Sports Facility Upgrade	✓	2.3.2.2 CW	$528,783
Various	Deliver sporting facility renewal and upgrades program across the LGA Sporting Infrastructure Renewals		2.3.2.2 CW	$475,000
Port Macquarie	Westport Park - continue boat ramp parking upgrade	✓	2.3.2.13 CW	$937,000
Various	Deliver park furniture renewals across the local government area, including donated seats program.		2.3.3.5 CW	$156,000
Wauchope, Rural & surrounds	Carry out playground equipment replacement program Moroko Park, Pembrooke		2.3.3.6 CW	$85,000
Wauchope, Rural & surrounds	Carry out playground equipment replacement program Charlie Watt Reserve, Telegraph Point		2.3.3.6 CW	$85,000

Council Service: Sports and Recreation				
Various	Deliver recreational walkway replacement program across the local government area Pathway Renewals		2.3.3.8 CW	$237,000
Wauchope, Rural & surrounds	Thrumster Sports Fields Detailed design and approvals	✓	2.3.3.12 CW	$406,441
Wauchope, Rural & surrounds	Hastings Regional Sporting Complex Construction (multi-year project)	✓	2.3.4.8 CW	$712,637
Port Macquarie	Port Macquarie Town Centre Master Plan (TCMP) Improvements - Port Macquarie Foreshore Walk Project Construction	✓	2.3.4.12 CW	$3,100,000
Laurieton, Camden Haven & surrounds	Rainbow Beach Sports Fields Continue construction of District Facilities	✓	2.3.4.18 CW	$3,336,428
Various	Parks and Gardens Future Designs - Preparation of engineering designs in advance of construction programmes for Parks and Gardens		2.3.4.22 CW	$32,200
Port Macquarie	Town Green Central & West		2.3.4.25 CW	$267,489
			TOTAL	**$10,358,978**

Council Service: Glasshouse				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Port Macquarie	Undertake Glasshouse back of house maintenance Plant and Equipment Purchases Allocated Amount 2021-22 $10,000 Technical Equipment Purchases Allocated Amount 2021-22 $56,000		2.5.1.2 CW	$66,000
			TOTAL	$66,000

Council Service: Sports & Recreation				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Port Macquarie	Port Macquarie Pool - Continuation of Strategic Concept and Business Case development	✓	2.3.4.14 CW	$748,215
Port Macquarie	Aquatic facilities - renewal of assets at end of useful life		2.3.4.35 CW	$150,000
			TOTAL	$898,215

Council Service: Cemeteries				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Various	Carry out improvement and expansion works at Wauchope, Laurieton and other outlying cemeteries		2.3.3.17 CW	$20,000
			TOTAL	$20,000

2021- 2022 CAPITAL WORKS PROGRAM

To support Community Theme 3 - Your Business and Industry, Council will undertake the Capital Works projects listed below.

Theme 3 - Your Business and Industry

Council Service: Airport

Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Port Macquarie	Port Macquarie Airport Parallel Taxiway Stage 1 and General Aviation (GA) pavement renewal – finalise detailed design - (multi-year project)	✓	3.3.1.4 CW	$100,000
			TOTAL	**$100,000**

Council Service: Strategic Landuse Planning

Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Port Macquarie	Finalise development planning for the Port Macquarie Airport Business and Technology Park - (multi-year project)	✓	3.3.1.7 CW	$60,000
			TOTAL	**$60,000**

Council Service: Cultural Development

Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Port Macquarie	Christmas Tree Decoration Renewal		3.1.1.14 CW	$5,000
			TOTAL	**$5,000**

2021- 2022 CAPITAL WORKS PROGRAM

To support Community Theme 4 - Your Natural and Built Environment, Council will undertake the Capital Works projects listed below.

Theme 4 - Your Natural and Built Environment

Council Service: Waste Management

Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Various	Deliver efficient waste and recycling services at all Waste Transfer Stations - New transfer bins x~~4~~		4.1.7.9 CW	$100,000
Wauchope, Rural & surrounds	Cairncross Waste Management Facility (WMF) Expansion / Improvements - (multi-year project) Finalise construction of new landfill cell (1A, 1C, 1E) in accordance with Development Consent Undertake preliminary site establishment for new landfill cell Establish new landfill cell in accordance with Development Consent Stage 1 - Lunchroom Facilities and Amenities	✓	4.1.7.26 CW	$3,165,000
Various	Install solar energy PV systems at Port Macquarie (Kingfisher Road), Wauchope and Kew waste transfer stations		4.1.7.33 CW	$395,000
Port Macquarie	Kingfisher Waste Transfer Station Upgrade - Kingfisher Road Rehabilitation		4.1.7.34 CW	$650,000
			TOTAL	**$4,310,000**

Council Service: Natural Resource Management				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Laurieton, Camden Haven & surrounds	Commence construction of new stormwater system at Illaroo Road		4.2.1.11 CW	$867,124
			TOTAL	$867,124

Council Service: Stormwater and Drainage				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Laurieton, Camden Haven & surrounds	Continue design and construction for Black Swan Terrace - Stormwater detention facility (multi-year project)	✓	4.1.5.06 CW	$158,186
Various	Stormwater Remediation - 35 Hart Street		4.1.5.12 CW	$40,000
Laurieton, Camden Haven & surrounds	Undertaken Panorama Drive/Binbilla Drive stormwater remediation works		4.1.5.14 CW	$420,000
Various	Carry out the Stormwater Renewal Program		4.1.6.7 CW	$250,000
Laurieton, Camden Haven & surrounds	North Haven Flood mitigation Works - investigation and concept design of remedial works		4.1.6.22 CW	$55,000
			TOTAL	$923,186

Council Service: Water Supply				
Location	Project Description	Multi-Year Project	Capital Works (CW) Reference Number	2021-22 Allocated Amount
Port Macquarie	Construction of the Sancrox Reservoir to Area 13 Thrumster trunk main (DN750)		4.1.1.1 CW	$34,297

Council Service: Water Supply					
Various	Installation of new water supply services to residential and business premises - to cater for new development Expansion of existing water supply network	✓	4.1.1.4 CW		$400,000
Port Macquarie	Thrumster Recycled Water Interim Supply - Rising Main to Thrumster Reservoir/Booster Pumping Station and Interim Reservoir - undertake construction		4.1.1.16 CW		$3,100,000
Laurieton, Camden Haven & surrounds	Continue construction of the Southern Arm Water Trunk Main (DN750) - Pacific Hwy to Bonny Hills	✓	4.1.1.26 CW		$50,000
Wauchope, Rural & surrounds	Commencement of design for the Water treatment/Filtration Plant at Cowarra dam	✓	4.1.1.27 CW		$100,000
Laurieton, Camden Haven & surrounds	Preconstruction Works - Trunk Main from Bonny Hills to Kew (Area 15) Reservoir - All Stages		4.1.1.28 CW		$250,000
Various	Water SCADA System - Replacement		4.1.1.31 CW		$600,000
Port Macquarie	Preconstruction/construction of Widderson St Reservoir Roof Replacement		4.1.1.35 CW		$50,000
Various	Water Critical Infrastructure Site Security Upgrades		4.1.1.36 CW		$150,000
Various	Installation of baffles within reservoirs to ensure chlorination contact time for disinfection		4.1.1.42 CW		$80,000
Various	Bulk water system chlorination upgrade		4.1.1.47 CW		$200,000
Laurieton, Camden Haven & surrounds	Commence preconstruction for an elevated reservoir at Bonny Hills		4.1.1.48 CW		$50,000
Laurieton, Camden Haven & surrounds	Commence preconstruction works for the Kew (Area 15) Reservoir		4.1.1.49 C		$50,000
Wauchope, Rural & surrounds	Construction of Rock Ramp to secure water level at Koree Island Pumping Stations Intake Pool		4.1.1.50 CW		$150,000
Wauchope, Rural & surrounds	Microwave link Cowarra to Rosewood		4.1.1.52 CW		$60,000

Council Service: Water Supply				
Wauchope, Rural & surrounds	Pre Construction of Cowarra to Wauchope Backfeed PS	4.1.1.53 CW		$100,000
Wauchope, Rural & surrounds	Wauchope WTP Augmentation	4.1.1.55 CW		$800,000
Various	Conduct water asset replacement and renewal programs for live water mains, water meters, renewals and minor works, pumps and switchboards Water Mains Relocations Allocated Amount 2021-22 $400,000 Renewals - Live Water Mains Allocated Amount 2021-22 $600,000 Renewals - Water Meters Allocated Amount 2021-22 $360,000 Renewals and Minor Works Allocated Amount 2021-22 $600,000 Annual Switchboard Replacement Program Allocated Amount 2021-22 $75,000 Smart Metering System roll-out - Allocated Amount 2021-22 $150,000	4.1.2.1 CW		$2,185,000
Wauchope, Rural & surrounds	Installation of in-line monitoring instruments at Koree Island River intake	4.2.1.19 CW		$100,000
Various	Annual Energy Efficiency Initiatives Allocation - Variable speed drive pumps for water sites Allocated Amount 2020-21 $150,000	4.4.1.43 CW		$150,000
Various	Carry out programmed replacement of Water Treatment Plant (WTP) electrical and mechanical assets	4.1.2.2 CW		$100,000
			TOTAL	$8,759 ,297

Council Service: Sewerage				
Location	**Project Description**	**Multi-Year Project**	**Capital Works (CW) Reference Number**	**2021-22 Allocated Amount**
Laurieton, Camden Haven & surrounds	Bonny Hills Recycled Water System Upgrade		4.1.1.46 CW	$777,144
Port Macquarie	Continuation of Preconstruction of Thrumster Sewerage treatment Plant (Area 13) - Phase 1 -		4.1.3.18 CW	$50,000
Various	Annual Energy Efficiency Initiatives Allocation - Variable Speed Drive Pumps – Sewer Sites		4.1.3.23 CW	$150,000
Port Macquarie	Preconstruction works for upgrade of Lake Innes Sewerage Pump Station #71		4.1.3.26 CW	$212,010
Port Macquarie	Port Macquarie Waste Water Treatment Plant Odour control mitigation works		4.1.3.27 CW	$107,000
Laurieton, Camden Haven & surrounds	Camden Haven Waste Water Treatment Membrane Replacements		4.1.3.28 CW	$400,000
Port Macquarie	Port Macquarie Sewer Pump Station 21 Refurbishment		4.1.3.35 CW	$100,000
Port Macquarie	Centrifuge upgrade and Process Optimisation at PM WwTP		4.1.3.42 CW	$100,000
Laurieton, Camden Haven & surrounds	Installation of new Microwave Telemetry Links - Jolly Nose to BH WwTP		4.1.3.44 CW	$60,000
Laurieton, Camden Haven & surrounds	Installation of new Microwave Telemetry Links - Jolly Nose to CH WwTP		4.1.3.45 CW	$60,000
Wauchope, Rural and surrounds	Installation of new Microwave Telemetry Links - Rosewood/Bago To Wauchope WwTP		4.1.3.46 CW	$60,000
Laurieton, Camden Haven & surrounds	Kew Sewerage Treatment Plant (STP) Upgrade, Complete project planning and commence construction (Multi-Year project)	✓	4.1.3.48 CW	$500,000
Port Macquarie	Replacement of 2nd Effluent Pump at Port WwTP		4.1.3.50 CW	$150,000

Council Service: Sewerage				
Various	Programmed replacement of Sewer Pumps and Electrical switchboards at Sewage Pump Stations Sewer Pump Replacement Program Allocated Amount 2021-22 $150,000 Annual Switchboard Replacement Allocated Amount 2021-22 $150,000 Lid Replacement Program Allocated Amount 2021-22 $250,000		4.1.4.1 CW	$550,000
Various	Carry out programmed replacement of Sewer Treatment Plant (STP) electrical and mechanical assets Annual Electrical STP Asset Replacement Allocated Amount 2021-22 $100,000 Annual Mechanical STP Asset Replacement Allocated Amount 2021-22 $100,000		4.1.4.4 CW	$200,000
Various	Conduct sewer assets replacement and maintenance programs for Sewer Rehabilitation and Relining Works Annual Sewer Rehabilitation Allocated Amount 2021-22 $350,000 Annual Sewer Relining Works Allocated Amount 2021-22 $650,000		4.1.4.5 CW	$1,000,000
Laurieton, Camden Haven & surrounds	Installation of Dedicated Generators for backup power supply to Sewerage Pumping Stations CH SPS #9		4.1.4.7 CW	$80,000
Port Macquarie	Installation of Dedicated Generators for backup power supply to Sewerage Pumping Stations PM SPS#64		4.1.4.8 CW	$120,000
			TOTAL	$4,676,154

Council Service: Roads, Bridges and Transport				
Location	**Project Description**	**Multi-Year Project**	**Capital Works (CW) Reference Number**	**2021-22 Allocated Amount**
Port Macquarie	CSU-Googik Connection Consultancies		2.3.4.33 CW	90,000
Wauchope, Rural and surrounds	Kindee Bridge – structural repairs and bridge replacement Optioneering to ensure bridge remains serviceable (multi-year project)	✓	4.4.1.22 CW	$30,000
Laurieton, Camden Haven & surrounds	Kew Main Street Upgrade Construction		4.4.1.34 CW	$1,211,316
Various	Local Roads Proactive Renewal Program		4.4.1.37 CW	$365,000
Various	Installation of new bus shelters as per the Community Passenger Transport Infrastructure Grant Scheme (CPTIGS) Program		4.4.1.51 CW	$176,000
Laurieton, Camden Haven & surrounds	Beach to Beach - shared path project at Camden Haven – Detailed design, environmental approvals and commencement of construction		4.4.1.55 CW	$367,245
Wauchope, Rural and surrounds	Pembrooke Road, Stoney Creek Bridge Upgrade - Detailed Design	✓	4.4.1.63 CW	$350,000
Wauchope, Rural and surrounds	Kindee Bridge Upgrade - Detailed Design	✓	4.4.1.66 CW	$30,000
Port Macquarie	Boundary Street Upgrade - Detailed design and Environmental Approvals		4.4.1.80 CW	$429,000
Wauchope, Rural and surrounds	Bril-Bril Road Sealing - Investigations and concept design		4.4.1.81 CW	$385,390
Laurieton, Camden Haven & surrounds	School to Schools share pathway project - detailed design and planning approvals for highest priority sections		4.4.1.82 CW	$211,869
Port Macquarie	Gordon Street Upgrade - Road Resurfacing, Stormwater flood mitigation and water main renewal works (multi-year project)	✓	4.4.1.83 CW	$6,380,152

Council Service: Roads, Bridges and Transport				
Laurieton, Camden Haven & surrounds	Lorne Road Sealing - Investigations and concept design	✓	4.4.1.88 CW	$250,000
Wauchope, Rural and surrounds	Design and Construction of the Pappinbarra Bridge Replacement		4.4.1.96 CW	$2,000,000
Port Macquarie	The Hatch Rd - Reseal Sections - Investigation and design for sealing 3kms of Rd		4.4.1.98 CW	$50,000
Laurieton, Camden Haven & surrounds	O'Neills Bridge Replacement - Finalised Land Acquisition		4.4.1.99 CW	$81,977
Laurieton, Camden Haven & surrounds	Ocean Drive Shared Path Pacific Hwy to Glen Haven Drive		4.4.1.101 CW	$15,000
Port Macquarie	Commence construction of Horton Street pedestrian facilities (between William and Clearance Streets)		4.4.1.118 CW	$32,604
Port Macquarie	Commence Construction of the Lake Road / Jindalee Road / Fernhill Road Intersection upgrade (Multi Year)		4.4.1.119 CW	$250,000
Port Macquarie	Commence detailed design and approvals for Lake Road Duplication (Ocean Drive to Chestnut Road) (Multi-year)		4.4.1.120 CW	$200,000
Port Macquarie	Maria River Road		4.4.1.123 CW	$300,000
Wauchope, Rural & surrounds	Pembrooke Road, Beechwood Rd & Stoney Creek Rd		4.4.1.125 CW	$2,980,000
Various	Undertake road resurfacing and rehabilitation works throughout the local government area in accordance with the rolling priority program and Pavement Management System Continuation of High Traffic Road Resurfacing Allocated Amount 2021-22 $994,245 Continuation of Pavement Rejuvenation Treatments Allocated Amount 2021-22 $248,560 Road Resealing Works Allocated Amount 2021-22 $2,099,395		4.4.2.1 CW	$3,342,200

Council Service: Roads, Bridges and Transport				
Various	Timber Bridges - Renewals & Repairs		4.4.2.7 CW	$200,000
Wauchope, Rural and surrounds	Timber Bridges – Renewals & Repairs from 20/21 - for Logans Crossing Bridge		4.4.2.8 CW	$500,000
Various	Ocean Drive Preliminaries		4.4.2.9 CW	$250,000
Wauchope, Rural & surrounds	Kindee Bridge - Immediate Structural Repairs		4.4.2.10 CW	$372,878
			TOTAL	$20,850,631

PORT MACQUARIE
HASTINGS COUNCIL

Snapshot of Projects for 2021-2022

ACROSS THE REGION

Total expenditure in 2021-2022 will be $194.1m. This includes:

> Town & Village Signage - $50,000
> Review of Car Parking Strategy - $127,947
> Bridgeworks and Road Rehabilitation Program - Undertake regular bridge and geotechnical road pavement tests to inform and develop program - $50,000
> Installation of new bus shelters as per the Community Passenger Transport Infrastructure Grant Scheme (CPTIGS) Program - $176,000
> Undertake road resurfacing and rehabilitation works throughout the local government area in accordance with the rolling priority program and Pavement Management System - $3,342,200
> Unsealed Road Gravel Resheeting - $500,000
> Conduct sewer assets replacement and maintenance programs for Sewer Rehabilitation and Relining Works - $1,000,000
> Deliver sporting facility renewal and upgrades program across the LGA - $475,000
> Undertake regional master planning for recreational facilities - $78,000
> Deliver park furniture renewals across the local government area, including donated seats program - $156,000
> Deliver recreational walkway replacement program across the local government area - Pathway Renewals (various) - $237,000
> Parks and Gardens Future Designs - Preparation of engineering designs in advance of construction programs for Parks and Gardens - $32,200
> Conduct water asset replacement and renewal programs for live water mains, water meters, renewals and minor works, pumps and switchboards - $2,185,000
> Installation of new water supply services to residential and business property - to cater for new development - $400,000

Snapshot of Projects for 2021-2022

LAURIETON, CAMDEN HAVEN AND SURROUNDS

> Camden Haven Surf Life Saving Clubhouse - connect to sewer - $100,000
> Camden Haven Surf Club Building - Contribution to design and approvals for new facility - $40,000
> Kew Main Street Upgrade - $1,211,316
> Laurieton Town Centre Master Plan - $15,000
> Lorne Road Sealing - Commence detailed design and approvals - $250,000
> O'Neills Bridge Replacement - Finalised Land Acquisition - $81,977
> Beach to Beach - shared path project at Camden Haven – Detailed design, environmental approvals and commencement of construction - $367,245
> Ocean Drive Shared Path Pacific Hwy to Glen Haven Drive - $15,000
> School to School share path project - detailed design and planning approvals for highest priority sections - $211,000
> Bonny Hills Recycled Water System Upgrade - $777,144
> Camden Haven Waste Water Treatment Membrane Replacements - $400,000
> Installation of Dedicated Generators for backup power supply to Sewerage Pumping Stations CH SPS #9 - $80,000
> Installation of new Microwave Telemetry Links - Jolly Nose to BH WwTP - $60,000
> Installation of new Microwave Telemetry Links - Jolly Nose to CH WwTP - $60,000
> Kew Sewerage Treatment Plant (STP) Upgrade, Complete project planning and commence construction (Multi-Year project) - $500,000
> Deliver sporting facility renewal and upgrades program across the LGA - $528,783
> Rainbow Beach Sports Fields - Commence construction of District Facilities - $3,336,428
> Continue design and construction for Black Swan Terrace - Stormwater detention facility (multi-year project) - $158,186
> North Haven Flood mitigation Works - investigation and concept design of remedial works - $55,000
> Undertaken Panorama Drive/Binbilla Drive stormwater remediation works - $420,000
> Commence preconstruction for an elevated reservoir at Bonny Hills - $50,000
> Commence preconstruction works for the Kew (Area 15) Reservoir - $50,000
> Continue construction of the Southern Arm Water Trunk Main (D750) - Pacific Hwy Bonny Hills - $50,000
> Preconstruction Works - Trunk Main from Bonny Hills to Kew (Area 15) Reservoir - All Stages - $250,000

Snapshot of Projects for 2021-2022

PORT MACQUARIE

> Finalise development planning for the Port Macquarie Airport Business and Technology Park - (multi-year project) - $60,000
> Operate and maintain Port Macquarie Airport in accordance with regulatory, safety and security requirements - Maintenance and refurbishment of Council-owned Hangars - $30,000
> Port Macquarie Airport Parallel Taxiway Stage 1 and General Aviation (GA) - pavement renewal – finalise construction - (multi-year project) - $100,000
> Continue to monitor, plan and implement the Port Macquarie Airport Biodiversity Certification Strategy and related environmental approvals - $100,000
> Undertake Building Rectification Works for 1 Commerce Street Building - $100,000
> Boundary Street Upgrade - Detailed Design and Environmental Approvals - $429,000
> Commence Construction of the Lake Road / Jindalee Road / Fernhill Road Intersection upgrade (Multi Year) - $250,000
> Commence detailed design and approvals for Lake Road Duplication (Ocean Drive to Chestnut Road) (Multi-year) - $200,000
> CSU-Googik Connection Consultancies - $90,000
> Gordon Street Upgrade - Road Resurfacing, Stormwater flood mitigation and water main renewal works (multi-year project) - $6,380,152
> Maria River Road - $300,000
> Ocean Drive (South of Port Macquarie) Site Remediation - $30,000
> The Hatch Rd - Reseal Sections - Investigation and design for sealing 3kms of Rd - $50,000
> Transport Network Improvement Planning Project - Options Assessment and Strategic Business Case (Including Review of Orbital Road Options) - (Multi Year Project) - $119,074
> Commence construction of Horton Street pedestrian facilities (between William and Clearance Streets) - $32,604
> Centrifuge upgrade and Process Optimisation at PM WwTP - $100,000
> Continuation of Preconstruction of Thrumster Sewerage Treatment Plant (Area 13) - Phase 1 - $50,000
> Installation of Dedicated Generators for backup power supply to Sewerage Pumping Stations PM SPS#64 - $120,000
> Port Macquarie Sewer Pump Station 21 Refurbishment - $100,000
> Port Macquarie Waste Water Treatment Plant Odour control mitigation works - $107,000
> Design & Preconstruction works for upgrade of Sewerage Pump Station #71, 18 & 2 (PMSPS71) - $212,010
> Replacement of 2nd Effluent Pump at Port WwTP - $150,000
> Aquatic facilities - renewal of assets at end of useful life - $150,000
> Port Macquarie Pool - Continuation of Strategic Concept and Business Case development - $748,215
> Hastings Regional Sporting Complex - Completion of pre-construction (multi-year project) - $712,637
> Port Macquarie Town Centre Master Plan (TCMP) improvements - Port Macquarie Foreshore Walk Project Construction - $3,100,000

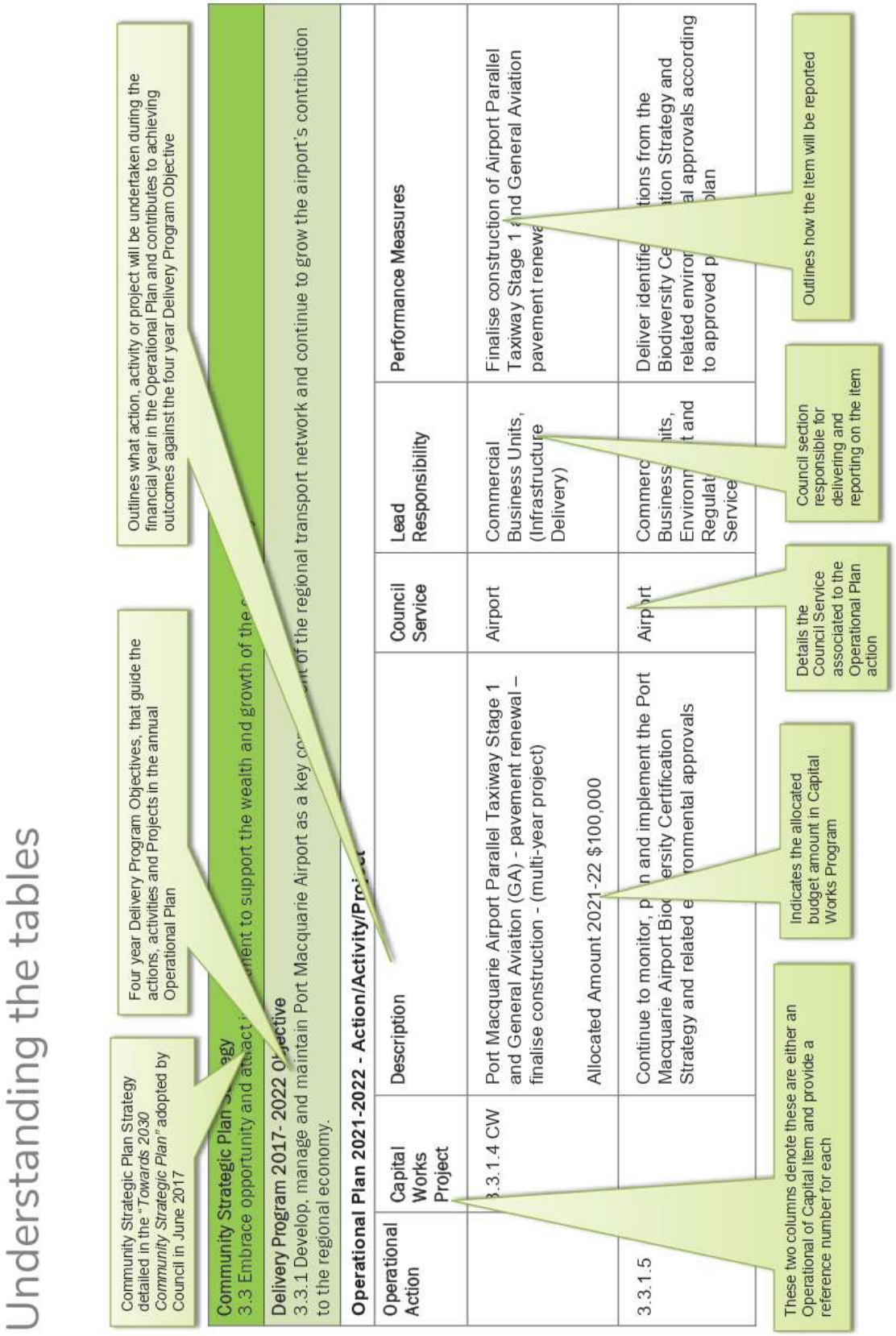
Snapshot of Projects for 2021-2022

> Thrumster Sports Fields - Detailed design and approvals - $406,441
> McInherney Park - Contribution to public amenities in new boat storage facility - $120,000
> Town Green Central & West/Playground - $267,489
> Westport Park - continue boat ramp parking upgrade - $937,000
> Stormwater Remediation - 35 Hart Street - $40,000
> Install solar energy PV systems at Port Macquarie (Kingfisher Road), Wauchope and Kew waste transfer stations - $395,000
> Kingfisher Waste Transfer Station Upgrade - Kingfisher Road Rehabilitation - $650,000
> Preconstruction/construction of Widderson St Reservoir Roof Replacement - $50,000
> Thrumster Recycled Water Interim Supply - Rising Main to Thrumster Reservoir - Booster Pumping Station and Interim Reservoir - undertake construction - $3,100,000
> Carry out reactive maintenance to Koala Food Trees and Koala Fencing on Link Rd (Ocean Dr) - $50,000

WAUCHOPE, RURAL AND SURROUNDS

> Bril Bril Road Sealing - Investigations and concept design - $385,390
> Design and Construction of the Pappinbarra Bridge Replacement - $2,000,000
> Kindee Bridge - structural repairs and bridge replacement Optioneering to ensure bridge remains serviceable (multi-year project) - $30,000
> Kindee Bridge - Immediate Structural Repairs - $372,878
> Kindee Bridge Upgrade - Detailed Design - $30,000
> Pembrooke Road - Stoney Creek Bridge Upgrade - Detailed Design - $350,000
> Pembrooke Road, Beechwood Rd & Stoney Creek Rd - $2,980,000
> Undertake a detailed traffic analysis of the Sancrox/Thrumster/Fernbank growth area to identify high priority works - $100,000
> Installation of new Microwave Telemetry Links - Rosewood/Bago To Wauchope WwTP - $60,000
> Carry out playground equipment replacement program: Charlie Watt Reserve, Telegraph Point - $85,000
> Carry out playground equipment replacement program: Moroko Park, Pembrooke - $85,000
> Cairncross Waste Management Facility (WMF) Expansion / Improvements - (multi-year project) - Finalise construction of new landfill cell (1A, 1C, 1E) in accordance with Development Consent - $3,165,000
> Commencement of design for the Water treatment/Filtration Plant at Cowarra dam - $100,000
> Construction of Rock Ramp to secure water level at Koree Island Pumping Stations Intake Pool - $150,000
> Construction planning for the Sancrox Reservoir to Area 13 (Thrumster) trunk main (DN750) - $34,297
> Installation of in-line monitoring instruments at Koree Island River intake - $100,000
> Wauchope WTP Augmentation - $800,000
> Microwave link Cowarra to Rosewood - $60,000
> Pre Construction of Cowarra to Wauchope Backfeed PS - $100,000

Understanding the tables



Community Theme 1



Leadership and Governance

COMMUNITY STRATEGIC PLAN

What we are trying to achieve

A collaborative community that works together and uses opportunities for community participation in decision-making that is defined as ethically, socially and environmentally responsible.

How we will get there

1.1 Inform and engage with the community about what Council does using varied communication channels

1.2 Maintain strong partnerships between all stakeholders – local, state and federal – so that they are affective advocates for the community

1.3 Demonstrate leadership

1.4 Use innovative, efficient and sustainable practices

1.5 Ensure strong corporate and financial management that is transparent and accountable

Who will assist us

> NSW Government

> Local businesses

> NSW Government (Land and Property Information)

> State Government

> Northern Joint Regional Planning Panel

> Department of Planning

> Other state government agencies

> Community interest groups

Community Strategic Plan Strategy
1.1 Inform and engage with the community about what Council does using varied communication channels.

Delivery Program 2017- 2022 Objective
1.1.1 Use a variety of tools to engage with the community in a manner that is transparent, effective, relevant and inclusive.

Operational Plan 2020-2021 - Action/Activity/Project

Operational Action	Capital Works Project	Description	Council Service	Lead Responsibility	Perfomance Measures
1.1.1.1		Engage with the community using a range of methods to facilitate community involvement in decision making	Community	Community	1. Capture the number of engagement activities undertaken and number of participants including online 2. Increased community participation on Council's Have your Say online portal 3. Improve overall engagement approach and levels of engagement
1.1.1.5		Implement the Education Framework to educate and inform the community about Council's services and priorities.	Community Education	Community	1. Education Framework for Council finalised and implementation commenced 2. Deliver regular and engaging education through a variety of channels.
1.1.1.6		Implement actions according to the 2021/22 communications plan.	Communications	Customer Experience and Communications	Implementation of communications plan actions completed.
1.1.1.7		Grow visitation and downloads from PMHStories	Communications	Customer Experience and Communications	Increase in visitation and access each month

1.1.5.6		Implement community research and engagement to support to deliver rebrand for PMHC	Communications	Customer Experience and Communications	Communities express brand value. New brand developed and implemented.
Delivery Program 2017- 2022 Objective 1.1.2 Support community involvement in decision making through education around Council matters and services					
1.1.2.1		Engage the community on developing the 2021 Community Strategic Plan to drive council projects and programs into the future	Community	Community	1.Engagement continues for the Community Strategic Plan-until June 2021 2.Community Strategic plan developed and adopted by June 2021
1.1.2.3		Undertake the Community Planning Program	Community	Community	1. Community plans developed by 1 September 2020 2. Facilitate Community Council Action teams 3. Implement Council actions identified in Community Plans and embed in future plans
1.1.2.4		Develop Local Strategic Planning Statement	Strategic Land Use Planning	Strategy	Complete Local Strategic Planning Statement for presentation to the NSW Department of Planning and Environment by 30 June 2022
Delivery Program 2017- 2022 Objective 1.1.3 Engage with the community on impacts and changes to services.					
1.1.3.2		Develop an annual Community Engagement program to enable community involvement in decision making in line with the Working Together Framework	Community	Community	The Community Engagement program is developed and implementation of actions commenced and completed to approved plan by 30 June 2021

Delivery Program 2017- 2022Objective 1.1.4 Provide easy to understand and accessible community reporting.					
1.1.4.1		Produce and submit the annual report in accordance with Local Government Act requirements	Integrated Planning and Reporting	People, Safety and Performance	1. Annual report adopted by Council and submitted to the Office of Local Government (OLG) by 30 November 2020 2. The community report card (Part A); statutory report (Part B); and financial statements (Part C) is published for community viewing
1.1.4.2		Provide progress reports on implementation of the Delivery Program in accordance with Local Government Act requirements	Integrated Planning and Reporting	People, Safety and Performance	Report Delivery Program progress to Council on a six monthly basis
1.1.4.3		Develop the one year Operational Plan in accordance with Local Government Act requirements	Integrated Planning and Reporting	People, Safety and Performance	Operational Plan adopted by 30 June 2022
	1.1.4.4 CW	Implement new Corporate Reporting Tool. (Budget with Digital Technology)	Integrated Planning and Reporting	People, Safety and Performance	Improved planning and reporting capability with self-service access to real-time reporting achieved.
1.1.4.5		Review the Resourcing Strategy in accordance with Local Government Act requirements	Integrated Planning and Reporting	People, Safety and Performance	Resourcing strategy review completed by 30 June 2022

Delivery Program 2017- 2022 Objective 1.1.5 Develop an effective and coordinated community focused Communications Strategy.					
1.1.5.3		Use targeted communication channels to ensure the community are well-informed, involved in Council decision making and understanding of Council priorities	Communications	Customer Experience and Communications	1. Increase community engagement with Council's digital channels 2. Deliver regular and engaging information and messaging utilising a range of communication channels
1.1.5.4		Ensure communication ~~and~~ strategies are informed by research and understanding of preferred community communication methods~~-~~ and other available insights	Communications	Customer Experience and Communications	Communications priorities and methods are informed by insights from the 2019 communications research and Customer Experience project
Delivery Program 2017- 2022 Objective 1.1.6 Continue to promote access by the community to Councillors.					
1.1.6.1		Manage Councillor development program	Governance and Executive Services	Governance	Manage Councillor development
1.1.6.2		Deliver the Take the Council to the Community program	Governance and Executive Services	Governance	Hold two off-site Council meetings during the year (March Wauchope, October Laurieton)

Community Strategic Plan Strategy **1.2 Maintain strong partnerships between all stakeholders — local, state and federal — so that they are affective advocates for the community**					
Delivery Program 2017- 2022 Objective 1.2.1 Promote Council participation and build linkages in local, state and federal initiatives, forums and opportunities to support Council's continued planning for the growth of the region.					
1.2.1.1		Convene meetings with local business chambers for the Mayor and Senior Staff	Governance and Executive Services	CEO's Office	Schedule meetings throughout the year
1.2.1.2		Convene meetings with State and Federal Members for the Mayor and Senior Staff	Governance and Executive Services	CEO's Office	Schedule meetings throughout the year
1.2.1.3		Work proactively to secure grant funding from other levels of government to support Council project and service delivery priorities	Economic and Cultural Development	Strategy and Growth	Identify and apply for grants in a timely and effective manner
Community Strategic Plan Strategy **1.3 Demonstrate leadership**					
Delivery Program 2017- 2022 Objective 1.3.1 Provide effective leadership and equity.					
1.3.1.1		Participate in the Mid North Coast Joint Organisation (MNCJO)	Governance and Executive Services	CEO's Office	Attendance at the Regional Joint Organisation meetings by the Mayor and General Manager
1.3.1.2		Participate in the Regional Cities NSW quarterly meetings	Governance and Executive Services	CEO's Office	Attendance at the meetings by the Mayor and General Manager

1.3.1.3		Ongoing community disaster preparedness and support	Governance and Executive Services	CEO's Office	Ensure activities are undertaken
Delivery Program 2017- 2022 Objective 1.3.2 Build trust and improve Council's reputation through transparency, good decision making and living Council's Values					
1.3.2.1		Manage the Legislative Compliance Register	Governance and Executive Services	Governance	Undertake annual review of the Legislative Compliance Register and report on it and consider improvements to the Legislative Compliance process.
1.3.2.2		Produce and submit the annual Code of Conduct complaints report in accordance with Office of Local Government requirements	Governance and Executive Services	Governance	Report prepared annually and presented to Council no later than 31 December
1.3.2.3		Produce and submit the annual Government Information Public Access (GIPA) Report in accordance with the GIPA Act requirements	Governance and Executive Services	Governance	Submit GIPA annual report to Information and Privacy Commission no later than 31 October
1.3.2.4		Coordinate lodgement of annual Disclosure of Interest Returns	Governance and Executive Services	Governance	Annually update Disclosure Register by 30 September
1.3.2.6		Report on Public Interest Disclosures (PID)	Governance and Executive Services	Governance	1. Report biannually in July and February on any Public Interest Disclosures 2. Submit PID annual report to NSW Ombudsman by 31 October
1.3.2.7		Submit annual performance reporting for the water and sewer business to NSW Office of Water for benchmarking comparisons	Water Supply	Infrastructure Planning	Collate and forward performance reporting data to NSW Office of Water annually

Delivery Program 2017- 2022 Objective 1.3.3 Ensure there is appropriate management of risk to mitigate impact for Council and the community.					
1.3.3.2		Manage the Risk Management Action Plan, as part of the state wide continuous improvement program	Governance and Executive Services	Governance	Review and implement the Risk Management Action Plan on a quarterly basis and report to Executive
1.3.3.5		Improve the Risk Management Framework	Governance and Executive Services	Governance	Improve the Risk Management Framework in line with project milestones
1.3.3.7		Manage the Delegation Framework	Governance and Executive Services	Governance	Manage and consider improvements to the Delegation Framework
1.3.3.8		Respond to formal information requests within required timeframes	Governance and Executive Services	Governance	Respond to formal GIPA requests within the required timeframes
1.3.3.9		Coordinate Fluoridisation Poll for the 2021 Local Government Election	Governance and Executive Services	Governance	Coordinate all requirements for the 2021 Local Government Election and Implement the Councillor Induction Program
1.3.3.10		Implement all requirements as specified in the Office of Local Government Risk Management and Internal Audit Framework	Governance & Executive Services	Governance	Implement all requirements as specified in the new Office of Local Government Risk Management and Internal Audit Framework
Delivery Program 2017- 2022 Objective 1.3.4 Manage our workforce to deliver community outcomes.					
1.3.4.1		Implement workplace strategies and processes to continue to improve Human Resources	People and Culture	People, Safety and Performance	Actions implemented by 30 June 2022 as per the Workforce Management Strategy.

1.3.4.2		Implement workplace strategies and processes to continue to improve Work, Health and Safety	Corporate Work Health and Safety	People, Safety and Performance	Actions implemented by 30 June-2022 as per the Work, Health Safety Strategy.
1.3.4.3		Implement workplace strategies and processes to continue to improve Learning and Development	People and Culture	People, Safety and Performance	Actions implemented by 30 June-2022 as per the Learning and Development Strategy.
	1.3.4.4 CW	Port Macquarie Depot - Rationalisation of Port Macquarie and Wauchope Council Depot operations Allocated Amount 2021-22 $500,000	Property Investment Portfolio	Strategy	Holistic review of depot holdings and plans by 30 June 2021
Delivery Program 2017- 2022 Objective 1.3.5 Build an engaged workforce.					
1.3.5.1		Implement Organisational Development initiatives and strategies to develop a highly engaged workforce who are solutions focused.	People and Culture	People, Safety and Performance	Actions implemented by 30 June 2022 as per the Organisational Development Strategy to grow Leadership capability across the organisation Further Measures being discussed - tbc
	1.3.5.3 CW	Implement Phase 2 of Human Resource Information System (HRIS) - Including Learning Management System (LMS). (Budget with Digital Technology)	People and Culture	People, Safety and Performance	Staff have digital access to self-service human resource functionality for LMS

Community Strategic Plan Strategy 1.4 Use innovative, efficient and sustainable practices					
Delivery Program 2017- 2022 Objective 1.4.1 Provide efficient technology and inclusive digital systems that are easy to use and access					
	1.4.1.1 CW	Undertake delivery of Implement phase 2 internal projects (DT - Roadmap Program - multi-year projects) Information and Communications – Projects Allocated Amount 2021-22 $1,200,000	Digital Technology	Digital Technology	Delivery of projects according to approved project plan
	1.4.1.3 CW	Undertake delivery of Digital Technology projects (servers, storage, switches etc) Allocated Amount 2021-22 $820,000	Digital Technology	Digital Technology	Deliver project according to approved project plan
1.4.1.5		Develop asset design and as-constructed templates as part of the Asset Data Standards Review	Asset Management	Infrastructure Planning	Develop an Auto CAD file template for asset design and as-constructed plans that meets Asset Design As Constructed (ADAC) standards by 30 June 2021
	1.4.1.6 CW	Property Management System for management of Council owned assets Allocated Amount 2021-22 $80,000	Property and Leasing	Strategy	Property Management System options assessed for suitability

Delivery Program 2017- 2022 Objective 1.4.2 Deliver agreed services at the agreed service level at best value					
1.4.2.1		Work across the organisation to facilitate the implementation of the Business Improvement Strategy	Business improvement	People, Safety and Performance	1. Undertake five improvement initiatives by 30 June 2021 2. Throughout 2020-21 carry out activities to build continuous improvement capability across the organisation, as outlined in the Business Improvement Strategy
Delivery Program 2017- 2022-Objective 1.4.3 Deliver a customer focused service that provides the community a consistent experience of Council					
1.4.3.1		Implement projects according to Customer Experience strategy and roadmap.	Customer Experience	Customer Experience and Communications	Implement projects as per Strategy.
1.4.3.2		Provide up to date information for our community through a single source of truth	Customer Experience	Customer Experience and Communications	1. Ensure Council's website is current and represents single source of truth for internal and external customers 2.Develop digital communications strategy

Community Strategic Plan Strategy 1.5 Ensure strong corporate and financial management that is transparent and accountable					
Delivery Program 2017- 2022 Objective 1.5.1 Manage Council's financial assets and provide accurate, timely and reliable information					
1.5.1.1		Monitor and accurately report on Council's financial position in accordance with Local Government Act requirements	Financial Management	Financial Services	1. Submit three quarterly budget review statements and an annual report to Council 2. Lodge audited financial statements with Office of Local Government by 31 October
1.5.1.2		Manage Council's investment portfolio to optimise investment returns within the constraints of the policy, the Local Government Act and Regulations	Financial Management	Financial Services	1. Exceed benchmark for investment return 2. Table report to Council monthly
1.5.1.3		Develop the annual Operational Plan budget and review the Long Term Financial Plan	Financial Management	Financial Services	1. Develop the draft annual budget in line with Integrated Planning and Reporting timeframes 2. Review the Long Term Financial Plan in line with the budget cycle 3. Final budget adopted by Council by 30 June
1.5.1.4		Prepare monthly financial reports for Council	Financial Management	Financial Services	Submit financial reports to Council monthly
1.5.1.6		Progress Partridge Creek residential development planning	Property Investment Portfolio	Strategy	Provide a report to Council outlining Partridge Creek residential development options upon receipt of updated land valuation
1.5.1.9		Progress Emily Avenue residential development planning	Property Investment Portfolio	Strategy	Receive Development Consent and Commence Design by 30 June 2021.

1.5.1.10		Implement Asset Designed As Constructed (ADAC) computerised automated process system	Asset Management	Infrastructure Planning	Complete implementation of ADAC within Council operations by 30 June 2021
1.5.1.11		Progress Kangaroo Park, North Shore residential development planning	Property Investment portfolio	Strategy	Lodge Development Approval application for Kangaroo Park development
1.5.1.14		Property Portfolio Investigations. Contamination reports/EOI	Property Investment Portfolio	Strategy	Investigations into Property Purchases undertaken
Delivery Program 2017- 2022 Objective 1.5.2 Use procurement, tendering, purchasing and contract management approaches that are transparent and equitable					
1.5.2.1		Continue to implement and monitor the procurement strategy action items	Procurement and Stores	Financial Services	Completion of Procurement Strategy Implementation Plan actions within agreed timeframes.
	1.5.2.2 CW	Ensure plant purchases are in line with the plant replacement program (Plant Purchases and Disposals - multi-year project) Allocated Amount 2021-22 $3,000,000	Fleet and Depot Management	Infrastructure Operations	Plant replacement program delivered according to approved schedule
1.5.2.3		Manage and maintain Council's Plant and Fleet to support the operational activities of Council	Fleet and Depot Management	Infrastructure Operations	Plant and Fleet managed and maintained in accordance with adopted program and budget.
1.5.2.5		Undertake procurement activities in accordance with legislative requirements, that are transparent	Procurement and Stores	Financial Services	Capture contracts awarded with a value of $150,000 (excluding GST) or more.

Delivery Program 2017- 2022 Objective 1.5.3 Develop, manage and maintain Council Business Units through effective commercial management.					
1.5.3.1		Increase operating revenue at the Airport, the Glasshouse, and the Environmental Laboratory	Airport, Glasshouse, Environmental Testing	Commercial Business Units	Increase operating revenue by 3% per annum per business unit - including: Airport, Glasshouse, and Environmental Laboratory
1.5.3.2		Implement the Glasshouse Plan 2020-2022 in consideration of Council's Cultural Plan	Glasshouse	Commercial Business Units	1. Present biannual reports to Council 2. Deliver actions according to adopted Plan
1.5.3.6		Manage Council's property management, leasing and licencing, and statutory property functions for the most appropriate return to Council and the community	Property and Leasing	Recreation, Property and Buildings	1. Manage Council's lease and licence portfolio to ensure the most appropriate return to Council and the community 2. Deliver statutory property projects according to approved project plan
	1.5.3.8 CW	Land and Easement Acquisitions for Council Purposes - Survey, Valuation and Land Transactions Allocated Amount 2021-22 $30,000	Property and Leasing	Recreation, Property and Buildings	Deliver projects according to approved project plan
Delivery Program 2017- 2022 Objective 1.5.4 Identify new commercially viable revenue sources					
1.5.4.1		Review current revenue sources and investigate the commercial viability of identified new revenue sources	Airport, Environmental Testing, Glasshouse, and Waste Management	Commercial Business Units	Identify new revenue sources

Community Theme 2



Your Community Life

COMMUNITY STRATEGIC PLAN

What we are trying to achieve

A healthy, inclusive and vibrant community.

How we will get there

2.1 Create a community that feels safe

2.2 Advocate for social inclusion and fairness

2.3 Provide quality programs, community facilities and public spaces, for example, community halls, parks and vibrant town centres

2.4 Empower the community through active involvement in projects, volunteering and events

2.5 Promote a creative and culturally rich community

Who will assist us

> NSW Surf Lifesaving Association
> Landcare
> Local Aboriginal Land Council
> National Parks
> NSW Fire Brigade
> Environmental Protection Authority (EPA)
> Department of Health
> NSW Police
> Office of Youth Network
> Community Groups
> Bearlay Interagency
> Other LGAs
> TCMP community
> Property Services
> Rural Fire Service
> NSW Fire and Rescue
> Crown Lands
> Department of Planning
> Office of Local Government
> NSW Public Health Unit
> NSW Food Authority
> State Debt Recovery
> Schools
> Government Agencies
> State Government
> Local Businesses
> 355 committees
> Cultural Steering Group

Community Strategic Plan Strategy 2.1 Create a community that feels safe					
Delivery Program 2017-2022 Objective 2.1.1 Support Community Safety initiatives					
Operational Plan 2021-2022 - Action/Activity/Project					
Operational Action	**Capital Works Project**	**Description**	**Council Service**	**Lead Responsibility**	**Performance Measures**
2.1.1.1		Manage the contract for approved lifeguard services	Sports and Recreation	Recreation, Property and Buildings	1. Deliver approved lifeguard services 2. Deliver lifeguard education programs to schools and community groups (target 2,500 students)
2.1.1.2		Work with our communities to ensure safe access to Council facilities, events, programs and in time of emergency.	Community Place	Community	1.Educating communities about existing plans to ensure their safety in times of emergency. 2. Develop a community checklist to improve the community's perception of safety at our facilities and events.
2.1.1.3		Working with our communities and CCATs to finalise Emergency Preparedness Plans for our communities	Community Place	Community	Communities engaged and plans developed.

Delivery Program 2017- 2022 Objective 2.1.2 Advocate for, support and coordinate emergency services.						
	2.1.2.2 CW	Council supports Emergency Management Operations and Agencies Bushfire Tank/Vehicle purchases	Emergency Management	Infrastructure (Director)		Provide coordination and support to emergency service units as required
Delivery Program 2017- 2022 Objective 2.1.3 Conduct regulatory and educational activities which safeguard public and environmental health, and ensures compliance with planning and building standards						
2.1.3.1		Monitor and take action as appropriate to ensure compliance with development approvals and building, environmental, public health and on-site sewage standards	Compliance	Environment and Regulatory Services		1. Risk Management Plans and annual audits monitored for all regulated cooling and heating systems and inspected as required. 2. On-site sewage system inspections completed in accordance with approved program 3. Food Premises inspection program completed by 30 June 4. Pollution incidents responded to within the service standard for type of incident 5. Public Health inspections completed for all public pools and spas in accordance with approved program 6. Inspections of personal appearance premises undertaken in accordance with approved program 7. Underground Petroleum Storage Systems (UPSS) inspected in accordance with approved program

					8. Building certificate applications assessed within service standard 9. Mandatory pool compliance inspections completed in-accordance with approved program 10. Notices of Completion applications for caravan park and manufactured homes assessed within service standard 11. Annual Fire Safety Statements pursued for all buildings with fire safety requirements Pollution incidents responded to within the service standard for type of incident
			Compliance	Environment and Regulatory Services	1. Respond to 80% of customer requests regarding compliance with parking, beach patrols, illegal signage, sale of goods on roads, building site sediment control and companion animal management within set customer service standard 2. Monitor the number of offences detected during proactive patrols 3. Monitor the number of companion animal incidents 4.Maintain Animal Shelter return and rehoming rates 5. Respond to Development Compliance and Stormwater complaints within service standards
		Provide ranger and local law enforcement services to ensure compliance with legislation, regulations and Council policies relating to parking, regular beach patrols, illegal signage, sale of goods on roads, building site sediment control and companion animal management			
2.1.3.3		Manage Council's Environmental Laboratory and provide sampling, analysis, reporting and	Environmental Testing	Commercial Business Units	1. Complete all sampling, analysis and reporting of operational and
2.1.3.4					

		professional advice of water quality analysis and environmental programs in accordance with operational and regulatory requirements to internal and external customers on an approved fee for service basis				regulatory requests in accordance with approved budgets 2. Complete all sampling, analysis and reporting of operational and regulatory requests in accordance with agreed service standards 3. Maintain National Association of Testing Authorities (NATA) corporate accreditation
	2.1.3.5	Provide a safe water supply in accordance with Australian Drinking Water Quality Guidelines	Water Supply	Infrastructure Planning	Have nil reportable incidents in accordance with NSW Health agreed protocols	
Community Strategic Plan Strategy **2.2 Advocate for social inclusion and faimess**						
Delivery Program 2017- 2022 Objective 2.2.1 Support and advocate for all community sectors.						
2.2.1.1		Implement the Community Inclusion Plan	Community Inclusion	Community	Implement the identified Community Inclusion Plan actions	
2.2.1.3		Through the Community Inclusion Plan coordinate the Community grants program to assist the community to deliver projects that contribute to a sense of place	Community Inclusion	Community	Deliver Community Grants Program through two rounds per year	
Community Strategic Plan Strategy **2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community halls, parks and vibrant town centres**						
Delivery Program 2017- 2022 Objective 2.3.1 Ensure access to community facilities and activities: including access to natural environment						

2.3.1.1		Disabled Access – Buildings/Recreation Facilities	Community Inclusion	Community	Implement the actions as per the Disability Inclusion Action Plan
2.3.1.2		Through the Community Inclusion plan continue to manage Community Halls	Community Inclusion	Community	1. Review current Community Halls management structure and implement change to management model where desired
2.3.1.3		Public Spaces Interpretation Strategy and Guidelines COVID RELIEF RESERVE FUNDING	Economic Development	Economic and Cultural Development	Deliver project according to approved project plan
Delivery Program 2017 - 2022 Objective 2.3.2 Provide a range of inclusive sporting and recreational opportunities and facilities to encourage a healthy and active lifestyle					
	2.3.2.2 CW	Deliver sporting facility renewal and upgrades program across the LGA Vince Imon Sporting Fields – Sports Facility Upgrade Allocated Amount 2021-22 $528,783 Sporting Infrastructure Renewals Allocated Amount 2021-22 $475,000	Sports and Recreation	Recreation, Property and Buildings	Deliver project to approved project plan
2.3.2.3		Manage the Mayor's Sporting Fund	Cultural Development	Economic and Cultural Development	Distribute funds as required and assist with fundraising events
2.3.2.4		Undertake regional master planning for recreational facilities	Sports and Recreation	Recreation, Property and Buildings	

	2.3.2.12 CW	McInherney Park - Contribution to public amenities in new boat storage facility Allocated Amount 2021-22 $120,000	Sports and Recreation	Recreation, Property and Buildings	Contribution in accordance with agreed project milestones
	2.3.2.13 CW	Westport Park - continue boat ramp parking upgrade Allocated Amount 2021-22 $937,000	Sports and Recreation	Recreation, Property and Buildings	Deliver project according to approved project plan
Delivery Program 2017- 2022 Objective 2.3.3 Develop and implement management of operational and maintenance programs for open space, recreational and community facilities						
2.3.3.1		Undertake the maintenance program for parks, reserves, sporting fields and beaches including parks signage	Sports and Recreation	Recreation, Property and Buildings	Deliver program, including beach cleaning and playground inspections according to approved maintenance schedules
	2.3.3.2 CW	Undertake scheduled and reactive maintenance programs of all Council-owned buildings including office furniture replacement Allocated Amount 2021-22 $47,700			
	2.3.3.3 CW	Undertake building rectification works in line with Council Asset Management - (multi-year project) Allocated Amount 2021-22 $319,600	Building Maintenance	Recreation, Property and Buildings	Deliver project according to approved project plan
2.3.3.4		Provide, maintain and manage public aquatic facilities	Aquatic Facilities	Recreation, Property and Buildings	1. Undertake annual off-season facility maintenance in accordance with approved program 2. Oversee the management of Council's public aquatic facilities in accordance with lease obligation checklist

	2.3.3.5 CW	Deliver park furniture renewals across the local government area, including donated seats program Allocated Amount 2021-22 $156,000	Sports and Recreation	Recreation, Property and Buildings	Deliver replacement program according to approved schedule
	2.3.3.6 CW	Carry out playground equipment replacement program Charlie Watt Reserve, Telegraph Point Allocated Amount 2021-22 $85,000 Moroko Park, Pembroke Allocated Amount 2021-22 $85,000	Sports and Recreation	Recreation, Property and Buildings	Deliver project to approved project plan
	2.3.3.8 CW	Deliver recreational walkway replacement program across the local government area Pathway Renewals (various) Allocated Amount 2021-22 $237,000	Sports and Recreation	Recreation, Property and Buildings	Deliver project to approved project plan
2.3.3.9		Implement maintenance programs for boat ramps, wharves and jetties	Sports and Recreation	Recreation, Property and Buildings, (Infrastructure Operations)	Deliver programs according to approved maintenance and schedule (for boat ramps, wharves and jetties)
2.3.3.10		Undertake the maintenance program for beaches	Sports and Recreation	Recreation, Property and Buildings	1. Undertake beach and beach access maintenance as per program 2. Undertake inspections of beach access signs
	2.3.3.12 CW	Thrumster Sports Fields - Detailed design and approvals Allocated Amount 2021-22 $406,441	Sports and Recreation	Recreation, Property and Buildings, (Infrastructure Delivery)	Deliver project according to approved project plan

2.3.3.16		Manage burial and memorialisation services at Wauchope, Laurieton and other outlying cemeteries	Cemeteries	Customer Experience & Communications	Carry out services in accordance with legislative and customer requirements
	2.3.3.17 CW	Carry out improvement and expansion works at Wauchope, Laurieton and other outlying cemeteries Allocated Amount 2021-22 $20,000	Cemeteries	Commercial Business Units	Deliver projects according to approved project plan
2.3.3.18		Administration of public roads, public spaces, events and customer engagement: - Section 138 Road Applications - Road Encroachments - Customer Enquiries and Responses - Other Statutory Road Functions - Road Policies	Roads, Bridges and Transport	Infrastructure Planning	Deliver works in accordance with Council's Policies and Procedures
2.3.3.19		Complete PMHC cemeteries policy	Cemeteries	Customer Experience & Communications	Policy completed
2.3.3.26		Develop PMHC cemeteries & memorials strategy	Cemeteries	Customer Experience & Communications	Strategy completed

Delivery Program 2017 - 2022 Objective 2.3.4 Plan, investigate, design and construct open spaces, recreational and community facilities					
	2.3.4.8 CW	Hastings Regional Sporting Complex - Completion of pre-construction (multi-year project) Allocated Amount 2021-22 $712,637	Sports and Recreation	Recreation, Property and Buildings, (Project Delivery)	Deliver project according to approved project plan
	2.3.4.12 CW	Port Macquarie Town Centre Master Plan (TCMP) improvements Allocated Amount 2021-22 $3,100,000	Sports and Recreation	Recreation, Property and Buildings	Deliver project according to approved project plan
	2.3.4.14 CW	Port Macquarie Pool - Continuation of Strategic Concept and Business Case development Allocated Amount 2021-22 $748,215	Aquatic Facilities	Recreation, Property and Buildings (Project Delivery)	Deliver project according to approved project plan
	2.3.4.18 CW	Rainbow Beach Sports Fields Continue construction of District Facilities Allocated Amount 2021-22 $3,336,428	Sports and Recreation	Recreation, Property and Buildings (Project Delivery)	Deliver project according to approved project plan
	2.3.4.22 CW	Parks and Gardens Future Designs - Preparation of engineering designs in advance of construction programmes for Parks and Gardens Allocated Amount 2021-22 $32,200	Sports and Recreation	Recreation, Property and Buildings	Parks and Gardens Future Designs preparation undertaken as required
	2.3.4.24 CW	Camden Haven Surf Club Building - Contribution to design and approvals for new facility Allocated Amount 2021-22 $40,000	Building Maintenance	Recreation, Property and Buildings	Preconstruction for replacement
	2.3.4.25 CW	Town Green Central & West - Preconstruction" Allocated Amount 2021-22 $267,489	Sports and Recreation	Recreation, Property and Buildings	Deliver project according to approved project plan

	2.3.4.28 CW	Town and Village Signage - Finalise the Installation of Signage in the Local Government area Allocated Amount 2021-22 $50,000	Community Place	Community	Deliver project according to approved project plan.
	2.3.4.33 CW	CSU-Googik Connection Consultancies COVID RELIEF RESERVE FUNDING Allocated Amount 2021-22 $90,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	2.3.4.35 CW	Aquatic facilities - renewal of assets at end of useful life Allocated Amount 2021-22 $150,000	Aquatic Facilities	Recreation, Property and Buildings	Deliver project according to approved project plan
	2.3.4.36 CW	Undertake building rectification for 1 Commerce St Building Allocated Amount 2021-22 $100,000	Building Maintenance	Recreation, Property and Buildings	Deliver project according to approved project plan
	2.3.4.37 CW	Camden Haven Surf Life Saving Clubhouse - connect to sewer Allocated Amount 2021-22 $100,000	Building Maintenance	Recreation, Property and Buildings	Deliver project according to approved project plan
Delivery Program 2017- 2022 Objective 2.3.5 Plan and deliver innovative Library Services which cater for new technology and growing population.					
	2.3.5.1 CW	Provide a range of library programs and lending services across the local government area. That include the maintenance of the collection, management of the facility and delivery of services, programs and events. Furniture and Fixings. Allocated Amount 2021-22 $40,000	Library	Community	1. Annual library program delivered 2. Increase Library membership by 5% annually
	2.3.5.2 CW		Library	Community	Complete book purchases

		Provide a range of library programs and lending services across the local government area. That include the maintenance of the collection, management of the facility and delivery of services, programs and events. Purchase of Library Books - (multi-year project) To provide book stock at NSW State average per capita as a minimum level Furniture and Fixings Allocated Amount 2021-22 $277,000	Library	Community	1, Implement actions as per the Library Strategic Plan
2.3.5.4		Implement the Library Strategic Plan	Library	Community	Deliver Special Library Projects to enhance library delivery program
	2.3.5.7 CW	Deliver Special Library Projects to enhance library delivery program Allocated Amount 2021-22 $20,000			

Delivery Program 2017- 2022 Objective 2.3.6 Support a range of inclusive community activities and programs					
2.3.6.11		Port Macquarie Hastings (PMH) Cares COVID RELIEF RESERVE FUNDING	Community	Community	Deliver project according to approved project plan
Community Strategic Plan Strategy **2.4 Empower the community through encouraging active involvement in projects, volunteering and events**					
Delivery Program 2017- 2022 Objective 2.4.1 Work with the community to identify and address community needs, to inform Council processes, services and projects					
2.4.1.1		Support and connect with our community through delivering the actions outlined in the Community Inclusion Plan	Community Inclusion	Community	Implement Events and Volunteering programs to encourage residents to actively contribute to their Community
2.4.1.8		Design the Strategic Education Program	Community Education	Community	Implement the Annual Education program that influences community behaviours, including the Schools Program
Community Strategic Plan Strategy **2.5 Promote a creative and culturally rich community**					
Delivery Program 2017- 2022 Objective 2.5.1 Support cultural activities within the community					
2.5.1.1		Cultural Plan Implementation - Public Art - Maintenance & Implementation.	Cultural Development	Economic and Cultural Development	Implement agreed Cultural Plan actions

	2.5.1.2 CW	Undertake Glasshouse back of house maintenance Plant and Equipment Purchases Allocated Amount 2021-22 $10,000 Technical Equipment Purchases Allocated Amount 2021-22 $56,000	Glasshouse	Commercial Business Units	Undertake maintenance as required
2.5.1.3		Manage the delivery of a range of high quality performing and visual arts events at the Glasshouse in consideration of Council's Glasshouse Plan and Cultural Plan	Glasshouse	Commercial Business Units	1.Deliver the performing arts program as per the annual season launch – 15 events 2. Deliver the exhibition program as per the annual gallery program - 20 exhibitions
2.5.1.4		Finalise development of new Cultural Plan	Cultural Development	Economic and Cultural Development	Commence review and development of new Cultural Development Plan working with the Cultural Steering Group and key stakeholders.
2.5.1.5		Heritage Local Assistance Fund	Cultural Development	Economic and Cultural Development	Distribute Heritage Assistance Fund Grants in accordance with established criteria
2.5.1.8		Art Walk	Cultural Development	Economic and Cultural Development	Art Walk delivered successfully

Community Theme 3



Your Business and industry

COMMUNITY STRATEGIC PLAN

What we are trying to achieve

The Port Macquarie-Hastings region is a successful place that has vibrant, diversified and resilient regional economy for people to live, learn, work, play and invest.

How we will get there

3.1 Embrace business and a stronger economy

3.2 Create vibrant and desirable places

3.3 Embrace opportunity and attract investment to support the wealth and growth of the community

3.4 Partner for success with key stakeholders in business, industry, government, education and the community

Who will assist us

> Economic Development Steering Group

> Local Business and industry

> State Government

> Federal Government

> Landowners

> Business and industry groups

> Community groups

Community Strategic Plan Strategy
3.1 Embrace business and a stronger economy

Delivery Program 2017- 2022 Objective
3.1.1 Assist the growth of local business and industry, ensuring this is a central consideration of Council activities

Operational Plan 2021-2022 - Action/Activity/Project

Operational Action	Capital Works Project	Description	Council Service	Lead Responsibility	Performance Measures
3.1.1.1		Implement actions from the 2017-2021 Economic Development Strategy to lead, create and proactively support an environment that stimulates sustainable industry, business and investment growth.	Economic Development	Economic and Cultural Development	Implement actions from the Economic Development Strategy and report to Council on implementation twice per year.
3.1.1.2		Finalise development of new Economic Development Strategy	Economic Development	Economic and Cultural Development	Commence review and development of new Economic Development Strategy in consultation with the Economic Development Steering Group and key stakeholders.
3.1.1.13		Greater Port Macquarie Marketing Strategy & Brand Deployment	Economic Development	Economic and Cultural Development	Deliver project according to approved project plan
	3.1.1.14 CW	Christmas Tree Decoration Renewal Allocated Amount 2021-22 $5,000	Cultural Development	Economic and Cultural Development	Deliver project according to approved project plan

Delivery Program 2017-2021 Objective 3.1.2 Optimise the use of appropriately zoned land for business uses					
3.1.2.2		Review and prepare planning proposals for specific sites within the Port Macquarie-Hastings Local Government Area based on priorities as determined by Council	Strategic Land Use Planning	Development Assessment	Report to Council bi-annually on progress of the progress and status of site specific amendments
3.1.2.3		Greenmeadows Drive - Development Planning and Feasibilities	Property Investment Portfolio	Strategy	Consider Greenmeadows Drive appropriateness for strategy on community use assets by 30 June 2021.
3.1.2.4		Kew Kendall STP Mid Scale Solar Project	Property Investment Portfolio	Strategy	Review opportunity for mid scale solar and appropriateness of site given sewer expansion plans by 30 June 2022.
Delivery Program 2017- 2022 Objective 3.1.3 Implement Major Events Strategy.					
3.1.3.2		Implement the Port Macquarie-Hastings Events Plan	Economic Development	Economic and Cultural Development	1. Successful distribution of Events Grants and Sponsorships 2. Implementation of Events Plan actions relating to 'Major and Community Events'
Delivery Program 2017- 2022 Objective 3.1.4 Implement the Destination Management Plan					
3.1.4.1		Work with stakeholders to implement actions from the Destination Management Plan in accordance with the identified strategic outcomes	Economic Development	Economic and Cultural Development	1. Implement actions within the Destination Management Plan 2. Increase new monthly visits to the website by more than 15% in 12 months
3.1.4.2		Finalise Greater Port Macquarie Brand Review	Economic Development	Economic and Cultural Development	Brand Review project developed and delivered in accordance with project plan.

3.1.4.4		Implement Interpretative Signage Strategy.	Economic Development	Economic and Cultural Development		Deliver project according to approved project plan
3.1.4.5		Commence development of new Greater Port Macquarie Destination Marketing Strategy.	Economic Development	Economic and Cultural Development		Deliver project according to approved project plan
Community Strategic Plan Strategy 3.2 Create vibrant and desirable places						
Delivery Program 2017- 2022 Objective 3.2.1 Support vibrant commercial, tourism, recreational and or community hubs across the region						
Actions that support this Delivery Program Objective are included in 3.1.1.1 - Implement actions from the 2017-2021 Economic Development Strategy to lead, create and proactively support an environment that stimulates sustainable industry, business and investment growth.						
Community Strategic Plan Strategy 3.3 Embrace opportunity and attract investment to support the wealth and growth of the community						
Delivery Program 2017- 2022 Objective 3.3.1 Develop, manage and maintain Port Macquarie Airport as a key component of the regional transport network and continue to grow the airport's contribution to the regional economy.						
3.3.1.1		Continue to monitor, plan and implement the Port Macquarie Airport Master Plan to meet demand and regulatory requirements - (multi-year project) - Commence design of future infrastructure improvements, including public car park expansion	Airport	Commercial Business Units, (Infrastructure Delivery)		Deliver identified actions from the Airport Master Plan according to approved project plan
3.3.1.2		Support, facilitate and advocate for regular public transport (RPT) airline services at Port Macquarie Airport	Airport	Commercial Business Units		Increase in passenger numbers compared to previous year

	3.3.1.4 CW	Port Macquarie Airport Parallel Taxiway Stage 1 and General Aviation (GA) - pavement renewal – finalise construction - (multi-year project) Allocated Amount 2021-22 $100,000	Airport	Commercial Business Units, (Infrastructure Delivery)	Finalise construction of Airport Parallel Taxiway Stage 1 and General Aviation pavement renewal
3.3.1.5		Continue to monitor, plan and implement the Port Macquarie Airport Biodiversity Certification Strategy and related environmental approvals	Airport	Commercial Business Units, Environment and Regulatory Services	Deliver identified actions from the Biodiversity Certification Strategy and related environmental approvals according to approved project plan
3.3.1.6		Operate and maintain Port Macquarie Airport in accordance with regulatory, safety and security requirements Maintenance and refurbishment of Council-owned Hangars	Airport	Commercial Business Units	1. Carry out daily aerodrome inspections according to regulatory requirements 2. Ensure airport operational manuals are reviewed by 30 June 3. Carry out maintenance / refurbishment of Council-owned hangars according to approved project plan
	3.3.1.7 CW	Finalise development planning for the Port Macquarie Airport Business and Technology Park - (multi-year project) Allocated Amount 2021-22 $60,000	Strategy	Strategy, (Commercial Business Units)	Finalise development planning by 30 June 2022 according to approved project plan
Delivery Program 2017-2022Objective 3.3.2 Promote investment, education and lifestyle opportunities					
Actions that support this Delivery Program Objective are included in 3.1.1.1 - Implement actions from the 2017-2021 Economic Development Strategy to lead, create and proactively support an environment that stimulates sustainable industry, business and investment growth.					

Community Strategic Plan Strategy 3.4 Partner for success with key stakeholders in business, industry, government, education and the community					
Delivery Program 2017- 2022 Objective 3.4.1 Foster partnerships with higher education institutions through research and development, innovation and local skills development					
3.4.1.2		Partner with Charles Sturt University in delivering the Port Macquarie Innovation Hub.	Economic Development	Economic and Cultural Development	Deliver project in accordance with the agreed Terms of Reference.
Actions that support this Delivery Program Objective are included in 3.1.1.1 - Implement actions from the 2017-2021 Economic Development Strategy to lead, create and proactively support an environment that stimulates sustainable industry, business and investment growth.					
Delivery Program 2017- 2022Objective 3.4.2 Support local business networks					
Actions that support this Delivery Program Objective are included in 3.1.1.1 - Implement actions from the 2017-2021 Economic Development Strategy to lead, create and proactively support an environment that stimulates sustainable industry, business and investment growth.					
Delivery Program 2017- 2022 Objective 3.4.3 Encourage innovation that will support our growth as a regional city including smart community technology					
3.4.3.3		Implement Council's Smart Community Roadmap	Economic Development	Economic and Cultural Development	Smart Communities Initiatives developed and implemented in accordance with priorities identified in Roadmap

Community Theme 4



Your Natural and Built Environment

COMMUNITY STRATEGIC PLAN

What we are trying to achieve

A connected, sustainable, accessible community and environment that is protected now and into the future.

How we will get there

4.1 Provide (appropriate) infrastructure and services including water cycle management, waste management, and sewer management

4.2 Aim to minimise the impact of natural events and climate, e.g. floods, bushfires and coastal erosion

4.3 Facilitate development that is compatible with the natural and built environment

4.4 Plan for integrated transport systems that helps people get around and link our communities

4.5 Plan for integrated and connected communities across the Port Macquarie-Hastings area

4.6 Restore and protect natural areas

4.7 Provide leadership in the development of renewable energy opportunities

4.8 Increase awareness of issues affecting our environment, including the preservation of flora and fauna

Who will assist us

> State Government

> Koala Preservation Society

> Landowners

> NSW Government

> Community interest groups

> General public

> State Government

> Federal Government

> Business and Industry groups

> Community groups

> External contractors

Community Strategic Plan Strategy
4.1 Provide (appropriate) infrastructure and services including water cycle management, waste management, and sewer management

Delivery Program 2017- 2022 Objective
4.1.1 Plan, investigate, design and construct water supply assets ensuring health, safety, environmental protection and security of supply for the future growth of the region

Operational Plan 2021-2022 - Action/Activity/Project

Operational Action	Capital Works Project	Description	Council Service	Lead Responsibility	Performance Measures
	4.1.1.1 CW	Construction planning for the Sancrox Reservoir to Area 13 (Thrumster) trunk main (DN750) Allocated Amount 2021-22 $34,297	Water Supply	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan
	4.1.1.4 CW	Installation of new water supply services to residential and business premises - to cater for new development Allocated Amount 2021-22 $400,000	Water Supply	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.1.16 CW	Thrumster Recycled Water Interim Supply - Rising Main to Thrumster Reservoir - Booster Pumping Station and Interim Reservoir - undertake construction Allocated Amount 2021-22 $3,100,000	Water Supply	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan
	4.1.1.26 CW	Continue construction of the Southern Arm Water Trunk Main (D750) - Pacific Hwy Bonny Hills Allocated Amount 2021-22 $50,000	Water Supply	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan

	4.1.1.27 CW	Commencement of design for the Water treatment/Filtration Plant at Cowarra dam Allocated Amount 2021-22 $100,000	Water Supply	Infrastructure Planning	Deliver project according to approved project plan
	4.1.1.28 CW	Preconstruction Works - Trunk Main from Bonny Hills to Kew (Area 15) Reservoir - Stage 1 Allocated Amount 2021-22 $250,000	Water Supply	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan
	4.1.1.31 CW	Water Supervisory Control and Data Acquisition (SCADA) System - Replacement Allocated Amount 2021-22 $600,000	Water Supply	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.1.35 CW	Preconstruction/construction of Widderson St Reservoir Roof Replacement Allocated Amount 2021-22 $50,000	Water Supply	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.1.36 CW	Water critical infrastructure - Site Security Upgrades Allocated Amount 2021-22 $150,000	Water Supply	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.1.42 CW	Installation of Baffles within Reservoirs to ensure chlorination contact time for disinfection Allocated Amount 2021-22 $80,000	Water Supply	Infrastructure Operations	Deliver project according to approved project plan
	4.4.1.43 CW	Annual Energy Efficiency Initiatives Allocation - Variable Speed Drive Pumps - water sites Allocated Amount 2021-22 $150,000	Water Supply	Infrastructure Operations	Deliver project according to approved project plan

	4.1.1.46 CW	Bonny Hills Recycled Water System Upgrade Allocated Amount 2021-22 $777,144	Sewerage (TBC)	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan
	4.1.1.47 CW	Bulk water system chlorination upgrade Allocated Amount 2021-22 $200,000	Water Supply	Infrastructure Planning, (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.1.48 CW	Commence preconstruction for an elevated reservoir at Bonny Hills Allocated Amount 2021-22 $50,000	Water Supply	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.1.1.49 CW	Commence preconstruction works for the Kew (Area 15) Reservoir Allocated Amount 2021-22 $50,000	Water Supply	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.1.1.50 CW	Construction of Rock Ramp to secure water level at Koree Island Pumping Stations Intake Pool Allocated Amount 2021-22 $150,000	Water Supply	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.1.1.51 CW	Developer Provided Assets Allocated Amount 2021-22 $500,000	Water Supply	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.1.1.52 CW	Microwave link Cowarra to Rosewood Allocated Amount 2021-22 $60,000	Water Supply	Infrastructure Planning, (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.1.53 CW	Pre Construction of Cowarra to Wauchope Backfeed PS Allocated Amount 2021-22 $100,000	Water Supply	Infrastructure Planning, (Infrastructure Operations)	Deliver project according to approved project plan

4.1.1.54		Undertake asset revaluations for water supply network	Water Supply	Infrastructure Planning	Deliver project according to approved project plan
	4.1.1.55 CW	Wauchope WTP Augmentation Allocated Amount 2021-22 $800,000	Water Supply	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
Delivery Program 2017- 2022 Objective 4.1.2 Develop and implement annual maintenance and preventative works program for water supply assets					
	4.1.2.1 CW	Conduct water asset replacement and renewal programs for live water mains, water meters, renewals and minor works, pumps and switchboards Water Mains Relocations Allocated Amount 2021-22 $400,000 Renewals - Live Water Mains Allocated Amount 2021-22 $600,000 Renewals - Water Meters Allocated Amount 2021-22 $360,000 Renewals and Minor Works Allocated Amount 2021-22 $600,000 Annual Switchboard Replacement Program Allocated Amount 2021-22 $75,000 Smart Metering System roll-out - $150,000 Allocated Amount 2021-22 $150,000	Water Supply	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.2.2 CW	Carry out programmed replacement of Water Treatment Plant (WTP) electrical	Water Supply	Infrastructure Operations	Deliver project according to approved project plan

		and mechanical assets Allocated Amount 2021-22 $100,000			
Delivery Program 2017- 2022 Objective 4.1.3 Plan, investigate, design and construct sewerage assets ensuring health, safety, environmental protection and the future growth of the region					
	4.1.3.3 CW	Small Towns Sewerage Scheme Construction - Long Flat, Comboyne, Telegraph Point (multi-year project)	Sewerage	Infrastructure Planning (Project Delivery)	1. Deliver project for Long Flat Sewerage Scheme according to approved project plan 2. Deliver project for Comboyne Sewerage Scheme according to approved project plan 3. Deliver project for Telegraph Point Sewerage Scheme according to approved project plan
	4.1.3.18 CW	Continuation of Preconstruction of Thrumster Sewerage treatment Plant (Area 13) - Phase 1 Allocated Amount 2021-22 $50,000	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan
	4.1.3.22 CW	Investigation, Design and Construction of Kew Sewer Treatment Plant (STP) Upgrade (Multi-Year project)	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan
	4.1.3.23 CW	Annual Energy Efficiency Initiatives Allocation - Variable Speed Drive Pumps – Sewer Sites Allocated Amount 2021-22 $150,000	Sewerage	Infrastructure Planning (Infrastructure Operations)	Deliver project to approved project plan
	4.1.3.26 CW	Preconstruction works for upgrade of Lake Innes Sewerage Pump Station #71 (PMSPS71) Allocated Amount 2021-22 $212,010	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan

	4.1.3.27 CW	Port Macquarie Waste Water Treatment Plant Odour control mitigation works Allocated Amount 2021-22 $107,000	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan
	4.1.3.28 CW	Camden Haven Waste Water Treatment Membrane Replacements Allocated Amount 2021-22 $400,000	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan
	4.1.3.29 CW	Preconstruction of Wauchope Waste Water Treatment Plant Inlet Rationalisation	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan
	4.1.3.35 CW	Port Macquarie Sewer Pump Station 21 Refurbishment Allocated Amount 2021-22 $100,000	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan
	4.1.3.36 C	Preconstruction works for Camden Haven Sewer Pump Station 2 Refurbishment	Sewerage	Infrastructure Planning (Project Delivery)	Deliver project to approved project plan
	4.1.3.38 CW	Preconstruction works for upgrade of Port Macquarie Sewerage Pump Station #18	Sewerage	Project Delivery	Deliver project to approved project plan
	4.1.3.39 CW	Sewer Critical infrastructure Site Security Upgrades	Sewerage	Infrastructure Operations	Deliver project to approved project plan
	4.1.3.42 CW	Centrifuge upgrade and Process Optimisation at PM WwTP Allocated Amount 2021-22 $100,000	Sewerage	Infrastructure Planning (Infrastructure Operations)	Deliver project to approved project plan

	4.1.3.43 CW	Developer Provided Assets Allocated Amount 2021-22 $1,000,000	Sewerage	Infrastructure Planning,	Deliver project to approved project plan
	4.1.3.44 CW	Installation of new Microwave Telemetry Links - Jolly Nose to BH WwTP Allocated Amount 2021-22 $60,000	Sewerage	Infrastructure Planning, (Infrastructure Operations)	Deliver project to approved project plan
	4.1.3.45 CW	Installation of new Microwave Telemetry Links - Jolly Nose to CH WwTP Allocated Amount 2021-22 $60,000	Sewerage	Infrastructure Planning, (Infrastructure Operations)	Deliver project to approved project plan
	4.1.3.46 CW	Installation of new Microwave Telemetry Links - Rosewood/Bago To Wauchope WwTP Allocated Amount 2021-22 $60,000	Sewerage	Infrastructure Planning, (Infrastructure Operations)	Deliver project to approved project plan
	4.1.3.47 (TBC)	Integrated Water Cycle Management Strategy Delivery (Multi-Year Project) Allocated Amount 2021-22 $225,000	Sewerage	Infrastructure Planning, (Infrastructure Operations)	Deliver project to approved project plan
	4.1.3.48 CW	Kew Sewerage Treatment Plant (STP) Upgrade, Complete project planning and commence construction (Multi-Year project) Allocated Amount 2021-22 $500,000	Sewerage	Infrastructure Planning, (Project Delivery)	Deliver project to approved project plan
	4.1.3.49 CW	Preconstruction works for upgrade of Port Macquarie Sewerage Pumping Station #64	Sewerage	Infrastructure Planning, (Project Delivery)	Deliver project to approved project plan

	4.1.3.50 CW	Replacement of 2nd Effluent Pump at Port WwTP Allocated Amount 2021-22 $150,000	Sewerage	Infrastructure Planning, (Infrastructure Operations)	Deliver project to approved project plan
4.1.3.51		Undertake asset revaluations for sewer network	Sewerage	Infrastructure Planning	Deliver project to approved project plan
	4.1.3.52 CW	Thrumster STP Area 13 Pre-Construction Phase 2 10000EP Augmentation	Sewerage	Infrastructure Planning	Deliver project to approved project plan
Delivery Program 2017- 2022 Objective 4.1.4 Develop and implement annual maintenance and preventative works program for sewerage assets.					
	4.1.4.1 CW	Programmed replacement of Sewer Pumps and Electrical switchboards at Sewage Pump Stations Sewer Pump Replacement Program Allocated Amount 2021-22 $150,000 Annual Switchboard Replacement Allocated Amount 2021-22 $150,000 Lid Replacement Program Allocated Amount 2021-22 $250,000	Sewerage	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan

	4.1.4.4 CW	Carry out programmed replacement of Sewer Treatment Plant (STP) electrical and mechanical assets Allocated Amount 2021-22 $200,000 Annual Electrical STP Asset Replacement Annual Mechanical STP Asset Replacement	Sewerage	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.4.5 CW	Conduct sewer assets replacement and maintenance programs for Sewer Rehabilitation and Relining Works Annual Sewer Rehabilitation Allocated Amount 2021-22 $350,000 Annual Sewer Relining Works Allocated Amount 2021-22 $650,000	Sewerage	Infrastructure Planning (Infrastructure Operations)	Deliver project according to approved project plan
	4.1.4.7 CW	Installation of Dedicated Generators for backup power supply to Sewerage Pumping Stations CH SPS #9 Allocated Amount 2021-22 $80,000	Sewerage	Infrastructure Planning, (Infrastructure Operations)	Deliver project to approved project plan
	4.1.4.8 CW	Installation of Dedicated Generators for backup power supply to Sewerage Pumping Stations PM SPS#64 Allocated Amount 2021-22 $120,000	Sewerage	Infrastructure Planning, (Infrastructure Operations)	Deliver project to approved project plan
Delivery Program 2017- 2022 Objective 4.1.5 Work towards planning, investigation, design, construction of stormwater assets					
	4.1.5.06 CW	Continue design and construction for Black Swan Terrace - Stormwater	Stormwater and Drainage	Infrastructure Planning	Deliver project according to approved project plan

		detention facility (multi-year project) Allocated Amount 2021-22 $158,186			
	4.1.5.12 CW	Stormwater Remediation - 35 Hart Street Allocated Amount 2021-22 $40,000	Stormwater and Drainage	Infrastructure Planning	Deliver project according to approved project plan
	4.1.5.14 CW	Undertaken Panorama Drive/Binbilla Drive stormwater remediation works Allocated Amount 2021-22 $420,000			
Delivery Program 2017- 2022 Objective 4.1.6 Develop and implement annual maintenance and renewal programs for stormwater assets					
4.1.6.2		Undertake annual canal maintenance for Settlement Shores and Broadwater canals as required	Stormwater and Drainage	Infrastructure Planning, (Infrastructure Operations)	Undertake canal maintenance works in accordance with the rolling priority program and risk management processes
4.1.6.2		Undertake maintenance for Settlement Shores Canals			
4.1.6.2		Undertake canal maintenance for Broadwater Canals			
	4.1.6.7 CW	Carry out the Stormwater Renewal Program Allocated Amount 2021-22 $250,000	Stormwater and Drainage	Infrastructure Planning, (Infrastructure Operations)	Deliver program according to approved schedule
4.1.6.18		Carry out stormwater maintenance program including inspections, monitoring and repair works.	Stormwater and Drainage	Infrastructure Planning, (Infrastructure Operations	In accordance with adopted programs and reactive maintenance requirements based on risk

4.1.6.19		Carry out stormwater engineering investigations in response to identified issues from both reactive and proactive inspections	Stormwater and Drainage	Infrastructure Planning,	Engineering Investigations completed for all complex issues raised.
4.1.6.20		Stormwater Asset Management Condition Rating of stormwater assets via CCTV inspections, including of newly constructed works	Stormwater and Drainage	Infrastructure Planning, (Infrastructure Operations	In accordance with adopted programs and proactive maintenance requirements based on risk
4.1.6.21		Develop Urban Stormwater Catchment Management Plans for each of the 62 sub-catchments	Stormwater and Drainage	Infrastructure Planning,	Deliver project according to approved project plan
	4.1.6.22 CW	North Haven Flood mitigation Works - investigation and concept design of remedial works Allocated Amount 2021-22 $55,000	Stormwater and Drainage	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan
Delivery Program 2017- 2022 Objective 4.1.7 Develop and implement effective waste management strategies					
4.1.7.6		Ensure effective recycling and recovery of domestic waste through Material Recovery Facility (MRF)	Waste Management	Commercial Business Units	Recovery of domestic waste through Material Recovery Facility complete by 30 June 2022
4.1.7.7		Ensure effective recycling and recovery of organic waste through Organic Resource Recovery Facility (ORRF)	Waste Management	Commercial Business Units	1. Recovery of domestic waste through Organic Resource Recovery Facility (ORRF) complete by 30 June 2022 2. Capture carbon credit data associated with waste diversion to ORRF for reporting purposes

	4.1.7.9 CW	Deliver efficient waste and recycling services at all Waste Transfer Stations - New transfer bins x 4 Allocated Amount 2021-22 $100,000	Waste Management	Commercial Business Units	Operation of all Waste Transfer Stations undertaken in accordance with regulatory requirements
4.1.7.13		Address illegal dumping and provide clean-up programs	Waste Management	Commercial Business Units, Environment and Regulatory Services	Illegal dumping and clean-up programs delivered by 30 June 2022
	4.1.7.26 CW	Caimcross Waste Management Facility (WMF) Expansion / Improvements - (multi-year project) Finalise construction of new landfill cell (1A, 1C, 1E) in accordance with Development Consent Allocated Amount 2021-22 $3,165,000	Waste Management	Commercial Business Units Project Delivery	Deliver projects according to approved project plans
4.1.7.27		Waste Strategy - Develop new Waste Strategy following NSW 20yr Waste Strategy	Waste Management	Commercial Business Units	Development of new Waste Strategy commenced by 30 June 2022
4.1.7.28		Deliver efficient waste collection services, including domestic, commercial and public place	Waste Management	Commercial Business Units	Waste collection services delivered as required
4.1.7.29		Ensure effective operation of Caimcross waste management facility including effective disposal of waste to landfill	Waste Management	Commercial Business Units	1. Operation of Caimcross waste management facility undertaken in accordance with regulatory requirements 2. Capture the tonnage of waste to landfill for environmental reporting

4.1.7.30		Undertake Waste Education and Marketing campaigns	Waste Management	Commercial Business Units Community	Waste Education and Marketing campaigns delivered according to approved programs
4.1.7.31		Operate and maintain waste facilities in accordance with regulatory requirements and industry best practice	Waste Management	Commercial Business Units	Deliver projects including landfill gas monitoring according to approved project plans
	4.1.7.33 CW	Install solar energy PV systems at Port Macquarie (Kingfisher Road), Wauchope and Kew waste transfer stations Allocated Amount 2021-22 $395,000	Waste Management	Commercial Business Units Project Delivery	Deliver project according to approved project plan
	4.1.7.34 CW	Kingfisher Waste Transfer Station Upgrade - Kingfisher Road Rehabilitation Allocated Amount 2021-22 $650,000			
Community Strategic Plan Strategy **4.2 Aim to minimise the impact of natural events and climate change, for example, floods, bushfires and coastal erosion**					
Delivery Program 2017- 2022 Objective 4.2.1 Develop and implement Coastal, Estuary, Floodplain, and bushfire management plans.					
4.2.1.01		Deliver the annual bushfire risk mitigation program for PMHC	Natural Resource Management	Environment and Regulatory Services	1. 90% of program delivered 2. RFFF estimates are submitted to the RFS for the following financial year grant application
4.2.1.02		Implement actions from the Flying Fox Camp Management Plan for Kooloonbung Creek	Natural Resource Management	Environment and Regulatory Services	1. National flying-fox census count x 4 (quarterly) 2. Community meetings x 2 annually

					3. Delivery of on-ground management actions (including subsidy program and operation of sprinkler system)
4.2.1.05		Continue to ensure development compliance to achieve sound environmental outcomes - Vegetation Management Plans (VMP's), Koala Plans of Management (KPoM) developed, registered, implemented and monitored	Natural Resource Management	Environment and Regulatory Services	Register new plans and continue to undertake audits of VMP's and KPoM's to ensure on-ground works are completed.
4.2.1.06		Development of environmental program of works (registration, implementation, monitoring) to ensure compliance to Airport bio certification	Natural Resource Management	Environment and Regulatory Services	1. Undertake scoping, briefing preparation, and requisition of appropriate services. 2. Ongoing monitoring, generate reports, manage budgets for payment of contracts and write final report pertinent to on-ground environmental management actions.
4.2.1.07		Provide subject matter expert advice on DA and landuse application referrals	Natural Resource Management	Environment and Regulatory Services	Referrals to DA applications is undertaken within 21 days
4.2.1.09		Continue to develop a Flood Study for the North Brother Local Catchments - facilitation of stormwater remediation	Natural Resource Management	Infrastructure Planning	Development of a North Brother Flood Study underway to facilitate future stormwater remediation
	4.2.1.11 CW	Commence construction of new stormwater system at Illaroo Road Allocated Amount 2021-22 $867,124	Natural Resource Management	Environment and Regulatory Services	1. Construction of Illaroo Road stormwater system has commenced
4.2.1.14		Coast and estuary management committee	Natural Resource Management	Environment and Regulatory Services	4 committee meetings held per year

4.2.1.16		Development of a Coastal Management Program for Lake Cathie - Tidal Improvement - Lake Innes/Lake Cathie Estuarine	Natural Resource Management	Environment and Regulatory Services	Continue to undertake studies and engagement for Coastal Management Program stage 2 specific to Lake Cathie including funding for hydrodynamic model associated with Kenwood Drive Bridge, continued discussion regarding Illaroo revetment wall and acid sulphate studies associated with holistic estuary management.
4.2.1.17		Develop the annual bushfire risk mitigation program for Council lands prepared in accordance with the Bush Fire Risk Management Plan.	Natural Resource Management	Environment and Regulatory Services	The annual Bushfire Risk Management Program is adopted by 30 September 2020
4.2.1.18		Flood Mapping - Updated Flood Maps including LEP maps, External Customer Mapping Portal and Automated Flood Certificates	Natural Resource Management	Environment and Regulatory Services	1. All Council adopted flood studies mapped and accessible to internal and external customers via LEP 2. Flood mapping portal scoping study completed 3. Online portal developed and tested
	4.2.1.19 CW	Installation of in-line monitoring instruments at Koree Island River intake Allocated Amount 2021-22 $100,000	Water Supply (TBC)	Infrastructure Planning, (Infrastructure Operations)	Deliver project according to approved project plan
4.2.1.19		Commence development of the Coastal Management Plan - CMP Stage 2 - Hastings River Drive	Natural Resource Management	Environment and Regulatory Services	Begin studies and engagement for Coastal Management Program stage 2 specific to Hastings River area
Delivery Program 2017- 2022 Objective 4.2.2 Promote strategies to mitigate Climate Change					

4.2.2.1		Undertake development of a Sustainability and Climate Change Strategy	Natural Resource Management	Environment and Regulatory Services	Sustainability and Climate Change Strategy developed and adopted by 30 June 2021
4.2.2.1		Implement sustainability and climate change strategy actions	Compliance	Environment and Regulatory Services	Actions completed in accordance with approved program
Community Strategic Plan Strategy **4.3 Facilitate development that is compatible with the natural and built environment**					
Delivery Program 2017- 2022 Objective 4.3.1 Undertake transparent and efficient development assessment in accordance with relevant legislation					
4.3.1.1		Ensure development assessment, building certification and subdivision certification activities are completed efficiently and in accordance with legislation	Development Assessment	Development Assessment	Capture the number of applications and processing times, together with a commentary on development trends and report to Council quarterly
4.3.1.2		Ensure the Development Assessment Panel operates in accordance with their charter and all applications are accurately determined	Development Assessment	Development Assessment	Have no successful legal appeals relating to process errors
Community Strategic Plan Strategy **4.4 Plan for integrated transport systems that helps people get around and link our communities**					
Delivery Program 2017- 2022 Objective 4.4.1 Plan, investigate, design and construct transport assets which address pedestrians, cyclist and vehicular needs to cater for the future growth of the region.					
4.4.1.02		Regional Integrated Transport Strategy	Strategic Land Use Planning	Strategy	Production of a draft RITS for exhibition before 30 June 2022

	4.4.1.03 CW	Footpath, Cycleway and Pedestrian works	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan and in line with program
	4.4.1.22 CW	Kindee Bridge – structural repairs and bridge replacement Optioneering to ensure bridge remains serviceable (multi-year project) Allocated Amount 2021-22 $30,000	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.4.1.32	Continue corridor planning - Kendall Road – Ocean Drive – Hastings River Drive regional road corridor (MR538 / MR600) - (multi-year project)	Roads, Bridges and Transport	Infrastructure Planning	Corridor planning – Kendall Road – Ocean Drive- Hastings River Drive regional road corridor commenced
	4.4.1.34 CW	Kew Main Street Upgrade Construction Allocated Amount 2021-22 $1,211,316	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.4.1.37 CW	Local Roads Proactive Renewal Program Allocated Amount 2021-22 $365,000	Roads, Bridges and Transport	Infrastructure Planning (Infrastructure Operations)	In accordance with adopted programs and preventative maintenance requirements
	4.4.1.48	Development Contribution Plan (Roads) Review and Update	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.49 CW	Transport, Traffic and Stormwater various design works - Additional Transport and Stormwater Designs	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.51 CW	Installation of new bus shelters as per the Community Passenger Transport Infrastructure Grant Scheme (CPTIGS)	Roads, Bridges and Transport	Infrastructure Planning	Bus shelter installations completed as per the program

		Program Allocated Amount 2021-22 $176,000		(Infrastructure Operations)	
4.4.1.52		AUS-SPEC Review - Undertake a comprehensive review of Councils full suite of design and construction specifications (multi-year project)	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.55 CW	Beach to Beach - shared path project at Camden Haven – Detailed design, environmental approvals and commencement of construction Allocated Amount 2021-22 $367,245	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.4.1.59 CW	Gordon/Horton Street - intersection upgrade - Complete approvals and commence construction (multi year)	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
	4.4.1.63 CW	Pembrooke Road - Stoney Creek Bridge Upgrade - Detailed Design Allocated Amount 2021-22 $350,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.66 CW	Kindee Bridge Upgrade - Detailed Design Allocated Amount 2021-22 $30,000	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan
4.4.1.67		Transport Network Improvement Planning Project - Options Assessment and Strategic Business Case (Including Review of Orbital Road Options) - (Multi Year Project)	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.80 CW	Boundary Street Upgrade - Detailed Design and Environmental Approvals Allocated Amount 2021-22 $429,000	Roads, Bridges and Transport	Infrastructure Planning,	Deliver project according to approved project plan

	4.4.1.81 CW	Bril Bril Road Sealing - Investigations and concept design Allocated Amount 2021-22 $385,390	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.82 CW	School to School share path project - detailed design and planning approvals for highest priority sections Allocated Amount 2021-22 $211,869	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.83 CW	Gordon Street Upgrade - Road Resurfacing, Stormwater flood mitigation and water main renewal works (multi-year project) Allocated Amount 2021-22 $6,380,152	Roads, Bridges and Transport	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan
	4.4.1.88 CW	Lorne Road Sealing - Commence detailed design and approvals Allocated Amount 2021-22 $250,000	Roads, Bridges and Transport	Infrastructure Planning (Project Delivery)	Deliver project according to approved project plan
4.4.1.89		Undertake a detailed traffic analysis of the Sancrox/Thrumster/Fernbank growth area to identify high priority works	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.96 CW	Design and Construction of the Pappinbarra Bridge Replacement Allocated Amount 2021-22 $2,000,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.97		Review of Car Parking Strategy	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan

	4.4.1.98 CW	The Hatch Rd - Reseal Sections - Investigation and design for sealing 3kms of Rd Allocated Amount 2021-22 $50,000	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Delivered according to approved project plan
	4.4.1.99 CW	O'Neills Bridge Replacement - Finalised Land Acquisition Allocated Amount 2021-22 $81,977	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.101 CW	Ocean Drive Shared Path Pacific Hwy to Glen Haven Drive Allocated Amount 2021-22 $15,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.113		Laurieton Town Centre Master Plan COVID PROJECTS ROADS AND COMMUNITY INFRASTRUCTURE PROGRAM	Roads, Bridges and Transport	Strategy	Deliver project according to approved project plan
	4.4.1.118 CW	Commence construction of Horton Street pedestrian facilities (between William and Clarence Streets) Allocated Amount 2021-22 $32,604			
	4.4.1.119 CW	Commence Construction of the Lake Road / Jindalee Road / Fernhill Road Intersection upgrade (Multi Year) Allocated Amount 2021-22 $250,000	Roads, Bridges and Transport	Infrastructure Planning, (Project Delivery)	Deliver project according to approved action plan
	4.4.1.120 CW	Commence detailed design and approvals for Lake Road Duplication (Ocean Drive to Chestnut Road) (Multi-year) Allocated Amount 2021-22 $200,000	Roads, Bridges and Transport	Roads, Bridges and Transport	Deliver project according to approved action plan

	4.4.1.122 CW	Developer Provided Assets Allocated Amount 2021-22 $5,000,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.123 CW	Maria River Road Allocated Amount 2021-22 $300,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.124		Ocean Drive (South of Port Macquarie) Soil Remediation	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.125 CW	Pembrooke Road Beechwood Rd & Stoney Creek Rd Allocated Amount 2021-22 $2,980,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.126		Unsealed Road Gravel Resheeting	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.127		Undertake sealed road network condition survey	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan

	4.4.1.122 CW	Developer Provided Assets Allocated Amount 2021-22 $5,000,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.123 CW	Maria River Road Allocated Amount 2021-22 $300,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.124		Ocean Drive (South of Port Macquarie) Soil Remediation	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.1.125 CW	Pembrooke Road Beechwood Rd & Stoney Creek Rd Allocated Amount 2021-22 $2,980,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.126		Unsealed Road Gravel Resheeting	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
4.4.1.127		Undertake sealed road network condition survey	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan

4.4.2.5		Carry out reactive maintenance to Koala Food Trees and Koala Fencing on Link Rd (Ocean Dr)	Roads, Bridges and Transport	Infrastructure Planning (Environmental Services)	In accordance with adopted programs and reactive maintenance requirements based on risk
4.4.2.6		Bridgeworks and Road Rehabilitation Program - Undertake regular bridge and geotechnical road pavement tests to inform and develop programme	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	4.4.2.7 CW	Timber Bridges – Renewals & Repairs Allocated Amount 2021-22 $200,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	NEW OP REF (TBC)	Timber Bridges – Renewals & Repairs for Logans Crossing Bridge Allocated Amount 2021-22 $500,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	NEW OP REF (TBC)	Ocean Drive Preliminaries Allocated Amount 2021-22 $250,000	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
	NEW OP REF (TBC)	Kindee Bridge - Immediate Structural Repairs Allocated Amount 2021-22 $372,878	Roads, Bridges and Transport	Infrastructure Planning	Deliver project according to approved project plan
Delivery Program 2017- 2022 Objective 4.4.3 Develop and implement traffic and road safety programs					
4.4.3.1		Develop a Road Safety Action Plan and undertake associated safety education and awareness programs identified in the plan	Roads, Bridges and Transport	Infrastructure Planning	Undertake road safety educational programs
4.4.3.2		Install and maintain street lights in accordance with identified priorities	Roads, Bridges and Transport	Infrastructure Planning	Deliver street lighting program according to approved schedule and prioritisation

Community Strategic Plan Strategy 4.5 Plan for integrated and connected communities across the Port Macquarie-Hastings area					
Delivery Program 2017-2022 Objective 4.5.1 Carry out strategic planning to manage population growth and provide for co-ordinated urban development					
4.5.1.7		Review Local Environmental Plan (LEP) and Development Control Plan (DCP) provisions to promote development of the Yippin Creek Urban Release Area (UGMS Action 4)	Strategic Land Use Planning	Strategy	Report to Council regarding draft planning outcomes to Council by 30 June 2022
4.5.1.8		Progress Council led precinct planning for the proposed Health and Education Precinct (UGMS Action 13)	Strategic Land Use Planning	Strategy	Continue support studies for a planning proposal in consultation with stakeholders by 30 June 2022
4.5.1.10		Review LEP and DCP provisions to promote appropriate housing choice options (UGMS Action 1)	Strategic Land Use Planning	Development Assessment	Complete Housing Strategy by June 2022
4.5.1.11		Investigate the capacity of land at the intersection of Ocean Drive with Houston Mitchell Drive for light industrial use and at the intersection of Ocean Drive with Bonny View Drive for light industrial development or for use as a school (UGMS Action 17)	Strategic Land Use Planning	Development Assessment	Final report to Council re Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments by 30 June 2022
4.5.1.14		Review the Port Macquarie-Hastings Heritage Inventory (UGMS Action 31)	Strategic Land Use Planning	Strategy	Complete Stage 2 of the Heritage Inventory review and report to Council by 30 June-2022
4.5.1.15		Port Macquarie Civic Precinct - Commence investigations for strategic landuse planning of Council owned property	Strategic Land Use Planning	Strategy	Investigations commenced for Port Macquarie Civic Precinct Strategic Landuse Planning of Council owned property

4.5.1.17		Fernbank Creek/Sancrox - Support Studies	Strategic Land Use Planning	Strategy	NSW DPIE endorsement of Structure Plan by December 2021
4.5.1.18		Sustainability Strategy	Strategic Land Use Planning	Strategy	Production of a draft Sustainability Strategy by 30 June 2022.
NEW OP REF (TBC)		Conduct a strategic review of development contributions plans	Strategic Land Use Planning	Strategy	Strategic Review the DSP and Contributions Plans and recommendations by 30 June 2022.
NEW OP REF (TBC)		Finalise and implement the Port Macquarie Regional City Action Plan in collaboration with DPIE	Strategic Land Use Planning	Strategy	Implement and advocate for actions by 30 June 2022
Delivery Program 2017- 2022 Objective 4.5.2 Plan for infrastructure that supports population growth					
4.5.2.2		Continue the review of the Major Roads Contributions Plan for completion in 2020 -2021 (UGMS Action 23)	Strategic Land Use Planning	Strategy	Complete review of draft works program for review of the Major Roads Contributions Plan by 30 June 2022

Community Strategic Plan Strategy 4.6 Restore and protect natural areas				
Delivery Program 2017- 2022 Objective 4.6.1 Develop and implement a range of programs for the environmental management of lands within the local government area				
4.6.1.1		Undertake strategic biosecurity (weed management) program to restore and conserve the natural environment of the Mid North Coast	Natural Resource Management	Environment and Regulatory Services
				1. 600 high risk species inspections undertaken 2. 2,000km of high risk/priority pathways inspected 3. 210ha of control for high risk species 4. 200km of high risk pathways treated for high risk species 5. 2 Extension events conducted on weed biosecurity (field days, workshops, presentations)
4.6.1.5		Implement the Ecological Restoration program and collaborate with various community groups (e.g. Landcare)	Natural Resource Management	Environment and Regulatory Services
				1. Undertake management of Council reserves that are deemed of significant ecological value following guidance and direction from the Ecological Restoration report 2. Develop a roles and responsibilities charter for Landcare and Bushcare groups in PMHC that work on Council land

4.6.1.6		Inform and educate residents, industry and community groups about Council's tree management requirements within the Port Macquarie-Hastings 2013 Development Control Plan (DCP)	Parks and Reserves	Recreation, Property and Buildings	1. Provide advice in accordance with service standards and industry best practice 2. Develop and implement educational material and delivery program 3. Undertake Investigations in relation to all reported illegal tree works
	4.6.1.8	Review the Koala Population Recovery Strategy 2018	Natural Resource Management	Environment and Regulatory Services	Review of strategy completed with opportunities for improvements identified
	4.6.1.12	Contract management of invasive weed and ecological restoration on Council owned land as per contractor conditions.	Natural Resource Management	Environment and Regulatory Services	1.New contracts are scoped, briefs are prepared and services are secured for work for 20/21 operational year
	4.6.1.13	Contract management of invasive weed and ecological restoration on Council owned land as per contractor conditions.	Natural Resource Management	Environment and Regulatory Services	1.New contracts are scoped, briefs are prepared and services are secured for work for 20/21 operational year
	4.6.1.14	Contract management of invasive weed and ecological restoration on Council owned land as per contractor conditions.	Natural Resource Management	Environment and Regulatory Services	1.New contracts are scoped, briefs are prepared and services are secured for work for 20/21 operational year
	4.6.1.15	Environmental Compliance Auditing of Part 5 Review of Environmental Factors	Natural Resource Management	Environment and Regulatory Services	1. Toolbox talks have been held with relevant teams to relay information regarding environmental management procedures

					2. Undertake 10 site inspections throughout the year to audit environmental compliance
4.6.1.16		Commence the Natural Resources asset and maintenance register	Natural Resource Management	Environment and Regulatory Services	Continue to carry out priority maintenance actions within the budget allocated
4.6.1.17		Review of Environmental Factors (REF) Training and process/capability improvement	Natural Resource Management	Environment and Regulatory Services	1. Provide internal staff with 4 environmental training opportunities during the year 2. Create new training and process documents where relevant (Environmental induction, environmental awareness training, Environmental Work Method Statement (EWMS), procedures, environmental inspection checklist)
4.6.1.18		Partridge Creek Acid Sulfate Soils Wetland Management	Natural Resource Management	Environment and Regulatory Services	6 site inspections of weir conducted each year
4.6.1.19		Investigation of stewardship sites establishment on Council owned lands.	Natural Resource Management	Environment and Regulatory Services	1. Investigation of feasibility of bushland reserves becoming stewardship sites 2. Investigation for new lands for Development Control Plan (DCP) offsets
4.6.1.20		Wild deer management in PMHC	Natural Resource Management	Environment and Regulatory Services	Implement PMHC specific management actions generated from the Hastings Wild Deer Program.

4.6.1.21		Tip Gravel Road Environmental Protect Biodiversity Conservation (EPBC) Act Koala Management Plan	Natural Resource Management	Environment and Regulatory Services	1. Undertake actions as required which include camera monitoring, fence inspections and submission of compliance report
4.6.1.24		Undertake feasibility study for engineering solutions and initial concept design work to combat koala road strike	Natural Resource Management	Environment and Regulatory Services	Feasibility study completed
4.6.1.25		Undertake development of workflow procedure for identification and reporting of unauthorised vegetation clearing	Natural Resource Management	Environment and Regulatory Services	Development of workflow procedure
4.6.1.26		Undertake development of Illegal Tracks identification and prioritization plan	Natural Resource Management	Environment and Regulatory Services	Illegal tracks plan created
Delivery Program 2017-2022 Objective 4.7.1 Promote renewable energy outcomes within Council					
Community Strategic Plan Strategy **4.8 Increase awareness of issues affecting our environment, including the preservation of flora and fauna**					
Delivery Program 2017-2022 Objective 4.8.1 Ensure all Council operations comply with environmental standards and regulations					
4.8.1.1		Operate and maintain water treatment plants in accordance with adopted maintenance programs and scheme requirements	Water Supply	Infrastructure Planning (Infrastructure Operations)	Monitor plants continuously with plant breakdowns attended to within 24 hours

4.8.1.2	Operate the water supply network to ensure public health and safety	Water Supply	Infrastructure Planning (Infrastructure Operations)	Ensure any public health and safety issues in relation to water supply are responded to in line with service standards
4.8.1.3	Maintain and operate storage dams in accordance with Australian National Committee On Large Dams (ANCOLD) guidelines	Water Supply	Infrastructure Planning (Infrastructure Operations)	Ensure any issues in relation to the operation and maintenance of storage dams are handled in line with ANCOLD guidelines
4.8.1.4	Operate and maintain sewerage treatment plants in accordance with environmental licences, adopted maintenance programs and scheme requirements	Sewerage	Infrastructure Planning (Infrastructure Operations)	Monitor plants continuously with plant breakdowns attended to within 24 hours
4.8.1.5	Operate the sewerage network to ensure service delivery meets public health and safety requirements	Sewerage	Infrastructure Planning (Infrastructure Operations)	Ensure any public health and safety issues in relation to sewerage network are responded to in line with service standards
Delivery Program 2017-2022 Objective 4.8.2 Increase community awareness and enable access to the natural environment				
4.8.2.1	Deliver bushfire preparedness and planning programs to the community	Natural Resource Management	Environment and Regulatory Services	1. Attendance at BFMC and bushfire risk meetings - 90 % participation 2. Attendance at relevant industry training and workshops - 90 % participation 3. CRM completion 100% within the relevant service standards -variable

Delivery Program 2017-2022 Objective 4.8.3 Promote Biodiversity Programs					
4.8.3.1		Continue implementation of identified actions from the adopted Biodiversity Strategy	Natural Resource Management	Environment and Regulatory Services	Implementation of actions from the following plans (as outlined in specific OP plan goals): - Koala Recovery Strategy - Flying-fox Camp Management plan - Ecological restoration report - Mid-North Coast Feral Deer Strategy
4.8.3.2		PMHC in partnership with JO, KPS, and DPIE support the ongoing work of the Koala Recovery Partnership Program	Natural Resource Management	Environment and Regulatory Services	Operational objectives of the Koala Recovery Partnership Program are met

Glossary

ADAC	Asset Designed As Constructed
ANCOLD	Australian National Committee On Large Dams
CSP	Community Strategic Plan
CCAT	Community Council Action Team
CPTIGS	Community Passenger Transport Infrastructure Grant Scheme
CW	Capital Works
DA	Development Application
DCP	Development Control Plan
DT	Digital Technology
DP	Delivery Program
EPA	Environment Planning Assessment
EPA	Environmental Protection Authority
EPBC	Environmental Protect Biodiversity Conservation
EWMS	Environmental Work Method Statement
GA	General Aviation
GIPA	Government Information (Public Access)
HRIS	Human Resource Information System
IPR	Integrated Planning and Reporting
KPoM	Koala Plans of Management
LMS	Learning Management System
LGA	Local Government Area
LTFP	Long Term Financial Plan
MRF	Material Recovery Facility
MNCJO	Mid North Coast Joint Organisation
NATA	National Association of Testing Authorities
OLG	Office of Local Government
OP	Operational Plan
ORRF	Organic Resource Recovery Facility
PID	Public Interest Disclosures
PMH	Port Macquarie-Hastings
PMHC	Port Macquarie-Hastings Council
REF	Review of Environmental Factors
RFS	Rural Fire Service
SCADA	Supervisory Control and Data Acquisition
STP	Sewer Treatment Plant
TCMP	Town Centre Master Plan
UGMS	Urban Growth Management Strategy
UPSS	Underground Petroleum Storage Systems
VMP	Vegetation Management Plans
WMF	Waste Management Facility
WTP	Water Treatment Plant

pmhc.nsw.gov.au

PORT MACQUARIE
HASTINGS COUNCIL

Port Macquarie Hastings Council
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Together as One sculpture,
Port Macquarie

PORT MACQUARIE
HASTINGS COUNCIL

Attachment 1

DRAFT Schedule of Fees and Charges

2021-2022



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DRAFT Schedule of Fees and Charges 2021 – 2022

Pricing Policy

In determining the appropriate fees to be charged for Council services and facilities in 2021-2022, the basic principle applied was that charges should be considered fair and equitable to the general community. Individual members of the community should not be precluded from essential services because of economic circumstances.

The range of services provided by Council to the community is diverse and require different considerations when determining the associated fee or charge. The level of the fee or charge was determined having regard to the following categories (which have been included in this document next to the relevant fee or charge):

Code	Description
A	**Economic Cost** Total cost of providing services for private good.
B	**Community Service** Services considered to have a level of benefit to the community. Generally benefits are not solely confined to users. Partially funded by rates.
C	**Regulated Charges** Federal or State Government set charges.
D	**User Pays Principal** Services under this category are such that individual costs can be determined and met by the user of the service.
E	**Market Forces** Services that Council operates in a competitive market and needs to fix charges similar to other providers.
F	**Cost Plus** Services provided on a commercial basis with an amount of risk profit included.
G	**Developer Contributions - Section 7.11, Section 7.12 & Development Servicing Plans (DSP)** Charges are determined in accordance with Council's adopted plans. Charges are indexed quarterly in line with movements in the Consumer Price Index (All Groups, Sydney). Current charges are available from Council's website.

DRAFT Schedule of Fees and Charges 2021 – 2022

Goods and Services Tax

Introduction

The Goods and Services Tax (GST) passed through legislation on 30 June 1999 and received Royal Ascent on the 8 July 1999. The introduction of the Goods and Services Tax meant that certain fees and charges levied by Port Macquarie - Hastings Council attract GST.

Transparency

Council has gone to great lengths to ensure it has been totally transparent in reporting the applicability of the GST to its fees and charges. This document has been set out in such a way so that you, as the user, will know exactly where the GST applies to fees and charges. Three columns in particular within this document relate to GST:

- **Charge (excl. GST):** This is the actual fee or charge without GST applied to it.
- **GST:** If GST is applicable, this column will show the value of the GST to be applied **(for one unit)** and is rounded to the nearest cent. If we are unable to determine the cost of a good or service at the time of printing (eg the cost may vary during the year), "calculate" will appear in the fee line and GST will be calculated once the fee is known. If the column is blank yet the Fee Amount field contains a fee, it indicates GST is not applicable.
- **Charge (incl. GST):** This column should only be used for indicative purposes only (refer to "GST Calculations" below). The column displays the Total Charge **for one unit** with GST included.

GST Calculations

In most cases Council has been able to calculate the GST charge and report it as a dollar figure. This amount is based on one unit. For example, the charge for a copy of a Deposited Plan is $20.00, with GST of $2.00, bringing the Charge incl GST to $22.00.

If Council was unable to calculate the unit charge at the time of printing, the word “calculate” will be shown in the fee line. In this case, GST will be calculated once the Fee Amount is known.

GST Amendments

While the fee amount in this document will not alter without a resolution of Council, followed by a subsequent period on public exhibition, the applicability of the GST to the fees and charges may, depending on the interpretations and rulings as the GST legislation evolves.

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Port Macquarie-Hastings Council

Leadership & Governance

Financial Management

Certificates

Section 603 Certificate	$86.00	$0.00	$86.00	Each
This is a statutory charge determined yearly by the Office of Local Government				
Urgency fee Section 603 Certificate	$85.00	$0.00	$85.00	Each
Fee to issue Section 603 Certificate on the spot - in addition to the normal Section 603 certificate fee				

Rate Information

Rate Information – Per hour	$64.20	$0.00	$64.20	Per 1 Hour
Minimum Charge 1 hour				
Copies of Rates & Water Notices – current notice and previous financial year			No Charge	
Copies of Rates & Water Notices – all notices earlier than current notice or previous financial year	$10.40	$0.00	$10.40	Each

Interest Rate on Overdue Rates & Charges

As per the rate determined by the NSW Office of Local Government

Broadwater Special Rate			0% from 1/7/20, 7% from 1/1/21	
General Rates			0% from 1/7/20, 7% from 1/1/21	
Sanctuary Springs Special Rate			0% from 1/7/20, 7% from 1/1/21	

Ordinary Rates

Base amount by Category

Business – Defined Urban Centres	$626.60	$0.00	$626.60	Per Annum
Business – Other	$526.60	$0.00	$526.60	Per Annum
Business – Port Macquarie CBD	$626.60	$0.00	$626.60	Per Annum
Farmland	$647.30	$0.00	$647.30	Per Annum
Residential – Defined Urban Centres	$626.60	$0.00	$626.60	Per Annum
Residential – Other	$526.60	$0.00	$526.60	Per Annum

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Rate in $ by Category				
Business – Defined Urban Centres			0.54547c	Per $ Valuation
Business – Other			0.47540c	Per $ Valuation
Business – Port Macquarie CBD			2.40857c	Per $ Valuation
Farmland			0.28078c	Per $ Valuation
Residential – Defined Urban Centres			0.25172c	Per $ Valuation
Residential – Other			0.28082c	Per $ Valuation
Sanctuary Springs Special Rate			0.13382c	Per $ Valuation
Broadwater Special Rate			0.06277c	Per $ Valuation
Lease Fees – Council Land				
Lease Application				
Administration Fee – Not elsewhere indicated – No Report to Council	$209.09	$20.91	$230.00	Each
Non-refundable Can be used for investigations / requests to lease new locations involves research / site visits / meetings. Could be deducted from lease application fee if lease proceeds.				
Administration Fee – Not elsewhere indicated – Report to Council	$290.91	$29.09	$320.00	Each
Non-Refundable Can be used for investigations/requests to lease new locations involves research/site visits/meetings. Could be deducted from Lease application fee if lease proceeds				
Commercial Leases up to 5 Years	$781.82	$78.18	$860.00	Each
Application and Administration Fee				
Commercial Leases over 5 Years	$1,072.73	$107.27	$1,180.00	Each
Application and Administration Fee				
Commercial – Renewal or Assignment of Lease Not Requiring Amendment	$336.36	$33.64	$370.00	Each
Application and Administration Fee				
Community – Application and Administration Fee	$700.00	$70.00	$770.00	Each
Application and Administration Fee				
Community – Renewal or Assignment of Lease Not Requiring Amendment	$290.91	$29.09	$320.00	Each
Application and Administration Fee				
Survey Fee			At Cost	Each
Valuation Fees			At Cost	Each
Legal Fees			At Cost	Each

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Lease Application [continued]

Advertising			At Cost	Each
Bond – Community Lease/Licence	$500.00	$0.00	$500.00	Each
Bond – Commercial Lease – Monthly Rental up to $5,000	$2,000.00	$0.00	$2,000.00	Each
Bond – Commercial Lease – Monthly Rental $5,001 and Over	$5,000.00	$0.00	$5,000.00	Each

Lease Rental

Commercial			Set by market valuation	Each
Community	$545.45	$54.55	$600.00	Per Annum
Agistment			Set by market valuation	Each

Outdoor Dining and Outdoor Trading on Council Roads and Footpaths

Application and Administration Fee	$400.00	$0.00	$400.00	Each
Non-refundable				
Supply, Installation, Removal or Relocation of Markers to Identify the Footway Dining Area.			At Cost	Each
Rental for Outdoor Dining – Port Macquarie CBD – per sqm	$150.00	$0.00	$150.00	Per m2/Annum
Rental for Outdoor Dining – Non Port Macquarie CBD – per sqm	$65.00	$0.00	$65.00	Per m2/Annum
Wauchope, Lake Cathie, Lighthouse Beach, Laurieton, Bonny Hills, etc				
Rental for Outdoor Dining – Villages – per sqm	$42.00	$0.00	$42.00	Per m2/Annum
Telegraph Point, Beechwood, etc				
Footpath Bond			$500 Bond or one (1) month's rental whichever is the greater	Each

Statutory Property Fees

Property Management

Administration Fee – Sales of land with a value of between $0 and $20,000	$509.09	$50.91	$560.00	Each
Administration Fee – Sales of land with a value of between $20,001 and $100,000	$981.82	$98.18	$1,080.00	Each
Non-refundable				
Administration Fee – Sale of land with a value of over $100,000	$1,463.64	$146.36	$1,610.00	Each
Non-refundable Based on administration time to co-ordinate, report etc				
Administration Fee – Not elsewhere indicated	$209.09	$20.91	$230.00	Each
No report to Council, Non-refundable				

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Property Management [continued]

Administration Fee – Not elsewhere indicated	$300.00	$30.00	$330.00	Each
Report to Council, Non-refundable				
Investigation Fee, Search Fee	$345.45	$34.55	$380.00	Each
Sale of Council Owned Land			At Cost	Each
Should the sale be undertaken following a reclassification of the land which was funded by the applicant, no additional investigation and administration fees will be charged. Should Council instigate the sale of the lot, no investigation, administration, valuation, survey or legal fees will be charged. Should the purchaser engage any external parties this will be at the purchaser's cost.				
Survey, Valuation, Legal			At Cost	Each

Statutory Property Transactions

Hourly Rate for Statutory Property Transactions and Advice	$127.27	$12.73	$140.00	Per Hour
Non-refundable For transactions including road closures, easements, land transfers, boundary adjustments etc where not covered by an existing fee				

Naming & Renaming of Roads and Reserves

Naming / Renaming Council Public Road / Reserve	$760.00	$0.00	$760.00	Each
Application Fee - Non-refundable				
Naming / Renaming of a Crown Reserve	$950.00	$0.00	$950.00	Each
Application Fee - non-refundable				

Road Closing Application Fees

Council Road Closure – Investigation Fee	$660.00	$0.00	$660.00	Each
Non-refundable This fee will be deducted from the Administration Fee if road closure proceeds.				
Crown Road Closure Application	$2,000.00	$0.00	$2,000.00	Each
Non-refundable				
Council Road Closure Stage 1 – Administration Fee	$1,300.00	$0.00	$1,300.00	Each
Non-refundable				
Council Road Closure Stage 2 – Administration Fee	$1,800.00	$0.00	$1,800.00	Each
Non-refundable				
Survey, Valuation, Legal			At Cost	Each
Fees to Other Authorities, Government Departments			At Cost	Each
Non-refundable				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Covenants and Easements				
Extinguishment / Variation to Restrictive Covenant			At Cost	Each
Non-refundable				
Requests for New / Variation to Easements			At Cost	Each
Non-refundable				
Survey, Valuation, Legal			At Cost	Each
Fees to Other Authorities, Government Departments			At Cost	Each
Non-refundable				
Land Register				
Land Register Extract – Multiple Properties	$110.00	$0.00	$110.00	Each
Administrative Fees				
Credit Card Surcharge			0.5%	Per Transaction
Cheque Dishonour Administration Fee	$36.00	$0.00	$36.00	Each
Direct Debit Dishonour Administration Fee	$26.00	$0.00	$26.00	Each
New Owners Administration Fee	$51.00	$0.00	$51.00	Each
Rates/Water Overpayment Refund Fee	$26.00	$0.00	$26.00	Each
Fee for Bank Trace on Unidentified Payment	$35.00	$0.00	$35.00	Each
Document Sales				
Other Documents				
Refer Appendix 1				
Council's Drainage Code	$47.00	$0.00	$47.00	Each
Reports & Studies				
Refer Appendix 1				
Various Reports & Studies	Calculated according to printing and / or photocopying costs			Each
Government Information (Public Access) Act 2009 (GIPA)				
Subpoena to produce documents				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Access to Records

Personal Records

Application Fee	$30.00	$0.00	$30.00	Each
Processing Charge – hourly rate	$30.00	$0.00	$30.00	Per Hour
after first 20 hours				
Internal Review Fee	$40.00	$0.00	$40.00	Each

Formal Applications – Non Personal Records

Application Fee	$30.00	$0.00	$30.00	Each
Processing Charge – hourly rate	$30.00	$0.00	$30.00	Per Hour
First hour free A 50% reduction in fees may apply to the processing charge for customers suffering financial hardship or of special benefit to the public generally				
Internal Review Fee	$40.00	$0.00	$40.00	Each

Informal and all other Applications

Application Fee			No Charge	
Processing Charge – hourly rate	$30.00	$0.00	$30.00	Per Hour

Adjoining Owners

Application for Adjoining Owners Details	$17.00	$0.00	$17.00	Each

Subpoenas – Conduct Money

Where Council is not a party to the proceedings

Subpoena to produce documents

Conduct Money	$69.00	$0.00	$69.00	Each
Conduct Money for subpoenas served under seven (7) days	$138.50	$0.00	$138.50	Each
Searching and compiling documents – per 15 mins	$22.50	$0.00	$22.50	1/4 hour
Per 1/4 hour of part thereof. Plus copying, printing, postage or courier charges				

Subpoena to attend court

Conduct money where production required at a Court of tribunal	$71.00	$0.00	$71.00	Each
Staff attendance and travel time – Hourly rate			At Cost	Per Hour
Travel, accommodation and meal expenses			At Cost	

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Digital Technology

Certified Copy

Refer Appendix 1

Certified Copy (for evidence)

Certified Copy of Document, Map or Plan	$53.00	$0.00	$53.00	Each
EP&A Act S.10.8 (2) & EP&A Reg 2000 cl.262				

Printing & Laminating

Refer Appendix 1

Printing

Prints 1-50	$1.05	$0.10	$1.15	Per Print
Prints 51+	$0.29	$0.03	$0.32	Each
This refers to each print in excess of 50. First 50 prints are at $1.00 any additional prints over 50 are at 0.30c				

Collating

A4	$0.15	$0.02	$0.17	Per Sheet
A3	$0.22	$0.02	$0.24	Per Sheet
Stapling	$0.22	$0.02	$0.24	Per Sheet

Comb Binding

1 – 50 pages	$3.86	$0.39	$4.25	Each
51 – 100 pages	$4.50	$0.45	$4.95	Each
101 – 150 pages	$5.23	$0.52	$5.75	Each

Laminating

A4 sheet	$2.86	$0.29	$3.15	Per Sheet
A3 sheet	$5.64	$0.56	$6.20	Per Sheet

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Your Business and Industry

Economic Development

The Hub Pop-Up Business and Co-Working Space

Co-Working – Full Day (up to 8 hours)	$30.00	$3.00	$33.00	Per Day
Co-Working – Full Time (up to 40 hours)	$90.00	$9.00	$99.00	Per Week
Co-Working Monthly Subscription – Part Time (up to 2 days per week)	$90.00	$9.00	$99.00	per month
Co-Working Monthly Subscription – Full Time (Up to 5 days per week)	$180.91	$18.09	$199.00	per month
Meeting Room Hire	$17.27	$1.73	$19.00	Per Hour
Venue Hire – After Hours Week Days	$30.00	$3.00	$33.00	Per Hour
Venue Hire – After Hours Weekends	$50.00	$5.00	$55.00	Per Hour
Closed Office Hire – Daily	$90.00	$9.00	$99.00	Per Day
Closed Office Hire – Weekly	$180.91	$18.09	$199.00	Per Week
Closed Office Hire – Monthly	$271.82	$27.18	$299.00	Per Month

Tourism Marketing

Co-operative Marketing			Price on application	POA

Advertising

Other Organisations

Electronic Direct Mail Advertising	$72.73	$7.27	$80.00	
Visitor Guide Advertisement	$481.82	$48.18	$530.00	
Destination Website Promotion Panel	$740.91	$74.09	$815.00	Per Month

Not for Profit

Electronic Direct Mail Advertising	$36.36	$3.64	$40.00	
Visitor Guide Advertisement	$237.27	$23.73	$261.00	
Destination Website Promotion Panel	$369.09	$36.91	$406.00	Per Month

Image Library

Photographic Digital Images	$33.64	$3.36	$37.00	Each
Cost per digital photographic image (for commercial purposes) No Charge if not for profit				
Video	$110.91	$11.09	$122.00	Per Module
Module				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Airport

Port Macquarie Airport

Refer Appendix 2

Regular Public Transport (RPT) Services

Passenger Landing Fee	$21.00	$2.10	$23.10	Per Passenger
Applies to all RPT aircraft, as well as any charter aircraft, including helicopters, using the RPT apron				
Passenger Departure Fee	$21.00	$2.10	$23.10	Per Passenger
Applies to all RPT aircraft, as well as any charter aircraft, including helicopters, using the RPT apron				
Security Screening Fee	POA - per departing passenger			POA – per departing passenger
Security screening charges are charged on a cost recovery basis, apportioned per passenger on Screened Air Services* and calculated monthly. Any additional security screening costs that are directly incurred as a result of other air services operating on the RPT apron may be cost recovered from that operator. Screened Air Services refer to government mandated "screened air service" as defined in the Aviation Transport Security Regulations 2005.				

General Aviation (GA) Services

Airport Usage Charge – Practice Approaches			No Charge	Per practice approach
Applies to all aircraft per practice approach Exempt from landing charges				
Airport Usage Charge (Annual) – For Commercial Purposes	$1,233.00	$123.30	$1,356.30	Per Annum per Aircraft
Applies to airport based commercial operators with less than five (5) aircraft - refer Appendix 2 Excludes RPT and freight aircraft operators				
Airport Usage Charge (Annual) – For Commercial Purposes	$1,233.00	$123.30	$1,356.30	Per Annum per Aircraft
Applies to Helicopter / Microlight / Ultralight aircraft operators with less than five (5) aircraft - refer Appendix 2 Hangar lessee will be charged the annual fee for a commercial ultralight, microlight or similar, per aircraft				
Airport Usage Charge (Annual) – For Private Purposes	$616.50	$61.65	$678.15	Per Annum per Aircraft
Applies to airport based private operators				
Airport Usage Charge (Annual) – For Private Purposes	$616.50	$61.65	$678.15	Per Annum per Aircraft

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

General Aviation (GA) Services [continued]

Airport Usage Charge (Annual) – For Private Purposes	$616.50	$61.65	$678.15	Per Annum per Aircraft
Applies to Helicopter / Microlight / Ultralight aircraft Hangar lessee will be charged the annual fee for a private ultralight, microlight or similar, per aircraft				
Airport Usage Charge – Weight Based Movement Charge	$11.82	$1.18	$13.00	Per Tonne pro rata
Applies to all aircraft per landing, excluding RPT aircraft and aircraft covered by the annual usage charges listed above. Minimum charge $13.00 (incl. GST) per landing.				
Airport Usage Charge – Training Circuits	$11.82	$1.18	$13.00	Per Tonne pro rata
Applies to all aircraft per landing, excluding RPT aircraft and aircraft covered by the annual usage charges listed above. Minimum charge of $13.00 (incl. GST) per landing.				
Airport Usage Charge – Training Circuits (out of hours operations – refer Appendix 2)	$17.73	$1.77	$19.50	Per Tonne pro rata
Applies to all aircraft per landing, excluding RPT aircraft and aircraft covered by the annual usage charges listed above. Minimum charge $19.50 (incl. GST) per landing.				
Aircraft Parking – RPT Apron	$62.73	$6.27	$69.00	Per hour
Applies to aircraft parked on RPT apron RPT aircraft exempt				
Aircraft Parking – GA Apron	$9.55	$0.95	$10.50	Per hour after first 2 hours, per aircraft
Applies to aircraft parked on GA sealed surfaces in defined areas in accordance with conditions set out on adjacent signage and excludes the width of hangar door openings				
Non-Operational and Abandoned Aircraft	$13.18	$1.32	$14.50	Per Day
Applies to aircraft without a current Certificate of Airworthiness or current Maintenance Release parked on any part of the airport - fee applies after first 30 days Exemption: aircraft that are accommodated within a leased boundary / premises				
Charitable not for profit organisations providing aeromedical services only		Based on application		Per Aircraft
Applies to charitable not for profit aeromedical services only on a case-by-case basis Exempt from landing charges based on application				

Airport Meeting Rooms

Meeting Room 1 OR 2 Hire (1/2 Day)	$90.91	$9.09	$100.00	1/2 Day
Includes electricity, A/C, cleaning, tables and chairs Monday to Friday, max 4 hours Max 4 hours				
Meeting Room 1 OR 2 Hire (Full Day)	$136.36	$13.64	$150.00	Full Day
Includes electricity, A/C, cleaning, tables and chairs				

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Airport Meeting Rooms [continued]				
Meeting Room 1 OR 2 Hire (Full Day)	$136.36	$13.64	$150.00	Full Day
Includes electricity, A/C, cleaning, tables and chairs Monday to Friday, max 8 hours 8 hours				
Other Miscellaneous Fees				
Hire Car Operators (Desk & Car Parking)			Market value	POA – Per Annum
Adjusted in June each year in line with CPI				
Hangar and Ground Lease Rental			Market value	POA – Per M2 per Annum
Determined by valuation.				
Airside Activities Charges	$60.45	$6.05	$66.50	Per Hour, Each
For Airport Safety / Security Officer supervision Cost recovery for airside activities				
Lost Gate Key	$272.73	$27.27	$300.00	Each
Airport Parking Fees				
Car Parking Charges: 0-30 minutes			FREE	per stay
Car Parking Charges: 30-60 minutes	$2.73	$0.27	$3.00	Per Hour
Terminal Public Car Park First 30 mins free				
Car Parking Charges: 1-2 hours	$5.45	$0.55	$6.00	per hour
Car Parking Charges: 2-3 hours	$8.18	$0.82	$9.00	per hour
Car Parking Charges: 3-4 hours	$10.91	$1.09	$12.00	per hour
Car Parking Charges: 4-5 hours	$13.64	$1.36	$15.00	per hour
Car Parking Charges: Full Day (5 to 24 hours from time of entry)	$13.64	$1.36	$15.00	Per Day
Terminal Public Car Park Discounted fees apply for longer term parking				
Car Parking Charges: 2 days	$27.27	$2.73	$30.00	per stay
Car Parking Charges: 3 days	$40.91	$4.09	$45.00	per stay
Car Parking Charges: 4 days	$50.00	$5.00	$55.00	per stay
Car Parking Charges: 5 days	$59.09	$5.91	$65.00	per stay
Car Parking Charges: 6 days	$68.18	$6.82	$75.00	per stay
Car Parking Charges: 7 days	$77.27	$7.73	$85.00	per stay
Car Parking Charges: Greater than 7 days	$85.00 plus $5.00 per day thereafter			per stay
Lost Parking Ticket	$77.27	$7.73	$85.00	per ticket

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Airport Parking Fees [continued]

Car Parking Charges – Credit Card Service Fee	2.5% Charge applies to payments made by credit card			Each

Environmental Testing

Water Analysis

Minimum Invoice/report fee will be $50 (incl GST). Price may vary in accordance with various programs undertaken.

Activated Sludge Analysis	$118.91	$11.89	$130.80	each
UV Absorbance/UV Transmission	$13.73	$1.37	$15.10	each
Administration Fee	$38.00	$3.80	$41.80	per sample batch
Extensive Report Fee	$75.09	$7.51	$82.60	per sample batch
Re-issue of Reports	$38.00	$3.80	$41.80	per sample batch
Sample Preparation Fee For Complex Matrix	$28.27	$2.83	$31.10	each
Urgent Analysis (if possible) Incurs a Surcharge		Price on Application		POA
Weekend Analysis Incurs a Surcharge		Price on Application		POA
Alkalinity	$23.45	$2.35	$25.80	each
Ammonia (includes filtration charge)	$23.45	$2.35	$25.80	each
Total BOD5	$66.27	$6.63	$72.90	each
Biovolume (literature and or historical values only)	$28.27	$2.83	$31.10	each
Biovolume (literature and or historical + measurement)	$56.55	$5.65	$62.20	each
Chlorophyll – a	$60.45	$6.05	$66.50	each
Colour (apparent)	$14.64	$1.46	$16.10	each
Colour (true)	$16.55	$1.65	$18.20	each
Dissolved Oxygen	$13.73	$1.37	$15.10	each
Electrical Conductivity	$13.73	$1.37	$15.10	each
Enterococci (confirmed)	$46.73	$4.67	$51.40	each
Thermotolerant Coliforms (presumptive)	$46.73	$4.67	$51.40	each
Thermotolerant Coliforms (confirmed)	$60.45	$6.05	$66.50	each
Fluoride	$28.27	$2.83	$31.10	each
Microscopic Identification	$53.64	$5.36	$59.00	each
Nitrite – N (includes filtration charge)	$23.45	$2.35	$25.80	each
Nitrate – N (calculated from NOx and Nitrite)	$35.09	$3.51	$38.60	each
NOx – N (includes filtration charge)	$35.09	$3.51	$38.60	each
Nitrate (if NOx and Nitrite also reported)	$5.91	$0.59	$6.50	each
Total Suspended Solids	$23.45	$2.35	$25.80	each
Filterable Reactive Phosphorus (includes filtration charge)	$23.45	$2.35	$25.80	each
Other Services			By quotation	each
pH	$13.73	$1.37	$15.10	each
Redox	$17.64	$1.76	$19.40	each

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Water Analysis [continued]

Salinity	$13.73	$1.37	$15.10	each
Sample Collection (water)	$140.27	$14.03	$154.30	per hour
1 person on run				
Sample Collection (gas)	$113.00	$11.30	$124.30	per hour
1 person on run				
Sample Containers		Included in testing fees		
Total Chlorine	$20.45	$2.05	$22.50	each
Free Chlorine	$20.45	$2.05	$22.50	each
Total Dissolved Solids (Calculation)	$13.73	$1.37	$15.10	each
Total Kjeldahl Nitrogen – N	$76.00	$7.60	$83.60	each
Total Kjeldahl Nitrogen – N (Calculated if TN and NOx also reported)	$5.91	$0.59	$6.50	each
Total Organic Nitrogen – N (Calculated TKN – NH3)	$28.27	$2.83	$31.10	each
Total Phosphorous (persulphate digestion)	$35.09	$3.51	$38.60	each
Total Nitrogen (persulphate digestion)	$41.00	$4.10	$45.10	each
Turbidity	$13.73	$1.37	$15.10	each
Cyanobacteria Identification & Enumeration	$118.91	$11.89	$130.80	each
Potentially Toxic Cyanobacteria Identification & Enumeration	$79.91	$7.99	$87.90	each
Total Phytoplankton Identification & Enumeration	$172.45	$17.25	$189.70	each
Total Coliforms & E. coli (MPN)	$66.27	$6.63	$72.90	each
Chemical Oxygen Demand	$45.82	$4.58	$50.40	each
Heterotrophic Plate Count (HPC)	$36.18	$3.62	$39.80	each

The Glasshouse

Glasshouse Port Macquarie

Refer also to Conditions of Hire (available on website www.glasshouse.org.au)

Refer to Appendix 10

Performance Spaces

Full Theatre Hire (hire per performance or event)	$354.55	$35.45	$390.00	per hour
As per standard rates as costed or 10% of Gross Box Office taking (whichever is the greater). Includes A/C, cleaning, access to standard in-house lighting, 1 x Venue Supervisor / 1 x Theatre Technician 4 hour minimum hire				
Theatre Hire Stalls Only	$309.09	$30.91	$340.00	per hour
Includes A/C, cleaning, access to standard in-house lighting, 1 x Venue Supervisor / 1 x Theatre Technician 4 hour minimum hire				
Theatre Hire Rehearsal Rate (per hour)	$272.73	$27.27	$300.00	per hour
Includes 1 x Venue Supervisor and 1 x Technician. Excludes access to auditorium seating and theatre is under work lights only.				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Performance Spaces [continued]

Theatre Hire Rehearsal Rate (per hour)	$272.73	$27.27	$300.00	per hour
Includes 1 x Venue Supervisor and 1 x Technician. Excludes access to auditorium seating and theatre is under work lights only. 4 hour minimum hire				
Studio Hire – Performance/Seminar	$81.82	$8.18	$90.00	per hour
Includes A/C, cleaning, access to standard in-house lighting and sound rig, 1 x Venue Supervisor 4 hour minimum hire				
Studio Hire Bare Walls Hire combined with Theatre Hire. Flat rate of $180, then $30/hr thereafter	$163.64	$16.36	$180.00	$180 Flat Rate + $30 Per Hour
Includes electricity, A/C, cleaning and event support staff. Room set to client specifications. 4 hour minimum hire				
Studio Hire Bare Walls. Flat fee of $200 per day. Available Monday to Thursday 9.00am – 5.00pm. Not available after hours.	$181.82	$18.18	$200.00	$200.00 Flat Rate Per Day
Includes electricity, AC, cleaning, work lights. No event staff included (space subject to availability)				
Studio Hire (1/2 Day) – Meeting Only During Business Hours, Monday to Friday 9am – 5.30pm	$227.27	$22.73	$250.00	1/2 Day
Includes electricity, A/C, cleaning, table, chairs. AV Operator pre rig, set OR operation at additional cost. 1/2 Day (max 4 hours)				
Studio Hire (Full Day) – Meeting Only During Business Hours, Monday to Friday 9am – 5.30pm	$318.18	$31.82	$350.00	Full Day
Includes electricity, A/C, cleaning, table, chairs. AV Operator pre rig, set OR operation at additional cost. Full Day (8 hours)				
Glasshouse Podium Hire Package (Charge is Per Hour)	$54.55	$5.45	$60.00	Per Hour
Includes 1 x Venue Supervisor for the duration of the booking. Hire and set up of equipment (up to 20 chairs, music stands, power cables) and access to 240v power (space is subject to availability). Minimum 3 hour hire				
Glasshouse Podium Hire Only (Charge is Per Hire)	$54.55	$5.45	$60.00	$60.00 Flat Rate Per Hire
No event staff, equipment or power included (space is subject to availability).				
Mezzanine Theatre Presentation Package	$186.36	$18.64	$205.00	Per Hour
Only available in conjunction with hire of the mezzanine foyer. Includes data projector and screen and access to seating for a maximum 100 pax in the theatre dress circle. Please Note: additional staff charges may apply depending on scope of the event. 3 hour minimum hire				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Conference Spaces				
Meeting Room 1 OR 2 Hire (1/2 Day)	$136.36	$13.64	$150.00	1/2 Day
Includes electricity, A/C, cleaning, tables, chairs Max 4 hours				
Meeting Room 1 OR 2 Hire (Full Day)	$181.82	$18.18	$200.00	Full Day
Includes electricity, A/C, cleaning, tables, chairs 8 hours				
Meeting Room 1 OR 2 Hire – After Hours (0 – 70 people, after business hours access inclusive of 1 staff). After Hours = 5.30pm – 11pm weekdays or 9am – 11pm Saturdays. Staff surcharges apply on Sundays, Public Holidays and after 11pm	$72.73	$7.27	$80.00	Per Hour
Includes electricity, A/C, cleaning, tables, chairs minimum 3 hours / price per hour				
Meeting Room 1 and 2 Combined Hire (1/2 Day)	$227.27	$22.73	$250.00	1/2 Day
Includes electricity, A/C, cleaning, tables, chairs Max 4 hours				
Meeting Room 1 and 2 Combined Hire (Full Day)	$318.18	$31.82	$350.00	Full Day
Includes electricity, A/C, cleaning, tables, chairs 8 hours				
Meeting Room 1 and 2 Combined Hire – After Hours (71 – 140 people, after business hours access inclusive of 1 staff). After Hours = 5.30pm – 11pm weekdays or 9am – 11pm Saturdays. Staff surcharges apply on Sundays, Public Holidays and after 11pm	$90.91	$9.09	$100.00	Per Hour
Includes electricity, A/C, cleaning, tables, chairs minimum 3 hours / price per hour				
Art Lab Room Hire 1/2 Day (Not available after hours)	$113.64	$11.36	$125.00	1/2 Day
Includes electricity, A/C, cleaning, tables, chairs Max 4 hours				
Art Lab Room Hire Full Day (Not available after hours)	$159.09	$15.91	$175.00	Full Day
Includes electricity, A/C, cleaning, tables, chairs 8 hours				
Boardroom 1 Hire (Level 2) – 1/2 Day	$100.00	$10.00	$110.00	1/2 Day
16 people maximum. Includes electricity, A/C, cleaning, tables, chairs Max 4 hours				
Boardroom 1 Hire (Level 2) – Full Day	$145.45	$14.55	$160.00	Full Day
16 people maximum. Includes electricity, A/C, cleaning, tables, chairs 8 hours				
Boardroom 2 (Level 2) – 1/2 Day	$90.91	$9.09	$100.00	1/2 Day

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Conference Spaces [continued]				
10 people maximum. Includes electricity, A/C, cleaning, tables, chairs Max 4 hours				
Boardroom 2 (Level 2) – Full Day	$136.36	$13.64	$150.00	Full Day
10 people maximum. Includes electricity, A/C, cleaning, tables, chairs 8 hours				
Boardroom 3 (Level 2) – Full Day	$54.55	$5.45	$60.00	Full Day
6 people maximum, Includes electricity, A/C, cleaning, tables, chairs, WI-FI 8 hours				
Boardroom 3 (Level 2) – Weekly Hire	$200.00	$20.00	$220.00	Per Week
6 people maximum, Includes electricity, A/C, cleaning, tables, chairs, WI-FI Monday to Friday, max 8 hours per day				
Regional Gallery Hire (Top Floor OR Ground Floor)	$90.91	$9.09	$100.00	Per Hour
Access to floor space subject to availability and exhibition restrictions - any set up required will be charged at applicable staff and equipment rates 3 hour minimum hire				
Foyer Hire (for event)	$90.91	$9.09	$100.00	Per Hour
Access to floor space - any set up required will be charged at applicable staff and equipment rates 3 hour minimum hire				
Foyer Hire (for set up by Hirer)	$45.45	$4.55	$50.00	Per Hour
Access to floor space by Hirer - any equipment set up required will be charged at applicable staff and equipment rates 1 hour minimum hire				
AV Package (Mezzanine Foyer)	$309.09	$30.91	$340.00	Per Day
Includes hire of a data projector, lectern and microphone OR radio mic, laptop, staging, PA system, LED lights, tabs and screen. (Operator is extra and charged at the published hourly rate IF required)				
Whole of Venue: Includes access to Theatre, Studio, Meeting Room 1 & 2, Small Function Room, Mezzanine Foyer, 3 x staff			By quotation	Per Day
Subject to availability				
Additional dressing room activation	$181.82	$18.18	$200.00	Per Hire/Event
Only available when combined with theatre hire Includes electricity, A/C, cleaning				

Staff Rates

Staff working conditions include the following - Minimum 3 hr call, plus staff must be allowed a meal break no later than 5 hours after commencement, all missed meal breaks will incur A/H charges until meal break is taken.

Rates are per hour.

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Staff Rates [continued]

Venue Supervisor / Technician / Duty Manager / Gallery Technician / Editing Technician (Monday – Friday)	$50.00	$5.00	$55.00	Per Hour
Venue Supervisor / Technician / Duty Manager / Gallery Technician (Saturday)	$52.73	$5.27	$58.00	Per Hour
Usher / Tour Guide / Merchandise Seller (Monday – Friday)	$45.45	$4.55	$50.00	Per Hour
Usher / Tour Guide / Merchandise Seller (Saturday)	$48.18	$4.82	$53.00	Per Hour
Venue Supervisor / Technician / Duty Manager / Gallery Technician (Sunday)	$61.82	$6.18	$68.00	Per Hour
Usher / Tour Guide / Merchandise Seller (Sunday)	$57.27	$5.73	$63.00	Per Hour
Venue Supervisor / Technician / Duty Manager / Gallery Technician (Public Holiday)	$90.91	$9.09	$100.00	Per Hour
Usher / Tour Guide / Merchandise Seller (Public Holiday)	$90.91	$9.09	$100.00	Per Hour

Miscellaneous Fees

Function Package			By quotation	
Customised Package				
Marketing Packages			By quotation	
Photography Packages (access to non-public venues)			By quotation	
Wedding Ceremony Packages			By quotation	
Merchandising			10% of total sales. Fixed Percentage	
Commission on any goods sold within the premises				
Technical Specifications Late Fee	$45.45	$4.55	$50.00	Per Day
Venue Hire Cancellation Fees			Prices as per Glasshouse Venue Hire Agreement	

Business Sense Packages

Only available during business hours: 8.30 am to 5.30 pm, catering as per set menu, minimum numbers apply, contact Glasshouse for further information.

1/2 Day

Includes Meeting Room 1 & 2 combined, technical assistance on arrival, morning OR afternoon tea, Glasshouse working lunch, free wi-fi, whiteboard, data projector, lectern & microphone, water & mints, room set to clients requirements.

Business Sense Package (minimum 20 delegates)	$40.00	$4.00	$44.00	Per Person
Includes: conference from hire set to clients requirements, technical assistance on arrival, data projector, laptop, Wi-Fi, lectern and microphone, whiteboard, water and mints on tables. Catering included: arrival tea and coffee, morning tea, working lunch with fruit platter, afternoon tea				

Full Day

Includes Meeting Room 1 & 2 combined, technical assistance on arrival, morning tea, afternoon tea, Glasshouse working lunch, free wi-fi, whiteboard, data projector, lectern & microphone, water & mints, room set to clients requirements.

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Full Day [continued]

Business Sense Package (minimum 20 delegates)	$43.64	$4.36	$48.00	Per Person
Includes: conference from hire set to clients requirements, technical assistance on arrival, data projector, laptop, Wi-Fi, lectern and microphone, whiteboard, water and mints on tables. Catering included: arrival tea and coffee, morning tea OR afternoon tea, working lunch with fruit platter				

Live Stream Packages

Specialised Web Streaming & Recording Technology for Online/Live Video Conferencing. Supported by GoTo Meetings.

Package A	$227.27	$22.73	$250.00	Per Day
Includes equipment, set up/down, testing, data allowance and livestream platform. Technician to operate is an additional charge at published hourly rate.				
Package B			By quotation	

Venue Set Up Items

Theatre PA	$109.09	$10.91	$120.00	Per Hire
Dance Floor (Tarkett) Theatre	$181.82	$18.18	$200.00	Per Hire
Dance Floor (Tarkett) Studio	$70.00	$7.00	$77.00	Per Hire
Theatre Forestage / Pit	$350.00	$35.00	$385.00	Per Hire
Radio Microphone – Hand held OR lapel	$50.00	$5.00	$55.00	Per Day
Radio Microphone – Headset (Radio Mic + DPA Microphone)	$90.91	$9.09	$100.00	Per Day
Data Projector – Meeting Rooms & Studio	$136.36	$13.64	$150.00	Per Day
Data Projector + Screen – Theatre	$281.82	$28.18	$310.00	Per Day
Small PA	$72.73	$7.27	$80.00	Per Day
Corded Microphone & Speaker				
Medium PA	$118.18	$11.82	$130.00	Per Day
Includes corded microphone (and lectern where required), CD player, mixing desk, left & right speakers and small stage				
Large PA	$181.82	$18.18	$200.00	Per Day
Includes 1 x radio microphone, 1 x corded microphone (and lectern where required), 2 CD players, mixing desk, left & right speakers, 2 foldback sends. Requires operator at relevant hourly staff charges				
Colour Filters for Lighting	$20.00	$2.00	$22.00	Per 1/2 Sheet
Non standard lighting rig				
Lectern with Microphone (Wired)	$50.00	$5.00	$55.00	Per Day
Screen (8ft x 12ft)	$90.91	$9.09	$100.00	Per Day
Other Miscellaneous Technical or Event Items			By negotiation	
Subject to equipment & availability				
Arcus Picture Hanging System	$181.82	$18.18	$200.00	Per Hire
Preview Monitor	$18.18	$1.82	$20.00	Per Day
White Board			No charge	
Laser Pointer	$10.00	$1.00	$11.00	Per Hire

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Venue Set Up Items [continued]

Presentation Mouse	$15.00	$1.50	$16.50	Per Hire
Orchestral Chairs			No charge	
40 available				
Music Stands			No charge	
50 available (short & tall)				
Grand Piano – Yamaha C7	$254.55	$25.45	$280.00	Per Hire
Does not include Tuning				
Digital Piano – Clarinova Baby Grand	$136.36	$13.64	$150.00	Per Hire
Piano Tuning	$209.09	$20.91	$230.00	Per Request
Rostrum / Risers	$9.09	$0.91	$10.00	Per Unit Per Hire
10 units available for hire				
Mirror Ball	$50.00	$5.00	$55.00	Per Hire
Smoke / Haze Machine	$68.18	$6.82	$75.00	Per Hire
Round Table Cloths	$6.36	$0.64	$7.00	Each
Rectangle Table Cloths	$5.91	$0.59	$6.50	Each
Laptop	$90.91	$9.09	$100.00	Per Unit Per Day
2 units available for hire (running Windows 7)				
Apple MAC	$90.91	$9.09	$100.00	Per Unit Per Day
2 units available for hire				
Modem	$45.45	$4.55	$50.00	Per Modem Per Day
Light It Up Package	$88.18	$8.82	$97.00	
240v Power (Podium)	$38.18	$3.82	$42.00	Per Day
Kiosk (self service) power only available for events located on the Glasshouse Podium				
3-Phase Power (Loading Dock)	$76.36	$7.64	$84.00	Per Day
Requires Technician to provide access. All leads must be tested and tagged.				

Video Recording Packages

Event/Show Recording for Full Show Quality	$318.18	$31.82	$350.00	Per Event/Show
2 x cameras, audio feed, no editing. This service requires an operator for the show call which will be an additional charge at the published hourly rate. Staff charges would be per day for the duration of the event if recording required on multiple days.				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Transaction Fees				
Glasshouse Membership Program Fee – Adult	$44.55	$4.45	$49.00	Each
Glasshouse Membership Program Fee – Adult Double	$71.82	$7.18	$79.00	Per Couple
Glasshouse Membership Program Fee – Concession/Under 21/Student	$40.00	$4.00	$44.00	Each
Proof of age/concession required				
Internet Transaction Fee	$3.18	$0.32	$3.50	Per Transaction
Inclusive of postage fee when tickets are purchased more than 14 days prior to the event.				
Counter Transaction Fee	$2.73	$0.27	$3.00	Per Transaction
Telephone Transaction Fee	$5.00	$0.50	$5.50	Per Transaction
Inclusive of postage fees when tickets are purchased more than 14 days prior to the event.				
Member Transaction Fee	No Charge - Available to current Glasshouse members (excludes online fees)			Per Transaction
Ticket Re-issue Fee (non-members)	$0.91	$0.09	$1.00	Per Ticket
Ticket Re-issue Fee (members)			No Charge	Per Ticket
Exchange Fee (non-members)	$0.91	$0.09	$1.00	Per Ticket
Exchange Fee (members)			No Charge	Per Ticket
Administration Fee	$4.55	$0.45	$5.00	Per Transaction
Membership Processing Fee	□		No charge	Per Transaction
Applicable for counter and telephone membership sales. Online membership sales incur standard internet transaction fees				
Donations Processing Fee			No charge	Per Transaction
Booking Fees				
Ticket Price $0.01 – $25.00	$2.27	$0.23	$2.50	Per Ticket Printed
Ticket Price $25.01 – $50.00	$3.18	$0.32	$3.50	Per Ticket Printed
Ticket Price $50.01 – $75.00	$4.09	$0.41	$4.50	Per Ticket Printed
Ticket Price $75.01 – $100.00	$5.00	$0.50	$5.50	Per Ticket Printed
Ticket Price $100.01 +	Price on application - From $6.00			POA
Cancellation Fee Ticket Price $0.01 – $25.00	$2.27	$0.23	$2.50	Per Ticket
Cancellation Fee Ticket Price $25.01 – $50.00	$3.18	$0.32	$3.50	Per Ticket

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Booking Fees [continued]				
Cancellation Fee Ticket Price $50.01 – $75.00	$4.09	$0.41	$4.50	Per Ticket
Cancellation Fee Ticket Price $75.01 – $100.00	$5.00	$0.50	$5.50	Per Ticket
Cancellation Fee Ticket Price $100.01 +	Price on application - From $6.00			POA
Complimentary Tickets	$0.91	$0.09	$1.00	Per Ticket
Bulk Ticket Print	$1.36	$0.14	$1.50	Per Ticket
Returned Bulk Tickets	$0.45	$0.05	$0.50	Per Returned Ticket
External Ticketing Event Set-up Fee	$54.55	$5.45	$60.00	Per Booking
This will be redeemable to the promoter after the sale of 25 tickets.				
Ticketing Event Amendment Fee	$54.55	$5.45	$60.00	Per Hour
Relates to changes in event ticketing requirements post on sale date				
Transport Tickets	$9.09	$0.91	$10.00	Per Booking
Maximum of 6 tickets				
Miscellaneous Ticket / Merchandise Packages			Price on Application	Per Ticket
Event and Conference Registration			Price on Application	Per Delegate
Visitor Information Centre				
Miscellaneous				
Glasshouse Brochure Display Program	$227.27	$22.73	$250.00	Each
Accommodation				
Booking Commission			10% of booking	Per Booking
Cancellation – Within 7 days prior to arrival			Non refundable	Per Booking
Tour Bookings				
Booking Commission			10% of booking	Each
Cancellation – Within 7 days prior to departure – unless tour is cancelled by the operator			Non refundable	Per Booking

Strategic Landuse

Development Control Plans

Where Council has to prepare or assess

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Development Control Plans [continued]

Preparation and / or review of a DCP	Fee determined by quotation based on full recovery			Estimate
Full cost recovery of external consultant fees and / or Council co-ordination / review costs				

Local Environment Plans

Where Council has to prepare or assess. Note: LEP amendments will be prioritised in accordance with Council policy and adopted strategy. There is no guarantee of the outcomes from the LEP process and fees are non-refundable.

Administrative LEP Amendments

E.g. Mapping anomalies and corrections

No Fee			No Charge	

Minor LEP Amendments and Reclassifications

No significant support studies for Council review

Minor LEP amendments and reclassifications	$12,930.00	$0.00	$12,930.00	Each
50% refundable if proposal is not supported by Council or the Gateway Review Panel				

Other LEP Amendments

E.g. where a significant support study is required

Stage 1: Lodgement and review	$16,160.00	$0.00	$16,160.00	Each
1) To be paid at the time of lodgement, 2) Charged for each party or group of parties represented separately in the planning proposal, 3) $1,000 discount on fee if pre-lodgement has been held in relation to the proposal				
Stage 2: Exhibition and finalisation	$10,770.00	$0.00	$10,770.00	Each
$10,400 up to 5Ha estimated developable area + $1,040/Ha up to 10Ha developable area + $520/Ha up to 20Ha developable area + $208/Ha over 20Ha developable area				

Council co-ordination of specialist study preparation or peer review

External consultant fees and Council co-ordination costs	Fee determined by quotation based on full recovery			Estimate

Public Hearing

Where required or requested

Full cost recovery	Fee determined by quotation based on full recovery			Each

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Deferred Developer Contributions

Development contributions are levied under various Contribution Plans in accordance with s7.11 of the *Environmental Planning & Assessment Act 1979.* Details of current development servicing plans and charges are available from Council's website or by contacting Council's Development Contributions Section on 6581 8686.

Development Contributions are indexed quarterly in line with movements in the CPI.

Preparation of Contributions Deferral Deed (Standard)	$500.00	$50.00	$550.00	per Deed
Variation of a Contributions Deferral Deed or associated dealings including a review of Caveator's Consent or a request to vary the deferral deed template.	Fee determined by quotation based on full Recovery. Minimum charge $250<			per Deed
Withdrawal of caveat associated with Contributions Deferral Deeds per lot created in the subdivision (Excluding lots to be dedicated to Council). Paid at the time of preparation of the Contributions Deferral Deed.	$90.91	$9.09	$100.00	per lot

Works-in-Kind Agreements

Development contributions are levied under various Contributions Plans in accordance with s7.11 of the *Environmental Planning & Assessment Act 1979*. Works-in-Kind (WIK) Agreements are used to facilitate the delivery of works as part of a Contribution Plan or of Material Public Benefit. Details of current development servicing plans and charges are available from Council's website or by contacting Council's Development Contributions Section on 6581 8686.

Preparation of a Standard Works-in-Kind Agreement	$500.00	$50.00	$550.00	Per Agreement
Preparation of Non-Standard Works-in-Kind Agreement or a Request to Vary the Standard Agreement	Fees determined by quotation based on full recovery. Minimum charge $250.			Per Agreement

Section 64 Development Servicing Plan Fees & Charges

Water Supply & Sewerage Headworks charges are levied under Development Servicing Plans prepared under the provisions of the *Water Management Act (NSW) 2000* pursuant to Section 64 of the *Local Government Act (NSW) 1993*.

Notes: Equivalent Tenement (ET) is defined as per unit cost for a standard residential 450 sqm to 2,000 sqm lot. Fees & Charges defined as of 1 February 2021.

Development Servicing Plan for Water and Supply and Sewerage 2014

Water Supply Headworks Charge	$10,375.00	$0.00	$10,375.00	Per ET
Sewerage Services Headworks Charge	$3,936.00	$0.00	$3,936.00	Per ET

s7.11 Development Contributions Fees & Charges

Contribution charges are levied under Council's Contribution Plans prepared under the provisions of Section 7.11 of the *Environmental Planning and Assessment Act 1979.*

Notes: Equivalent Tenement (ET) is defined as per unit cost for a standard residential 450 sqm to 2,000 sqm lot. Fees & Charges defined as of 1 February 2021.

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Port Macquarie-Hastings Administration Building Contributions Plan 2007				
All Areas	$926.00	$0.00	$926.00	Per ET
Port Macquarie-Hastings Administration Levy Contribution Plan				
All Areas			2.20%	% of s7.11 charges
Port Macquarie-Hastings Community, Cultural and Emergency Services Facilities 2005				
Port Macquarie	$4,705.00	$0.00	$4,705.00	Per ET
Innes Peninsula	$4,705.00	$0.00	$4,705.00	Per ET
Sancrox Thrumster	$5,311.00	$0.00	$5,311.00	Per ET
Wauchope	$4,819.00	$0.00	$4,819.00	Per ET
Kings Creek	$4,819.00	$0.00	$4,819.00	Per ET
Lake Cathie / Bonny Hills	$5,357.00	$0.00	$5,357.00	Per ET
Camden Haven	$4,530.00	$0.00	$4,530.00	Per ET
Rural (Not included in other areas)	$4,530.00	$0.00	$4,530.00	Per ET
Bushfire (All Areas)	$514.00	$0.00	$514.00	Per ET
Kings Creek Contribution Plan Version 2.5				
Kings Creek Area	$9,553.00	$0.00	$9,553.00	Per ET
Port Macquarie-Hastings Major Roads Contributions Plan				
Port Macquarie	$7,777.00	$0.00	$7,777.00	Per ET
Innes Peninsula (Includes Innes Peninsula Contribution Plan)	$9,581.00	$0.00	$9,581.00	Per ET
Sancrox Thrumster	$8,259.00	$0.00	$8,259.00	Per ET
Thrumster Area 13 (Includes Area 13, 14 & 15 Local Roads Plan)	$14,024.00	$0.00	$14,024.00	Per ET
Camden Haven	$8,601.00	$0.00	$8,601.00	Per ET
Camden Haven Area 15 (Includes Area 13, 14 & 15 Local Roads Plan)	$16,258.00	$0.00	$16,258.00	Per ET
Lake Cathie/Bonny Hills	$5,982.00	$0.00	$5,982.00	Per ET
Lake Cathie/Bonny Hills Area 14 (Includes Area 13, 14 & 15 Local Roads Plan)	$13,491.00	$0.00	$13,491.00	Per ET
Wauchope	$7,268.00	$0.00	$7,268.00	Per ET
Remaining Rural Areas	$5,873.00	$0.00	$5,873.00	Per ET
Regional Component	$5,873.00	$0.00	$5,873.00	Per ET
Port Macquarie-Hastings Open Space Contributions Plan 2018				
Port Macquarie	$5,730.00	$0.00	$5,730.00	Per ET
Innes Peninsula	$6,409.00	$0.00	$6,409.00	Per ET
Sancrox Thrumster	$6,784.00	$0.00	$6,784.00	Per ET

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Port Macquarie-Hastings Open Space Contributions Plan 2018 [continued]				
Camden Haven	$6,112.00	$0.00	$6,112.00	Per ET
Lake Cathie/Bonny Hills	$6,861.00	$0.00	$6,861.00	Per ET
Wauchope	$5,331.00	$0.00	$5,331.00	Per ET
Yippin Creek (Hastings S.94 Open Space Contribuitions Plan – Version 2.2 applies)	$5,078.00	$0.00	$5,078.00	Per ET
Remaining Rural Areas	$4,930.00	$0.00	$4,930.00	Per ET
Regional Component	$4,930.00	$0.00	$4,930.00	Per ET
Port Macquarie-Hastings Contributions Plan 1993 (Part C – Car Parking)				
Port Macquarie	$23,176.00	$0.00	$23,176.00	Per Space
Gordon Street	$9,897.00	$0.00	$9,897.00	Per Space
Wauchope	$6,484.00	$0.00	$6,484.00	Per Space
Laurieton	$9,133.00	$0.00	$9,133.00	Per Space
North Haven	$10,839.00	$0.00	$10,839.00	Per Space
North Haven Neighbourhood Business Precinct Contribution Plan V1.2				
North Haven	$100.06	$0.00	$100.06	Per m2
Hastings River Drive Contribution Plan for Traffic Facility Works V1.2				
Hastings River Drive3(s) Area	$24.69	$0.00	$24.69	Per sqm developed for use
Hastings River Drive4(t) Area	$7.61	$0.00	$7.61	Per sqm developed for use
The Bain Dairy Contributions Plan V1.4				
Bain's Dairy Local Transport	$2,440.00	$0.00	$2,440.00	Per ET
Innes Peninsula Contributions Plan – Road Works V1.3				
Innes Peninsula Road Works	$3,708.00	$0.00	$3,708.00	Per ET
Section 94 Settlement City Precinct Roads Contributions Plan				
Settlement City Road Works	$501.00	$0.00	$501.00	Per Trip
Port Macquarie-Hastings Section 94 Local Roads Contributions Plan Areas 13, 14 and 15 2014				
Thrumster (Area 13)	$8,151.00	$0.00	$8,151.00	Per ET
Lake Cathie/Bonny Hills (Area 14)	$7,618.00	$0.00	$7,618.00	Per ET
Camden Haven (Area 15)	$10,385.00	$0.00	$10,385.00	Per ET

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

s7.12 Development Contributions Fees & Charges

Contribution charges are levied under Council's Contribution Plans prepared under the provisions of Section 7.12 of the *Environmental Planning and Assessment Act 1979.*

Notes: Fees & Charges defined as of 1 February 2021.

Port Maquarie-Hastings Council Section 94A Levy Contributions Plan 2007

Cost of works up to and including $100,000	Nil	% of Cost
Cost of works more than $100,000 and up to and including $200,000	0.50%	% of Cost
Cost of works more than $200,000	1.00%	% of Cost

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Your Community Life

Community Participation

Halls/Community Centres

Alderman CC "Mac" Adams Music Centre

Miscellaneous

Hastings Municipal Band	$860.00	$86.00	$946.00	Per Annum
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	

Main Hall

Commercial & Other	$20.91	$2.09	$23.00	Per Hour
Private Functions			Not Available	
Not for Profit	$14.55	$1.45	$16.00	Per Hour

Practice Rooms

Commercial & Other	$13.64	$1.36	$15.00	Per Hour
Private Functions			Not Available	
Not for Profit	$8.18	$0.82	$9.00	Per Hour

Beechwood School of Arts

Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.00	$1.00	$11.00	Per Hour
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	

Bonny Hills Community Hall

Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.91	$1.09	$12.00	Per Hour
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Bonny Hills Community Hall [continued]				
Council Activities & Elections			No Charge	
Dunbogan Jubilee Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.91	$1.09	$12.00	Per Hour
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Emerald Downs Community Centre				
Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$11.82	$1.18	$13.00	Per Hour
Meeting Room				
Alcohol Not Permitted				
Commercial & Other	$15.45	$1.55	$17.00	Per Hour
Private Functions	$11.82	$1.18	$13.00	Per Hour
Not for Profit	$9.09	$0.91	$10.00	Per Hour
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Lake Cathie Community Hall				
Hall				
Commercial & Other	$22.73	$2.27	$25.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.91	$1.09	$12.00	Per Hour
Meeting Room				
Commercial & Other	$18.18	$1.82	$20.00	Per Hour
Private Functions	$13.64	$1.36	$15.00	Per Hour
Not for Profit	$9.09	$0.91	$10.00	Per Hour

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Other Fees				
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Laurieton School of Arts Hall				
Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.91	$1.09	$12.00	Per Hour
Other Fees				
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Lorne Recreation Centre				
Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.00	$1.00	$11.00	Per Hour
Other Fees				
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
North Haven Community Hall				
Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.91	$1.09	$12.00	Per Hour

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Other Fees				
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Pappinbarra Recreation Reserve				
Tennis Court & Facilities				
Commercial & Other	$11.82	$1.18	$13.00	Per Hour
Private Functions	$7.27	$0.73	$8.00	Per Hour
Not for Profit	$7.27	$0.73	$8.00	Per Hour
General Bond	$219.00	$0.00	$219.00	Each
Pembrooke Hall				
Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.00	$1.00	$11.00	Per Hour
Other Fees				
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Port Macquarie Seniors' Facility				
Les Crisp Auditorium				
Commercial & Other	$32.73	$3.27	$36.00	Per Hour
Private Functions	$24.55	$2.45	$27.00	Per Hour
Not for Profit	$18.18	$1.82	$20.00	Per Hour
The Pioneer Room				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$11.82	$1.18	$13.00	Per Hour

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Marjorie "Nikki" Adams Lounge				
Commercial & Other	$17.27	$1.73	$19.00	Per Hour
Private Functions			Not Available	Per Hour
Not for Profit	$10.00	$1.00	$11.00	Per Hour
Other Fees				
Use of Tea Making Facilities	$9.09	$0.91	$10.00	Per Function
Kitchen (use of facilities)	$17.27	$1.73	$19.00	Per Function
Stove, fridge, bain-marie				
PMQ Senior's Club	$1,063.64	$106.36	$1,170.00	Per Month
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Wauchope Community Arts Hall				
Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.91	$1.09	$12.00	Per Hour
Other Fees				
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Wauchope Rotary Youth Centre				
Hall				
Commercial & Other	$21.82	$2.18	$24.00	Per Hour
Private Functions	$17.27	$1.73	$19.00	Per Hour
Not for Profit	$10.00	$1.00	$11.00	Per Hour
Other Fees				
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Other Fees [continued]				
Council Activities & Elections			No Charge	
Historic Court House				
Courtroom				
Other	$30.91	$3.09	$34.00	Per Hour
Commercial not permitted				
Private Functions	$23.64	$2.36	$26.00	Per Hour
Not for Profit	$10.91	$1.09	$12.00	Per Hour
General Admission – Adult	$3.64	$0.36	$4.00	Each
General Admission – Pensioners and School Children (including School Excursions)	$2.73	$0.27	$3.00	Each
Hire of Grounds				
Other	$300.00	$30.00	$330.00	Per Day
Commercial not permitted				
Private Functions	$199.09	$19.91	$219.00	Per Day
Not for Profit	$110.00	$11.00	$121.00	Per Day
General Bond	$219.00	$0.00	$219.00	Each
State & Federal Elections	$319.09	$31.91	$351.00	Per Election
Council Activities & Elections			No Charge	
Library				
Hire of Rooms				
Access Fee – Outside Library Hours				
Applies to Both Rooms	Cost recovery - set by security company			Each
Meeting Room				
Commercial Organisations	$18.18	$1.82	$20.00	Per Hour
Hastings Schools & Community Organisations	$9.09	$0.91	$10.00	Per Hour
Library / Council			No Charge	Each
Technology Training Room				
Commercial Organisations	$36.36	$3.64	$40.00	Per Hour
Hastings Schools & Community Organisations	$13.64	$1.36	$15.00	Per Hour

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Technology Training Room [continued]				
Library / Council			No Charge	
Hire of Both Rooms				
Commercial Organisations	$54.55	$5.45	$60.00	Per Hour
Hastings Schools & Community Organisations	$18.18	$1.82	$20.00	Per Hour
Library / Council			No Charge	
Other Library Charges				
Computer Bookings				
Library Members			No Charge	Per Hour
Visitors			No Charge	Per Hour
Photocopying				
Coin Slot Operation				
Colour Copies	$0.91	$0.09	$1.00	Per Page
A4 & B4 page	$0.18	$0.02	$0.20	Per Page
A3 page	$0.45	$0.05	$0.50	Per Page
Other				
3D Printer – Prints	$0.91	$0.09	$1.00	per hour
Canvas Library Bags	$1.82	$0.18	$2.00	each
Inter-Library Loans – Application	$13.64	$1.36	$15.00	Each
Payable on application				
Inter-Library Loans – Urgent			Cost Recovery + $12.00	Each
Sent within 24 hours				
Fine at Account Stage	$0.00	$0.00	$0.00	Per Item
After 2nd notice				
Visitors Charges – Joining Fee – Adults/Children	$3.00	$0.00	$3.00	Each
Visitors Charges – Temporary Membership (20 items)	$10.00	$0.00	$10.00	Each
Lost or Damaged Books Beyond Repair			Cost of the Item	Each
Replacement of Lost Cards	$2.60	$0.00	$2.60	Each
Sale of Flash Drives	$9.09	$0.91	$10.00	Each
Headphones	$3.64	$0.36	$4.00	Each
Commercial Reference Service	$72.73	$7.27	$80.00	Per Hour or Part Thereof

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Sports & Recreation

Beach & Boating

Beach Driving Permit – 4WD Vehicles – Visitor	$34.00	$0.00	$34.00	Each
Beach Driving Permit Yearly – 4WD Vehicles	$68.00	$0.00	$68.00	Per Annum
Beach Driving Permit – 4WD Vehicles – Pensioner	$34.00	$0.00	$34.00	Per Annum
Use of Wharves by Commercial Operators	$18.18	$1.82	$20.00	Per Day

Commercial Activities on Council Managed Land

Parks, Reserves, Sports Fields and Beaches

New Application Fee	$160.00	$0.00	$160.00	Per Annum
Application Renewal Fee	$85.00	$0.00	$85.00	Per Annum
Temporary Licence (up to 2 nominated locations)	$500.00	$0.00	$500.00	Per Annum
Temporary Licence (per additional location)	$120.00	$0.00	$120.00	Per Additional Location
Applies if the applicant does not pay a business rate directly related to the Temporary Licence activity				
Temporary Licence (per additional location)	$60.00	$0.00	$60.00	Per Additional Location
Applies if the applicant pays a business rate directly related to the Temporary Licence activity				

Sporting Complexes

Camden Haven District Sport & Recreation Management Committee

Ground Levy

Little Athletics	$110.91	$11.09	$122.00	Each
Bonny Hills Cricket Club	$213.64	$21.36	$235.00	Each
Camden Haven Cricket	$213.64	$21.36	$235.00	Each
Camden Haven Bombers Junior AFL Club	$213.64	$21.36	$235.00	Each
Netball	$145.45	$14.55	$160.00	Each
Junior Rugby League	$213.64	$21.36	$235.00	Each
Soccer	$213.64	$21.36	$235.00	Each
Tennis	$145.45	$14.55	$160.00	Each
Touch Football	$213.64	$21.36	$235.00	Each

Lights

Soccer Field (each pole)	$5.55	$0.55	$6.10	Per Hour

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Lights [continued]				
Support Field (each pole)	$5.55	$0.55	$6.10	Per Hour
Oval	$23.64	$2.36	$26.00	Per Hour
Canteen Fee				
Outside groups	$25.45	$2.55	$28.00	Per Day
Plus Bond				
Outside groups – Bond	$65.00	$0.00	$65.00	Each
Refundable if left clean and undamaged				
Casual users – Per Day	$7.27	$0.73	$8.00	Per Day
Casual users – Per Season	$59.09	$5.91	$65.00	Per Season
Lank Bain Sporting Complex				
Group 2 Competition Matches	$1,100.00	$110.00	$1,210.00	Per Year
Hastings League Club Use – Field 1	$663.64	$66.36	$730.00	Per Year
Hastings League Club Use – Field 2	$381.82	$38.18	$420.00	Per Year
High School Use	$281.82	$28.18	$310.00	Per Year
Primary School Use	$281.82	$28.18	$310.00	Per Year
Cricket Club Use	$281.82	$28.18	$310.00	Per Year
Hastings League Controlled Fixtures	$110.00	$11.00	$121.00	Per Day
Junior Cricket	$281.82	$28.18	$310.00	Per Year
Lighting	$6.18	$0.62	$6.80	Per Pole Per Hour
Other Sporting Fields				
Lighting	$6.27	$0.63	$6.90	Per Pole Per Hour
Amenity Use – 1 canteen + 2 changerooms	$42.73	$4.27	$47.00	Per Day
Amenity Use – 1 canteen + 2 changerooms – 4 hours	$20.91	$2.09	$23.00	Half Day
Lighting callout fee (user error)	$63.64	$6.36	$70.00	Each
Ground Fee – Commercial	$418.18	$41.82	$460.00	Per Day
Ground Fee – Commercial	$86.36	$8.64	$95.00	Per Hour
Unlock/Lock facilities fee	$61.82	$6.18	$68.00	Each
Wauchope Sporting Fields				
Blackbutt Reserve – Lighting – 8 lights on pole	$8.64	$0.86	$9.50	Per Pole Per Hour
Blackbutt Reserve – Lighting – 4 lights on pole	$6.00	$0.60	$6.60	Per Pole Per Hour
Landrigan Park – Lighting	$6.27	$0.63	$6.90	Per Pole Per Hour

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Wauchope Sporting Fields [continued]				
Fairmont Gardens – Lighting	$6.27	$0.63	$6.90	Per Pole Per Hour

Parks & Reserves

Circuses, Carnivals & Major Events

Ground Fee – Non Holidays

Performance Days	$418.18	$41.82	$460.00	Per Day
Bump in/Bump out	$368.18	$36.82	$405.00	Per Day

Ground Hire Fees – School & Public Holidays

Performance Days	$577.27	$57.73	$635.00	Per Day
Bump in/Bump out	$463.64	$46.36	$510.00	Per Day

Bonds

Performance Bond	$6,000.00	$0.00	$6,000.00	Each

Power

Power Use

At Cost			At Cost	Per Day

Power – Access Fee

Single Phase	$39.09	$3.91	$43.00	Per Day/Per Outlet
Three Phase	$78.18	$7.82	$86.00	Per Day/Per Outlet

General Use

Application for Private Ceremony	$116.36	$11.64	$128.00	Per Application
2 hours maximum				
Ground Fee – General Use	$172.73	$17.27	$190.00	Per Day
Ground Fee – Commercial Use	$418.18	$41.82	$460.00	Per Day
Ground Fee – Charitable			No Charge	Per Day
Performance Bond	$2,000 - $6,000 Determined according to event			Per Event

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
General Use [continued]				
Application to Stage an Event – All Applicants	$128.00	$0.00	$128.00	Per Application
Application for Filming on Public Lands	$60.00	$0.00	$60.00	Per Application
Access of Reserve for Private Works – Performance Bond	$2,000.00	$0.00	$2,000.00	Per Application
Electrical Call Out Fee			At Cost	Per Hour
Stadiums				
Port Macquarie Indoor Stadium				
Stadium Hire Costs				
Monthly Ticket				
Badminton N/A	$24.09	$2.41	$26.50	Each
Casual Play				
Basketball, Volleyball, Futsal, Netball, Other	$3.18	$0.32	$3.50	Each / Per Hour
Badminton	$7.73	$0.77	$8.50	Each / Per Hour
Badminton – Seniors	$7.73	$0.77	$8.50	Each / Per Hour
Equipment Hire				
Balls & Racquets	$3.18	$0.32	$3.50	Each
Shuttles	$1.82	$0.18	$2.00	Each
Court Hire				
Local Clubs and Associations Peak Time				
Badminton	$20.00	$2.00	$22.00	Per Hour
Basketball, Volleyball, Soccer (Indoor), Netball	$43.64	$4.36	$48.00	Per Hour
Local Clubs and Associations Off Peak Times				
Badminton	$19.55	$1.95	$21.50	Per Hour
Basketball, Volleyball, Soccer (Indoor), Netball	$33.64	$3.36	$37.00	Per Hour

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Other Groups				
Badminton	$24.09	$2.41	$26.50	Per Hour
Basketball, Volleyball, Soccer (Indoor), Netball	$48.18	$4.82	$53.00	Per Hour
Hire of Stadium				
Cleaning				
Extra Cleaning	$29.09	$2.91	$32.00	Per Hour
Inclusive				
6 Courts	$3,118.18	$311.82	$3,430.00	Per Day
3 Courts	$1,736.36	$173.64	$1,910.00	Per Day
Restricted				
6 Courts	$290.91	$29.09	$320.00	Per Hour
3 Courts	$154.55	$15.45	$170.00	Per Hour
Schools				
Supervision Required	$5.00	$0.50	$5.50	Each
Supervision NOT Required	$4.09	$0.41	$4.50	Each
School Holiday Program				
8.30am to 12.30pm	$19.09	$1.91	$21.00	Per Half Day
8.30am to 5pm – Including morning tea	$29.09	$2.91	$32.00	Per Session
After School Care				
Per 12 children				
On Site	$57.73	$5.77	$63.50	Per Hour
Multi Sport Competition				
Nomination	$145.45	$14.55	$160.00	Per Team
18 Weeks				
Plus Weekly Game Fee	$52.73	$5.27	$58.00	Per Team
18 Weeks				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Volleyball Competition				
Nomination	$96.36	$9.64	$106.00	Per Team
Plus Weekly Game Fee	$43.18	$4.32	$47.50	Per Team
Ultimate Disc Competition				
Nomination	$96.36	$9.64	$106.00	Per Team
plus Weekly Game Fee	$43.18	$4.32	$47.50	Per Team
Mixed Netball/Fast 5 Competition				
Nomination	$38.64	$3.86	$42.50	Per Team
18 Weeks				
plus Weekly Game Fee	$38.64	$3.86	$42.50	Per Team
18 Weeks				
Birthday Parties				
Supervised 2 hour booking	$145.45	$14.55	$160.00	Per 2 hour booking
Up to 20 children				
Unsupervised (private) 2 hours	$96.36	$9.64	$106.00	Per 2 hour booking
Up to 20 children				
Meeting Rooms				
Room 1	$24.09	$2.41	$26.50	Per Hour
Room 2	$14.55	$1.45	$16.00	Per Hour
Port Macquarie Regional Sports Stadium				
Special Event / Social			10% gate takings	
Charity (on application)	$86.36	$8.64	$95.00	Per Day
Junior Sporting Groups	$122.73	$12.27	$135.00	Per Use
Hastings League	$122.73	$12.27	$135.00	Per Use
Group 2 / 3 Rugby League	$236.36	$23.64	$260.00	Per Use
Casual Users	$436.36	$43.64	$480.00	Per Day
Lighting Fields 1 and 2	$38.18	$3.82	$42.00	Per Hour
Refundable Bonds and Deposits				
Cleaning			$500-$5,000	Each

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Refundable Bonds and Deposits [continued]

Ground damage	$2,000 - $6,000 Determined according to event			Each
Property Loss			$500-$5,000	Each
Removal of rubbish			$500-$5,000	Each
Structural damage			$500-$5,000	Each
Regular users – Annual Bond	$800.00	$0.00	$800.00	Each
Regular users – Key Deposits	$70.00	$0.00	$70.00	Each
Regular users – Schools/Charity	$29.00	$0.00	$29.00	Each
Refund Subject to Application Council reserves the right to deduct all cleaning costs				

Wauchope Indoor Stadium

Main Stadium (all courts)

Commercial, private or other	$45.45	$4.55	$50.00	Per Hour
Not for profit, sporting groups, community groups	$23.64	$2.36	$26.00	Per Hour

Downstairs Studio

Commercial, private or other	$15.36	$1.54	$16.90	Per Hour
Not for profit, sporting groups, community groups	$7.73	$0.77	$8.50	Per Hour

Upstairs Studio

Commercial, private or other	$0.00	$0.00	$0.00	Per Hour
Not for profit, sporting groups, community groups	$0.00	$0.00	$0.00	Per Hour

Whole Stadium

Non sporting

Per Hour	$109.09	$10.91	$120.00	Per Hour
Per Day	$827.27	$82.73	$910.00	Per Day

Refundable Bonds and Deposits

Performance Bond	$2,000 minimum determined according to event			Per Event
Cleaning			$500-$5,000	Each
Regular users – Key Deposits	$70.00	$0.00	$70.00	Each

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Swimming Pools				
Kendall, Laurieton and Wauchope				
Spectator Admission	$1.64	$0.16	$1.80	Each
General Admission	$4.18	$0.42	$4.60	Each
Concession Admission	$3.64	$0.36	$4.00	Each
Book of 20 Tickets	$71.36	$7.14	$78.50	Each
Book of 50 Tickets	$154.55	$15.45	$170.00	Each
School Groups	$3.82	$0.38	$4.20	Per Person
Teachers and carers free. No lane hire				
School Carnivals	$4.18	$0.42	$4.60	Per Person
Teachers and carers free. No lane hire				
Daycare and Disability Groups	$4.18	$0.42	$4.60	Per Person
Carers free. No lane hire				
Swim Club	$4.18	$0.42	$4.60	Per Person
No Lane Hire Fees				
Lane Hire	$30.00	$3.00	$33.00	Per Hour/per 50 metres of lane space
Per 50 Metres of Lane Space - Per Hour				
Port Macquarie				
Spectator Admission	$1.64	$0.16	$1.80	Each
General Admission	$4.64	$0.46	$5.10	Each
Concession Admission	$4.09	$0.41	$4.50	Each
Book of 20 Tickets	$78.18	$7.82	$86.00	Each
Book of 50 Tickets	$181.82	$18.18	$200.00	Each
School Groups	$4.27	$0.43	$4.70	Per Person
Teachers and carer free. No lane hire				
School Carnivals	$4.64	$0.46	$5.10	Per Person
Teachers and carers free. No lane hire				
Daycare and Disability Groups	$4.64	$0.46	$5.10	Per Person
Carers Free. No lane hire				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Port Macquarie [continued]

Swim Club	$4.64	$0.46	$5.10	Per Person
No lane hire fees				
Masters Swim Club	$5.91	$0.59	$6.50	Per Person
Out of hours. No lane hire fees.				
Lane Hire – 1x lane of 50m pool	$30.00	$3.00	$33.00	Per Hour/per 50 metres of lane space
Per hour, per 50 metres of lane space				

Cemeteries

Port Macquarie Hastings Cemeteries

Refer to Appendix 11

Inurnment of Ashes

Wall Niche Inurnment	$1,298.18	$129.82	$1,428.00	Each
Wall Niche Reservation	$743.64	$74.36	$818.00	Each
Plaques for above	$554.55	$55.45	$610.00	Each

Extras

Family Ash Placement by Appointment			Price on Application	Each
Surcharge for Grave Digging			Price on Application	Each
Applies to requests outside of normal working hours for religious reasons				
Administration Fee – Transferring Rights of Burial	$160.00	$0.00	$160.00	Each
Ash Removal and Packaging	$227.27	$22.73	$250.00	Each
Late Fee	$172.73	$17.27	$190.00	Each
Applies to services which cannot be completed within normal business hours (9am to 3pm Monday to Friday)				
Application for Exhumation	Exhumation requires approval from NSW Health. Price subject to quotation.			Each
Saturday Surcharge	$454.55	$45.45	$500.00	Each

Burial

All General Cemeteries

Port Macquarie General Digging Fee	$2,018.18	$201.82	$2,220.00	Each
Grave Digging Fee	$1,500.00	$150.00	$1,650.00	Each
Grave Digging Fee – Child up to 12 years	$966.36	$96.64	$1,063.00	Each

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
All General Cemeteries [continued]				
Open General Cemeteries – Site only or Reservation Fee	$2,268.18	$226.82	$2,495.00	Each
Open General Cemeteries – Site only (Child up to 12 years)	$816.36	$81.64	$898.00	Each
Single Headstone Application	$130.00	$0.00	$130.00	Each
Double Headstone Application	$190.00	$0.00	$190.00	per application
Ash Replacement				
All General Cemeteries				
Placement fee per lot of ash in an occupied gravesite (up to 4) – Open cemeteries	$627.27	$62.73	$690.00	Each
Placement of ash in a gravesite (up to 4)				
Placement fee per lot of ash in an occupied gravesite (up to 4) – Closed cemeteries	$627.27	$62.73	$690.00	Each
New Site – Right of Burial Site Fee	$2,281.82	$228.18	$2,510.00	Each
Administration Fee for Family History Enquiries	$65.00	$0.00	$65.00	Per 30 Minutes or Part Thereof
Communications				
CBD Flags				
CBD Flags – Installation (42 Flags)	$1,118.18	$111.82	$1,230.00	Per Installation
CBD Flags – Installation (21 Flags)	$559.09	$55.91	$615.00	Per Installation

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Your Natural & Built Environment

Development Assessment

Approvals under Environmental Planning and Assessment Act (EP&A Act)

Subdivision Works Certificate

Subdivision and Infrastructure Works

Works Certificate (Infrastructure) Application – Dual Occupancy (Torrens or Strata)	$280.91	$28.09	$309.00	Each
Base Administration Fee - applicable to ALL applications with construction of public infrastructure works and/or subdivision works (includes AUSPEC admin & maintenance) Includes Roads Act (s138) application when works application works are on existing public roads				
Works Certificate (Infrastructure) Application, Building Related or Subdivision Works With No New Public Roads	$280.91	$28.09	$309.00	Each
Base Administration Fee - applicable to ALL applications with construction of public infrastructure works and/or subdivision works without the creation of new public roads (includes AUSPEC admin & maintenance)				
Works Certificate (Infrastructure) Application, Subdivision Works with New Public Roads	$280.91	$28.09	$309.00	Each
Base Administration Fee - applicable to ALL applications with construction of public infrastructure works and / or subdivision works with the creation of new public roads (includes AUSPEC admin & maintenance) Includes Roads Act (s138) application when works in application are on existing public roads				
Works Certificate (Infrastructure) Application Amendments	$118.18	$11.82	$130.00	Each
Base administration fee for additional amendment First amendment included in initial application				
Engineering Review Fees – Dual Occupancy (Torrens)	$750.00	$75.00	$825.00	Each
Engineering review fees for dual occupancy Works Certificate (Infrastructure) applications				
Engineering Review Fees – Dual Occupancy (Strata)	$500.91	$50.09	$551.00	Each
Engineering review fees for dual occupancy Works Certificate (Infrastructure) applications				
Engineering Review Fees – Minor Works	$251.82	$25.18	$277.00	Review Area
Engineering review fees for Works Certificate (Infrastructure) applications with minor works and no new public roads Minimum fee $405				
Engineering Review Fees – Major Works	$358.18	$35.82	$394.00	Review Area
Engineering review fees for Works Certificate (Infrastructure) applications with major works and no new public roads Minimum fee $623				
Engineering Review Fees – Subdivision Development (with new public roads)	$266.36	$26.64	$293.00	Per Lot
Engineering review fees for Works Certificate (Infrastructure) applications, Subdivision Works with New Public Roads Minimum Fee $668				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Subdivision Works Certificate [continued]

Engineering Review Fees – Amendments	$54.55	$5.45	$60.00	Review Area
Engineering review fees for additional amendments, excludes first amendment Minimum fee $94				
Development Inspection Fees – Dual Occupancy (Torrens)	$363.64	$36.36	$400.00	Each
Development inspection fees for dual occupancy Works Certificate (Infrastructure) applications				
Development Inspection Fees – Dual Occupancy (Strata)	$243.64	$24.36	$268.00	Each
Development inspection fees for dual occupancy certificate Works Certificate (Infrastructure) applications				
Development Inspection Fees – Minor Works	$122.73	$12.27	$135.00	Review Area
Development inspection fees for Works Certificate (Infrastructure) applications with minor public infrastructure and subdivision works associated with building or subdivision development Minimum fee $176				
Development Inspection Fees – Major Works	$233.64	$23.36	$257.00	Review Area
Development inspection fees for Works Certificate (Infrastructure) applications with major public infrastructure and subdivision works associated with building or subdivision development Minimum fee $353				
Subdivision Inspection Fee – Residential Roads	$22.00	$0.00	$22.00	Per Metre
New roads (residential) Minimum fee $399				
Subdivision Inspection Fee – Rural Roads	$10.91	$1.09	$12.00	Per Metre
New roads (rural) Minimum fee $399				
Subdivision Inspection Fee – Industrial Roads	$24.55	$2.45	$27.00	Per Metre
New roads (industrial) Minimum fee $399				
Subdivision Inspection Fee – Rural Residential Roads	$18.18	$1.82	$20.00	Per Metre
New roads (rural residential) Minimum fee $399				
Additional Inspection Fee	$122.73	$12.27	$135.00	Per Hour
For infrastructure works associated with building developments (non refundable) Minimum 1 hour				
Works Certificate (Infrastructure) Modification – Minor Works	$122.73	$12.27	$135.00	Review Area
Applicable to modify existing Works Certificate (Infrastructure) after approval. Base application fees also apply. Fees for engineering reviews associated with proposed changes				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Subdivision Works Certificate [continued]				
Works Certificate (Infrastructure) Modification – Major Works	$193.09	$19.31	$212.40	Review Area
Applicable to modify existing Works Certificate (Infrastructure) after approval. Base application fees also apply. Fees for engineering reviews associated with proposed changes				
Outstanding Works Bond Fees & Charges	See "Security Bond" section (below)			

Approvals under Roads Act 1993

Section 138 Application

Works, activities, events in, on and above a public road

Single Residential Dwelling Driveway and Utility Connection Application (All Works on Public Road Reserve)	$369.00	$0.00	$369.00	Each
Note: Upon Roads Act approval - vehicle crossings must be constructed by owners under their own arrangements. A licensed contractor listed with Council must be used with public liability insurance of $20 million. Application must be submitted to/approved by Council (s138) Includes base administration fee and inspection				
Dual Occupancy without Subdivision (All works on Public Road Reserve)	$309.00	$0.00	$309.00	Each
Note: Upon Roads Act approval - vehicle crossings must be constructed by owners under their own arrangements. A licensed contractor listed with Council must be used with public liability insurance of $20 million. Application must be submitted to/approved by Council (s138) Does not include inspection and review fees				
Industrial Driveway Application (All works on Public Road Reserve)	$309.00	$0.00	$309.00	Each
Note: Upon Roads Act approval - vehicle crossings must be constructed by owners under their own arrangements. A licensed contractor listed with Council must be used with public liability insurance of $20 million. Application must be submitted to/approved by Council (s138) Does not include inspection and review fees				
Roads Act Application for Construction Works on Road Reserve (Section 138 Application)	$309.00	$0.00	$309.00	Each
Base administration fee (applies to all Section 138 applications other than residential driveway applications)				
Roads Act Application Amendments	$129.00	$0.00	$129.00	Each
Base administration fee for additional amendments after the first amendment First amendment included in initial application				
Engineering Review Fees – Dual Occupancy without Subdivision (All works on Public Road Reserve)	$549.00	$0.00	$549.00	Each
Engineering review fees for Dual Occupancy without Subdivision applications				
Engineering Review Fees – Industrial Driveway (All works on Public Road Reserve)	$551.00	$0.00	$551.00	Each
Engineering review fees for Industrial Driveway applications				
Engineering Review Fees – Minor Works	$277.00	$0.00	$277.00	Review Area

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Section 138 Application [continued]				
Engineering Review Fees – Minor Works	$277.00	$0.00	$277.00	Review Area
Engineering review fees for Roads Act applications with minor infrastructure works on public roads Minimum fee $405				
Engineering Review Fees – Major Works	$394.00	$0.00	$394.00	Review Area
Engineering review fees for Roads Act applications with major infrastructure works on public roads Minimum fee $623				
Engineering Review Fees – Amendments	$60.00	$0.00	$60.00	Review Area
Engineering review fees for additional amendments, excludes first amendment Minimum fee $94				
Development Inspection Fees – Dual Occupancy without Subdivision (All works on Public Road Reserve)	$269.00	$0.00	$269.00	Each
Development Inspection fees for Dual Occupancy without Subdivision applications				
Development Inspection Fees – Industrial Driveway (All works on Public Road Reserve)	$269.00	$0.00	$269.00	Each
Development Inspection fees for Industrial Driveway				
Development Inspection Fees – Minor Works	$135.00	$0.00	$135.00	Review Area
Development inspection fees for Roads Act applications with minor infrastructure and road works on public roads Minimum fee $176				
Development Inspection Fees – Major Works	$257.00	$0.00	$257.00	Review Area
Development inspection fees for Roads Act applications with major infrastructure and road works on public roads Minimum fee $353				
Additional Inspection Fee	$135.00	$0.00	$135.00	Per Hour
For infrastructure works associated with building developments (non refundable) Minimum 1 hour				
Roads Act Approval Modification – Minor Works	$137.00	$0.00	$137.00	Review Area
Applicable to modify existing Roads Act after approval. Base administration fees also apply. Fees for engineering reviews associated with proposed changes				
Roads Act Approval Modification – Major Works	$194.00	$0.00	$194.00	Review Area
Applicable to modify existing Roads Act after approval. Base administration fees also apply. Fees for engineering reviews associated with proposed changes				
Outstanding Works Bond Fees & Charges	See "Security Bond" section (below)			

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Security Bonds

Application for Temporary Occupation of Footways and Road Reserve for Hoardings and/or Work Zones – CBD or Shopping Precinct	$100,000.00	$0.00	$100,000.00	
Security bond for infrastructure damage associated with building developments. Refundable upon leased area being left to Council satisfaction upon completion of development. This bond not required if applicant has submitted security for damage to infrastructure. Maximum $100,000 bond for minor developments to be determined on merit by Council.				
Application for Temporary Occupation of Footways and Road Reserve for Hoardings and/or Work Zones – Other (Not CBD or Shopping Precinct)	$50,000.00	$0.00	$50,000.00	
Security bond for infrastructure damage associated with building developments. Refundable upon leased area being left to Council satisfaction upon completion of development. This bond not required if applicant has submitted security for damage to infrastructure. Maximum $50,000 bond for minor developments to be determined on merit by Council.				

Development Application Fees

Application Fees

Application Fees (All)	As per statutory scale of fees			Estimate
EP&A Regulation 2000 refer cl 246B				

Advertising

Where advertising under ss.79 or 79A is compulsory

Designated Development	$2,220.00	$0.00	$2,220.00	Each
EP&A Regulation 2000 Cl 252 (maximum charge) This fee is in addition to the application fee mentioned above and unexpended fees will be refunded after determination of application				
Where Notification is Required by Council Policy	$168.00	$0.00	$168.00	Each
Letters to adjoining & adjacent owners. EP&A Regulation cl 252 maximum fee $1,105				
Where Notification and Advertising is Required by Council Policy – Advertising in Local Paper	$479.00	$0.00	$479.00	Each
EP&A Regulation cl 252 maximum fee $1,105				

Lodgement Fees

Electronic Lodgement	$15.00	$0.00	$15.00	Each
Form and supporting documents provided in PDF as un-protected files				
Paper Lodgement	$165.00	$0.00	$165.00	Each
Scanning and archive costs for applications lodged in paper only				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Archive Fee				
Electronic Application	$43.00	$0.00	$43.00	Each
All documents submitted in PDF as un-protected files				
Paper Application	$190.00	$0.00	$190.00	Each
Scanning and archive costs for paper based applications				
Review of Determination of DA				
Review of Determination of DA	As per statutory scale of fees			Estimate
EP&A Regulation 2000 cl 257				
Modification of DA or Consent				
Correction to Minor Error, Misdescription or Miscalculation	As per statutory scale of fees in EP&A Regulation			Each
Modification Involving Minimal Environmental Impact	As per statutory scale of fees in EP&A Regulation			Estimate
Other Modifications	As per statutory scale of fees in EP&A Regulation			Estimate
Integrated Development				
Processing Fee for Council	As per statutory scale of fees in EP&A Regulation			Each
For Each Relevant Authority (Separate Cheque Forwarded by Council)	As per statutory scale of fees in EP&A Regulation			Each Authority
When Concurrence is Required				
Processing Fee for Council	As per statutory scale of fees in EP&A Regulation			Each
For Each Relevant Authority (Separate Cheque Forwarded by Council)	As per statutory scale of fees in EP&A Regulation			Each Authority
Approvals under Environmental Planning Assessment Act (EP&A Act)				
Subdivision Works Certificate – Earthworks & Clearing ONLY – Application Fee				
Base administration fee (applicable to ALL applications)	$646.36	$64.64	$711.00	Each
Add engineering plan checking fees for Value of Work (VOW)				
Subdivision Works Certificate – Earthworks & Clearing ONLY – Engineering Plan Checking				
VOW up to $10,000	$340.00	$34.00	$374.00	Each
VOW $10,001 – $20,000	$479.09	$47.91	$527.00	Each
VOW $20,001 – $50,000	$655.45	$65.55	$721.00	Each

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Subdivision Works Certificate – Earthworks & Clearing ONLY – Engineering Plan Checking
[continued]

VOW $50,001 – $100,000	$1,303.64	$130.36	$1,434.00	Each
VOW $100,001 – $150,000	$1,563.64	$156.36	$1,720.00	Each
VOW $150,001 – $300,000	$2,102.73	$210.27	$2,313.00	Each
VOW $300,001 – $800,000 PLUS per $1,000 above $800,000 fee (as below)	$2,915.45	$291.55	$3,207.00	Each
Per $1,000 above $800,000 fee	$6.36	$0.64	$7.00	Each

Compliance Certificates for Subdivision Works

Compliance Certificate Application – Subdivision Development	$309.00	$0.00	$309.00	Each
Application to provide concurrence from relevant authorities or Council sections for construction of new assets. This application does not permit construction of infrastructure. A separate Construction Certificate for subdivision works or Construction Certificate (Infrastructure) required to permit construction. Note: all subdivision inspection fees still apply.				
General Review – Subdivision Development	$60.00	$0.00	$60.00	Per Lot
Compliance Certificate review fees for one Council review area (i.e landscaping) Minimum Fee $134				
Water Authority Review – Subdivision Development	$118.00	$0.00	$118.00	Per Lot
Water Authority Compliance Certificate Review Fees Minimum Fee $269				

Refunds

Development Applications & Construction Certificates

Cancelled / Withdrawn After 7 days With No Assessment by Council Officer (Minimum)	$58.18	$5.82	$64.00	Each
Administration fee and PCA component deducted				
All Other Cases Where No Work Has Commenced			No Charge	Each
DA's				
Cancelled / Withdrawn within 48 Hours – CC's (Infrastructure), S138, Subdivision Certificate Fees and Bonds		Administration fee deducted		Each

Security Bonds

Bond Administration

Bond Administration Fee	$284.00	$0.00	$284.00	Each
Base Administration Fee (applicable to ALL bonds) Non Refundable				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Outstanding Works Bonds				
Bond is security for completion of engineering works on public roads or infrastructure to be paid prior to approval				
Outstanding Works Bond (Single Dwelling) – Complex Applications	$2,000.00	$0.00	$2,000.00	Each
Applies to complex residential dwelling applications based upon Council discretion. Bond refundable.				
Outstanding Works Bond (Dual Occupancy)	$5,000.00	$0.00	$5,000.00	Each
Applies to 2 dwellings or units ONLY. Bond refundable.				
Outstanding Works Bond (Industrial Driveway)	$8,000.00	$0.00	$8,000.00	Each
Bond is security for completion of engineering works on public roads or infrastructure to be paid prior to approval Applies to industrial driveway applications.				
Outstanding Works Bond (General)	Calculation can be used for any case based upon 130% contract cost inclusive of GST. Bond refundable.			Contract Cost
Defects Liability Bonds				
Bond is security for new Council assets prior acceptance into a defects liability period				
Defects Liability Bond (Dual Occupancy)	$2,000.00	$0.00	$2,000.00	Each
Bond applies to dual-occupancy Torrens Title subdivisions				
Defects Liability Bond (General)	Calculation can be used for any case based upon 10% assets to be dedicated to Council. Bond refundable.			Asset Value
Protection of Public Infrastructure Bonds				
Security deposit for damage to public infrastructure. Minimum $10,000 (minor building works) minimum $100,000 (major building works and CBD development). Refundable upon completion of development to Council satisfaction.				
Security Bond for Infrastructure Works and Infrastructure Damage Associated with Building Developments			Calculate	Each
Tree Preservation Bonds				
Council can require lodgement at subdivision (or construction) certificate stage of a deposit to secure retention of trees on public land subject to application Refundable where Council satisfied of no loss				
Tree Preservation Bond – Specific Species (Any Development)	$11,956.00	$0.00	$11,956.00	Per Tree
Council Accreditation Charges				
Authorised Contractors Annual Registration Fee	$170.00	$0.00	$170.00	Each

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Subdivisions				
Subdivision Certificates (Torrens)				
Application for Subdivision Certificate (Torrens)	$236.00	$0.00	$236.00	Per Lot
Base Administration Fee Minimum fee $444 (includes consolidation)				
Resubmitted Linen Plan	25% of original fee or $255 whichever is lesser			Estimate
Application Fee for Council to Release, Vary or Modify Real Property Documents	$211.00	$0.00	$211.00	Each
Under General Manager delegation (s377 Local Govt Act) Modification of real property instruments				
Application Fee for Council to Release, Vary or Modify Real Property Documents	$419.00	$0.00	$419.00	Each
Under Council seal following report to Council Modification of real property instruments				
Re-signing of Subdivision Plans/Post Cadastral Correction	$211.00	$0.00	$211.00	Each
Endorsement of Plans (For Example: S88B Instruments, Transfers, etc) – Council's Legal Costs are in Addition to This Fee	$211.00	$0.00	$211.00	Each
Lighting – Non Standard – "Prestige"		Levy - see Policy R5		Each
Subdivision Certificates (Torrens) and Occupation Certificates (Strata)				
Work as Executed – Strata and Torrens Title	$656.00	$0.00	$656.00	Each
Submission of wax detail NOT in CAD format - minor subdivision works only - up to 3 lots and any building development works				
Search Fee – Miscellaneous				
Minimum 1 hour	$63.00	$0.00	$63.00	Per Hour
Aus-spec #1				
Refer Appendix 1				
Construction Specification				
Design specifications one off hard copy	$291.00	$0.00	$291.00	Per Set
Construction specifications one off hard copy	$359.00	$0.00	$359.00	Per Set
Hard copy individual specifications	$32.00	$0.00	$32.00	Each

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Certificates				
Environmental Planning & Assessment Act 1979				
Section 10.7(2) Planning Certificate	$53.00	$0.00	$53.00	Each
Fixed by EPA Reg 2000 cl 259				
Section 10.7(5) Planning Certificate	$80.00	$0.00	$80.00	Each
Maximum under EPA Reg 2000 cl 259				
Expedition Charge (24 Hr Response)	$110.00	$0.00	$110.00	Each
Section 6.26 Building Certificate		As per statutory scale of fees		Each
Refer EPA Reg 2000 cl 260-261				
Strata Certificate				
Strata Certificate	$156.36	$15.64	$172.00	Per Lot
Bushfire Attack Level				
Bushfire Attack Level (BAL) Certificate	$351.82	$35.18	$387.00	Each
Bushfire Attack Level (BAL) Certificate Associated With Complying Development Certificate Lodged With PMHC	$201.82	$20.18	$222.00	Each
Conveyancing Act 1919 No. 6				
Section 88G Certificate		As per statutory scale of fees		Per Lot
Inspection of Land Required		As per statutory scale of fees		Per Lot
Plan Copy Charges				
Refer Appendix 1				
A3 & A4 Plans	$4.20	$0.00	$4.20	Per Sheet
A2 Sheet	$14.00	$0.00	$14.00	Per Sheet
A1 Sheet	$16.00	$0.00	$16.00	Per Sheet
A0 Sheet	$20.00	$0.00	$20.00	Per Sheet
Over Size (Sewer Plans)	$22.00	$0.00	$22.00	Per Sheet
Or per Lineal Metre	$18.00	$0.00	$18.00	Per L/Mtr
Development Records				
Copy of Building Certificate		As per statutory scale of fees		Each
EPA Regulation 261				
Written Report on Dwelling Entitlement or Zoning Matter	$176.00	$0.00	$176.00	Each
Plus $80.00 inspection fee if required				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Development Records [continued]

Urgent (Response in 5 Days) – Written Report on Dwelling Entitlement or Zoning Matter	$293.00	$0.00	$293.00	Each
Copy of Application Documents (i.e. Consent, Plan, Submission or Supporting Report)	$44.00	$0.00	$44.00	Each
Before making a request check www.pmhc.nsw.gov.au/applicationtracker - what you need may already be available free. Any documents requested will be emailed. Searches for some historic records are more involved and additional fees may apply; we will discuss this with you.				

Waste Management

Under section 88 of the *Protection of the Environment Operations Act 1997* (POEO Act), Council is required to pay the Waste & Environment Levy. This levy is considered when setting the fees and charges for waste management services.

Interest Rate

Interest Rate on overdue rates & charges

As per the rate determined by the NSW Office of Local Government

Domestic Waste Management Services	0% from 1/7/20, 7% from 1/1/21	
Other Waste Management Services	0% from 1/7/20, 7% from 1/1/21	

Domestic Waste Management Services

Annual Charge

Minimiser service – 140 Litre fortnightly general waste	$428.00	$0.00	$428.00	Per Annum
Standard service – 240 Litre fortnightly general waste	$488.00	$0.00	$488.00	Per Annum
Excess service – 240 Litre weekly general waste	$721.00	$0.00	$721.00	Per Annum
Half minimiser service – 140 Litre fortnightly general waste	$239.00	$0.00	$239.00	Per Annum
Multi-unit dwellings only				
Half standard service – 240 Litre fortnightly general waste (Shared)	$268.00	$0.00	$268.00	Per Annum
Multi-unit dwellings only				
Half excess service – 240 Litre weekly general waste (Shared)	$386.00	$0.00	$386.00	Per Annum
Multi-unit dwellings only				
On application only special weekly service – 140 Litre weekly general waste	$603.00	$0.00	$603.00	Per Annum
Half special weekly service (shared)	$328.00	$0.00	$328.00	Per Annum
Multi-unit dwellings only				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Annual Charge [continued]				
Additional weekly garbage service – 240 Litre general waste	$373.00	$0.00	$373.00	Per Annum
Additional weekly garbage service – 140 Litre general waste	$283.00	$0.00	$283.00	Per Annum
Multi-unit dwellings only				
Additional organics service – 240 Litre weekly	$98.00	$0.00	$98.00	Per Annum
Additional recycling service – 240 Litre fortnightly	$76.00	$0.00	$76.00	Per Annum
Minimum Waste Charge – Single Dwelling	$428.00	$0.00	$428.00	Per Annum
Availability charge on vacant land	$79.00	$0.00	$79.00	Per Annum
Availability charge on land not receiving full charge	$143.00	$0.00	$143.00	Per Annum
Multi-unit dwellings only				
Other Waste Management Services				
Annual Charge				
Waste Management Access Charge	$31.00	$0.00	$31.00	Per Annum
Commercial weekly service – 140 Litre general waste	$594.00	$0.00	$594.00	Per Annum
Commercial excess service – 240 Litre weekly general waste	$709.00	$0.00	$709.00	Per Annum
Commercial half weekly service – 140 Litre general waste (Shared)	$322.00	$0.00	$322.00	Per Annum
Commercial half excess service – 240 Litre weekly general waste (Shared)	$380.00	$0.00	$380.00	Per Annum
Commercial additional weekly garbage service – 240 Litre general waste	$372.00	$0.00	$372.00	Per Annum
Commercial additional weekly garbage service – 140 Litre general waste	$283.00	$0.00	$283.00	Per Annum
Commercial additional organics service – 240 Litre weekly	$98.00	$0.00	$98.00	Per Annum
Commercial additional recycling service – 240 Litre fortnightly	$76.00	$0.00	$76.00	Per Annum
Commercial availability charge on land not receiving full charge	$79.00	$0.00	$79.00	Per Annum
Business Properties				
Availability charge on vacant land	$79.00	$0.00	$79.00	Per Annum
Business Properties				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Other Services				
On Request Kerbside Collection	$39.00	$0.00	$39.00	Per Service
Replacement Bin	$59.00	$0.00	$59.00	Per Unit
Supply of Bins – New Service	$149.00	$0.00	$149.00	Per Service
Stolen Bin – First Replacement Only			No Charge	Per Unit
Stolen Bin – Subsequent Replacements	$59.00	$0.00	$59.00	Per Unit
Bin Size Adjustment Fee	$59.00	$0.00	$59.00	Per Unit
Red or yellow bin				
Bin Reinstatement Fee	$59.00	$0.00	$59.00	Per Unit
Charge for replacement of organic/recycle bin, due to suspended service				
Collection of Missed Service	$15.00	$0.00	$15.00	Per Unit
Weighbridge Ticket	$50.91	$5.09	$56.00	Each
Waste Adminstration Fee (Unpaid Waste Fees)	$20.00	$2.00	$22.00	Each
Contamination Reloading Fee	$227.27	$22.73	$250.00	Per Incident
Charge for management and reloading any waste incorrectly declared at weighbridge/ gatehouse or disposed in incorrect area at a site				
Waste Depot Charges				
Cairncross Waste Depot				
General Waste				
Calculated by Nett Weight				
Transfer Station General Waste	$229.09	$22.91	$252.00	Per Tonne
Minimum Charge - $10				
All Mattresses or Mattress Bases	$25.45	$2.55	$28.00	Each
Building Waste (Landfill)	$229.09	$22.91	$252.00	Per Tonne
Includes contaminated soil classified as general solid waste Minimum charge - $10				
Asbestos	$355.45	$35.55	$391.00	Per Tonne
Minimum charge - $10				
Mixed Solid Waste	$229.09	$22.91	$252.00	Per Tonne
Minimum charge - $10				
Clean fill / VENM	$100.00	$10.00	$110.00	Per Tonne
Minimum charge - $10				
Bricks / Concrete	$27.27	$2.73	$30.00	Per Tonne
Minimum charge - $10				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

General Waste [continued]

Green / Wood Waste	$60.00	$6.00	$66.00	Per Tonne
Includes lawn clippings, garden waste, branches & leaves, trees & tree loppings & untreated timber				
Special Wastes			By Negotiation	
Subject to the nature of the material & ability to receive				
Recyclable materials			No Charge	
Clean glass, paper cardboard, oil in drop-off area				
Metal & White goods			No Charge	
Clean and Separated				

Tyres

Motorcycle	$3.64	$0.36	$4.00	Each
Car	$3.64	$0.36	$4.00	Each
Car on rim	$9.09	$0.91	$10.00	Each
4x4	$7.27	$0.73	$8.00	Each
Light Truck	$7.27	$0.73	$8.00	Each
Light Truck/4x4 on rim	$18.18	$1.82	$20.00	Each
Heavy Truck	$16.36	$1.64	$18.00	Each
Heavy Truck on rim	$31.82	$3.18	$35.00	Each
Super Singles	$35.45	$3.55	$39.00	Each
Super Singles on rim	$72.73	$7.27	$80.00	Each
Tractor – Small/Medium	$40.00	$4.00	$44.00	Each
Tractor – Large	$59.09	$5.91	$65.00	Each
Other (Tractor Earthmoving)			By Assessment	Each

Animals

Small Domestic	$10.00	$1.00	$11.00	Each
Small Livestock (sheep, goat, calf, etc)	$39.09	$3.91	$43.00	Each
Large Livestock (cattle, horses, etc)	$62.73	$6.27	$69.00	Each

Recovered Aggregate

Sale of Recycled Crushed Concrete Aggregate (Various Sizes)			Price on Application	Per Tonne
In accordance with the NSW Environment Protection Authority (EPA) Recovered Aggregate Resource Recovery Order 2014				

Port Macquarie Waste Depot

Commercial Waste loads are limited to Passenger Vans, Utilities, Small Trailers up to 8' x 5' size with no side extensions.

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
General Waste				
Transfer Station General Waste	$229.09	$22.91	$252.00	Per Tonne
Minimum Charge - $10				
All Mattresses or Mattress Bases	$25.45	$2.55	$28.00	Each
Green / Wood Waste	$60.00	$6.00	$66.00	Per Tonne
Includes lawn clippings, garden waste, branches & leaves, trees & tree loppings & untreated timber				
Recyclable Materials			No Charge	
Clean glass, paper cardboard, oil in drop-off area				
Metal & White Goods			No Charge	
Clean and Separated				
Special Wastes			By Negotiation	
Subject to nature of the material & ability to receive				
Tyres				
Motorcycle	$3.64	$0.36	$4.00	Each
Car	$3.64	$0.36	$4.00	Each
Car on rim	$9.09	$0.91	$10.00	Each
4x4	$7.27	$0.73	$8.00	Each
Light Truck	$7.27	$0.73	$8.00	Each
Light Truck/4x4 on rim	$18.18	$1.82	$20.00	Each
Heavy Truck	$16.36	$1.64	$18.00	Each
Heavy Truck on rim	$31.82	$3.18	$35.00	Each
Super Singles	$35.45	$3.55	$39.00	Each
Super Singles on rim	$72.73	$7.27	$80.00	Each
Tractor – Small/Medium	$40.00	$4.00	$44.00	Each
Tractor – Large	$59.09	$5.91	$65.00	Each
Other (Tractor Earthmoving)			By Assessment	
Wauchope, Kew & Comboyne Waste Depots				
Household Loads Only - Council's Waste Depot Attendants calculate charges per size of load at entry.				
General Waste				
Domestic				
Cars/Station Wagons	$10.00	$1.00	$11.00	Per Load
Passenger Vans, Utilities, Small Trailers up to 8' x 5' size with no side extensions	$17.27	$1.73	$19.00	Per Load
Large trailers and all trailers with side extensions, Vans & 1 Ton Utilities	$29.09	$2.91	$32.00	Per Load

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Commercial				
Cars/Station Wagons	$75.45	$7.55	$83.00	Each
Passenger Vans, Utilities, Small Trailers up to 8' x 5' size with no side extensions	$75.45	$7.55	$83.00	Per Load
Accepted load size limited to 0.5 metre in height				
Greenwaste				
Domestic				
Cars/Station Wagons	$9.09	$0.91	$10.00	Per Load
Passenger Vans, Utilities, Small Trailers up to 8' x 5' size with no side extensions	$14.55	$1.45	$16.00	Per Load
Large trailers and all trailers with side extensions, Vans & 1 Ton Utilities	$25.45	$2.55	$28.00	Per Load
Commercial				
Cars/Station Wagons	$22.73	$2.27	$25.00	Each
Passenger Vans, Utilities, Small Trailers up to 8' x 5' with no side extensions	$22.73	$2.27	$25.00	Per Load
Tyres				
Motorcycle	$3.64	$0.36	$4.00	Each
Car	$3.64	$0.36	$4.00	Each
Car on rim	$9.09	$0.91	$10.00	Each
4x4	$7.27	$0.73	$8.00	Each
Light Truck	$7.27	$0.73	$8.00	Each
Light Truck/4x4 on rim	$18.18	$1.82	$20.00	Each
Heavy Truck	$16.36	$1.64	$18.00	Each
Heavy Truck on rim	$31.82	$3.18	$35.00	Each
Super Singles	$35.45	$3.55	$39.00	Each
Super Singles on rim	$72.73	$7.27	$80.00	Each
Tractor – Small/Medium	$40.00	$4.00	$44.00	Each
Tractor – Large	$59.09	$5.91	$65.00	Each
Other (Tractor Earthmoving)			By Assessment	Each
Other Waste				
All Mattresses	$25.45	$2.55	$28.00	Each
Recyclable Materials			No Charge	Each
Clean glass, paper cardboard, oil in drop-off area				
Metals & White Goods			No Charge	Each
Clean and Separated				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

All Waste Facilities

Other Waste

Domestic (> 20 lt or kg) and Commercial (any amount)

Vehicle Batteries			No Charge	
Single Use Batteries			No Charge	
Rechargeable Batteries			No Charge	
Fluorescent Tubes and Lighting Fittings	$0.45	$0.05	$0.50	Per Unit
Smoke Detectors	$0.91	$0.09	$1.00	Per Unit
Paint	$1.82	$0.18	$2.00	Per Litre
Minimum charge - $5				
Hazardous By-Catch Materials	$1.82	$0.18	$2.00	Per Litre
By-catch material includes Flammable liquid other than paint, Toxic, Oxidising agents, Corrosives - acids, Corrosives - alkalis; does not include radioactive substances				

Waste Collection Service

Available 7 days per week Port Macquarie area; 6 days per week Wauchope/Camden Haven area

Commercial Premises – 240 Litre General Waste Mobile Bin – per bin	$10.00	$1.00	$11.00	Each Service
Commercial Premises – 660 Litre General Waste Mobile Bin – per bin	$31.82	$3.18	$35.00	Each Service

Asset Management

Geographical Information Systems

Refer Appendix 1

Sale of Maps

Cost estimates provided based on 15 minute intervals

AO			Price on Application	Each
A1			Price on Application	Each
A2			Price on Application	Each
A3			Price on Application	Each
A4			Price on Application	Each
Map Customizing (Charged in 15 Minute Modules)	$100.00	$0.00	$100.00	Per Hour
Applies to all map sizes Charged in 15 minute modules Minimum charge of $25 applied to all maps				
Priority Charge	$200.00	$0.00	$200.00	Per Hour
By quotation and based on an hourly rate - Request required within 2 working days of acceptance of quote by both parties				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

ALS 2005 Height Data

ALS 2005 Height Data Extraction Costs	$100.00	$0.00	$100.00	Per Hour
Minimum 1/2 hour				
ALS 2005 Data / Contours	$130.00	$0.00	$130.00	Per 10 Ha
Minimum Area 10Ha up to 100Ha $110/10Ha				
ALS 2005 Data / Contours			By quotation	Each
Areas > 100Ha or 1km2				

All other Digital GIS Data

Digital Data	$100.00	$0.00	$100.00	Per Hour
Extraction costs				
Digital Data			Price on Application	Per Layer
Cost estimates provided based on 15 minute intervals Some data has restrictions on access				
Postage and Handling			Price on Application	Each
Media Sundries - Including postage materials and media eg. USB, CD, HD, etc				

Aerial Photography

Imagery extraction process	$100.00	$0.00	$100.00	Per Hour
Minimum 1/2 hour				

Consultancy

Provision of specialised GIS services	$270.00	$0.00	$270.00	Per Hour
Minimum 1 hour				

Compliance

Companion Animals Act

Registration Fees

Under Companion Animals Regulation 2018 Cl. 18

Desexed animal	As per statutory scale of fees from the Companion Animals Act	Each
Desexed animal – Eligible pensioner	As per statutory scale of fees from the Companion Animals Act	Each
Non – Desexed Animal	As per statutory scale of fees from the Companion Animals Act	Each

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Registration Fees [continued]				
Non – Desexed Animal – Recognised Breeder	As per statutory scale of fees from the Companion Animals Act			Each
Animal Registration Fees – 28 Day Late Fee	$15.00	$0.00	$15.00	As per statutory scale of fees
Annual Permit Fees				
Under Companion Animals Regulation 2018 Cl. 27				
Annual Permit – Cat Not Desexed	$80.00	$0.00	$80.00	As per statutory scale of fees
Annual Permit – Dangerous Dog	$195.00	$0.00	$195.00	As per statutory scale of fees
Annual Permit – Restricted Dog	$195.00	$0.00	$195.00	As per statutory scale of fees
Other Companion Animal Fees				
Companion Animals Act – Dangerous Enclosure Compliance Certificate	$150.00	$0.00	$150.00	As per statutory scale of fees
Under Companion Animals Regulation 2018 Cl. 36				
Microchipping	$36.00	$0.00	$36.00	Each
Microchipping – Promotion	$20.00	$0.00	$20.00	Each
Microchipping – Microchipping Day			No Charge	
Animal Pound – Vet Costs			Cost + 10%	
Animal Pound – Merchandise			Cost + 10%	
Release of dog/cat from Pound	$63.00	$0.00	$63.00	Each
Plus maintenance				
Contact of dog/cat owner from registration service of notice	$47.00	$0.00	$47.00	Each
Disposal of dog/cat surrendered to the pound by owner	$89.00	$0.00	$89.00	Each
Hire of feral animal trap	$15.45	$1.55	$17.00	Per Week
Hire of vermin traps	$13.64	$1.36	$15.00	Per Week
Maintenance fee for dogs/cats	$49.00	$0.00	$49.00	Per Day
Sale of doggy leash bags	$4.55	$0.45	$5.00	
Sale of refill bags for doggy leash bags	$0.91	$0.09	$1.00	

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Impounding				
Animals				
Sustenance Fee	$49.00	$0.00	$49.00	Refer Comments
Per head, per day or part thereof				
Conveyance Fee	$49.00	$0.00	$49.00	Each
Administration Fee (Plus Actual Cost)				
Conveyance Fee			At Cost	Estimate
Lost or Damaged Admin Fee	$49.00	$0.00	$49.00	Each
Administration Fee (Plus Actual Cost)				
Lost or Damaged Fee			At Cost	Estimate
Notice of Impounding – Administration Fee	$44.00	$0.00	$44.00	Each
Impounding Admin Fee	$64.00	$0.00	$64.00	Each
Administration Fee (Plus Actual Cost)				
Impounding Fee			At Cost	Estimate
Actual Cost of Impounding Item				
Other Articles				
Storage Fee	$49.00	$0.00	$49.00	Refer Comments
Per article, per week or part thereof				
Conveyance Admin Fee	$49.00	$0.00	$49.00	Each
Administration Fee (Plus Actual Cost)				
Conveyance Fee			Cost + 10%	Estimate
Lost or Damaged Admin Fee	$49.00	$0.00	$49.00	Each
Administration Fee (Plus Actual Cost)				
Lost or Damaged Fee			Cost + 10%	Estimate + 10%
Notice of Impounding – Administration Fee	$44.00	$0.00	$44.00	Each
Impounding Admin Fee	$64.00	$0.00	$64.00	Each
Administration Fee (Plus Actual Cost)				
Impounding and Recovery Fee			At Cost	Estimate
Actual Cost of Impounding and Recovering Item				

Approvals Under Section 68 Local Government Act

Refer also to Local Government (General) Regulation 2005.

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Section 68				
Approval for septic to sewer conversions for small town sewerage schemes and other	$252.00	$0.00	$252.00	Each
Part A – Structures or places of public entertainment				
Notice of completion of a manufactured home, removable dwelling or associated structure on land – inspection fee.	$186.40	$0.00	$186.40	Each
Notice of completion of a manufactured home, removable dwelling or associated structure on land – re-inspection fee.	$110.00	$0.00	$110.00	Each
Application to install a manufactured home, removable dwelling on land or associated structure	$102.00	$0.00	$102.00	Each
Part B – 2. Section 68 Application				
Approval to undertake water supply, storm water and/or sewerage works associated with building construction works (Includes Completion Certificate) (i) Application not accompanied by verification certification.				
Estimated cost of project				
Up to $15,000	$240.00	$0.00	$240.00	Each
$15,001 – $50,000	$479.00	$0.00	$479.00	Each
$50,001 – $200,000	$629.00	$0.00	$629.00	Each
$200,001 – $500,000	$1,126.00	$0.00	$1,126.00	Each
$500,001 – $1,000,000	$1,661.00	$0.00	$1,661.00	Each
$1,000,001 – $5,000,000	$4,296.00	$0.00	$4,296.00	Each
$5,000,001 – $10,000,000	$6,848.00	$0.00	$6,848.00	Each
> $10,000,001	$8,936.00	$0.00	$8,936.00	Each
Other				
Maximum water and stormwater fee for dwellings not on reticulated sewerage – on-site sewage management fee still applicable where relevant	$479.00	$0.00	$479.00	Each
Part B – 2. Section 68 Application				
Approval to undertake private storm water works only				
Estimated cost of building work				
Up to $50,000	$181.00	$0.00	$181.00	Each
$50,000 – $200,000	$240.00	$0.00	$240.00	Each
> $200,000	$356.00	$0.00	$356.00	Each
Part B – 3. Section 68 Application				
Approval to undertake water supply, storm water and/or sewerage works associated with subdivision				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Part B – 3. Section 68 Application [continued]

developments (Includes Completion Certificate) (i) Application not accompanied by verification certification.

Estimated cost of project

Up to $50,000	$700.00	$0.00	$700.00	Each
$50,001 – $100,000	$895.00	$0.00	$895.00	Each
$100,001 – $150,000	$1,164.00	$0.00	$1,164.00	Each
$150,001 – $200,000	$1,431.00	$0.00	$1,431.00	Each
$200,001 – $500,000	$2,498.00	$0.00	$2,498.00	Each
$500,001 – $1,000,000	$3,367.00	$0.00	$3,367.00	Each
$1,000,001 – $5,000,000	$4,296.00	$0.00	$4,296.00	Each
$5,000,001 – $10,000,000	$6,848.00	$0.00	$6,848.00	Each
> $10,000,000	$8,936.00	$0.00	$8,936.00	Each

Part B – 8. Section 68 Application

Approval of the installation of a water meter

Meter size

Multiple services – sizes larger than 20mm		Actual cost plus $150.00		Each
New single 20mm service	$508.00	$0.00	$508.00	Each

Part B – 10. Other Services Fees and Charges

Pre-Purchase Inspection – Onsite Sewage Management Facility: Domestic – Standard Service	$285.00	$0.00	$285.00	Each
Includes approval to operate if sale proceeds				
Pre-Purchase Inspection – Onsite Sewage Management Facility: Domestic – Urgent Service	$427.00	$0.00	$427.00	Each
Includes approval to operate if sale proceeds				
Pre-Purchase Inspection – Onsite Sewage Management Facility: Commercial / Industrial – Standard Service	$435.00	$0.00	$435.00	Each
Includes approval to operate if sale proceeds				
Pre-Purchase Inspection – Onsite Sewage Management Facility: Commercial / Industrial – Urgent Service	$638.00	$0.00	$638.00	Each
Includes approval to operate if sale proceeds				
Follow-Up Inspection – Onsite Sewage Management Facility: Domestic	$153.00	$0.00	$153.00	Each
Follow-Up Inspection – Onsite Sewage Management Facility: Commercial / Industrial	$178.00	$0.00	$178.00	Each
Written Report – Septic System Registration	$51.00	$0.00	$51.00	Each
Septic to Sewer Conversion	$276.00	$0.00	$276.00	Each
Consultancy / Advisory Services	$121.00	$0.00	$121.00	Per Hour

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Part B – Section 68 Application – Manhole Adjustment				
Engineering Review & Inspection Fees (Manhole Adjustment)	$277.00	$0.00	$277.00	Each
Fee to be included with Section 68 (Local Government Act) applications if single residential dwelling requires manhole surface level adjustment Fees in addition to application fee and includes inspections				
Part C – Section 68 Approval				
Approval to Install, Construct, Alter Sewage Management Facility				
Install, construct and operate a new sewage management facility (Domestic premises)	$565.00	$0.00	$565.00	Each
Includes assessment, 3 x inspections, 1st approval to operate				
Alter an existing sewage management facility (Domestic premises)	$275.00	$0.00	$275.00	Each
Amend or upgrade an existing approval for sewage management facility Includes reassessment and 1 extra inspection				
Operate sewage management facility (Domestic premises)	$169.00	$0.00	$169.00	Each
Approval to operate a sewage management system including change of ownership and system upgrade or modification Includes assessment and 1 inspection				
Install, construct and operate a new sewage management facility (Commercial / Industrial premises)	$791.00	$0.00	$791.00	Each
Includes assessment, 3 x inspections, 1st approval to operate				
Alter an existing sewage management facility (Commercial / Industrial premises)	$396.00	$0.00	$396.00	Each
Amend or upgrade an existing approval for sewage management facility Includes reassessment and 1 extra inspection				
Operate sewage management facility (Commercial / industrial premises)	$210.00	$0.00	$210.00	Each
Approval to operate a sewage management system including change of ownership and system upgrade or modification Includes assessment and 1 inspection				
Part D – Community Land				
Application for an activity on public / community land	$124.00	$0.00	$124.00	Each
Application for A-Frame Sign – 1 Year Licence	$119.00	$0.00	$119.00	Each
Application for A-Frame Sign – 3 Year Licence	$235.00	$0.00	$235.00	Each
Part E – Public Roads				
Applications for approval	Refer to the following section of this document - Roads, Bridges and Transport - Section 138 Certificate (Works on Public Road)			

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Part F – Other Activities				
Register a caravan park or manufactured home estate – Minimum Fee PLUS per site	$116.00	$0.00	$116.00	Each
Register a caravan park or manufactured home estate – Per site	$8.00	$0.00	$8.00	Each
Amended application to register a Caravan Park or manufactured home estate – Minimum fee plus per amended/altered site fee	$126.00	$0.00	$126.00	Each
Amended application to register a Caravan Park or manufactured home estate– Per amended/altered site – PLUS:	$5.08	$0.00	$5.08	Each
Caravan Park – Annual Inspection	$180.00	$0.00	$180.00	Each
Inspection of amusement devices	$52.00	$0.00	$52.00	Each
Charitable/Non-Profit Organisations excluded				
Application to burn under POEO	$150.00	$0.00	$150.00	Each
Application – other miscellaneous Section 68 activities	$126.00	$0.00	$126.00	Each
Certification				
PCA (where CC/CDC issued by private certifier) – All values		Quotation as per fee calculator		Each
PCA (where CC/CDC issued by private certifier) – Re-inspection fee / minimum inspection fee		Quotation as per fee calculator		Each
PCA Site Signage		Quotation as per fee calculator		Each
Certificate of Compliance – associated structure	$160.91	$16.09	$177.00	Each
Certificate of Compliance – sewer connection per site	$178.00	$0.00	$178.00	Each
Complying Development Certificate				
Occupation Certificate		Quotation as per fee calculator		Each
All values		Quotation as per fee calculator - discounts available for online lodgement		Each
Amended applications		Quotation as per fee calculator		Each
Construction Certificate (Building)				
Class 1 and 10				
All Values		Quotation as per fee calculator		Each
Class 2 – 9				
All Values		Quotation as per fee calculator		Each
Applying to all Part 4A or complying development certificate				
Lodgement Fee				Each
This is a statutory fee under S7.44 of the EP&A Regulation 2000 s263				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Amended Construction Certificate				
Minor Change			Quotation as per fee calculator	Each
Major Change – Original application fee < $1,000			25% of applied fee	Each
Major Change – Original application fee > $1,000			50% of applied fee	Each
Alternative solutions			See comments	Each
Fees as per Class 2 - 9 building plus cost for assessment of alternative solution				
Information Services				
Advice to building professionals	$159.09	$15.91	$175.00	Each
Advice regarding compliance with development conditions or construction requirements.				
BCA Advisory service / reports			As per fee schedule	Each
Refunds				
Development Applications & Construction Certificates				
All other cases where no work has commenced			CC's (Building work) Compliance PCA & occupation certificate fees & any non engineering bonds	Each
Building Certificates				
Cancelled / withdrawn with no inspection	$42.00	$0.00	$42.00	Each
Minimum administration fee deducted				
Cancelled / withdrawn prior to determination after inspection			No refund	Each
All other Environment Applications (Including S68)				
Cancelled / withdrawn within 48 hours	$70.00	$0.00	$70.00	Each
Administration fee deducted 50% or $62 - whichever is greater				
Cancelled / withdrawn prior to inspection			See comments	Each
Inspection fees to be refunded				
All other cases			No refund	Each
Information Services (Minimum)	$15.00	$0.00	$15.00	Each
Food Businesses				
Low Risk Premises	$138.00	$0.00	$138.00	Each
Proprietor will be notified of risk assessment and methodology (determined by Council's adopted risk assessment methodology)				
Medium Risk Premises	$205.00	$0.00	$205.00	Each
Proprietor will be notified of risk assessment and methodology (determined by Council's adopted risk assessment methodology)				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Food Businesses [continued]

High Risk Premises	$273.00	$0.00	$273.00	Each
Proprietor will be notified of risk assessment and methodology (determined by Council's adopted risk assessment methodology)				
Large Commercial Premises	$396.00	$0.00	$396.00	Each
Reinspection	Charge is 50% of original inspection fee based upon the property risk rating (low, medium or high)			Each
Pre-Registration Fee	$218.00	$0.00	$218.00	Each
Professional advice and progress inspections of new businesses Includes assessment and site inspections				
Pre-Purchase Inspection Report for Food Handling Business	$329.00	$0.00	$329.00	Each
Written application and current owner consent				
Temporary Event Involving Food (1-3 days p.a maximum)	$67.00	$0.00	$67.00	Per Event
Charities and non-profit organisations exempt unless certificate is required				
Temporary Event Food Premises (4-50 events p.a)	$163.00	$0.00	$163.00	Per Calendar Year
Mobile Food Vending Vehicle – Annual Approval	$235.00	$0.00	$235.00	Per Calendar Year
Registration of Food Handling Premises	$67.00	$0.00	$67.00	Each
Notification cost per single food premise Refer Food Act 2003				
Food Improvement Notice Fee – Regulated	$330.00	$0.00	$330.00	Each

Public Health

Businesses that have a public health impact e.g. skin penetration services, public and semi-public pools, regulated heating and cooling systems, brothels, barbers, beauty salons, etc.

Legionella Annual Administration Fee	$101.50	$0.00	$101.50	each
Notification of Cooling Tower/Warm Water System	$116.50	$0.00	$116.50	per notification
Pre-Purchase Public Health Inspection	$344.00	$0.00	$344.00	Each
Written application and current owners consent				
Notification / Registration of Public Health Business	$102.00	$0.00	$102.00	Each
A one-off fee for notification/registration of a business that has a public health impact				
Public Health Inspection: Reinspection			Calculate	Each
Charge is 50% of the original inspection fee plus the cost of relevant laboratory testing				
Improvement Notice: Regulated System	$560.00	$0.00	$560.00	Each
Improvement Notice: Other	$270.00	$0.00	$270.00	Each
Prohibition Order: Regulated System	$560.00	$0.00	$560.00	Each
Prohibition Order: Other	$270.00	$0.00	$270.00	Each

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Public Health [continued]

Prohibition Order: Reinspection	Statutory fee. Minimum charge is 1/2 hour. Maximum charge is 2 hours at $250 per hour			Per Hour

Public Health Inspection

Proprietor will be notified of risk assessment and methodology.

Low Risk Premises	$191.00	$0.00	$191.00	Each
Plus relevant laboratory testing costs				
Medium Risk Premises	$254.00	$0.00	$254.00	Each
Plus relevant laboratory testing costs				
High Risk Premises	$307.00	$0.00	$307.00	Each
Plus relevant laboratory testing costs				

Swimming Pools

Initial Inspection of Swimming Pool Barrier	$227.27	$22.73	$250.00	per inspection
$100 refunded if pool passes first inspection				
Subsequent Inspection of Swimming Pool Barrier	$90.91	$9.09	$100.00	per inspection
Fee to Register a Swimming Pool	$9.09	$0.91	$10.00	Each
Application for Exemption	$250.00	$0.00	$250.00	Each

Fire Safety

Fire Safety Inspection – request by owner	$229.09	$22.91	$252.00	Each
Minimum				
Annual Fire Safety Inspection	$143.64	$14.36	$158.00	Per Hour
Preparation of fire safety report			Calculate	Each
Assessment of fire safety report – Minimum	$95.45	$9.55	$105.00	Each
Assessment of fire safety report	$110.00	$11.00	$121.00	Per Hour
Fire Safety Statement	$74.55	$7.45	$82.00	Each
Refer EPA Reg 2000 - REG 177				

Environment

Environmental Inspection Fee	$250.00	$0.00	$250.00	per inspection
Local Government Act Order (OSM) Administration Fee	$200.00	$0.00	$200.00	per order
Overgrown Land – according to LGA (Clause 124)	$138.00	$0.00	$138.00	Each
Administration fee PLUS Clearing of land by contractor (where applicable)				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Environment [continued]

Overgrown Land			Cost + 10%	Each
Clearing of land by contractor (where applicable)				
Issue of Environmental Protection Notices	$591.00	$0.00	$591.00	As per statutory scale of fees
Protection of the Environment Operations (General) Regulation 2009 As per statutory scale of fees				

Certificates

Outstanding notices	$145.00	$0.00	$145.00	Each
Section 735A Certificate (Local Govt Act) and Section 121ZP Certificate (EPA Act)				
Application for Building Certificate (including 1st inspection)	$250.00	$0.00	$250.00	Each
In accordance with Clause 260 of the Environmental Planning & Assessment Regulation (2000)				
Re-inspection Fee – Building Certificate Application	$90.00	$0.00	$90.00	Each
In accordance with Clause 260 of the Environmental Planning & Assessment Regulation (2000)				
Copy of Building Certificate	$13.00	$0.00	$13.00	Each
Refer EPA Reg 2000 cl 261				

Development Records

House Drainage Plan	$38.00	$0.00	$38.00	Each
A diagram of the pipes within the house and yard to the service connection point. If you want a sewer junction plan showing the location of the connection point to the Council sewer main, please refer to the Water Section.				

Natural Resource Management

Tree Management (Private Land)

Application for permit to remove or prune trees	$95.00	$0.00	$95.00	Per Application
1 - 5 trees				
Application for permit to remove or prune trees – accompanied by qualified Arborist's report	$40.00	$0.00	$40.00	Per Application
Application for permit to remove or prune trees in conjunction with erection of a building	$110.00	$0.00	$110.00	Per Application
Combination Tree Pruning / Removal				
Compensatory Tree Offset Planting – Residential Zones	$29.00	$0.00	$29.00	Per Tree
Tree replacement on public lands				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Tree Management (Private Land) [continued]

Compensatory Tree Offset Planting – Other Zones	Based on cost evaluation for trees identified for removal			Per Tree
Tree replacement on public lands				

Certificates

Weed Notice / Expenses Certificate	$200.00	$0.00	$200.00	As per statutory scale of fees
Under S28(2) Schedule 7 of the Biosecurity Act				

Roads, Bridges & Transport

Approvals under Roads Act 1993

Events within the Glasshouse Forecourt and Town Square

Application Under Section 138 must be made

Glasshouse Forecourt Bollard Key Deposit	$50.00	$0.00	$50.00	Per Application
Deposit for the use of the Bollard Key held by Transport & Stormwater Networks. The deposit will be refunded on return of the key.				
Special Event Glasshouse Hay Street Reserve Usage Fee – General Use	$163.64	$16.36	$180.00	Per Day
Special Event Glasshouse Hay Street Reserve Usage Fee – Commercial Use	$409.09	$40.91	$450.00	Per Day
Special Event Glasshouse Hay Street Reserve Usage Fee – Charitable			No Charge	Per Day
Event Town Square Reserve Usage Fee – No Closure or Quarter Use	$0.00	$0.00	$0.00	Per Day
Event Town Square Reserve Usage Fee – Half Closure	$0.00	$0.00	$0.00	Per Day
Event Town Square Reserve Usage Fee – Full Closure	$0.00	$0.00	$0.00	Per Day
Occupation Bond	$0 - $2,000 Determined according to event.			Per Event

REF for Works within Council Public Road

Section 138 REF in Relation to Works within Council Public Road(s)	$437.00	$0.00	$437.00	Per REF
Where works are to be undertaken by a party other than Council that require an Environmental Assessment prior to commencement - for example vegetation clearing of road reserve along boundaries on rural roads for installing or repairing stock fences.				

Section 138 – Cattle Grid/Gates within a Public Road

Application Fee, Pre-Approval Inspection Fee and Post-Approval Inspection Fee	$501.00	$0.00	$501.00	Per Application

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Traffic Management				
Refer Appendix 9				
Application Fees				
Base application fee (plus calculated additional occupancy fees)	$193.00	$0.00	$193.00	Each
All Occupancies Minimum				
Road occupancy / opening < 1 week	$193.00	$0.00	$193.00	Each
Road occupancy / opening > 1 week	$431.00	$0.00	$431.00	Each
Standing plant < 1 week	$193.00	$0.00	$193.00	Each
Standing plant > 1 week	$431.00	$0.00	$431.00	Each
Work zone	$431.00	$0.00	$431.00	Each
Occupancy of Car Park	$193.00	$0.00	$193.00	Each
Occupancy Fees				
Minimum 1 Day				
Footpath / Nature Strip (Other Than for Vehicle Crossing)	$2.55	$0.00	$2.55	Per Metre Per Day
Non residential zone (more than 3 days) Minimum 6 metres				
Parking Lane – Residential Zone (Other Than Vehicle Crossing)	$2.55	$0.00	$2.55	Per Metre Per Day
With no parking restriction (more than 1 week) Minimum 6 metres				
Parking Lane – Residential Zone (Other Than Vehicle Crossing)	$2.55	$0.00	$2.55	Per Metre Per Day
With parking restrictions Minimum 6 metres				
Parking Lane – Industrial and CBD Areas	$2.60	$0.00	$2.60	Per Metre Per Day
No parking restrictions (less than 3 days) Minimum 6 metres				
Parking Lane – Industrial and CBD Areas	$4.90	$0.00	$4.90	Per Metre Per Day
No parking restrictions (more than 3 days) Minimum 6 metres				
Parking Lane – Industrial and CBD Areas	$4.90	$0.00	$4.90	Per Metre Per Day
With parking restriction Minimum 6 metres				
Trafficable Lane Occupancy	$10.40	$0.00	$10.40	Per Metre Per Day
Minimum 6 metres				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Occupancy Fees [continued]				
Standing Plant (Skips, Concrete Pumps, Cranes, etc)	$2.60	$0.00	$2.60	Per Metre Length of Plant Per Day
Minimum 5 metres				
Work Zone (CBD and Shopping Precincts)	$27.20	$0.00	$27.20	Per Metre Per Day
Standing plant fees additional				
Work Zone (Others Area)	$14.05	$0.00	$14.05	Per Metre Per Day
Standing plant fees additional				
Security Bonds				
Traffic Management Bond Administration Fee	$279.00	$0.00	$279.00	Per Bond
Applicable to all bonds				
Security Bond – For Damage to Public Infrastructure	For occupation <1 week, minimum $2,000. For occupation >1 week, calculate			Each
Plant and Equipment Occupation (Standing Plant) within Road Reserve (including CBD) Bond	$2,000.00	$0.00	$2,000.00	Per Application
Note this is different from physical works on the road reserve.				
Works on Road Reserve – Located within CBD – General Bond	$10,000.00	$0.00	$10,000.00	Per Application
This bond is applied where works require the use of heavy plant, equipment and or scaffolding within the road reserve within the CBD				
Works within Road Reserve – Location other than CBD – General Bond	$2,000.00	$0.00	$2,000.00	Per Application
This bond may be applied where works require the use of heavy plant, equipment and or scaffolding within the road reserve outside of the CBD				
Large events, and large events within Glasshouse Forecourt and Town Green Parking Areas – General Bond Area	$2,000.00	$0.00	$2,000.00	Per Application
This bond may be applied where a bump in and out requires the use of large vehicles/fork lifts etc. and/or where there is a possibility of Council assets being damaged				
Street Banner Poles				
Street Banner Poles – Banner Change Over Fee	$70.00	$0.00	$70.00	per banner

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Directions Signage

Community, Service & Tourism Signage

Application and Sign Fee for New Community, Service and Tourism Signage

One sign	$210.00	$21.00	$231.00	Per Application
Includes application fee and supply & installation of one sign				
Two or three signs	$354.55	$35.45	$390.00	Per Application
Includes application fee and supply & installation of two or three signs				

Private Works – Restoration of Road Openings in Public Roads Maintained by Council

Refer to Appendix 5

Restoration of Road Openings up to 10m2

Application Administration Fee – Restoration of Damaged Assets	$500.50	$0.00	$500.50	Per Application
Fees relating to internal costs incurred by Council including inspection of works and organisation of Council staff to repair damage to Council's Traffic & Stormwater Network Assets.				

Type of Road Pavement

Asphaltic concrete with cement concrete base	$425.00	$0.00	$425.00	Per m2
Tar and bitumous surfaces on all classes of base other than cement concrete	$157.50	$0.00	$157.50	Per m2
Earth and gravel, waterbound macadam and all other classes of unsealed pavement or shoulders	$66.00	$0.00	$66.00	Per m2

Kerbing, Guttering Construction

Contribution from land owners for Kerb & Guttering

Frontage	$83.00	$0.00	$83.00	Per Lineal Metre
Side and/or Rear	$51.00	$0.00	$51.00	Per Lineal Metre

Street Stalls

Street Stalls			No Charge	Per Day

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Management and Investigation of Street Lighting Glare Issue				
Application Fee	$171.82	$17.18	$189.00	Each
Approved Essential Energy Glare Shield Installation	$509.09	$50.91	$560.00	Each
Essential Energy tariff ($506.56) + 10%				
Detailed Street Lighting Design Fee	$1,818.18	$181.82	$2,000.00	Each
Required for V category lighting on high traffic volume (collector/sub arterial/arterial) roads or high risk (due to reduced light levels) areas needing assessment. Accrediated electrical/lighting design consultant to prepare a design, construction plan, including Essential Energy authorisation costs.				
New Ilumanire (Light) as per Design		Essential Energy + 10%		Each
Note this is where no approved glare shield is applicable.				
Ferries				
Ferry Services				
Refer Appendix 3				
Standard Full Fee				
Cars/Utilities Annual Ticket	$909.09	$90.91	$1,000.00	Annually
Unlimited use Fee will be quarterly pro-rated - pass issued for financial year				
Cars/Utilities Monthly Ticket	$90.91	$9.09	$100.00	Monthly
Unlimited use Ticket is issued for the calendar month				
Cars/Utilities Weekly Ticket	$36.36	$3.64	$40.00	Weekly
Unlimited use Ticket is issued for the week, Monday to Sunday				
Car/Utilities	$4.55	$0.45	$5.00	Per Trip
Single Trip				
Caravans/Trailers	$4.55	$0.45	$5.00	Per Trip
Extra Charge per Trip				
Trucks > 4t GVM Approx. 2t Payload	$9.09	$0.91	$10.00	Per Trip
Single Trip				
Semi-Trailers	$13.64	$1.36	$15.00	Per Trip
Single Trip				
Motorcycles	$1.82	$0.18	$2.00	Per Trip
Single Trip				

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Resident/Ratepayer Concession Holders				
Annual Concession Stickers	$50.00	$5.00	$55.00	Each
Based on a financial year Fee will be quarterly pro-rated				
Concession Annual Pass – Motorcycle	$159.09	$15.91	$175.00	Annually
Unlimited use Includes cost for annual concession sticker				
Concession Annual Pass – Cars/Utilities	$318.18	$31.82	$350.00	Annually
Unlimited use Includes cost for annual concession sticker				
Concession Annual Pass – Trucks > 4t GVM Approx. 2t Payload	$954.55	$95.45	$1,050.00	Annually
Unlimited use Includes cost for annual concession sticker				
Concession Annual Pass – Semi-Trailer, Dog-Trailer, Articulated Vehicle	$1,272.73	$127.27	$1,400.00	Annually
Unlimited use Includes cost for annual concession sticker				
Concession Monthly Ticket – Cars/Utilities	$27.27	$2.73	$30.00	Monthly
Unlimited use Ticket is issued for the calendar month				
Concession Monthly Ticket – Trucks > 4t GVM Approx. 2t Payload	$81.82	$8.18	$90.00	Monthly
Unlimited use Ticket is issued for the calendar month				
Concession Monthly Ticket – Semi-Trailer, Dog-Trailer, Articulated Vehicle	$109.09	$10.91	$120.00	Monthly
Unlimited use Ticket is issued for the calendar month				
Concession Monthly Ticket – Motorcycles	$13.64	$1.36	$15.00	Monthly
Unlimited use Ticket is issued for the calendar month				
Concession Weekly Ticket – Cars/Utilities	$9.09	$0.91	$10.00	Weekly
Unlimited use Ticket is issued for the week, Monday to Sunday				
Concession Weekly Ticket – Trucks > 4t GVM Approx. 2t Payload	$27.27	$2.73	$30.00	Weekly
Unlimited use Ticket is issued for the week, Monday to Sunday				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Resident/Ratepayer Concession Holders [continued]				
Concession Weekly Ticket – Semi-Trailer, Dog-Trailer, Articulated Vehicle	$36.36	$3.64	$40.00	Weekly
Unlimited use Ticket is issued for the week, Monday to Sunday				
Concession Weekly Ticket – Motorcycles	$4.55	$0.45	$5.00	Weekly
Unlimited use Ticket is issued for the week, Monday to Sunday				
Concession Pre-Paid Booklets – 25 Tickets per booklet	$18.18	$1.82	$20.00	Per Booklet
Per Booklet Pre-paid tickets must be used for single concession trips				
Concession Car/utilities	$0.73	$0.07	$0.80	1 pre-paid ticket, per trip
Single Trip 1 pre-paid ticket, handed to ferry operator				
Concession Caravans/trailers	$0.73	$0.07	$0.80	1 pre-paid ticket, per trip
Extra Charge per Trip 1 pre-paid ticket, handed to ferry operator				
Concession Trucks > 4t GVM approx. 2t payload	$2.18	$0.22	$2.40	3 pre-paid tickets, per trip
Single Trip 3 pre-paid tickets, handed to ferry operator				
Concession Semi-Trailer, Dog-Trailer, Articulated Vehicle	$2.91	$0.29	$3.20	4 pre-paid tickets, per trip
Single Trip 4 pre-paid tickets, handed to ferry operator				
Concession Motorcycles	$0.36	$0.04	$0.40	1/2 pre-paid ticket, per trip
Single Trip 1/2 pre-paid ticket, handed to ferry operator				

Private Works

Refer to Appendix 4

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

General Fund

Emergency Works

Emergency Works	Actual Costs + 25%			

Private Works (pre-paid)

Up to $20,000	Quotation + 18%			
$20,000 – $50,000	Quotation + 12%			
$50,000 & above	Quotation + 6%			

Government Department & Other Local Government Instrumentalities

Up to $20,000	Quotation + 18%			
$20,000 – $50,000	Quotation + 12%			
$50,000 & above	Quotation + 6%			

Sewerage Services

Interest Rate

Interest Rate on overdue rates & charges

Sewer Annual Charges	0% from 1/7/20, 7% from 1/1/21			
As per the rate determined by the Division of Local Government				

Wastewater Annual Charges & Usage Fees

Section 501, 502 & 608 Local Government Act, 1993

Annual Charges

Connected or available other than churches and halls	$923.70	$0.00	$923.70	Per Annum
Non Rateable – Section 555 churches & halls	$592.80	$0.00	$592.80	Per Annum
Non Rateable – Section 555 Other than churches and halls	$735.40	$0.00	$735.40	Per Annum
Non Rateable – Section 556	$923.70	$0.00	$923.70	Per Annum
Unconnected – Section 548A	$592.80	$0.00	$592.80	Per Annum
Pressure Sewer	$893.70	$0.00	$893.70	Per Annum

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Usage Fees				
Caravan Parks, Retirement Homes, Motels, Clubs, Hotels, Schools & Backpackers Hostels, Flats, Granny Flats, Secondary Dwellings, Multi Dwelling Housing, Dual Occupancy (where not on separate sewer connections), Major Regional Shopping Centres	$1.37	$0.00	$1.37	C per kl

On-site Sewerage Management System

Annual Charges

Operate on-site sewage management system

Residential

Low Risk System	$39.80	$0.00	$39.80	Each
Medium Risk System	$78.50	$0.00	$78.50	Each
High Risk System	$112.20	$0.00	$112.20	Each

Commercial

Small	$224.40	$0.00	$224.40	Each
Large	$279.50	$0.00	$279.50	Each

Recycled Water

Port Macquarie Urban Area Business/Commercial/Council Facilities Only (Usage Charge - Refer to Appendix 8 for Usage Allowance)

Annual Availability Charge

Charge Per Meter

50% of Potable Water Charge

Usage Fees

50% of Potable Water Charge

Residential Properties to be Serviced by Recycled Water (i.e. Dual Scheme with Two Meters per Property)

Section 501, 502 & 556 of the Local Government Act, 1993

Annual Availability Charge

Charge Per Meter

80% of Potable Water Charge

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Usage Charges

80% of Potable Water Charge

Approvals Under Section 68 Local Government Act, 1993

Refer also to Local Government (Approvals) Regulation 1999.

Part B – 7. Approval to Discharge Waste to a Council Sewer

Treatment Facility Type/Development Type

Application requiring State Government concurrence	$587.00	$0.00	$587.00	Each
Application not requiring State Government concurrence	$321.00	$0.00	$321.00	Each

Septic Sewage Fees

Pans & Effluent	$2.54	$0.00	$2.54	Per kl
Sludge (septic)	$26.00	$0.00	$26.00	Per kl

Trade Waste Charges

Refer also Policy T2

Annual Inspection Charge Category 1 & 2	$208.00	$0.00	$208.00	Each
Annual Inspection Charge Category 3	$638.00	$0.00	$638.00	Each
Biochemical Oxygen Demand (BOD)	$0.83	$0.00	$0.83	Per kg
Total Dissolved Solids (TDS)	$1.12	$0.00	$1.12	Per kg
Total Suspended Solids (TSS)	$0.96	$0.00	$0.96	Per kg
Oil & Grease	$1.40	$0.00	$1.40	Per kg
Re-inspection Fee	$111.00	$0.00	$111.00	Each
Operating Trade Waste Charge – Volume with Pre-Treatment	$1.84	$0.00	$1.84	Per kl
Operating Trade Waste Charge – Volume with No Treatment	$16.80	$0.00	$16.80	Per kl
pH Coefficient	$0.47	$0.00	$0.47	Constant
refer to PMHC Trade Waste Policy				

Private Works – Sewer Fund

Emergency Works

Emergency Works	Actual Costs + 25%	

Private Works (pre-paid)

Up to $20,000	Quotation + 18%	
$20,000 – $50,000	Quotation + 12%	
$50,000 & above	Quotation + 6%	

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Government Department & Other Local Government Instrumentalities

Up to $20,000			Quotation + 18%	
$20,000 – $50,000			Quotation + 12%	
$50,000 & above			Quotation + 6%	

Miscellaneous Sewerage Fees and Charges

Sewerage Pumping Station Commissioning	$372.00	$0.00	$372.00	Per pump station
Effluent Reuse	$0.15	$0.00	$0.15	Per kl
Not recycled quality				
Camera investigation – of sewer drainage	$192.00	$0.00	$192.00	Per Hour
Minimum 2 Hours				
Sewer Main Pressure Testing	$146.00	$0.00	$146.00	Per Hour
Hourly rate for all time spent setting up and pressure testing main.				
Sewer Junction Location – Mailed	$38.00	$0.00	$38.00	Each
Sewer Junction Location – Letter to Customer Advising not Available	$38.00	$0.00	$38.00	Each
Sewer Junction Location – Expedition Charge – Response Required for 24 Hour Pick Up	$51.00	$0.00	$51.00	Each

Stormwater & Drainage

Interest Rate

Interest Rate on overdue rates & charges

Stormwater Management Annual Charge			0% from 1/7/20, 7% from 1/1/21	
As per the rate determined by the Division of Local Government				

Annual Stormwater Charge

Section 496A of Local Government Act, 1993

Business

Between 0 & 350m2	$25.00	$0.00	$25.00	Per Annum
Between 351m2 & 700m2	$50.00	$0.00	$50.00	Per Annum
Between 701m2 & 1,000m2	$75.00	$0.00	$75.00	Per Annum
Between 1,001m2 & 1,400m2	$100.00	$0.00	$100.00	Per Annum
Between 1,401m2 & 1,750m2	$125.00	$0.00	$125.00	Per Annum

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Business [continued]				
Between 1,751m2 & 2,100m2	$150.00	$0.00	$150.00	Per Annum
Between 2,101m2 & 2,450m2	$175.00	$0.00	$175.00	Per Annum
Between 2,451m2 & 2,800m2	$200.00	$0.00	$200.00	Per Annum
Between 2,801m2 & 3,200m2	$225.00	$0.00	$225.00	Per Annum
Between 3,201m2 & 3,500m2	$250.00	$0.00	$250.00	Per Annum
Between 3,501m2 & 3,850m2	$275.00	$0.00	$275.00	Per Annum
Between 3,851m2 & 4,200m2	$300.00	$0.00	$300.00	Per Annum
Between 4,201m2 & 4,600m2	$325.00	$0.00	$325.00	Per Annum
Between 4,601m2 & 4,900m2	$350.00	$0.00	$350.00	Per Annum
Between 4,901m2 & 5,200m2	$375.00	$0.00	$375.00	Per Annum
Between 5,201m2 & 5,600m2	$400.00	$0.00	$400.00	Per Annum
Between 5,601m2 & 5,950m2	$425.00	$0.00	$425.00	Per Annum
Between 5,951m2 & 6,300m2	$450.00	$0.00	$450.00	Per Annum
Between 6,301m2 & 6,600m2	$475.00	$0.00	$475.00	Per Annum
Greater than 6,600m2	$500.00	$0.00	$500.00	Per Annum
Business Strata				
Business Strata	$12.50	$0.00	$12.50	Per Annum
Residential				
Residential	$25.00	$0.00	$25.00	Per Annum
Residential Strata				
Residential Strata	$12.50	$0.00	$12.50	Per Annum
Stormwater Asset Investigations				
Camera Investigation of Stormwater Drainage Assets	$16.36	$1.64	$18.00	Per Lineal Metre

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Water Supply

Interest Rate

Interest Rate on overdue rates & charges

Water Annual Charges	0% from 1/7/20, 7% from 1/1/21	
As per the rate determined by the Division of Local Government		

Water Charges & Fees

Annual Availability Charge

Section 501, 502 & 556 of Local Government Act, 1993

Community Service Organisations			No Charge	Per Annum
Section 555				
Equivalent Tenements	$171.00	$0.00	$171.00	Per Annum
Strata Units	$171.00	$0.00	$171.00	Per Annum
Not individually metered				
Vacant Land	$171.00	$0.00	$171.00	Per Annum
Other than land that complies with Section 548A				
20 mm Meter	$171.00	$0.00	$171.00	Per Annum
25 mm Meter	$272.00	$0.00	$272.00	Per Annum
32 mm Meter	$453.00	$0.00	$453.00	Per Annum
40 mm Meter	$714.00	$0.00	$714.00	Per Annum
50 mm Meter	$1,124.00	$0.00	$1,124.00	Per Annum
80 mm Meter	$2,889.00	$0.00	$2,889.00	Per Annum
100 mm Meter	$4,517.00	$0.00	$4,517.00	Per Annum
150 mm Meter	$10,185.00	$0.00	$10,185.00	Per Annum
200 mm Meter	$18,110.00	$0.00	$18,110.00	Per Annum

Usage Fees

Refer Appendix 6 for Usage Allowance

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Usage Fees [continued]

Consumption below usage allowance

Water Consumption – Tier 1	$3.45	$0.00	$3.45	Per kl
Water Consumption – Tier 2	$6.90	$0.00	$6.90	Per kl

Fire Service Levy

Annual Charges

Charge per Meter Size

50% of the potable water charge

32 mm Meter	$226.50	$0.00	$226.50	Per Annum
40 mm Meter	$357.00	$0.00	$357.00	Per Annum
50 mm Meter	$562.00	$0.00	$562.00	Per Annum
80 mm Meter	$1,444.50	$0.00	$1,444.50	Per Annum
100 mm Meter	$2,258.50	$0.00	$2,258.50	Per Annum
150 mm Meter	$5,092.50	$0.00	$5,092.50	Per Annum
200mm Meter	$9,055.00	$0.00	$9,055.00	Per Annum

Recycled Water Charges

Port Macquarie Urban Area Business/Commercial/Council Facilities Only

Annual Availability Charge

20 mm Meter	$85.50	$0.00	$85.50	Per Annum
25 mm Meter	$136.00	$0.00	$136.00	Per Annum
32 mm Meter	$226.50	$0.00	$226.50	Per Annum
40 mm Meter	$357.00	$0.00	$357.00	Per Annum
50 mm Meter	$562.00	$0.00	$562.00	Per Annum
80 mm Meter	$1,444.50	$0.00	$1,444.50	Per Annum
100 mm Meter	$2,258.50	$0.00	$2,258.50	Per Annum
150 mm Meter	$5,092.50	$0.00	$5,092.50	Per Annum
200 mm Meter	$9,055.00	$0.00	$9,055.00	Per Annum

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Usage Fees				
Refer to Appendix 7				
Recycled Water Consumption – Tier 1	$1.72	$0.00	$1.72	Per kl
Residential Properties to be Serviced by Recycled Water				
i.e. Dual Scheme with Two Meters per Property				
Included in Annual Water Charge			No Additional Charge	
Private Works – Water Fund				
Emergency Works				
Emergency Works			Actual Costs + 25%	
Private Works (pre-paid)				
Up to $20,000			Quotation + 18%	
$20,000 – $50,000			Quotation + 12%	
$50,000 & above			Quotation + 6%	
Government Department & Other Local Government Instrumentalities				
Up to $20,000			Quotation + 18%	
$20,000 – $50,000			Quotation + 12%	
$50,000 & above			Quotation + 6%	
Miscellaneous Water Fees and Charges				
Service Fee to be charged upon the issue of a Final Notice of Intention to Disconnect Water	$64.00	$0.00	$64.00	Each
Disconnection/Reconnection of Water Supply	$127.00	$0.00	$127.00	Each
Supervision of Interconnection to existing main or Supervision of Pressure Testing	$127.00	$0.00	$127.00	Per Hour
For each connection, includes notification and supervision of interconnection or pressure testing by contractor. NOTE: This fee is to be reapplied if site is not available within 1/2 hour of agreed time Recovering actual cost				
Water Main Pressure Testing	$146.00	$0.00	$146.00	Per Hour
Hourly rate for all time spent setting up and pressure testing main.				
Sale of in-house water meters	$100.91	$10.09	$111.00	Each
Remote water meter transmitter hire	$120.00	$0.00	$120.00	Each
Available areas only				
Consultancy – Investigation and Design	$178.18	$17.82	$196.00	Per Hour

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit

Miscellaneous Water Fees and Charges [continued]

Vacuum Excavation Truck	$225.45	$22.55	$248.00	Per Hour
Includes Plant & Operator cost				
Tanker Truck	$104.55	$10.45	$115.00	Per Hour
Includes Plant and Operator cost				
Water Usage Printout – Standard Delivery	$40.00	$0.00	$40.00	Each
Water Usage Printout – Urgent Delivery	$40.00	$0.00	$40.00	Each

Disinfection of Water Mains

Minimum Fee	$932.00	$0.00	$932.00	Each
Lineal Metre rate	$8.00	$0.00	$8.00	Lineal Metre
Re-establishment fee	$468.00	$0.00	$468.00	Each
Fee to be applied if site not available within 1/2 hour of agreed time				
Tanker Hire for Disinfection of Water Mains	$115.00	$0.00	$115.00	Per Hour

Leakages

Water Leakage Investigations	$127.27	$12.73	$140.00	Per Hour
Hire of equipment plus operator Minimum 1 hour				

Swimming Pools

Water directly from main to fill Residential Swimming Pool	$656.00	$0.00	$656.00	

Testing of Water Meters

20 mm	$396.00	$0.00	$396.00	Each
Deposit, if the meter is found to be faulty and over-registering, this deposit will be refunded				
Greater than 25 mm			Actual Cost	Each
Registration of Backflow Prevention Devices	$70.00	$0.00	$70.00	Each
Testing of Backflow Prevention Devices	$133.00	$0.00	$133.00	Each

Water Meter Readings

Additional Water Meter Reading Requests – Standard Delivery	$70.00	$0.00	$70.00	Each
Additional Water Meter Reading Requests – Urgent Delivery	$140.00	$0.00	$140.00	Each
Private water meter readings	$2.50	$0.00	$2.50	Per Meter

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Water from Mains				
Water Carter's Licence Fee – Potable	$1,021.00	$0.00	$1,021.00	Per Annum
Private Water Carters Licence Fee	$642.00	$0.00	$642.00	Per Annum
Water Meter Installation				
Lowering existing 20mm Water Meter into a Non-Trafficable Pit	$498.00	$0.00	$498.00	per service
Replacement of a Stolen 20mm Water Meter	$143.24	$0.00	$143.24	per meter
New single 20 mm Potable Water Meter	$556.80	$0.00	$556.80	Each
New single 20mm Recycled Water Meter	$556.80	$0.00	$556.80	Each
20mm Short Service Additional – Potable/Recycled	$719.24	$0.00	$719.24	Each
All services terminate prior to 90 bend to raise out of ground.				
20mm Long Service Additional – Potable/Recycled	$2,307.54	$0.00	$2,307.54	Each
All services terminate prior to 90 bend to raise out of ground.				
20mm RPZ Backflow Prevention Device	$356.77	$0.00	$356.77	Each
Does not include labour.				
20mm DCV Backflow Prevention Device	$306.80	$0.00	$306.80	Each
Does not include labour.				
25mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	$804.59	$0.00	$804.59	Each
All services terminate prior to 90 bend to raise out of ground.				
25mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	$2,671.38	$0.00	$2,671.38	Each
All services terminate prior to 90 bend to raise out of ground.				
25mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	$671.30	$0.00	$671.30	Each
All meters include cost of meter frame beginning at the 90 bend.				
25mm RPZ Backflow Prevention Device	$397.03	$0.00	$397.03	Each
Does not include labour.				
25mm DCV Backflow Prevention Device	$326.23	$0.00	$326.23	Each
Does not include labour.				
32mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	$906.59	$0.00	$906.59	Each
All services terminate prior to 90 bend to raise out of ground.				
32mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	$2,810.36	$0.00	$2,810.36	Each
All services terminate prior to 90 bend to raise out of ground.				
32mm Water Meter– Potable/Recycled (Hydraulic Plans to Support)	$1,306.06	$0.00	$1,306.06	Each
All meters include cost of meter frame beginning at the 90 bend.				
32mm RPZ Backflow Prevention Device	$590.00	$0.00	$590.00	Each
Does not include labour.				

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Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Water Meter Installation [continued]				
32mm DCV Backflow Prevention Device	$512.26	$0.00	$512.26	Each
Does not include labour.				
40mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	$994.48	$0.00	$994.48	Each
All services terminate prior to 90 bend to raise out of ground.				
40mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	$2,940.75	$0.00	$2,940.75	Each
All services terminate prior to 90 bend to raise out of ground.				
40mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	$1,408.08	$0.00	$1,408.08	Each
All meters include cost of meter frame beginning at the 90 bend.				
40mm RPZ Backflow Prevention Device	$649.58	$0.00	$649.58	Each
Does not include labour.				
40mm DCV Backflow Prevention Device	$567.79	$0.00	$567.79	Each
Does not include labour.				
50mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	$1,335.81	$0.00	$1,335.81	Each
All services terminate prior to 90 bend to raise out of ground.				
50mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	$3,366.93	$0.00	$3,366.93	Each
All services terminate prior to 90 bend to raise out of ground.				
50mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	$3,226.84	$0.00	$3,226.84	Each
All meters include cost of meter frame beginning at the 90 bend.				
50mm RPZ Backflow Prevention Device	$744.10	$0.00	$744.10	Each
Does not include labour.				
50mm DCV Backflow Prevention Device	$634.43	$0.00	$634.43	Each
Does not include labour.				
80mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	$2,083.69	$0.00	$2,083.69	Each
All services terminate prior to 90 bend to raise out of ground.				
80mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	$4,149.62	$0.00	$4,149.62	Each
All meters include cost of meter frame beginning at the 90 bend.				
80mm RPZ Backflow Prevention Device	$4,300.53	$0.00	$4,300.53	Each
Does not include labour.				
80mm DCV Backflow Prevention Device	$2,904.15	$0.00	$2,904.15	Each
Does not include labour.				
100mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	$2,696.53	$0.00	$2,696.53	Each
All services terminate prior to 90 bend to raise out of ground.				
100mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	$4,772.12	$0.00	$4,772.12	Each
All services terminate prior to 90 bend to raise out of ground.				

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Water Meter Installation [continued]				
100mm Water Meter (Hydraulic Plans to Support)	$4,879.58	$0.00	$4,879.58	Each
All meters include cost of meter frame beginning at the 90 bend.				
100mm SDC with Bypass Meter + 2 x Rising Spindle Valves	$4,125.18	$0.00	$4,125.18	Each
Includes cost to raise service up from end of service.				
100mm RPZ Backflow Prevention Device	$4,668.91	$0.00	$4,668.91	Each
Does not include labour.				
100mm DCV Backflow Prevention Device	$3,589.49	$0.00	$3,589.49	Each
Does not include labour.				
150mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	$3,525.67	$0.00	$3,525.67	Each
All services terminate prior to 90 bend to raise out of ground.				
150mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	$5,745.00	$0.00	$5,745.00	Each
All services terminate prior to 90 bend to raise out of ground.				
150mm Water Meter (Hydraulic Plans to Support)	$10,102.73	$0.00	$10,102.73	Each
All meters include cost of meter frame beginning at the 90 bend.				
150mm SDC with Bypass Meter + 2 x Rising Spindle Valves	$7,500.21	$0.00	$7,500.21	Each
Includes cost to raise service up from end of services.				
150mm RPZ Backflow Prevention Device	$7,418.85	$0.00	$7,418.85	Each
Does not include labour.				
150mm DCV Backflow Prevention Device	$5,722.62	$0.00	$5,722.62	Each
Does not include labour.				
Hydrant Relocation up to 150mm Water Main	$2,971.33	$0.00	$2,971.33	Each
Valve Relocation up to 150mm Water Main	$3,014.99	$0.00	$3,014.99	Each
Single Panel Footpath Removal and Restoration to Access Water Main	$1,044.19	$0.00	$1,044.19	Each
Water Pressure Certificates				
Hose reel installation	$99.00	$0.00	$99.00	Each
Fire hydrant installation	$196.00	$0.00	$196.00	Each
Fire sprinkler and / or wall drencher installation	$285.00	$0.00	$285.00	Each
Canal Management				
Settlement Shores Maintenance Fee			$0.0006154	Rate Applied to Current Land Value
Private Works on Canals – Maintenance Permit	$159.00	$0.00	$159.00	Each

continued on next page ...

Name	Year 21/22 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
Canal Management [continued]				
Boating Structure Licence Fee	$138.00	$0.00	$138.00	Per Annum

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices

Appendix 1 – Documents & Publications

Single Copies

The public should be encouraged to use coin-operated machines in the Library except where it is a Council document that is to be copied (e.g. Minutes). In this case, the office copiers are to be used for single jobs.

50 Copies or Greater per Original

This service will be provided on the basis that it is not an "on demand" service. If the copy cannot be done immediately a time will be mutually allocated.

A concession of 50% off the normal charge will apply to the following type of organisations:

(a) Government and/or Council sponsored non-profit organisations concerned primarily with the welfare and or safety of the community and whole complement of workers consist mainly of volunteers, e.g. SES, Neighbourhood Centre, and Volunteer Fire Brigade.
(b) Organisations directly sponsored by Council, consisting wholly of volunteers concerned with special projects, the promotion of which being subject to the declared support of Council, i.e. Friends of Kooloonbung, and that in all other cases the adopted scale of charges apply.

GST Exemption

Income from the sale of the following documents is GST Exempt: the production of, copying of, certifying of, including documents or data produced as a result of the searching or extracting of information from a data file. Examples include Policy documents, DCP's, LEP's, Council Minutes, mapping information, valuations, statistical data etc. The exemption does not extend to documents produced for commercial sale, such as tourist guides.

Publicly Available Information

Many items are available, at least in one form, free of charge as required by section 6 of the *Government Information (Public Access) Act 2009*. Access provided in alternative ways may be charged for.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 2 – Port Macquarie Airport

- RPT – Regular Public Transport
- GA – General Aviation
- Definition of private aircraft – used solely for private purposes where no income is generated from the aircraft use by the operator.
- Definition of commercial aircraft – any aircraft operation where income is received by the operator (excluding regular passenger / airline / freight services), including for example though not limited to, pilot training, charter, surveying, fire-fighting, joy/adventure flights, skydiving, etc
- Airport Usage Charge (Annual) – For Commercial Purposes - Applies to all airport based Commercial Operators with less than five (5) aircraft.
  'Commercial Operator' means:
  (a) a natural person to whom a general aviation aircraft using the airport is registered,
  (b) a body corporate to which a general aviation aircraft using the airport is registered,
  (c) two or more natural persons to whom general aviation aircraft using the airport are registered and who are associated for a common business purpose in relation to the operation of those aircraft,
  (d) two or more bodies corporate to which general aviation aircraft using the airport are registered and which are associated for a common business purpose in relation to the operation of those aircraft,
  (e) two or more related bodies corporate within the meaning of section 50 of the Corporations Act 2001 (Cth) to which general aviation aircraft using the airport are registered,
  (f) two or more bodies corporate each of which has at least one director in common to which general aviation aircraft using the airport are registered,
  (g) two or more bodies corporate each of which has at least one shareholder in common holding at least 10% of the shares in each of the bodies corporate to which general aviation aircraft using the airport are registered.'
- Council may choose to waive or reduce a fee for an aircraft operator pursuant to s610E(1) of the Local Government Act 1993 by written agreement entered into between the General Manager, under delegated authority granted by the Council, and the aircraft operator by reference to the categories of hardship or other categories appearing below:
  - Regular Public Transport (RPT) Services
  - General Aviation (GA) Services.
- Defined pilot circuit training hours:
  - Monday - Friday 7am to 10pm October - March (7am to 9pm April to September)
  - Saturday - Sunday 8am to 8pm

  A surcharge applies for any circuit training movements conducted outside of these hours.

Operators wishing to pay the annual fee are required to apply in writing outlining their aircraft registration number, confirming that it is parked and operated out of Port Macquarie Airport and describing the purposes for which the aircraft is used (i.e. commercial or private use).

An additional fee applies where any flying machine not registered on the "VH" register is provided with storage/hangar in a leased area. The hangar lessee will be charged the annual fee for a commercial ultra-light, micro-light or similar, for each

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 2 – Port Macquarie Airport (continued)

such aircraft, or the 'private fee' where the lessee declares such machine as a private aircraft (describing any external markings for identification).

A movement charge will be levied based on broadcasts over the CTAF(R) (radio) Frequency as mandated by Civil Aviation Safety Regulations and the Aeronautical Information Publication if:

(a) An on ground aircraft broadcasts the intention to taxi and enter runway 03/21
(b) An airborne aircraft broadcasts the intention to join the circuit or broadcasts the intention to undertake a straight approach to runway 03/21

The Port Macquarie Airport Car Park is a pay parking area. Conditions of Parking and the parking fees applicable are displayed at the entry to the car park. A 'lost ticket' fee shall apply for any lost ticket. The 'lost ticket' fee shall be determined by the General Manager or delegate as appropriate to suit operational circumstances.

Port Macquarie is a Security Controlled Airport.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 3 – Ferry Services

All residents and rate payers of the Port Macquarie-Hastings Council Local Government Area are entitled to purchase a concession sticker. The concession annual pass prices are inclusive of the concession sticker fee and the annual pass only will be issued.

When concession stickers or annual passes are purchased, they are to be affixed to the driver's side of the windscreen of the vehicle to be valid for traveling or making a concession ticket purchase. Concession stickers and annual passes are not transferrable. A concession sticker or annual pass is required to purchase all concession booklets, concession weekly tickets and concession monthly tickets.

Weekly Tickets are issued for the week from Monday to Sunday, monthly tickets are issued for the calendar month and pre-paid concession booklets have no expiry date (they will only become invalid should the ticketing system be altered).

A concession sticker must be affixed to the vehicle using a pre-paid single trip concession ticket. A concession sticker is not required on a vehicle when using a weekly or monthly ticket. Weekly and monthly tickets are transferrable. Concession single trips can only be made using pre-paid tickets from the booklet - single trip tickets will only be available for purchase at the standard full fare rate.

Annual passes and concession stickers will only be available for purchase from Council.

All other tickets including pre-paid concession ticket booklets are to be purchased from the ferry operator. Weekly and monthly tickets do not cover the cost of a caravan or trailer (including dog-trailer). An additional cost is payable for the caravan or trailer - for concession holders this will be the use of 1 pre-paid ticket.

Concession travelers will hand the ferry operator the required number of pre-paid tickets when boarding the ferry for each single trip. The number of tickets required for each class of vehicle for a single trip is as follows:

- Car single trip = 1 ticket
- Motorcycle single trip = ½ ticket
- Trucks > 4t GVM (approx. 2 ton payload) = 3 tickets
- Semi-trailers, Dog-trailers, articulated vehicles and the like = 4 tickets
- Caravan / Trailer is an additional cost = 1 ticket

Charitable not for profit organisations who undertake charitable work on the North Shore are eligible to apply for 1 annual pass to be affixed to a nominated vehicle. Application is to be made in writing to the Group Manager Infrastructure Operations for consideration - specific information relating to the charity, its registration as a not for profit organisation and the type of work undertaken will be required.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 4 – Private Works

The *Local Government Act 1993* enables Council to carry out the following works for residents and organisations on private property.

- Paving and road marking (GST applies)
- Kerbing and guttering (GST exempt)
- Demolition and excavation (GST applies)
- Water, sewerage and drainage connections (GST applies)
- Land clearing and tree felling (GST applies)
- Tree planting and tree maintenance (GST applies)
- Fencing and ditching (GST applies)

Appendix 5 – Restoration of Road Openings in Public Roads Maintained by Council

(a) The rate per m² is to be interpreted as meaning a minimum charge / deposit on final cost.
(b) The rate per m² is a minimum charge for restoration of road openings up to 10m².
(c) Where actual restoration costs exceed, by more than $200, the charge calculated by applying the appropriate rate per m², actual may be charged and any amount received in accordance with the above scale rates would be regarded as a deposit on final cost.
(d) Actual costs are to be charged for restoration or road openings over 10m².
(e) Several openings made at the one time less than 50m apart may be grouped as one, unless otherwise determined by the Council's Director of Infrastructure.
(f) Where earth and gravel shoulders exist adjacent to pavements and restoration by the Council is necessary to the shoulders, the charge shown for "earth and gravel, waterbound macadam and all other classes of unsealed pavement or shoulders" is to be made additional to the charge for pavement. Applicants will be required to complete an "Applicants Information Check Sheet" in all road-closing matters prior to initiation or road closing action.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 6 – Annual Water Charge – Usage Allowance

Usage allowance – the per annum consumption level where consumption (usage) charges increase from Tier 1 to Tier 2

- 20mm Meter 270kL/pa
- 25mm Meter 422kL/pa
- 32mm Meter 691kL/pa
- 40mm Meter 1080kL/pa
- 50mm Meter 1688kL/pa
- 80mm Meter 4320kL/pa
- 100mm Meter 6750kL/pa
- 150mm Meter 15188kL/pa
- 200mm Meter 27000kL/pa

Refer to body of document for relevant water consumption charges.

Appendix 7 – Recycled Water Charge – Usage Allowance

Usage allowance – the per annum consumption level where consumption (usage) charges increase from Tier 1 to Tier 2. Port Macquarie Recycled Water Scheme users currently exempt from Tier 2 charges.

- 20mm Meter 270kL/pa
- 25mm Meter 422kL/pa
- 32mm Meter 691kL/pa
- 40mm Meter 1080kL/pa
- 50mm Meter 1688kL/pa
- 80mm Meter 4320kL/pa
- 100mm Meter 6750kL/pa

Refer to body of document for relevant water consumption charges.

Appendix 8 – Traffic Management

The Traffic Management Section replaces the "Temporary Occupation of Footways & Road Reserve" fees from previous years. The fees have now been divided into separate application & occupation sections. Users should find that they are more equitable and short term occupancies are not penalised. This fee is only applicable to development building sites during construction / reconstruction / renovating.

This fee **does not** include the leasing costs imposed by Council for renting public roadway area.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 9 – Council Facilities / Halls

Explanation of Fee Categories:

- **Commercial & Other –** includes activities staged by individuals, groups, organisations that *are not* incorporated under the *Associated Incorporations Act NSW (2009)* were revenue generated by use of the building goes back to these individuals, groups, organisations. This rate enables Council to take a full cost recovery approach to this use. Example – Local dance school.
- **Private Functions –** includes activities that have admission restricted to an identifiable group. Example – Birthday Party, Wedding Reception. This rate recognises that no financial gain will be gained from activity and that significant discount is applied.
- **Not for Profit Rate –** includes activities provided by community groups, clubs and organisations for the physical, social, cultural, intellectual development or welfare of the local community. Organisations eligible for this rate should be incorporated under the *Associated Incorporations Act NSW (2009)*. This rate recognises the benefit these activities provide to the community and therefore a major discount applies, while allowing users to make a contribution to the cost facility. E.g. Local Quilting Group.
- **General Bonds – Refundable –** Please note that refunds will only be granted if the hall, room, key or equipment is returned in good and clean condition. Council or the Management Committee / Booking Officer has the rights to deduct appropriate recovery costs.
- **Alcohol Bond – Refundable –** Please note that refunds will only be granted if the hall, room, key or equipment is returned in good and clean condition. Council or the Management Committee / Booking Officer has the rights to deduct appropriate recovery costs. It is the responsibility of the hirer to obtain the necessary approvals from Police to undertake an event involving alcohol. Refer to hire conditions for each of the facilities.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 10 – Glasshouse

- After Hours = 5.30pm - 11pm weekdays or 9am - 11pm Saturdays.
- Staff surcharges apply on Sundays, Public Holidays and after 11pm.
- Full Theatre = Stalls seating + Balcony seating.
- Studio Bare Walls = This mode only available when combined with Theatre Hire. No seating, fluoro LX, no audio, no staff. Includes access, cleaning & electricity.
- Whole of Venue = Price on Application. Includes access to the Theatre, Studio, Meeting Rooms 1 & 2, Small Function Room, Mezzanine Foyer and minimum 3 staff, does not include Art Lab or Regional Gallery spaces. Staff charges to set-up and pack down at additional charge and based on event requirements in consultation with Glasshouse staff. Does not include Sunday, Public Holidays, after 11pm or Audio Visual services & equipment.

Glasshouse Discounted Rates

- 50% discount is available to incorporated not-for-profit groups, incorporated community groups, registered charities and schools. Eligibility is limited to organisations that are based in the Port Macquarie-Hastings local government area and that are not already receiving support via Port Macquarie - Hastings Council's Community Grants or similar funding program**s**. Proof of Incorporation, ABN and registrations must be provided. Please note the 50% discount only applies to venue hire between Monday and Thursday inclusive (i.e. not including Friday, Saturday or Sunday) unless otherwise noted below.
- In addition, not-for-profit groups and community groups must have a form of organisational permanence, be non-government; and not be operating for the profit or gain of its individual members. The Venue Manager, Glasshouse will have responsibility for determining the eligibility status of groups.
- Discounted rates only to apply to the following fees and charges categories (with all other fees and charges to be charged as per commercial rates such as Staff Rates):-
  - Theatre Hire
  - Studio Hire – discount available 7 days per week, subject to availability
  - Meeting Room Hire
  - Art Lab Hire
  - Small Function Room Hire
  - Podium – discount available 7 days per week, subject to availability
  - Other Venue Hire
  - Venue Set Up and audio visual Items (equipment only)
- 30% discount is available for Studio Hire only to local performing arts organisations and local performance artists. Eligibility is limited to organisations and artists that are based in the Port Macquarie - Hastings local government area and that are not already receiving support via Port Macquarie - Hastings Council's Community Grants or similar funding programs. "Local" is defined as organisation having a principal place of business and artists having a principal place of residence (not being a PO Box) that is located in the Port Macquarie - Hastings local government area, and that the organisation/artist has operated/resided within the Port Macquarie - Hastings local government area for a minimum period of three (3) months. The onus is on the performing arts organisation and performance artist to provide the necessary supporting evidence.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 10 – Glasshouse (continued)

- Please contact the Glasshouse Event Services Team for a comprehensive quote tailor made to suit your function requirements.

DRAFT Schedule of Fees and Charges 2021 – 2022

Appendices *(continued)*

Appendix 11 – Cemeteries

- Services which cannot be completed within normal business hours (9am to 3pm Monday to Friday) will incur a Late Fee.
- Burial services booked outside of normal business hours for religious reasons will be subject to an additional surcharge.
- Reservations without payment for burial sites and ash inurnment will be held for one (1) calendar month only after which full payment will be required.
- Council cannot accept part payments / deposits for burial services.
- Requests for refunds on unused reserved sites will be issued at the rate of the original amount paid less the current Administration Fee. Exclusive rights must be relinquished. No refunds on used sites.
- Family Ash Placements by appointment can be made at Council's Customer Services offices and subject to fees depending on location of the cemetery.
- Ash removal on request by the original applicant or Executor may be approved and subject to the relevant fee. A Statutory Declaration signed by all next of kin is required for ash removal requests in situations where the original Applicant or Executor are not contactable.

Index of all fees

Other

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100 mm Meter	[Annual Availability Charge]	95
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100mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	[Water Meter Installation]	99
100mm RPZ Backflow Prevention Device	[Water Meter Installation]	100
100mm SDC with Bypass Meter + 2 x Rising Spindle Valves	[Water Meter Installation]	100
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150 mm Meter	[Annual Charges]	95
150 mm Meter	[Annual Availability Charge]	95
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150mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	[Water Meter Installation]	100
150mm RPZ Backflow Prevention Device	[Water Meter Installation]	100
150mm SDC with Bypass Meter + 2 x Rising Spindle Valves	[Water Meter Installation]	100
150mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	[Water Meter Installation]	100
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PORT MACQUARIE
HASTINGS COUNCIL

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PORT MACQUARIE
HASTINGS COUNCIL

Attachment 2

DRAFT REVENUE POLICY

2021-2022



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Statutory Requirements

In accordance with the *Local Government Act 1993* the following statutory requirements are included in this document:

- Statement containing a detailed estimate of the council's income and expenditure;
- Statement of ordinary and special rates;
- Rating structure;
- Statement of charges to apply to rateable and non-rateable properties;
- Statement of fees to be charged and pricing policy of goods and services;
- Statement of borrowings;
- Statement of private works; and
- Statement of business and commercial activities.

Estimate of Council's Income and Expenditure

	2021-22 Budget
Continuing Operations Movements	
Income	
Rates and annual charges	108,389,830
User charges and fees	40,033,187
Interest received	5,454,711
Grants and contributions	49,532,407
Other operating receipts	5,457,658
Expenses	
Employee costs	(55,149,843)
Materials and contracts	(45,306,583)
Depreciation	(50,236,200)
Interest paid	(2,157,754)
Other operating payments	(15,353,740)
Loss on disposal of assets	(3,000,000)
Operating Result from Continuing Operations	**37,663,673**
Restricted Asset Movements	
Receipts	
Transfer from restricted assets	41,741,789
Payments	
Transfer to restricted assets	(56,488,314)
Net Revenue (Used in)/Provided by Restricted Assets	**(14,746,525)**
Property, Plant and Equipment Movements	
Receipts	
Sale of fixed assets/real estate development	-
Payments	
Purchase of assets	(58,638,885)
Developer provided assets	(6,500,000)
Net Revenues (Used in)/Provided by Property, Plant & Equipment	**(65,138,885)**
Financing Movements	
Receipts	
Proceeds from borrowings	0
Repayment of borrowings and advances	(11,014,463)

Payments	
Net Revenues (Used in)/Provided by Financing Activity	(11,014,463)
Net Result (including depreciation)	(53,236,200)
Add back: Non-cash items	53,236,200
Budget Surplus/(Shortfall)	0

Statement of Ordinary and Special Rates

Strategy – ordinary rates

Council will continue to levy ordinary rates using a structure comprising a base amount to which an ad valorem (rate in the dollar) component is added. The Base Amount will vary, depending on rating category/sub-category combination, up to the maximum allowed (50%) for defined urban areas. All rateable properties within each category / sub-category, regardless of their land value, are levied the base amount. The balance of income for ordinary rates is derived by multiplying the land value of a property by a rate in dollar for the relevant category / sub-category, which is determined by Council. The amount payable by ratepayers under this component is dependent on the land value of the property. In addition, the total amount collected for ordinary rates each year will take account of any approved increase advised by the Minister.

The following is the structure of Council's rates:

Type	Category	Sub-Category	Comments
Ordinary	Residential	Defined Urban Centres	All properties categorised as residential within the localities of Bonny Hills, Camden Head, Dunbogan, Kendall, Kew, Lake Cathie, Lakewood, Laurieton, North Haven, Port Macquarie, Wauchope and West Haven as defined by the "Designated Urban Centre" maps following.
Ordinary	Residential	Other Hastings	All other properties classified as residential within the Council area and are not located within the areas defined as "Designated Urban Centres" above.
Ordinary	Farming		Eligibility determined in accordance with *Local Government Act 1993*.
Ordinary	Mining		Eligibility determined in accordance with *Local Government Act 1993*.
Ordinary	Business	Port Macquarie CBD	All business properties within the Port Macquarie CBD which are identified on the map following, and as adopted by Council for the purpose of identifying the Port Macquarie CBD for Business Sub-Category rating.
Ordinary	Business	Defined Urban Centres	All business properties within the "Designated Urban Centres" are identified on the maps following, and as adopted by Council for the purpose of identifying the "Designated Urban Centre" for Business Sub-Category rating. The locality of Port Macquarie does not include the area defined as "Port Macquarie CBD".
Ordinary	Business	Other Hastings	All business properties within the Council area other than those in the CBD of Port Macquarie area and "Designated Urban Centres" as identified on the maps following and as adopted by Council.

Rating Structure

Ordinary rates under section 494 of the *Local Government Act 1993* and special rates under section 495 of the *Local Government Act 1993*. The Minister's allowable increase for the 2021-22 financial year has been set at 2.0% and has been applied in full. Council is using land valuations as at 1 July 2019 for the rating calculations.

The table below includes the 2.0% rate pegging limit for 2021-22.

Category	Sub-Category	General Base Amount	Environ-mental Base	Base Amount % of Total Levy	Plus	Ad Valorem Rate: Cents in $	Estimated Gross Yield	% of Total	Average Rates
Residential	Defined Urban Centre	$601.50	$25.10	49.61%		0.25172	$37,911,199	68.52	$1,263
Residential	Other Hastings	$501.50	$25.10	39.66%		0.28082	$5,985,275	10.82	$1,328
Farmland		$622.20	$25.10	30.72%		0.28078	$2,480,170	4.49	$2,107
Business	Port Macquarie CBD	$601.50	$25.10	5.19%		2.40857	$3,319,469	6.00	$12,071
Business	Defined Urban Centre	$601.50	$25.10	20.09%		0.54547	$5,127,970	9.27	$3,119
Business	Hastings Other	$501.50	$25.10	30.82%		0.47540	$355,408	0.64	$1,709
The Broadwater Special Rate						0.06277	$111,601	0.20	$333
Sanctuary Springs Special Rate						0.13382	$31,191	0.06	$346
Allowance for Growth							$288,329		
Sub-Total							**$55,610,612**	**100.00**	
Pensioner Rebates							($1,536,600)		
Postponed Rates							($50,000)		
Abandoned Other/Appeals							($134,500)		
Economic Development							($329,370)		
Tourism							($572,800)		
The Broadwater Special Rate							($111,601)		
Sanctuary Springs Special Rate							($31,191)		
Environmental Base							($953,197)		
Port Macquarie CBD Town Improvement							($1,240,600)		
General Net Income							**$50,650,753**		

Rates and Charges Hardship Assistance Policy

Council has a current Rates and Charges Hardship Assistance Policy. This policy was adopted by Council on the 16 August 2017. If you would like to get more information on this policy, please contact Council's customer services section on 6581 8111.

Environmental and community infrastructure levy expenditure: 2021-22

Project	Amount
Flying Fox Camp Management - Implement actions from Management Plan	$45,000
Undertake Biosecurity (Weed Management) program to restore and conserve the natural environment of the Mid North Coast	$122,900
Koala Road Strike - Feasibility Study for engineering solutions and initial concept design work	$150,000
Coastal Management Plan development - CMP Stage 2 - Hastings River Drive	$50,000
Wild Deer Management in the Council area	$25,000
Koala Recovery Partnership Program - Support	$90,000
Charlie Watt Reserve, Telegraph Point - Playground equipment replacement	$85,000
Moroko Park, Pembrooke - Playground equipment replacement	$85,000
Vince Inmon Sporting Field - Sporting facility renewal	$111,487
Sporting Infrastructure Renewals	$57,731
McInherney Park - Contribution to public amenities in new boat storage facility	$106,080
Development of Illegal Tracks Identification	$10,000
Total	$938,198

Statement of Fees and Charges

Water charges under Sections 501 & 502 of the Local Government Act 1993

With water an increasingly scarce resource both locally and globally, it is appropriate that councils focus on influencing water demand through increasing emphasis on usage based pricing. Best practice water supply pricing requires councils to provide strong pricing signals to encourage efficient water use. With this in mind the water usage charge has been increased and the water access charge has been reduced over three years commencing 2019-20 with the goal that 75% of water income will be derived from usage charges by 2021-22, in line with best practice recommendations.

The total yield from water charges in 2021-22 has been increased in line with the IPART approved general fund rate peg of 2.0%, however a change in the pricing structure as detailed above has been included. The tier 1 water usage charge has been increased by 14c per kl from $3.31 in 2020-21 to $3.45 in 2021-22 and the access charge for a 20mm meter has reduced from $178.00 in 2020-21 to $171.00 in 2021-22.

If you require specific information on these charges please contact Council on 6581 8111.

The following total revenue is to be derived from the 2021-22 Water Pricing Tariff.

Description	Annual Charge	Services Charged	Total Annual Income	Total Usage Charge	Total Usage Income	Total Income
20mm Water Meter (Including Vacant Land)	$171.00	33,511	$5,730,381.00			
25mm Water Meter	$272.00	1,013	$275,536.00			
32mm Water Meter	$453.00	259	$117,327.00			
40mm Water Meter	$714.00	177	$126,378.00			
50mm Water Meter	$1,124.00	132	$148,368.00			
80mm Water Meter	$2,889.00	6	$17,334.00			
100mm Water Meter	$4,517.00	43	$194,231.00			
150mm Water Meter	$10,185.00	5	$50,925.00			
200mm Water Meter	$18,110.00	0	$0.00			
Equivalent Tenants	$171.00	2,736.00	$467,856.00			
Fire Service: 32mm Water Meter	$226.50	1	$226.50			
Fire Service: 40mm Water Meter	$357.00	2	$714.00			
Fire Service: 50mm Water Meter	$562.00	8	$4,496.00			
Fire Service: 80mm Water Meter	$1,444.50	0	$0.00			
Fire Service: 100mm Water Meter	$2,258.50	160	$361,360.00			
Fire Service: 150mm Water Meter	$5,092.50	23	$117,127.50			

Description	Annual Charge	Services Charged	Total Annual Income	Total Usage Charge	Total Usage Income	Total Income
Fire Service: 200mm Water Meter	$9,055.00	2	$18,110.00			
Gross Income from Annual Charges			**$7,630,370,00**			**$7,630,370.00**
Charges for Consumption: Tier 1 Tier 2				$3.45 $6.90	$18,842,793.00 $4,297,506.00	
Gross Income from Consumption Charges					**$23,140,299.00**	**$23,140,299.00**
Total Gross Income						**$30,770,669.00**
Less: Pension Rebates						($670,100.00)
Less: Other Rebates						($410,000.00)

Net Income $29,690,569.00

Sewer charges under Sections 501 & 502 of the Local Government Act 1993

All properties connected or capable of connection to the sewerage system will be charged an annual charge. In addition, properties such as major regional shopping centres, caravan parks, flats, retirement homes, motels, clubs, hotels, schools and backpacker hostels will be required to pay an additional charge based on the amount of water consumed. Council intends to increase the sewer annual and usage charges by 2.0% for the 2021-22 financial year which is in line with the general fund rate pegging allowance that has been determined by IPART.

The projected income for sewerage for 2021-22 is as follows:

Description	Annual Charge	Assessments Charged	Total Annual Income	Usage Charge	Expected Water Usage (kls)	Total Usage Income
Available	$923.70	32,263	$29,801,333.10			
Available Pump Out	$893.70	428	$382,503.60			
Unconnected (Section 548a)	$592.80	0	$0.00			
Non-rateable (other than Churches & Halls s555)	$735.40	79	$58,096.60			
Non-rateable (Churches & Halls s555)	$592.80	22	$13,041.60			
Non-rateable (Other s556)	$923.70	154	$142,249.80			
Additional Charge				$1.37	978,102.19	$1,340,000.00
Gross Income			**$30,397,224.70**			**$1,340,000.00**
Less: Pension Rebates			($635,000.00)			
Less: Other						($10,000.00)
Net Income from Sewerage Annual and Usage Charges			**$29,762,224.70**			**$1,330,000.00**

On-site sewerage management system annual charges

Properties with an on-site sewerage management system will be charged an annual charge based on the risk of the system. Council intends to increase the on-site sewerage management annual charge by 2.0% for the 2021-22 financial year which is in line with the general fund rate pegging allowance that has been determined by IPART.

The 2021-22 projected income for onsite effluent is as follows:

Description	Annual Charge	Assessments Charged	Total Annual Income
Low Risk System	$39.80	1,738	$69,172.40
Medium Risk System	$78.50	2,282	$179,137.00
High Risk System	$112.20	550	$61,710.00
Small Commercial	$224.40	92	$20,644.80
Large Commercial	$279.50	12	$3,354.00
Gross Income		**4,674**	**$334,018.20**

Recycled water charges

Recycled water for non-residential properties will continue to be charged at 50% of the water charge. For residential properties the charge for recycled water will be 80% of the water charge. The 2021-22 projected income for recycled water is as follows:

Description	Annual Charge	Assessments Charged	Total Annual Income	Usage Charge	Expected Water Usage (kls)	Total Usage Income
Non-Residential						
20mm Meter	$85.50	6	$513.00			
25mm Meter	$136.00	20	$2,720.00			
32mm Meter	$226.50	5	$1,132.50			
40mm Meter	$357.00	7	$2,499.00			
50mm Meter	$562.00	8	$4,496.00			
80mm Meter	$1,444.50	3	$4,333.50			
100mm Meter	$2,258.50	1	$2,258.50			
150mm Meter	$5,092.50	1	$5,092.50			
200mm Meter	$9,055.00	0	$0.00			
Charges for Consumption						
Tier 1				$1.72	203,488	$350,000.00
Gross Income		**51**	**$23,045.00**			**$350,000.00**

Description	Annual Charge	Assessments Charged	Total Annual Income	Usage Charge	Expected Water Usage (kls)	Total Usage Income
Residential						
20mm Meter	$136.80	0	$0.00			
25mm Meter	$217.60	0	$0.00			
32mm Meter	$362.40	0	$0.00			
40mm Meter	$571.20	0	$0.00			
50mm Meter	$899.20	0	$0.00			
80mm Meter	$2,311.20	0	$0.00			
100mm Meter	$3,613.60	0	$0.00			
150mm Meter	$8,148.00	0	$0.00			
200mm Meter	$14,488.00	0	$0.00			
Charges for Consumption						
Tier 1				$2.76	0	$0.00
Gross Income		**0**	**$0.00**			**$0.00**

Stormwater charges - annual charge under Local Government Amendment (Stormwater) Act 2005 and the Local Government (General) Amendment (Stormwater) Regulation 2006

All urban properties except vacant land that are in the residential and business categories for rating purposes, for which Council provides a stormwater management service will be charged a stormwater levy. The base stormwater levy has remained unchanged since it was introduced in 2006-07.

The projected income for stormwater in 2021-22 is as follows:

Description	Charge	Number of Assessments	Total Annual Income
Business – 0 to 350m2	$25.00	59	$1,475.00
Business – 351m2 to 700m2	$50.00	195	$9,750.00
Business – 701m2 to 1,000m2	$75.00	191	$14,325.00
Business – 1,001m2 to 1,400m2	$100.00	140	$14,000.00
Business – 1,401m2 to 1,750m2	$125.00	73	$9,125.00
Business – 1,751m2 to 2,100m2	$150.00	55	$8,250.00
Business – 2,101m2 to 2,450m2	$175.00	49	$8,575.00
Business – 2,451m2 to 2,800m2	$200.00	35	$7,000.00
Business – 2,801m2 to 3,200m2	$225.00	23	$5,175.00
Business – 3,201m2 to 3,500m2	$250.00	18	$4,500.00
Business – 3,501m2 to 3,850m2	$275.00	20	$5,500.00
Business – 3,851m2 to 4,200m2	$300.00	28	$8,400.00
Business – 4,201m2 to 4,600m2	$325.00	17	$5,525.00
Business – 4,601m2 to 4,900m2	$350.00	8	$2,800.00
Business – 4,901m2 to 5,200m2	$375.00	12	$4,500.00
Business – 5,201m2 to 5,600m2	$400.00	6	$2,400.00
Business – 5,601m2 to 5,950m2	$425.00	9	$3,825.00
Business – 5,951m2 to 6,300m2	$450.00	10	$4,500.00
Business – 6,301m2 to 6,600m2	$475.00	6	$2,850.00
Business – Greater than 6,600m2	$500.00	136	$68,000.00
Business Strata	$12.50	631	$7,887.50
Residential	$25.00	22,923	$573,075.00
Residential Strata	$12.50	6,553	$81,912.50
Gross Income		**31,197**	**$853,350.00**

Stormwater levy expenditure: Council has allocated the full amount of the Stormwater Levy to maintenance and running of the current stormwater system. This allocation is over and above previous allocations for stormwater maintenance. Urban land (not vacant) that is categorised for rating purposes as residential or business with a stormwater service will be charged the levy as allowed for in the legislation.

Pursuant to Section 403(1) of the *Local Government Act 1993* the following statement relates to stormwater management services to be funded by the Stormwater Levy.

The Stormwater Levy is used to fund operational stormwater infrastructure maintenance and remedial works across all urban areas of the LGA. Stormwater Levy and General Fund resources for 2021-22 will be allocated as follows:

Purpose	Funding Source	Amount
Operational Maintenance and Remedial Works	General Fund Revenue	$1,805,630
Operational Maintenance and Remedial Works	Stormwater Levy	$600,000
Loan Repayments	Stormwater Levy	$205,964
Loan Repayments	General Fund Revenue	$197,069
Stormwater Renewal Program	General Fund Revenue	$250,000
Stormwater Remediation - Hart Street	Stormwater Reserve	$40,000
North Haven Flood Mitigation Works - Investigation and concept design remedial works	Stormwater Reserve	$55,000
Stormwater assets management condition rating via CCTV inspections	General Fund Revenue	$50,000
Stormwater Remediation - Panorama Drive/Binbilla Drive, Bonny Hills	General Fund Revenue	$420,000
Black Swan Terrace Stormwater Detention Facility	General Fund Revenue	$158,186
Total		$3,781,849

Waste Management Charges

The charges to apply to domestic waste management are determined in accordance with the Reasonable Cost guidelines issued by the NSW Office of Local Government. The charges determined using these guidelines will apply to domestic as well as non-domestic properties.

Domestic waste management services

All properties with a domestic waste management service available to their property will be charged an annual charge under Section 496 of the *Local Government Act 1993*.

The charge for multiple services is calculated by the "type of service" multiplied by the "number of services" provided.

The applicable charges for 2021-22 are outlined in the schedule below.

Description	Cost per Service	Services Provided	Estimated Income
DOMESTIC WASTE MANAGEMENT ANNUAL CHARGES			
Standard Service (240 Litre Fortnightly General Waste)	$488.00	18,831	$9,189,528.00
Minimiser Service (140 Litre Fortnightly General Waste)	$428.00	10,357	$4,432,796.00
Excess Service (240 Litre Weekly General Waste)	$721.00	1,792	$1,292,032.00
On Application Only Special Weekly Service (140 Litre Weekly General Waste)	$603.00	7	$4,221.00
Special Half Weekly Service (140 Litre Weekly General Waste) - (Shared) Multi-unit dwellings only	$328.00	12	$3,936.00
Half Minimiser Service (140 Litre Fortnightly General Waste) - (Shared) Multi-unit dwellings only	$239.00	35	$8,365.00
Half Excess Service (240 Litre Weekly General Waste) - (Shared) Multi-unit dwellings only	$386.00	156	$60,216.00
Half Standard Service (240 Litre Fortnightly General Waste) - (Shared) Multi-unit dwellings only	$268.00	668	$179,024.00
Availability Charge on Land Not Receiving Full Charge - Multi-unit dwellings only	$143.00	2,269	$324,467.00
Availability Charge on Vacant Land	$79.00	1,300	$102,700.00
Additional Recycling Service (240 Litre Fortnightly)	$76.00	328	$24,928.00
Additional Organics Service (240 Litre Weekly)	$98.00	356	$34,888.00
Additional Weekly Garbage Service (240 Litre General Waste)	$373.00	107	$39,911.00
Additional Weekly Garbage Service (140 Litre General Waste) - Multi-unit dwellings only	$283.00	1	$283.00
Minimum Waste Charge - Single dwelling	$428.00	68	$29,104.00
Less: Pensioner/Other Rebates			($510,000.00)
Net Income for Domestic Waste Management Services		36,287	$15,216,399.00

Other waste management service

All properties with a non-domestic waste management service will be charged an annual charge under Section 501 of the *Local Government Act 1993*.

The charge for multiple services is calculated by the "type of service" multiplied by the "number of services" provided.

The applicable charges for 2021-22 are outlined in the schedule below.

Description	Cost per Service	Services Provided	Estimated Income
OTHER WASTE MANAGEMENT ANNUAL CHARGES			
Commercial Weekly Service (140 Litre Weekly General Waste)	$594.00	468	$277,992.00
Commercial Excess Service (240 Litre Weekly General Waste)	$709.00	412	$292,108.00
Commercial Half Weekly Service (140 Litre Weekly General Waste) - (Shared)	$322.00	6	$1,932.00
Commercial Half Excess Service (240 Litre Weekly General Waste) -(Shared)	$380.00	10	$3,800.00
Commercial Availability Charge on Land Not Receiving Full Charge	$79.00	1,051	$83,029.00
Commercial Availability Charge on Vacant Land	$79.00	185	$14,615.00
Commercial Additional Recycling Service (240 Litre Fortnightly)	$76.00	245	$18,620.00
Commercial Additional Organics Service (240 Litre Weekly)	$98.00	32	$3,136.00
Commercial Additional Weekly Garbage Service (240 Litre Weekly General Waste)	$372.00	197	$73,284.00
Commercial Additional Weekly Garbage Service (140 Litre Weekly General Waste)	$283.00	4	$1,132.00
Waste Management Access Charge – Rural Properties	$31.00	1,680	$52,080.00
Less: Pension/Other Rebates			($1,300.00)
Net Income for Other Waste Management Services		**4,290**	**$820,428.00**

Interest charge under Section 566

Charged on all outstanding rates and charges – 7.0%.

Statement of Fees to be Charged and Pricing Policy of Goods and Services

Council fees for the 2021-22 financial year are listed in the Schedule of Fees and Charges.

In determining the appropriate fees to be charged for Council services and facilities in 2021-22, the basic principle applied is that charges should be considered fair and equitable to the general community. Individual members of the community should not be precluded from essential services because of economic circumstances. In accordance with Council's adopted practice Fees & Charges for the following price categories have generally increased by 1.5% as an approximation of CPI.

(d) User pays (e) Market Forces (f) Cost Plus

The range of services provided by Council to the community is diverse and requires different considerations when determining the associated fee or charge. The level of the fee or charge was determined having regard to the following categories:

Code	Description
A	**Economic Cost** *Total cost of providing services for private good.*
B	**Community Service** Services considered to have a level of benefit to the community. Generally benefits are not solely confined to users. Partially funded by rates.
C	**Regulated Charges** Federal or State Government set charges.
D	**User Pays Principal** Services under this category are such that individual costs can be determined and met by the user of the service.
E	**Market Forces** Services that Council operates in a competitive market and needs to fix charges similar to other providers.
F	**Cost Plus** Services provided on a commercial basis with an amount of risk profit included.
G	**Section 7.11 (Developer Contributions)** *Items are priced at the level determined by the adopted Council's Developer Contributions Plan. The plans provide for quarterly increases in these fees based on Consumer Price Index (CPI) increases.*

For information, one of the above codes has been included next to each fee or charge listed in Part C.

Statement of Borrowings

To provide for the future needs of our community, Council borrows funds to provide infrastructure and community assets which are not able to be funded out of normal revenue sources. The loans are based on periods that represent the economic life of the facility or asset or a reasonable fixed term, whichever is the lesser. Loans are raised by Council from banks or other recognised financial institutions and secured by a mortgage deed over the revenue of the Council. Proposed new borrowings for the next four years are:

Purposed New Borrowings	2021-22	2022-23*	2023-24*	2024-25*
Nil	Nil	Nil	Nil	Nil
Total	**Nil**	**Nil**	**Nil**	**Nil**

*Currently being reviewed. At the 3 March 2021 Extraordinary Council Meeting, Council resolved, (in part), to fund $30m for the Ocean Drive Duplication project by, in part, borrowing $25m. The full impact on the draft 2021-2022 Operational Plan and Long Term Financial Plan, including the timing of cash flow requirements and associated borrowings, is currently being assessed.

For information on Council's debt cover ratio refer to the Annual Financial Statements available on Council's website.

Statement of Private Works

The *Local Government Act 1993* enables Council to carry out the following works for residents and organisations on private land:

- Paving and road making (GST exempt);
- Kerbing and guttering (GST exempt);
- Demolition and excavation (GST applies);
- Water, sewerage and drainage connections (GST applies);
- Land clearing and tree felling (GST exempt);
- Tree planting and maintenance (GST exempt);
- Fencing and ditching (GST applies) and;
- Canal maintenance (GST exempt)

Council has adopted the following charging policy in relation to private works:

Actual cost plus adjustments to cover Council overheads.

Overhead Charges:

- To cover Workers' Compensation, leave entitlements, superannuation, etc, and
- To cover administration.

Overhead charges to cover administration, engineering, store running costs:

- Emergency works - 25%;
- Prepaid works up to $20,000 - 18%;
- Prepaid works $20,000 to $50,000 - 12%; and
- Prepaid works $50,000 & above - 6%.

Labour costs are increased to cover Workers' Compensation, leave entitlements, award provisions and superannuation.

Statement of Business and Commercial Activities

Council has conducted commercial activities for a number of years and currently undertakes the following:

- Port Macquarie Airport
- The Glasshouse Arts, Conference and Entertainment Centre

Whilst the majority of business undertakings have a primary requirement to make a profit on the funds invested, there is also a social and community component in their undertakings. Each of the commercial units contributes in some way to community wellbeing, as well as to the economic infrastructure of the Port Macquarie-Hastings area.

Council conducts regular reviews of the operations and of the commercial activities of each of these business units. The review ensures that their charges are commercially based and are not at variance with market requirements. Funds that are in excess of the operating and development requirements of the commercial activity are used as part of Council's revenue stream to enable Council to provide the Port Macquarie-Hastings community with a broad range of services and facilities.

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PORT MACQUARIE
HASTINGS COUNCIL

Port Macquarie Hastings Council
ABN 11 236 901 601

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49 High Street, Wauchope NSW 2446
9 Laurie Street, Laurieton NSW 2443

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port-macquarie-hastings-council
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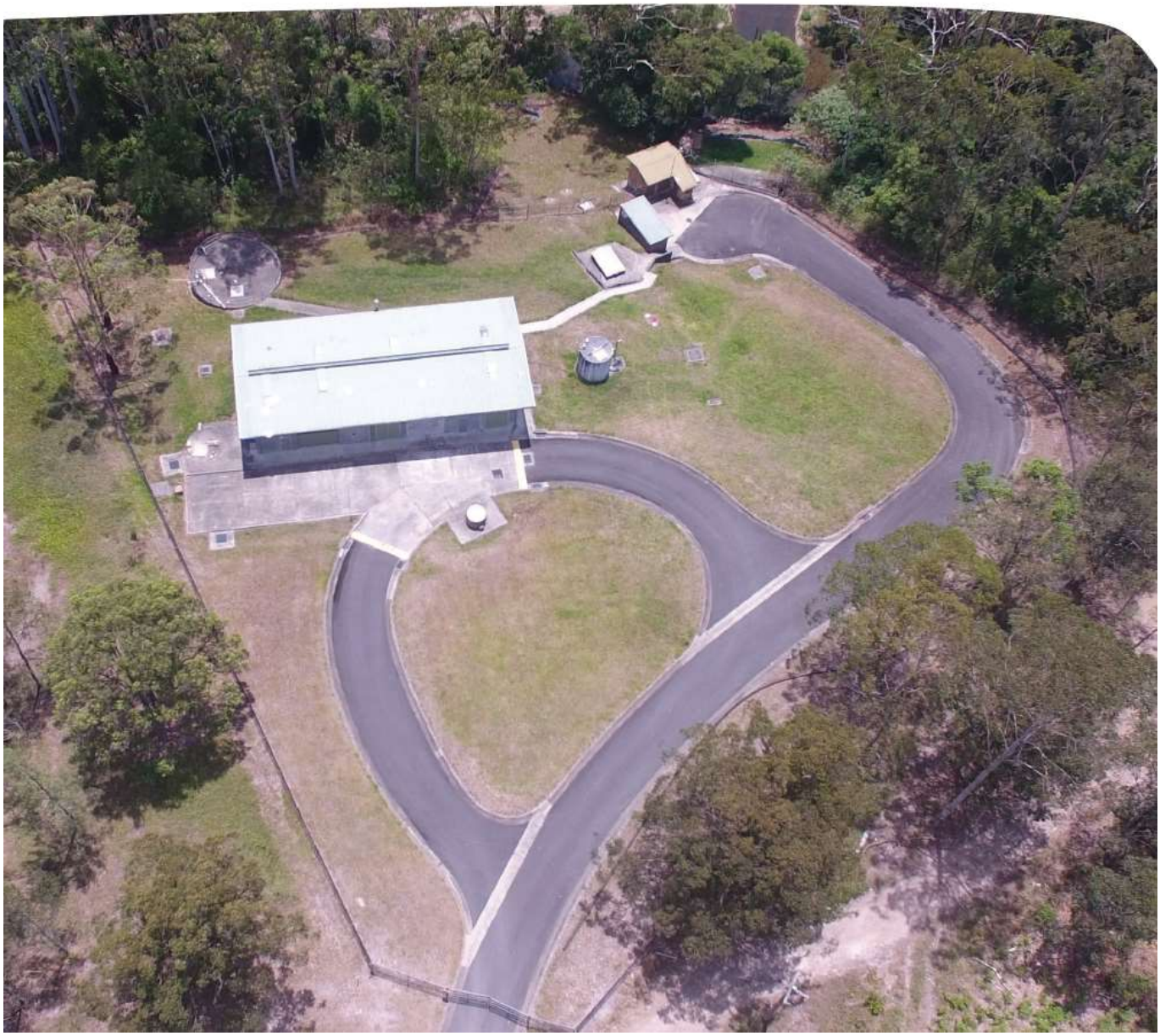
connectpmh
chatpmh
watchpmh

PORT MACQUARIE
HASTINGS COUNCIL

Attachment 3

DRAFT RATING MAPS

2021-2022




Legend
LGA
PORT MACQUARIE
WAUCHOPE
LAURIETON
QUEENS LAKE
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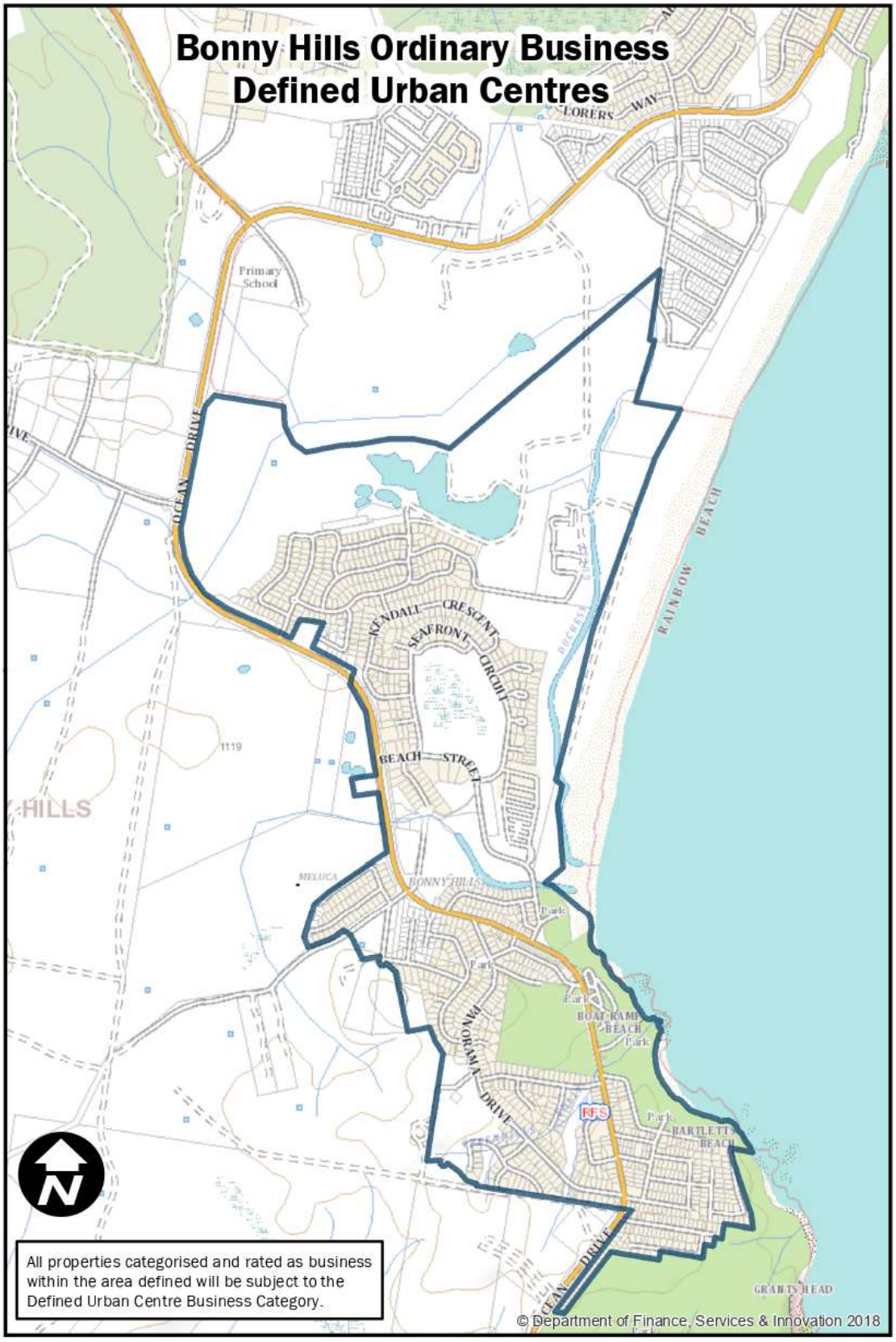
Bonny Hills Ordinary Business
Defined Urban Centres
LORERS WAY
Primary School
OCEAN DRIVE
KENDALL CRESCENT
SEAFRONT CIRCUIT
BEACH STREET
RAINBOW BEACH
BONNY HILLS
MELUCA
Park
BOAT RAMP
BEACH
PANORAMA DRIVE
RFS
BARTLETTS BEACH
GRANTS HEAD
All properties categorised and rated as business within the area defined will be subject to the Defined Urban Centre Business Category.
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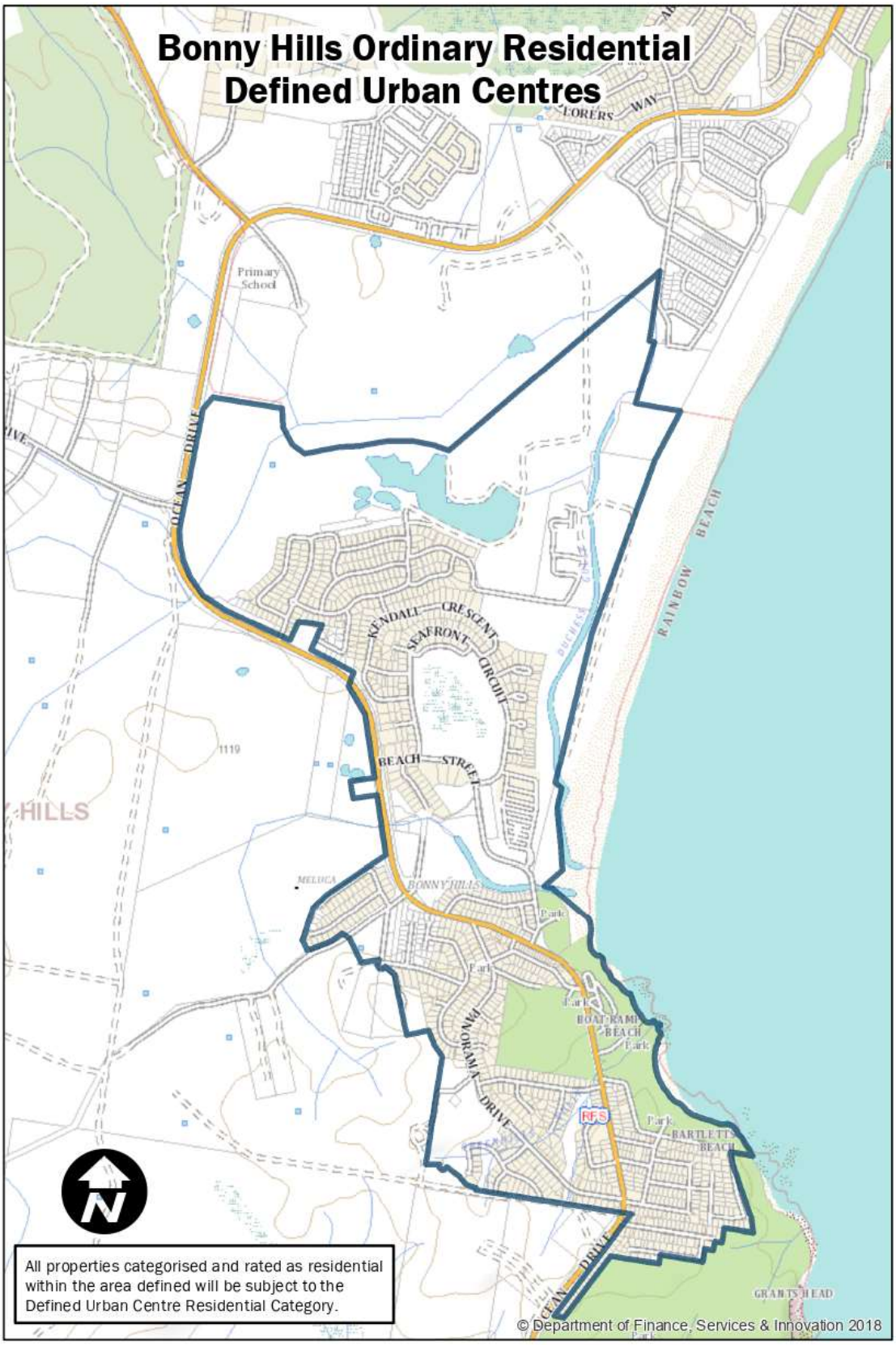
Bonny Hills Ordinary Residential
Defined Urban Centres
LORERS WAY
Primary School
OCEAN DRIVE
KENDALL CRESCENT
SEAFRONT CIRCUIT
BEACH STREET
RAINBOW BEACH
HILLS
MELROA
BONNY HILLS
Park
BOAT RAMP
BEACH
PANORAMA DRIVE
RFS
BARTLETTS BEACH
GRANTS HEAD
All properties categorised and rated as residential within the area defined will be subject to the Defined Urban Centre Residential Category.
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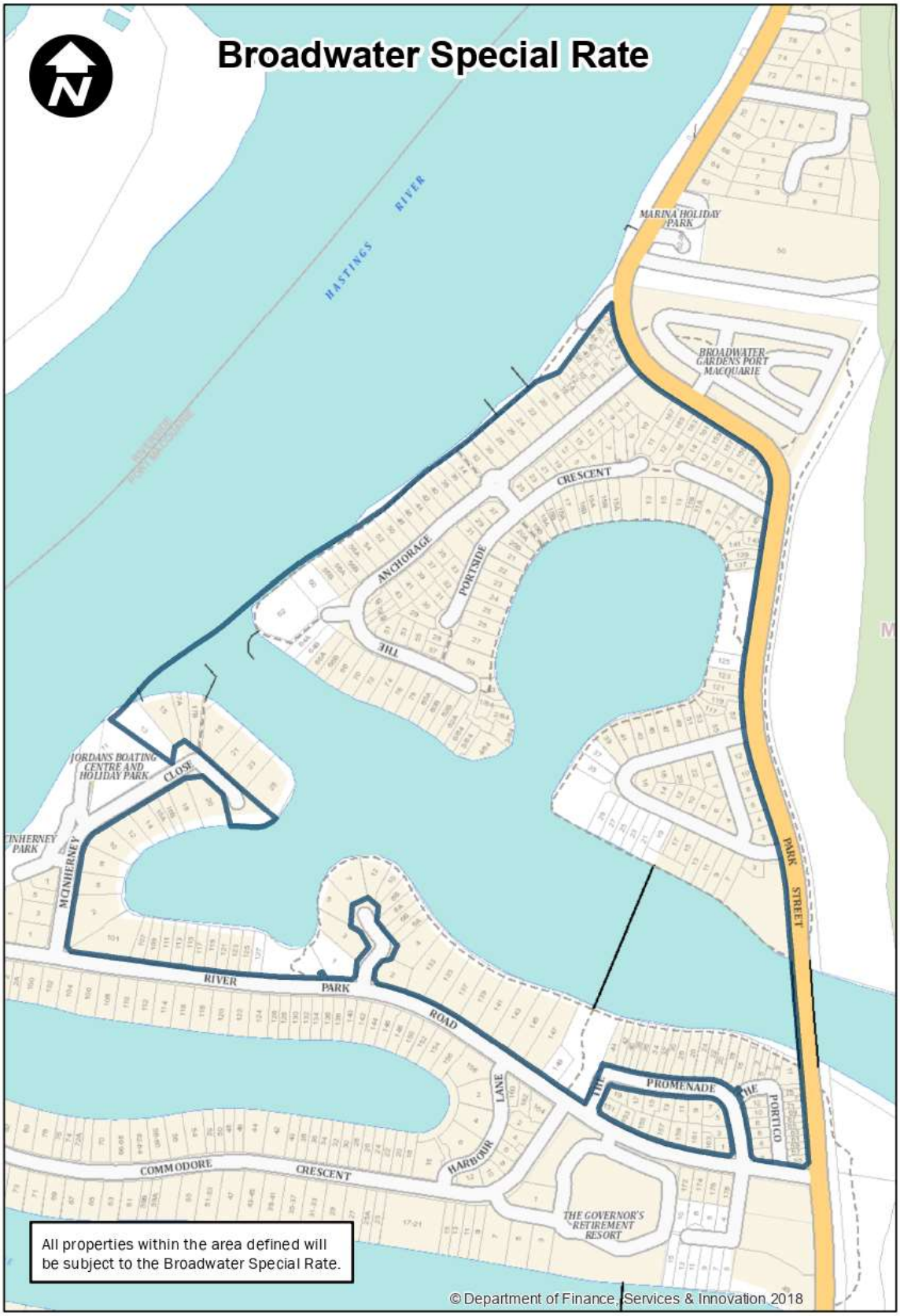
Broadwater Special Rate
HASTINGS RIVER
MARINA HOLIDAY PARK
BROADWATER GARDENS PORT MACQUARIE
CRESCENT
ANCHORAGE
PORTSIDE
THE
JORDANS BOATING CENTRE AND HOLIDAY PARK
CLOSE
MCINHERNEY PARK
MCINHERNEY
PARK STREET
RIVER
PARK
ROAD
THE PROMENADE
THE PORTICO
LANE
HARBOUR
COMMODORE
CRESCENT
THE GOVERNOR'S RETIREMENT RESORT
All properties within the area defined will be subject to the Broadwater Special Rate.
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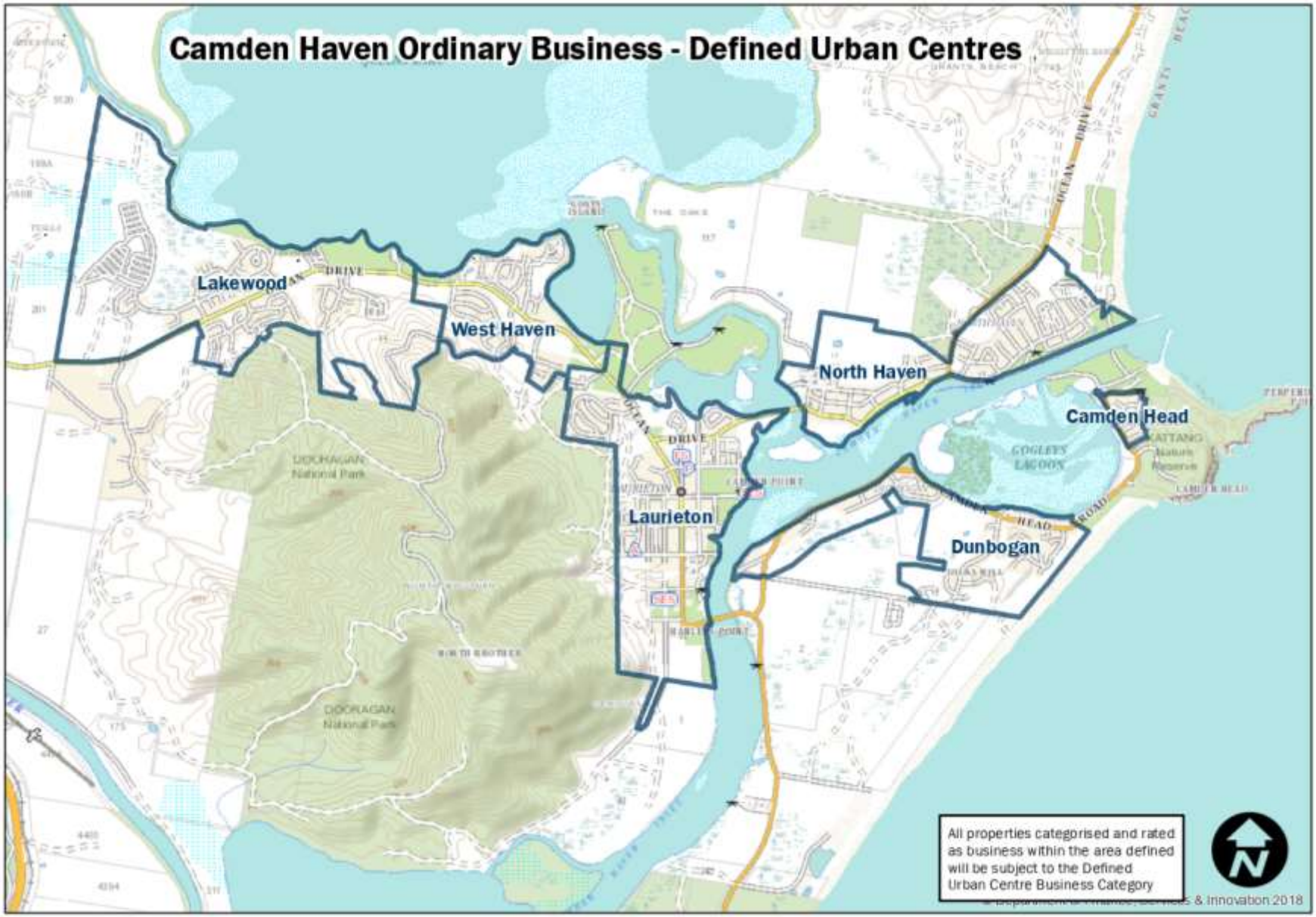
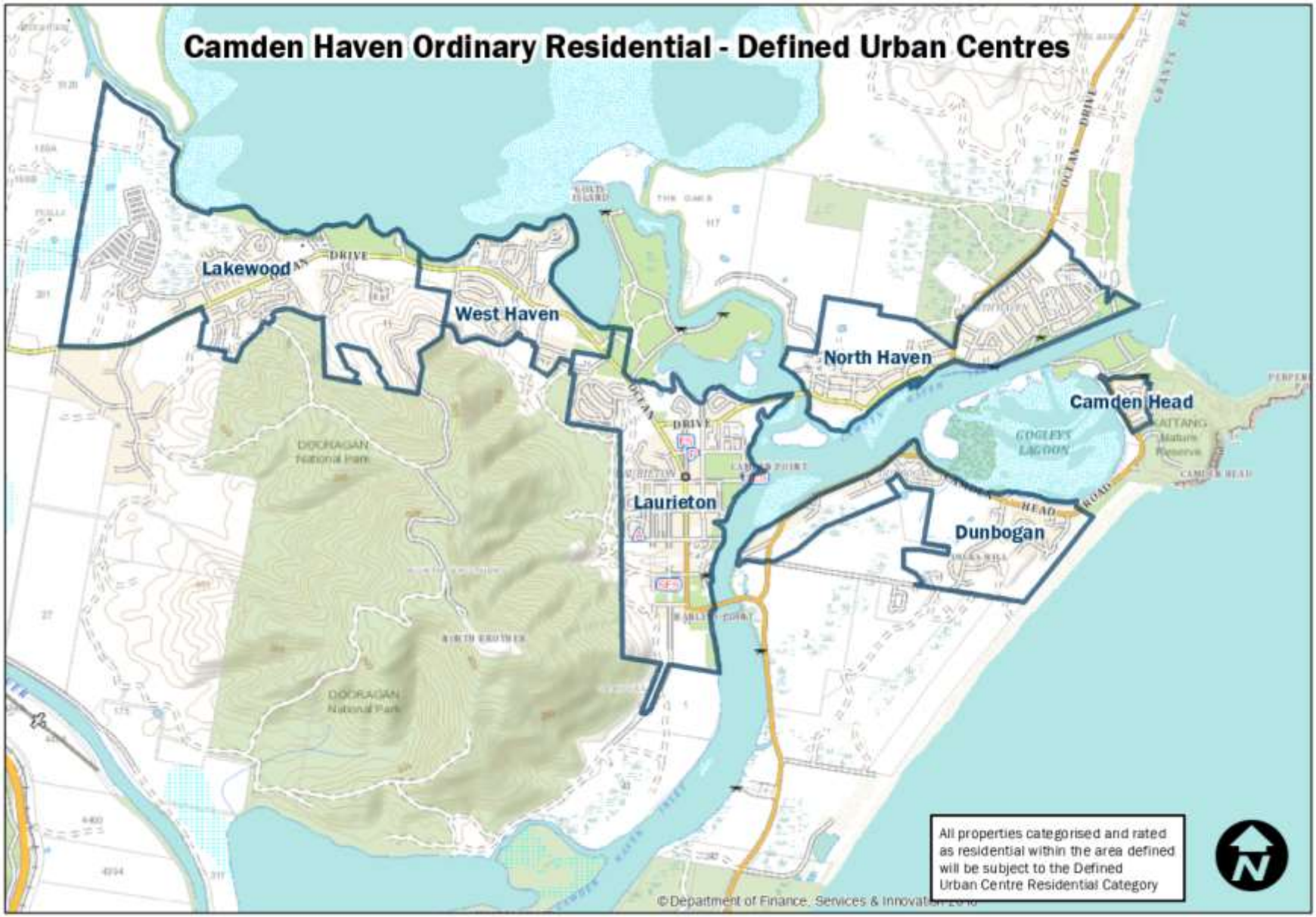

Camden Haven Ordinary Business - Defined Urban Centres
Lakewood
West Haven
North Haven
Camden Head
Laurieton
Dunbogan
All properties categorised and rated as business within the area defined will be subject to the Defined Urban Centre Business Category


Camden Haven Ordinary Residential - Defined Urban Centres
Lakewood
West Haven
North Haven
Camden Head
Laurieton
Dunbogan
All properties categorised and rated as residential within the area defined will be subject to the Defined Urban Centre Residential Category
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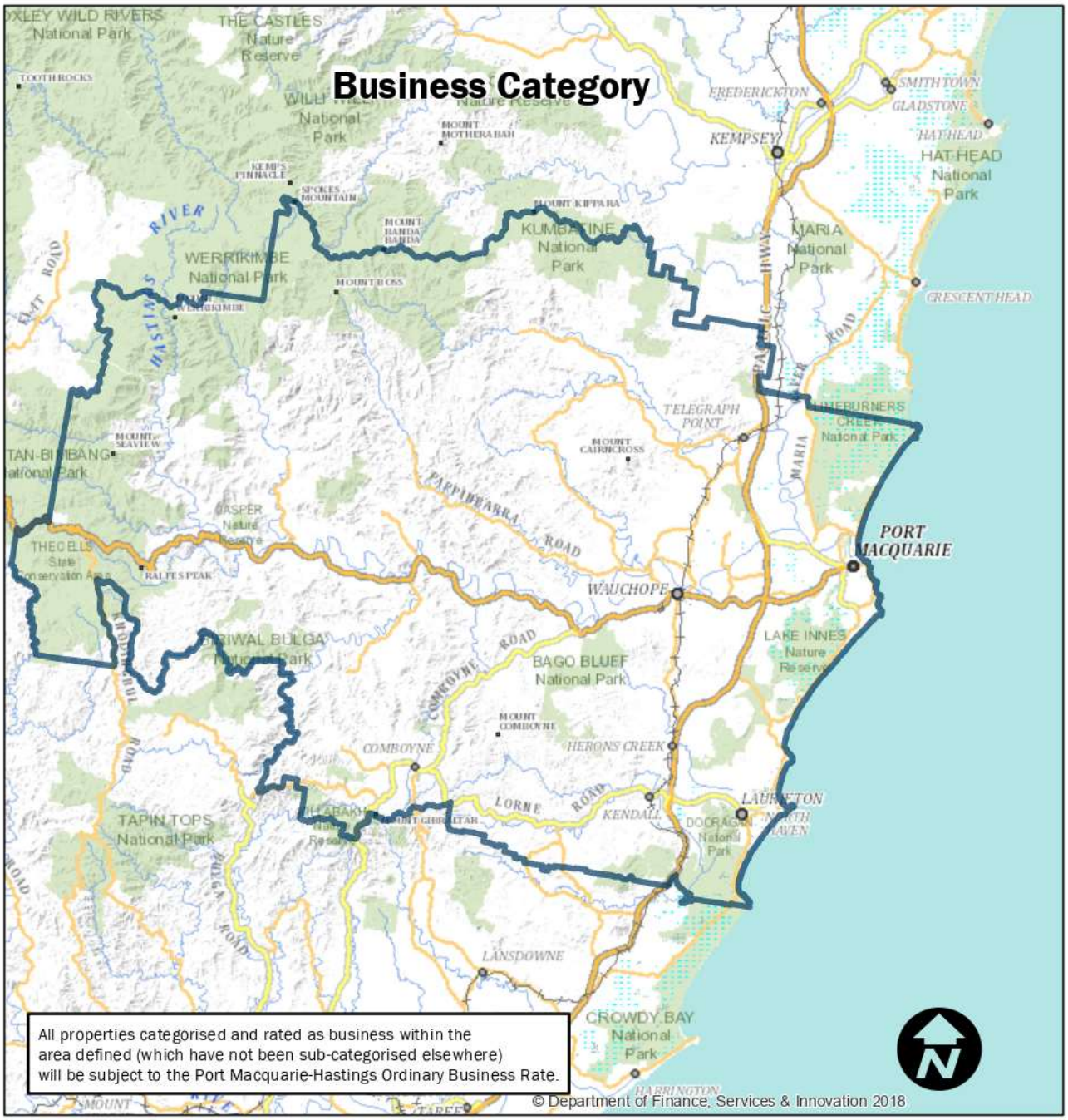
Business Category
All properties categorised and rated as business within the area defined (which have not been sub-categorised elsewhere) will be subject to the Port Macquarie-Hastings Ordinary Business Rate.
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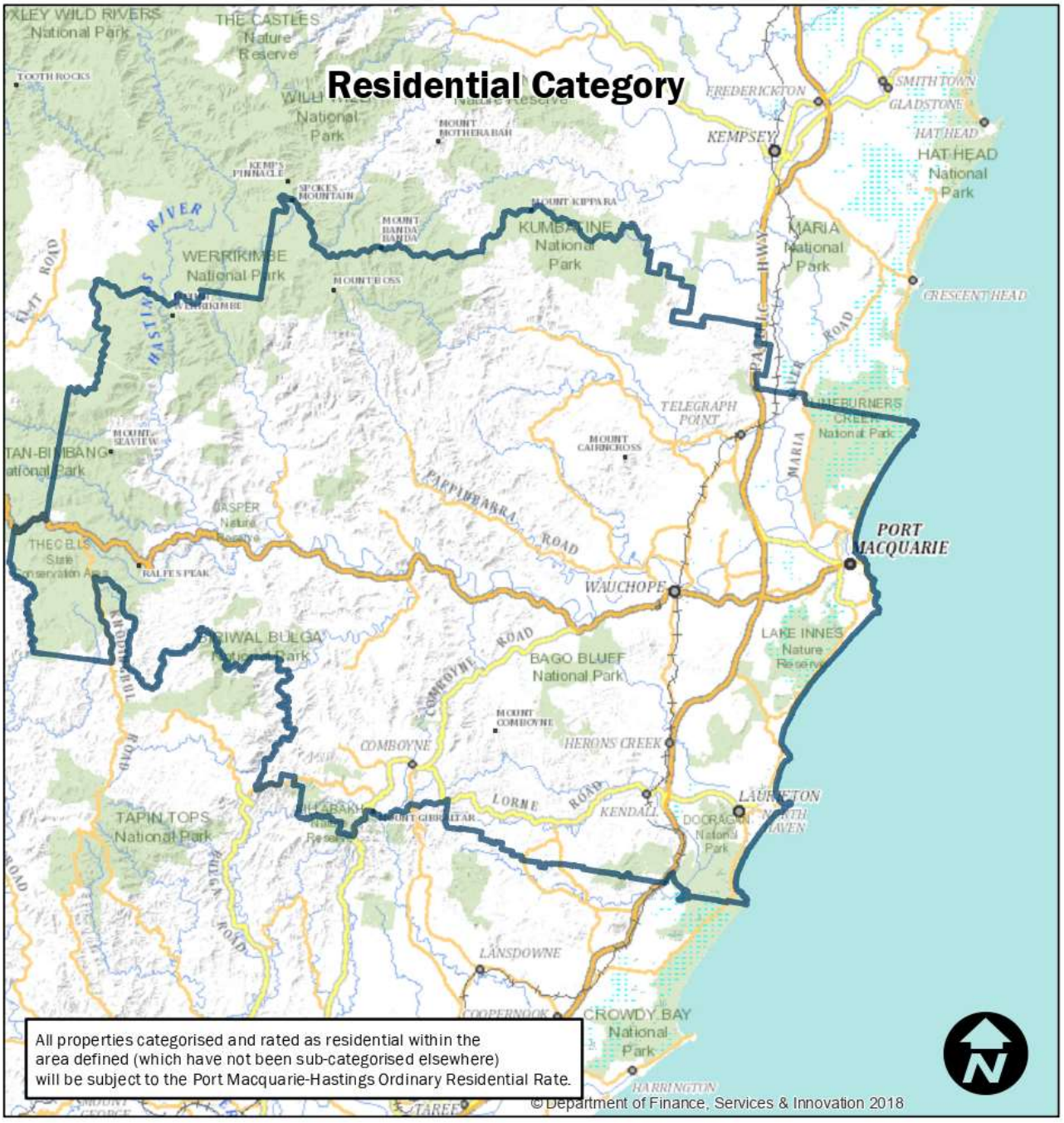
PORT MACQUARIE
WAUCHOPE
KEMPSEY
FREDERICKTON
SMITHTOWN
GLADSTONE
HAT HEAD
HAT HEAD National Park
MARIA National Park
CRESCENT HEAD
TELEGRAPH POINT
MOUNT CAIRNCROSS
PAPPINBARRA ROAD
COMBOYNE ROAD
LORNE ROAD
HERONS CREEK
KENDALL
LAURIETON
LANSDOWNE
CROWDY BAY National Park
HARRINGTON
LAKE INNES Nature Reserve
BAGO BLUFF National Park
COMBOYNE
TAPIN TOPS National Park
WERRIKIMBE National Park
KUMBATINE National Park
THE CASTLES Nature Reserve
THE CELLS State Conservation Area
RALFES PEAK
JASPER Nature Reserve
MOUNT SEAVIEW
MOUNT BOSS
MOUNT KIPPARA
MOUNT MOTHERABAH
SPOKES MOUNTAIN
KEMPS PINNACLE
TOOTH ROCKS
HASTINGS RIVER
MARIA RIVER ROAD
PACIFIC HWY


Residential Category
All properties categorised and rated as residential within the area defined (which have not been sub-categorised elsewhere) will be subject to the Port Macquarie-Hastings Ordinary Residential Rate.
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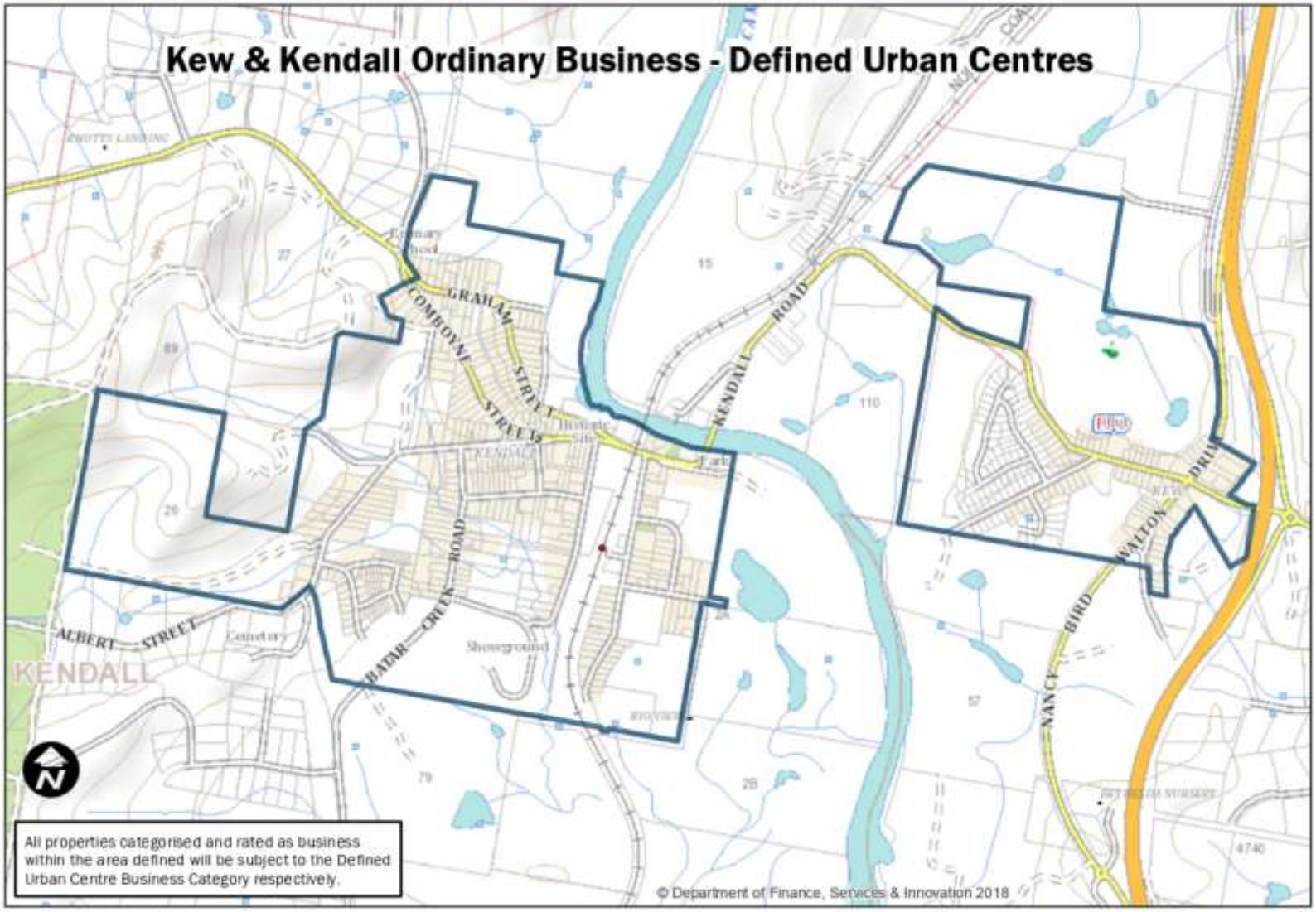
PORT MACQUARIE
KEMPSEY
WAUCHOPE
COMBOYNE
LANSDOWNE
KENDALL
HERONS CREEK
TELEGRAPH POINT
MARIA National Park
HAT HEAD National Park
CRESCENT HEAD
LAKE INNES Nature Reserve
BAGO BLUEF National Park
TAPIN TOPS National Park
CROWDY BAY National Park
WERRIKIMBE National Park
KUMBATINE National Park
THE CASTLES Nature Reserve
PARPINBARRA ROAD
COMBOYNE ROAD
LORNE ROAD
MARIA RIVER ROAD
HASTINGS RIVER
FREDERICKTON
SMITHTOWN
GLADSTONE
HAT HEAD
MOUNT KIPPARA
MOUNT BOSS
MOUNT CAIRNCROSS
MOUNT COMBOYNE
MOUNT GIBRALTAR
RALFES PEAK
JASPER Nature Reserve
TOOTH ROCKS
KEMPS PINNACLE
SPOKES MOUNTAIN
MOUNT MOTHERABAH
MOUNT SEAVIEW
MOUNT BANDA BANDA
LIMEBURNERS CREEK National Park
DOORAGAN National Park
HARRINGTON
COOPERNOOK
TAREE


Kew & Kendall Ordinary Business - Defined Urban Centres
GRAHAM STREET
COMBOYNE STREET
KENDALL ROAD
ALBERT STREET
BATAR CREEK ROAD
NANCY BIRD WALTON DRIVE
KENDALL
Cemetery
Showground
All properties categorised and rated as business within the area defined will be subject to the Defined Urban Centre Business Category respectively.
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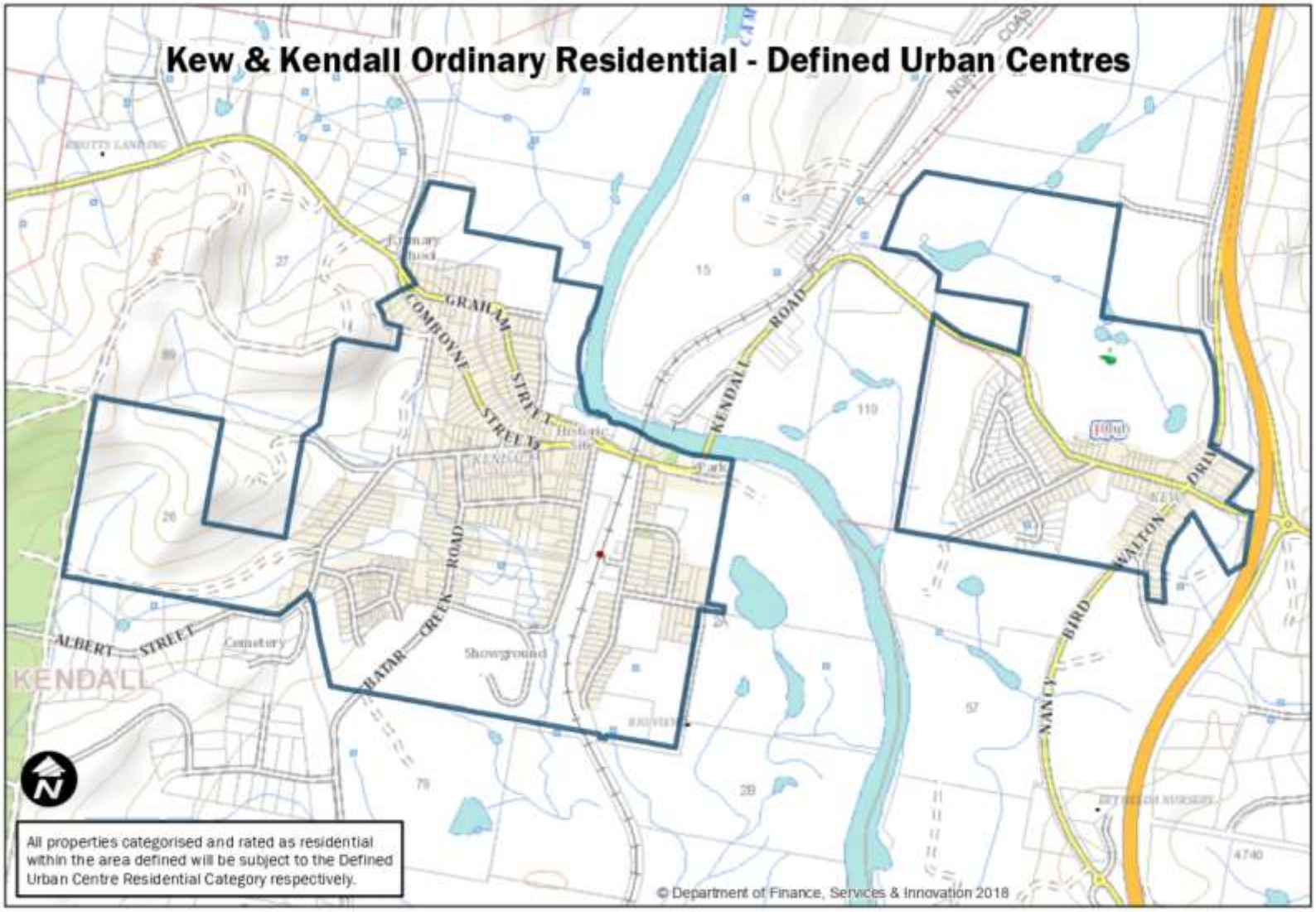
Kew & Kendall Ordinary Residential - Defined Urban Centres
GRAHAM STREET
COMBOYNE STREET
KENDALL ROAD
ALBERT STREET
BATAR CREEK ROAD
NANCY BIRD WALTON DRIVE
KENDALL
Cemetery
Showground
All properties categorised and rated as residential within the area defined will be subject to the Defined Urban Centre Residential Category respectively.
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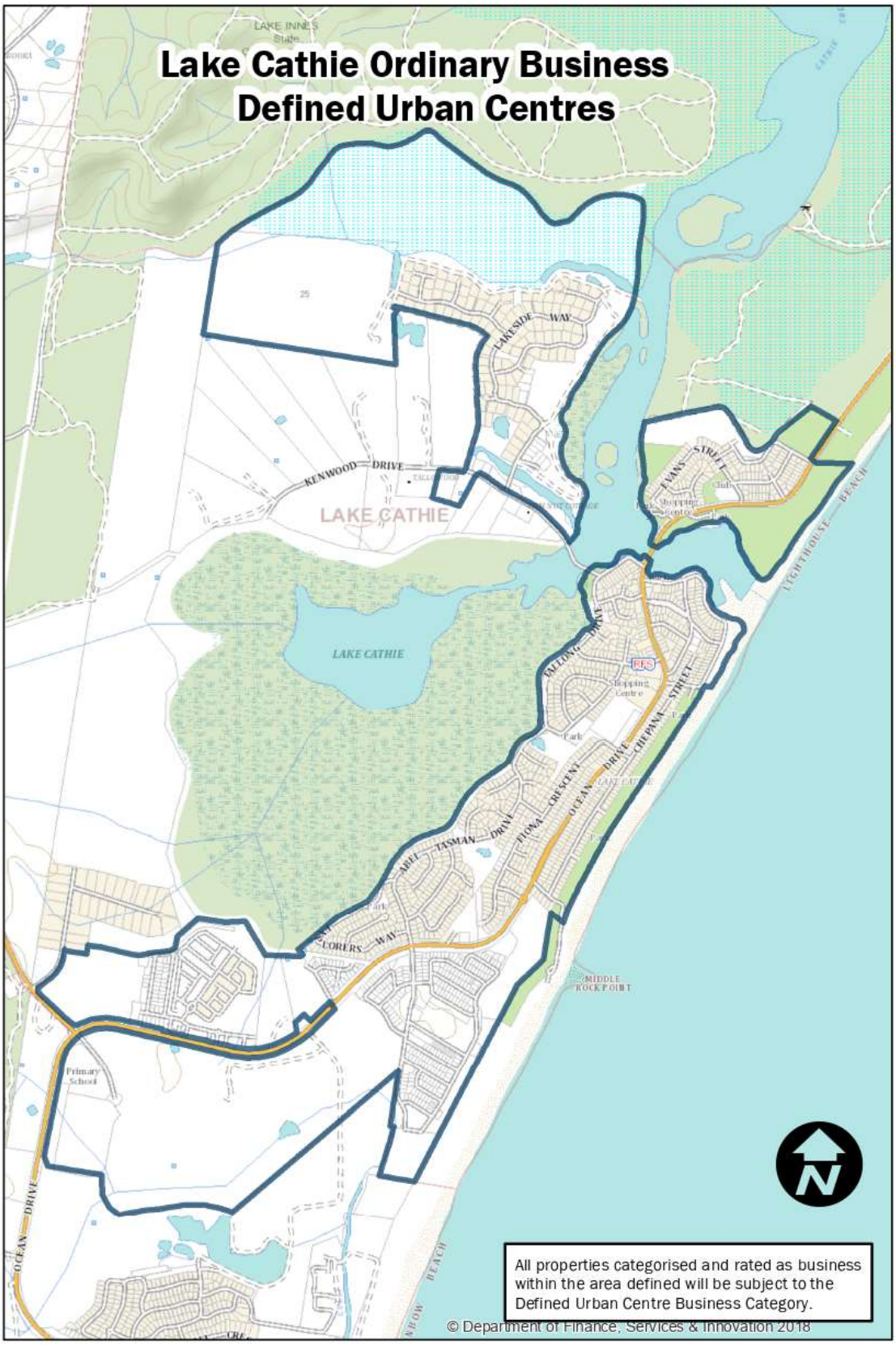
Lake Cathie Ordinary Business
Defined Urban Centres
LAKE INNES
State
LAKESIDE WAY
KENWOOD DRIVE
LAKE CATHIE
LAKE CATHIE
EVANS STREET
LIGHTHOUSE BEACH
VALLONG DRIVE
Shopping Centre
CHEPANA STREET
OCEAN DRIVE
PIONA CRESCENT
TASMAN DRIVE
ABEL
LORERS WAY
MIDDLE ROCK POINT
Primary School
OCEAN DRIVE
All properties categorised and rated as business within the area defined will be subject to the Defined Urban Centre Business Category.
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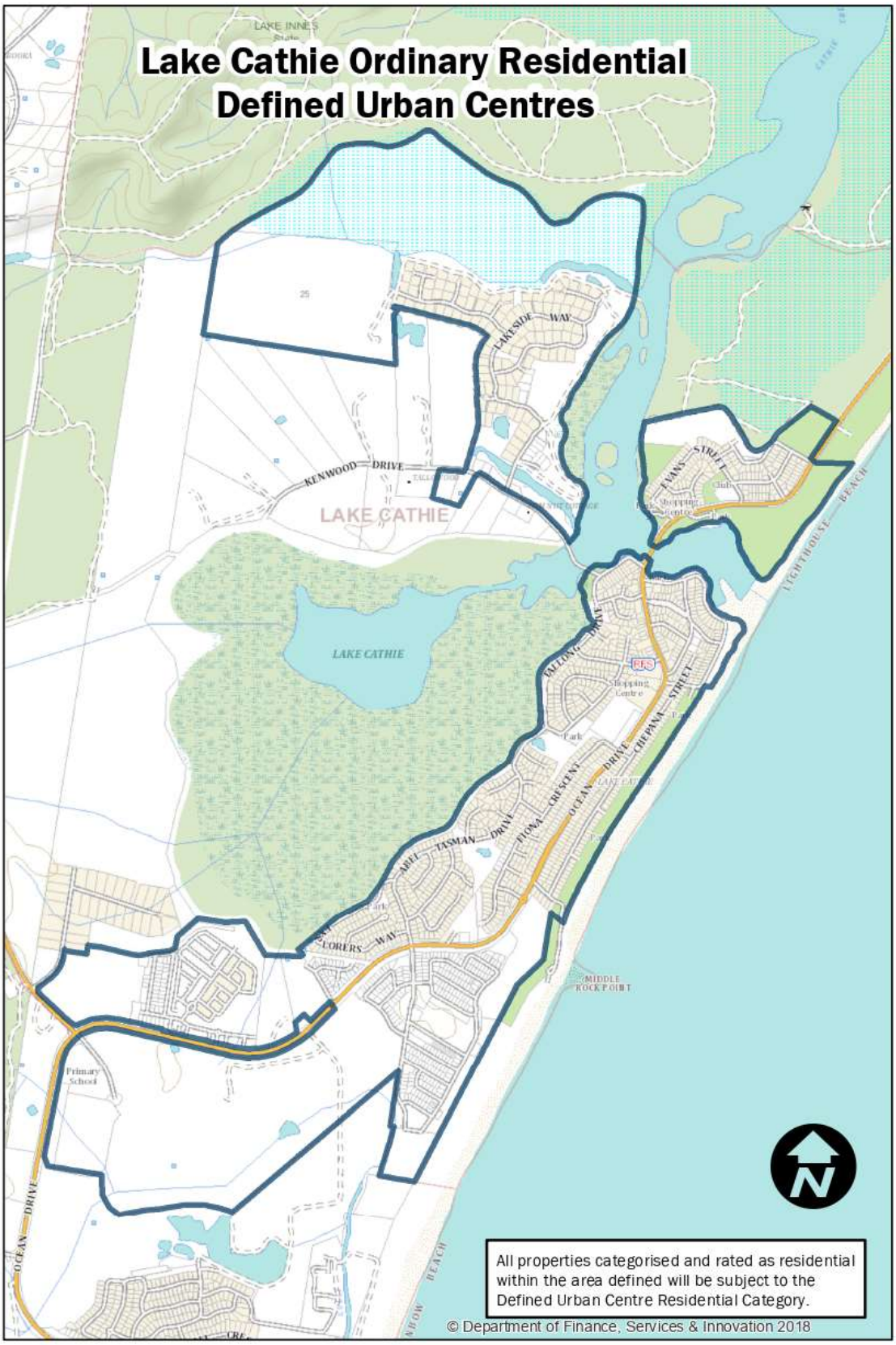
Lake Cathie Ordinary Residential
Defined Urban Centres
LAKE INNES
LAKESIDE WAY
KENWOOD DRIVE
LAKE CATHIE
LAKE CATHIE
EVANS STREET
LIGHTHOUSE BEACH
VALLONG DRIVE
CHEPANA STREET
OCEAN DRIVE
PIONA CRESCENT
TASMAN DRIVE
ABEL
LORERS WAY
MIDDLE ROCK POINT
Primary School
OCEAN DRIVE
All properties categorised and rated as residential within the area defined will be subject to the Defined Urban Centre Residential Category.
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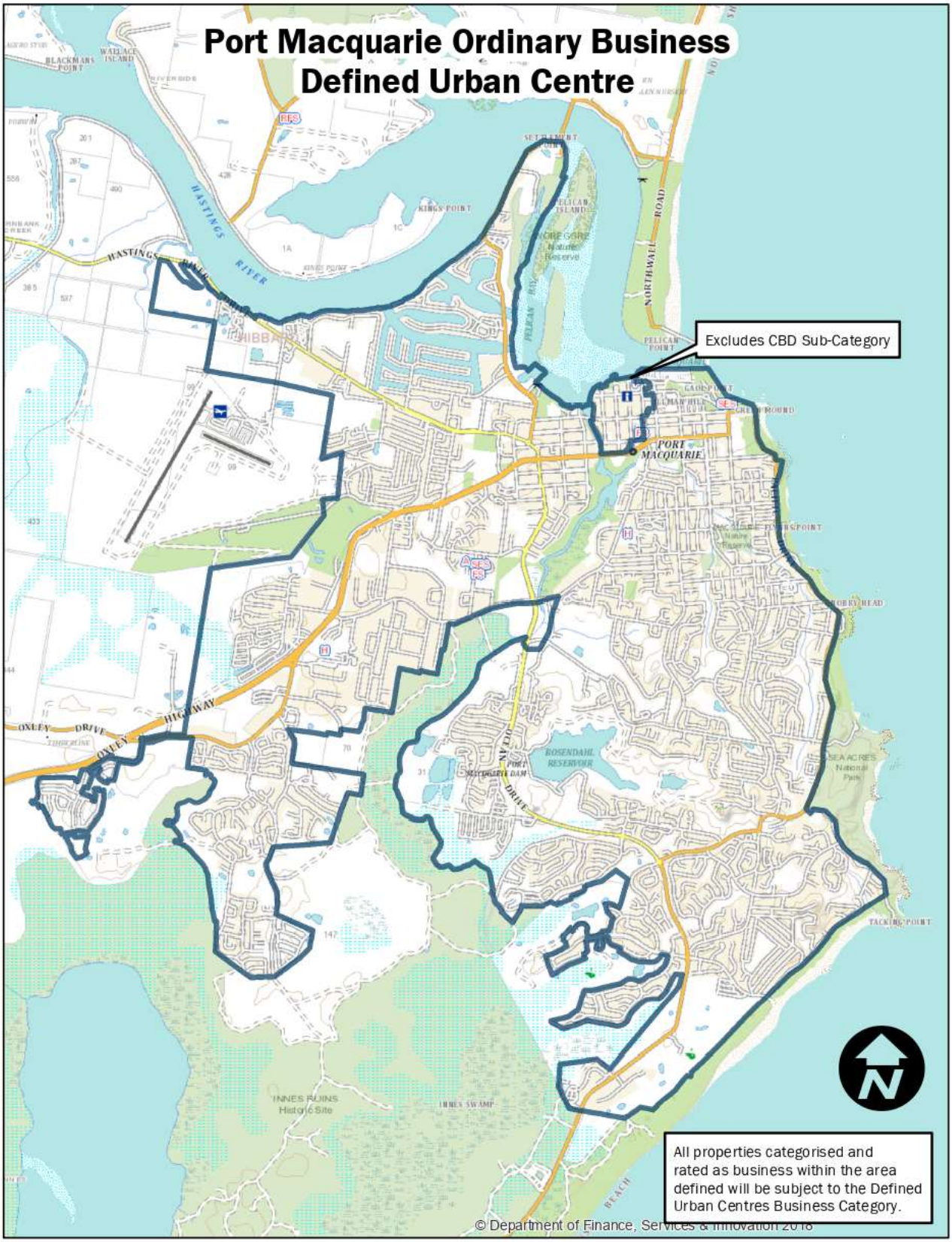
Port Macquarie Ordinary Business Defined Urban Centre
Excludes CBD Sub-Category
All properties categorised and rated as business within the area defined will be subject to the Defined Urban Centres Business Category.
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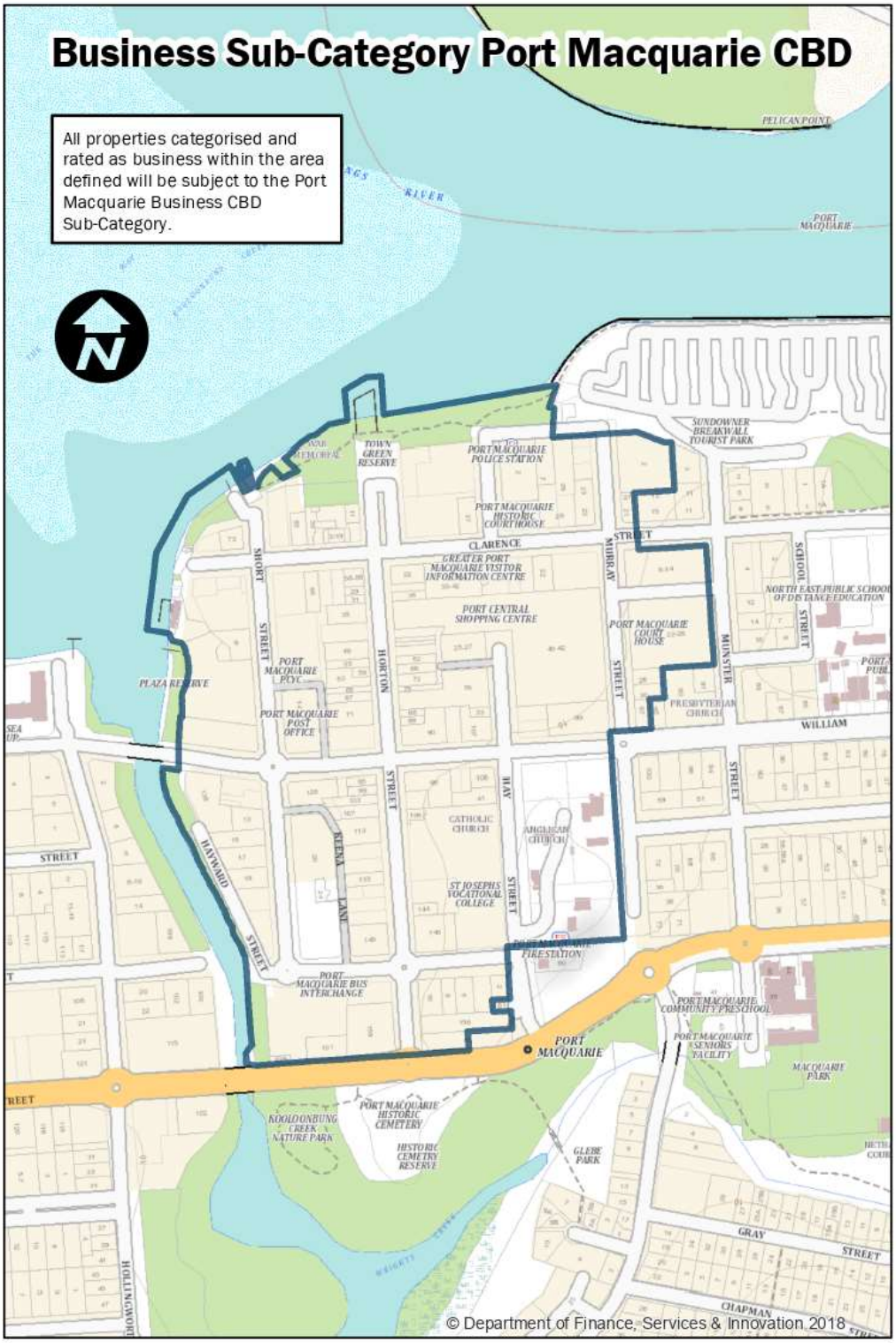
Business Sub-Category Port Macquarie CBD
All properties categorised and rated as business within the area defined will be subject to the Port Macquarie Business CBD Sub-Category.
N
PELICAN POINT
RIVER
PORT MACQUARIE
TOWN GREEN RESERVE
PORT MACQUARIE POLICE STATION
SUNDOWNER BREAKWALL TOURIST PARK
PORT MACQUARIE HISTORIC COURTHOUSE
CLARENCE STREET
GREATER PORT MACQUARIE VISITOR INFORMATION CENTRE
SHORT STREET
HORTON STREET
PORT CENTRAL SHOPPING CENTRE
MURRAY STREET
PORT MACQUARIE COURT HOUSE
MUNSTER STREET
SCHOOL STREET
NORTH EAST PUBLIC SCHOOL OF DISTANCE EDUCATION
PLAZA RESERVE
PORT MACQUARIE POST OFFICE
PRESBYTERIAN CHURCH
WILLIAM STREET
HAY STREET
CATHOLIC CHURCH
ANGLICAN CHURCH
HAYWARD STREET
KEENA LANE
ST JOSEPHS VOCATIONAL COLLEGE
PORT MACQUARIE BUS INTERCHANGE
PORT MACQUARIE COMMUNITY PRESCHOOL
PORT MACQUARIE SENIORS FACILITY
PORT MACQUARIE
MACQUARIE PARK
KOOLOONBUNG CREEK NATURE PARK
PORT MACQUARIE HISTORIC CEMETERY
HISTORIC CEMETERY RESERVE
GLEBE PARK
GRAY STREET
CHAPMAN
HOLLINGSWORTH
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Port Macquarie Ordinary Residential
Defined Urban Centre
HASTINGS RIVER
HIBBARD
PORT MACQUARIE
ROSENDAHL RESERVOIR
OXLEY DRIVE
OXLEY HIGHWAY
NORTHWALL ROAD
PELICAN BAY
INNES RUINS Historic Site
INNES SWAMP
TACKING POINT
All properties categorised and rated as residential within the area defined will be subject to the Defined Urban Centres Residential Category.
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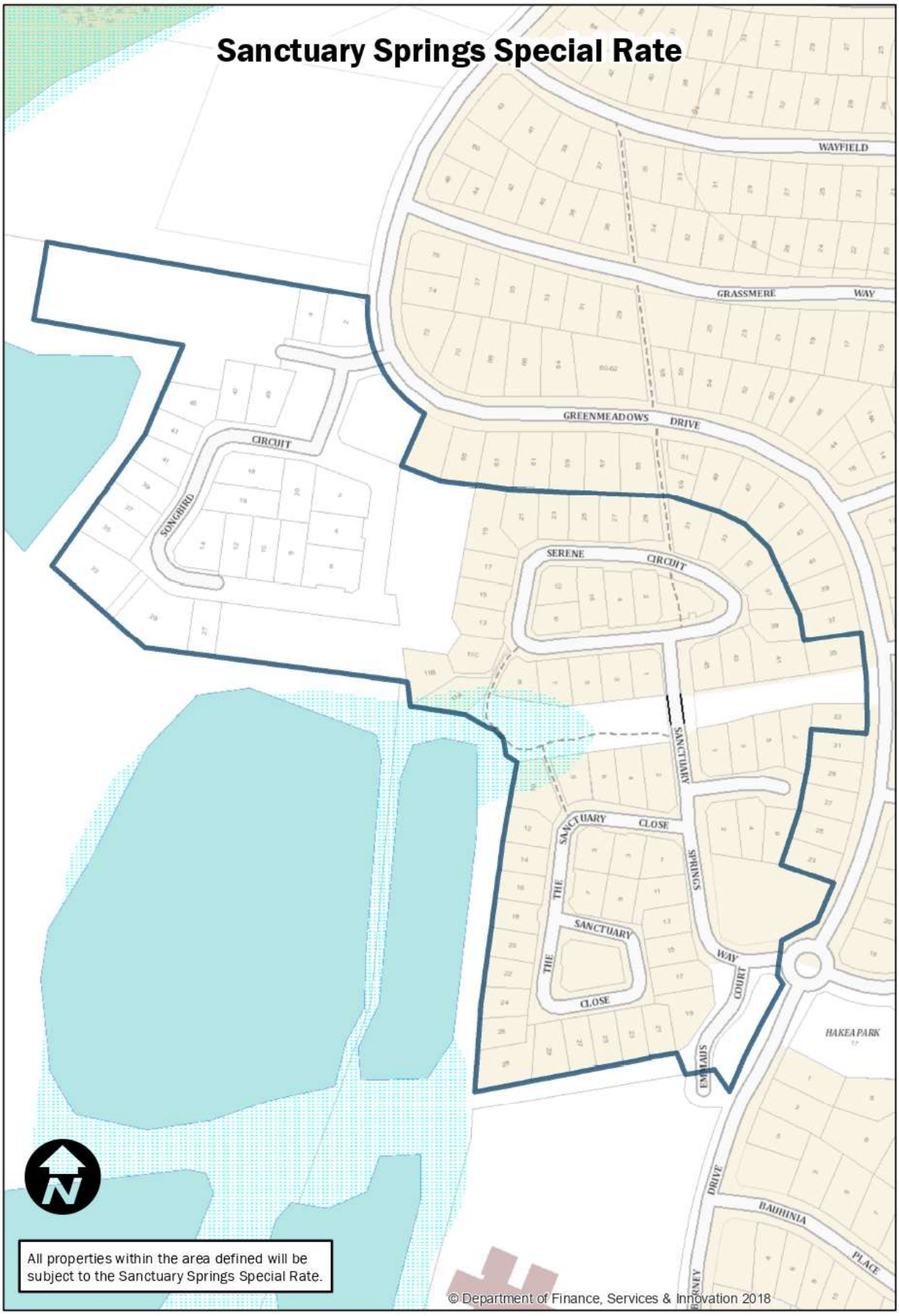
Sanctuary Springs Special Rate
WAYFIELD
GRASSMERE WAY
GREENMEADOWS DRIVE
CIRCUIT
SONGBIRD
SERENE CIRCUIT
SANCTUARY
SANCTUARY CLOSE
SPRINGS
THE SANCTUARY CLOSE
WAY
COURT
EMERALDS
HAKEA PARK
DRIVE
BAUHINIA PLACE
All properties within the area defined will be subject to the Sanctuary Springs Special Rate.
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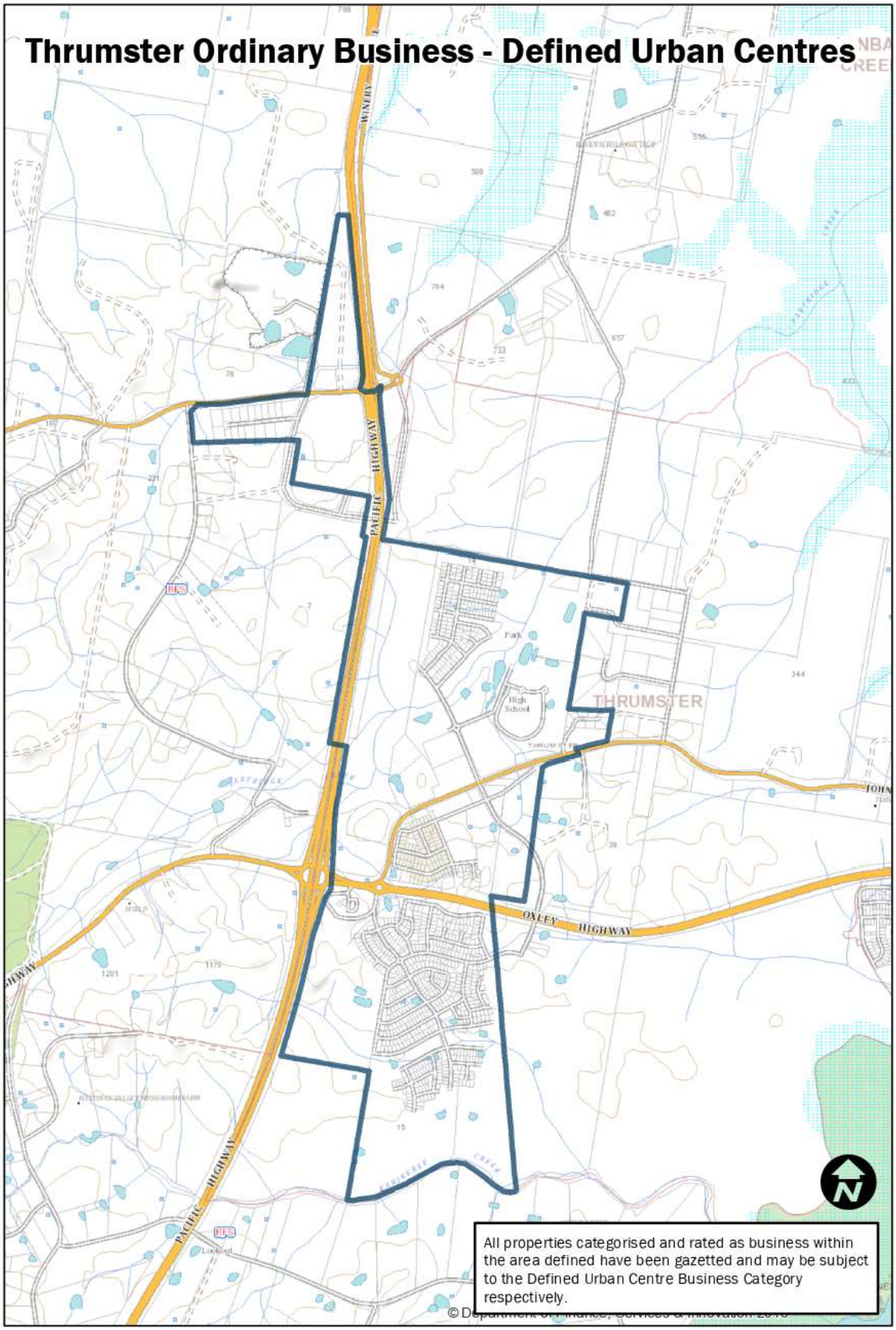
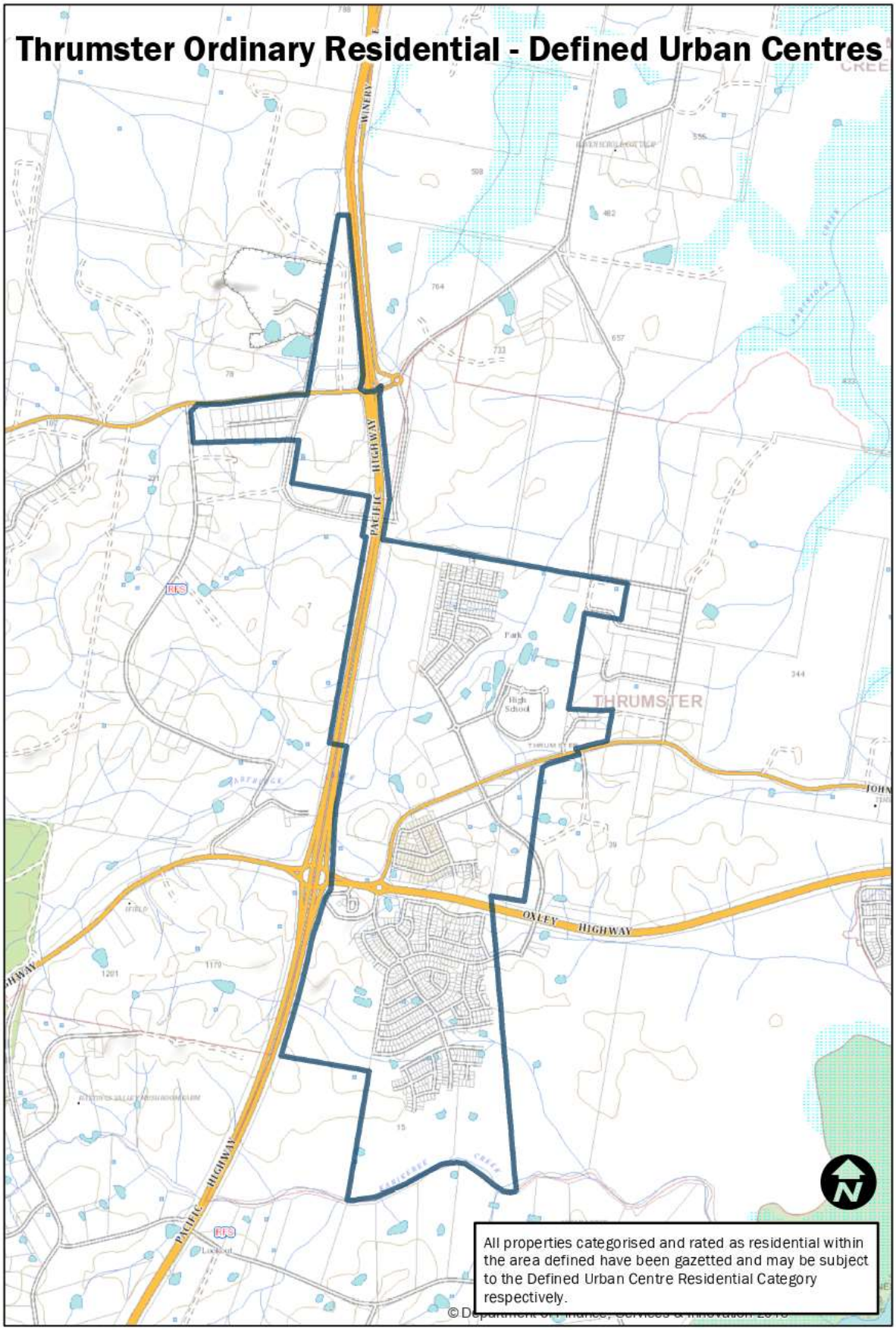
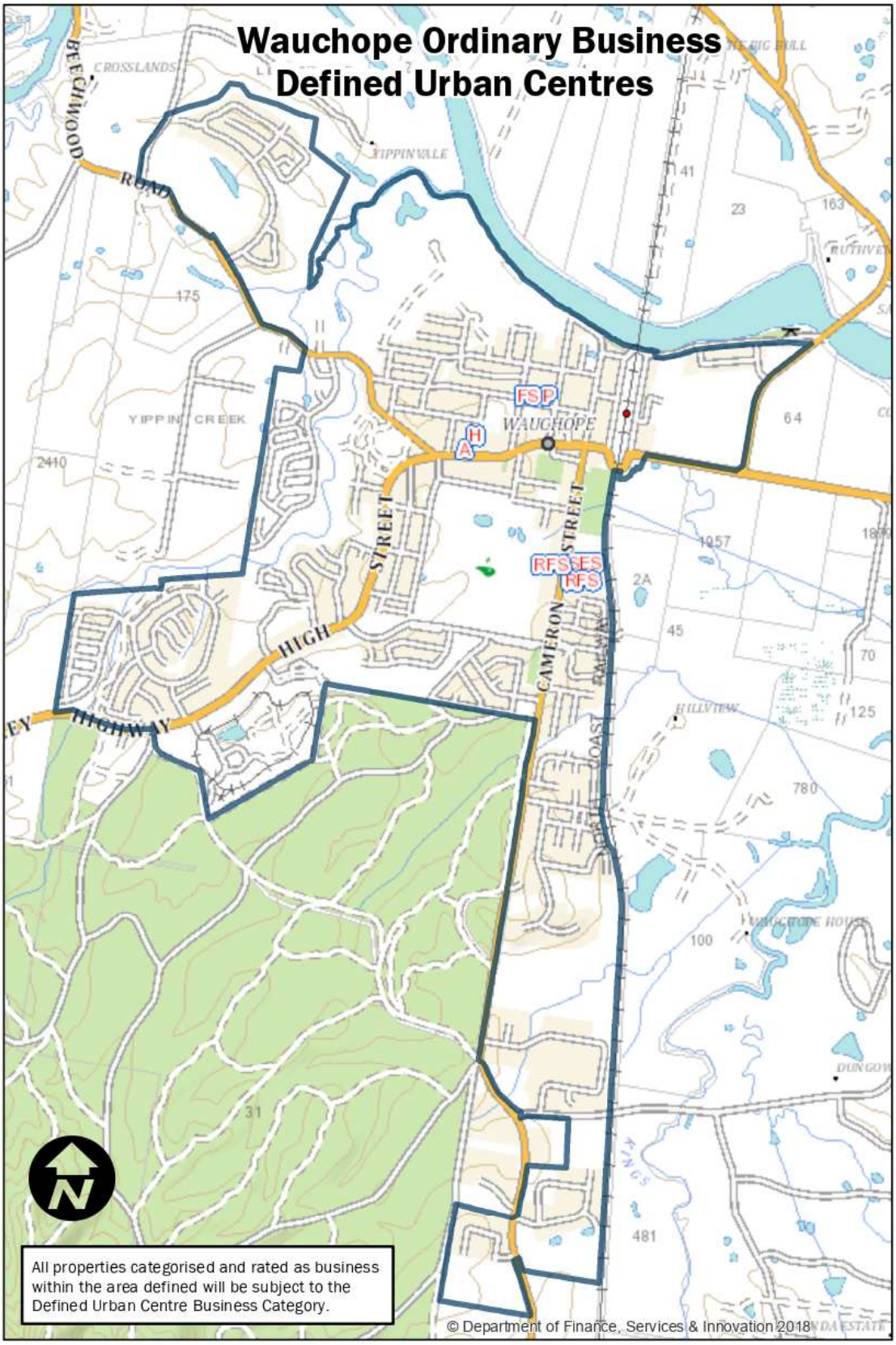

Thrumster Ordinary Business - Defined Urban Centres
PACIFIC HIGHWAY
ONLEY HIGHWAY
THRUMSTER
All properties categorised and rated as business within the area defined have been gazetted and may be subject to the Defined Urban Centre Business Category respectively.


Thrumster Ordinary Residential - Defined Urban Centres
PACIFIC HIGHWAY
THRUMSTER
ORLEY HIGHWAY
All properties categorised and rated as residential within the area defined have been gazetted and may be subject to the Defined Urban Centre Residential Category respectively.


Wauchope Ordinary Business
Defined Urban Centres
BEECHWOOD
ROAD
CROSSLANDS
YIPPINVALE
YIPPIN CREEK
WAUCHOPE
HIGH
STREET
CAMERON
STREET
HIGHWAY
HILLVIEW
WAUCHOPE HOUSE
DUNGOW
FSP
H
A
RFS
SES
RFS
175
2410
41
23
163
64
1957
2A
45
70
125
780
100
31
481
All properties categorised and rated as business within the area defined will be subject to the Defined Urban Centre Business Category.
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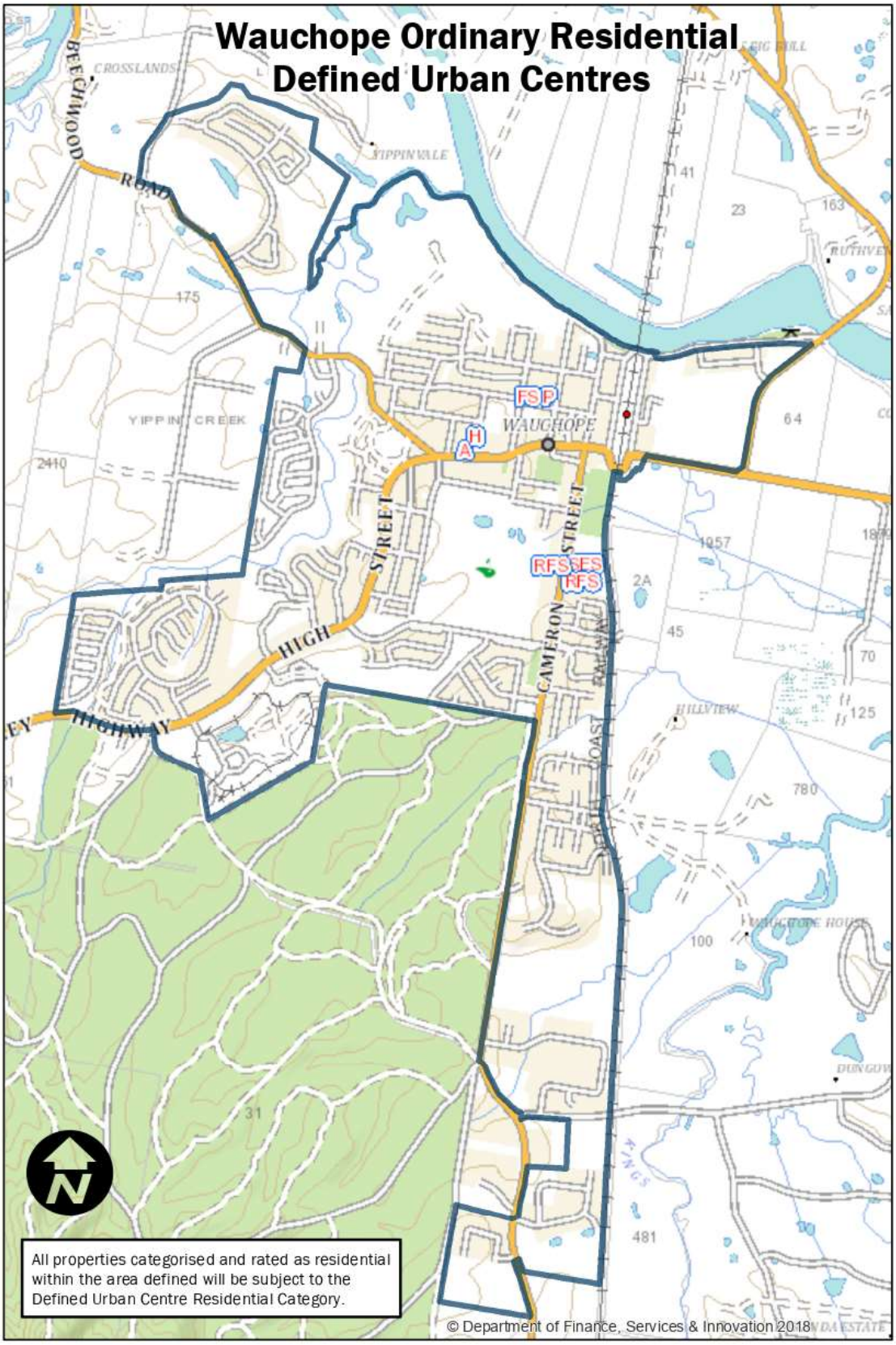
Wauchope Ordinary Residential
Defined Urban Centres
BEECHWOOD ROAD
CROSSLANDS
YIPPIN CREEK
YIPPINVALE
WAUCHOPE
FSP
H
A
HIGH STREET
CAMERON STREET
RFSSES
RFS
HILLVIEW
All properties categorised and rated as residential within the area defined will be subject to the Defined Urban Centre Residential Category.
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HASTINGS COUNCIL

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9 Laurie Street, Laurieton NSW 2443

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t: (02) 6581 8111

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port-macquarie-hastings-council
pmhcouncil
connectpmh
chatpmh
watchpmh

BUDGET VARIATIONS - February 2021											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to February 2021	New Yearly Proposed Budget - February 2021	Movement	Funding Source	EFFECT ON FUNDING POSITION
Grants & Other Funding											
Council has received a grant from the Department of Planning, Industry & Environment for the "The Festival of Place Summer Fund".											
Business & Industry	42152	The Festival of Place - Summer Fund Project	Operating	Strategy & Growth	0	0	0	10,000	-10,000	Grant	0
Business & Industry	19161	Operating Grants	Operating		-15,000	-15,000	0	-25,000	10,000	Grant	0
Grant funding has been received from the Department of Communities and Justice for Youth Week 2021.											
Community Inclusion	326	Youth Week	Operating	Strategy & Growth	3,996	3,996	0	7,025	-3,029	Grant	0
Community Inclusion	10240	Operating Grants	Operating		0	-220,000	-3,029	-223,029	3,029	Grant	0
Funding has been received from Transport for NSW for the Westport Boat Ramp Upgrade.											
Parks & Recreation	42110	Westport Park Boat Ramp Facilty Upgrade	Capital	Development & Environment	0	0	0	50,000	-50,000	Grant	0
Parks & Recreation	19282	Capital Grants	Capital		-1,586,000	-2,567,668	-3,308,372	-2,617,668	50,000	Grant	0
Grant Funding received from Transport for NSW for the Country Passenger Transport Infrastructure Grants Scheme (CPTIGS)											
Infrastructure Planning	42141	CPTIGS	Capital	Infrastructure	0	50,000	0	150,000	-100,000	Grant	0
Infrastructure Planning	19332	Capital Grants	Capital		-890,000	-1,010,000	-161,350	-1,110,000	100,000	Grant	0
To recognise contribution received from Lake Cathie-Bonny Hills Lions Club to fund Lake Cathie Skate Park project.											
Parks & Recreation	41944	Lake Cathie Foreshore Reserve - Skate Facility	Capital	Development & Environment	0	301,439	351,826	602,775	-301,336	Contribution	0
Parks & Recreation	19285	Contributions Income	Capital		0	-88,769	-120,534	-390,105	301,336	Contribution	0
Grant Received under the Bushfire Affected Coastal Waterways Program.											
Natural Resources	42144	Sensitive Receptors	Capital	Development & Environment	0	0	10,747	55,000	-55,000	Grant	0
Natural Resources	19232	Capital Grants	Capital		0	-166,498	-139,163	-221,498	55,000	Grant	0
Bonds used for Defects Liability											

BUDGET VARIATIONS - February 2021											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to February 2021	New Yearly Proposed Budget - February 2021	Movement	Funding Source	EFFECT ON FUNDING POSITION
Development Assessment	42158	Oxbow Circuit, King Creek Repairs	Capital	Development & Environment	0	0	0	115,977	-115,977	Contribution	0
Development Assessment	19315	Contributions Capital - Engineering Development	Capital		0	0	-115,977	-115,977	115,977	Contribution	0
Total Grants & Other Funding									**635,342**		**0**
Reserve Movements											
To transfer unspent funds back to Reserve for completed project in the 2020/2021 works program.											
Natural Resources	19239	Transfer From Reserve	Capital	Development & Environment	-273,900	-987,623	0	-941,037	-46,586	Reserve	0
Natural Resources	41770	Diamond Head Rd / The Boulevard Flood Access - Stage 1	Capital		6,000	255,940	209,354	209,354	46,586	Reserve	0
Total Reserve Movements									**46,586**		**0**
Movement between Projects											
Transfer funds from Drainage to Parks & Recreation budget to fund Stormwater Remediation Design portion of Lake Cathie Skate Park project.											
Parks & Recreation	41944	Lake Cathie Foreshore Reserve - Skate Facility	Capital	Development & Environment/ Infrastructure	0	602,775	351,826	605,775	-3,000	Revenue	-3,000
Drainage	40619	Stormwater Remediation Designs	Capital		0	32,466	3,281	29,466	3,000	Revenue	3,000
Budget Variation Requests - Approved by Executive											
Budget Variance Request for the parrallel Taxiway project Stage 1											
Airport	41607	PM Airport - Parrallel Taxiway	Capital	Corporate Performance	60,000	60,000	135,184	240,000	-180,000	Reserve	0
Airport	19239	Transfer From Reserve	Capital		-133,074	-133,074	0	-313,074	180,000	Reserve	0
Total Budget Variations approved by Executive									**180,000**		**0**
Works Program Amounts Re-allocated from 20/21 to 21/22											
Project movements between financial years											
Airport	41976	PM Airport Hangar Mtce/Refurbishment	Capital		30,000	30,000	0	0	30,000	Reserve	0

BUDGET VARIATIONS - February 2021

Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to February 2021	New Yearly Proposed Budget - February 2021	Movement	Funding Source	EFFECT ON FUNDING POSITION
Waste Disposal	50110	Cairncross Landfill Expansion 1A 1C	Capital		5,763,603	5,763,603	501,365	3,697,214	2,066,389	Reserve	0
Strategic Property Investments	41611	Lot 139 Greenmeadows Dr - Sale and Develop Costs	Capital		80,000	80,000	5,063	5,001	75,000	Reserve	0
Strategic Property Investments	41906	Property Management System	Capital		80,000	80,000	0	0	80,000	Reserve	0
Strategic Planning	41820	Health & Education Precinct Planning	Operational		391,000	391,000	36,290	280,000	111,000	Reserve	0
Business & Industry	41935	Port Macquarie Cultural Precinct Plan	Operational		60,000	60,000	0	10,000	50,000	Reserve	0
Business & Industry	41938	Greater Port Macquarie Brand Review	Operational		150,000	150,000	0	120,000	30,000	Reserve	0
Communications	41907	Customer Experience Project	Operational		80,000	80,000	0	0	80,000	Reserve	0
Destination & Cultural Development	41912	Public Art Audit & Maintenance	Operational		75,000	75,000	3,300	25,300	49,700	Various	0
Destination & Cultural Development	42095	Tourism & Cult Development Proj Officer	Operational		100,000	100,000	38,151	78,107	21,893	Reserve	0
Destination & Cultural Development	42083	Tourism - Visiting Friends & Relatives Program	Operational		25,000	25,000	0	5,000	20,000	Reserve	0
Destination & Cultural Development	42089	Cultural Industries - Networking & Mentoring	Operational		50,000	50,000	0	30,000	20,000	Reserve	0
Destination & Cultural Development	42091	Program to Encourage Vacant Commercial Spaces Use	Operational		80,000	80,000	0	20,000	60,000	Reserve	0
Destination & Cultural Development	42104	Towns Gateway Entrance Strategy	Operational		50,000	50,000	0	0	50,000	Reserve	0
Natural Resources	41426	Hibbard Flooplain Mitigation Measures	Operational		40,000	40,000	0	0	40,000	Reserve	0
Natural Resources	41575	Wrights & Yarranabee Creeks Mitigation Works	Operational		40,000	40,000	0	0	40,000	Reserve	0
Natural Resources	41722	North Brother Local Catchments Flood Study	Operational		112,391	112,391	0	70,000	42,391	Various	0
Natural Resources	41889	Illaroo Rd - Stormwater Preparatory Work	Capital		316,610	316,610	47,298	44,936	271,674	Various	0
Natural Resources	41928	Development of Coastal Management Plan for LGA	Operational		157,103	157,103	40,100	86,326	70,777	Various	0
Natural Resources	42007	Tidal Improvemt - Lake Innes/Lake Cathie Estuarine	Capital		147,500	147,500	0	0	147,500	Reserve	0
Drainage	41713	Black Swan Terrace Drainage Upgrade Design	Capital		15,300	15,300	0	0	15,300	Reserve	0

BUDGET VARIATIONS - February 2021

Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to February 2021	New Yearly Proposed Budget - February 2021	Movement	Funding Source	EFFECT ON FUNDING POSITION
Drainage	41764	Black Swan Terrace - Stormwater Detention Facility	Capital		246,555	246,555	9,374	103,669	142,886	Reserve	0
Drainage	41960	Stormwater Remediation - 35 Hart Street	Capital		90,000	90,000	0	50,000	40,000	Reserve	0
Infrastructure Planning	41925	Kew Main Street Upgrade - Stage 3	Capital		1,590,345	1,590,345	112,345	379,029	1,211,316	Reserve	0
Infrastructure Planning	41934	Carparking Strategy Review	Operational		192,910	192,910	6,791	64,963	127,947	Reserve	0
Infrastructure Planning	42033	Boundary Street Detailed Design	Capital		1,000,000	1,000,000	150,811	571,000	429,000	Various	0
Infrastructure Planning	42098	Develop a Laurieton Main Street Master Plan	Operational		100,000	100,000	0	85,000	15,000	Reserve	0
Infrastructure Planning	42105	CSU-Googlk Connection Consultancies	Operational		150,000	150,000	16,487	60,000	90,000	Reserve	0
Sewerage Services	30147	Area 15 Sewerage Upgrade	Capital		483,389	483,389	88,616	180,299	303,090	Reserve	0
Sewerage Services	39612	Long Term Asset Management Systems	Operational		250,000	250,000	0	125,000	125,000	Reserve	0
Sewerage Services	39304	Thrumster STP Area 13 Precons Phase 2 10000EP Aug	Capital		50,000	50,000	0	18,000	32,000	Reserve	0
Sewerage Services	39316	Port Macquarie WWTP Odour Control	Capital		200,000	200,000	0	93,000	107,000	Reserve	0
Sewerage Services	39319	PM SPS#71 Construction	Capital		250,000	250,000	21,000	37,990	212,010	Reserve	0
Sewerage Services	39616	Bonny Hills Recycled Water System Upgrade	Capital		2,600,000	2,600,000	211,482	1,822,856	777,144	Reserve	0
Transport and Traffic	40307	Batar Ck Bridge Replacement - Culvert Const	Capital		81,977	81,977	0	0	81,977	Reserve	0
Transport and Traffic	41776	Kindee Bridge - Immediate Structural Repairs	Capital		740,811	740,811	257,954	367,933	372,878	Reserve	0
Transport and Traffic	41777	Kindee Bridge - Replacement Optioneering	Capital		50,000	50,000	0	20,000	30,000	Various	0
Transport and Traffic	41793	Ocean Dr Shared Path-Inc Land Acq 54 Ocean Drive	Capital		15,000	15,000	0	0	15,000	Reserve	0
Transport and Traffic	41835	(Part RMS) - Beach to Beach Shared Path Constructi	Capital		676,819	676,819	116,154	309,574	367,245	Various	0
Transport and Traffic	41838	Orbital Road Investigations	Operational		754,883	754,883	53,795	635,809	119,074	Reserve	0
Transport and Traffic	41866	Gordon St Pavement Reconst-Ocean Dr to Horton-Design	Capital		3,005,897	3,005,897	89,191	2,041,445	964,452	Various	0

BUDGET VARIATIONS - February 2021

Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to February 2021	New Yearly Proposed Budget - February 2021	Movement	Funding Source	EFFECT ON FUNDING POSITION
Transport and Traffic	41967	Pedestrian Refuge - Horton St (Clarence & William)	Capital		60,000	60,000	878	27,396	32,604	Reserve	0
Transport and Traffic	41969	Pembrooke Road - Stoney Creek Bridge Upgrade	Capital		500,000	500,000	3,416	150,000	350,000	Reserve	0
Transport and Traffic	42005	Bril Bril Road Upgrade	Capital		480,578	480,578	9,539	95,188	385,390	Reserve	0
Transport and Traffic	42006	Schools to Schools Shared Pathway - Plan & Design	Capital		321,785	321,785	12,511	109,916	211,869	Reserve	0
Transport and Traffic	42068	Traffic Analysis Sancrox/Thrumster/Fernbank	Capital		150,000	150,000	0	50,000	100,000	Reserve	0
Transport and Traffic	42069	Timber Bridge Program	Capital		1,200,000	1,200,000	0	700,000	500,000	Loans	0
Transport and Traffic	42029	Pappinbarra Right Arm Bridge - Design & Reconstruc	Capital		3,158,140	3,158,140	91,900	1,158,140	2,000,000	Grant	0
Transport and Traffic	42132	Maria River Road Sealing	Capital		500,000	500,000	126,549	326,571	173,429	Grant	0
Transport and Traffic	42137	Pembrooke Road between Beechwood Rd & Stoney Ck Rd	Capital		2,990,000	2,990,000	0	10,000	2,980,000	Grant	0
Water Supply	20137	Trunkmain - Sancrox Reservoir to Area 13 TM 750mm	Capital		34,297	34,297	0	0	34,297	Reserve	0
Water Supply	20215	Thrumster RW Interim Supply Rising Main to Reservo	Capital		6,077,962	6,077,962	2,030,206	4,463,656	1,614,306	Reserve	0
Water Supply	20155	Wauchope Water Treatment Plant Expansion	Capital		4,374,839	4,374,839	1,882,695	3,574,839	800,000	Reserve	0
Landuse Planning	41887	Yippen Creek Planning Investigations	Operational		217,710	217,710	30,605	172,295	45,415	Reserve	0
Landuse Planning	41973	Fernbank Creek/Sancrox - Support Studies	Capital		300,000	300,000	9,922	199,999	100,001	Reserve	0
Landuse Planning	42062	Port Macquarie Civic Precinct Planning	Capital		15,000	15,000	0	0	15,000	Reserve	0
Aquatic Facilities	42079	PM Aquatic Facility - Concept Design & Approvals	Capital		1,236,060	1,236,060	79,112	487,845	748,215	Reserve	0
Facilities	42050	Camden Haven Surf Club Building Preconstruction	Capital		100,000	100,000	0	60,000	40,000	Reserve	0
Parks & Recreation	41723	Hastings Regional Sporting Complex	Capital		2,000,000	2,000,000	1,092,255	1,287,363	712,637	Loans	0
Parks & Recreation	41758	Sancrox/Thrumster Sports Fields-Design & Approval	Capital		591,140	591,140	64,118	184,699	406,441	s7.11	0
Parks & Recreation	41834	Town Green Central & West - Pre-construction	Capital		1,859,911	1,859,911	1,499,557	1,592,422	267,489	Various	0

BUDGET VARIATIONS - February 2021

Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to February 2021	New Yearly Proposed Budget - February 2021	Movement	Funding Source	EFFECT ON FUNDING POSITION
Parks & Recreation	41950	Rainbow Beach Sports Fields - Preconstruction Work	Capital		896,736	896,736	142,378	415,520	481,216	s7.11	0
Parks & Recreation	41959	Vince Inmon Sport Fields - Sports Facility Upgrade	Capital		560,000	560,000	8,783	31,217	528,783	Various	0
Various	19000	Various	Capital		0	0	0	-26,534,514	-21,461,737	Various	0
									21,461,737		
ORGANISATIONAL TOTAL - THIS REVIEW									22,323,665		0

FORECAST FOR FINANCIAL YEAR ENDED 30 JUNE 2021

Original Budget as at 1 July 2020	Shortfall	-676,730
Plus: Adjustments		
July Review		0
August Review	Surplus	151,102
September Review	Surplus	63,165
October Review	Balanced	0
November Review	Balanced	0
January Review	Surplus	117,330
February Review	Balanced	0
FORECAST FOR 30 JUNE 2021	**Shortfall**	-345,133

Notes:	1	The result shown above is the general fund result. All surpluses/deficits in the water, sewerage and waste funds are transferred to/from reserves.
	2	Reserve are internal restrictions that hold funds for a specific purpose, e.g. The airport has its own reserve and all income and expenditure relating to the airport is credited/debited to that reserve.
	3	Council projects are funded from a variety of funding sources. Below is a definition of the various types of funding that are used to fund projects.
		Revenue - All funds that are generated through rates, annual charges, fees and charges, interest etc. These funds are untied and can be expended on any project that Council considers appropriate.
		Grants - Government grants can either be monetary or otherwise and may be tied or untied. Tied grants are required to be used for a specific purpose such as the construction of a road. Untied grants may be applied for any purpose council considers appropriate.
		Contributions - Contributions are non-reciprocal transfers to Council in the sense that Council is not required to give value in exchange for the contributions directly to the contributor. Examples are contributions given by ratepayers towards capital works in their vicinity.
		Reserves - Reserves are internal restrictions held for a specific purpose, e.g. The airport has its own reserve and all income and expenditure relating to the airport is credited/debited to that reserve.
		S7.11 and S64 Contributions - Section 7.11 of the NSW Environmental and Planning Act (1979) and section 64 of the Local Government Act (1993) provides NSW local government with a formal legal framework for levying developers for the provision of infrastructure, services and amenities - known as developer contributions.
	4	Some projects are funded by multiple funding sources, e.g. a capital project may be funded by s7.11 funds, grants and revenue. The effect on capital column will only show the revenue funding adjustment as the other types of funding will have an income line budget adjustment shown in the report.

PORT MACQUARIE-HASTINGS COUNCIL

Monthly Investment Report

February 2021

IMPERIUM MARKETS

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Executive Summary

Compliance

Compliance Measure	Within Policy Limits (Y/N)	Reason if Not Compliant
Term to Maturity	Yes – Compliant	n/a
Counterparty	Yes – Compliant	n/a
Credit Quality	Yes – Compliant	n/a

Performance

As at 28/02/2021	1m (actual)	1m (% p.a.)	FYTD (actual)	FYTD (% p.a.)
AusBond Bank Bill Index	0.00%	-0.01%	0.05%	0.08%
Council's Portfolio^	**0.17%**	**1.96%**	**1.42%**	**2.42%**
Outperformance	0.17%	1.97%	1.37%	2.34%

^Total portfolio performance excludes Council's cash account holdings. Overall returns would be lower if cash was included.

Impact of COVID-19 to Council's Portfolio

COVID-19 has adversely impacted financial markets, which in turn, has also affected Council's investment portfolio. We provide a quick summary in this section.

With regards to financial markets, of importance was the RBA cutting interest rates twice in March 2020, taking the official cash rate down to 0.25%. Shares (equities) experienced a significant correction in March 2020 but recovered substantially due to the unprecedented fiscal and monetary policy support from global central banks and governments. **The RBA cut rates to record lows on 3rd November 2020 to 0.10%.** Equities have since, largely rallied with the accelerated rollouts of multiple vaccines and additional fiscal stimulus measures. Longer-term bond yields also rose significantly in February on the prospects of higher inflation. As a result, longer-term fixed interest securities (3-5 years) such as bonds and term deposits also rose during February.

With regards to the medium-longer term outlook for financial markets, of importance is the RBA's outlook and stance on the current situation:

1. The RBA's official cash rate will remain unchanged at its emergency level of 0.10% until its objectives of full employment and inflation are reached. They stressed that reducing unemployment was a "*national priority*" and the development in the labour market as key to the policy outlook;
2. The extension of the Term Funding Facility (TFF) until 30 June 2021, allowing all ADIs to access cheap funding directly from the RBA at a cost of 0.10% for 3 years for new drawings (the facility was previously available at a cost of 0.25% and was increased from an original $90bn to $200bn);
3. **The RBA Board is "*not expecting to increase the cash rate for at least three years*".**

The biggest impact to Council's investment portfolio is with regards to its largest exposure being assets held in bank term deposits, which accounts for around ~93% of Council's total investment, and cash (~6% of the total investment portfolio). **The biggest risk that PMHC faces over the medium-longer term in this environment is not the potential loss of capital (given all the banks are well capitalised and regulated by APRA), but the rapid loss of interest income as interest rates have plummeted**.

Council's term deposit portfolio was yielding 1.97% p.a. at month-end, with a weighted average duration of around 613 days or 1.68 years. **This average duration will provide some income protection against the low interest rate environment over the next 18 months**. As existing deposits mature however, they will inevitably be reinvested at much lower prevailing rates.

We note the current interest rates in the term deposit market:

- The highest deposit rate from any rated ADI in the market is now ~1.50% p.a. for 5 years;
- The highest deposit rates amongst the "AA-" rated ADIs (major banks) is now yielding between 0.40%-1.25% p.a. (depending on term);
- The highest deposit rates amongst the "A" rated ADIs was yielding between 0.75%-1.50% p.a. (depending on term);
- The highest deposit rates amongst the "BBB" and unrated ADIs was yielding between 0.40%-0.65% p.a. (depending on term).

Given official rates have fallen to record lows, Council is likely to see a rapid decline in interest income over future financial years. Its budgeted income over the medium-longer term needs to be revised to reflect the low interest rate environment. Returns between 0.50%-0.80% p.a. may potentially be the "norm" over the next few financial years.

Council's Portfolio

Asset Allocation

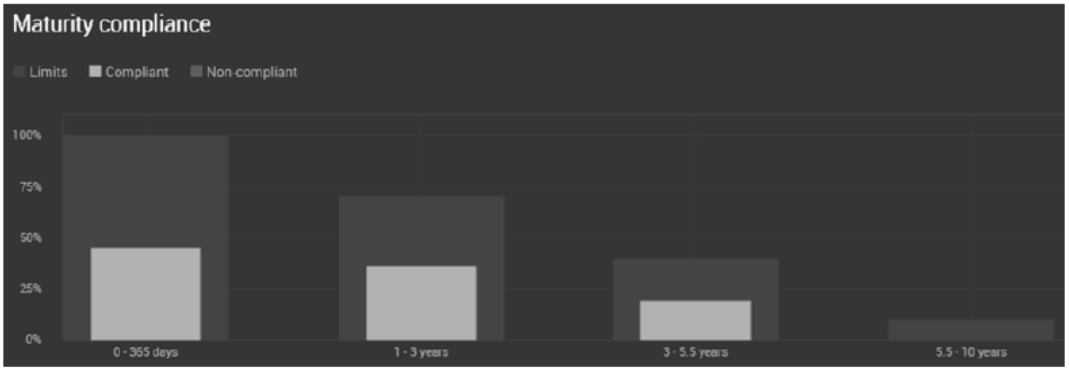
The portfolio is predominately directed to fixed term deposits (93%). The remainder of the portfolio is directed to the overnight cash account with Westpac (6%) and the single FRN with Bendigo-Adelaide (1%).

With the RBA cutting interest rates in November 2020 to 0.10%, the priority should be to lock in any remaining attractive medium-longer dated fixed deposits that may still be available to address reinvestment risk as margins continue to compress.



Term to Maturity

All maturity limits (minimum and maximum) comply with the Investment Policy. Medium-Term (3-5½ years) assets account for around 19% of the total investment portfolio, with capacity of around $70m at month-end.



Where there is (counterparty) capacity to invest in attractive 3-5½ year investments, we recommend this be allocated to new any remaining attractive fixed term deposits or fixed bonds (refer to respective sections below).

Compliant	Horizon	Invested ($)	Invested (%)	Min. Limit (%)	Max. Limit (%)	Available ($)
✓	0 - 365 days	$150,080,112	44.85%	0%	100%	$184,557,483
✓	1 - 3 years	$120,500,000	36.01%	0%	70%	$113,746,317
✓	3 - 5.5 years	$64,057,483	19.14%	0%	40%	$69,797,555
✓	5.5 - 10 years	$0	0.00%	0%	10%	$33,463,760
		$334,637,595	**100.00%**			

Counterparty

As at the end of February, Council did not have an overweight position to any single ADI. Overall, the portfolio is diversified across the investment grade credit spectrum (rated BBB- or higher), with no exposure to unrated ADIs.

Compliant	Issuer	Rating	Invested ($)	Invested (%)	Max. Limit (%)	Available ($)
✓	NAB	AA-	$74,500,000	22.26%	30.00%	$25,891,279
✓	WBC (St George)	AA-	$68,580,112	20.49%	30.00%	$31,811,166
✓	Rabobank	A+	$13,000,000	3.88%	20.00%	$53,927,519
✓	ICBC Sydney	A	$59,500,000	17.78%	20.00%	$7,427,519
✓	ING Bank Aus.	A	$17,500,000	5.23%	20.00%	$49,427,519
✓	Aus Military Bank	BBB+	$7,500,000	2.24%	10.00%	$25,963,760
✓	BOQ	BBB+	$28,000,000	8.37%	10.00%	$5,463,760
✓	Bendigo	BBB+	$3,057,483	0.91%	10.00%	$30,406,277
✓	AMP Bank	BBB	$9,000,000	2.69%	10.00%	$24,463,760
✓	Auswide	BBB	$24,000,000	7.17%	10.00%	$9,463,760
✓	MyState	BBB	$13,000,000	3.88%	10.00%	$20,463,760
✓	Newcastle PBS	BBB	$17,000,000	5.08%	10.00%	$16,463,760
			$334,637,595	**100.00%**		

In September 2020, ratings agency **S&P downgraded AMP Bank by one notch to "BBB"** stating its view that "*the overall creditworthiness of the AMP group is weaker*" and that "*the group is exposed to challenges that may disrupt its overall strategic direction and its ability to effectively execute its strategy.*"

Separately, Moody's downgraded MyState Bank's long-term credit rating from Baa1 (BBB+ equivalent from S&P) to Baa2 (BBB equivalent from S&P). The downgrade reflects the bank's lower financial buffers in a more challenging operating environment when compared to its peers. Moody's acknowledged though that the bank's capital ratio remained steady during the 2020 financial year.

We have no issues with Council's investments with both AMP Bank and MyState Bank, given they are super-senior ranked assets, extremely low risk and high up the bank capital structure.

We remain supportive of the regional and unrated ADI sector (and have been even throughout the GFC period). They continue to remain solid, incorporate strong balance sheets, while exhibiting high

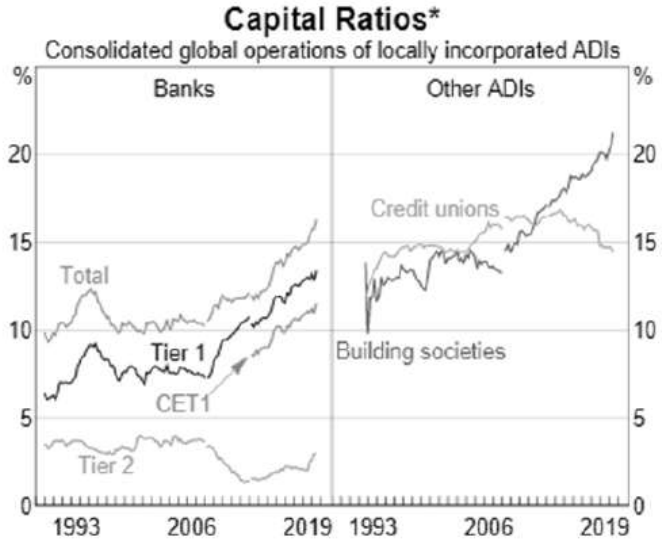
levels of capital – typically, much higher compared to the higher rated ADIs. Some unrated ADIs have up to 25-40% more capital than the domestic major banks, and well above the Basel III requirements.

RBA Governor Lowe has commented that they have not seen any signs of stress in the financial system and that unlike during the GFC, the banks (all ADIs) now have cash, are well capitalised and are acting as "shock absorbers" in the current crisis.

Overall, the lower rated ADIs (BBB and unrated) are generally now in a better financial position then they have been historically (see the Capital Ratio figure below). We believe that deposit investments with the lower rated ADIs should be continued going forward, particularly when they offer 'above market' specials. Not only would it diversify the investment portfolio and reduce credit risk, it would also improve the portfolio's overall returns.

In the current environment of high regulation and scrutiny, all domestic (and international) ADIs continue to carry high levels of capital. There is minimal (if any) probability of any ADI defaulting on their deposits going forward – this was stress tested during the GFC. **APRA's mandate is to "*protect depositors*" and provide "*financial stability*".**

The biggest single risk that depositors face in the current low interest rate environment is not capital or credit risk, but reinvestment risk. Interest rates are now at their effective lower bound of 0.10%.





Fossil Fuel Investments

What is Council's current exposure to institutions that fund fossil fuels?

Using the following link http://www.marketforces.org.au/banks/compare, based on the Council's investment portfolio balance as at 28/02/2021 ($334.64m), we can roughly estimate that ~59% of the investments have some form of exposure.

How would Council modify its Investment Policy to cater for divestment of fossil fuels?

If the major banks were withdrawn from investments, some members of the community may look at that remaining list of ADIs (banks) and say "*Why the do we have all our money with those no-name institutions? I've never even heard of them. We don't want to take risks with our money after councils lost $100's of millions speculating in the GFC*". It will be difficult to please everyone. We suggest starting the discussion with all Councillors asking "*are you comfortable investing all the money with the lower rated regionals and credit unions?*" If not, then a full divestment campaign will be complicated.

Some ways to potentially 'make changes' to the policy, or at least have a discussion, includes:

- *"Where possible within policy and without compromising the risk and return profile, we favour..."*
- *"We have not yet made a decision to divest because it will have implications on credit quality, ratings and income, but we are actively discussing..."*

What would be implications on our portfolio credit rating?

By adopting a free fossil fuel policy or an active divestment strategy, this would eliminate the major banks rated "AA-" as well as some other "A" rated banks (AMP, BoQ and ING). Council would be left with a smaller sub-sector of banks to choose to invest with.

What would be risks and implications on Council's portfolio performance?

Some implications include:

- High concentration risk – limiting Council to a selected number of banks;
- Increased credit/counterparty risk;
- May lead to a reduction in performance (most of the senior FRN issues are with the higher rated ADIs) which could result in a significant loss of income generated – could be in excess of hundreds of thousands of dollars per annum;
- Underperformance compared to other Councils.

It may be contrary to Council's primary objective to preserve capital as the investment portfolio's risk would increase (all things being equal). Council may not be maximising its returns – this is one of the primary objectives written in the Investment Policy.



Council's exposure is summarised as follows:

Counterparty	Credit Rating	Funding Fossil Fuel
NAB	AA-	Yes
WBC (St George)	AA-	Yes
Rabobank	A+	No
ICBC, Sydney	A	No
ING Bank Australia	A	Yes
Australian Military	BBB+	No
BoQ	BBB+	Yes
Bendigo-Adelaide	BBB+	No
AMP Bank	BBB	Yes
Auswide	BBB	No
MyState Bank	BBB	No
Newcastle Permanent	BBB	No

^^The underlying exposure in these managed funds includes the domestic major banks.
Source: https://www.marketforces.org.au/info/compare-bank-table/

Summary	Amount	Invested %
Yes	$197,580,112	59%
No	$137,057,483	41%
	$334,637,595	**100%**



Credit Quality

The portfolio remains lightly diversified from a credit ratings perspective. The portfolio is entirely directed to the investment grade ADIs (BBB- or higher), with zero allocation to unrated ADIs. There is high capacity to invest in the higher rated ADIs (A or higher), particularly after the downgrades of BoQ and Bendigo-Adelaide Bank in May 2017, as well as AMP Bank over the past few years, which now all fall into the "BBB" rated category.

Following the adoption of a new policy, there is now more capacity to invest with the "BBB" rated ADIs (~$15½m remaining at month-end), although most ADIs in this sector are currently full on liquidity due to the combination of minimal credit growth (loans being written) and the term funding facility (TFF) provided by the RBA (access to cheap funding).

If there are any attractive deposits being offered in the "BBB" rated sector (outside of BoQ, which Council is close to maximum limits), we will inform Council to take advantage and invest accordingly.

All ratings categories are within the current Policy limits:

Compliant	Credit Rating	Invested ($)	Invested (%)	Max. Limit (%)	Available ($)
✓	AA Category	$143,080,112	42.76%	100%	$191,557,483
✓	A Category	$90,000,000	26.89%	60%	$110,782,557
✓	BBB Category	$101,557,483	30.35%	35%	$15,565,675
✓	Unrated ADIs	$0	0.00%	5%	$16,731,880
		$334,637,595	**100.00%**		

Performance

Council's performance for the month ending 28 February 2021 is summarised as follows:

Performance (Actual)	1 month	3 months	6 months	FYTD	1 year
Official Cash Rate	0.01%	0.02%	0.07%	0.12%	0.20%
AusBond Bank Bill Index	0.00%	0.00%	0.03%	0.05%	0.21%
Council's T/D Portfolio	0.17%	0.50%	1.04%	1.43%	2.29%
Council's FRN Portfolio	0.08%	0.25%	0.51%	0.69%	1.18%
Council's Portfolio^	**0.16%**	**0.50%**	**1.04%**	**1.42%**	**2.28%**
Outperformance	**0.17%**	**0.49%**	**1.01%**	**1.37%**	**2.07%**

^Total portfolio performance excludes Council's cash account holdings. Overall returns would be lower if cash was included.

Performance (Annualised)	1 month	3 months	6 months	FYTD	1 year
Official Cash Rate	0.09%	0.10%	0.15%	0.20%	0.20%
AusBond Bank Bill Index	-0.01%	0.01%	0.06%	0.08%	0.21%
Council's T/D Portfolio	1.97%	2.00%	2.08%	2.43%	2.29%
Council's FRN Portfolio	0.99%	1.00%	1.02%	1.17%	1.18%
Council's Portfolio^	**1.96%**	**1.99%**	**2.07%**	**2.42%**	**2.28%**
Outperformance	**1.96%**	**1.98%**	**2.01%**	**2.34%**	**2.07%**

^Total portfolio performance excludes Council's cash account holdings. Overall returns would be lower if cash was included.

For the month of February, the total portfolio (excluding cash) provided a solid return of +0.16% (actual) or +1.96% p.a. (annualised), outperforming the benchmark AusBond Bank Bill Index return of -0.00% (actual) or -0.01% p.a. (annualised). The strong performance continues to be driven by the handful of deposits still yielding above 3% p.a. However, some of these individual deposits are approaching maturity and will be reinvested at much lower prevailing rates.

Over the past 12 months, the portfolio returned +2.28% p.a., outperforming bank bills by 2.07% p.a. and over eleven times the official cash rate. This has been very strong given deposit rates reached their all-time lows and margins have generally contracted over the past 3 years.

We are pleased that PMHC remains amongst the best performing Councils in the state of NSW where deposits are concerned, earning on average, around $2,200,000 in additional interest income compared to its peers (refer to our November 2020 rankings). We have been pro-active in our advice about protecting interest income and addressing reinvestment risk for many years and encouraged to maintain a long duration position. This is now reflected by the high performance of the investment portfolio. Of the 79 individual deposits PMHC held, 21 are still yielding higher than 3.00% p.a. That is, around 27% of outstanding deposits held is earning an interest rate that is thirty times the prevailing cash rate of 0.10%.

Council's Term Deposit Portfolio & Recommendation

As at the end of February 2021, Council's deposit portfolio was yielding 1.97% p.a. (unchanged from the previous month), with an average duration of ~1.7 years. Where possible, we recommend Council extends or at least maintains this average duration. In the low interest rate environment, the biggest collective risk that the local government sector has faced over the post-GFC era has been the dramatic fall in interest rates - from 7¼% to the historical low levels of 0.10%.

As the past decade has highlighted (post-GFC era), we have seen too many portfolios' roll a high proportion of their deposits between 3-6 months, resulting in their deposits being reinvested at lower prevailing rates. That is, depositors have overpaid for liquidity and generally not insured themselves against the low interest rate environment by diversify their funding across various tenors (out to 5 years) but rather placed all their 'eggs in one basket' and kept all their deposits short. **Reinvestment risk has collectively been and continues to be the biggest detriment to depositors' interest income over the post-GFC period**.

At the time of writing, we see value in:

ADI	LT Credit Rating	Term	T/D Rate
ICBC, Sydney	A	5 years	1.50% p.a.
ICBC, Sydney	A	4 years	1.25% p.a.
NAB	AA-	5 years	1.20% p.a.
NAB	AA-	4 years	0.95% p.a.
AMP	BBB	18 months	^0.95% p.a.
ICBC, Sydney	A	3 years	0.95% p.a.
ICBC, Sydney	A	2 years	0.75% p.a.
NAB	AA-	3 years	0.65% p.a.

^ AMP T/Ds – these are grossed up rates which includes a 0.20% p.a. rebated commission from Imperium Markets

The above deposits are suitable for investors looking to provide some income protection and mitigate reinvestment/rollover risk in the low interest rate environment.

For terms under 12 months, we believe the strongest value is currently being offered by the following ADIs (dependent on daily funding requirements):

ADI	LT Credit Rating	Term	T/D Rate
AMP	BBB	11-12 months	^0.95% p.a.
AMP	BBB	5, 7-10 months	^0.90% p.a.
Judo Bank	Unrated ADI	6 months	~0.90% p.a.
Judo Bank	Unrated ADI	12 months	~0.85% p.a.
AMP	BBB	3-4, 6 months	^0.80% p.a.
ICBC, Sydney	A	12 months	~0.48% p.a.
CBA	AA-	12 months	0.43% p.a.
BoQ	BBB+	9-12 months	0.40% p.a.
NAB	AA-	11-12 months	0.35% p.a.

^ AMP T/Ds – these are grossed up rates which includes a 0.20% p.a. rebated commission from Imperium Markets



Senior FRNs & Recommendations

Over February, amongst the senior major bank FRNs, physical credit securities remained relatively flat at the longer-end of the curve. Secondary market securities remain expensive on the back of the RBA announcing its $200bn quantitative easing (QE) package (doubled in Feb 2021). Bid-ask spreads have tightened sharply on the back of excess liquidity and short supply of new issuances.

A new 5 year senior major bank FRN would now be issued around the +35bp level, appearing expensive on a historical basis. We expect minimal primary issuance from the domestic banks in the immediate future given the RBA's term funding facility (TFF) to the ADIs, offering a rate of 0.10% (on new drawings) for 3 years, which has been extended to June 2021. The lack of supply from new (primary) issuances amongst the domestic ADIs has also played a major role with the rally in credit markets over recent months.

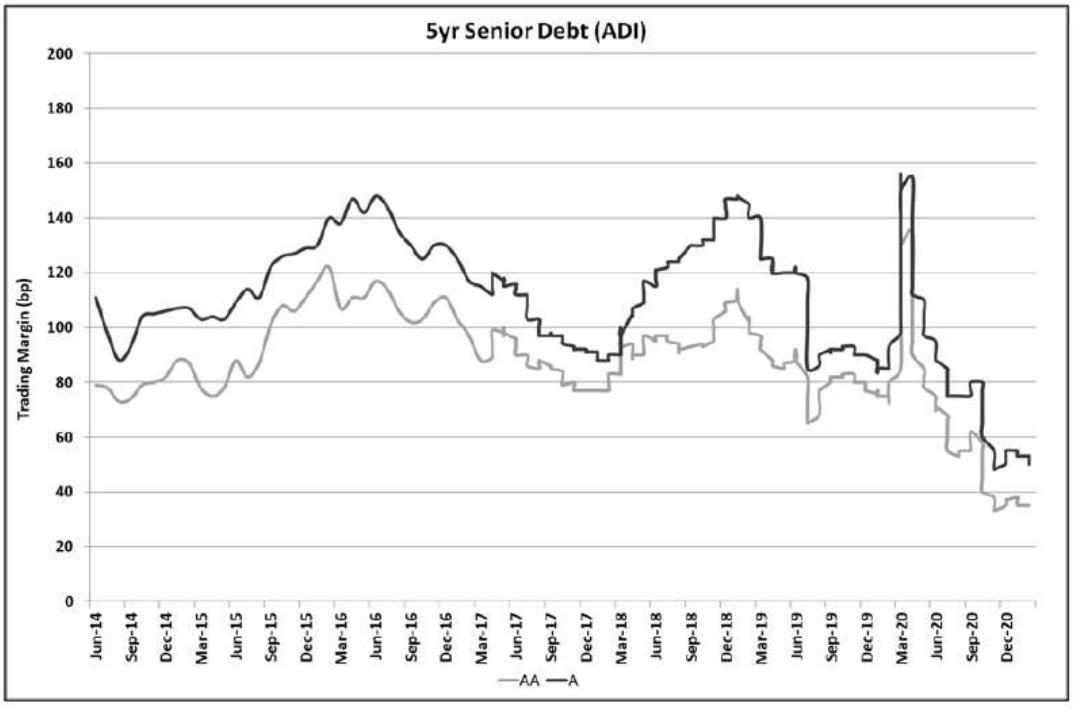
During the month, Suncorp-Metway (A+) issued a new 5 year senior 'benchmark' issue at +45bp, initially tightening from initial guidance of +50bp. The transaction size was $750m while bids exceeded $1.85bn i.e. over two times oversubscribed. UBS AG, Australia Branch (A+) also issued a new 5 year deal at +50bp (tightening from +55bp), printing $1bn with a 70%-30% split between floating and fixed tranches.

Amongst the "A" rated sector, the securities were marked marginally tighter at the long-end of the curve, driven by the new issues from Suncorp and UBS. The "BBB" rated sector remained relatively flat during the month. While turnover in the secondary market is still predominately dominated by commonwealth, semi-government and major bank senior paper, given the lack of supply, we have started to observe that even a handful of regional bank senior paper has sometimes been trading inside "mid" levels over recent months.

Credit margins are now trading very tight on a historical level and look fairly expensive. FRNs will continue to play a role in investor's portfolios mainly on the basis of their liquidity and the ability to roll down the curve and gross up returns over ensuing years (in a relatively stable credit environment).

Senior FRNs (ADIs)	26/02/2021	29/01/2021
"AA" rated – 5yrs	+35bp	+35bp
"AA" rated – 3yrs	+20bp	+20bp
"A" rated – 5yrs	+50bp	+53bp
"A" rated – 3yrs	+33bp	+35bp
"BBB" rated – 3yrs	+52bp	+52bp

Source: IBS Capital



Source: IBS Capital

We now generally **recommend switches** ('benchmark' issues only) into new attractive primary issues (or longer-dated alternatives), out of the following senior FRNs that are maturing:

- **On or before early 2024 for the "AA" rated ADIs (domestic major banks)**;
- On or before mid-2022 for the "A" rated ADIs; and
- Within 12 months for the "BBB" rated ADIs (consider case by case).

Investors holding onto the above senior FRNs ('benchmark' issues only) in their last 1-2 years are now generally holding sub-optimal investments and are not maximising returns by foregoing realised capital gains. In the current low interest rate environment, any boost in overall returns should be locked in when it is advantageous to do so.

In late August 2019, Council placed a bid of $3m into the new Bendigo (BBB+) 5 year FRN at +97bp maturing 06/09/2024 (ISIN: AU3FN0050019). This FRN should be viewed as a 4 year holding period, with the ability to 'roll down the curve', realise capital gains which would boost the overall return of the investment portfolio. The security was marked around +42bp (from +42bp the previous month) or a capital price ~$101.92 at month-end. We recommend Council holds this FRN.

Economic Commentary

International Market

Global bond yields rose significantly during the month, driven by increased inflationary concerns amid a rise in energy prices, the prospect of the big US fiscal stimulus package, and the global recovery entering a more solid stage in its vaccine rollouts.

Global equity markets rose on the accelerated vaccine rollout. The S&P 500 Index rose +2.61%, while the NASDAQ gained +0.93%. Across Europe, Germany's DAX rose +2.63%, UK's FTSE +1.19% and France's CAC +5.63%.

The US House passed the American Rescue Plan stimulus worth US$1.9 trillion (~9%/GDP), which will pay for vaccines and medical supplies, financial aid to households, small businesses and state and local governments. The package includes US$1,400 direct payments to taxpayers making as much as US$75,000.

The US unemployment rate unexpectedly fell to 6.3% from 6.7% in January, well below the consensus for an unchanged outcome. This was not considered good news given the decline was largely **driven by a pullback in the participation rate (-0.1% to 61.4%), meaning about 405k of workers left the market**, a sign of discouragement.

US Treasury Secretary Yellen emphasised that if the US$1.9trn package is approved, the US could return to full employment by 2022 and that without additional stimulus, it could take until 2025 to see unemployment back below 4%.

US core CPI which came in at 0.0% m/m against the +0.2% consensus, taking the annual rate to +1.4%.

The Bank of England meeting outcomes were in line with expectations with no change in policy settings at 0.10% and quantitative easing of £895bn, which included £20bn in corporate bonds.

Eurozone Q4 GDP came in 0.2% stronger than the consensus estimate of -0.9% at -0.7%q/q, largely due to better performances by France and Spain, with Germany in line.

Mario Draghi was sworn in as Italy's new PM after two formerly anti-euro parties (The League and Five Star) signalled they would be willing to support him in a national unity government.

Chinese CPI data saw headline CPI miss at -0.3% y/y against 0.0% expected.

The MSCI World ex-Aus Index rose +2.46% for the month of February:

Index	1m	3m	1yr	3yr	5yr	10yr
S&P 500 Index	2.61%	+5.23%	+29.01%	+11.98%	+14.55%	+11.12%
MSCI World ex-AUS	+2.46%	+5.51%	+27.48%	+8.94%	+12.10%	+7.49%
S&P ASX 200 Accum. Index	+1.45%	+3.00%	+6.48%	+7.39%	+10.74%	+7.76%

Source: S&P, MSCI

Domestic Market

The RBA surprised to the dovish side in its meeting in February, flagging an early $100bn extension to the $100bn QE program, when the consensus was that the RBA would not decide on this until closer to the end of the current program in late April. **Forward guidance on rates was also tweaked slightly with the Board now not expecting the conditions for a rate hike "*until 2024 at the earliest*"**.

RBA Board Member Harper indicated "*the tendency of this to produce an asset-price bubble is way off where we're presently headed*" and that "*there's still plenty of excess capacity in the economy*". The comments emphasise the RBA is in no hurry to alter its policy package on the basis of asset prices.

Household deposits rose $275m in January to $1.11trn. Compared to pre-pandemic February 2020 levels, total household deposits are now up a cumulative $123.8bn or 12.5%.

Credit growth remain subdued at +0.2% m/m, taking the annual rate to +1.7%.

New housing loan approvals continued to surge in December, increasing +8.6% m/m to be +31.2% y/y. Residential building approvals continued to see strong gains in December, lifting +10.9% m/m to be +22.8% higher y/y.

Victoria entered a 5-day Stage 4 lockdown in mid-February as authorities expected the outbreak of the UK strain of COVID-19 from a hotel quarantine to grow.

JobSeeker numbers are falling, reducing concerns that the end of the JobSeeker Supplement and JobKeeper could significantly slow the recovery. The rebound has seen over 553k unemployed Australians back into the workforce.

Unemployment fell more than expected in January, down to 6.4% from 6.6%, taking the unemployment rate to its lowest level since April 2020. Underemployment also declined, down 0.4% to 8.1% and is now the lowest since February 2019.

Bank of Queensland announced its acquisition of Members Equity Bank for $1.325bn, fully funded and underwritten through an equity raise, with the deal likely formalised in coming months.

The Australian dollar gained another 2.41%, finished the month at US78.29 cents (from US76.45 cents the previous month).

Credit Market

The main credit indices tightened over February as investors remained optimistic about the outlook for the global recovery on the back of the accelerated vaccine rollout. The indices now trade back to their levels experienced in late 2019:

Index	February 2021	January 2021
CDX North American 5yr CDS	56bp	56bp
iTraxx Europe 5yr CDS	51bp	52bp
iTraxx Australia 5yr CDS	62bp	63bp

Source: Markit

Fixed Interest Review

Benchmark Index Returns

Index	February 2021	January 2021
Bloomberg AusBond Bank Bill Index (0+YR)	-0.00%	+0.00%
Bloomberg AusBond Composite Bond Index (0+YR)	-3.58%	-0.42%
Bloomberg AusBond Credit FRN Index (0+YR)	-0.02%	+0.09%
Bloomberg AusBond Credit Index (0+YR)	-1.65%	+0.04%
Bloomberg AusBond Treasury Index (0+YR)	-4.21%	-0.64%
Bloomberg AusBond Inflation Gov't Index (0+YR)	-4.37%	-0.98%

Source: Bloomberg

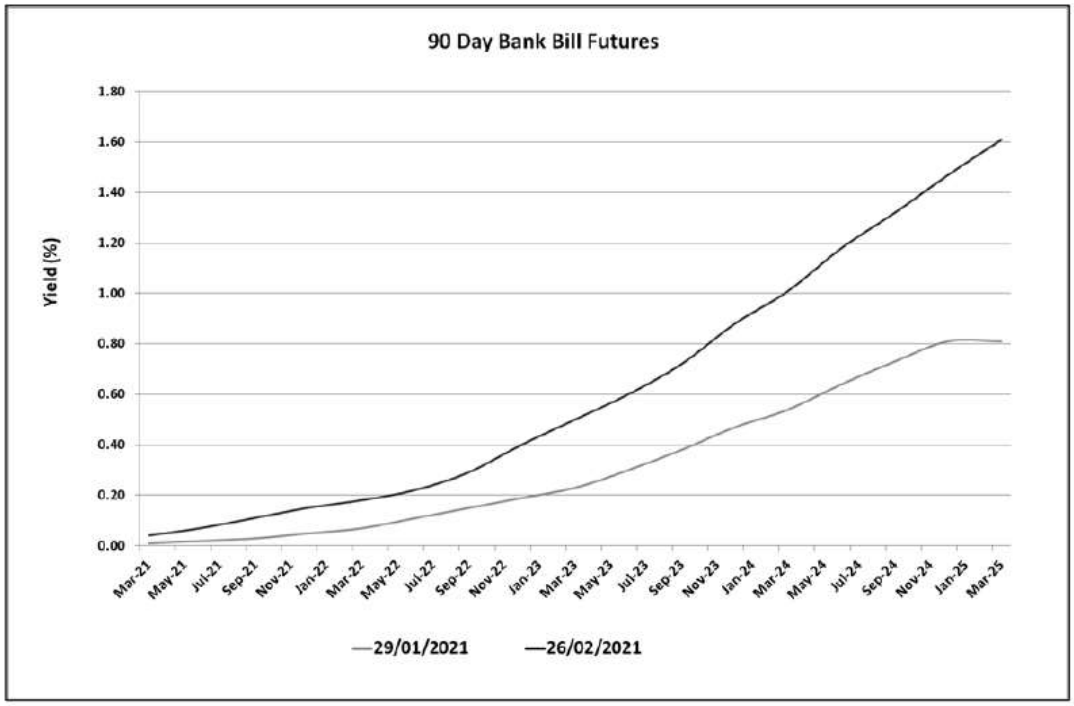
Other Key Rates

Index	February 2021	January 2021
RBA Official Cash Rate	0.10%	0.10%
90 Day (3 month) BBSW Rate	0.03%	0.01%
3yr Australian Government Bonds	0.12%	0.11%
10yr Australian Government Bonds	1.87%	1.09%
US Fed Funds Rate	0.00%-0.25%	0.00%-0.25%
10yr US Treasury Bonds	1.44%	1.11%

Source: RBA, AFMA, US Department of Treasury

90 Day Bill Futures

Over February, bill futures rose significantly at the long-end of the curve as global inflationary pressures caused long-term bond yields to rise dramatically. Overall, bill futures continue to depict a low rate environment over the long-run, despite the steeping curve:



Source: ASX

Fixed Interest Outlook

Investors continue to focus on the positive medium-term news from multiple vaccine roll-outs, the reduction in daily infection rates and curbing of overwhelmed health systems, amongst the backdrop of unprecedented fiscal stimulus.

The prospect of stronger fiscal support for the global economy and the evident determination of the new US Biden administration to get pandemic under control and stabilise the economy has aided financial markets.

US Fed Chair Powell stressed the point that the US economy is a long way from a full recovery. He indicated it "*could take more than three years to hit the 2% average inflation target*" while also showing no concerns over asset prices elevation "*by some measures*".

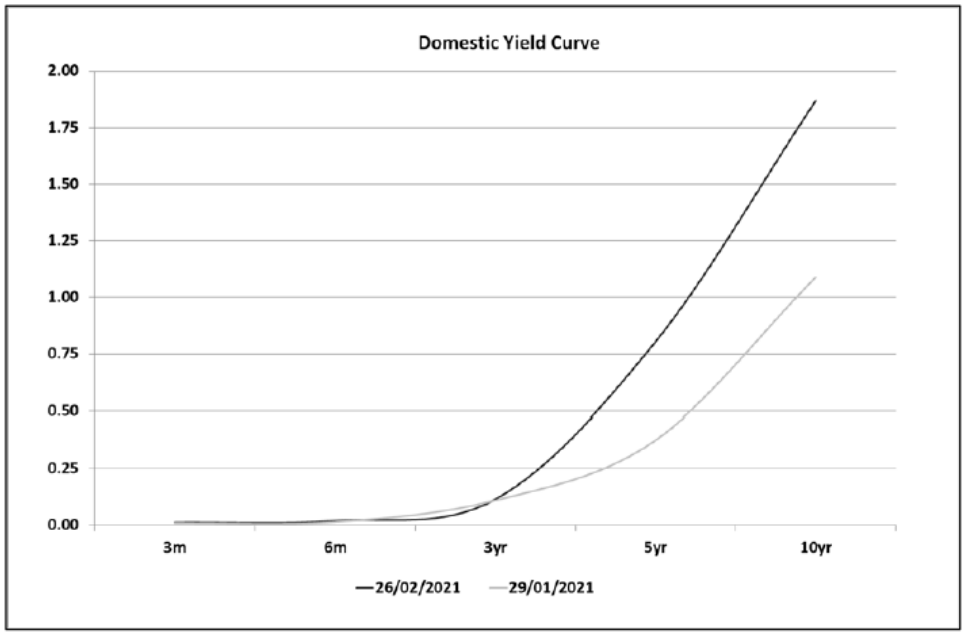
Domestically, the RBA's latest forward guidance suggests **they do not expect to increase the official cash rate "*until 2024 at the earliest*"** given that "*wages growth will have to be materially higher than it is currently*" to see actual inflation sustainably within their 2-3% target range. The RBA's preferred core trimmed mean measure is forecast to be 1½% at the end of 2022.

The RBA's focus is now to reduce the unemployment rate, commenting that it was a "*national priority*" to achieve their inflation target range. For inflation to lift sustainably, it will require wages growth to lift substantially and Governor Lowe previously indicated that the unemployment rate may need to fall to 4-point something percent to achieve this objective.

Worryingly on the inflation outlook, the RBA notes that around 25% of recently surveyed firms intend to implement wage freezes in 2021, while 30% already have wage freezes in place. The wage price index (WPI) rose +0.6% in Q4, taking the annual rate to +1.4%, which is well below the 3%+ rate that the RBA states is needed to have inflation sustainably within 2-3% target band.

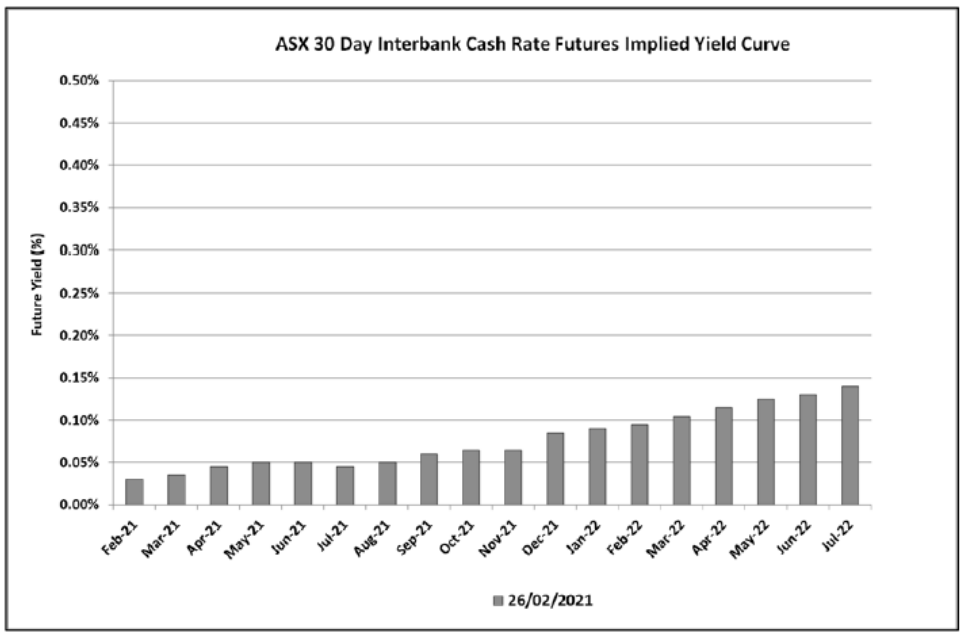


The domestic bond market continues to suggest a prolonged low period of interest rates. Over the month, yields rose over 80bp at the long-end of the curve on rising global inflationary expectations:



Source: AFMA, ASX, RBA

Despite the RBA's forward guidance (keep rates unchanged for 3 years), the futures market is still pricing in the possibility of further rate cuts closer to 0% over the next 12 months:



Source: ASX



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PORT MACQUARIE-HASTINGS COUNCIL

Investment Report

01/02/2021 to 28/02/2021

PORT MACQUARIE-HASTINGS COUNCIL

Portfolio Valuation as at 28/02/2021

Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
BOQ	BBB+	TD	GENERAL	Annual	10/03/2016	10/03/2021	3.8000	3,000,000.00	111,189.04	8,745.21
ING Direct	A	TD	GENERAL	Annual	20/02/2019	16/03/2021	2.8200	2,000,000.00	1,081.64	1,081.64
Westpac	AA-	TD	GENERAL	Quarterly	22/03/2018	23/03/2021	3.0200	4,000,000.00	22,836.16	9,266.85
Westpac	AA-	TD	LOCAL BRANCH	At Maturity	21/05/2020	21/05/2021	1.0000	10,000.00	77.81	7.67
AMP Bank	BBB	TD	GENERAL	Annual	25/11/2019	25/05/2021	1.6000	5,000,000.00	21,041.10	6,136.99
Westpac	AA-	TD	GENERAL	Quarterly	22/05/2018	25/05/2021	3.1000	4,000,000.00	2,378.08	2,378.08
AMP Bank	BBB	TD	GENERAL	Annual	29/11/2019	27/05/2021	1.6000	4,000,000.00	15,956.16	4,909.59
BOQ	BBB+	TD	GENERAL	Annual	29/05/2019	31/05/2021	2.3000	3,000,000.00	52,175.34	5,293.15
Rabobank Australia Branch	A+	TD	GENERAL	Annual	08/06/2017	07/06/2021	3.0200	5,000,000.00	109,630.14	11,583.56
Westpac	AA-	TD	GENERAL	Quarterly	06/06/2018	15/06/2021	3.1000	3,000,000.00	21,402.74	7,134.25
NAB	AA-	TD	GENERAL	At Maturity	19/06/2020	21/06/2021	1.0000	4,000,000.00	27,945.21	3,068.49
NAB	AA-	TD	GENERAL	Annual	03/07/2018	22/06/2021	3.0000	4,000,000.00	79,232.88	9,205.48
NAB	AA-	TD	GENERAL	Annual	03/07/2018	06/07/2021	3.0000	3,000,000.00	59,424.66	6,904.11
Westpac	AA-	TD	GENERAL	Quarterly	17/07/2018	13/07/2021	3.0400	5,000,000.00	17,490.41	11,660.27
NAB	AA-	TD	GENERAL	Annual	26/07/2018	20/07/2021	3.0400	4,000,000.00	72,293.70	9,328.22
Westpac	AA-	TD	LOCAL BRANCH	Annual	24/07/2019	23/07/2021	1.7500	4,000,000.00	42,191.78	5,369.86
NAB	AA-	TD	GENERAL	Annual	02/08/2018	03/08/2021	3.0700	5,000,000.00	87,894.52	11,775.34
ICBC Sydney Branch	A	TD	GENERAL	Annual	30/08/2019	30/08/2021	1.6200	5,000,000.00	40,389.04	6,213.70

PORT MACQUARIE-HASTINGS COUNCIL

Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
NAB	AA-	TD	GENERAL	Annual	31/08/2020	31/08/2021	0.8000	5,000,000.00	19,945.21	3,068.49
NAB	AA-	TD	GENERAL	At Maturity	31/08/2020	31/08/2021	0.8000	5,000,000.00	19,945.21	3,068.49
Westpac	AA-	TD	GENERAL	Quarterly	13/09/2018	14/09/2021	2.8800	5,000,000.00	30,378.08	11,046.58
NAB	AA-	TD	GENERAL	Annual	27/09/2018	28/09/2021	3.0500	5,000,000.00	64,342.47	11,698.63
Auswide Bank	BBB	TD	GENERAL	Annual	30/09/2019	30/09/2021	1.7500	4,000,000.00	29,150.68	5,369.86
Westpac	AA-	TD	GENERAL	Quarterly	13/09/2018	12/10/2021	2.8900	5,000,000.00	30,483.56	11,084.93
Auswide Bank	BBB	TD	GENERAL	Annual	23/10/2019	25/10/2021	1.6500	5,000,000.00	29,157.53	6,328.77
Auswide Bank	BBB	TD	GENERAL	At Maturity	25/11/2019	25/11/2021	1.7000	5,000,000.00	107,589.04	6,520.55
ICBC Sydney Branch	A	TD	GENERAL	Annual	05/12/2018	07/12/2021	3.0100	4,000,000.00	27,708.49	9,236.16
ICBC Sydney Branch	A	TD	GENERAL	Annual	16/12/2019	16/12/2021	1.5700	4,000,000.00	12,904.11	4,817.53
Westpac	AA-	TD	GENERAL	At Maturity	30/01/2021	31/01/2022	0.9500	10,000.00	7.81	7.29
ING Direct	A	TD	GENERAL	Annual	30/01/2020	31/01/2022	1.6500	5,000,000.00	7,006.85	6,328.77
Newcastle Permanent	BBB	TD	GENERAL	Quarterly	07/02/2019	08/02/2022	3.0500	4,000,000.00	7,019.18	7,019.18
NAB	AA-	TD	GENERAL	Annual	21/02/2017	21/02/2022	3.4600	5,000,000.00	3,317.81	3,317.81
Westpac	AA-	TD	GENERAL	Annual	21/02/2017	21/02/2022	3.6100	2,000,000.00	1,384.66	1,384.66
ING Direct	A	TD	GENERAL	Annual	02/03/2020	02/03/2022	1.5000	5,000,000.00	74,794.52	5,753.42
BOQ	BBB+	TD	GENERAL	Annual	15/03/2017	15/03/2022	3.8000	2,000,000.00	72,876.71	5,830.14
Newcastle Permanent	BBB	TD	GENERAL	Quarterly	12/03/2019	22/03/2022	2.9000	4,000,000.00	24,471.23	8,898.63
Newcastle Permanent	BBB	TD	GENERAL	Annual	27/03/2019	29/03/2022	2.8000	5,000,000.00	130,027.40	10,739.73
Newcastle Permanent	BBB	TD	GENERAL	Quarterly	18/04/2019	19/04/2022	2.7000	4,000,000.00	12,427.40	8,284.93

IMPERIUM MARKETS

PORT MACQUARIE-HASTINGS COUNCIL

Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
BOQ	BBB+	TD	GENERAL	Annual	28/05/2019	30/05/2022	2.4000	4,000,000.00	72,854.79	7,364.38
Rabobank Australia Branch	A+	TD	GENERAL	Annual	08/06/2017	07/06/2022	3.2200	5,000,000.00	116,890.41	12,350.68
Australian Military Bank	BBB+	TD	GENERAL	Annual	19/06/2020	20/06/2022	1.1500	2,000,000.00	16,068.49	1,764.38
Australian Military Bank	BBB+	TD	GENERAL	Annual	19/06/2020	20/06/2022	1.1500	2,000,000.00	16,068.49	1,764.38
Westpac	AA-	TD	GENERAL	Quarterly	23/06/2020	23/06/2022	1.0100	3,500,000.00	6,585.75	2,711.78
Australian Military Bank	BBB+	TD	GENERAL	Annual	23/06/2020	23/06/2022	1.0500	3,500,000.00	25,271.92	2,819.18
Westpac	AA-	TD	GENERAL	Quarterly	24/06/2020	24/06/2022	1.0200	5,000,000.00	9,361.64	3,912.33
NAB	AA-	TD	GENERAL	Annual	02/08/2018	02/08/2022	3.2200	4,000,000.00	73,751.23	9,880.55
NAB	AA-	TD	GENERAL	Annual	16/08/2018	16/08/2022	3.0500	4,000,000.00	65,512.33	9,358.90
ICBC Sydney Branch	A	TD	GENERAL	Annual	28/08/2019	29/08/2022	1.6400	5,000,000.00	41,561.64	6,290.41
Auswide Bank	BBB	TD	GENERAL	At Maturity	06/09/2019	06/09/2022	1.8000	3,000,000.00	80,186.30	4,142.47
Rabobank Australia Branch	A+	TD	GENERAL	Annual	13/09/2017	13/09/2022	3.3800	3,000,000.00	46,671.78	7,778.63
Westpac	AA-	TD	LOCAL BRANCH	Annual	13/09/2017	13/09/2022	3.4100	3,000,000.00	47,086.03	7,847.67
MyState Bank	BBB	TD	GENERAL	Annual	29/09/2020	29/09/2022	0.8500	5,000,000.00	17,815.07	3,260.27
Westpac	AA-	TD	GENERAL	Quarterly	29/09/2020	29/09/2022	0.7200	5,000,000.00	6,115.07	2,761.64
Auswide Bank	BBB	TD	GENERAL	Annual	30/09/2019	30/09/2022	1.7500	4,000,000.00	29,150.68	5,369.86
ICBC Sydney Branch	A	TD	GENERAL	Annual	23/10/2019	24/10/2022	1.7000	3,000,000.00	18,024.66	3,912.33
ICBC Sydney Branch	A	TD	GENERAL	Annual	31/10/2019	31/10/2022	1.7300	5,000,000.00	28,912.33	6,635.62
ING Direct	A	TD	GENERAL	Annual	27/02/2020	27/02/2023	1.6000	2,500,000.00	328.77	328.77
BOQ	BBB+	TD	GENERAL	Annual	28/05/2019	29/05/2023	2.5500	4,000,000.00	77,408.22	7,824.66

PORT MACQUARIE-HASTINGS COUNCIL

Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
BOQ	BBB+	TD	GENERAL	Annual	19/06/2020	19/06/2023	1.3500	2,000,000.00	18,863.01	2,071.23
BOQ	BBB+	TD	GENERAL	Annual	27/06/2019	27/06/2023	2.2000	5,000,000.00	73,835.62	8,438.36
MyState Bank	BBB	TD	GENERAL	Annual	14/09/2020	14/09/2023	0.9000	4,000,000.00	16,569.86	2,761.64
MyState Bank	BBB	TD	GENERAL	Annual	14/09/2020	14/09/2023	0.9000	4,000,000.00	16,569.86	2,761.64
ICBC Sydney Branch	A	TD	GENERAL	Annual	27/11/2019	27/11/2023	1.7600	6,000,000.00	27,195.62	8,100.82
ICBC Sydney Branch	A	TD	GENERAL	Annual	16/12/2019	18/12/2023	1.8100	4,000,000.00	14,876.71	5,553.97
Auswide Bank	BBB	TD	GENERAL	Annual	02/03/2020	04/03/2024	1.7500	3,000,000.00	52,356.16	4,027.40
BOQ	BBB+	TD	GENERAL	Annual	18/06/2020	18/06/2024	1.4500	3,000,000.00	30,509.59	3,336.99
ING Direct	A	TD	GENERAL	Annual	23/06/2020	24/06/2024	1.2500	3,000,000.00	25,787.67	2,876.71
Bendigo and Adelaide	BBB+	FRN	GENERAL	Quarterly	06/09/2019	06/09/2024	0.9891	3,057,483.00	6,828.85	2,276.28
BOQ	BBB+	TD	GENERAL	Annual	27/09/2019	27/09/2024	2.0000	2,000,000.00	16,876.71	3,068.49
NAB	AA-	TD	GENERAL	Annual	16/10/2020	16/10/2024	0.8000	5,000,000.00	14,904.11	3,068.49
NAB	AA-	TD	GENERAL	Annual	18/11/2020	18/11/2024	0.7000	5,000,000.00	9,876.71	2,684.93
NAB	AA-	TD	GENERAL	Annual	29/01/2021	29/01/2025	0.7200	4,000,000.00	2,446.03	2,209.32
ICBC Sydney Branch	A	TD	GENERAL	Annual	18/06/2020	18/06/2025	1.7500	2,000,000.00	24,547.95	2,684.93
ICBC Sydney Branch	A	TD	GENERAL	Annual	16/10/2020	16/10/2025	1.2000	5,000,000.00	22,356.16	4,602.74
NAB	AA-	TD	GENERAL	Annual	17/11/2020	17/11/2025	0.8500	3,500,000.00	8,476.71	2,282.19
ICBC Sydney Branch	A	TD	GENERAL	Annual	17/11/2020	17/11/2025	1.3000	6,500,000.00	24,076.71	6,482.19
ICBC Sydney Branch	A	TD	GENERAL	Annual	03/12/2020	03/12/2025	1.2000	5,000,000.00	14,465.75	4,602.74
NAB	AA-	TD	GENERAL	Annual	07/12/2020	08/12/2025	0.9000	5,000,000.00	10,356.16	3,452.05

IMPERIUM MARKETS

PORT MACQUARIE-HASTINGS COUNCIL

Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
ICBC Sydney Branch	A	TD	GENERAL	Annual	07/12/2020	08/12/2025	1.2000	5,000,000.00	13,808.22	4,602.74
NAB	AA-	TD	GENERAL	Annual	29/01/2021	29/01/2026	0.9100	4,000,000.00	3,091.51	2,792.33
Westpac	AA-	CASH	GENERAL	Monthly	28/02/2021	28/02/2021	0.5000	20,060,112.33	5,980.58	5,980.58
TOTALS								**334,637,595.33**	**2,739,850.25**	**448,664.70**

ATTACHMENT A - PROPOSED SUSTAINABILITY FRAMEWORK

1. Policy and Planning Context for Council's Sustainability Framework

a) Global Context - The 2030 Agenda and the Sustainable Development Goals

The 2030 Agenda for Sustainable Development (2030 Agenda), adopted by all United Nations Member States (including Australia) in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future.

The 2030 Agenda is a comprehensive, progressive and innovative agenda that responds to the many challenges faced by the world today and into the future. It aims to integrate the social, environmental and economic dimensions of sustainable development.

At its heart are the 17 Sustainable Development Goals (SDGs), which are underpinned by 169 targets to guide efforts to increase global well-being through addressing some of society's key challenges. The SDGs apply to all countries - developed and developing - and promote action on climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities.

The goals are universal, are supported by the Australian Government and are increasingly becoming the driver for business sustainability and local government integrated planning globally. The SDGs provide a global platform to promote and integrate sustainable outcomes and objectives into Council's strategies, plans, policies and operations.

The 17 SDGs are shown below:



b) National Context - The National Strategy for Ecologically Sustainable Development

Prepared by the Ecologically Sustainable Development Steering Committee and endorsed by the Council of Australian Governments in December 1992, this Strategy identifies the following goal and core objectives:

The Goal is:

Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The Core Objectives are:

- to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations
- to provide for equity within and between generations
- to protect biological diversity and maintain essential ecological processes and life-support systems

c) NSW Context - Local Government Act 1993

The Local Government Act 1993 (the Act) mandates a requirement for council decision-making to consider sound financial management, investment in responsible and sustainable infrastructure, principles of ecologically sustainable development and social justice principles.

The Act requires councils to use the Integrated Planning and Reporting (IP&R) Framework, which is built on a Quadruple Bottom Line (QBL) approach. Under the Act, councils must work with their community to develop a Community Strategic Plan must address social, environmental, economic and civic leadership issues in an integrated manner.

An expanded definition of QBL is an "organisation's capacity to embed and incorporate a set of definitive policies and programs to address economic, social, environmental, and governance aspects of sustainability, whereas governance is defined through fiscal responsibility and resilience, community engagement for effective service delivery and transparency and accountability"

Alibasic H (2017) Measuring the sustainability impact on local governments using the Quadruple Bottom Line. Int J Sustain Policy Prac 13(3): 37-45

d) PMHC Strategic Context

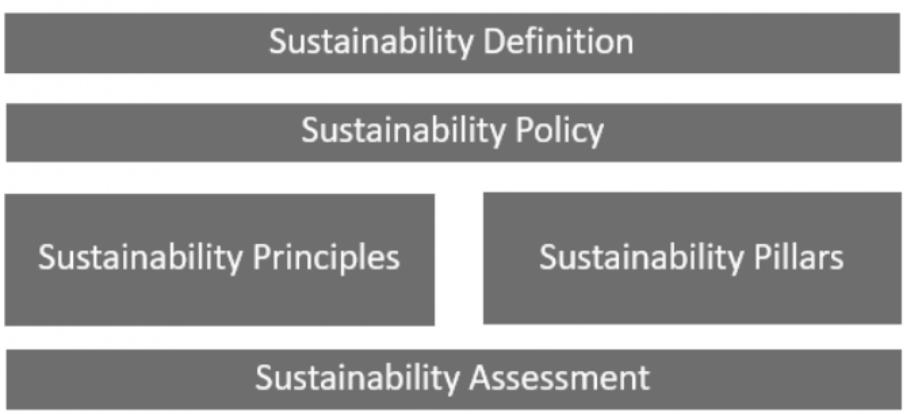
A *Sustainability Framework* is supported by and consistent with the community's vision for Port Macquarie-Hastings as defined in the Towards 2030 Community Strategic Plan, *"A sustainable high-quality of life for all."*

Additionally, Port Macquarie-Hastings Council's Local Strategic Planning Statement "Shaping Our Future 2040" which guides land use planning for the Port Macquarie-Hastings LGA to 2040 supports sustainable outcomes for Port Macquarie-Hastings across the five themes of "Our environment, Our places, Our economy, Our connections and Enabled by Infrastructure".

2. PMHC Sustainability Framework - Overview

Outlined below is a proposed structure for the Framework consisting of two parts and seven elements as detailed and illustrated below. It is envisaged that Part A of the Framework (the Commitment) will remain static over time, while Part B (Implementation) will be reviewed regularly to take into account any changes in the operating environment and successes achieved.

Part A: Commitment to Sustainability



a) Sustainability Definition

There are many ways to define sustainability. Council has adopted the following "working definition" for sustainability:

"a continual way of thinking and action that focuses on balancing the best outcomes for our environment, our community and the economy both now and in the future."

Council also recognises the importance of equity, access and inclusion as key priority areas contributing to the long-term sustainability of our community.

b) Sustainability Policy

A Sustainability Policy will articulate Council's commitment to a sustainable future of Port Macquarie-Hastings and how we will do this by:

- Embedding sustainability practice in its day-to-day operations
- Considering sustainability in all decision-making processes
- Supporting and promoting action towards sustainability in the wider community

The Policy will guide Council's decision-making and the development of future policy, strategy and plans across all areas of our organisation in relation to sustainable practices for Council's operations and community capacity building. This will include (but not be limited to) the following activities:

- Delivery of Council's core services
- Capital investment and infrastructure projects
- Development of short and long term projects, actions and indicators
- Urban form and land-use planning and development
- Use of resources including electricity, water, fuel and construction materials
- Procurement practices
- Events and community programs
- Encouraging, training and supporting staff, businesses and community members in adopting sustainable principles and practices to achieve sustainable behaviour change in the workplace and the broader Port Macquarie-Hastings community
- Advocating to all levels of government for policy and resourcing that supports sustainable practices at a local level.

c) Sustainability Pillars

Taking our lead from the 2030 Agenda, and our obligations under the Local Government Act 1993, Council has framed sustainability around the following four Sustainability Pillars:

- Environmental Sustainability
- Social/Community Sustainability
- Economic/financial Sustainability
- Sustainable Governance and Leadership

i. Pillar 1 - Environmental Sustainability
A sustainable environment is a result of responsible custodianship of the land, water, air and built environment by protecting, preserving and enhancing Port Macquarie-Hastings' natural areas and eco systems for current and future generations while making the natural environment accessible for everyone to enjoy.

ii. Pillar 2 - Social/Community Sustainability
The United Nation's goal for sustainable cities and communities is to 'make cities inclusive, safe, resilient and sustainable'. A sustainable community must have the ability to maintain and enhance its social capacity developed around the principles of social equity while enabling the community to meet its own needs, advance their potential and improve their wellbeing through healthy, safe and fulfilling lifestyle options.

iii. Pillar 3 - Economic/Financial Sustainability
The United Nations Sustainable Development Goals state that 'sustainable economic growth will require societies to create the conditions that allow people to have quality jobs that stimulate the economy while not harming the environment. Job opportunities and decent working conditions are also required for the whole working age population.' Under this pillar, Council must also ensure that Council must also ensure cost-effective delivery of our works and services, as well as appropriate management of our assets within the framework of present and future financial sustainability.

iv. Pillar 4 - Sustainable Governance & Leadership
Sustainable governance:

- Ensures effective direction setting, decision making and accountability to the community for sustainable outcomes
- Establishes Council's open and transparent adherence to legislation, policies, processes and practices
- Builds public trust and confidence in Council
- Strengthens democracy

Council also has a leadership role in the community, proactively engaging, educating and influencing the community, other levels of government and industry to work collectively for a sustainable future and to achieve our aspirations for a sustainable future.

d) Sustainability Principles

Council will demonstrate its commitment to sustainability by following Sustainability Principles. These Principles will provide sustainability guidance to Council as it makes its decisions and delivers services and projects to implement the Community Strategic Plan vision.

Draft Principles are outlined below:

i. Integrated and Responsible Decision-Making
Our decisions seek both long and short-term beneficial outcomes for our community and are holistic in approach by considering economic, environmental and social considerations.

ii. Intergenerational Equity
We seek to conserve, protect and restore our natural environment and manage our resources responsibly in order to maintain or enhance the health, diversity and productivity of our environment for future generations.

iii. Think Global, Act Local
As a community, we play our part in taking action at a local level to support sustainability efforts and outcomes globally. We use the United Nations Sustainable Development Goals to guide our actions to achieve these outcomes.

iv. The Precautionary Principle
Where there are threats of serious or irreversible environmental damage, we do not postpone measures to prevent environmental degradation due to a lack of full scientific certainty. In application of this principle, our decisions are guided by:

- Careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment and
- An assessment of the risk-weighted consequences of various options.

The aim is to embed the Sustainability Principles into Council's decision-making and activities in a manner where environmental, community, economic and governance responsibilities are considered equally as part of decision making and activities, to

serve the needs of the present and create the capacity for future generations to serve their own needs.

e) Sustainability Assessment

To assist Council when considering the merits of projects and activities which are seeking staff resources and funding allocations, Council will develop a set of criteria, which will identify the extent to which the project/activity supports sustainability. The criteria will also help Council, when it is planning actions and projects, to ensure that sustainability is integrated to the greatest extent possible.

It is anticipated that the criteria would consider the following:

i. Alignment
How the action contributes to the delivery of Council and community priorities

ii. Risk Management
The degree to which the action contributes to managing risk for Council and/or the community

iii. Impact
The sustainability impact the action is anticipated to have.

iv. Co-benefits
The extent to which the action can deliver multiple benefits to the community and the efficient use of finite resources.

v. Cost and value for money
The extent to which the action will have positive budget and funding benefits (over the lifetime of the project/service/asset).

vi. Success
The likelihood of success of the action.

Part B: Implementation



a) Sustainability Priorities and Objectives

Council will work with internal and external stakeholders to identify appropriate objectives and priorities related to the four Sustainability Pillars. This work will be informed by the integrated framework of the Sustainable Development Goals, which will be considered for their applicability at a local level.

Council will identify the roles and responsibilities, resources (financial and human) and timeframes for delivery of key strategies and action plans that

support a sustainable future, which will be incorporated into Council's future Delivery Program and annual Operational Programs.

b) Measurement and Reporting

Reporting of progress and action on sustainability will be undertaken through a range of Council reports, which form an important component of the Integrated Planning and Reporting Framework.

The Statutory Annual Report provides an overview of Council's progress and achievements in the delivery of services. The Annual Report provides a summary of action undertaken by Council each year in implementing the Delivery Program and the Community Strategic Plan.

Council will also look to adopt best-practice governance reporting on sustainability to monitor our progress in embedding sustainability across Council.

External Submissions Summary

The following submissions were received by Council in October 2020, in anticipation of the Notice of Motion to declare a climate emergency at the 21 October 2020 Ordinary Council meeting.

Climate Emergency Declaration		**Issue**
1.	Rhiannon Calvert	Implore Council to not delay any further a Declaration of a Climate Emergency
	Response/ Comment: Noted	
2.	Stephen Healy	Recognising that in the current emergency (pandemic) the greater climate emergency is largely being ignored and requesting consideration be given to the Climate Emergency Declaration to ensure sufficient resourcing and planning is given to deal with the impacts of climate change
	Response/ Comment: Noted	
3.	Emilie Lapointe	Concerned about the lack of action by Council and government on climate change. Requests Council to not delay any further a Declaration of a Climate Emergency
	Response/ Comment: Noted	
4.	Bryony Anderson	Urges Council to declare a Climate Emergency before the end of 2020. Concerned about the mental health of our young people and the lack of hope for their future.
	Response/ Comment: Noted	
5.	Ed Coleman	Urges Council to take action to reduce environmental degradation by declaring a Climate Emergency
	Response/ Comment: Noted	

6.	Ali Bigg	Urges Council to be at the forefront of climate action, recognising the science, the urgency, and the economic gains to be had from being proactive and a leader in adapting our activities and lifestyles to suit by supporting the community to adapt to climate change and declaring a Climate Emergency
	Response/ Comment:	Noted
7.	Jake Wadsworth	Encourages Council to be the strong leaders our community needs, by declaring a climate emergency in 2020. I ask you to make a Climate Emergency Declaration this year (2020). If this is not going to be possible, asks Council to make a statement that is informed by facts, explaining why this will not be done
	Response/ Comment:	Noted
8.	John and Sarah Manderson	Urges Council to be part of the leading group to recognise the urgency of action required to address the dire situation developing across our planet by declaring a Climate Emergency.
	Response/ Comment:	Noted
9.	Peter Michael	Requests Council to declare a Climate Emergency which would send a strong and decisive leadership message to the community that Council acknowledges the seriousness of the imminent threat that anthropogenic climate change places on our lives.
	Response/ Comment:	Noted
10.	Jacqui Murray	Asks that Council prepare a Climate Emergency Declaration before the end of 2020 as a way of making the right choice for our children.
	Response/ Comment:	Noted
11.	Janet Dawson	Suggests that Council not delay a Climate Emergency Declaration any longer - that Council possesses all the information it needs to take this action.

	Response/ Comment:	Noted
12.	Chay Khamsone	Implores Council to move forward - as soon as possible - with a Climate Emergency Declaration, so that all areas of Council business are as prepared and robust as possible. Gives evidence of 96 other Councils who have taken this step.
	Response/ Comment:	Noted
13.	Jane Moye	Asks Council to declare a climate emergency. Suggests that taking action on climate change makes good economic sense as well as improving the resilience of the community to withstand climate impacts.
	Response/ Comment:	Noted
14.	Doctors for the Environment Australia (118 signatories)	Open letter indicating strong community support for emergency action to address climate change, and the considerable human resources which have been made available to our community through the commitment of the signatories to support and invest in local mitigation, adaptation, resilience and sustainability strategies.
	Response/ Comment:	Noted
15.	Kathryn Khansome	Urges Council to declare a Climate Emergency immediately, as the MidCoast Council has done, so that communities can be better protected from future catastrophic events. Recognising that young people want to be involved in future climate action
	Response/ Comment:	Noted
16.	Anna Jane Linke	Outlines that we need to put in place structures to ensure that the Port Macquarie region stays resilient and connected through the coming years and suggests that this starts with leadership from the council and

		therefore requests Council to not delay any further a Declaration of a Climate Emergency.
	Response/ Comment:	Noted
17.	Stuart Watson	Urges Council to not delay any further a Declaration of a Climate Emergency.
	Response/ Comment:	Noted
18.	Rhiannon Simmonds	Urges Council to not delay any further a Declaration of a Climate Emergency
	Response/ Comment:	Noted
19.	Val Mudford	Implores Council to not delay any further a Declaration of a Climate Emergency
	Response/ Comment:	Noted

2 Your Community Life

What we are trying to achieve

A healthy, inclusive and vibrant community.

What the result will be

We will have:

- Community hubs that provide access to services and social connections
- A safe, caring and connected community
- A healthy and active community that is supported by recreational infrastructure
- A strong community that is able to identify and address social issues
- Community participation in events, programs, festivals and activities

How we will get there

2.1 Create a community that feels safe
2.2 Advocate for social inclusion and fairness
2.3 Provide quality programs, community facilities and public spaces, for example, community halls, parks and vibrant town centres
2.4 Empower the community through encouraging active involvement in projects, volunteering and events
2.5 Promote a creative and culturally rich community

08 MAYOR'S SPORTING FUND - APPLICATIONS RECEIVED

CONSENSUS:

That the Mayor's Sporting Fund Sub-Committee:

1. Pending confirmation that this is not a paid/sponsored team position, approve the allocation of $350 to assist Stella Tijou with expenses she will have incurred travelling to and competing as a member of the Under 19's Girls Rugby League Team competing at the Harvey Norman Tarsha Gale Cup being held from 6 February - 24 February 2021 at various locations throughout the State.

PORT MACQUARIE HASTINGS COUNCIL

ABORIGINAL ADVISORY GROUP - Draft Charter

Adopted: XXXXXXXXX

1.0 INTRODUCTION

The Aboriginal Advisory Group (AAG) will provide input to Council regarding issues affecting the Aboriginal and Torres Strait Islander community in Port Macquarie and provide the Aboriginal and Torres Strait Islander community with capacity to inform Port Macquarie-Hastings Council's decision-making processes.

Broadly, the Advisory Group will enable Port Macquarie-Hastings Council (Council) to meet its Community Strategic Plan, in particular those parts of the plan that relate to Aboriginal and Torres Strait Islander people.

The Advisory Group will also provide a point of contact for Council's broader consultation with the Aboriginal and Torres Strait Islander community and promote Aboriginal initiatives and celebrations auspiced by Port Macquarie-Hastings Council.

2.0 OBJECTIVES

- To advise Council on Council projects and issues which support and affect the Aboriginal and Torres Strait Islander Community including Council programs, services, projects and celebrations to ensure we build a community that respects the rights of all people and encourages self-determination and equity.
- To assist Council in implementation, monitoring and review of Council Policies.
- To provide and receive two-way feedback from the community regarding issues relating to our Aboriginal and Torres Strait Islander Cultural Heritage.

3.0 KEY FUNCTIONS

The key functions of the Aboriginal Advisory Group are to:

- Review, consult and provide feedback to Council on the development of a Port Macquarie-Hastings Council Reconciliation Action Plan
- Provide a forum in which Council and community leaders can discuss and debate, plan and progress local and regionally significant Aboriginal and Torres Strait Islander community inclusion outcomes that continue the growth of our community and our places in the Port Macquarie Hastings Local Government Area.
- Support Council in promoting appropriate celebrations with the Aboriginal and Torres Strait Islander people and wider community.
- Discuss issues of mutual concern in relation to Council policy, strategy or direction, so that they can be resolved to the benefit of both the Aboriginal and non-Aboriginal communities.
- Provide advice and guidance to Council on the development of Council cultural projects including public art, interpretative signage.
- Be outcomes focused and assist in determining appropriate budget requests for Council lead Aboriginal and Torres Strait Islander programs and events in the community.

4.0 MEMBERSHIP

4.1 Voting Members

- One representative and one alternated from the organisations listed below:
    - Birpai Local Aboriginal Land Council

- Bunyah Local Aboriginal Land Council
- Bearlay Aboriginal Interagency
- Hastings Aboriginal Education Consultative Group (AECG)
- Werin Aboriginal Corporation Medical Clinic
- Aboriginal Employment organisation
- Tribal Wave Assembly

- Two representative from Traditional Owners

- Four Aboriginal and Torres Strait Islander community members

4.2 Council Representatives

- Voting representatives
  - Mayor
  - Director Strategy and Growth
  - Group Manager Community

- Non-voting representatives
  - Community Inclusion Team Leader
  - Community Inclusion Trainee (Identified Position)

4.3 Non-Voting Members/Attendees

Other attendees/members, including State and Federal Government representatives and specific constituent groups within various sectors, may be invited to attend meetings or working groups on certain issues or to progress an agreed outcome, as approved by the Committee. These are non-voting attendees and may only be invited with the approval of the Committee or the Chairperson if the need for their attendance is identified. These attendees may be but not limited to Purfleet/Taree Local Aboriginal Land Council and Kempsey Local Aboriginal Land Council.

4.4 Obligations of Members

- Commit to working towards advancement of the cultural endeavours within the Local Government Area.
- Act honestly and in good faith.
- Act impartially at all times.
- Participate actively in the work of the Advisory Group
- Exercise the care, diligence and skill that would be expected of a reasonable person in comparable circumstances.
- Comply with this Charter document at all times.
- Facilitate and encourage community engagement with Committee and Council initiatives to support good inclusion outcomes for our community.
- As per Section 226 (c) of the NSW Local Government Act 1993, the Mayor is the principal spokesperson for the governing body and Councillors that are members of a Committee are to obtain the Mayor's agreement to make media and other statements. Further, only the Mayor, or a Councillor with the Mayor's agreement and otherwise in accordance with Council policies and procedures, may release Council information through media statements or otherwise, and the release of such information must be lawful under the Council adopted Code of Conduct. Council officers that are members of Committees are bound by the existing operational delegations in relation to speaking to the media.
- A Councillor as a member of an Advisory Group or the Advisory Group itself has no delegation or authority to make decisions on behalf of Council, nor to direct the business of Council. The only decision making power open to Councillors is through formal resolutions of Council.
- A Councillor as a member of an Advisory Group or the Advisory Group itself cannot direct staff and must abide by the decisions of Council and the policies of Council.
- Councillors, Council staff and members of this Advisory Group must comply with the applicable provisions of Council's Code of Conduct in carrying out the functions as Council officials. It is the personal responsibility of Council officials to comply with the standards in the Code of Conduct and

regularly review their personal circumstances with this in mind particularly with respect to conflicts of interest, confidentiality and general conduct obligations.

4.5 Member Tenure

- Advisory Group members will serve for a period of four (4) years after which Council will call expressions of interest for the next four (4) year period. Existing Advisory Group members will be eligible to re-apply for a position and serve additional terms. Any changes in the composition of the Advisory Group require the approval of Council.

4.6 Appointment of Members

- A formal Expression of Interest process for all positions will be undertaken across the Local Government Area as a way of determining the independent representatives on the Advisory Group.
- Members of the Advisory Group will be representative of diverse interests across the Local Government Area rather than a single issue.
- The members of the Committee, taken collectively, will have a broad range of skills and experience relevant to community sectors in the Port Macquarie-Hastings region.
- Where practicable the membership will represent the geographical spread of the Port Macquarie-Hastings Local Government Area, and a diverse range of cultural, gender and age groups.
- Council, by resolution duly passed, will appoint members to the Advisory Group.

5.0 TIMETABLE OF MEETINGS

- Meetings will be held bi-monthly (or more regularly if required). Meetings will generally be held at various locations across the Port Macquarie-Hastings area.
- Extra-ordinary meetings can be called if required.

6.0 MEETING PRACTICES

6.1 Attendance

- Meetings are not open to the public to attend, however, as noted above, specific members of the public may be invited to address the Advisory Group regarding a specific matter on which the Advisory Group seeks their input.

Decision Making

- Recommendations of the Advisory Group shall be by majority of the members present at each Meeting and each member shall have one (1) vote.
- The Chairperson shall not have a casting vote.
- In the event of an equality of votes on any matter, the matter shall be referred directly to Council's Executive Group and then to Council.
- Recommendations from the Group are to be made through the General Manager or the relevant Director who will determine, under delegation, the process for implementation.
- The Advisory Group has no delegation to allocate funding on behalf of Council. The Advisory Group may make recommendations to Council about how funding should be spent in relation to the above-mentioned objectives, however those funds will only be applied and expended following a formal resolution of Council.
- The Advisory Group may establish working groups to support actions and activities within Council Plans or to assist in the delivery of projects and events, as deemed appropriate. All projects are to be aligned with Council's suite of Integrated Planning and Reporting documents.

6.2 Quorum

- A quorum must include a minimum of one (1) Councillor or one (1) Council Executive staff member being present. The quorum for the Advisory group will be met if six (6) members are present, or greater than half of the total membership at that point in time, whichever is the smallest.

6.3 Chairperson and Deputy Chairperson

- The Chairperson shall be the Mayor
- The Deputy Chair shall be an Aboriginal and Torres Strait Islander representative (voted in by Committee)
- At all Meetings of the Advisory Group, the Chairperson shall occupy the Chair and preside. In the absence of the Chairperson and Deputy Chair, as the Advisory Group's first item of business, the Advisory Group shall elect one of its members to preside at the Meeting.

6.4 Secretariat

- The responsible Council Director is responsible for ensuring the Advisory Group has adequate secretariat support. The secretariat will ensure that business papers and supporting papers are circulated at least three (3) days prior to each meeting. Minutes shall be circulated to members within seven (7) days of the meeting having taken place.
- All Advisory Group agendas and minutes will be made available to the public via Council's web site, unless otherwise restricted by legislation.
- The responsible Council Director will coordinate a review of the Charter within 12 months of a new Council term and present to Council for adoption.
- Minutes of meetings will include the attendance, times, recommendation of the Advisory Group together with any dissenting votes, actions arising and a basic summary of discussion.

6.5 Recording of decisions and explicit discussions on risks

- The Secretariat shall record a summary of all discussions that relate to risks.

7.0 CONFIDENTIALITY AND CONFLICT OF INTEREST

- Any independent members of the Advisory Group will be required to complete a confidentiality agreement that will cover the period of their membership of the Advisory Group.
- Advisory Group members must declare any conflict of interests at the start of each meeting or before discussion of a relevant item or topic. Details of any conflicts of interest should be appropriately minuted.
- Where members or invitees at Advisory Group meetings are deemed to have a real or perceived conflict of interest, it may be appropriate that they be excused from Advisory Group deliberations on the issue where the conflict of interest may exist and this is to be recorded in the minutes of the meeting.

PORT MACQUARIE-HASTINGS COUNCIL

Bain Park Master Plan

PUBLIC EXHIBITION OUTCOMES

February 2021



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1. INTRODUCTION

1.1. Background

The Bain Park Master Plan (Master Plan) was identified in the 2019/2020 Operational Plan as part of Council's regional master planning for recreational facilities to encourage a healthy, inclusive and vibrant community.

Bain Park is a significant recreation area located in the centre of the Wauchope CBD. Council has undertaken a series of comprehensive engagement activities to inform a draft Master Plan to guide future development. A timeline of activities, reports and Master Plan revisions is included in this report.

At the 18 November Ordinary Council Meeting, Councillors resolved to place the draft Master Plan on public exhibition for 28 days, closing on 16 December 2020. This report summarises and responds to community feedback across key themes and details changes made to the updated Master Plan.

Submissions made during this time have been considered when developing an updated draft Master Plan. The challenge in developing the next revision of the draft Master Plan (Rev 4) has been to balance varying community preferences with our commitment to delivering recreational facilities to encourage a healthy, inclusive and vibrant community now and into the future.

1.2. Engagement approach

The public exhibition period is a formal process undertaken prior to finalisation of the Master Plan and subsequent recommendation for adoption. During this period, the Community Engagement team undertook the following activities to promote the public exhibition period and encourage the community to have their say.

- Have Your Say
- Media release / Heart of the Hastings newsletter
- Social media posts
- Targeted email campaign (stakeholders / Chamber of Commerce / CCAT)
- Temporary signage at Bain Park displaying Draft Master Plan
- Two pop-up stands (Bain Park and IGA, Wauchope CBD)
- Letterbox drop (Avondale Street and Range Street)
- Walk around to High Street businesses
- Posters in IGA / Waterman's café / WCAC and other nearby locations
- Draft Master Plan copies and feedback forms in all Customer Service Centres and Wauchope Library.

1.3. Consultation focus

The community was asked for open ended feedback on the draft Master Plan in the context of the consultation that had been undertaken over the previous year. No specific surveys or prompts were used.

2. ENGAGEMENT ACTIVITIES, TIMELINE & FEEDBACK THEMES

2.1. Engagement Activities and timeline

A series of engagement activities were undertaken to promote and seek feedback during the public exhibition period, these included:

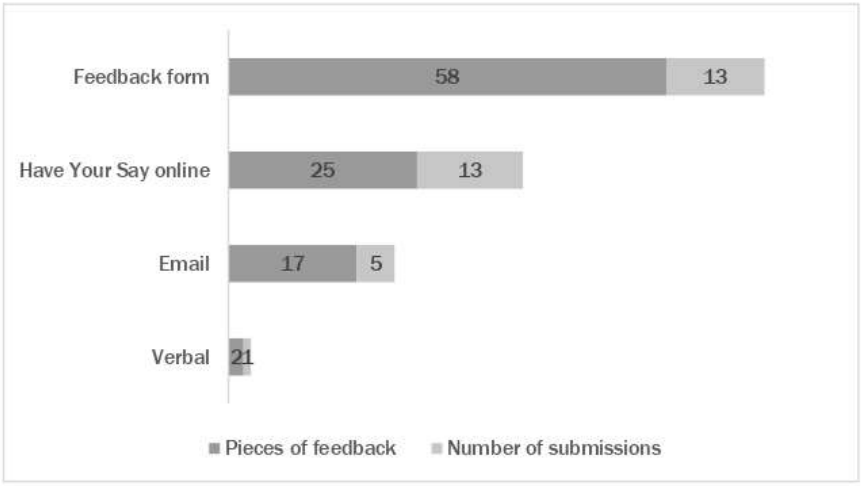
- Direct email with key stakeholders
- Social media campaign
- Print media (Heart of the Hastings Newsletter feature)
- Signage in Bain Park
- Posters put up in High Street shops
- Feedback boxes installed at Wauchope Library
- Pop-up information stands
- Have Your Say

2.2. Engagement, reports and revisions

Initial Engagement Sep – Oct 2019	Stage 2 Engagement Aug – Oct 2020	Stage 3 Engagement Nov 2020 – Feb 2021
• Have Your Say • Pop-up in the park • Planning workshop • Wauchope Community Arts Council consultation	• Key Stakeholder consultation • Focus group meetings • Master Plan updates • Stakeholder acceptance of Revision 3	• Have Your Say • Pop-ups in Bain Park and Wauchope IGA • Social and print media • Signage in Bain Park • Posters in High St shops
Community Engagement Report A: Nov 2019	**Community Engagement Report B: Oct 2020**	**Public Exhibition Outcomes Report: Feb 2021**
Draft Bain Park Master Plan (Rev 0) Mar 2020	**Draft Bain Park Master Plan (Rev 1) Jun 2020 (Rev 2) Sep 2020 (Rev 3) Sep 2020**	**Draft Bain Park Master Plan (Rev 4) Feb 2021**

2.3. Submission sources

A total of 102 pieces of feedback were received from 32 submissions across four platforms. A breakdown of this is illustrated in the diagram below.

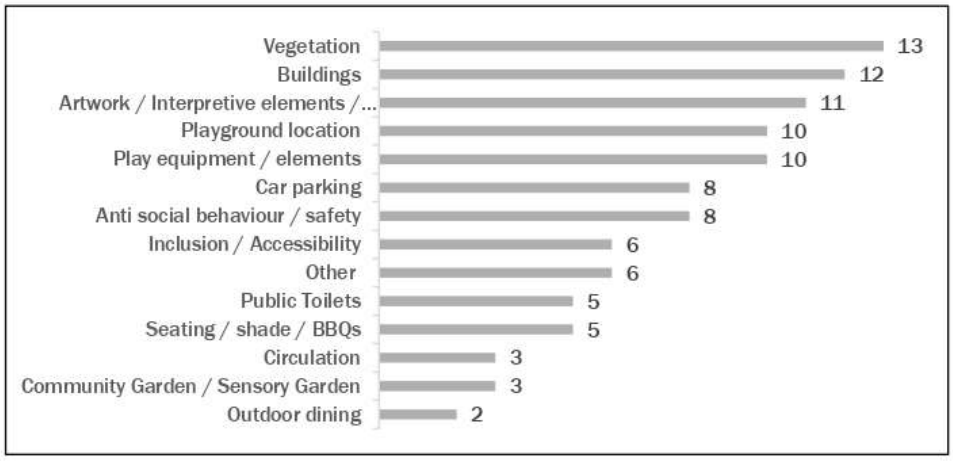


Graph 1: Breakdown of submission sources and feedback.

2.4. Feedback Themes

Feedback from all sources was categorised to gain insight into common sentiment across submissions. Data has been themed and listed below in order of most to least feedback received. A graph showing number of submissions received per theme follows.

- Vegetation
- Buildings
- Artwork / Interpretive elements / Acknowledgements
- Playground location
- Play equipment / elements
- Car parking
- Anti-social behaviour / safety
- Inclusion / Accessibility
- Public Toilets
- Seating / shade / BBQs
- Circulation
- Community Garden / Sensory Garden
- Outdoor dining



Graph 2: Number of submissions per theme

2.5. Have Your Say

Thirteen submissions were received from community members via Have Your Say from the following demographic profiles.

Suburb		Age		Gender	
Wauchope	5	26-35	5	Female	8
Port Macquarie	2	46-55	1	Male	5
Beechwood	2	56-65	3		
Bonny Hills	1	Over 65	4		
Yippin Creek	1				
Johns River	1				
Brombin	1				

2.6. Social Media

Social media posts across Facebook and Instagram returned the following reach and engagement levels.

Page	Date	Reach	Engagement
Port Macquarie-Hastings Council FB	26 Nov	11,085	153
Port Macquarie-Hastings Council FB	3 Dec	5,414	401
Port Macquarie-Hastings Council FB	6 Dec	1,700	15
EngagePMH FB	26 Nov	Unknown	5
ConnectPMH Instagram	26 Nov	290	364

2.7. Pop-up Information Stands

- **Bain Park 4 December, 11am - 1pm**
- **Hastings Street IGA, Wauchope 7 December, 1pm - 4pm**

Members of the community engagement team and the project team hosted two pop-up information stands during the public exhibition period, inviting the community to attend to ask questions, talk to team members, pick up a hard copy of the draft Master Plan, complete a feedback form, and (for the Bain Park pop-up) take a tour around the park with the landscape architect.

Both were well attended with Council staff talking to approximately 25 people on each day and handing out over 50 copies of the draft Master Plan.







3. SUBMISSIONS

3.1. Overview of submissions

Submissions received during the public exhibition period were varied with a mix of support and opposition for a variety of design elements. Submissions should be considered in the context of prior community engagement outcomes and the intensive stakeholder consultation that informed the development of previous revisions of the draft Master Plan. This means that in some instances (such as the options for the two community buildings) design options will reflect the desire of key stakeholders.

Areas of greatest interest (categorised by theme) were: the treatment of community buildings; vegetation; sculptural, artwork and interpretive elements; and location of the playground. These

themes (and responses) have been summarised below, with detailed feedback and responses across all themes tabled in **Appendix (i) Submissions: Summary and Responses**.

Vegetation

There is a strong preference to retain and enhance this green space, including at the High Street entry, with the addition of mature trees and endemic species (including Lasiandra trees), and the removal of weed species. The draft Master Plan accommodates much of this feedback with the exception of identifying the lasiandra trees at the High Street entry as being significant.

Design outcome: Lasiandra trees to be included in planting palette throughout the park. No change to High Street entry - the intent of which is to be open with a focus on original Bain Park gates and artwork with views into the park.

Buildings

The sentiment around the Community Arts Hall and Rotary Youth Hall largely reflects the outcomes of significant consultation undertaken with the Wauchope Community Arts Council (WCAC) - with an acknowledgement of the aesthetic and acoustic qualities of the current Arts Hall. Council has a clear understanding of the desire of WCAC to retain the existing hall either in its current location or relocated closer to the park with the addition of improved amenities. This consultation, along with meetings held with Wauchope Rotary, will inform the design options for these community facilities. An outlier request to relocate both community halls and replace them with a new, multi-use, two-storey building is not in keeping with community views.

Design outcome: Existing design options for these buildings is unchanged.

Artwork / Interpretive elements / Acknowledgements

The Master Plan is an overarching plan for the future development of Bain Park and does not include detailed design of artwork, sculptural elements, acknowledgements, furniture or equipment. A number of statements supporting ongoing consultation during the future detailed design of elements have been included in the Master Plan.

Design outcome: No change to Master Plan.

Playground Location

The community voiced a desire to keep the playground in its existing location, citing distance from the public toilets, Waterman's Café and other High Street businesses as key reasons supporting the current location. Some residents feared that relocating the playground to the south of the park would result in an increase in anti-social behaviour that may impact their safety and properties.

While acknowledging these concerns we are prioritising the future need to increase the size of the playground in response to the predicted growth of our region. We know that Bain Park is already a destination area for locals and visitors from across the region and we anticipate this to continue (and increase) once the playground is updated.

The relocation of the playground to the south of the park is informed by the NSW Everyone Can Play guidelines that make the space more accessible across a range of criteria. In addition, Crime Prevention through Environmental Design (CPTED) principles will be incorporated into the design to discourage anti-social behaviour.

Design outcome: Playground to be relocated to south of park.

Sensory Garden

Omnicare have advised that the proposed sensory garden, if built, will no longer be open to the public. This decision is based on ensuring the safety of vulnerable clients that will use the facility. Omnicare has advised that there is potential for local schools and community groups to visit the garden by arrangement once the garden is completed.

Design outcome: Sensory garden removed from draft Master Plan.

Please refer to **Appendix (i) Submissions: Summary and Responses** for more detailed feedback and responses across all themes.

4. UPDATED MASTER PLAN - REVISION 4

The challenge in developing the next revision of the draft Master Plan (Rev 4) has been to balance varying community preferences with our commitment to delivering recreational facilities to encourage a healthy, inclusive and vibrant community now and into the future. Changes to the Master Plan (Rev 4) are listed below.

Retraction of outdoor dining specific to Waterman's Café

- Seating in this location will be for public use
- Any application for outdoor dining by Waterman's Café will be reviewed in line with our Outdoor Dining Policy.

Removal of Omnicare sensory garden

- Omnicare has advised that following further consideration and concerns over the safety of clients and staff, and the security of premises of a public facility, that the proposed Omnicare Sensory garden, if built, will not be open to the community.

5. NEXT STEPS

The updated draft Master Plan (Rev 4) will be shared directly with the key stakeholders and those who made submissions, and more broadly with the community using media channels and Council's website.

The intention is to make a recommendation for adoption of the Master Plan (Rev 4) at the 17 March Ordinary Council Meeting. To view the agenda and find out how to speak to an agenda item please visit our website. www.pmhc.nsw.gov.au/About-Us/How-Council-Works

Once the plan is adopted, Council can cost the development and begin to seek funding. At present, there is no timeline set for the commencement of construction and Council will keep the community informed as this changes.

6. APPENDIX

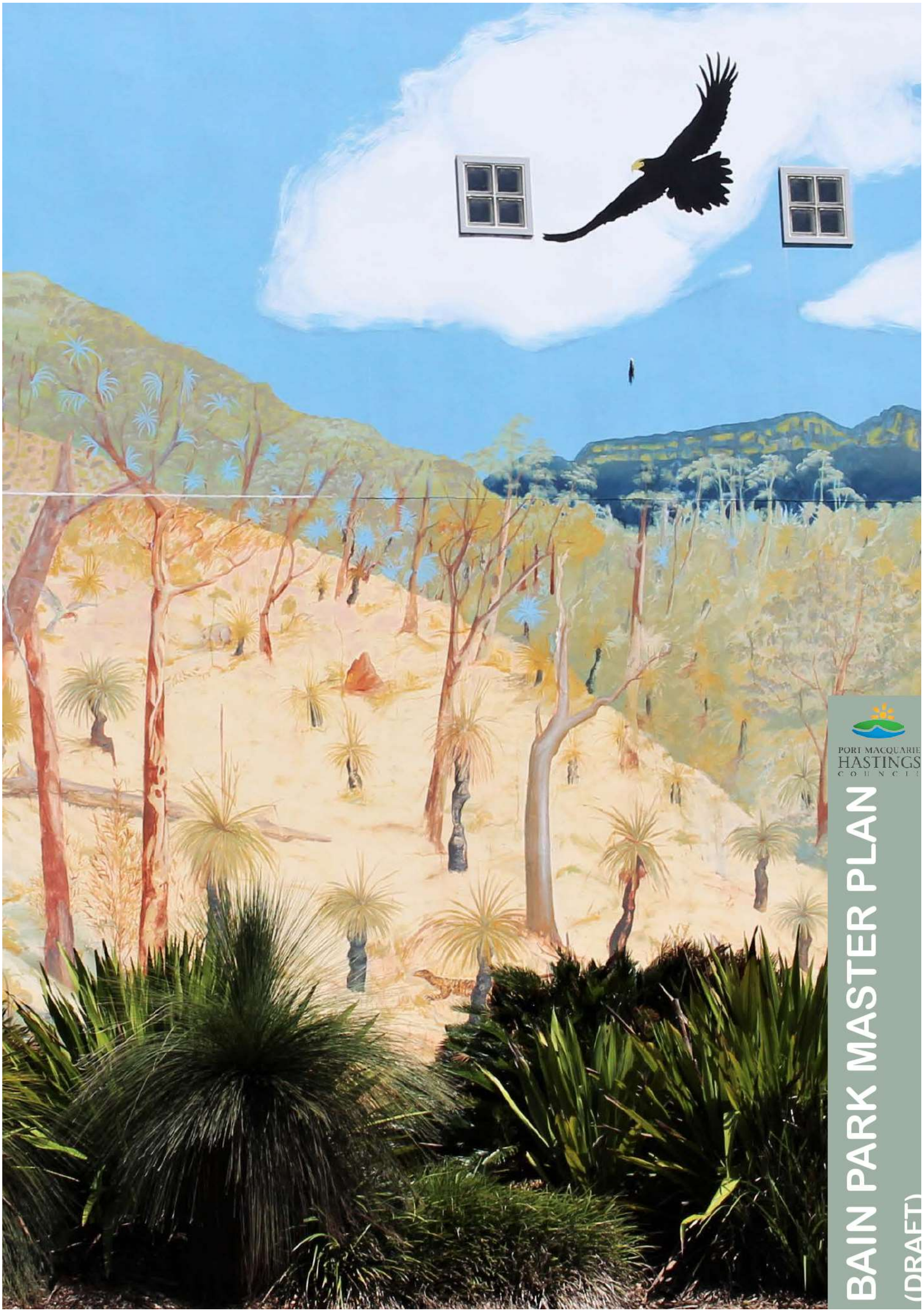
Appendix (i) Submissions: Summary and Responses

Theme	Key Issues	PMHC Comments/Response
Vegetation	• Concerned about cost of installing, maintaining and storing an artificial Christmas tree. • Against plastic Christmas tree. • Love provision of the Christmas tree. • Lasiandra trees near High Street are original trees that instigated the Lasiandra Festival, please retain / Wauchope is a Lasiandra town / we need lasiandra trees towards the front of the park. • Remove weed trees now. • Allow trees to provide shade. • Retain grass on amphitheatre. • Retain trees, garden beds and open green space; introduce mature trees with colour; do not remove mature trees. • Concerned about the loss of green space at entry due to paved plaza to High Street.	• In previous years the Wauchope Chamber of Commerce and Industry (WCCI) have managed the installation of an artificial Christmas tree supported by Council grants - infrastructure included to facilitate this option in future. • WCCI will continue to be responsible for determining Christmas decorations in the Park (which may be to decorate a live tree). • Provision for succession planting of weed trees with large native trees is included. • In addition to existing trees, the Master Plan allows for extensive planting of mature, shade bearing trees. • Large trees, low understory planting and a wide paved entrance retain some green space at High Street and reinforce visual connectivity into the park. • Paved plaza designed to accommodate pedestrian traffic into the park and to support circulation around artwork. • Lasiandras will be considered as part of planting palette for the park. The intent of the High Street entry is to be open with a focus on original Bain Park gates and artwork.
Buildings	• Retain buildings spend money elsewhere in the community. • Retain buildings in current location with upgrades. • Retain character of Arts Hall (acoustics and aesthetic). • Relocate existing buildings (Option 2). • New Community Arts Hall in Bain Park using elements of existing building. • Relocate both existing buildings elsewhere in Wauchope and build a high capacity, two-storey, large multi-use facility including conference and meeting rooms overlooking Bain Park.	• Significant community engagement was undertaken with Wauchope Community Arts Council (WCAC) and Wauchope Rotary. • Council has a clear understanding of the desire of WCAC to retain the existing hall either in its current location or relocated closer to the park. • The proposal to relocate both existing buildings is not within the scope of the project. The potential for business activities to be undertaken in the building remains possible by arrangement with building managers.
Artwork / Interpretive elements / Acknowledgements	• Opportunity for artwork from Birpai community / locally sourced. • Include interpretive geological signage pertaining to Bago Bluff • Retain Bain Park Gates / not off to one side. • Sculptures / display about local history is far more appropriate than a human sundial at the High Street entry. • No need for two war memorials in Wauchope / do not move the war memorial to Bain Park (cites lack of seating/shade, hard surfaces and visibility). • Uninspiring design shown on Master Plan for High Street entry. • Concerned that terraced sandstone block amphitheatre will be costly and restrict usage of the park. • Creative elements are supported such as the free form "Gaudi" inspired seating, Human sun dial (incorporates community	• The design of all public art introduced to the park will be subject to community consultation. Public art shall leverage opportunities for cultural and historical expression through working with public artists and in consultation with Bunyah Local Aboriginal Land Council and abovementioned community groups. • Master Plan is a high level design and does not represent the detail of individual artworks. • Bain Park Gates are being retained - location supports an open entry to the park with interpretive elements. • Wauchope's culture and history to be woven into the landscape through design details and interpretive art installations. • The addition of the war memorial in Bain Park was in response to a unanimous request by the Wauchope RSL Sub Branch

	memorial), War memorial, sensory garden, and interpretive sculpture with up lighting. • Wauchope Garden Club recognition through interpretive element. • Lions Club ongoing request to install three, inter-connected sundials at the High Street entry to the park in the immediate future prior to roll out of the Master Plan. • Treatment of centenarian plaques when weed trees removed.	via written submission. This is not a replacement of the existing memorial on High Street but an additional memorial. • Recognition of other community groups to be determined at detail design phase. • Sundials are included at the Avondale Street entry. Interpretive sculpture with up-lighting is a key feature of the High Street entry along with the historic Bain Park gates. Shade from proposed tree planting at this entry will impact the function of the sundials in this location. • Community consultation will be undertaken on any changes/reinterpretation into the design for the centenarian trees and plaques, and the volunteer memorial (specific consultation with businesses and individuals listed on the sign).
Playground location	• Upgrade playground and retain in current location. • Renovate the existing playground, add shade and save money. • Concern that playground is too far away from public toilets. • Parents like to sit at café and watch children in the playground / playground too far away from café. • Retain bike path in current location. • Concerned that proposed playground location will impact residents and create safety concerns for them.	• Increasing the size of the playground is necessary to respond to the future growth of the region and the fact that the park will continue to attract locals and visitors from across the region. • The existing playground was installed in 2012 and scheduled for replacement in 2022. It has limited capacity to expand in the current location due to the presence of large trees and root systems in that area. • Shaded playground / water play area - relocated to improve connectivity to school and improved passive surveillance. • The proposed integration of buildings into the park, and the inclusion of a small stage is incompatible with a playground in its current location. • We acknowledge the distance from the playground to the public toilets has increased. However, the toilet location still remains accessible as per the NSW Everyone Can Plan guidelines and is supported by an accessible pathway. • We encourage active supervision of children using our playgrounds at all times. • See anti-social behaviour responses for residents' safety concerns.
Play equipment / elements	• Include play fountain with waterslide, monkey bars, flying fox, rock wall, slip and slide, tree house with TV, camping zone, climbing trees with soft fall, provisions for drought for water play to continue (underground water tank). Multi-use oval for ball play and Frisbee. • Model the playground and waterpark on the Tamworth Regional Park. • Exercise area for people and dogs. • Waterpark is expensive to maintain and not useful year-round and too far from toilets. • I absolutely love every suggested enhancement to the Bain park precinct and believe that this park when completed will become a very family friendly venue that can be enjoyed by all. • The active elements of playgrounds, water play, and the bike tracks are supported, and we anticipate this will encourage community participation. • The overall layout of the activity spaces is not supported due to interruption of noise from play on performances and lack of	• Community consultation will be undertaken prior to the detailed design of playground equipment and inclusions. • A variety of activities and activations in Bain Park gives people options to use the recreation space as they choose and in a socially responsible manner in terms of how they do so and how they supervise children. • Bain Park is not a designated off-leash dog area. Wauchope has an existing dog off leash area at Blackbutt Park, with another proposed at the Hastings Sporting Fields facility. Inclusion of water play is dependent on funding. • Water play was identified as a desired inclusion during community consultation; funding sources and detailed design will occur following the adoption of the Master Plan. • The proposed integration of buildings into the park, and the inclusion of a small stage is incompatible with a playground in its current location.

	ability to supervise children while watching a performance.	• We encourage active supervision of children using our playgrounds at all times.
Car parking	• Opposed to reducing the width of Avondale Street (by approximately 1m) due to busy road at school drop off and pick up and cost of changing road. • Leave the car park in existing location as it offers easy access to community buildings and Bain Park. • Locate car park at the far [southern] end of Bain Park near the school. • The reversing of the carpark and building space a clever idea, as the buildings can 'spill' out onto the park. This will give much more versatility of use. • Concerned about lack of parking (particularly on Friday's when community members, many in wheelchairs or with limited mobility, attend a regular event at the Arts Hall).	• Reconfiguration of the roadway is to formalise parking and improve vehicular circulation (and safety) in accordance with current standards. Road design will be carried out by a suitably qualified Engineer. • Design does not allow for incursion on parkland for car parking. • The addition of an accessible pathway around the park and better integration of the park to the community buildings provides improved access to Avondale Street parking.
Anti-social behaviour / safety	• Concerned about safety and security in the park (such as lighting). • Ensure non-slip surfaces on pathways. • Can the new design make the children's playground safer or make it more difficult for after hours, anti-social behaviour to occur. • Concern that shelters close to residential properties will put residents/property at risk. • Avondale Street is actually a cul-de-sac with a handful of residents within close proximity to the proposed location. There is minimal natural surveillance especially in evenings (when damage to structures and equipment is more likely to occur). • Residents should not be responsible for passive surveillance of park in proposed location. • Some incidents of vandalism to the Youth Hall and damage to cars. Concerned about safety of those using car park if it cannot be seen from Bain Park.	• Updated and improved lighting is provided for in the Master Plan. • Crime Prevention through Environmental Design (CPTED) principles will be incorporated into the design to discourage anti-social behaviour. • Changing the location of the playground increases the actual and perceived likelihood of detection and apprehension. • Passive surveillance is not the responsibility of residents, it occurs naturally as spaces are used more - the theory being that the more spaces are visited by legitimate users, let less they are visited by those who may display anti-social behaviour.
Inclusion / Accessibility	• Accessibility for people with mobility issues. Access and visibility for people with vision, hearing and other forms of impairment. • Consultation with Bunyah Aboriginal Land Council. • All paths wide enough for 2 wheelie walkers to walk side by side. • Include disability friendly equipment in playground. • Incorporate sensory garden into the play area and where the special needs community can use it.	• Detailed design of the playground will involve consultation where these elements can be considered following NSW Everyone Can Play guidelines. • Proposed promenade pathway is 3.5m wide. • Bunyah Aboriginal Land Council are considered key stakeholders.
Public Toilets	• Retain existing toilet block with improvements. • We need the disabled toilet to be upgraded to a fully accessible change room with the hoist and bed as the Community Hall is used every Friday be disabled people and several in wheelchairs. • Prioritise the upgrade of the public toilets.	• Existing toilet block to be replaced with new amenities to include an adult change table. • Current delivery is included in Stage 3 (of 7). Flexibility in the staging of works depending on funding, condition of existing assets, and priorities as identified by the community.
Seating / shade / BBQs	• Sheltered picnic tables - what a positive improvement. • Include accessible seating / solar panels run BBQs. • Regular cleaning schedule for BBQs. • Don't locate too closely to residents.	• Detailed design of furniture (bubblers/BBQs/picnic tables etc.) will in accessible options. • Design details pertaining to formed seating will be subject to community consultation. • Solar power options can be explored during detailed design phase.

	• Formed/shaped seating to reflect culture and history of Wauchope not Barcelona (Not "Gaudi" inspired mosaics).	
Community Garden / Sensory Garden	• Concerns over safety of clients and staff, and security of premises of a public facility; the proposed Omnicare Sensory garden will not be open to the community. • Include reclaimed water / water tanks to save money. • Maintenance of sensory garden to be managed post Omnicare involvement.	• Sensory garden has been removed from the Master Plan following further consideration from Omnicare.
Circulation	• No need for 3.5m pathway, too much concrete. • People will walk through the centre of the park not around the circular path. • Retain centre pathway, create a winding, smaller path. • Concern that the circular pathway and placement of activities does not support large events and market stalls. Currently when people attend this event, they enjoy being able to see their family from the mound, to the play area and to the market stalls.	• Pathway width to accommodate passing prams, mobility scooters and wheelchairs. • Circulation has been designed to best facilitate access to all areas of the park while maintaining a larger open space within the centre of the park. • The design includes substantial open space with the specific purpose to support large events and market stalls. This includes the provision of power, water and a place for a temporary stage and considers population growth and greater activation of the space.
Outdoor dining	• Private business (Waterman's Café) should not take up public space. • The seating elements at the park entrance are welcomed but should be inclusive of general patronage not limited to a single business's outdoor dining.	• Proposal has been amended to provide opportunity for public seating. • Any application for outdoor dining by Waterman's Café will be reviewed in line with our Outdoor Dining Policy.
Other	• A sheltered bike-lock facility as more and more people use bicycles. • Improved facilities such as the lighting, including solar powered options, stage options, undercover areas, power provisions, water provisions are all welcomed. • What is the lifespan of completed project?	• The lifespan of elements of the Master Plan varies considerably (vegetation, buildings, playground etc.). Currently our playgrounds are designed for a 10 year life. • Options for electric car charging and e-bikes to be included in detailed design. • Bike-lock facilities are provided for at both entrances to the park - tree cover provided.


PORT MACQUARIE
HASTINGS
COUNCIL
BAIN PARK MASTER PLAN
(DRAFT)

REVISION HISTORY				
ISSUE		DATE	AUTHOR	APPROVED
0	DRAFT MASTER PLAN	18 March 2020	Craig Luff	Liam Bulley
1	DRAFT MASTER PLAN	30 June 2020	Craig Luff	Liam Bulley
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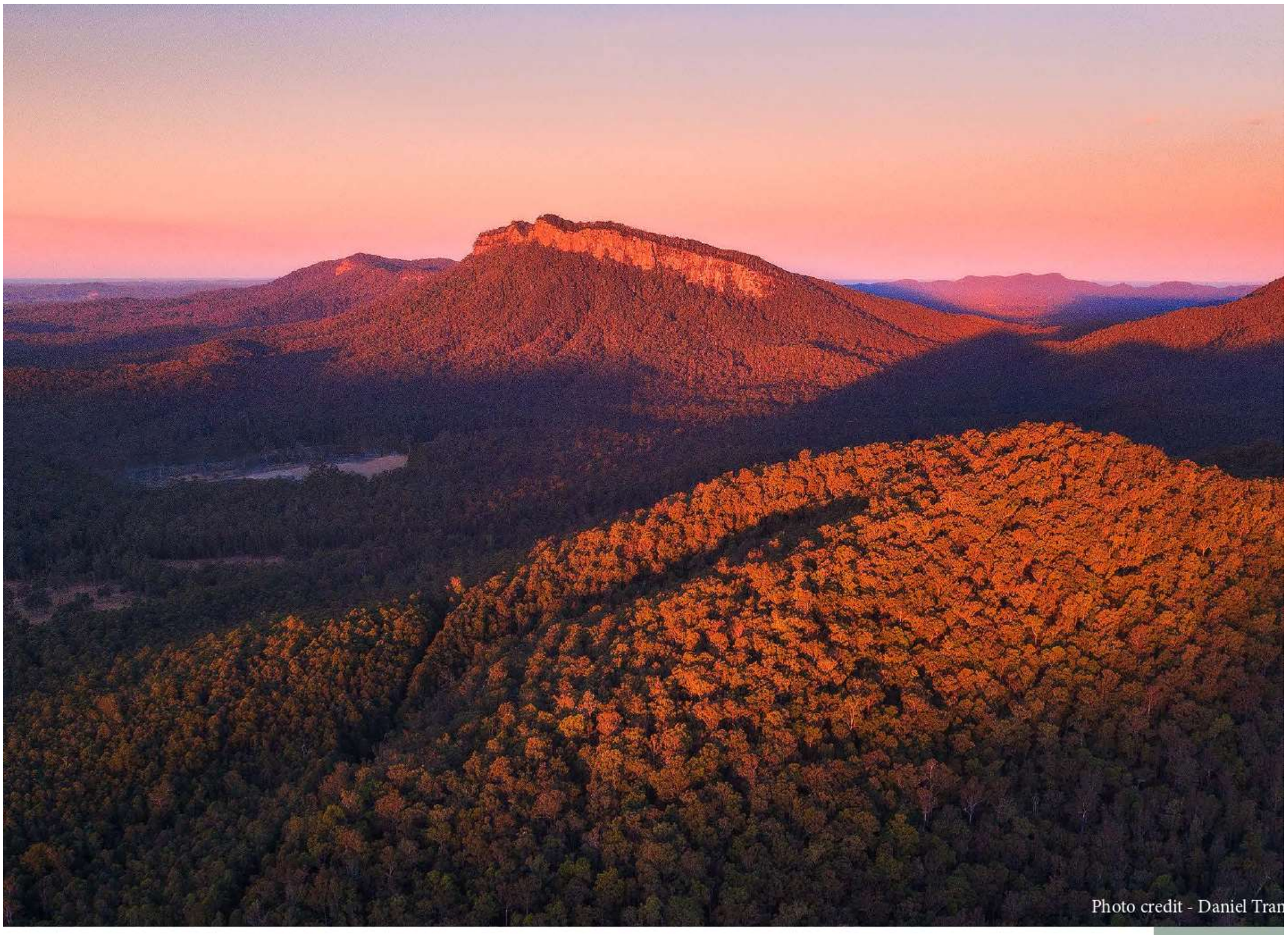

Photo credit - Daniel Tran

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About Bain Park

Bain Park is an important cultural and recreational space for the community and a number of groups who both use and activate the space. The park has been an intrinsic part of the Wauchope community since it was proclaimed a recreational area in 1889.

The park sits on Birpai land that, post settlement, was owned by the Bain Family, who hailed from Scotland and settled in the region. The Bain Family sold the parcel of land that makes up the park to the community at a greatly reduced price. In addition, the community raised funds and sought a government grant to clear the land and install a tennis court, cricket pitch and small pavilion. At that time, it was known as Wauchope Park.

Located in the heart of the Wauchope CBD, Bain Park continues to attract locals and visitors alike; it is a key community meeting place, playing host to markets and events year round.

About the Master Plan

The Bain Park Master Plan (the Master Plan) represents a long term vision for the park and provides an over-arching framework to guide future development. The Master Plan identifies opportunities and constraints of the site and incorporates the community's vision for the space, identified through community consultation. It also addresses the use of the space, connectivity and activation from adjacent facilities that support a range of cultural, community and commercial functions that enrich the park.

Structures, buildings, artwork and other elements included in the Master Plan are indicative of this future development - detailed design of these elements will be undertaken in consultation with the community and specific user groups as the project progresses.

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• Purpose built. An individual design response is required for each setting, site and community.

Community Engagement

Following community requests and consultation, an all abilities playground was installed in the park in 2012. Since this time, Wauchope community groups have approached Council to consider the development of infrastructure to support an increase in activation of the space.

Initial Engagement

In September 2019, Council invited the community to participate in a series of activities (including surveys, pop-up stalls and a visioning workshop) to generated ideas and a vision for the park. These include:

• Increased shaded seating including near scooter track
• Install gas/electric barbeques.
• Centrally located water refill station.
• Upgrade or new accessible toilets including adult change table.
• Inclusion of sheltered picnic tables and seating in open spaces and inside playground.
• Adventure playground including flying fox, more play areas for older children.
• Play options for toddlers, 'regular' swing set.
• Water play.

PORT MACQUARIE HASTINGS COUNCIL

P3/13

BAIN PARK MASTER PLAN
COMMUNITY ENGAGEMENT
& DESIGN PRINCIPLES









• Nature, imaginative play inclusions.
• Shade over play equipment.

The community identified the following issues:
• The playground was looking tired and the inclusions needed some maintenance/upgrading.
• The pebble create pathways were patchy due to age/ wear and tea and needs resurfacing in sections.
• Pedestrian access (such as a wide set of stairs) is needed from the Community Arts Hall car park as people were currently jumping over the retaining wall and it was crumbling in sections.

Ongoing Consultation
Community engagement and key stakeholder consultation (including a formal public exhibition period) between September 2019 and February 2021 has informed four revisions of the Master Plan. This important process helps us to better understand the needs and preferences of the community. The following community groups and stakeholders have been involved in direct consultation including focus group meetings.
• Wauchope Community Arts Council
• Wauchope District Historical Society
• Wauchope Chamber of Commerce and Industry
• Wauchope Rotary Club
• Wauchope Lions Club
• Bunyah Aboriginal Land Council
• Local residents

The outcome of this consultation is the inclusion in the Master Plan of a series of statements, to reassure the community that ongoing consultation will occur as the project progresses and, specifically, for the following factors.

• All stakeholders listed above will be included in the detailed design process for the park.
• Recognition that Wauchope Community Arts Council has a preference to retain, upgrade and potentially move the existing Arts Hall to the proposed site of the new building.
• The design of the proposed new Wauchope Community Arts Hall (Arts Hall) and Wauchope Rotary Youth Hall (Youth Hall) facilities will be fit for purpose.
• Wauchope Community Arts Council, Wauchope Rotary Club and other existing user groups will be a part of the design process for their respective facilities.
• No construction/demolition of the Arts Hall or Youth Hall will occur without prior consultation with both parties. This includes negotiating the design options and staging to ensure the current Arts Hall and Youth Hall can continue until the new buildings are completed. If that is not possible agreement on downtime and interim accommodation will be sought.
• Port Macquarie-Hastings Council will, during the building concept design stage, research and investigate options for keeping the Arts Hall so Wauchope and the Mid North Coast can have a facility that reflects the culture and atmosphere of the current hall with the benefits of a modernisation facelift.
• The current managers of the Arts Hall and the Youth Hall will be the future managers of either new or retained facilities.
• Any expansion of the footprint/inclusion of outdoor dining for the commercial premises in the park will be subject to community consultation both during the public exhibition stage and prior to the commencement of detailed design.
• The design of all public art introduced to the park will be subject to community consultation. Public art shall leverage opportunities for cultural and historical expression through working with public artists and in consultation with Bunyah Local Aboriginal Land Council and abovementioned community groups.
• Flexibility in the staging of works depending on funding, condition of existing assets, and priorities as identified by the community.
• Community consultation will be undertaken on any change to the historic entry gates during the public exhibition stage and prior to the commencement of detailed design.
• Community consultation will be undertaken on any changes/reinterpretation into the design for the centenarian trees and plaques, and the volunteer memorial (specific consultation with businesses and individuals listed on the sign).
• Council will seek opportunities to incorporate wayfinding signage to direct visitors to other heritage and cultural precincts in the area.
Further inclusions incorporated into the site plan are:
• Options to retain, move or upgrade the existing Wauchope Community Arts Hall and Wauchope Rotary Youth Hall, including improved connectivity from the buildings to the park (if existing structures retained in-situ and other possibilities for parking from Avondale Street with a driveway up beside Omnicare property boundary).
• Options for relocation and upgrade of public toilets (including but not limited to the inclusion of adult change table) into the park if existing Wauchope Community Arts Hall and Wauchope Rotary Youth Hall buildings are retained.
• Clear demarcation of land titles and boundaries.
• Increased size of shelter located in north east of park.
• A note that weed trees will not be removed until new feature trees are planted and established on the promenade.
• Demarcation of accessible parking and 'parents with prams' spaces to be included in detailed design.
• Options for electric car charging and e-bikes to be included in detailed design.
• Incorporation of the Bain Park Gates at the High Street entry (replica gates and two remaining pillars to be installed at the Avondale Street entry).
• Inclusion of a war memorial in the west of the park.
• Inclusion of opportunities to reference Wauchope's history, culture and environment. This may be explored through a variety of mediums including use of locally sourced materials, interpretive signage / art / installations / detailing.
• Inclusion of a sundial (location to be based on solar study and compatibility with adjacent activities within the master plan).

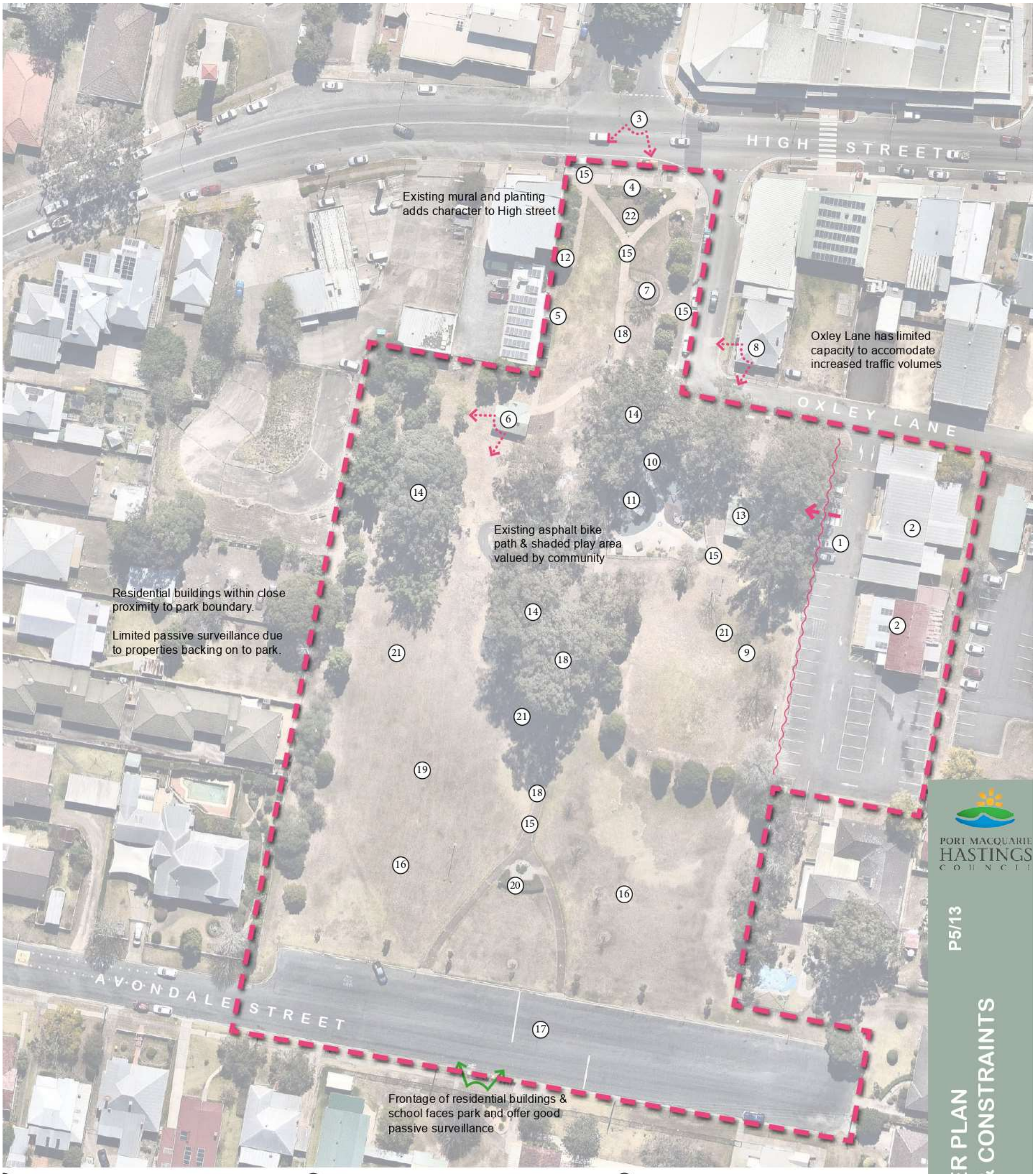
Next Steps
Once the plan is adopted, Council can cost the development and begin to seek funding. At present, there is no timeline set for the commencement of construction and Council will keep the community informed as this changes.

Contact
For more information on the project please contact Council's Community Engagement team via email engagement@pmhc.nsw.gov.au or by calling (02) 6581 8111

PORT MACQUARIE HASTINGS COUNCIL

P4/13

BAIN PARK MASTER PLAN
COMMUNITY ENGAGEMENT



1. Limited connectivity between Rotary Youth Hall / Wauchope Arts Hall and Bain Park.
2. Rotary Youth Hall and Waughope Arts Hall have had multiple extensions and require further improvements to better support user needs.
3. Bain Park has low street prescence / kerb appeal from High Street.
4. Views into Bain Park from High Street are interupted by planting and gates at front of park limiting passive surveillance.
5. Narrow pavement at frontage of Cafe has limited opportunity for outdoor dining.
6. Toilet block subject to vandalism and does not have adult change table.
7. Existing tree and wall surround in poor condition
8. Lack of commercial / residential frontage to park on Oxley Lane results in limited passive surveillance.
9. 5no. Chinese Tallow trees (Triadica sebifera) are required to be eradicated under Biosecurity Act 2015 due to being a regional containment priority weed. These trees have Centenarian plaques.
10. Existing playground was installed in 2012 and will be scheduled for replacement in approximatley 2022. Current position impacts passive surveillance into park and circulation.
11. Community plant beds underutilised & poor condition.
12. Tree's mature size will outgrow current location. Tree is utilised as Wauchope's Christmas Tree.
13. Large shelter not ideal for multiple smaller groups
14. Existing trees have good form and provide shade
15. Existing pavements in poor condition.
16. Southern half of Bain Park has no activities to draw users into park and is underutilised.
17. Informal parking to Avondale Street is inefficient.
18. Lighting throughout Bain Park is dated / in poor condition.
19. No irrigation results in die back during drought. Poor quality compacted soils results in limited growth of plants / proliferation of weeds.
20. Community memorial in poor condition
21. Lack of power provisions in park to support event such as market stalls.
22. Park furniture is dated and in average condition. Existing retaining wall in poor condition


COMMUNITY ARTS HALL



NARROW PAVEMENT TO FRONT OF WATERMANS CAFE


CHINESE TALLOW TREES (WEED SPECIES)


CHILDREN'S PLAYGROUND



YOUTH HALL

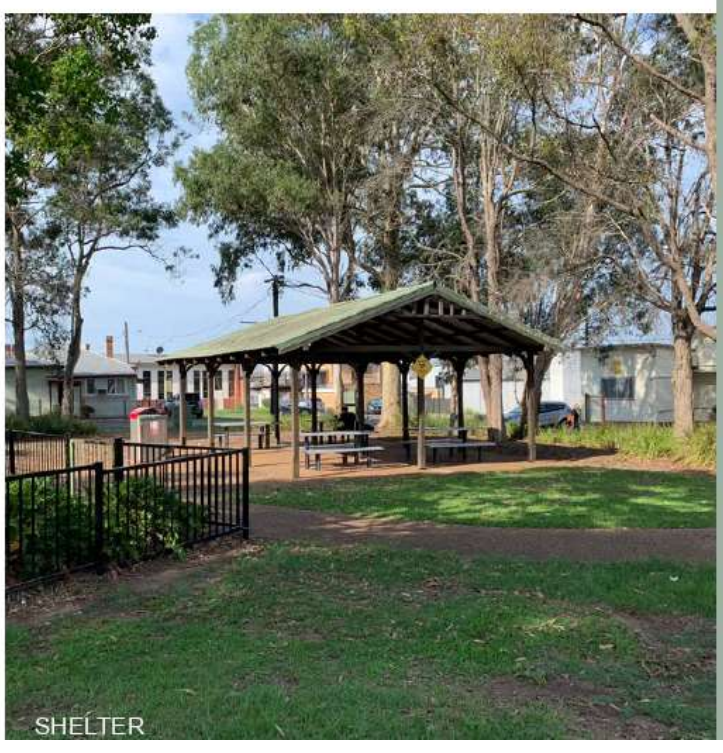

PATH LIGHTING

PORT MACQUARIE HASTINGS COUNCIL

P6/13

BAIN PARK MASTER PLAN
SITE PHOTOGRAPHS


SEATING


SHELTER


DILAPIDATED PAVEMENTS


EASTERN PATH ENTRANCE FROM CAR PARK


MURAL AND GARDEN BEDS


HISTORIC GATES AT NORTHERN ENTRANCE


GRADE SEPARATION AT EASTERN CARPARK

PORT MACQUARIE HASTINGS COUNCIL

P7/13

BAIN PARK MASTER PLAN
SITE PHOTOGRAPHS


SOUTHERN ACCESS OF BAIN PARK



1. Upgraded street frontage and open up views into park.
2. Playground and bike track relocated to south of park. Decomposed granite surface below trees with uplights and free-form "Gaudi" inspired seating.
3. Removable Christmas tree with provisions for power.
4. Interpretive sculpture with uplighting.
5. Entry wall with uplighting at main entrances to park (original Bain Park gates integrated to northern entry).
6. Car parking formalised with 6m solar pole lights.
7. Large trees, low understory planting and a wide paved entrance with 4m solar pole lights reinforce visual connectivity to High Street & open views into Bain Park.
8. Existing toilet block replaced. New toilets to include adult change table
9. 3.5m width promenade path with 4m solar pole lights & wifi. Formal arrangement of large native trees to replace existing centenarian trees. Power provisions incorporated to western alignment of path for markets.
10. Multi-purpose lawn for informal use and events such as markets, outdoor movie nights, Christmas carols etc.
11. 5m x 5m & 10m x 5m shelters with accessible seating. Shelter to south to have four BBQ's.
12. Upgrades to community buildings (12a Youth Hall / 12b Community Arts Hall). Option A depicted - refer to P8 for further details & alternative arrangements.
13. Terraced sandstone block amphitheatre cut into bago mound with small covered stage area (13a).
14. Shaded playground / water play area - relocated to improve connectivity to school, passive surveillance and access to parking
15. Buffer planting to western edge of park to incorporate species suitable for use in residential gardens and will incorporate plant identification for education purposes.
16. Location for temporary stage. Power / water provisions incorporated into adjacent decomposed granite area.
17. Human sun dial (incorporates community memorial)
18. War memorial.
19. Bicycle / scooter pump track.

Irrigation to all planting beds and lawn areas (recycled water ready).

PORT MACQUARIE HASTINGS COUNCIL

P8/13

BAIN PARK MASTER PLAN
OVERALL PLAN



LEGEND

(1) New community buildings (Option A - highest cost).
- Existing buildings demolished (however opportunity to salvage and reuse materials from the existing buildings to be considered).
- New buildings constructed at grade with park to achieve high level of connectivity to park, with parking to rear.
- Character shall be the Wauchope vernacular.
- Shall maintain current functionality; target engagement to be carried out with existing users during subsequent design stages to ensure all user requirements achieved.
- Management agreements with the existing users to be developed.
- Construction to minimise disruption to existing users.
- May be considered in conjunction with Option B (i.e. a New Youth Hall building however existing Community Arts Hall relocated - or vice versa).

(2) Existing community buildings relocated (Option B - medium cost).
- Relocated to be at grade with park to with parking to rear to achieve high level of connectivity to park.
- Subject to structural review of buildings / feasibility study.
- Buildings will require modification to allow access from both sides and ensure compliance with current standards.
- Shall maintain current functionality; target engagement to be carried out with existing users during subsequent design stages to ensure all user requirements achieved.
- Management agreements with the existing users to be developed.
- Construction to minimise disruption to existing users.
- May be considered in conjunction with Option A (i.e. a New Youth Hall building however existing Community Arts Hall relocated - or vice versa).

(3) Existing community buildings retained in current location (Option C - lowest cost).
- Retained in current location with parking separating buildings from park.
- Accessability between park and buildings enhanced by addition of a defined pedestrian access through car park and by provision of new steps / ramps.
- Existing retaining wall replaced with sandstone blocks.
- Opportunity to extend WCAC building south to accomodate storage.
- Management agreements with the existing users to be developed.





PORT MACQUARIE HASTINGS COUNCIL

P9/13

BAIN PARK MASTER PLAN
DETAIL PLAN


LEGEND
1 Road frontage to Bain Park upgraded to enhance street frontage and open up views into park.
2 Street trees and planting bays added to Oxley Lane
3 Removable Christmas tree including inground plug and play provisions for power.
4 Significant interpretive sculpture with uplighting to entrance plaza to enhance street presence and draw people into park.
5 Signage wall incorporating Bain Park gates and uplighting at main entrances to park.
6 Large trees, low understory planting and a wide paved entrance with 4m solar pole lights reinforce visual connectivity to High Street & open views into Bain Park.
1
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PORT MACQUARIE HASTINGS COUNCIL
P10/13
BAIN PARK MASTER PLAN
DETAIL PLAN
5
3
4
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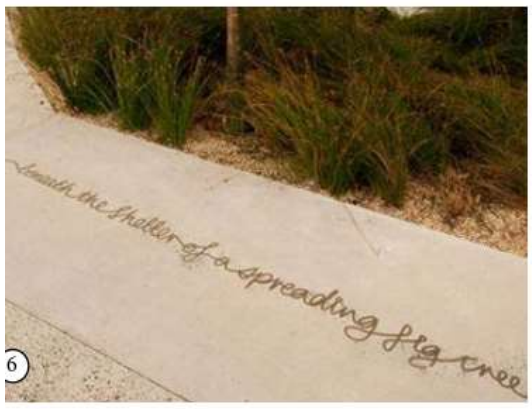
4

LEGEND

1. Human sun dial (theme to reflect existing community memorial with messaging improved)
2. 5m x 5m shelter with four BBQ's.
3. Bicycle / scooter pump track.
4. Shaded playground / water play area - relocated to improve connectivity to school, passive surveillance and access to parking. Existing playground close to end of useful life. Fenced to south / eastern boundaries.
5. Formal arrangement of large native trees to replace existing weed species centenarian trees (succession planting)
6. Wauchope's culture and history to be woven into the landscape through design details and interpretive art installations



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PORT MACQUARIE HASTINGS COUNCIL

P11/13



BAIN PARK MASTER PLAN
DETAIL PLAN









PORT MACQUARIE HASTINGS COUNCIL

P12/13



BAIN PARK MASTER PLAN
VIEWS & MOOD IMAGES



Stage 1 - $680,000 for main entrances, interpretive sculptures and promenade path



Stage 2 - $790,000 for shaded playground, pump track and sculptural seating area



Stage 3 - $2,950,000 for new buildings, upgrade of old toilets, and upgrade of carparks



Stage 4 - $720,000 for amphitheatre, covered stage and multi-purpose lawn



Stage 5 - $390,000 for shaded water play area



Stage 6 - $500,000 for shelters and perimeter landscaping

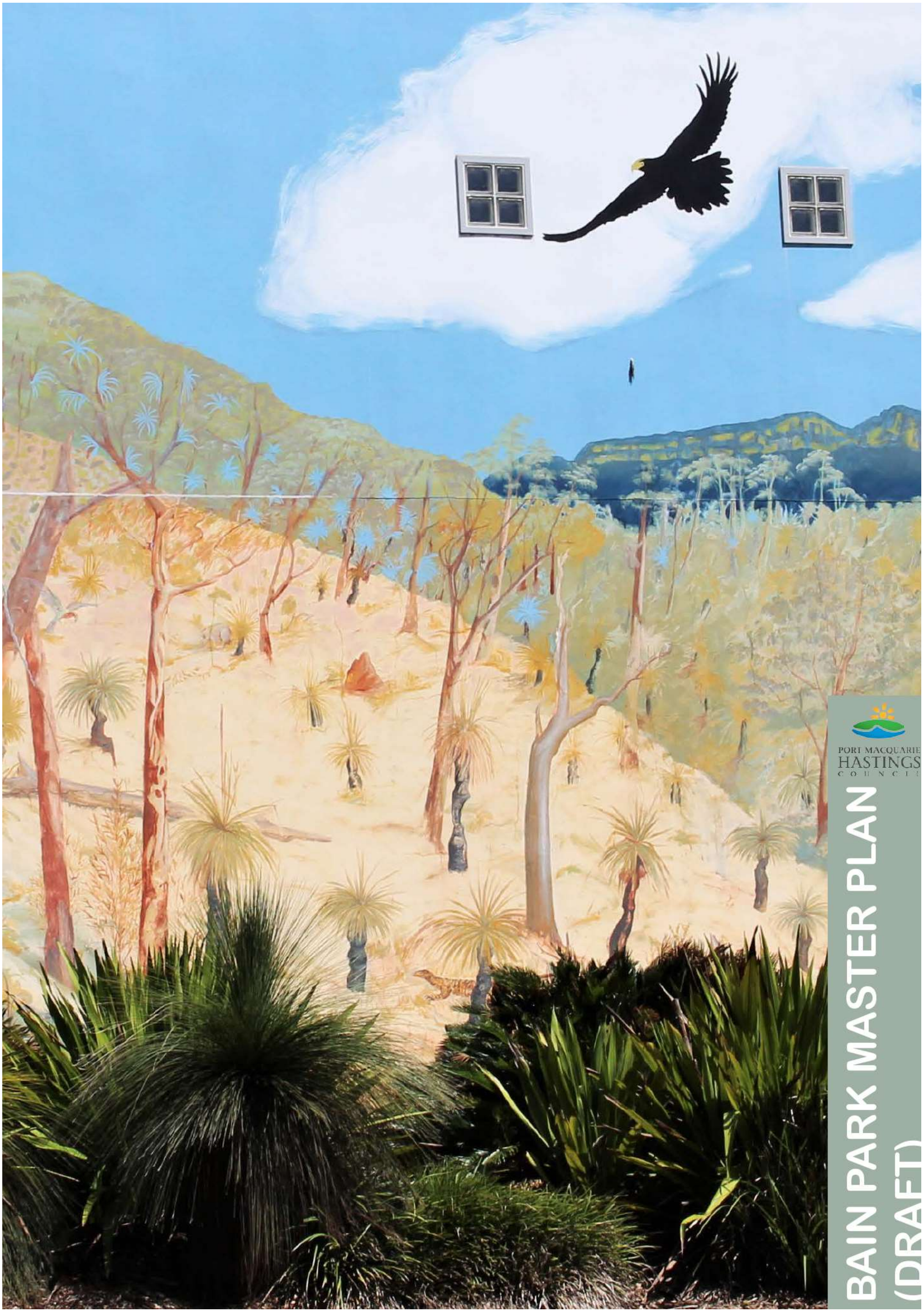


Stage 7 - $530,000 for irrigation, lighting and wifi

PORT MACQUARIE HASTINGS COUNCIL

P13/13

BAIN PARK MASTER PLAN
STAGING PLAN (SUBJECT TO FUNDING)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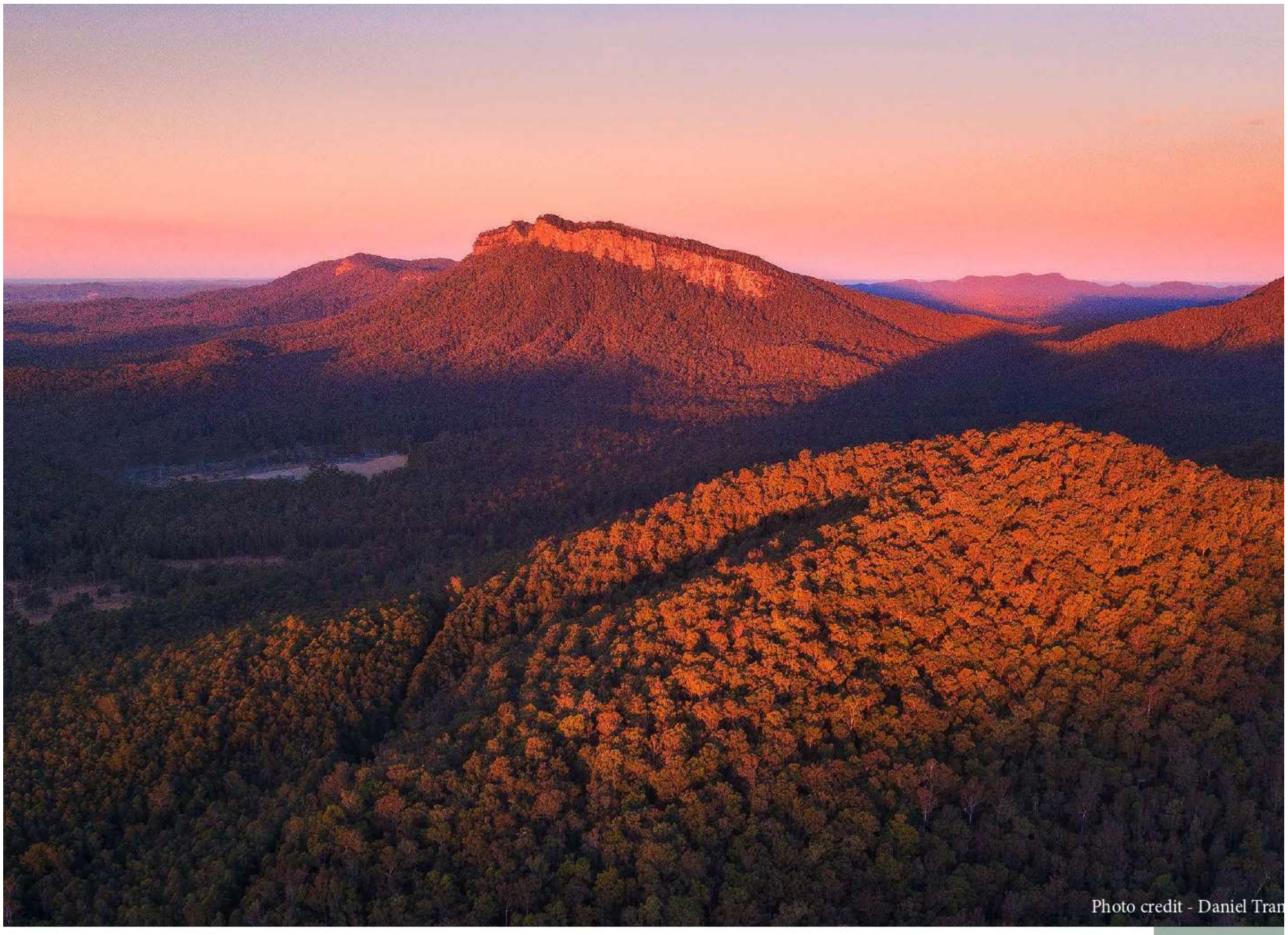

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PORT MACQUARIE HASTINGS COUNCIL

P3/13

BAIN PARK MASTER PLAN (DRAFT)
COMMUNITY ENGAGEMENT
& DESIGN PRINCIPLES









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• Pedestrian access (such as a wide set of stairs) is needed from the Community Arts Hall car park as people were currently jumping over the retaining wall and it was crumbling in sections.

Ongoing Consultation
In August 2020, Council undertook further engagement with some of those who took part in the initial planning workshops, including the following community groups and stakeholders:
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• Wauchope District Historical Society
• Wauchope Rotary Club
• Wauchope Lions Club
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Further inclusions incorporated into the site plan are:
• Options to retain, move or upgrade the existing Wauchope Community Arts Hall and Wauchope Rotary Youth Hall, including improved connectivity from the buildings to the park (if existing structures retained in-situ and other possibilities for parking from Avondale Street with a driveway up beside Omnicare property boundary).
• Options for relocation and upgrade of public toilets (including but not limited to the inclusion of adult change table) into the park if existing Wauchope Community Arts Hall and Wauchope Rotary Youth Hall buildings are retained.
• Clear demarcation of land titles and boundaries.
• Increased size of shelter located in north east of park.
• A note that weed trees will not be removed until new feature trees are planted and established on the promenade.
• Demarcation of accessible parking and 'parents with prams' spaces to be included in detailed design.
• Options for electric car charing and e-bikes to be included in detailed design.
• Incorporation of the Bain Park Gates at the High Street entry (replica gates and two remaining pillars to be installed at the Avondale Street entry).
• Inclusion of a war memorial in the west of the park.
• Inclusion of a sensory garden in the space between the Omnicare Building and the playground, that will be installed and maintained by Omnicare and will be fully accessible to the public.
• Inclusion of opportunities to reference Wauchope's history, culture and environment. This may be explored through a variety of mediums including use of locally sourced materials, interpretive signage / art / installations / detailing.
• Inclusion of a sundial (location to be based on solar study and compatibility with adjacent activities within the master plan).

Next Steps
Following acceptance by the identified key stakeholder groups the Draft Bain Park Master Plan will be put to Council for endorsement to be put on public exhibition for 28 days. During this time, key stakeholders and the broader community will be invited to have their say. Submissions made during this time will be considered and if necessary, revisions made to the Master Plan and shared with key stakeholders and the community. Following this, the Draft Bain Park Master Plan will be put to Council for endorsement.

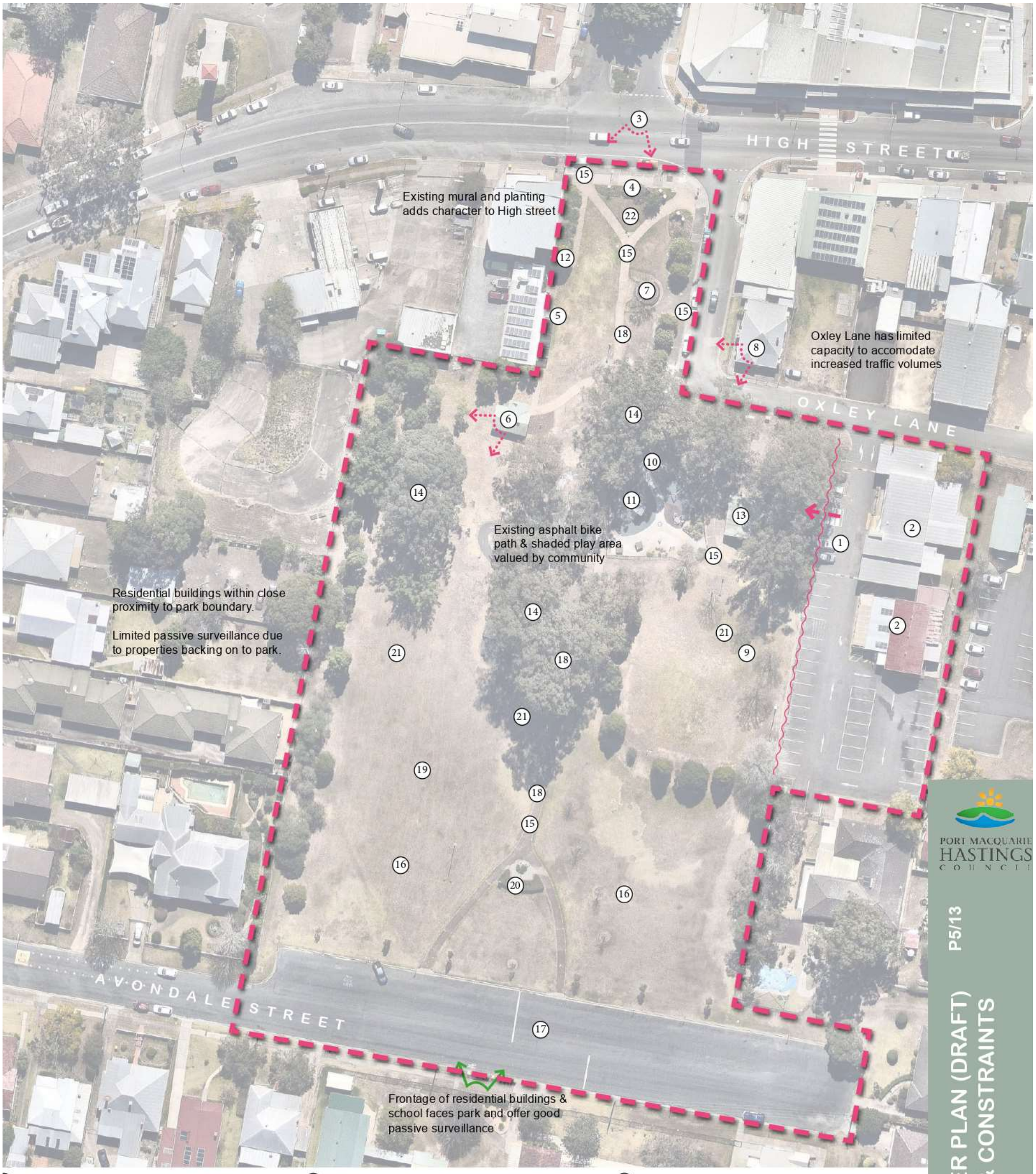
Once the plan is endorsed, Council can cost the development and begin to seek funding. At present, there is no timeline set for the commencement of construction and Council will keep the community informed as this changes.

Contact
For more information on the project please contact Council's Community Engagement team via email engagement@pmhc.nsw.gov.au or by calling (02) 6581 8111

PORT MACQUARIE HASTINGS COUNCIL

P4/13

BAIN PARK MASTER PLAN (DRAFT)
COMMUNITY ENGAGEMENT



1. Limited connectivity between Rotary Youth Hall / Wauchope Arts Hall and Bain Park.
2. Rotary Youth Hall and Waughope Arts Hall have had multiple extensions and require further improvements to better support user needs.
3. Bain Park has low street prescence / kerb appeal from High Street.
4. Views into Bain Park from High Street are interupted by planting and gates at front of park limiting passive surveillance.
5. Narrow pavement at frontage of Cafe has limited opportunity for outdoor dining.
6. Toilet block subject to vandalism and does not have adult change table.
7. Existing tree and wall surround in poor condition
8. Lack of commercial / residential frontage to park on Oxley Lane results in limited passive surveillance.
9. 5no. Chinese Tallow trees (Triadica sebifera) are required to be eradicated under Biosecurity Act 2015 due to being a regional containment priority weed. These trees have Centenarian plaques.
10. Existing playground was installed in 2012 and will be scheduled for replacement in approximatley 2022. Current position impacts passive surveillance into park and circulation.
11. Community plant beds underutilised & poor condition.
12. Tree's mature size will outgrow current location. Tree is utilised as Wauchope's Christmas Tree.
13. Large shelter not ideal for multiple smaller groups
14. Existing trees have good form and provide shade
15. Existing pavements in poor condition.
16. Southern half of Bain Park has no activities to draw users into park and is underutilised.
17. Informal parking to Avondale Street is inefficient.
18. Lighting throughout Bain Park is dated / in poor condition.
19. No irrigation results in die back during drought. Poor quality compacted soils results in limited growth of plants / proliferation of weeds.
20. Community memorial in poor condition
21. Lack of power provisions in park to support event such as market stalls.
22. Park furniture is dated and in average condition. Existing retaining wall in poor condition

PORT MACQUARIE HASTINGS COUNCIL

P5/13

BAIN PARK MASTER PLAN (DRAFT)
OPPORTUNITIES & CONSTRAINTS


COMMUNITY ARTS HALL



NARROW PAVEMENT TO FRONT OF WATERMANS CAFE


CHINESE TALLOW TREES (WEED SPECIES)


CHILDREN'S PLAYGROUND


YOUTH HALL


PATH LIGHTING

PORT MACQUARIE HASTINGS COUNCIL

P6/13

BAIN PARK MASTER PLAN (DRAFT)
SITE PHOTOGRAPHS


SEATING


SHELTER


DILAPIDATED PAVEMENTS


EASTERN PATH ENTRANCE FROM CAR PARK


MURAL AND GARDEN BEDS


HISTORIC GATES AT NORTHERN ENTRANCE


GRADE SEPARATION AT EASTERN CARPARK


SOUTHERN ACCESS OF BAIN PARK

PORT MACQUARIE HASTINGS COUNCIL

BAIN PARK MASTER PLAN (DRAFT) P7/13

SITE PHOTOGRAPHS



1. Upgraded street frontage and open up views into park.
2. Playground and bike track relocated to south of park. Decomposed granite surface below trees with uplights and free-form "Gaudi" inspired seating.
3. Removable Christmas tree with provisions for power.
4. Interpretive sculpture with uplighting.
5. Entry wall with uplighting at main entrances to park (original Bain Park gates integrated to northern entry).
6. Pavement extended to accomodate outdoor dining.
7. Large trees, low understory planting and a wide paved entrance with 4m solar pole lights reinforce visual connectivity to High Street & open views into Bain Park.
8. Existing toilet block replaced. New toilets to include adult change table and address CPTED principles
9. 3.5m width promenade path with 4m solar pole lights & wifi. Formal arrangement of large native trees to replace existing centenarian trees. Power provisions incorporated to western alignment of path for markets.
10. Multi-purpose lawn for informal use and events such as markets, outdoor movie nights, Christmas carols etc.
11. 5m x 5m & 10m x 5m shelters with accessible seating. Shelter to south to have four BBQ's.
12. Upgrades to community buildings (12a Youth Hall / 12b Community Arts Hall). Option A depicted - refer to P8 for further details & alternative arrangements.
13. Terraced sandstone block amphitheatre cut into bago mound with small covered stage area (13a).
14. Shaded playground / water play area - relocated to improve connectivity to school, passive surveillance and access to parking
15. Buffer planting to western edge of park to incorporate species suitable for use in residential gardens and will incorporate plant identification for education purposes.
16. Location for temporary stage. Power / water provisions incorporated into adjacent decomposed granite area.
17. Human sun dial (incorporates community memorial)
18. Public sensory garden (funded and maintained by Omnicare).
19. Bicycle / scooter pump track.
20. War memorial.
21. Car parking formalised with 6m solar pole lights.

    Irrigation to all planting beds and lawn areas (recycled water ready).

PORT MACQUARIE HASTINGS COUNCIL

P8/13

BAIN PARK MASTER PLAN (DRAFT)
OVERALL PLAN



LEGEND

(1) New community buildings (Option A - highest cost).
- Existing buildings demolished (however opportunity to salvage and reuse materials from the existing buildings to be considered).
- New buildings constructed at grade with park to achieve high level of connectivity to park, with parking to rear.
- Character shall be the Wauchope vernacular.
- Shall maintain current functionality; target engagement to be carried out with existing users during subsequent design stages to ensure all user requirements achieved.
- Management agreements with the existing users to be developed.
- Construction to minimise disruption to existing users.
- May be considered in conjunction with Option B (i.e. a New Youth Hall building however existing Community Arts Hall relocated - or vice versa).

(2) Existing community buildings relocated (Option B - medium cost).
- Relocated to be at grade with park to with parking to rear to achieve high level of connectivity to park.
- Subject to structural review of buildings / feasibility study.
- Buildings will require modification to allow access from both sides and ensure compliance with current standards.
- Shall maintain current functionality; target engagement to be carried out with existing users during subsequent design stages to ensure all user requirements achieved.
- Management agreements with the existing users to be developed.
- Construction to minimise disruption to existing users.
- May be considered in conjunction with Option A (i.e. a New Youth Hall building however existing Community Arts Hall relocated - or vice versa).

(3) Existing community buildings retained in current location (Option C - lowest cost).
- Retained in current location with parking separating buildings from park.
- Accessability between park and buildings enhanced by addition of a defined pedestrian access through car park and by provision of new steps / ramps.
- Existing retaining wall replaced with sandstone blocks.
- Opportunity to extend WCAC building south to accomodate storage.
- Management agreements with the existing users to be developed.





PORT MACQUARIE HASTINGS COUNCIL

P9/13

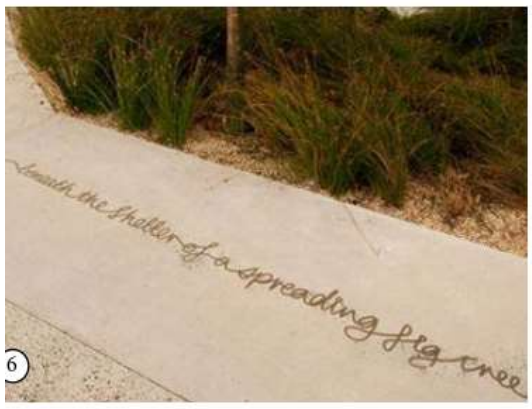
BAIN PARK MASTER PLAN (DRAFT)
DETAIL PLAN


LEGEND
1 Road frontage to Bain Park upgraded to enhance street frontage and open up views into park.
2 Street trees and planting bays added to Oxley Lane
3 Removable Christmas tree including inground plug and play provisions for power.
4 Significant interpretive sculpture with uplighting to entrance plaza to enhance street presence and draw people into park.
5 Signage wall incorporating Bain Park gates and uplighting at main entrances to park.
6 Pavement to front of cafe extended to accomodate outdoor dining.
7 Large trees, low understory planting and a wide paved entrance with 4m solar pole lights reinforce visual connectivity to High Street & open views into Bain Park.


PORT MACQUARIE HASTINGS COUNCIL
P10/13
BAIN PARK MASTER PLAN (DRAFT)
DETAIL PLAN

LEGEND

1. Human sun dial (theme to reflect existing community memorial with messaging improved)
2. Public sensory garden (funded and maintained by Omnicare).
3. Bicycle / scooter pump track.
4. Shaded playground / water play area - relocated to improve connectivity to school, passive surveillance and access to parking. existing playground close to end of useful life. Fenced to south / eastern boundaries.
5. Formal arrangement of large native trees to replace existing weed species centenarian trees (succession planting)
6. Wauchope's culture and history to be woven into the landscape through design details and interpretive art installations
7. 5m x 5m shelter with four BBQ's.







PORT MACQUARIE HASTINGS COUNCIL

P11/13



BAIN PARK MASTER PLAN (DRAFT)
DETAIL PLAN









PORT MACQUARIE HASTINGS COUNCIL

P12/13

BAIN PARK MASTER PLAN (DRAFT)
VIEWS & MOOD IMAGES



Stage 1 - $680,000 for main entrances, interpretive sculptures and promenade path



Stage 2 - $790,000 for shaded playground, pump track and sculptural seating area



Stage 3 - $2,950,000 for new buildings, upgrade of old toilets, and upgrade of carparks



Stage 4 - $720,000 for amphitheatre, covered stage and multi-purpose lawn



Stage 5 - $390,000 for shaded water play area



Stage 6 - $540,000 for shelters, perimeter landscaping and outdoor dining area



Stage 7 - $530,000 for irrigation, lighting and wifi



3 Your Business and Industry

What we are trying to achieve

A region that is a successful place that has vibrant, diversified and resilient regional economy that provides opportunities for people to live, learn, work, play and invest.

What the result will be

We will have:

- A strong economy that fosters a culture supportive of business and ensures economic development of the region
- Townships, villages and business precincts that are vibrant commercial, cultural, tourism, recreational and/or community hubs
- A region that attracts investment to create jobs
- Partnerships that maximise economic return and create an efficient and effective business environment

How we will get there

3.1 Embrace business and a stronger economy
3.2 Create vibrant and desirable places
3.3 Embrace opportunity and attract investment to support the wealth and growth of the community
3.4 Partner for success with key stakeholders in business, industry, government, education and the community

Attachment B:

History of allocations under the Event Sponsorship Program

Event Name	Year	Sponsorship Granted	Economic Impact
Ekam Yoga Festival	2015	$3,500	$17,000
Big Band Blast	2015	$5,000	$309,000
3 Rivers Rowing Festival	2015	$3,500	$45,000
King of the Mountain Fun Run	2015	$2,000	$33,000
Sand Mudder	2015	$2,000	$22,000
Beatles Festival	2016	$2,000	$135,000
Bago Bluff Mountain Bike Marathon	2016	$2,000	$40,000
Port Macquarie Running Festival	2016	$3,000	$585,000
Suck it up Buttercup	2016	$5,000	$500,000
Ekam Yoga Festival	2016	$5,000	$20,000
3 Rivers Rowing Festival	2016	$2,500	$45,000
Big Band Blast	2016	$5,000	$309,000
Port Macquarie Beer & Cider festival	2016	$5,000	$360,000
Northern Division Road Cycling Championships	2016	$2,000	$29,000
Luminosity Youth Summit	2016	$4,000	$20,000
Sand Mudder	2016	$3,000	$90,000
Beach to Brother Running Festival	2016	$5,000	$308,000
King of the Mountain Fun Run	2016	$1,500	$22,500
Suck it up Buttercup	2017	$5,000	$233,000
Port Macquarie Beatles Festival	2017	$5,000	$416,000
Port Macquarie Running Festival	2017	$5,000	$763,000
Slice of Haven	2017	$5,000	$647,000
Blues & BBQ Festival	2017	$5,000	$812,000
Ekam Yoga Festival	2017	$2,500	$44,000
Port Macquarie Beer & Cider Festival	2017	$5,000	$500,000
Beach to Brother Running Festival	2017	$5,000	$353,000
Port Macquarie Mountain Bike Festival	2017	$2,500	$10,000
Suck it Up Buttercup	2018	$5,000	$267,000
Port Macquarie Running Festival	2018	$5,000	$1,021,000
Slice of Haven	2018	$5,000	$712,000
Hello Koalas Festival	2018	$5,000	$103,000
Elephant Trail Race	2018	$5,000	$407,000

Event Name	Year	Sponsorship Granted	Economic Impact
Beach to Brother	2018	$5,000	$1,066,000
Wildwood Music Festival	2018	$2,500	$76,000
Digital Expo	2018	$0-refunded	$0
Fox Super Flow MTB Champs	2019	$5,000	$106,000
Regional Dementia Conference	2019	$5,000	$130,000
Laurieton Multisport Challenge	2019	$5,000	$15,000
Elephant Trail Race	2019	$5,000	$207,000
'A Gala Night at the Ballet'	2019	$5,000	$63,000
PMBA Bodyboard Teams Challenge	2019	$5,000	$154,448
TOTAL (40)		**$163,500**	**$10,994,948**

Event Name	Year	Sponsorship Granted since COVID19	Est. Economic Impact
Wauchope Twilight Tastings	2020	$2,500 rolled to 20/21	*$200,000 *Postponed*
Laurieton Multisport Challenge	2020	$2,500 granted. $875 retained by PMHC due to cancelation. New total $1,625 granted.	**Cancelled*
Cycling NSW Junior Tour	2020	$2,500 rolled to 20/21	*$175,000 *Postponed*
PMBA Body board Teams Challenge	2020	$2,500 rolled to 20/21	*$154,000 *Postponed*
Fox Super Flow MTB Champs	2020	$5,000	*$123,000*
Howling Moon Blues Festival	2020	$5,000 rolled to 20/21	*$823,700 *Postponed*
MotoFest Wauchope	2020	$4,000	*Unknown as will be an online event in 2020*
Surf n' Country	2020	$4,000 rolled to 20/21	*$1,000,000 *Postponed*
Elephant Trail Race	2020	$4,000 rolled to 20/21	*$760,900 *Postponed*
Gardenista	2020	$4,000 rolled to 21/22	*$1,200,000 *Postponed*
King of the Mountain	2020	$2,000 rolled to 21/22	*$286,000 *Postponed*
David 'Goose' Gosby Memorial	2020	$2,000	*$86,000*
Dark Alley Sessions	2021	$5,000	*Digital Reach Event*
Flamin' Dragons Annual Regatta	2021	$5,000	*$640,800*
Ride the Wave	2021	$5,000	*$143,000*
Vibez in the Vines	2021	$5,000	*$137,300*
TOTAL (16)		**$60,000**	

*Estimates in *red* - Acquittal data for these events will be submitted after event held.

4 Your Natural and Built Environment

What we are trying to achieve

A connected, sustainable, accessible community and environment that is protected now and into the future.

What the result will be

We will have:

- Effective management and maintenance of essential water, waste and sewer infrastructure
- A community that is prepared for natural events and climate change
- Sustainable and environmentally sensitive development outcomes that consider the impact on the natural environment
- Accessible transport network for our communities
- Infrastructure provision and maintenance that meets community expectations and needs
- Well planned communities that are linked to encourage and manage growth
- Accessible and protected waterways, foreshores, beaches and bushlands
- An environment that is protected and conserved for future generations
- Renewable energy options that are understood and accessible by the community

How we will get there

4.1 Provide (appropriate) infrastructure and services including water cycle management, waste management, and sewer management
4.2 Aim to minimise the impact of natural events and climate change, for example, floods, bushfires and coastal erosion
4.3 Facilitate development that is compatible with the natural and built environment
4.4 Plan for integrated transport systems that help people get around and link our communities
4.5 Plan for integrated and connected communities across the Port Macquarie-Hastings area
4.6 Restore and protect natural areas
4.7 Provide leadership in the development of renewable energy opportunities
4.8 Increase awareness of issues affecting our environment, including the preservation of flora and fauna

Authorised by:	<authority>
Authorised date:	DD/MM/YYYY
Effective date:	DD/MM/YYYY
Next review date:	DD/MM/YYYY
File Number:	##########

Roadside Vegetation Management Policy

1. INTRODUCTION

This policy sets out the principles by which Council manages vegetation on its road network and associated stormwater management systems.

2. POLICY STATEMENT AND SCOPE

Council, as a Roads Authority, has the responsibility of managing hazards along public roads within the Local Government Area to help the safety of all road users. One source of hazards that needs managing is roadside vegetation. Council also has a responsibility for controlling weeds within the road corridor.

In acknowledgment of finite resources to fulfil these responsibilities along with all other responsibilities as a Local Authority, clear management principles are required to appropriately manage the allocation of resources to mitigate risk and hence provide as safe as possible road network.

This policy applies to all public roads and stormwater management systems, both formed and unformed, throughout the Local Government Area (LGA), with the exception of:

- The management of Crown Roads except where the road is listed on Council's Road Asset Register.

The scope of this policy is limited to the management of vegetation within the bounds of Council's available resourcing.

2.1 Safe Systems Approach

Road safety is a shared responsibility – everyone needs to make safe decisions on and around the road to prioritise safety.

Having a safe road and roadside environment through maintenance, including the management of vegetation is only one measure to ensure the road is as safe as possible. The other important elements of the Safe Systems Approach are Safe Speeds (adhering to speed limits and driving to conditions), Safe Vehicles and Safe People (making safe choices on the road network).

2.2 Management Principles

Council will manage roadside and stormwater vegetation using the following principles:

Program of Works	In order to provide a service to as much as the community as possible managing roadside vegetation and to achieve work efficiencies, vegetation maintenance will be primarily delivered via programmed works. The programmes are:

	○ scheduled rural roadside slashing programme ○ scheduled rural outreach mowing programme ○ scheduled weed spraying programme ○ scheduled urban vegetation maintenance programme
Reactive Works	Acknowledging some vegetation risks may not be mitigated by programmed works, reactive works will be undertaken to treat hazards at discrete locations based on individual assessment and risk prioritisation.
Resource Allocation	Acknowledging that available resources limit the provision of services across the entire road and stormwater networks, the allocation of those available resources to implement the programmed works or undertake reactive works will be prioritised based on the classification of the road, community safety and risk.
Removal of Vegetation that is on or overhanging the public road	Council can remove vegetation that is on or overhanging a public road to remove a traffic hazard. The extent of responsibility will be considered to be the air space above the road and the limits of the road formation or more generally 5m from the road shoulder hinge point. Council may elect to leave timber at the site within the road reserve if it does not pose a high risk. The removal of vegetation for upgrade projects or for the carrying out of roadworks may be subject to other environmental approvals.
Removal of Marine Vegetation	Council will not undertake maintenance activities where Marine Vegetation shall be harmed, threatened or picked unless a Fisheries Permit has been approved by the regulator.
Removal of Threatened Ecological Communities (TEC)	Council will not undertake maintenance activities where an TEC shall be harmed, threatened or picked unless a Review of Environmental Factors (REF) has been approved by Council.
Removal of trees within road shoulders	Council will not routinely programme activities to remove trees on road shoulders unless deemed a high risk to the public by a qualified arborist.
Vegetation Management on National Park managed land.	Council will not undertake maintenance activities on National Parks land unless consent has been provided by National Parks and Wildlife Services.
Weed spraying	Weed spraying will be completed on roads and stormwater management systems identified from Council's Road and Stormwater Asset Register on a programmed or reactive basis. Sensitive receivers with serious health issues adjoining areas to be sprayed shall be notified prior to commencement of spraying. Organic Farms require buffer zones within their property and Council may elect to spray within the road reserve to mitigate public risk.

Stockpiling of Vegetation Waste	Council will stockpile vegetation waste in accordance with the EPA Waste Exemptions. Council will not burn vegetation on Total Fire Ban Days without consent provided by Rural Fire Service (RFS).
Driveways / Road Crossings	Due to the scale of the public road network, vegetation issues or hazards associated with private driveways are likely to rate as a low risk. Therefore based on finite resources Council will not specifically programme vegetation works for private driveways within the road reserve outside of existing scheduled work programmes or reactive risk prioritisation. Council will consider applications from land owner(s) to manage vegetation within the road reserve that impedes safe access and egress from their driveway onto Council's road network.
Urban verge/nature strip maintenance	Council will not routinely programme vegetation maintenance works along urban local road verge/nature strips fronting properties.
Damage to fencing from fallen vegetation	Council will not repair road boundary fences damaged due to fallen vegetation. Council may elect to undertake immediate temporary repairs to avoid stock migrating onto the road. Council will consider applications from adjoining land owner(s) to manage vegetation within the road reserve that is a risk to damaging fencing.

2.3 Road Classifications

Roads are classified into ten typical classifications across the unsealed and sealed network that are used to prioritise the allocation of resources as outlined above. These definitions are located within the Appendix (Roads Classifications).

2.4 Stormwater Classifications

Stormwater management systems are classified into three typical classifications that are used to prioritise the allocation of resources. These definitions are located within the Appendix (Stormwater Classifications)

2.5 Service Provision

The service provision is related to the availability of funding and resourcing which is delivered by the service treatment. The adopted budget and allocated resources dictate the service level delivered to the community via the service treatment.

Asset classifications, service treatments and estimated network sizes are listed below:

Asset Classification	Service Treatment	Estimated Size of Network [2020]
Sealed Roads (Rural)	Outreach Mowing Programme Roadside Slashing Programme + Weed Spraying Programme	429km

	Reactive Vegetation Management (risk prioritisation)	
Sealed Roads (Urban)	Urban Mowing and Garden Maintenance Programme Reactive Vegetation Management (risk prioritisation)	482km
Unsealed Roads	Outreach Mowing Programme Weed Spraying Programme Reactive Vegetation Management (risk prioritisation)	454km
Access Tracks	On an as-needs basis where impassable by a Standard 4WD Vehicle.	50 km.
Unformed	No vegetation maintenance.	> 100 km
Car Parks	Reactive Vegetation Management (risk prioritisation)	> 93 car parks
Open Drains (including Drainage Easements)	Open Drain Maintenance Programme Reactive Vegetation Management (risk prioritisation)	>16km
Pipes, Pits and Outlets	Reactive Vegetation Management (risk prioritisation)	326km
Water Quality Devices	Reactive Vegetation Management (risk prioritisation)	142

- Slashing, Mowing and Spraying intervals, assigned to the programmes listed above is the Level of Service that Council can provide within current resourcing.
- The Service Treatment will be reviewed where there is a significant change in network composition, condition and/or budget allocation.
- The management of road pavements and other features within the road reserve is covered under separate policies that cover both sealed and unsealed roads.
- The management of stormwater management systems and other features within the drainage reserve or designated drainage easements is covered under a separate policy that covers the effects of Stormwater.
- Approval of a dwelling, shed, business, or any other development on a property does not automatically commit Council to alter the Service Provision or the Road Classification.
- Works shall be allocated in accordance with the above mentioned programmes, supported by risk based reactive maintenance focused on addressing community safety issues and in line with guidance from Council's insurer.
- Works shall be completed in accordance with Council's NATSPEC maintenance specification documents

3. RESPONSIBILITIES AND AUTHORITIES

Council is the Road Authority for all roads vested in fee simple to Council (meaning that it has absolute ownership of the land) as described within the Roads Act 1993. Council is the appointed Authority for the Local Government Area as described in the Local Government Act 1993.

Council as the governing body is responsible and accountable for:

- Adopting the Roadside Vegetation Management Policy.
- Oversight of the implementation.

The General Manager and Directors are responsible and accountable for:

- Implementing and communicating this policy
- Monitoring compliance of this policy
- Ensuring the policy is reviewed and updated to meet current legislative requirements
- Ensuring appropriate delegations are in place with regard to exercising Road and Local Government Authority functions.

Group Managers: Infrastructure Planning, Infrastructure Operations, Recreation, Property & Buildings and Environment & Regulatory Services are responsible and accountable for:

- Implementing and communicating this policy.
- Monitoring compliance of this policy.
- Ensuring the policy is reviewed and updated to meet current legislative requirements.
- Ensuring appropriate procedures are developed, implemented and monitored to meet the principles of this policy.

Managers and Engineers: Infrastructure Operations, Recreation, Property & Buildings and Environment & Regulatory Services are responsible and accountable for:

- Implementing and communicating this policy and any associated procedures.
- Monitoring compliance of this policy and any associated procedures.

Coordinators: Transport and Stormwater Network, Recreation, Property & Buildings and Natural Resource Management are responsible and accountable for:

- Implementing and communicating this policy and any associated procedures.

All Council Officers are responsible and accountable for following this policy and any associated procedures.

4. REFERENCES

This policy must be followed by all Council staff. All significant changes to this policy will be tabled at a future meeting of Council for consideration.

Legislative References include:

- Roads Act (1993)
- Local Government Act (1993)
- Civil Liability Act (2002)
- Work Health and Safety Act (2011)
- Work Health and Safety Regulation (2017)
- Environmental Planning and Assessment Act (1979)

- National Parks and Wildlife Act (1974)
- Biodiversity Conservation Act (2016)
- Fisheries Act (1994)
- State Environmental Planning Policy (SEPP) Infrastructure (2007)
- State Environmental Planning Policy (SEPP) Coastal Management (2018)
- Road Transport Act (2013)

Other references:

- Making a Council Policy
- Unsealed Roads Policy
- Rural Roads Slashing Programme
- Rural Roads Outreach Mowing Programme
- Urban Mowing Programme
- Weed Spraying Programme
- Parks and Open Space Hierarchy and Maintenance Schedule
- Statewide Mutual Best Practice Manual – Roads
- Statewide Mutual Best Practice Manual – Trees
- Council's Asset Management Policy
- Council's NATSPEC maintenance specifications

5. DEFINITIONS

A definition of key terms referred to in the policy

Councillor: An elected member of Council
General Manager: 1st tier management position and titled as such
Director: 2nd tier management position and titled as such
Group Manager: 3rd tier management position and titled as such, asset custodian
Engineer: Specific professional engineering staff within Council
Coordinator: Supervisor of outdoor staff
Council officer: A member of Council staff
Fee Simple: Absolute ownership of land
Standard 4WD Vehicle: A vehicle that has the ability for torque to be applied to both rear and front axels groups via a locked centre differential and/or transfer case, as applicable, has a ground clearance (unladen) of 200mm or greater and has no post factory modifications to enhance its 4 wheel drive capabilities.
Hinge Point: The point in the cross-section of a road at which the extended batter slope line would intersect the extended shoulder line.

6. PROCESS OWNER

The Group Manager Infrastructure Planning is the process owner. The process owner should be contacted for any information in relation to this policy.

7. AMENDMENTS

Nil. This is a new Council Policy.

8. APPENDIX

8.1 Road Classifications

Sealed Roads are classified into - five typical classifications, in order of importance:

Road Category	Description
Sealed Arterial	• Generally through roads which connect to significant regional centres - Major traffic flow with many branches/feeder roads. • Typically support commercial, industrial and residential land use. • The running surface is generally > 10.0 metres wide (including shoulders) with two lanes for traffic and generally duplicated in urban areas. • Road is formed and generally drained to Council standards. • Significant rain events will generally not cause temporary closure. • Pavement material may be either asphalt or bitumen surfacing or a combination of these. • Roads are generally delineated with a centreline and edge lines. • Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.
Sealed Sub-Arterial	• Traffic count generally more than 3,000 vehicles/day. • Generally through roads which connect to local centres or destinations - Main traffic flow with many branches/feeder roads. • Typically support commercial, industrial and residential land use. • The running surface is generally 8.0 – 10.0 metres wide (including shoulders) with two lanes for traffic and occasionally duplicated in urban areas. • Road is formed and generally drained to Council standards. • Significant rain events may cause temporary closure. • Pavement material may be either asphalt or bitumen surfacing or a combination of these. • Roads are generally delineated with a centreline and edge lines. • Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.
Sealed Collector	• Traffic count generally less than 3,000 vehicles/day. • Generally through roads which connect to Arterial or Sub-Arterial Roads – collects traffic flow with many branches/feeder roads. • Typically support some commercial, industrial and residential land use. • The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic. • Road is formed and generally drained to Council standards. • Significant rain events may cause temporary closure. • Pavement material may be either asphalt or bitumen surfacing or a combination of these.

	• Roads are occasionally delineated with a centreline or edge lines or only a centreline. • Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage.
Sealed Local	• Traffic count generally less than 1000 vehicles/day. • Generally through roads which distribute to a Collector Road but can be no through roads - Limited flow with occasional branches/feeder roads including Access Tracks. • Typically support residential land use. • The running surface is generally > 5.0 metres wide (including shoulders) with one or two lanes for traffic. • Road is formed and generally drained to Council standards. • Significant rain events may cause temporary closure. • Pavement material may be either asphalt or bitumen surfacing or a combination of these. • Roads are generally not delineated with line marking. • Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage.
Car Parks	• Car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property. • Generally located close to public reserves, however can also be found in other urban locations. • Car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.

Unsealed Roads are classified into - five typical classifications, in order of importance:

Road Category	Description
Major Roads	Traffic count generally more than 100 vehicles/day. Generally through roads which connect to significant local community centres or destinations - Main traffic flow with many branches/feeder roads. The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic. Road is formed and generally drained to Council standards. Significant rain events may cause temporary closure. Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these. Roads typically have guideposts located adjacent to culverts and limited advisory signage
Local Roads	Traffic count generally less than 100 vehicles/day.

Road Category	Description
	Generally through roads which distribute to a Major Road (unsealed) but can be no through roads - Limited flow with occasional branches/feeder roads including Access Tracks. The running surface is generally 3 – 6.5 metres wide (including shoulders) with one or two lanes for traffic. Road is formed and generally drained to Council standards Significant rain events may cause temporary closure. Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these. Roads typically have guideposts located adjacent to culverts and limited or no advisory signage
Access Tracks	Generally an access track with infrequent traffic use and less than 10 vehicles/day and may provide a connection to Forestry NSW areas or National Parks. Typically "no through" roads that are open to the public and provide access to a limited number of properties. Generally have no standard formation, are undrained and their make-up consists of naturally occurring material, however may contain a small percentage of imported materials. Accessible by 4WD vehicles. It is probable that water will cross the road in minor rain events and significant rain events and may cause temporary closure and road scour.
Unformed/Paper Road	These are unformed "paper" roads, which are indistinct, inactive or not regularly used as a vehicle access track. No road formation exists as the road is only identified as such on a map.
Unsealed Car Parks	Unsealed car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property. Generally located close to public reserves, however can also be found in other urban locations. Unsealed car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.

8.2 Stormwater Classifications

Stormwater management systems are classified into three typical classifications:

Stormwater Category	Description
Open Drains	

	• Open Drains are generally constructed on a road reserve but can be completely on non-road property (drainage easements and reserves). • Generally located within urban areas, however can also be found in rural locations. • Open Drains generally consist of one drain but may form a network of multiple drains. • Open Drains are generally created to control nuisance water derived from Council managed land and may become non-functional during significant rain events. • Open Drains are typically earth formed bunds or trenches where water is concentrated and conveyed around property to a natural waterways or localised depression. • Open Drains may consist of earth, vegetation, geofabric, jute mesh, matting, concrete, rock or a combination of these. • Open Drains could be perennially dry or be continually waterlogged, dependent on the size of the catchment area, drain capacity, subsoil conditions, grade and prevailing rain events. • Significant rain events may cause the closure of a road or flooding in low lying areas. • Road Table Drains are treated as part of Sealed Roads shoulder grading. • Conventional overland sheet flow is not considered to be an open drain. • The Broadwater and Settlement Shores Canals are classified as Open Drains.
Pipe and Pits	• Stormwater pipes and pits are generally constructed on a road reserve but can be completely on non-road property (drainage reserves and easements). • Generally located within urban areas, however can also be found in rural locations. • Generally consist of one pipe but may form a network of multiple pipes. • Stormwater pipes and pits are generally created to convey nuisance water derived from Council managed land and adjoining private property and may become non-functional during significant rain events. • Pipes and pits are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression. • Pipes and pits may consist of concrete, steel or polymer materials or a combination of these. • Pipes and pits could be perennially dry or be continually waterlogged, dependent on the size of the catchment area, level, grade, subsoil conditions, drain capacity and prevailing rain events. • Significant rain events may cause the closure of a road or flooding in low lying areas. • The kerb and gutters generally convey stormwater from road pavements into kerb inlet pits and into the piped stormwater network.

Stormwater Quality Improvement Devices (SQIDs) (Gross Pollutant Traps and Detention Basins)	• Stormwater Quality Improvement Devices are generally constructed in a drainage reserve but can be completely in road reserves or drainage easements. • Generally located within urban areas, however can also be found in rural locations. • Generally consist of isolated devices but may form a network of devices. • Stormwater Quality Improvement Devices are generally created to control water pollution derived from Council managed land and adjoining upstream residential land and may become non-functional during significant rain events. • Stormwater quality improvement devices are generally designed to capture pollution from high frequency, low intensity rain events and/or to capture the "first flush" of pollutants generated during a storm event. Stormwater quality improvement devices are generally ineffective during rare, intense of infrequent rainfall events. • Stormwater Quality Improvement Devices are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression. • Stormwater Quality Improvement Devices may consist of earth, vegetation, geofabric, jute mesh, matting, rock, concrete, steel or polymer materials or a combination of these. • Stormwater Quality Improvement Devices could be perennially dry or be continually waterlogged, dependent on the size of the catchment area, level, grade, subsoil conditions, drain capacity and prevailing rain events.

Authorised by:	<authority>
Authorised date:	DD/MM/YYYY
Effective date:	DD/MM/YYYY
Next review date:	DD/MM/YYYY
File Number:	##########

Roadside Vegetation Management Policy ~~— DRAFT~~

1. INTRODUCTION

This policy sets out the principles by which Council manages vegetation on its road network and associated stormwater management systems.

2. POLICY STATEMENT AND SCOPE

Council, as a Roads Authority, has the responsibility of managing hazards along public roads within the Local Government Area to help the safety of all road users. One source of hazards that needs managing is roadside vegetation. Council also has a responsibility for controlling weeds within the road corridor.

In acknowledgment of finite resources to fulfil these responsibilities along with all other responsibilities as a Local Authority, clear management principles are required to appropriately manage the allocation of resources to mitigate risk and hence provide as safe as possible road network.

This policy applies to all public roads and stormwater management systems, both formed and unformed, throughout the Local Government Area (LGA~~).~~-), with the exception of:

- ~~This policy does not include t~~The management of Crown ~~land~~ Roads except where the road is
- listed on Council's Road Asset Register ~~or where Council has been appointed as Trustee to Crown Public Reserves~~.

The scope of this policy ~~includes~~ is limited to the management of -vegetation within the bounds of Council's available resourcing.

2.1 Safe Systems Approach

Road safety is a shared responsibility – everyone needs to make safe decisions on and around the road to prioritise safety.

Having a safe road and roadside environment through maintenance, including the management of vegetation is only one measure to ensure the road is as safe as possible. The other important elements of the Safe Systems Approach are Safe Speeds (adhering to speed limits and driving to conditions), Safe Vehicles and Safe People (making safe choices on the road network).

~~2.1 Road Classifications~~

~~Roads are classified into 9 typical classifications, these definitions are located within the Unsealed Roads Policy or within the Appendix (Sealed Roads)~~

~~2.2 Stormwater Classifications~~

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~~Stormwater features are classified into 3 typical classifications, these definitions are located within the Appendix (Stormwater)~~

~~2.~~2.~~3~~2 Management Principles

Council will manage roadside and stormwater vegetation using the following principles:

~~Classification of Roads~~Program of Works	In order to provide a service to as much as the community as possible managing roadside vegetation and to achieve work efficiencies, vegetation maintenance will be primarily delivered via programmed works. The programmes are: o scheduled rural roadside slashing programme o scheduled rural outreach mowing programme o scheduled weed spraying programme o scheduled urban vegetation maintenance programme ~~Roads will be categorised, as outlined in the previous section, based on multiple factors including:~~ ~~o traffic volumes~~ ~~o number and type of premises accessed~~ ~~o school bus routes~~ ~~o regional tourism value~~ ~~o regional economic value~~ ~~o network and community connectivity.~~ ~~The classification of a road defines the "L~~level of s~~Service" provided by Council in maintaining that road.
Reactive Works	Acknowledging some vegetation risks may not be mitigated by programmed works, reactive works will be undertaken to treat hazards at discrete locations based on individual assessment and risk prioritisation.
Resource Allocation	Acknowledging that available resources limit the provision of services across the entire road and stormwater networks, the ~~A~~allocation of those available resources to implement the programmed works or undertake reactive works ~~across the entire road and stormwater networks~~ will be prioritised based on ~~reflective of~~ the classification of the road, community safety~~,~~ and risk~~,~~ ~~and include:~~ ~~o scheduled rural roadside slashing programme~~ ~~o scheduled rural outreach mowing programme~~ ~~o scheduled weed spraying programme~~ ~~o scheduled urban vegetation maintenance programme~~ ~~o reactive maintenance to high risk issues identified during programmed works or reactively by the public.~~
Removal of Vegetation that is on or overhanging the public road	Council ~~may~~ can remove vegetation that is on or overhanging a public road to remove a traffic hazard. The extent of ~~maintenance works~~ responsibility will be ~~is~~ considered to be the air space above the road and the limits of the road formation or more generally 5m from the road shoulder hinge point. Council may elect to leave timber at the site within the ~~nature strip~~road reserve if it does not pose a high risk.

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	The removal of vegetation for upgrade projects or for the carrying out of roadworks may be subject to other environmental approvals.
Removal of Marine Vegetation	Council will not undertake maintenance activities where Marine Vegetation shall be harmed, threatened or picked unless a Fisheries Permit has been approved by the regulator.
Removal of ~~Endangered~~ Threatened Ecological Communities (~~EEC~~TEC)	Council will not undertake maintenance activities where an ~~EEC~~ TEC shall be harmed, threatened or picked unless a Review of Environmental Factors (REF) has been approved by ~~the Group Manager~~Council.
Removal of trees within road shoulders	~~In accordance with Council Road Reactive Risk Procedure,~~ Council will not routinely programme activities to remove trees on road shoulders unless deemed a high risk to the public by a~~n~~ qualified arborist.
Vegetation Management on National Park managed land.	Council will not undertake maintenance activities on National Parks ~~managed~~ land unless consent has been provided by National Parks and Wildlife Services.
Weed spraying	Weed spraying will be completed on roads and stormwater management systems identified from Council's Road and Stormwater Asset Register on a programmed or reactive basis. Sensitive receivers with serious health issues adjoining areas to be sprayed shall be notified prior to commencement of spraying. Organic Farms require buffer zones within their property and Council may elect to spray within the road reserve to mitigate public risk.
Stockpiling of Vegetation Waste	Council will stockpile vegetation waste in accordance with the EPA Waste Exemptions. Council will not burn vegetation on Total Fire Ban Days without consent provided by Rural Fire Service (RFS).
Driveways / Road Crossings	Due to the scale of the public road network, vegetation issues or hazards associated with private driveways are likely to rate as a low risk. Therefore based on finite resources Council will not specifically programme vegetation works for private driveways within the road reserve outside of existing scheduled work programmes or reactive risk prioritisation. ~~Safe access and egress from driveways / road crossings across Council's road reserve onto Council's road network is entirely the responsibility of the benefiting land owner(s). Council will not intervene in these private matters outside of its scheduled work programmes or reactive risk procedures.~~ Council ~~may~~ will consider applications from ~~benefiting~~ land owner(s) to manage vegetation within the road reserve that impedes safe access and egress from their driveway onto Council's road network.
Urban verge/nature strip maintenance	Council will not routinely programme vegetation maintenance works along urban local road verge/nature strips fronting properties.

Damage to fencing from fallen vegetation	~~Fences damaged due to fallen vegetation will not be repaired by Council~~Council will not repair road boundary fences damaged due to fallen vegetation ~~and could be the subject of a damage claim~~. Council may elect to ~~make safe~~undertake immediate temporary repairs ~~fences~~ to avoid stock migrating onto the road. Council ~~may~~ will consider applications from ~~benefiting~~ adjoining land owner(s) to manage vegetation within the road reserve that is ~~likely~~ a risk to ~~damage~~ damaging fencing.
~~Private Works on Public Roads~~	~~Council may accept an adjoining owner(s) offer to pay for the cost of managing vegetation on a road or public land, or for additional maintenance, via private works agreement. This does not commit Council to regular vegetation maintenance activities.~~

2.~~1~~3 Road Classifications

Roads are classified into ~~9~~10 ten typical classifications across the unsealed and sealed network that are used to prioritise the allocation of resources as outlined above.~~.~~ ~~t~~These definitions are located within the ~~Unsealed Roads Policy or within the~~ Appendix ((~~Sealed~~ Roads Classifications).

2.~~2~~4 Stormwater Classifications

Stormwater ~~features~~management systems are classified into ~~3~~three typical classifications that are used to prioritise the allocation of resources~~.~~. ~~t~~These definitions are located within the Appendix (Stormwater Classifications)

2.45 ~~Level of Service [2019]~~Service Provision

The ~~"Level of Service"~~service provision is related to the availability of funding and resourcing which is delivered by the service treatment. The adopted budget and allocated resources dictate the service level delivered to the community via the service treatment. ~~typically includes the investigation, prioritisation and resolution of works on a risk based approach or annually through pre-determined works programmes.~~

Asset classifications, service treatments and ~~E~~estimated ~~Network~~ network sizes ~~and service treatments~~ are listed below:

Asset Classification	Service Treatment	Estimated Size of Network [2020]
Sealed Roads (Rural)	Outreach Mowing Programme Roadside Slashing Programme + Weed Spraying ~~(road shoulders)~~Programme Reactive Vegetation Management (~~high~~ risk prioritisation ~~only~~)	429km
Sealed Roads (Urban)	~~Urban Mowing Programme~~Urban Mowing and Garden Maintenance Programme	482km

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	Reactive Vegetation Management (risk prioritisation~~high risk only~~)	
Unsealed ~~Major~~ Roads	Outreach Mowing Programme Weed Spraying ~~(road shoulders)~~Programme Reactive Vegetation Management (risk prioritisation~~high risk only~~)	454km
Access Tracks	On an as-needs basis where impassable by a Standard ~~standard~~ 4WD ~~vehicle~~Vehicle.	50 km.
Unformed	No vegetation maintenance.	> 100 km
Car Parks	Reactive Vegetation Management (risk prioritisation~~high risk only~~)	> 93 car parks
Open Drains (including Drainage Easements)	Open Drain Maintenance Programme Reactive Vegetation Management (risk prioritisation~~high risk only~~)	>16km
Pipes, Pits and Outlets	Reactive Vegetation Management (risk prioritisation~~high risk only~~)	326km
Water Quality Devices	Reactive Vegetation Management (risk prioritisation~~high risk only~~)	142

- Slashing, Mowing and Spraying intervals, ~~as stated within~~assigned to the programmes listed above is the Level of Service that Council can provide within current resourcing ~~at the time of policy adoption~~.
- ~~—~~

- The "~~Level of Service~~Service Treatment" will be reviewed where there is a significant change in network composition, condition and/or budget allocation.
- The management of road pavements and other features within the road reserve is covered under separate policies that cover both sealed and unsealed roads.
- The management of stormwater management systems and other features within the ~~road~~ drainage reserve or designated drainage easements is covered under a separate policy that covers the effects of Stormwater.
- Approval of a dwelling, shed, business, or any other development on a property does not automatically commit Council to alter the "~~Level of Service~~Service Provision" or the "Road Classification".
- Works shall be allocated in accordance with the above mentioned programmes, supported by risk based reactive maintenance focused on addressing community safety issues and in line with guidance from Council's insurer.
- Works shall be completed in accordance with Council's NATSPEC maintenance specification documents

3. RESPONSIBILITIES AND AUTHORITIES

Council is the Road Authority for all roads vested in fee simple to Council (meaning that it has absolute ownership of the land) as described within the Roads Act 1993. Council is the appointed Authority for the Local Government Area as described in the Local Government Act 1993.

Council as the governing body is responsible and accountable for:

- Adopting the Roadside Vegetation Management Policy.
- Oversight of the implementation.

The General Manager and Directors are responsible and accountable for:

- Implementing and communicating this policy
- Monitoring compliance of this policy
- Ensuring the policy is reviewed and updated to meet current legislative requirements
- Ensuring appropriate delegations are in place with regard to exercising Road and Local Government Authority functions.

Group Managers: Infrastructure Planning, Infrastructure Operations, Recreation, Property & Buildings ~~Property~~ and ~~Buildings and~~ Environment ~~and~~ & Regulatory Services are responsible and accountable for:

- Implementing and communicating this policy.
- Monitoring compliance of this policy.
- Ensuring the policy is reviewed and updated to meet current legislative requirements.
- Ensuring appropriate procedures are developed, implemented and monitored to meet the principles of this policy.

Managers and Engineers: Infrastructure Operations, Recreation, Property & Buildings ~~Property~~ and ~~Buildings and~~ Environment & Regulatory Services ~~Environmental Services~~ are responsible and accountable for:

- Implementing and communicating this policy and any associated procedures.
- Monitoring compliance of this policy and any associated procedures.

Coordinators: Transport and Stormwater Network, Recreation, Property ~~and~~ & Buildings and ~~Environmental Services~~Natural Resource Management are responsible and accountable for:

- Implementing and communicating this policy and any associated procedures.

All Council Officers are responsible and accountable for following this policy and any associated procedures.

4. REFERENCES

This policy must be followed by all Council staff. All significant changes to this policy will be tabled at a future meeting of Council for consideration.

Legislative References include:

- Roads Act (1993)
- Local Government Act (1993)
- Civil Liability Act (2002)
- ~~Work Health and Safety (Mines) Act (2013)~~
- ~~Work Health and Safety (Mines) Regulation (2014)~~
- Work Health and Safety Act (2011)
- Work Health and Safety Regulation (2017)

- Environmental Planning and Assessment Act (1979)
- National Parks and Wildlife Act (1974)
- Biodiversity Conservation Act (2016)
- Fisheries Act (1994)
- State Environmental Planning Policy (SEPP) Infrastructure (2007)
- State Environmental Planning Policy (SEPP) Coastal Management (2018)
- Road Transport Act (2013)

Other references:

- Making a Council Policy
- Unsealed Roads Policy
- Rural Roads Slashing Programme
- Rural Roads Outreach Mowing Programme
- Urban Mowing Programme
- Weed Spraying Programme
- Parks and Open Space Hierarchy and Maintenance Schedule
- ~~Road and Stormwater Network Reactive Risk Procedure~~
- Statewide Mutual Best Practice Manual – Roads
- ~~Road Hierarchy~~
- Statewide Mutual Best Practice Manual – Trees
- Council's Asset Management ~~Policies~~Policy
- Council's NATSPEC maintenance specifications

5. DEFINITIONS

A definition of key terms referred to in the policy

Councillor: An elected member of Council
General Manager: 1st tier management position and titled as such
Director: 2nd tier management position and titled as such
Group Manager: 3rd tier management position and titled as such, asset custodian
Engineer: Specific professional engineering staff within Council
Coordinator: Supervisor of outdoor staff
Council officer: A member of Council staff
Fee Simple: Absolute ownership of land
Standard 4WD Vehicle: A vehicle that has the ability for torque to be applied to both rear and front axels groups via a locked centre differential and/or transfer case, as applicable, has a ground clearance (unladen) of 200mm or greater and has no post factory modifications to enhance its 4 wheel drive capabilities.
Hinge Point: The point in the cross-section of a road at which the extended batter slope line would intersect the extended shoulder line.

6. PROCESS OWNER

The Group Manager Infrastructure Planning is the process owner. The process owner should be contacted for any information in relation to this policy.

7. AMENDMENTS

Nil. This is a new Council Policy.

8. APPENDIX

8.1 Road Classifications ~~(Sealed Roads)~~

Sealed Roads are classified into ~~5~~ five typical classifications, in order of importance:

Road Category	Description
Sealed Arterial	• Generally through roads which connect to significant regional centres - Major traffic flow with many branches/feeder roads. • Typically support commercial, industrial and residential land use. • The running surface is generally > 10.0 metres wide (including shoulders) with two lanes for traffic and generally duplicated in urban areas. • Road is formed and generally drained to Council standards. • Significant rain events will generally not cause temporary closure. • Pavement material may be either asphalt or bitumen surfacing or a combination of these. • Roads are generally delineated with a centreline and edge lines. • Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.
Sealed Sub-Arterial	• Traffic count generally more than 3,000 vehicles/day. • Generally through roads which connect to local centres or destinations - Main traffic flow with many branches/feeder roads. • Typically support commercial, industrial and residential land use. • The running surface is generally 8.0 – 10.0 metres wide (including shoulders) with two lanes for traffic and occasionally duplicated in urban areas. • Road is formed and generally drained to Council standards. • Significant rain events may cause temporary closure. • Pavement material may be either asphalt or bitumen surfacing or a combination of these. • Roads are generally delineated with a centreline and edge lines. • Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.
Sealed Collector	• Traffic count generally less than 3,000 vehicles/day. • Generally through roads which connect to Arterial or Sub-Arterial Roads – collects traffic flow with many branches/feeder roads. • Typically support some commercial, industrial and residential land use. • The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic. • Road is formed and generally drained to Council standards. • Significant rain events may cause temporary closure.

	• Pavement material may be either asphalt or bitumen surfacing or a combination of these. • Roads are occasionally delineated with a centreline or edge lines or only a centreline. • Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage. •
Sealed Local	• Traffic count generally less than 1000 vehicles/day. • Generally through roads which distribute to a Collector Road but can be no through roads - Limited flow with occasional branches/feeder roads including Access Tracks. • Typically support residential land use. • The running surface is generally > 5.0 metres wide (including shoulders) with one or two lanes for traffic. • Road is formed and generally drained to Council standards. • Significant rain events may cause temporary closure. • Pavement material may be either asphalt or bitumen surfacing or a combination of these. • Roads are generally not delineated with line marking. • Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage.
Car Parks	• Car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property. • Generally located close to public reserves, however can also be found in other urban locations. • Car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.

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Unsealed Roads are classified into ~~5~~ five typical classifications, in order of importance:

Road Category	Description
Major Roads	Traffic count generally more than 100 vehicles/day. Generally through roads which connect to significant local community centres or destinations - Main traffic flow with many branches/feeder roads. The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic. Road is formed and generally drained to Council standards. Significant rain events may cause temporary closure. Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these. Roads typically have guideposts located adjacent to culverts and limited advisory signage

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Road Category	Description
Local Roads	Traffic count generally less than 100 vehicles/day. Generally through roads which distribute to a Major Road (unsealed) but can be no through roads - Limited flow with occasional branches/feeder roads including Access Tracks. The running surface is generally 3 – 6.5 metres wide (including shoulders) with one or two lanes for traffic. Road is formed and generally drained to Council standards Significant rain events may cause temporary closure. Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these. Roads typically have guideposts located adjacent to culverts and limited or no advisory signage
Access Tracks	Generally an access track with infrequent traffic use and less than 10 vehicles/day and may provide a connection to Forestry NSW areas or National Parks. Typically "no through" roads that are open to the public and provide access to a limited number of properties. Generally have no standard formation, are undrained and their make-up consists of naturally occurring material, however may contain a small percentage of imported materials. Accessible by 4WD vehicles. It is probable that water will cross the road in minor rain events and significant rain events and may cause temporary closure and road scour.
Unformed/Paper Road	These are unformed "paper" roads, which are indistinct, inactive or not regularly used as a vehicle access track. No road formation exists as the road is only identified as such on a map.
Unsealed Car Parks	Unsealed car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property. Generally located close to public reserves, however can also be found in other urban locations. Unsealed car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.

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8.2 Stormwater Classifications

Stormwater ~~features~~ management systems are classified into ~~3~~three typical classifications:

Stormwater Category	Description

Open Drains	• Open Drains are generally constructed on a road reserve but can be completely on non-road property (drainage easements and reserves). • Generally located within urban areas, however can also be found in rural locations. • Open Drains generally consist of one drain but may form a network of multiple drains. • Open Drains are generally created to control nuisance water derived from Council managed land and may become non-functional during significant rain events. • Open Drains are typically earth formed bunds or trenches where water is concentrated and conveyed around property to a natural waterways or localised depression. • Open Drains may consist of earth, vegetation, geofabric, jute mesh, matting, concrete, rock or a combination of these. • Open Drains could be perennially dry or be continually waterlogged, dependent on the size of the catchment area, drain capacity, subsoil conditions, grade and prevailing rain events. • Significant rain events may cause the closure of a road or flooding in low lying areas. • Road Table Drains are treated as part of Sealed Roads shoulder grading. • Conventional overland sheet flow is not considered to be an open drain. • The Broadwater and Settlement Shores Canals are classified as Open Drains.
Pipe and Pits	• Stormwater pipes and pits are generally constructed on a road reserve but can be completely on non-road property (drainage reserves and easements). • Generally located within urban areas, however can also be found in rural locations. • Generally consist of one pipe but may form a network of multiple pipes. • Stormwater pipes and pits are generally created to convey nuisance water derived from Council managed land and adjoining private property and may become non-functional during significant rain events. • Pipes and pits are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression. • Pipes and pits may consist of concrete, steel or polymer materials or a combination of these. • Pipes and pits could be perennially dry or be continually waterlogged, dependent on the size of the catchment area, level, grade, subsoil conditions, drain capacity and prevailing rain events. • Significant rain events may cause the closure of a road or flooding in low lying areas. • The kerb and gutters generally convey stormwater from road pavements into kerb inlet pits and into the piped stormwater network.

Stormwater Quality Improvement Devices (SQIDs) (Gross Pollutant Traps and Detention Basins)	• Stormwater Quality Improvement Devices are generally constructed in a drainage reserve but can be completely in road reserves or drainage easements. • Generally located within urban areas, however can also be found in rural locations. • Generally consist of isolated devices but may form a network of devices. • Stormwater Quality Improvement Devices are generally created to control water pollution derived from Council managed land and adjoining upstream residential land and may become non-functional during significant rain events. • Stormwater quality improvement devices are generally designed to capture pollution from high frequency, low intensity rain events and /or to capture the "first flush" of pollutants generated during a storm event. Stormwater quality improvement devices are generally ineffective during rare, intense of infrequent rainfall events. • Stormwater Quality Improvement Devices are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression. • Stormwater Quality Improvement Devices may consist of earth, vegetation, geofabric, jute mesh, matting, rock, concrete, steel or polymer materials or a combination of these. • Stormwater Quality Improvement Devices could be perennially dry or be continually waterlogged, dependent on the size of the catchment area, level, grade, subsoil conditions, drain capacity and prevailing rain events.

Draft Roadside Vegetation Management Policy

Community submissions

Submission		Issue
1.	Jennifer Hawkins 1140 Comboyne Road, Byabarra	1. As there is no previous policy, my assumption would be that this policy will be based on current procedures. If that is the case, there would be works that are not done and therefore the procedures are not being followed. 2. The DRVMP (2.3 page 2) refers to Council Road Reactive Risk Procedure – this document is not available on the website to read – how can feedback on the Policy be asked for when all information is not available? 3. Level of Service (2019) (2.4 page 3) - Local Unsealed Roads are not mentioned. The Unsealed Roads Policy shows 108km of Major Roads and 346km of Local Roads. The DRVMP shows 454km of Unsealed Major Roads, so the assumption would be that within this proposed policy, Local and Major Roads are combined. Is this correct? Therefore, they would receive the same Service Treatment? 4. Service Treatment for Unsealed Major Roads does not include slashing, which is done on Sealed Roads (Rural). Why would this be the appropriate level of service? As an example, Bagnoo/Byabarra Road is a Major Road with significant traffic and would need the same level of service as Sealed Roads (Rural) such as Comboyne Road. 5. Equally many Unsealed Local Roads should also be slashed as well as Outreach Mowing. They are still carrying sufficient traffic, that are at risk of accidents due to visibility issues. Cattle, Kangaroos, Wallabies, Rabbits, Children on bikes, and of course, other cars, trucks, tractors, etc. The majority of the community in Rural Areas, have at some time had a collision with animals, and, if not, have had a near miss. We are constantly on the look out for stray animals and at this time, with the grasses so high, it is extremely difficult to see them before it is too late. 6. Removal of Vegetation that is on or overhanging the public road (2.3 Page 2) – this quantifies the Council responsibility to 5 metres from the road shoulder hinge point. If this is the current standard, it is not being adhered to. At many points on Comboyne Road there is grass growing very high within 2 metres of the shoulder of the road. It is a significant safety issue. There are areas such as just over Bulli Creek Bridge heading towards Byabarra and Blanchs Road and close to the intersection of Jones Road with Comboyne Road (as

		examples), where the grasses are so high, that a vehicle can not be seen coming around the bends in the road. There are many occasions where vehicles leaving Jones Road, and also private driveways, immediately have a car behind them which is braking, as there was no sign of any traffic at the time of entering Comboyne Road. We know from the period of the drought, that when the grasses on the edge of the road are low, the road is significantly safer. If the standard to 5 metres was adhered to, there would be far less risk. 7. As Comboyne Road is a Bus Route and there are Bus Shelters, there needs to be more clearing done to make these safe for children being dropped by their parents as well as getting on and off the bus. 8. Damage to fencing from fallen vegetation (2.3 Page 3) – it surprises me that Council would not see their responsibility to repair a fence, if a tree has fallen and damaged the fence. The property owner is not responsible for the tree, nor can they remove the tree, yet if the tree damages the fence, Council does not see themselves to be responsible either. Who is responsible? 9. Similarly, to point 8. – If DRVMP does not include clearing of Unsealed Local Roads, and property owners are not to remove any trees on shoulder of the road, who does clear this? Who manages clear vision, fire risk? 10. After these unbelievable time of fires and fire threat in 2019 and 2020, a significant need is for all roads to be clear of vegetation (including grasses and trees and weeds) which impinge the access and visibility and therefore safety of RFS volunteers when being called to defend property, be it private or Council or Crown and Forestry. All Policies of Council should surely be working to this end. 11. Further to fire and the risks of this last year, if there had not been a drought leading up to the fires and therefore the grass was as it is now on parts of Comboyne Road, there would have been significantly more fire damage than occurred. There would not have been the fire breaks that roads provide. The dry climate certainly added to the fire season, but we hear repeatedly about the fuel load. That would be enormous along roadsides at the moment. 12. Road Classifications (2.1 page 1) – I find it surprising that the Classifications are not all on this document, but referred to another Policy. This is a complexity for future operation of the policy as well as for people commenting on the Draft. 13. Within the Unsealed Roads Policy and the DRVMP, the Access Track (which is defined as less

		than 10 vehicles per day and accessible by 4wd) only get serviced "On an as-needs basis where impassable by a standard 4WD vehicle". This, from an accessibility and safety aspect, is of great concern. There are issues with access by Ambulance and RFS vehicles. These vehicles are not generally 4wd and therefore, with no repair or clearing of these roads until impassable by 4wd, means that the residents living in these places are at enormous risk. My husband and I have had to call the ambulance on a number of occasions and they would not have been able to reach the property if we were on an Access Track. 14. Responsibilities (3. page 4) – it refers to the Vegetation Management Policy, not Roadside Vegetation Management Policy Further issues were raised regarding the communication and community notification regarding the policy exhibition and usability of Council's website, particularly searching for information.
	Response/ Comment:	1. Council currently has programmes of work for undertaking routine vegetation maintenance based on adopted budgets and applies the Statewide Mutual (Council's insurer) Best Proactive guidelines for reactive risk assessment and mitigation, again in line with adopted budgets. The adoption of the Roadside Vegetation Policy is intended to document the principles by which roadside vegetation management is undertaken. 2. The reactive risk procedure is outlined in Council Roads Maintenance and Repairs factsheet, which is listed on Council website at: https://www.pmhc.nsw.gov.au/Services/Roads-and-Bridges/Road-maintenance-and-repairs/Prioritising-road-repairs 3. The term "Unsealed Major Roads" has been changed to "Unsealed Roads" consistent with the term "Sealed Roads" - The assumption that all Unsealed Roads (Major and Local) would receive the same is potentially incorrect, the "Level of Service" references Programmes and the Reactive Risk Procedure. These may change each year based on what is adopted in the annual Operational Plan and how much funding is available which dictates how much works is competed each year. 4. Comboyne Road has significantly more traffic than Byabarra Bagnoo Road. Unsealed Roads typically have less vehicles than Sealed Roads and are generally lower speeds (when motorists drive to the conditions). Unsealed Roads are inherently made of rock and loose material can get caught up in the slasher. The outreach mower is better and safer tool for this job albeit more expensive. 5. Unsealed Local Roads are currently mowed/slashed with the outreach mower on a 5 year programme. This is

		dependent on funding which may affect the "Level of Service". There is no intention of changing the service that Council currently provides. 6. This distance quantifies the Council responsibility to 5 metres from the road shoulder hinge point. - this is a reference to Section 88 of the Roads Act that gives the Road Authority (Council) powers to clear vegetation "despite any other Act to the contrary". There are a number of competing acts like the Fisheries Act or National Parks Act (among others) that restrict what vegetation can be removed by Council. An example might be a mangrove (marine vegetation) blocking the road causing an imminent hazard to the road user. In theory under the Fisheries Act, a permit is required from the regulator before this impediment could be removed which takes time and could result in a serious injury if not promptly attended to. It is, in essence, reasonably defining what Council as a Road Authority considers is the road formation and clear zone and when immediate action can be taken to remove the vegetation from the road "despite any other Act to the contrary". 7. This is treated under the Level of Service Reactive Risk Programmes and is dependent on available funding and resources. It needs to be considered with respect to other competing risks across the road and stormwater network. 8. The responsibility for repairs to boundary fences between properties is set out in the Dividing Fences Act, however this legislation does not impose any liability on a roads authority. This policy documents that due to limited resources Council will not repair private boundary fences if damaged by vegetation. If there is a tree that is high risk of damaging property, owners can apply to undertake works to remove the risk. 9. Council as a Roads Authority is responsible for managing risk on the road network, however this is in line with available resources. If a property owner wishes to undertake works in the road reserve they can apply for a permit from Council. 10. This becomes a "Level of Service" issue dictated by the available funding and resources. Council operates 1 roadside slasher and 1 outreach mower in the rural areas that cover the extensive rural network and is linked to the adopted funding. 11. As above 12. The policy has been amended to be more stand alone. 13. The definition of an Access Track is a road that generally has less than 10 vehicles per day. Access Tracks can be of a varied standard however they are typically in more remote areas that are accessed by farmers, NPWS or Forestry in 4WDs. It is reasonable to assume that those that reside in these areas will receive a reduced "Level of Service" based on the use of the road to the broader community and its risk profile, i.e it will not receive the same service for a road that has several thousand vehicles per day. The term impassable in a vegetation

		management context would be trees fallen across the track blocking access. 14. The policy has been updated. During every engagement Council works to reach as many community members as possible to ensure the community is aware of what is happening and they can have chance to comment. This has been made difficult in recent times with limited local newspapers.

Submission		**Issue**
2.	John Court 127 Lantana Road, Byabarra	In no particular order I would like the following noted. The final ARRB report is dated October 2019 which would have been undertaken during the very dry (drought) period but prior to the destructive bush fires in the area. As bush fires are an ongoing threat it would seem this should be taken into account in relation to roadside vegetation clearing and it's removal or safe burning off. I have always thought it unlikely that Council would have resources to act on this but even wondered if this widespread issue could be considered for hazard burning by the RFS in view of recent fundraising efforts and grants potentially available to council. Fleeing from a bush fire is severely hampered if roadside vegetation presents a danger to driving out of one's property. We look after our roadside verge but unfortunately a lot of people don't or are unable to undertake the task. Separate to this issue is the ongoing danger of local fauna coming upon you suddenly due to high growing roadside vegetation. Additionally, when one turns off the unsealed road onto Comboyne Road there are times when the roadside vegetation hampers clear vision, (bearing in mind vision is already hampered by the bend in the road) this is another ongoing danger. It would seem that a frequent ongoing audit of all side roads off more major roads needs to be undertaken on an ongoing basis in order to avoid this issue.
	Response/ Comment:	Your comments regarding hazard reduction burning are noted. Your are correct relating to Council's limited resources to large scale vegetation clearing along roads to reduce fire hazards. Council's primary focus is trying to reduce hazards to road users within the adopted budgets. Regarding intersections along Comboyne Road, this is accounted for in the Reactive Risk Procedure and Slashing Programme. Depending on the location, this would be typically rated as a medium risk and addressed during the Slashing Programme. Council's current Level of Service allows for 1 slasher to cover the entire rural sealed road network.

Submission		**Issue**
3.	Ross Smith 67 Kendall Crescent, Bonny Hills	Several items are suggested for Section 2.3 Management Principles: - Add • Maintenance of vegetated median strips at road intersections. To provide/maintain clear vision to vehicles turning and/or crossing at intersection. Include • at 'Weed spraying' To extend weed spraying to the full width of the road reserve. And to reduce "risk" for Section 2.4 Level of Service (2019) :- Refer to "weed spraying". Seems to be limited to 'road shoulders' and hence does not effectively control the prolific weed growth beyond 'shoulder' , for example lantana. Hence should extend weed spraying to the full width of the road reserve.
	Response/ Comment:	The Management Principles have been updated to clearer around prioritising and managing risk. Regarding vegetation works specifically at intersections, works will be undertaken based on the assessed risk, current programmes and available funding. The comments within the draft policy were focused on the road rather than the "road reserve" which has been corrected. ie "Weed Spraying (road shoulders)" has been changed to "Weed Spraying Programme".

Submission		**Issue**
4.	Sue Proust 10 Bergalia Crescent, Camden Head	I have read through the draft plan and there is one glaring omission - weed control. I understand the main aim is safety, but it should be possible to do both. Many of the roads in our LGA are full of weeds. Some of these weeds are very large, like Camphor Laurel trees. These could be progressively removed from roadsides, keeping the roads safe and reducing weeds at the same time. If spraying roadsides, weeds could be properly sprayed too. Often contractors spray only part of weeds like lantana or privet. If their brief was to spray the whole of the plant, there would also be less maintenance in the long term, as it takes a longer time to regrow.

		The other issue is a visual one. The way spraying is done now is very haphazard and often looks shoddy. It is not a good look for a local government area that welcomes tourists. This is also the case near the intersection of the Oxley Highway and the M1 north. Many visitors enter Port Macquarie this way and the roundabouts and sides of both roads are very weedy. Again, not a good look.
	Response/ Comment:	Comments have been noted and the policy has been updated to note the Weed Spraying Programme (rather than just "road shoulders"). The Weed Spraying Programme and Reactive Risk Procedure addressed the specifics of weed spraying. The "Level of Service" could fluctuate each year depending on the adopted Operational Plan budget which changes the "Level of Service" reflected in the Programmes of Work. The intersection of the Oxley Highway and the M1 is a classified road under the management of Transport for NSW (TfNSW). Council are in regular contact with TfNSW representatives about this and other matters across the road network.

Submission		**Issue**
5.	Mark Strain 1536 Comboyne Road, Byabarra	I live on Comboyne Rd, just before the Hartys Creek Bridge. Excellent bridge work and recent road work. BUT. The amount of grass, taller than me 165cm, makes visibility leaving and entering my driveway during the day and even worse at night, highly risky. Despite trying to be very aware and cautious about entering and leaving our gate, cars and mainly trucks come tearing down Comboyne Rd on the way to Wauchope at any time of day. My estimates is most exceed 100kmh. and trucks have no hope of slowing down or stopping before they get to our entrance. There are no signs further up the hill warning drivers about upcoming entrances. The care factor seems to be zero. Now what is even more concerning is that I take my kids out to the bus stop at the turn around point in the morning and pick them up in the afternoon. I have been at the bus stop since 2016 and seem drivers completely ignore the 40kmh speed limit going pas the bus. The speeds are so fast that no kid has a chance in heck of surviving a collision with a speeding car or truck. And the bus would be demolished by the bigger trucks speeding down the hill. My concern is that the grass in this 400m stretch just up the hill and down to Harty's Ck bridge makes vehicles on the road invisible. Lost in the hieght of the grass. In fact it so dangerous I'm worried at times about exiting my driveway due to the lack of visibility for me and other drivers. .More regular vegetation on the side of the roads is critical. On this point, I drive along comboyne Rd often and out to Telegraph point and the grass on

		tight bends day and night is treacherous. Your policy must factor in high risk areas such as any pick up point for children, aged, and disable. also, high risk driveways. If you can't cut the grass then change the speed limits, ask the Police to be visible in these areas at these times of the day. Not to book people, but healthy reminders to drive safely and to the conditions. Perhaps Council staff in management roles can drive out along some these roads and see just how risky it is for landholders entering and leaving their driveways in rural areas. Use drone technolgies or sateillte imagery using slant sensors to provide details of the risky areas. If you can't do this authorize landholders to mow these roadside grasses and weeds rather than wait for Council programs to arrive, when it is too late, and we're cryng our eyes out at the hospital, police station, morgue or inquest.
	Response/ Comment:	The frequency of slashing and associated level of service is dictated by the adopted budget and this in turn sets out the slashing programme. Reactive works are prioritised based on risk across the entire road network. Property owners can apply to Council for a permit to undertake works within the road reserve should they wish to have a service above what is provided by Council.

Submission		**Issue**
6.	Paddy Dixon 877 Upper Rollands Plains Road, Rollands Plains	Only concern regards weed spraying on road shoulders. Is it absolutely necessary that road shoulders are sprayed with weed if they are well maintained and routinely mowed? I Ensure the guttering along the front of our road (sealed road) is clear and mowed. I clear around the signs and safety markers along the edge. Once per year or so the council routinely kills the grass by spraying. When it recovers it is the weed species that sprout first, meaning I spend the next 6 months clearing away farmer's friends, stinking roger and the like, finally returning it to clear, short grass for the process to be repeated. Unless this action is critical for the maintenance of the road surface itself surely there should be a way that properties that are well maintained need not be sprayed?
	Response/ Comment:	Roadside spraying operators constantly assess the state of vegetation on the road shoulder and will make adjustments where the shoulder is already mown and in good condition. If vegetation is occasionally maintained, but appears to be untidy on the day of spraying operation, staff will usually elect to spray in order to reduce any potential risk. Landholders are welcome to contact Council's Invasive Weeds Team to discuss roadside spraying requirements.

Submission		Issue
7.	Damien Kelly 4 Elizabeth Street, Bonny Hills	Thank you for the opportunity to comment on the Draft Roadside Vegetation Management Policy. I hold significant concern regarding the ongoing practice of weed spraying using herbicides on roadside vegetation. Recent peer reviewed research distributed by the World Health Organisation classifies the use of Glyphosate as a category 2A product which is "probably carcinogenic to humans". The use of this product on any vegetation in the local government area is no longer appropriate or safe. Although many herbicides can degrade in soil, most have varied decomposition in water and air, posing significant risk to nearby native vegetation, animals, members of the public and water catchments. I understand the cost effective nature of weed spraying from a human resource perspective, however, watching council service providers dressed in full body hazard protection gear, spraying roadside vegetation while cars, cyclists and pedestrians walk nearby is a cause for concern. Can council guarantee that the practice of weed spraying roadside vegetation will not negatively effect any other flora or fauna? Will council publish the names of herbicides used in the event weed spraying continues despite scientific evidence of it's carcinogenic nature? Please refer to the attached WHO report on Glyphosate's updated 2A classification.
	Response/ Comment:	Council is aware of concerns surrounding herbicide use, including glyphosate, and regularly reviews our practices and products to ensure that we are using best practice in all spraying operations. Council is guided by advice from various State and Federal regulatory bodies including the NSW Department of Primary Industries and the Australian Pesticides and Veterinary Medicines Authority (APVMA). The APVMA reviews all pesticide information and has concluded that glyphosate is currently safe to use provided that label directions are adhered to. Council publishes the names of herbicides used, and uses warning signs for the public in accordance with our Pesticide Use Notification Plan. Council has trialled alternative methods for controlling roadside vegetation and found them not to be cost effective at this time.

Submission		Issue
8.	Graham Keena 5 Daintree Lane, Port Macquarie	It is very timely that I received this council news letter as I have been intending to contact you for some time to discuss the lack of roadside vegetation maintenance. The places I have noticed are of course on roads that I travel regularly so there would most likely be other areas that also need attention. I have recently witnessed two potentially deadly situations one on ocean drive west of the pacific drive ocean drive round about and another on lake road near the intersection of

		lake road and Barton crescent where on each occasion a pedestrian has all but tripped and fallen into traffic try to negate overhanging bushes and over grown road pavement. Prior to these incidents I became more and more aware of the terrible and potentially dangerous conditions on the edges of many of our main roads particularly pacific drive Kennedy drive and many kilometers of ocean drive particularly but not limited to between pm and lake Cathie. (Some road side clearing has been carried out recently but only a relatively short distance) Please note I am NOT a cyclist and at times I have been frustrated like many other people with cyclists who think they have no responsibility to show the same courtesy to motorists that they themselves expect motorists to show to them. That said there are also many cyclists that do try to “do the right thing “ but they are so dangerously hampered in so many areas that it is impossible to ride safely on the edge of the road because they have to dangerously weave in and out of untended road side vegetation that forces them into the path of motorists. I think this situation has been highlighted during the recent pandemic period where many more people were hitting the road on a bike. It would appear the council tree preservation policies have probably contributed to the reluctance for our roadsides to be cleared away to a safe distance. This is especially evident on (and again not limited to) pacific drive and lighthouse roads adjacent to sea acres but you can also see the same lack vegetation control all the way from windmill hill to lighthouse road and on to lake Cathie. It seems there is some sort of unresolvable difficulty dealing with national parks in relation to pacific drive and particularly lighthouse road. Lighthouse road is a disgrace. It’s all very fine to say that changes have been made beyond Matthew flinders drive but that is not where the bulk of the traffic is. It is from pacific drive to MFD. this section is a death trap. How no one has been killed on this section of road I have no idea. This road does not need to be straighter or have a wider pavement it just needs a basic re alignment to include a safe walking/ cycling path. It does not need to be done to super high specs it just needs a very basic improvement. You can easily see that the road easement is wide enough to achieve a grand improvement on a very modest budget provided designers take a modest approach. It certainly wouldn’t take a lot to make a huge improvement. It’s possible this project has been repeatedly delayed because of the lack of willingness of council staff “to make it happen “. I hope this feed back is helpful and doesn’t just get put in the too hard basket.

	Response/ Comment:	The examples raised fall under reactive risk based works. As there are no formalised pedestrian paths in those areas, programmed works are limited to just beyond the road edge. There are various environmental factors that have to be considered for roadside vegetation clearing. The policy notes that other approvals are required when working on National Park land, working near Threatened Ecological Communities (TECs) and removing marine vegetation (like mangroves) etc. It can be difficult to navigate through the relevant pieces of legislation and one purpose of this Policy is to clearly define who is responsible and what actions need to be taken to complete works. The comments regarding upgrading Lighthouse Road are noted. Council does have future plans to upgrade this road and provide improved pedestrian facilities.

Submission		**Issue**
9.	Pauline Chapman 473 Rawdon Island Road, Rawdon Island	Could it be reasonable to think that all grasses along the side of a dirt road could be turned into long paddocks for the adjoining land owner to use? Just steel posts and wire fencing ..... for grazing during day light hours. Properties facing sealed roads continue to be maintained by council unless.... Small properties under 50 acres mow and maintain the front of their own properties.....many people around here already do this.
	Response/ Comment:	The NSW Government, Local Land Services oversee the use of the road reserve for grazing and property owners can apply for a permit. It is acknowledged that may property owners do maintain their property frontage. The policy has been updated to more clearly allow this practice to continue.

Submission		**Issue**
10.	Jenny Hurrell 110 Stennetts Road, Comboyne	How often is the roadside vegetation going to be maintained, as there is no frequency mentioned in the policy. Is it on "as needs basis"? At present the local sealed and unsealed roads appear to be missing out and these are the roads that tourists like to travel, as well as the local residents. Prevention of accidents is easier, if roadside maintenance of vegetation is done routinely, by mowing and trimming.
	Response/ Comment:	Based on current adopted budgets rural sealed roads are slashed every 12 months and outreach mown every 5 years. The unsealed roads are outreach mown every 5 years on a programme. The reactive works, based on risk prioritisation, targets the high risk vegetation ie trees that have fallen across the road blocking access and endangering motorists.

Submission		Issue
11.	Blair Maxwell 1 Allenwood Street, Camden Head	The policy should include a section for benefiting landowners to make relevant applications for clearing as listed in the policy (Access, Vision, Asset damage). There should also be an application for residents to apply for clearing work to be done if they are not benefiting landowners, Such as local residents who see issues with safe view on turns or intersections, Safe access or egress on other roads where larger vehicles like school buses make take more than half the road to avoid damage. Community engagement and participation is important for LG, making it easy for both parties to instigate roadside management is a benefit to all. An attached application to the policy would make it easy for the public to be directed to the policy and connected appropriate paperwork. There is no indication of ongoing vegetation management routine like the council road maintenance schedule. Should this be included for difficult areas to access such as some Beaches and access to public lands. There is also no listing on the policy how works would be carried out. Such as poisoning, Steam or what types of removal. If it is a weed problem there is no indication of followup work to manage the problem. Surely the public should have clear policies on how council intend to manage these issues.
	Response/ Comment:	Property Owners can already apply for a permit to undertake works within the road reserve, however there are certain requirements around safety and traffic management that need to be implemented, often at costs to the applicant. Council is currently reviewing the permit application process and associated forms to make it easier. Council currently has vegetation maintenance programmes and the intent with the policy is not to change the current programmes but rather document the principles by which the programmes and other vegetation works are managed. The policy also does not dictate particular methods of works, as this will be depended on the specific situation.

Submission		Issue
12.	Penny Small Beach to Beach Shared Pathway Committee	I am responding to the PMHC Draft Roadside Vegetation Management Policy primarily as President of the Beach to Beach Shared Pathway Committee. It is so good to see that Council has provided detailed actions and responsibilities pertaining to the maintenance of vegetation. After reading through the policy and consulting with others, it is evident that the

	1 River Street Dunbogan	policy does not have enough depth to cover safe access egress on pathways as well as road users, where unmanaged vegetation creates a hazard to users. As this policy covers roadside, pathways are often within the road reserve. There needs to be specific section to the vegetation management for pathways and an application process for residents to have pathways cleared for safety. Pedestrians are sometimes forced to walk on roadways where vegetation blocks safe roadside access, if there is no pathway. Therefore, roadside maintenance is vital for walkers to keep off the road. An example of this is on the D3 and D5 section of the B2b where casuarina trees (she oaks) grow right to the road edge
	Response/ Comment:	The policy currently outlines that works will be undertaken in accordance with programmes with any other works undertaken on a reactive nature based on risk across the entire road network. Council's current adopted budgets and hence level of service does not allow for a specific pathway vegetation maintenance program. Pathways adjacent to roads will have the vegetation maintained as part of the relevant program. Any community members can report a hazard to Council for investigation and assessment. Alternatively, an application can be submitted for a permit to undertake works within the road reserve.

Submission		**Issue**
13.	Steven Gates Port Macquarie Hastings Community Against Ratepayer Exploitation Incorporated 43 Thone River Road, Byabarra	Our primary position is, for the reasons and examples provided in this Submission, any future discussion and development of the Policy be suspended, and the following to occur: 1. The policy be re-drafted to comply with: a. Legislation b. Levels of Service previously stated by Council as existing and the Desired Levels of Service agreed by the Community in 2016 c. Levels of Service to reflect the SMART criteria, that is Specific, Measurable, Achievable, Realistic and Timeframe for both Routine and Reactive Maintenance i. That is to say, to what exact standard should ratepayers expect to what timeframe to measure and hold Council accountable to d. The Budget be increased to sustain the SMART Levels of Service using Councils $320 MILLION + Cash Reserves to: i. Provide a safe transport network for all users

		ii. Maintain road assets and reserves consistent with the Roads Act 1993 and Local Government Act 1993 2. The Proposed Policy be amended to correct all errors in fact 3. The Proposed Policy be redrafted to ensure compliance with the Making of Council Policy including: a. Containing a definition of all words so as be a self-contained document and remove any ambiguity, including but not limited to: i. Access Track- currently defined in the Unsealed Roads Policy as 10 VDM (vehicle movements per day) 1. How this is calculated when no actual measurement is completed by Council on the number of vehicles 2. What roads are defined as an Access Track ii. Standard 4 Wheel Drive- what is a "standard 4 wheel drive". Is it a Subaru Liberty or higher, a Suzuki Vitara or better, a Prado or better, a Landcruiser Ute of better. 4. The Proposed Policy be resubmitted for Community consultation consistent with the Making of Council Policy with: a. All Programs referred to in the Policy b. The financial budget, actual and proposed, for the last 5 financial years, by Account and Sub-Account for each category under the Policy by Rural and Non Rural Roads c. The Government Grants allocated in that year relevant to the Proposed Policy d. The Amount of the 2000/01, 2004/05, 2005/06, 2012/13 and 2017/18 SRV that is used in the budget e. An accurate set of data showing exactly what roads were slashed, outreach mowed, weeds poisoned 5. Provide a detailed summary of the effect of the Proposed Policy to explain, in plain English, whether the Policy will reduce, change, or increase any Level of Service currently provided, the details and rational of any change or reduction, and the potential impact of any Ratepayers affected by the Policy in terms of additional cost to them (i.e. Public Liability Insurance) or additional work they may be required to complete.
	Response/ Comment:	The intent of this policy is not to reduce the current level of service provided based on adopted budgets. The intent of the policy is to document and clearly set out the principles by which roadside vegetation maintenance is currently undertaken. As the level of service is related to the adopted budget in any given year, the intent is also not to prescriptively list the level of

		service, but rather establish the principles that would govern the delivery of the service given an adopted budget. The 'level' of the service will be associated with the adopted budget. The draft policy has been amended to correct any errors and to provide clearer definition for the interpretation of the policy.

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PORT MACQUARIE HASTINGS COUNCIL

16 October 2020

The Hon. Leslie Williams PM
Member for Port Macquarie
Suite 6, 26 Grant Street
PORT MACQUARIE NSW 2444

Email: portmacquarie@parliament.nsw.gov.au

Dear Leslie

Pacific Highway Intersection with Houston Mitchell Drive

As you are aware, following yet another two-vehicle incident at the above intersection, the Mayor raised a Notice of Motion at the 23 September 2020 Council meeting, which is provided to you below:

13.01 NOTICE OF MOTION - SIGNIFICANT ROAD SAFETY UPGRADE TO PACIFIC HIGHWAY/HOUSTON MITCHELL DRIVE INTERSECTION

RESOLVED: Pinson/Griffiths

That Council:

1. Note the current dangerous configuration and speed limit of Pacific Highway and Houston Mitchell Drive intersection.
2. Note that Port Macquarie-Hastings is designated as a Regional Growth Area and much of this planned growth is in the Lake Cathie / Bonny Hills area and is likely to increase the use of the Pacific Highway and Houston Mitchell Drive intersection into the future.
3. Request the General Manager write to the Hon Leslie Williams MP, Member for Port Macquarie, to seek urgent representation to Minister for Roads and Transport, the Hon Andrew Constance MP and the Minister for Regional Transport and Roads, the Hon Paul Toole MP requesting immediate road safety improvements and an eventual fly-over upgrade to the Pacific Highway / Houston Mitchell Drive intersection to address urgent road safety issues.
4. Request the General Manager report back to Council in December 2020 on responses received from the Member for Port Macquarie, Hon Leslie Williams MP.

CARRIED: 7/0
FOR: Alley, Dixon, Griffiths, Hawkins, Intemann, Pinson and Turner
AGAINST: Nil

PORT MACQUARIE OFFICE
17 Burrawan Street, Port Macquarie NSW 2444
t 02 6581 8111 f 02 6581 8123

WAUCHOPE OFFICE
49 High Street, Wauchope NSW 2446
t 02 6589 6500

LAURIETON OFFICE
9 Laurie Street, Laurieton NSW 2443
t 02 6559 9958

PORT MACQUARIE HASTINGS COUNCIL

Only the week after the September Council meeting, a second two-vehicle incident was recorded at this intersection. We are also aware that a number of serious crashes have occurred in the past year however, details have not been provided to Council via the official crash database.

The above-mentioned intersection has been a matter of contention for many years and Council has written to numerous State and Federal members since 2014, requesting significant upgrades to this intersection.

Accordingly, Council requests your immediate assistance and representation to the Minister for Roads and Transport and the Minister for Regional Transport and Roads, to ensure that the safety of this intersection will not deteriorate further. It is clear that there are existing safety issues at the intersection and these are only forecast to be exacerbated as traffic volumes increase.

I appreciate you taking the time to consider this request and would welcome the opportunity to discuss further with you should you require any additional information. A response from The Hon. Andrew Constance MP and The Hon. Paul Toole MP would be appreciated prior to the 9 December 2020 Council meeting.

Yours sincerely

Jeffery Sharp
Acting General Manager

Leslie WILLIAMS MP
Member for Port Macquarie



3rd February 2021

Dr Clare Allen
CEO
Port Macquarie-Hastings Council
PO Box 84
Port Macquarie NSW 2444

Dear Dr ~~Allen~~ Clare

I refer to correspondence received from Port Macquarie-Hastings Council in relation to Council's Notice of Motion regarding Houston Mitchell Drive and the Pacific Highway.

I can advise that Transport for NSW has conducted a speed zone review of the Pacific Highway to ensure that the speed is safe in the vicinity of Houston Mitchell Drive.

That review has now been completed and the findings of the review are likely to be released in the next few weeks.

Furthermore, following ongoing discussions with Transport for NSW, an investigation has been carried out to explore improvement options such as warning signage and intersection changes to improve safety at the intersection.

Any proposed changes will need to compete for funding with other safety projects across the State.

As always I will continue to liaise with Transport for NSW on road safety issues within the Port Macquarie electorate.

I trust this clarifies the situation for you, however if you need further information on this matter, please do not hesitate to contact my office.

Yours sincerely

The Hon Leslie Williams MP
Member for Port Macquarie
Deputy Speaker

02 6584 0977 Suite 6, 27 Grant Street, Port Macquarie NSW 2444
PO Box 2022, Port Macquarie NSW 2444 portmacquarie@parliament.nsw.gov.au lesliewilliams.com.au

PORT MACQUARIE-HASTINGS COUNCIL

pmhc.nsw.gov.au

Port Macquarie-Hastings Council
PO Box 84
PORT MACQUARIE NSW 2444

Council is open for business from 8.30 - 5pm Monday - Friday
p (02) 6581 8111
e council@pmhc.nsw.gov.au

v1 03/19

Planning Proposal Application Form

Amendment to the Port Macquarie Hastings LEP 2011 - Environmental Planning & Assessment Act 1979

Advisory Notes:

It will be necessary for a Planning Proposal Application to be prepared in accordance with Council's Planning Proposal Policy as adopted by Council on 11 December 2019. This is in addition to any State legislative requirements mentioned in this form.

An Application will not be accepted by Council for lodgement and is not considered to be a formal application unless the requirements of the Planning Proposal Policy have been met.

Where an Application has been accepted for lodgement, this does not infer that Council will be in a position to act upon the request immediately, nor that Council will agree to prepare a Planning Proposal as requested. Council reserves the right to request further information, if necessary, upon formal assessment of the proposal.

Filling in this form and the Checklist at the back of the form will help you prepare and lodge a complete Planning Proposal Application.

For further information and/or enquiries contact Council's Strategic Planning Team on (02) 6581 8111.

1. Proponent Details

Council will only contact the Proponent as the point of contact and all correspondence will be forwarded to this name and address.

Contact name: Mr R Charley c/- Michelle Love	**Phone/mobile contact:** 0400953101
Company name:	ABN/ACN:
Company address: c/- Love Project Management PO Box 161 Wauchope NSW 2446	
Email address: loveprojectmanagement@gmail.com	
Proponent signature: Robert Charley	Date: 29.1.2021

2. Description of the Land

Property descriptions of all land the subject of the Planning Proposal Application are required.

Property address (including street name, number and postcode): Part Lot 499 DP 1258597, Blackwood Street, Port Macquarie NSW 2444		
Lot: Part Lot 499	Section:	DP: DP 1258597
Site area (ha): 4.36 ha		

3. Landowner Details and Consent

If extra space is required, please attach additional details.

Owners name(s): Vilro Pty Ltd	**Phone/mobile contact:**
Address: c/- R Charley	
Email address: c/- loveprojectmanagment@gmail.com	
☑ I/we being the owner(s) of the properties identified above, consent to the submission of this Planning Proposal Application	
☑ I/we being the owner(s) of the land associated with the application give consent for the Proponent (listed in the Section 1 Proponent Details above) to act on my/our behalf.	
☐ Is the land Crown Land (within the definition of the *Crown Lands Act 2016*)?	☐ Yes (if yes please ensure owner's consent has been signed by officer of the Department of Industry, authorised for these purposes by a delegate of the Minister for Planning & Public Spaces. ☑ No
Disclosure Statement - Transparency	
I am an employee/Councillor or relative of an employee/Councillor of Port Macquarie-Hastings Council.	☐ Yes (if yes please state relationship): ☑ No

Landowner(s) signature* Robert Chailey	Date: 29.1.2021

**If signing on the owner's behalf as the owner's legal representative, you must state the nature of your legal authority and attach documentary evidence (e.g. power of attorney, executor, trustee, company director).*

4. Pre-lodgement Meeting

Has a mandatory Pre-lodgement Meeting been held with Council's Strategic Planning Team prior to lodgement of this application?	☑ Yes Numerous meetings - last date October 2020 with minutes ☐ No
Name of officer/s:	Date held*:

**Pre-lodgement meetings should be held no more than 12 months before lodgement of a Planning Proposal. Where more than 12 months has passed since the time of a Pre-lodgement meeting, a further meeting is required prior to the application being lodged.*

5. Planning Proposal Description

Proposed amendment to LEP – what are you applying to amend? *(please tick all that apply)*			
☑ Zone	☑ Floor Space Ratio	☑ Minimum Lot Size	☑ Height of Building
☐ Heritage	☐ Additional Permitted Use	☐ Reclassification of land	
Other/Clause (please provide a brief description)			
Planning Proposal objectives and intended outcomes (please describe what the Planning Proposal Application is intended to allow e.g. a zone change to allow construction of townhouses, office development, retail etc.). As detailed in the Planning Proposal lodged			

6. Accompanying Documentation

Please list all documents and studies being lodged and refer to the Checklist at the end of this form for the information to be lodged with a Planning Proposal Application.

Planning Proposal
Bushfire Hazard Assessment
Aboriginal Archaeological Consultation
BDAR Assessment and Report
Koala Plan of Management
Response to BCD recommendations
Plan Set including dwg format files
Property Title
s88B instrument

Document copies required:

- One electronic copy of all documents is required in PDF format and no single document/ study is to be larger than 20MB
- Mapping data must be supplied in a georeferenced format, compatible with standard GIS software (e.g. georeferenced CAD file - dwg)
- Submitted via drop box – contact Council Strategic Planning staff for details

7. Fees

Please confirm that fees have been paid in accordance with Council's adopted Fees and Charges. Where Stage 2 fees apply, they will be payable prior to a notice of public exhibition being placed in local papers.

☑ Yes – Stage 1 fee has been paid (please attach proof of payment)

Note: Please see Council Fees and Charges for more information on Stage 1 fees or contact the Customer Service Team.

8. Political Donations and Gifts Disclosure

Is a Political Donations and Gifts Disclosure Statement required *(sect 10.4 (4) and (5) of the EP&A Act)*?

☐ Yes (if Yes, a statement must be completed and attached to this application)

☑ No

Note: For more information on reportable political donations and gift disclosures and whether you are required to make a disclosure, please see Council's Political Donations and Gift Disclosure Statement Form

Applicant's Declaration

☑ I agree that all information given in this request is true and correct. I also understand that, if incomplete, the Planning Proposal Application may be delayed or returned. I understand payment of fees may not result in the desired change to the LEP. I understand that timeframes cannot be guaranteed and may vary.

Signature:	Date: 29. 1. 2021

*** Privacy –** The personal information that Council is collecting from you on this Application is personal information for the purposes of the *Privacy and Personal Information Protection Act 1998*. Council will use the information and materials provided for notification and advertising purposes, and materials provided with this Application will be made available to the public for inspection and copying at Council's Customer Service Centre's and on the *haveyoursay* section of the website during any public exhibition period.

*** Copyright –** This Application and any documents submitted in association with the Application may be open access information under the *Government Information (Public Access) Act 2009*. Documents are made publically available on Council's website and in other ways that the Council considers appropriate.

9. Planning Proposal Application Checklist

The following information must be submitted with all applications.

Item		Proponent to tick ✔		Office use only
		Y	N	
1	Completed Application Form with land owner(s) consent	☑	☐	
2	Payment of Application Fee *Previously Paid*	☑	☐	
Site Information				
3	Description of the subject land and the locality	☑	☐	
4	Current zoning	☑	☐	
5	Site plan drawn to scale identifying physical features such as trees, watercourses, topography, existing buildings etc.	☑	☐	
6	Site analysis of property and surrounding environment identifying any relevant significant issues, such as development constraints (e.g. bushfire, flooding, geotechnical, threatened species, contamination, Aboriginal/European heritage, impacts to traffic/site access etc.)	☑	☐	
7	Details of current existing uses, approvals and development on the land, and surrounding properties and the potential impact of the proposal on the surrounding area	☑	☐	
8	Photographs of the site and surrounding area	☑	☐	
Planning Proposal The Planning Proposal document must be prepared in accordance with Section 3.33 of the EP&A Act 1979 and Department of Planning & Environment's *"A guide to preparing Planning Proposals"* and *"A guide to preparing LEPs"*. These can be accessed on the Department's website: https://www.planning.nsw.gov.au/				
9	Objectives and intended outcomes of the Planning Proposal – description of what the application is intended to allow	☑	☐	
10	Justification for those objectives, outcomes and provisions, including any anticipated public and/or environmental benefit that would result from the proposed amendment	☑	☐	
11	Explanation of the intended land uses/activities for the site requiring a rezoning or change to planning controls	☑	☐	
12	An explanation of the provisions to be included in the LEP amendment – proposed zoning, change in permissible use etc.	☑	☐	
13	Draft amended mapping – current and proposed indicative maps showing where the planning proposal seeks to amend the Port Macquarie-Hastings LEP 2011 in relation to Land Zoning, Height of Buildings, Floor Space Ratio, Minimum Lot Size etc.	☑	☐	
14	Relevant information provided to assess the environmental impacts of the proposal on the site and surrounding environment (e.g. traffic studies, commercial/economic viability analysis, ecological assessment, built form analysis, noise analysis, infrastructure servicing etc.)	☑	☐	
15	Demonstrated consistency with the strategic planning framework: • *North Coast Regional Plan 2036* • Council's *Towards 2030 Community Strategic Plan* • Port Macquarie-Hastings Council endorsed Strategies and Policies including the *Port Macquarie-Hastings Urban Growth Management Strategy 2017-2036* • *Council approved Structure Plans and Master Plans* • Applicable State Environmental Planning Policies (SEPPs)	☑	☐	

Item		Proponent to tick ✔		Office use only
	• Applicable Ministerial Directions (s9.1 directions)			
16	Planning Proposal prepared in accordance with Section 3.33 of the EP&A Act 1979 and *A guide to Preparing Planning Proposals* (NSW Department of Planning & Environment)	☑	☐	
17	Details provided of any consultation undertaken to inform the preparation of the Planning Proposal Application (e.g. discussions with relevant State Government agencies, adjoining neighbours etc.)	☑	☐	
Supporting Studies and Information In addition to the above mandatory information, a Planning Proposal Application should be accompanied by relevant and current supporting studies (less than 12 months old) which justify the proposal, and any information identified at the Pre-Lodgement meeting. Copies of all supporting studies must be submitted at the time of lodgement.				
18	**Traffic and Transport** An assessment considering the likely impact of the planning proposal on local traffic and transport issues, road network, public transport infrastructure and/or cycle and pedestrian movement, and access to the site	☐	☐	
19	**Environmental Considerations** May include specialist reports addressing: bushfire hazard, acid sulphate soils, noise impact, visual impact, flora and/or fauna, soil stability, erosion, sediment, landslip assessment and subsidence, water quality, stormwater management, flooding, site contamination, sea level rise, agricultural land capability/land use conflict **Note:** If the land is mapped as important farmland, an assessment against the Interim Important Farmland Variation Criteria at Appendix B of the *North Coast Regional Plan 2036* is required. This is in addition to any land use capability report that may be necessary.	☑	☐	
20	**Urban Design** Site analysis, building mass and/or block diagram study (changes in building height and FSR), development yield analysis (lots or jobs created), draft Development Control Plan provisions or other design guidelines	☐	☐	
21	**Economic** Economic impact and viability assessments, retail centres hierarchy and/or employment land analysis	☐	☐	
22	**Social and Cultural** Heritage impact, Aboriginal archaeology, open space management, European archaeology, social and cultural impacts and stakeholder engagement	☑	☐	
23	**Infrastructure** Infrastructure servicing and potential funding arrangements	☐	☐	
24	**Any other matters relevant to the specific Planning Proposal**	☐	☐	
Development Concept				
25	An indicative development concept, illustrating the nature and scale of development envisaged for the site – built form, open space, vehicular and pedestrian access etc., and relationship with surrounding area. This information could include a draft Development Control Plan containing guidelines to assist in providing a framework to assess future development on the site.	☑	☐	

LPM Love Project Management
PO Box 161 Wauchope NSW 2446 Phone: 0400953101
ABN: 26 108 622 745

Planning Proposal
South Lindfield
PORT MACQUARIE



Michelle Love, Project No 6507
Love Project Management

29th January, 2021

Document Details

Document Version Date: 29th January, 2021

Authorised by: Michelle Love

Signed: MLove.

This assessment has been undertaken with skill, care and diligence by the staff of Love Project Management. This assessment is based on information provided by the client, third party research and research undertaken by Love Project Management. Love Project Management disclaims any responsibility to the client and others in respect of any matters outside the scope of this report.

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All parties must acknowledge that conditions of approval at time of consent, post development application and approvals, and other matters, may modify the outcomes described in this report. The information and conclusions presented in this report apply to the subject land at the time of the assessment. All parties must take into account the above information when making decisions on the basis of the findings and conclusion of this report.

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Executive Summary

This planning proposal relates to land identified as part of the urban release area for Port Macquarie. The investigation and assessment of landuse zones undertaken as part of this Planning Proposal will assist the long term management of land surrounded by urban zoned land, as well as provide additional housing opportunities for the growing residential population of Port Macquarie and the broader region.

The area is referred to as South Lindfield. The land is identified in the North Coast Regional Plan for residential development. The site has been surveyed and investigated over a period of some 17 years. Therefore, the environmental values of the land have been surveyed and assessed over a variety of seasons and a number of years. The most recent ecological assessment of the land undertaken for the BDAR Development Assessment Report and the Koala Plan of Management, have directed the identification of areas available for residential development, and the identification of land areas which require long term management, enhancement and retention. The avoid and minimise principles guided these designs.

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1. Introduction & Background

This Planning Proposal application has been prepared in response to the need to evaluate and determine the appropriate landuse zones for an area of land identified for residential development within the North Coast Regional Plan.

The Department of Planning & Environment set out the following in their Guide to Preparing Planning Proposals (Dec 2018 version):

> *It is not expected that a council or proponent will provide comprehensive information to support a request for Gateway determination. As a minimum, a planning proposal before a Gateway determination has been issued must identify relevant environmental, social, economic and other site specific considerations. The planning proposal document may identify the need for investigations and an approach for addressing the issues. It must also demonstrate how the proposed instrument will give effect to the local strategic planning statement of the council of the area.*

By way of further explanation, the Guidelines provide the following Explanatory Note:

> *Where vegetation management is an issue for a large site to be rezoned, it would be sufficient for the planning proposal to be submitted to the Gateway to identify the issue and indicate what environmental studies may be necessary to assess and analyse the value and location of the vegetation and how the matter(s) could be addressed.*

In this regard, this Planning Proposal application has addressed in detail the environmental values of the subject land, and in particular the koala habitat areas. The investigations and management provisions have been extended to the level of a full Koala Plan of Management prepared and submitted with this application. The Koala Plan of Management is consistent with Council's most recently prepared KPOM being for the adjoining South Lindfield rezoning and has also addressed the provisions of Council's yet to be adopted Coastal Koala Plan of Management.

A number of environmental investigations have been undertaken since this Planning Proposal was lodged with Council several years ago, thus providing a significant depth of information regarding the environmental qualities in this locality. This Planning Proposal is based on the current legislation and the current listing of significant species.

2. Subject Land & Locality

The subject land forms part of the residue of an existing residential estate which was approved in the 1980s. Thus, as each stage of the estate is subdivided, the legal title of the residue is changing. The subject land is part Lot 499 DP 1258597.

The subject land is located within the Port Macquarie town boundaries, with the Innes Lake Estate to the east and south, the Ascot Park estate to the west, and the Annabella Downs / Oxley Grove estate to the north. The locality plan is shown in the following figures.

Figure 1: Locality Plan

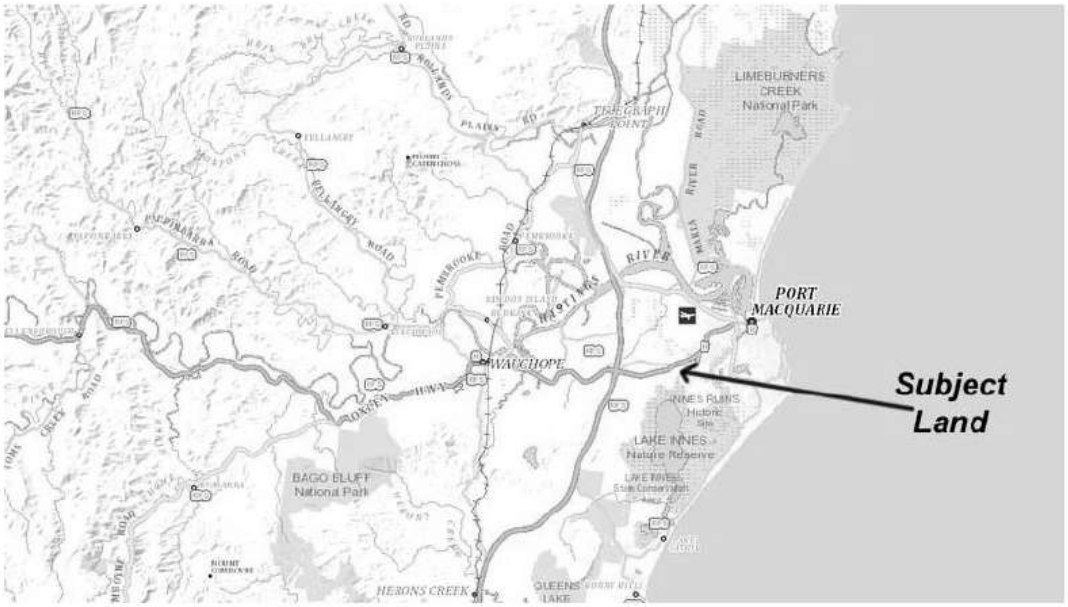
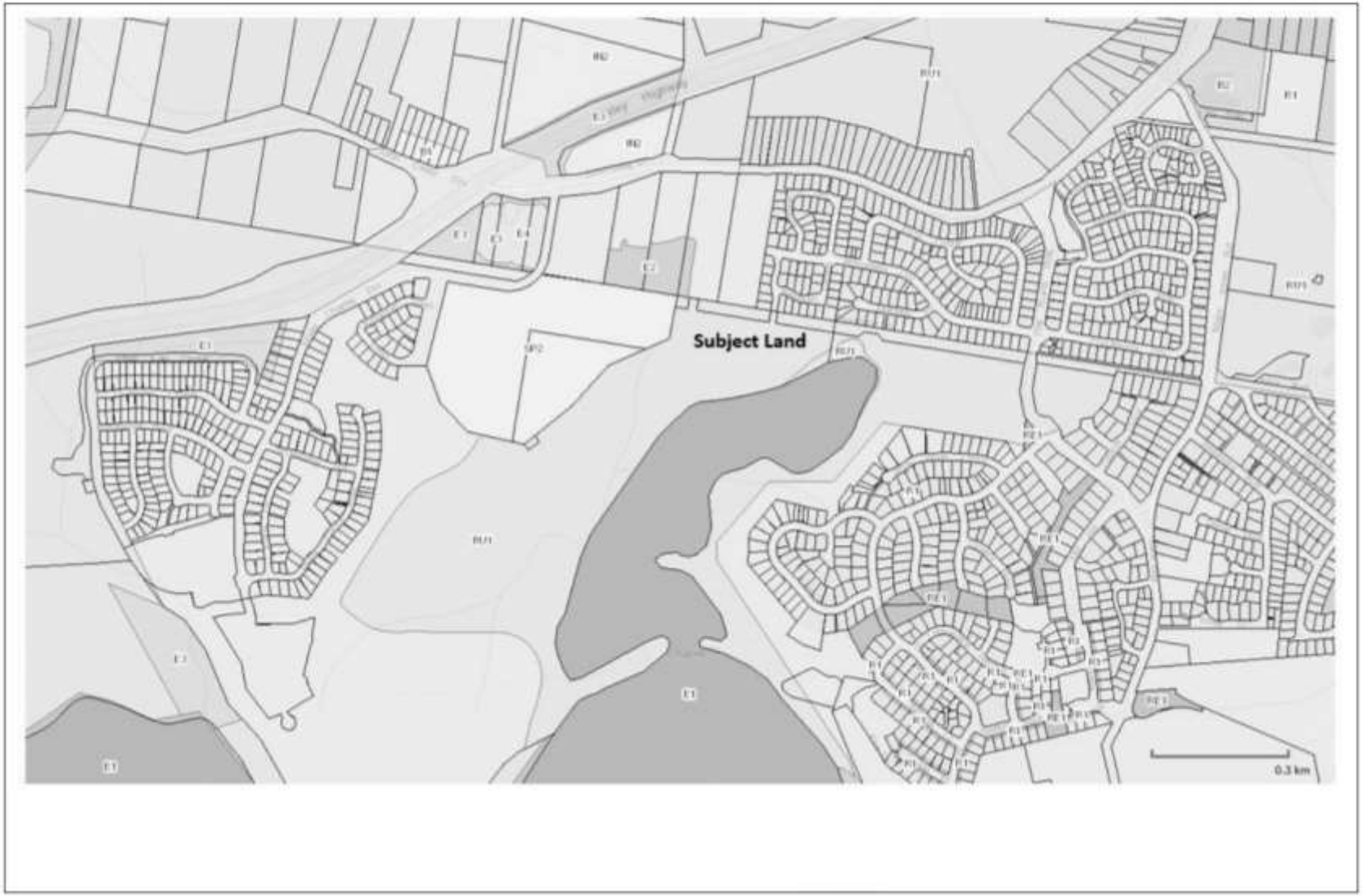


Figure 2: Location of Subject Land



The subject land is part of land which has been progressively developed as the InnesLake Residential Estate, which included a full golf course. The fairways are immediately evident on aerial photographs. The approved golf course and stages of the residential estate have been established in this locality, with other residential estates, such as the ones to the north of the subject land, also being progressively established.

The subject land has been maintained via slashing for some years, with a strip of trees along the southern side of the land retained as the planned separation between the approved golf course fairway to the south of the subject land, and the long proposed residential estate for the subject land.

There is an overhead powerline easement across the site, which will be relocated to align with the future road network, as well as a stormwater drain which will also be altered to the street network system of the proposed residential estate. There is an existing sewer easement within the western area of the land and this will be retained in the current location as it connects to the Pump Station further south of the subject land.

The ecological investigation of the subject land did not identify any vegetation on the land which could be classified as Endangered Ecologial Communities. There are areas of koala habitat on the land with the vast majority of the habitat to be protected via Environmental zones. A small stand of paddock trees which formed part of the koala habitat on the land are to be removed and replaced within areas of protected Environmental zones. It is recognised that this isolated pocket of trees would not be viable in the long term, as there was no opportunity for this area to undergo any natural regeneration due to ongoing slashing and property maintenance regimes. However, the offset planting within protected land areas will ensure this habitat is retained in the long term, enhanced and improved. This provides a much better outcome for the long term maintenance and increase in koala habitat.

The native guava is a plant species which was only recently listed as requiring protection. This plant has been threatened by myrtle rust, and thus some populations are diminishing. This plant has been identified on site, with a number of plants within the western and southern vegetated areas. The Environmental zones have specifically been mapped to provide long term protection to these plants.

The subject land does not have any history of landuses which would likely result in any site contamination. The land has been within the same family ownership for a number of generations and thus the history of the land is well known. The land has been identified for future urban development in both Regional and Local Planning Strategies, and this Planning Proposal is consistent with those long term plans.

3. Proposed Landuse

The proposal is to identify appropriate landuses, including residential areas and environmental management & protection lands. The Ecological Constraints Assessment was undertaken to identify the environmentally significant areas, including koala habitat, and land which contains the newly listed native guava.

This Planning Proposal only applies to the South Lindfield Precinct being a total area of 4.36 hectares.

The South Lindfield Precinct is proposed to be both residential development and environmental protection areas. The land has been identified for residential development for some years, and has been maintained by slashing. Vegetation to the west and southern boundaries has been retained and is proposed to be protected via appropriate Environmental Protection zoning.

South Lindfield is integral to other residential estates in this locality, as this development will provide the required emergency bushfire egress for Ascot Park to the west (this egress is a condition of development consent for Ascot Park), as well as providing the stormwater network and access to the sewer pumping station for the recently rezoned residential areas to the north.

The emergency egress will be realigned to fit with the future residential development layout, and reduces the impact on the existing vegetation to the west of this precinct. The vegetation retained on the western side adjoins the crematorium land, and provides a vegetated buffer to the lawn cemetary but also creates a habitat linkage to the retained habitat area located on the adjoining northern residential area recently approved by Council. These infrastructure requirements are designed into the South Lindfield Precinct Plan as shown in the plan set submitted with this Planning Proposal.

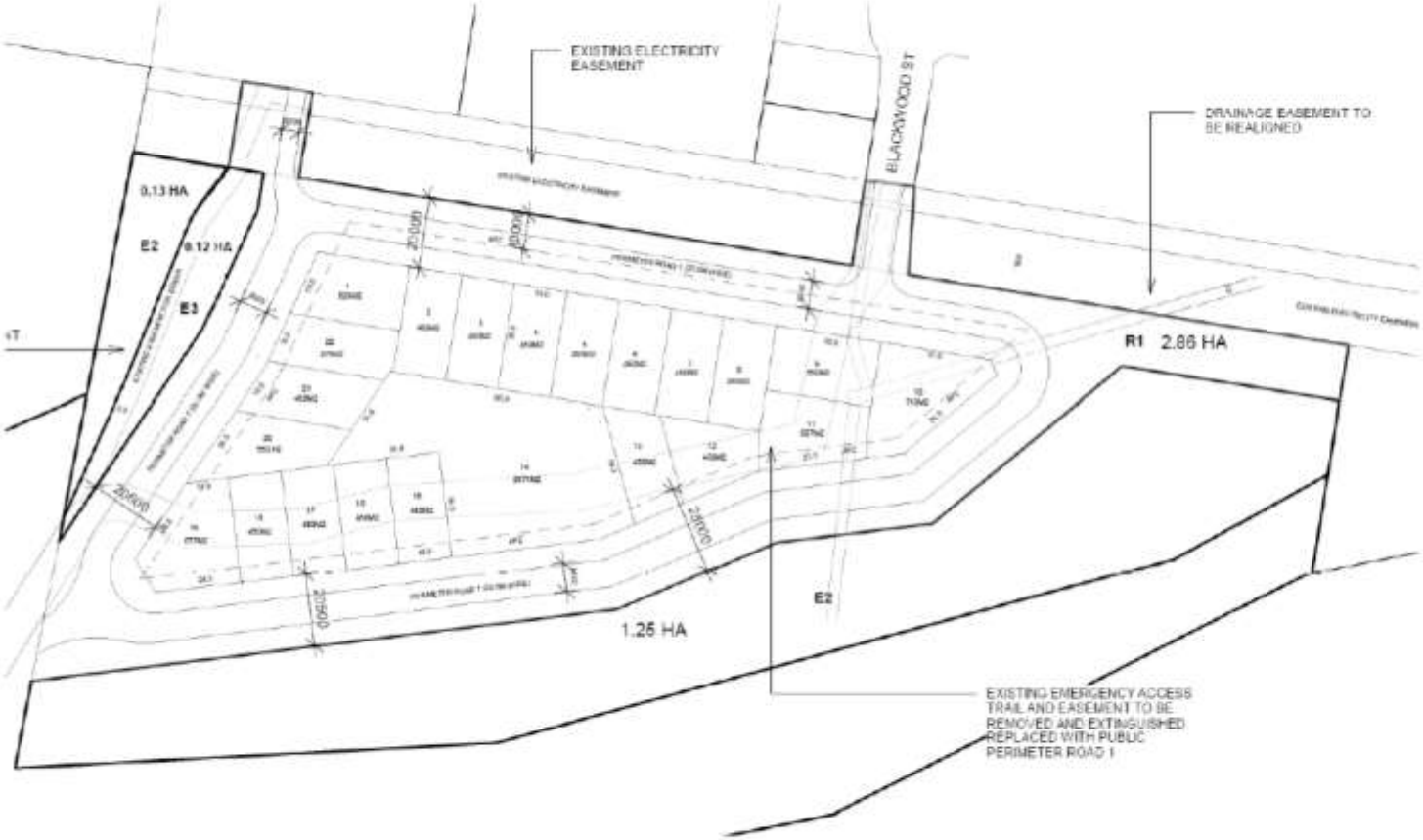
The design includes additional planting to offset the removal of the vulnerable paddock koala food trees, and to strengthen the retained vegetation areas. This additional planting of koala food trees will enhance this area for koala usage. The location of additional planting areas has been identified with a view to also providing for areas which are able to be retained in the long term, and also located in areas which will not increase the bushfire hazard for the existing and future residential areas. This has a long term positive benefit to the Lake Innes Nature Reserve by also minimizing the opportunity for any house fire to escape into the bushland areas of the Nature Reserve.

The subject land will require a development application for any future residential development on the land. Such an application will include a Vegetation Management Plan to setout the required long term management of the conservation areas, as well as the long term ownership of these areas of land.

Figure 3: South Lindfield Zone Plan



Figure 4: South Lindfield Concept Development Plan



The design of the residential development has been based on the initial criteria of avoid and minimise impact on koala habitat areas as well as areas of native guava. This has resulted in the identification of areas of retained vegetation, as well as the removal of minor areas of koala food trees which were isolated in open paddock areas.

The outcome of this approach has enabled the Koala Plan of Management to identify the number of koala food trees to be impacted and the offset area required. The Ecological Planning has integrated with the habitat areas that are being retained and enhanced in the recently approved residential estate to the north.

The native guava is to be retained in totality. The Planning Proposal will not result in the removal of any native guava from the subject land. The design has specifically avoided areas where native guava are located on site, and this species will protected within the forested areas. The proposal provides for a minimum of 4,800m2 of additional planting areas, providing an overall increase in habitat areas for both the native guava and koalas.

The E3 – Environmental Management zone applies to an area where there is existing Council infrastructure. If this easement did not exist, then the land would have been zoned E2 – Environmental Conservation, as per the other environmental areas of the subject land. However the E3 zone would enable Council to access their infrastructure if required, but only subject to a complete environmental assessment at the time of any required works.

The Planning Proposal will require amendment of the zone maps as discussed above, as well as the height of building map, koala habitat map and floor space ratio map. The proposal is consistent with other residential areas in this locality.

4. Analysis of Subject Land & Proposal

The subject land has been extensively investigated over a number of years. This includes years of fauna survey data, as well as formal investigations in relation to Aboriginal Cultural Heritage and Bushfire Hazard impacts. The servicing of the land, including connection to reticulated services, have all formed part of these investigations over the last several years. These matters are discussed in summary as follows.

4.1 Bushfire Hazard Analysis

A Bushfire Hazard Analysis has been undertaken and the report is included with this Planning Proposal. The assessment was undertaken in consultation with the ecological assessment. South Lindfield is able to be developed for residential purposes without the need to remove any vegetation for the purposes of Asset Protection Zones. The Asset Protection Zones are all located within the area to be zoned residential, and do not encroach into any areas of environmental conservation or management.

The concept plan shows the proposed residential area is protected via a perimeter road design. The width of the asset protection zones (APZ) had been determined in the Bushfire Hazard Assessment, and this is the width of separation provided in the concept plan design. Offset planting areas are not adversely impacted by the APZ areas.

Ultimately, the matter in relation to Bushfire Hazard Analysis is to determine that the asset protection zones may be contained wholly within the private property and no reliance on adjoining lands is required. This is certainly the case for this Planning Proposal.

Thus, the Bushfire Hazard Analysis has determined that the subject land may be developed for residential and urban purposes, with the identification of the asset protection zones as shown.

4.2 Aboriginal Cultural Heritage

The subject land has been part of development consents from the late 1980s onwards. On a number of occasions, the property owner has engaged with representatives of the Local Aboriginal Land Council to undertake site inspections over the land. These consultations have noted that the land has been the subject of extensive site disturbances, particularly the land clearing and levelling associated with creation of the golf course fairway and the proposed residential developments on South Lindfield.

These site disturbances have resulted in an area which is considered to be unlikely to contain any areas of significant Aboriginal Heritage artefacts. The previous site inspections have confirmed the level of surface disturbance and earthworks, and that there is a lack of

artefacts on the site. Council's recent engagement of the Local Aboriginal Land Council representatives to inspect the South Lindfield site, reconfirmed this level of disturbance and lack of artefacts on the site.

A search of the OEH Aboriginal Heritage Information Management System noted that no Aboriginal sites and no Aboriginal Places were recorded or declared in or near the subject land. An extensive search noted the nearest site is recorded at the corner of Philip Charley Drive and John Oxley Drive (Lot 5 DP 630393). This site is not adjoining the subject land.

Correspondence from the Local Aboriginal Land Council forms part of this Planning Proposal. The correspondence refers to a broader area that was investigated at the time, and this included the South Lindfield property. No objection to the Planning Proposal and development of the land was raised by the Local Aboriginal Land Council.

4.3 Reticulated Services

A water main is located north of the subject land, within a dedicated easement. This water main will not be adversely impacted by the proposal. In consultation with Council, and similar to Council's previous responses in relation to the South Lindfield Planning Proposal, it is noted that the subject land may be readily supplied with a reticulated water service. Some extensions to the water supply will be required but Council's network has capacity for the proposal.

The South Lindfield land has already been assessed and catered for in regards to reticulated sewer services. A pumping station, located downstream of the land, to the south-west, has capacity to cater for the proposed residential subdivision.

No vegetation impacts will be required for these extensions and upgrade to reticulated services, particularly as the pump station and other network infrastructure is already in place.

It is noted that the proposal to develop this land for additional residential occupation has formally been with Council since 2013 and no concerns have been raised regarding the capacity of the network. Thus, it is considered that the existing network has capacty to cater for the proposal.

4.4 Transport

The cadastral information shown on the plan set clearly identifies the road connections to the north. These road connections were retained by the property owner in order to ensure two vehicular connections to the northern properties was a viable option. The development of the existing residential estate has provided for the eastern most connection via Blackwood Street, and the road formation clearly shows that the road was always intended

to extend into the subject land. The western most connection is not formed as the development of the northern lands in this area has not been finalised. The development concept plan has demonstrated where this connection may be located, but this will be subject to the final development design and approval of both the subject land and the adjoining northern property.

The perimeter road network shown on the development concept plan has demonstrated how this road will address both the bushfire hazard protection measures, whilst also providing a road network which is compliant with Council's current design standards.

The road network has capacity to cater for this minor (2.86 hectares) of residential zoning. It should be noted that this 2.86 hectares of residential land includes land required for asset protection zones, location of services infrastructure, and asset protection zones. Thus, the residential development footprint is much smaller. Therefore, it may be seen that the subject land may be readily developed for residential occupation, with integration into the existing and future road network in this locality.

4.5 Environmental Analysis

The environmental evaluation of the subject land has been ongoing for several years. Regular spotlighting and monitoring of koalas in this broader locality has provided the Ecological consultant with years of data, and a long term knowledge of koala usage of the broader locality.

The Ecological Constraints Assessment, and a full Koala Plan of Management have been lodged with this Planning Proposal. The design process was based on the requirement to firstly avoid environmentally significant areas, secondly to minimise any adverse impacts and thirdly, to mitigate / offset any impacts. The environmental analysis determined that the proposals will have minimal environmental impact, subject to the replacement planting of koala food trees at a ratio of 2:1 and the retention of areas of native guava.

The retention and enhancement of habitat areas will have an overall positive environmental impact. This will result in an improved ecological outcome for the overall site.

5. Purpose of the Planning Proposal (Objectives or Intended Outcomes)

The intended outcome of this Planning Proposal is as per similar proposals in this locality and is set out as follows:

The intended outcome is urban development and habitat management across the subject land that is:

- able to be serviced with essential infrastructure;
- compatible with the local environment;
- well designed to facilitate social wellbeing; and
- compatible with surrounding landuses.

The objective is to provide planning based controls which enable urban development to be undertaken whilst achieving the above outcomes.

The Planning Proposal will facilitate the long term management of urban bushland. Portions of the land have been identified as suitable and capable of being developed to provide additional residential accommodation, and areas of the land have been identified as suitable for environmental management. The proposal has been assessed as being able to provide a sustainable outcome.

The Planning Proposal will require amendments to the LEP mapping including the Land Zoning Map, the Lot Size Map, Floor Space Ratio Map, Height of Building Map, and Koala Habitat Map.

The adoption of the Koala Plan of Management will also be required to implement the proposed habitat enhancement works and provide a wholistic environment for the long term management and enhancement of koala habitat.

6. Strategic Justification of Proposal

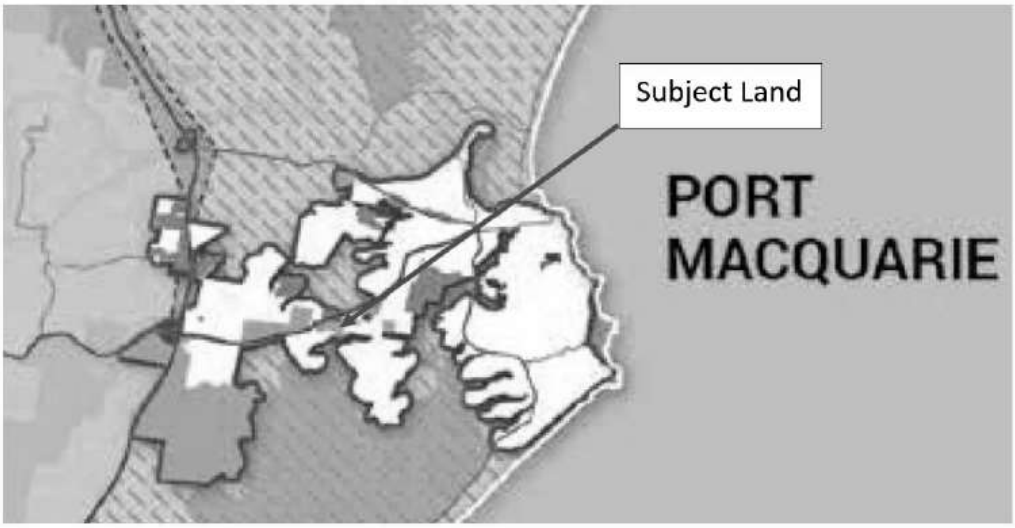
The Department of Planning & Environment (now the Department of Planning, Industry and Environment), issued a Guide to Preparing Planning Proposals (Dec 2018) which refers to the questions to be considered when demonstrating a justification for the Planning Proposal. As this Planning Proposal is very similar to the South Lindfield Planning Proposal on the adjoining land to the north, the responses to the questions are also similar due to the relatively similar planning context.

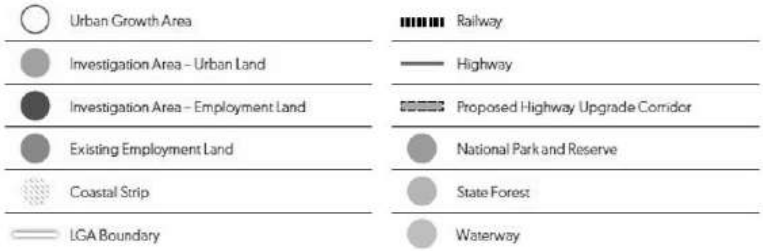
(a) Need for the Planning Proposal

- *Is the planning proposal a result of any strategic study or report?*

The subject land is wholly identified within the Urban Growth Area of the North Coast Regional Plan map within the Department of Planning's North Coast Regional Plan 2036. The South Lindfield Precinct is shaded orange and is both within the Urban Growth Area and also identified as an Investigation Area – Urban Land. An extract from the North Coast Regional Plan Map is shown below:

Figure 5: North Coast Regional Plan map extract





The Subject Land has consistently been identified in the North Coast Regional Plan as an area for Urban Land Investigation.

The Council's Urban Growth Management Strategy, also identified the subject land as suitable for urban growth, as shown in the following plan extract. South Lindfield is outlined in purple which identifies the land as part of the Urban Growth Area for Port Macquarie. The subject land is within the Port Macquarie – Wauchope urban expansion corridor identified in the adopted Urban Growth Management Strategy.

The Ecological Constraints mapping undertaken for this Planning Proposal, has demonstrated that the subject land is capable of supporting residential development, and with the proposed offset planting identified in the Koala Plan of Management lodged with this proposal, will result in an overall increase in the habitat trees for koalas, as well as the retention and protection of significant species such as Native Guava.

Figure 6: Port Macquarie - Hastings Urban Growth Management Strategy extract

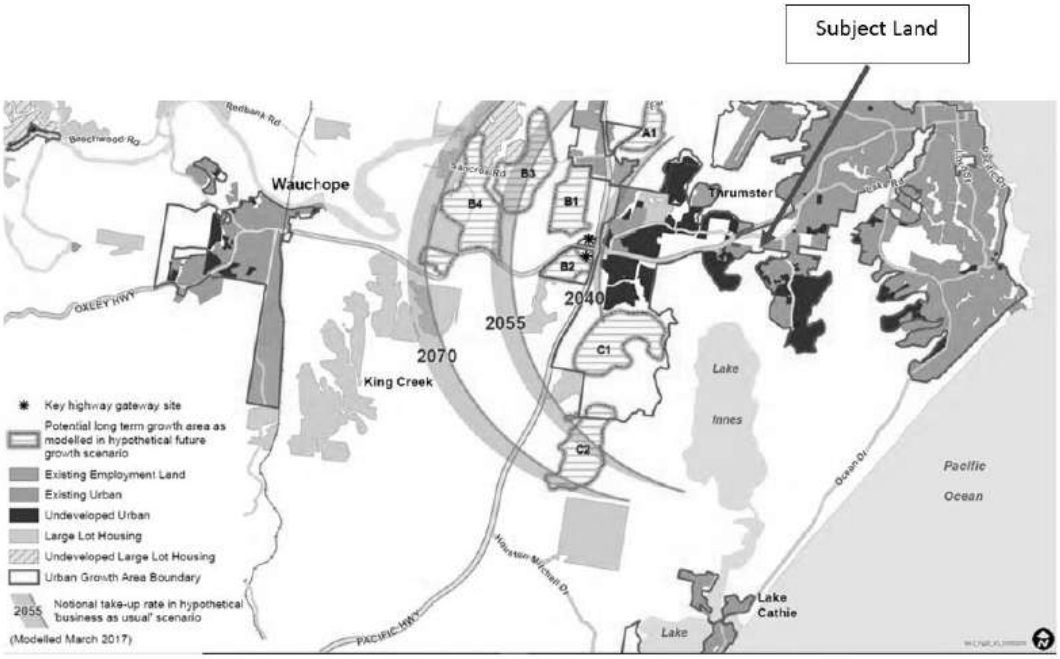
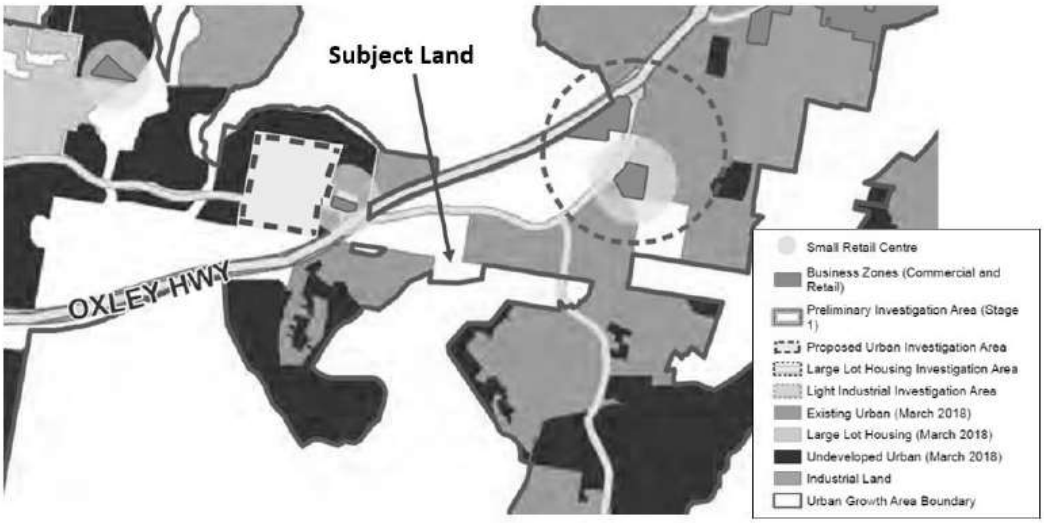


Figure 7: Extract from Port Macquarie - Hastings Council's adopted Urban Growth Management Strategy clearly showing the Subject Land as being within the Urban Growth Area Boundary



- *Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?*

  The subject land is currently zoned for Primary Production. Urban development is prohibited under the current zoning, and the Primary Production zone does not provide any level of environment protection for habitat areas. Therefore, this Planning Proposal is the best means of achieving the objectives and intended outcomes. The Planning Proposal will achieve the outcomes identified in the Port Macquarie – Hastings Urban Growth Strategy.

(b) Relationship to strategic planning framework

- *Is the Planning Proposal consistent with the objectives and actions of the North Coast Regional Plan 2036?*

  The Planning Proposal is consistent with the objectives and actions of the North Coast Regional Plan, and addresses the Settlement and Housing provisions of the Plan.

- *Is the Planning Proposal consistent with Council's Community Strategic Plan and Urban Growth Management Strategy 2010 – 2031?*

  The Planning Proposal is consistent with Council and Department of Planning's long term strategy for the growth of Port Macquarie to be directed to the west of the existing CBD and to provide for efficient use of land through infill developments. The

Planning Proposal is particularly consistent with the Implementation Actions in the Port Macquarie – Hastings Urban Growth Management Strategy 2011 – 2031 including:

> Preparation of Koala Plans of Management for Urban Investigation areas and existing urban areas, as necessary to address the management of koala habitat and koala populations;
> Continue planning of infill areas for residential development: West Lindfield – South, Port Macquarie (etc).

- *Is the Planning Proposal consistent with applicable State Environmental Planning Policies?*

There are a number of State Planning Policies applicable to this Planning Proposal, including State Environmental Planning Policy (Koala Habitat Protection) 2020. This Planning Proposal is consistent with the provisions of the Koala SEPP, and provides a comprehensive plan for the long term protection and enhancement of koala habitat in the locality.

The proposal has also been investigated in regards to the provisions of State Environmental Planning Policy No 55—Remediation of Land. The subject land has been assessed and analysed in regards to any potential contamination, including soil testing. There is no landuse history which could lead to potential site contamination. The final results of the soil testing will be provided separately.

State Environmental Planning Policy (Coastal Management) 2018, herein referred to as the Coastal SEPP, applies to coastal areas of NSW, and areas of coastal wetlands and lakes. The subject land is NOT within an area mapped as Coastal Wetlands. The subject land is NOT within an area mapped as Littoral Rainforest or land in Proximity to Littoral Rainforests. The subject land is NOT within an area mapped as Coastal Environment Area and the subject land is NOT within an area mapped as Coastal Use Area, under the provisions of the Coastal SEPP.

Part of the southern portion of the subject land is within an area identified as being within Proximity Area for Coastal Wetlands. In regards to future residential development, the Proximity Area will apply to the southern strip of retained and protected vegetation, the 25m wide Asset Protection Zone, and the front setback area of the likely residential allotments. Any future development application will need to address the provisions of clause 11 of the Coastal SEPP to ensure the proposal will not significantly impact on the coastal wetland area south of the land (primarily contained within the Lake Innes Nature Reserve). This particularly relates to water quality and quantity, both surface and ground water flows. The future development of the site will be able to contain stormwater runoff as per Council's engineering design standards as they may apply at the time of any future development application. This will ensure the proposal will not adversely impact on the downstream coastal wetland.

The Planning Proposal is consistent with the applicable State Environmental Planning Policies.

Is the Planning Proposal consistent with applicable Ministerial Directions (s117 Directions)?

Rural Zones: The directive is to not rezone rural land to an urban zone. The inconsistency with this direction is justified such that the land is identified as part of the future urban growth area, and a better long term management of the environmental values will be achieved via this Planning Proposal. None of the subject land is mapped or identified as Regionally Significant Farmland. The proposal will not result in the loss of any valuable agricultural productive land.

Environment Protection Zones: This direction is to protect and conserve environmentally sensitive areas. In accordance with this direction a Planning Proposal may be inconsistent only if justified by a study prepared in support of the Planning Proposal. It is noted that this Planning Proposal will provide for removal of some koala food trees. This is supported by the detailed assessment and Ecological Reports, and will result in an overall increase in koala habitat in the locality, and will significantly improve the planning protections for the areas of environmental value which are currently zoned Primary Production. The Planning Proposal provides an Environmental Zone over areas to be managed and protected, and will result in a greater overall environmental benefit.

Planning for Bushfire Protection: This direction is to protect life, property and the environment from bushfire hazards. It may be interpreted that the direction requires Planning Proposals to contain development application details to the level of asset protection zone identifications, access road links, water supply details, etc. A Concept Plan has been provided which identifies the location of asset protection zones as well as vehicular access throughout the area. The subject land will be connected to Council's reticulated water supply services. The Planning Proposal has been assessed in regards to the current Planning for Bushfire Protection provisions and the proposal is compliant with these Bushfire Protection requirements.

(c) **Environmental, social and economic impact**

- *Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?*

The subject land has been extensively surveyed and investigated over several years. The assessment and report lodged with this Planning Proposal provides an assessment based on this extensive depth of information. As a result, a full Koala Plan of Management has been prepared which will result in an increase in koala habitat in this area. The assessment has concluded that, subject to the ameliorative measures being implemented, the proposal will not have any adverse environmental impact.

- *Are there any other likely environmental effects as a result of the Planning Proposal and how are they proposed to be managed?*
  There are no other likely environmental effects which have not already been considered in the environmental assessments undertaken to date.

- *How has the Planning Proposal adequately addressed any social and economic effects?*
  There is a social and economic benefit to providing additional housing choices for land which is located with easy access to existing educational facilities, as well as public transport to the full range of services and employment opportunities provided by the Regional City standards and services within the Port Macquarie CBD. The location of the subject land is such that future residents will have easy access to the developing health and education precinct (as identified in Council and Departmental strategies). There are significant social and economic benefits to the community in utilising available and readily serviced land.

7. Port Macquarie – Hastings Council's Planning Proposal Policy

Port Macquarie – Hastings Council adopted a Planning Proposal Policy which came into effect in February, 2020. Despite this Planning Proposal being formally lodged with Council in 2013, staff have advised that this Planning Proposal is now to address the provisions of the new Policy. The following section addresses each matter setout in section 3.8 of the Council Policy.

(a) Provisions of Section 3.33 of the Environmental Planning & Assessment Act

The Council policy repeats the provisions of Section 3.33 of the Environmental Planning and Assessment Act. These matters have already been addressed in this Planning Proposal.

(b) Planning Proposal to be setout as per Departmental Guidelines

This Planning Proposal is structured as per the requirements of the Departmental Guidelines.

(c) Planning Proposal to address Strategic Merit

The matters relating to Strategic Merit have been addressed earlier in this Planning Proposal as per the Departmental Guidelines.

(d) Planning Proposal Application inclusions

The Council Policy sets out the matters that are required to be lodged as part of the Planning Proposal application as follows:

(i) Planning Proposal document prepared in accordance with Departmental Guidelines justifying the proposal.

As noted previously, this Planning Proposal has been prepared in accordance with Departmental Guidelines and addresses the justification for the proposal.

(ii) Appropriate technical studies, including concept diagrams and maps, and any information identified at a Prelodgement meeting.

This Planning Proposal includes technical studies completed by a number of experts, including the Ecological Assessment, Koala Plan of Management, Bushfire Hazard Assessment, Aboriginal Heritage consultation and Survey work completed by registered surveyors. It is also noted that this Planning Proposal has been prepared by a practicing Certified Registered Planner.

In regards to addressing Council nominated technical studies, the latest correspondence from Council (10th December, 2020) which provides minutes from a meeting (held 27th October, 2020) sets out the matters that Council requires to be addressed in this Planning Proposal. These are summarized as follows:

- *Biodiversity Assessment – updated ecological assessment to address an assessment of any areas of High Environmental Values which takes into account relevant legislation and assists to guide the determination of zones. The assessment should be consistent with the North Coast Regional Plan 2036, Direction 2 and in particular Action 2.1 to 'Focus development to areas of least biodiversity sensitivity in the region and to implement avoid, minimize, offset hierarchy to biodiversity including areas of high environmental value'.*

  This Planning Proposal includes an updated ecological assessment which has assessed any areas of High Environmental Values and taken into account relevant legislation. The ecological assessment has been used to determine the areas which require appropriate Environmental zones. The ecological assessment is consistent with the North Coast Regional Plan, including Action 2.1 which reflects the avoid, minimize, offset hierarchy consistent throughout the relevant biodiversity legislation.

- *Biodiversity Assessment – Respond to matters outlined in consultation with BCD dated 11 September 2020.*

  The BCD letter relates to a Planning Proposal which has been significantly reduced in area. The matters outlined in the consultation with BCD as they relate to the study area of South Lindfield are addressed in an attachment to this Planning Proposal.

- *Bushfire – A Bushfire Hazard Assessment Report consistent with the requirements of Planning for Bushfire Protection (2019) noting the need for bushfire protection measures to be consistent with the environmental constraints of the land. Asset Protection Zones to be contained within residential zones, with perimeter roads subject to detailed design at DA stage.*

  A Bushfire Hazard Assessment Report has been prepared in accordance with the current legislative requirements and bushfire prone land mapping. This Bushfire Hazard Assessment Report forms part of this Planning Proposal. The Concept Plan for future development of the residential area has demonstrated how the asset protection areas will be located within the residential zoned areas and will not impact on the areas of retained and enhanced vegetation.

- *Contamination – A Preliminary Site Contamination report is required to address the requirements of the Ministerial Planning Direction 2.6 – Remediation of Contaminated Land (issued 17 April 2020). Council's Contaminated Land Policy 2017 requires the assessment is carried out by a suitably qualified and practicing contaminated land practitioner accredited under an EPA accreditation scheme.*

  A review of the landuse history for the subject land was undertaken. It is noted that the subject land has been in the same family ownership for some decades, and thus the site history is readily available. There is no record of any landuse undertaken on the subject land which could render the site unsuitable for residential occupation. Despite this well known history, consultants were engaged to undertake soil testing on the subject land. The preliminary advice from the consultants is that no evidence of site contamination has been identified on the land. It is anticipated that the final soil analysis report will confirm that the land is suitable for residential occupation. The geotechnical report is to be provided separately.

- *Electricity and Transmission Lines – Council staff have sought a title search for the property and copy of section 88b instruments or easements in relation to the electricity infrastructure and transmission infrastructure that traverse the site or other relevant restrictions on title that apply to the use of the land, and advise of any consultation with relevant agency.*

  A copy of the Property Title and Section 88B Instrument have been provided with this Planning Proposal. As the subject land forms part of a residue allotment, there are numerous easements and provisions which are not relevant to this proposal, however the information has been provided to Council staff as requested. The electricity easement which traverses the subject land services a private property and the property owner does not object to relocation of the powerline as required by this proposal.

- *Private Native Forestry Agreement – Council staff sought details of any agreement applying to the land and consultation with Local Land Services, if any.*

  There are no Private Native Forestry Agreements applying to the subject land.

(e) Planning Proposal to include completed Planning Proposal Application Form

The Council form has been duly completed and included with the Planning Proposal.

(f) Planning Proposal to include completed Political Donations & Gifts Disclosure Statement

The Council form has been duly completed and included with the Planning Proposal.

(g) Submission of documentation in PDF

This Planning Proposal and documentation has been provided to Council in PDF.

(h) Mapping data to be supplied in georeferenced format eg: georeferenced CAD file

Noted – Mapping data provided in appropriate format for Council.

(i) Payment of fees

The Planning Proposal fees were paid at the time this Planning Proposal was formally lodged with Council.

8. Port Macquarie – Hastings Council's Local Strategic Planning Statement

A Local Strategic Planning Statement (LSPS) for Port Macquarie Hastings was published on 31 September 2020. The LSPS identified 19 Planning Priorities for the Local Government Area. These Planning Priorities apply to the full range of landuses within the 3686km^2 of the LGA, of which Residential landuse makes up 2% of the LGA land area. The subject land is included in this 2% calculation as the subject land forms part of Council's identified urban release area.

Council's LSPS notes that the LGA is a high growth area, with Port Macquarie identified as one of the growth regions in the North Coast Regional Plan 2036. The LSPS states that by 2040, the projected increase in Port Macquarie-Hastings' population will require an additional 11,950 new dwellings. There are challenges in ensuring this significant additional housing is provided in areas identified for urban growth. Future housing should be located in areas which will provide future residents with good access to the services and facilities of the Regional City of Port Macquarie, and particularly the Health and Education Precinct.

This Planning Proposal is consistent with the LSPS and particularly Planning Priorities which seek to protect, conserve and enhance biodiversity, with this Planning Proposal providing an Environmental Conservation zone over areas which contain both native guava and koala habitat. The existing paddock trees will be lost in the long term as there is no likelihood of any new growth under the current zoning and land management, and thus the replacement of these trees in an area to be zoned for Environmental Protection, and a doubling of the number of koala food trees, provides this long term protection, conservation and enhancement (refer Planning Priorities 1 & 2).

The proposed residential area will be protected by the most up to date bushfire hazard management guidelines and legislation, thus providing an improved resilience to increasing natural hazards and risks such as bushfire (refer Planning Priority 3). The new housing to be constructed within this residential area will be required to comply with improved BASIX standards and thus the housing type will have an improved level of energy efficiency (refer Planning Priority 5).

The Concept Plan for development demonstrates the opportunity to develop this site for a diversity of housing types. The final design will be subject to a future, comprehensive development application and may include more areas of integrated development. This housing will also be located on land which has consistently been identified for urban development in both Council and Regional Planning Strategies, and thus has been planned as the right location for additional housing. These opportunities for improved housing supply, and a diversity of housing types, is consistent with the LSPS (refer Planning Priority 7).

Thus, it may be seen that the Planning Proposal is consistent with Council's adopted Local Strategic Planning Statement.

9. Conclusion

This Planning Proposal application has been the culmination of several years of studies and investigations in relation to the subject land. The current zoning does not identify any areas of environmental significance.

The environmental reports which accompany this Planning Proposal are the result of years of surveys and therefore, are based on a comprehensive knowledge of the site. With this strong basis, the reports have determined the most appropriate landuses which will result in a suitable use of the land, including long term management and enhancement of the environmental values of the subject land.

A Koala Plan of Management has been prepared which identifies a consolidated area for koala habitat management and co-ordinated offset plantings. The location of conserved habitat area along the western boundary of the subject land is consistent with the location of habitat areas to be retained and dedicated to Council on the recently approved residential development to the north of the subject land.

The Planning Proposal is consistent with the direction for urban growth in the Port Macquarie region. The end result of this Planning Proposal will be to provide a greater level of management and long term protection for the habitat and significant flora identified on the subject land, as well as providing for the provision of additional housing over the South Lindfield area.

The Planning Proposal is consistent with both the North Coast Regional Plan and the Council's Urban Growth Management Strategy. The subject land is identified in both Strategies as forming part of the Urban Area of Port Macquarie. The Environmental Investigations have identified the area suitable for a residential zone, and thus the Planning Proposal has Strategic Merit and should be supported.

10.Appendices

The following documents have been lodged with this amended Planning Proposal:

1. Application Form
2. Bushfire Hazard Assessment Report
3. Koala Plan of Management
4. BDAR Report
5. Aboriginal Heritage Report
6. Response to BCD
7. Property Title
8. Section 88B Instrument
9. Concept Development Plans
10. Map Amendments
    a. Floor Space Ratio
    b. Height of Building
    c. Koala Habitat
    d. Minimum Lot Size
    e. Zone Map
11. Plan Set in dwg Format x 2

PLAN FORM 2 (A2) | WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION | ePlan | Sheet 1 of 4 sheets

SCHEDULE OF SSM CONNECTIONS	
MARKS	BEARING & DISTANCE
SSM176612 - SSM192896	174° 33' 16" - 115.387
SSM204668 - SSM204669	42° 12' 07" - 71.938
SSM184021 - CNR 'A'	191° 54' 09" - 498.805
SSM204668 - CNR 'B'	141° 06' 36" - 513.816

(RR)EASEMENT FOR UNDERGROUND POWERLINES VARIABLE WIDTH (DP1223015)
(SS) EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE (DP1223015)
(JJ) EASEMENT TO DRAIN WATER VARIABLE WIDTH(DP1218524)
(FF) EASEMENT FOR SERVICES, WATER SUPPLY & DRAINAGE OF SEWAGE 5 WIDE (DP1195855)
(HH)EASEMENT FOR SERVICES, WATER SUPPLY & DRAINAGE OF SEWAGE VARIABLE WIDTH (DP1195855)
(GG)EASEMENT FOR SERVICES, WATER SUPPLY & DRAINAGE OF SEWAGE 10 WIDE (DP1195855)

SSM 33609 FD.
SSM 136810 FD.
PM 111543 FD.
SSM184021 FD
SSM 176612 FD.
SSM 204669 FD
SSM204668 FD.
SSM192896 FD.
CNR 'A'
CNR 'B'

SSM33609 - SSM136810
95°14'40" - 802.566 MGA (GND)
95°14'43" - 802.563 BY SURVEY

'X' - 'Y'
87°57'48" - 1021.781 MGA (GND)
87°57'48" - 1021.775 BY SURVEY

SSM184021 - SSM136810
66°19'34" - 983.830 MGA (GND)
66°19'36" - 983.833 BY SURVEY

PM111543 - SSM136810
161°29'24" - 378.297 MGA (GND)
161°29'26" - 378.282 BY SURVEY

SSM 176612 - SSM 192896
245° 49' 17" - 297.062

SSM 204669 - SSM 204668
290° 46' 59" - 280.093

1 DP 630179
2 DP 1223015
298 DP1234443
31 DP809231

PT. 500
PT. 499
(1.574 Ha PO)

PT.499
(61.15 Ha) DEDN.
TOTAL 62.84 Ha DEDN.

FOR DESIGNATIONS (TT) (UU) (VV) (WW) (YY) SEE SHEET 3

R2 - R3 - COMPILED FROM DP809231

SCHEDULE OF SHORT LINES	
NO.	BEARING & DISTANCE
1	89.37 PO
2	39.42 PO
3	114 PO
4	35.37 PO
5	60.905 PO
6	47.185 PO
7	112.155 PO
8	49.585 PO
9	71.47 PO
11	159° 28' 40" - 87 PO
12	135° 43' 40" - 86.06 PO
13	102° 15' - 124.08 PO
14	51° 28' 40" - 100.295 PO
16	42° 13' 10" - 118.14 PO
19	190° 53' 20" - 69.345 PO
20	189° 04' 30" - 64.99 PO DEDN
21	99° 02' 40" - 125.71 PO
26	55° 54' - 5.56
55	347° 13' 20" - 6.04 PO
56	81° 27' 20" - 5.665 PO
87	135° 14' 20" - 6.735
88	187° 52' 20" - 22.91
89	259° 02' 20" - 19

SCHEDULE OF CURVED LINES			
NO.	ARC	CHORD	RADIUS
C1	12.195 PO	21° 21' 20" - 12.195 PO	217.5 PO
C2	6.03 PO	25° 10' 40" - 6.025	78
C3	11.33 PO	16° 44' 40" - 11.305	47.5
C4	21.44 PO	105° 50' - 21.43	185
C5	15.795 PO	105° 13' - 15.785	115
C6	34.8 PO	216° 29' 20" - 34.65	107.5
C7	35.62 PO	218° 14' 40" - 35.4	92.5
C8	23.78 PO	222° 17' 20" - 23.725	97.5

SCHEDULE OF CURVED LINES			
NO.	ARC	CHORD	RADIUS
C17	13.26	169° 33' - 13.26	247.3
C33	4.03 PO	188° 21' - 4.03	217.5
C38	19.49 PO	32° 24' 40" - 19.47 PO	107.5 PO
C39	3.56 PO	28° 19' - 3.56 PO	92.5 PO
C40	14.54	191° 54' - 14.22	20
C87	41.355	178° 21' 40" - 41.29	208.5
C88	14.355	218° 57' 40" - 12.845	8.885

COORDINATE SCHEDULE						
MARK	M.G.A. COORDINATES EASTING	M.G.A. COORDINATES NORTHING	CLASS	ORDER	METHOD	STATE
SSM 33609	486 333.052	6 519 315.076	C	3	SCIMS	FOUND
PM 111543	486 111.219	6 519 205.449	B	2	SCIMS	FOUND
SSM 136810	487 131.940	6 519 241.746	C	3	SCIMS	FOUND
SSM 184021	486 231.268	6 518 846.867	B	2	SCIMS	FOUND
SSM 176612	485 960.373	6 518 725.250	D	N/A	TRAVERSE	FOUND
SSM 192896	485 971.318	6 518 610.431	D	N/A	TRAVERSE	FOUND
SSM 204668	485 709.558	6 518 709.775	D	N/A	TRAVERSE	FOUND
SSM 204669	485 757.862	6 518 763.044	D	N/A	TRAVERSE	FOUND

DATE OF SCIMS COORDINATES: 03-10-2019 MGA ZONE: 56 MGA DATUM:GDA94
COMBINED SCALE FACTOR 0.999594

(A) RIGHT OF ACCESS 8 WIDE (DP1233408)
(E) EASEMENT FOR DRAINAGE OF WATER VARIABLE WIDTH (DP1190501)
(F) POSITIVE COVENANT (DP1201505) (SITE)
(PP) EASEMENT TO DRAIN WATER VARIABLE WIDTH (DP1223015)
(H) POSITIVE COVENANT No.4 DP1234443(SITE) (NO.4)
(J) POSITIVE COVENANT (DP1190501)
(APZ) POSITIVE COVENANT (DP1223015) (NO.13) (SITE)
(KK) POSITIVE COVENANT (DP1218524) (SITE)
(LL) RIGHT OF CARRIAGEWAY VARIABLE WIDTH (DP1218524)
(NN) POSITIVE COVENANT (DP1223015) (NO.17)
(AA) POSITIVE COVENANT (DP1223015)
(BB) RIGHT OF ACCESS 10 WIDE (DP1195855)
(CC)RIGHT OF ACCESS VARIABLE WIDTH (DP1195855)
(P) EASEMENT TO DRAIN WATER 10 WIDE (DP1218524)
(R) EASEMENT TO DRAIN WATER 2 WIDE (DP1218524)
(U) EASEMENT TO DRAIN WATER 3.5 WIDE (DP1223015)
(Z) EASEMENT TO DRAIN WATER 2 WIDE (DP1223015)
(ZZ) EASEMENT TO DRAIN WATER 1.5 WIDE (DP1223015)

DIAGRAM 1
SCALE 1:1000

SURVEYOR Name: GRAHAM McLEOD BURNS Date: 3RD OCTOBER 2019 Reference : 4960SL5	PLAN OF SUBDIVISION OF LOT 399 DP1241278	L.G.A: PORT MACQUARIE - HASTINGS Locality : PORT MACQUARIE Reduction Ratio 1: 5000 Lengths are in metres.	REGISTERED 24.8.2020	DP1258597

ATTACHMENT

Office of the Registrar-General /Src:URBISPRO /Ref:Love Project Management

PLAN FORM 2 (A2) | WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION | ePlan | Sheet 2 of 4 sheets

DIAGRAM 2
SCALE 1:1000

SCHEDULE OF CURVED LINES			
NO.	ARC	CHORD	RADIUS
C9	20.715	282° 25' - 20.675 PO	100
C12	46.24	228° 49' 40" - 45.735 PO	90
C13	19.09	62° 52' - 19.09 PO	500

DIAGRAM 3
SCALE 1:500

SCHEDULE OF SHORT LINES	
NO.	BEARING & DISTANCE
27	91° 35' 20" - 11.12 PO
28	99° 16' 20" - 5.33 PO
29	117° 17' - 5.52 PO
30	152° 08' 20" - 9.41 PO
31	195° 37' 20" - 12.21 PO
32	152° 08' 20" - 6.66 PO
33	195° 37' 20" - 11.48 PO
34	117° 17' 00" - 3.63 PO
35	99° 16' 20" - 4.43 PO
36	96° 29' - 1.96 PO
37	171° 09' - 10.33 PO
38	151° 50' 20" - 12.07 PO
39	171° 09' - 8.78 PO
40	161° 23' 40" - 3.345 PO
41	151° 50' 20" - 12.42 PO
42	180° 29' - 10.915 PO
43	161° 23' 40" - 4.35 PO
44	96° 29' - 0.315 PO
45	161° 57' 20" - 4.62 PO
46	161° 57' 20" - 3.45 PO
47	180° 29' - 10.895 PO
66	96° 29' - 4.935 PO

DIAGRAM 4
N.T.S.

DIAGRAM 5
N.T.S.

- (B) RIGHT OF ACCESS VARIABLE WIDTH (DP1233408)
- (C) EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE (DP1201505)
- (E) EASEMENT FOR DRAINAGE OF WATER VARIABLE WIDTH (DP1190501)
- (F) POSITIVE COVENANT (DP1201505)
- (J) POSITIVE COVENANT (DP1190501)
- (K) EASEMENT TO DRAIN WATER 3 WIDE AND VARIABLE (DP1079956)
- (L) EASEMENT TO DRAIN WATER 3 WIDE (DP1090593)
- (M) EASEMENT FOR TRANSMISSION LINE 14, 18 & 20 WIDE (VIDE GOVT GAZ 11-2-1983 FOL 696 - DP627273)
- (N) T315871 - EASEMENT FOR WATER SUPPLY PIPELINE 5, 7 & 11 WIDE (VIDE DP622690)
- (Q) POSITIVE COVENANT (DP1195855) (NO.16) (SITE)
- (T) EASEMENT TO DRAIN WATER VARIABLE WIDTH (DP1201505)
- (BB) RIGHT OF ACCESS 10 WIDE (DP1195855)
- (CC) RIGHT OF ACCESS VARIABLE WIDTH (DP1195855)
- (FF) EASEMENT FOR SERVICES, WATER SUPPLY & DRAINAGE OF SEWAGE 5 WIDE (DP1195855)
- (GG) EASEMENT FOR SERVICES, WATER SUPPLY & DRAINAGE OF SEWAGE 10 WIDE (DP1195855)
- (HH) EASEMENT FOR SERVICES, WATER SUPPLY & DRAINAGE OF SEWAGE VARIABLE WIDTH (DP1195855)
- (XX) EASEMENT FOR DRAINAGE OF WATER 10 WIDE (DP1190501)

SURVEYOR Name: GRAHAM McLEOD BURNS Date: 3RD OCTOBER 2019 Reference : 4960SL5	PLAN OF SUBDIVISION OF LOT 399 DP1241278	L.G.A: PORT MACQUARIE - HASTINGS Locality : PORT MACQUARIE Reduction Ratio : 1:1000 Lengths are in metres.	REGISTERED 24.8.2020	DP1258597

ATTACHMENT

Office of the Registrar-General /Src:URBISPRO /Ref:Love Project Management

PLAN FORM 2 (A2) | WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION | ePlan | Sheet 3 of 4 sheets

(A) RIGHT OF ACCESS 8 WIDE (DP1233408)
(D) RIGHT OF CARRIAGEWAY VARIABLE WIDTH (DP 1241278)
(G) EASEMENT TO DRAIN WATER VARIABLE WIDTH (DP1241278)
(S) RIGHT OF ACCESS 8 WIDE
(EE) EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE
(DD) EASEMENT FOR UNDERGROUND POWERLINES 2 WIDE
(KK) POSITIVE COVENANT (DP1218524)
(LL) RIGHT OF CARRIAGEWAY VARIABLE WIDTH (DP1218524)
(NN) POSITIVE COVENANT (DP1223015)

SCHEDULE OF REFERENCE MARKS		
CNR	BEARING & DISTANCE	FROM
RM 1	203°49' - 2.23	RM DH&W FD. (DP1241278)
RM 2	330° 41' - 19.08	RM SSM192896 FD. (DP1246122)
RM 3	198° 36' - 15.755	RM DH&W's FD. (DP1246122)
	211° 03' - 23.805	
RM 4	113° 14' 40" - 8.915	RM DH&W's FD. (DP1241278)
	87° 06' 20" - 15.365	
RM 5	174° 38' 20" - 13.485	RM DH&W FD. (DP1241278)
RM 6	156° 03' 40" - 20.55	RM DH&W FD. (DP1241278)
RM 7	208° 51' 20" - 10.18	RM DH&W's FD. (DP1241278)
	212° 44' 20" - 22.31	
RM 8	79° 33' - 1	RM GIP FD. (DP1218524)

(TT) - POSITIVE COVENANT (DP1218524)
(UU) - BENEFITED BY RIGHT OF CARRIAGEWAY 19 WIDE (DP809231)
- POSITIVE COVENANT (NO.16) (DP1223015)
(VV) - BENEFITED BY EASEMENT TO DRAIN WATER10 WIDE (DP1218524)
- BENEFITED BY EASEMENT TO DRAIN WATER 2 WIDE (DP1218524)
- BENEFITED BY EASEMENT TO DRAIN WATER VARIABLE WIDTH (DP1218524)
- BENEFITED BY RIGHT OF CARRIAGEWAY VARIABLE WIDTH (DP1218524)
(WW) -BENEFITED BY EASEMENT TO DRAIN WATER 3.5 WIDE (DP1223015)
- POSITIVE COVENANT(NO.13) (DP1223015)
(YY) - BENEFITED BY EASEMENT TO DRAIN WATER 10 WIDE (DP1218524)

SCHEDULE OF CURVED LINES			
NO.	ARC	CHORD	RADIUS
C17	13.26	169° 33' - 13.26	247.3
C40	14.54	191° 54' - 14.22	20
C87	41.355	178° 21' 40" - 41.29	208.5
C88	14.355	218° 57' 20" - 12.845	8.885
C99	76.205	244° 50' 20" - 22.05	16
C100	10.075	134° 38' - 9.73	11
C101	7.76	1° 05' - 7.6	11
C102	19.68	175° 30' 20" - 19.665	142.5
C103	113.675	295° 35' - 109.105	115
C105	17.535	264° 44' 40" - 17.53	199
C106	16.625	69° 36' - 15.515	13
C107	10.62	181° 52' - 10.615	139.5
C108	20.73	154° 34' - 19.31	16

SCHEDULE OF SHORT LINES	
NO.	BEARING & DISTANCE
87	135° 14' 20" - 6.735
88	167° 52' 20" - 22.91
89	79° 02' 20" - 19
117	122° 57' 40" - 9.025
118	16° 14' - 6.21
119	79° 36' 20" - 16.475
120	278° 09' 40" - 15.16
121	169° 44' 20" - 10.535
122	201° 48' 20" - 16.555
123	247° 42' 40" - 5.835

DIAGRAM 16
SCALE 1:250

SURVEYOR Name: GRAHAM McLEOD BURNS Date: 3RD OCTOBER 2019 Reference : 4960SL5	PLAN OF SUBDIVISION OF LOT 399 DP1241278	L.G.A: PORT MACQUARIE - HASTINGS Locality : PORT MACQUARIE Reduction Ratio 1:1000 Lengths are in metres.	REGISTERED 24.8.2020	DP1258597

ATTACHMENT

Office of the Registrar-General /Src:URBISPRO /Ref:Love Project Management

PLAN FORM 2 (A2) | WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION | ePlan | Sheet 4 of 4 sheets

(A) RIGHT OF ACCESS 8 WIDE (DP1233408)
(S) RIGHT OF ACCESS 8 WIDE
(V) EASEMENT TO DRAIN WATER 1.5 WIDE
(NN) POSITIVE COVENANT (DP1223015)

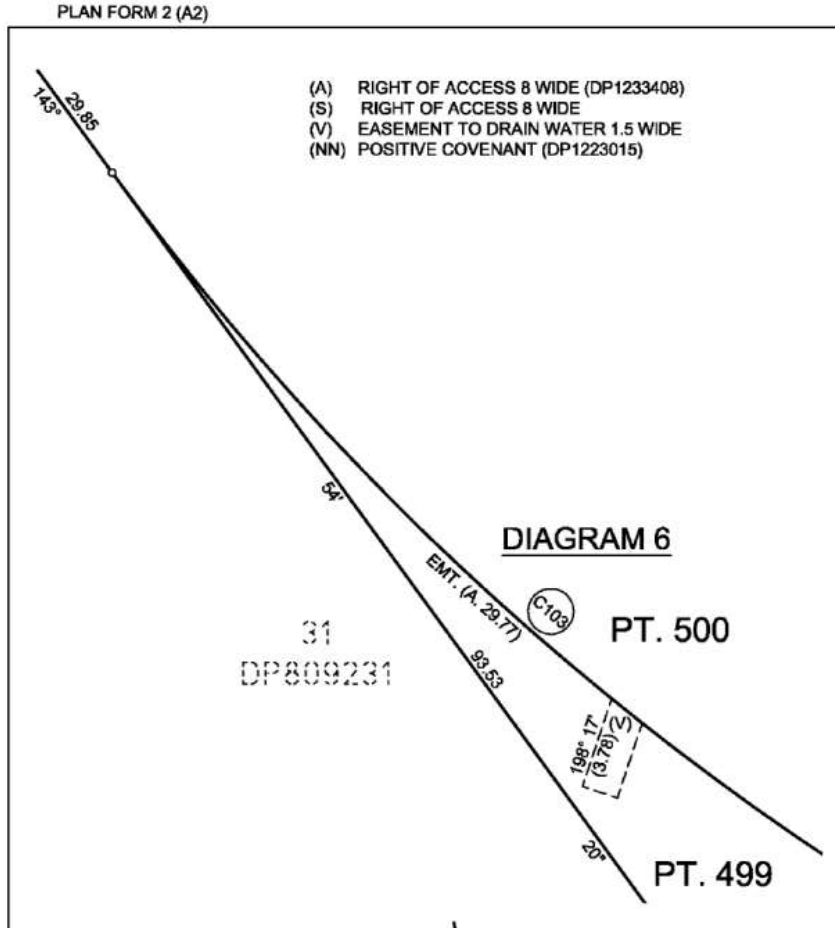


DIAGRAM 6

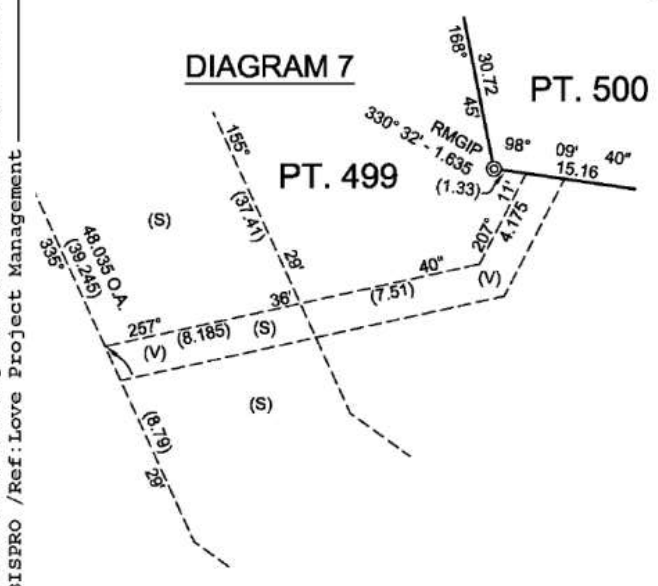


DIAGRAM 7

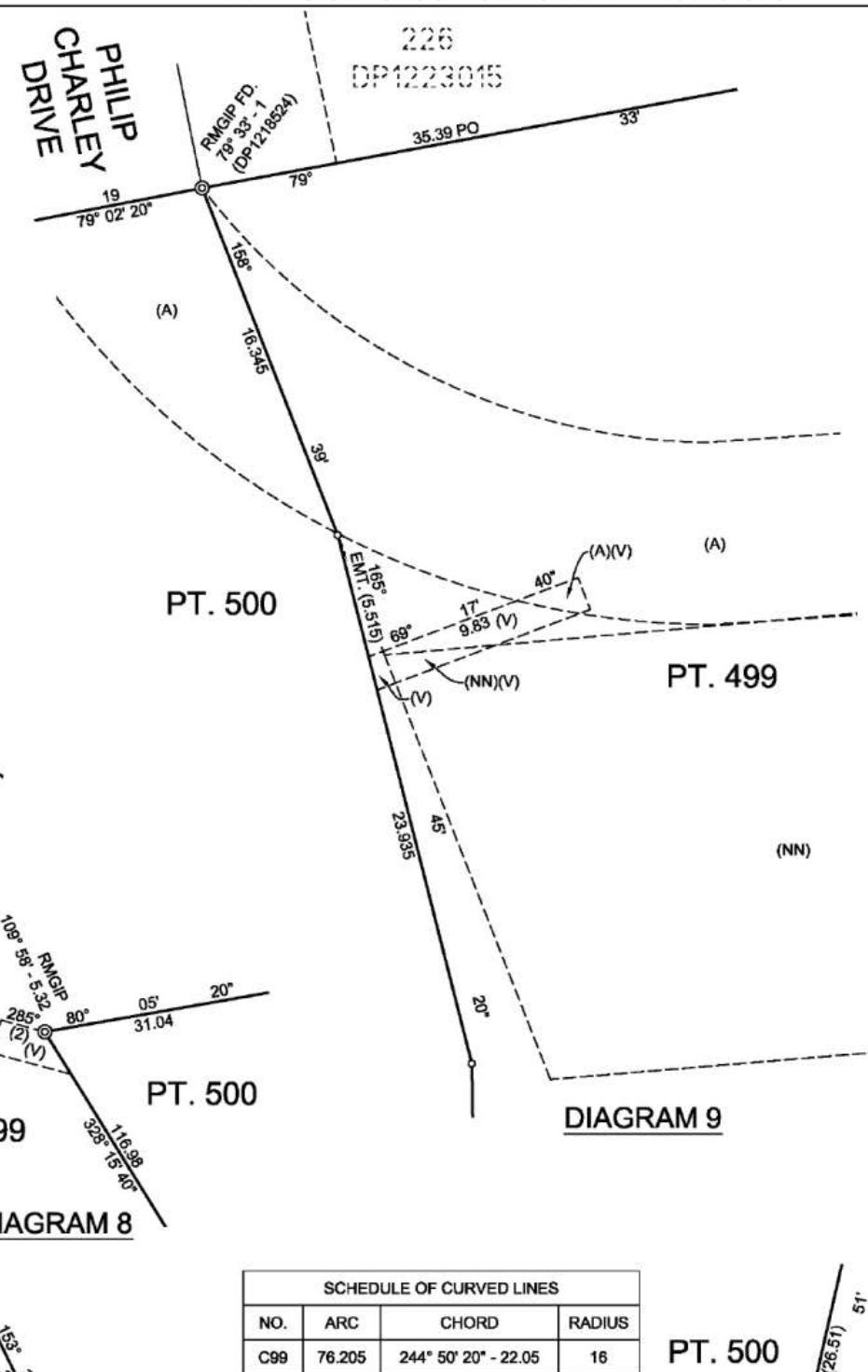


DIAGRAM 8

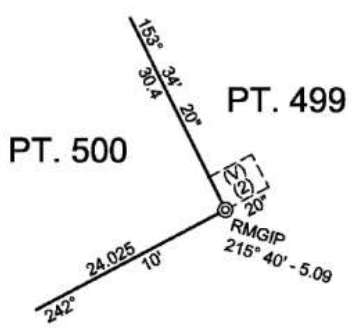


DIAGRAM 14

SCHEDULE OF CURVED LINES			
NO.	ARC	CHORD	RADIUS
C99	76.205	244° 50' 20" - 22.05	16
C100	10.075	134° 38' - 9.73	11
C101	7.76	1° 05' - 7.6	11
C103	113.675	295° 35' - 109.105	115
C108	20.73	154° 34' - 19.31	16

SCHEDULE OF SHORT LINES	
NO.	BEARING & DISTANCE
116	160° 52' 40" - 2.71

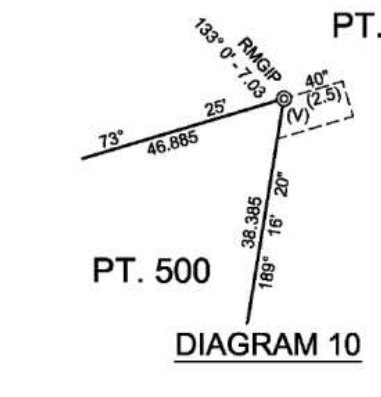


DIAGRAM 10

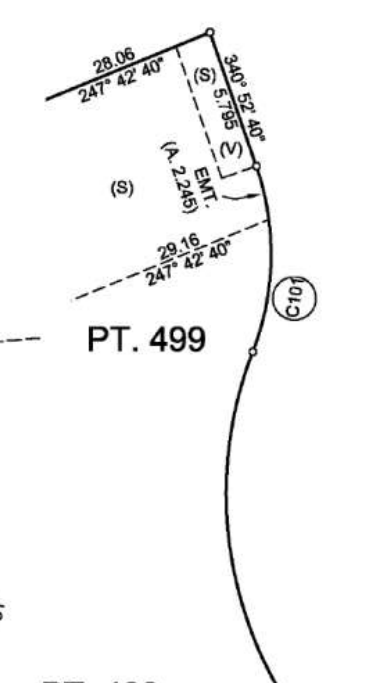


DIAGRAM 9



DIAGRAM 12

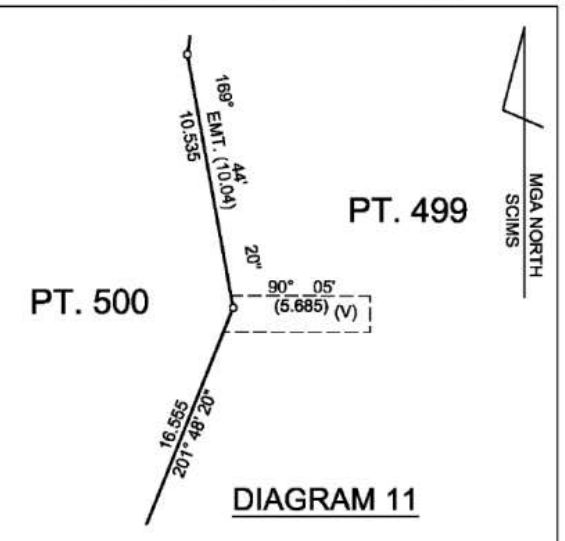


DIAGRAM 11

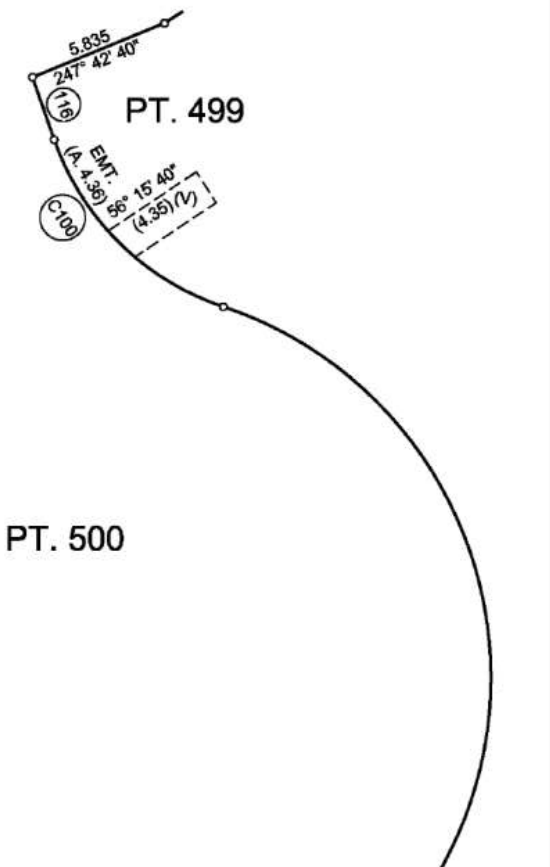


DIAGRAM 15

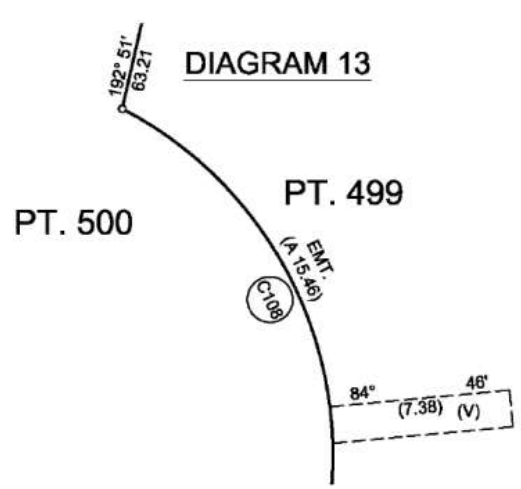


DIAGRAM 13

SURVEYOR	PLAN OF SUBDIVISION OF LOT 399 DP1241278	L.G.A: PORT MACQUARIE - HASTINGS	REGISTERED	DP1258597
Name: GRAHAM McLEOD BURNS		Locality : PORT MACQUARIE	24.8.2020	
Date: 3RD OCTOBER 2019		Reduction Ratio 1:200		
Reference : 4960SL5		Lengths are in metres.		

Office of the Registrar-General /Src:URBISPRO /Ref:Love Project Management

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PLAN FORM 6 (2019) WARNING: Creasing or folding will lead to rejection ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 2 sheet(s)

Office Use Only	Office Use Only
Registered: 24.8.2020 Title System: TORRENS	DP1258597
PLAN OF SUBDIVISION OF LOT 399 DP1241278	LGA: PORT MACQUARIE-HASTINGS Locality: PORT MACQUARIE Parish: ~~HASTINGS~~ MACQUARIE County: ~~HASTINGS~~ MACQUARIE

Survey Certificate

I, GRAHAM McLEOD BURNS

of LAND DYNAMICS AUSTRALIA

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

~~*(a) The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2017*, is accurate and the survey was completed on ....., or~~

*(b) The part of the land shown in the plan (*being/~~*excluding~~ **LOT 500) was surveyed in accordance with the *Surveying and Spatial Information Regulation 2017*, the part surveyed is accurate and the survey was completed on,3.10.2019 the part not surveyed was compiled in accordance with that Regulation, or

~~*(c) The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2017.*~~

Datum Line: 'X'- 'Y'

Type: *Urban/~~*Rural~~

The terrain is *Level-Undulating/~~*Steep-Mountainous.~~

Signature: ..... Dated: 3.10.2019

Surveyor Identification No:689
Surveyor registered under
the *Surveying and Spatial Information Act 2002*

*Strike out inappropriate words.

**Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

Crown Lands NSW/Western Lands Office Approval

I, ... (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: .....

Date: .....

File Number: .....

Office:

Subdivision Certificate

I, KERROD FRANKLIN

*Authorised Person/~~*General Manager/*Accredited Certifier~~, certify that the provisions of s.6.15 of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature: Kerrod Franklin

~~Accreditation number:~~

Consent Authority: PORT MACQUARIE-HASTINGS COUNCIL

Date of endorsement: 07 JULY 2020

Subdivision Certificate number: 13.2005.0547.20

File number: DA 2005/547

*Strike through if inapplicable.

Plans used in the preparation of survey/compilation. DP1241278, DP1223015, DP1244641, DP1249002,	Statements of intention to dedicate public roads create public reserves and drainage reserves, acquire/resume land.
Surveyor's Reference:4960SL5	Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

Office of the Registrar-General /Src:URBISPRO /Ref:Love Project Management

ePlan

PLAN FORM 6A (2019) **DEPOSITED PLAN ADMINISTRATION SHEET** Sheet 2 of 2 sheet(s)

Office Use Only

Registered: 24.8.2020

Office Use Only

DP1258597

PLAN OF SUBDIVISION OF LOT 399 DP1241278

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2017*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Subdivision Certificate number: 13.2005.0547.20

Date of Endorsement: 07 July 2020

PURSUANT TO SEC.88B OF THE CONVEYANCING ACT 1919, IT IS INTENDED TO:

CREATE:

1. EASEMENT TO DRAIN WATER 1.5 WIDE
2. EASEMENT FOR UNDERGROUND POWERLINES 2 WIDE
3. EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 WIDE
4. RIGHT OF ACCESS 8 WIDE

RELEASE:

1. RIGHT OF CARRIAGEWAY 30 WIDE (DP630179)(PARTIAL)
2. EASEMENT TO DRAIN WATER 10 WIDE (DP1218524)(PARTIAL)
3. EASEMENT TO DRAIN WATER 1.5 WIDE (DP1234443)(PARTIAL)

LOT	STREET NO.	STREET NAME	TYPE	LOCALITY
499	N/A			PORT MACQUARIE
500	N/A			PORT MACQUARIE

Executed for and on behalf of **Vilro Pty Limited ACN 000 560 387 (In Liquidation)** in accordance with s127 of the *Corporations Act 2001* (Cth) by:

Signature of Liquidator

Print name: PETER JOHN DONE

Signature of Witness

Name of Witness: SARAH CARTWRIGHT

Signature of Liquidator

Print name: RODNEY BRUCE SCHULTZ

Signature of Witness

Name of Witness: HEAVING FLETCHER

If space is insufficient use additional annexure sheet

Surveyor's Reference: 4960SL5



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 499/1258597

SEARCH DATE	TIME	EDITION NO	DATE
29/1/2021	12:58 PM	1	24/8/2020

LAND

LOT 499 IN DEPOSITED PLAN 1258597
AT PORT MACQUARIE
LOCAL GOVERNMENT AREA PORT MACQUARIE-HASTINGS
PARISH OF MACQUARIE COUNTY OF MACQUARIE
TITLE DIAGRAM DP1258597

FIRST SCHEDULE

VILRO PTY LIMITED

SECOND SCHEDULE (45 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 NOTIFICATION IN GOVERNMENT GAZETTE DATED 11.2.1983 FOL 696: EASEMENT FOR TRANSMISSION LINE 14 WIDE, 18 WIDE & 20 WIDE AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 T315871 EASEMENT FOR WATER SUPPLY PIPELINE 5, 7 & 11 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
AE215732 EASEMENT NOW VESTED IN PORT MACQUARIE-HASTINGS COUNCIL VIDE GOVERNMENT GAZETTE DATED 12.12.1997 FOL.10049
4 DP630179 RIGHT OF CARRIAGEWAY 30 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
DP1258597 EASEMENT RELEASED IN SO FAR AS IT BENEFITS LOT 500 IN DP1258597
5 DP801087 RESTRICTION(S) ON THE USE OF LAND
6 DP809231 RIGHT OF CARRIAGEWAY 19 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM
7 DP1079956 EASEMENT TO DRAIN WATER 3 METRE(S) WIDE AND VARIABLE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
8 DP1090593 EASEMENT TO DRAIN WATER 3 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
* 9 AH766015 CAVEAT BY PORT CITY DEVELOPMENTS PTY LIMITED OF THE PART FORMERLY IN 171/1218524 & 3/1190501
* AP54140 CAVEATOR CONSENTED
* AP191605 CHANGE OF ADDRESS OF CAVEATOR IN CAVEAT AH766015. ADDRESS FOR SERVICE OF NOTICES IS NOW SUITE 29.03 LEVEL 29, 9 CASTLEREAGH STREET, SYDNEY 2000

END OF PAGE 1 - CONTINUED OVER

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NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 499/1258597 PAGE 2

SECOND SCHEDULE (45 NOTIFICATIONS) (CONTINUED)

10 DP1190501 EASEMENT FOR DRAINAGE OF WATER 10 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
11 DP1190501 EASEMENT FOR DRAINAGE OF WATER VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
12 DP1190501 POSITIVE COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
13 DP1195855 RIGHT OF ACCESS 10 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
14 DP1195855 RIGHT OF ACCESS VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
15 DP1195855 EASEMENT FOR SERVICES ,WATER SUPPLY AND DRAINAGE OF SEWAGE 5 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
16 DP1195855 EASEMENT FOR SERVICES ,WATER SUPPLY AND DRAINAGE OF SEWAGE 10 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
17 DP1195855 EASEMENT FOR SERVICES ,WATER SUPPLY AND DRAINAGE OF SEWAGE VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
18 DP1201505 EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
19 DP1201505 EASEMENT TO DRAIN WATER VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
20 DP1218524 EASEMENT TO DRAIN WATER 2 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
21 DP1218524 EASEMENT TO DRAIN WATER 2 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED (VV), AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
22 DP1218524 EASEMENT TO DRAIN WATER 10 METRE(S) WIDE AFFECTING THE SITE DESIGNATED (P) IN THE TITLE DIAGRAM
DP1223015 EASEMENT RELEASED IN SO FAR AS IT AFFECTS BLACK CAVIAR PARADE & THE PART DESIGNATED (P1) IN DP1223015
DP1244641 EASEMENT RELEASED IN SO FAR AS IT AFFECTS THE PART(S) DESIGNATED AS (P1) AND (P2) IN DP1244641
DP1258597 EASEMENT RELEASED IN SO FAR AS IT BENEFITS LOT 500 IN DP1258597
23 DP1218524 EASEMENT TO DRAIN WATER 10 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED (TT), AFFECTING THE SITE DESIGNATED (P) IN THE TITLE DIAGRAM
DP1244641 EASEMENT RELEASED IN SO FAR AS IT AFFECTS THE PART DESIGNATED AS (P2) IN DP1244641
DP1258597 EASEMENT RELEASED IN SO FAR AS IT BENEFITS LOT

END OF PAGE 2 - CONTINUED OVER

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NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 499/1258597 PAGE 3

SECOND SCHEDULE (45 NOTIFICATIONS) (CONTINUED)

500 IN DP1258597

24 DP1218524 EASEMENT TO DRAIN WATER 10 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED (VV), AFFECTING THE SITE DESIGNATED (P) IN THE TITLE DIAGRAM

DP1244641 EASEMENT RELEASED IN SO FAR AS IT AFFECTS THAT PART DESIGNATED AS (P2) IN DP1244641

25 DP1218524 EASEMENT TO DRAIN WATER VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

26 DP1218524 EASEMENT TO DRAIN WATER VARIABLE WIDTH APPURTENANT TO THE PART(S) SHOWN SO BENEFITED (VV), AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

27 DP1218524 RIGHT OF CARRIAGEWAY VARIABLE WIDTH APPURTENANT TO THE PART(S) SHOWN SO BENEFITED (VV) IN THE TITLE DIAGRAM

28 DP1218524 POSITIVE COVENANT AFFECTING THE PART(S) SHOWN SO BURDENED (TT) IN THE TITLE DIAGRAM

29 DP1223015 EASEMENT TO DRAIN WATER 1.5 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

30 DP1223015 EASEMENT TO DRAIN WATER 2 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

31 DP1223015 EASEMENT TO DRAIN WATER 3.5 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

DP1244641 EASEMENT RELEASED IN SO FAR AS IT BENEFITS LOT 473 IN DP 1244641

32 DP1223015 EASEMENT TO DRAIN WATER 3.5 METRE(S) WIDE APPURTENANT TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM

33 DP1223015 EASEMENT TO DRAIN WATER VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

34 DP1223015 EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

35 DP1223015 EASEMENT FOR UNDERGROUND POWERLINES VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

36 DP1223015 POSITIVE COVENANT REFERRED TO AND NUMBERED (13) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) SHOWN SO BURDENED (WW) IN THE TITLE DIAGRAM

37 DP1223015 POSITIVE COVENANT REFERRED TO AND NUMBERED (14) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) SHOWN SO BURDENED (AA) IN THE TITLE DIAGRAM

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NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 499/1258597 PAGE 4

SECOND SCHEDULE (45 NOTIFICATIONS) (CONTINUED)

40 DP1233408 RIGHT OF ACCESS 8 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

41 DP1233408 RIGHT OF ACCESS VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

42 DP1234443 POSITIVE COVENANT REFERRED TO AND NUMBERED (4) IN THE S.88B INSTRUMENT AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

43 DP1258597 EASEMENT TO DRAIN WATER 1.5 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

44 DP1258597 EASEMENT FOR MULTI-PURPOSE ELECTRICAL INSTALLATION 4.2 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

45 DP1258597 RIGHT OF ACCESS 8 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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1 SITE SUBDIVISION CONCEPT
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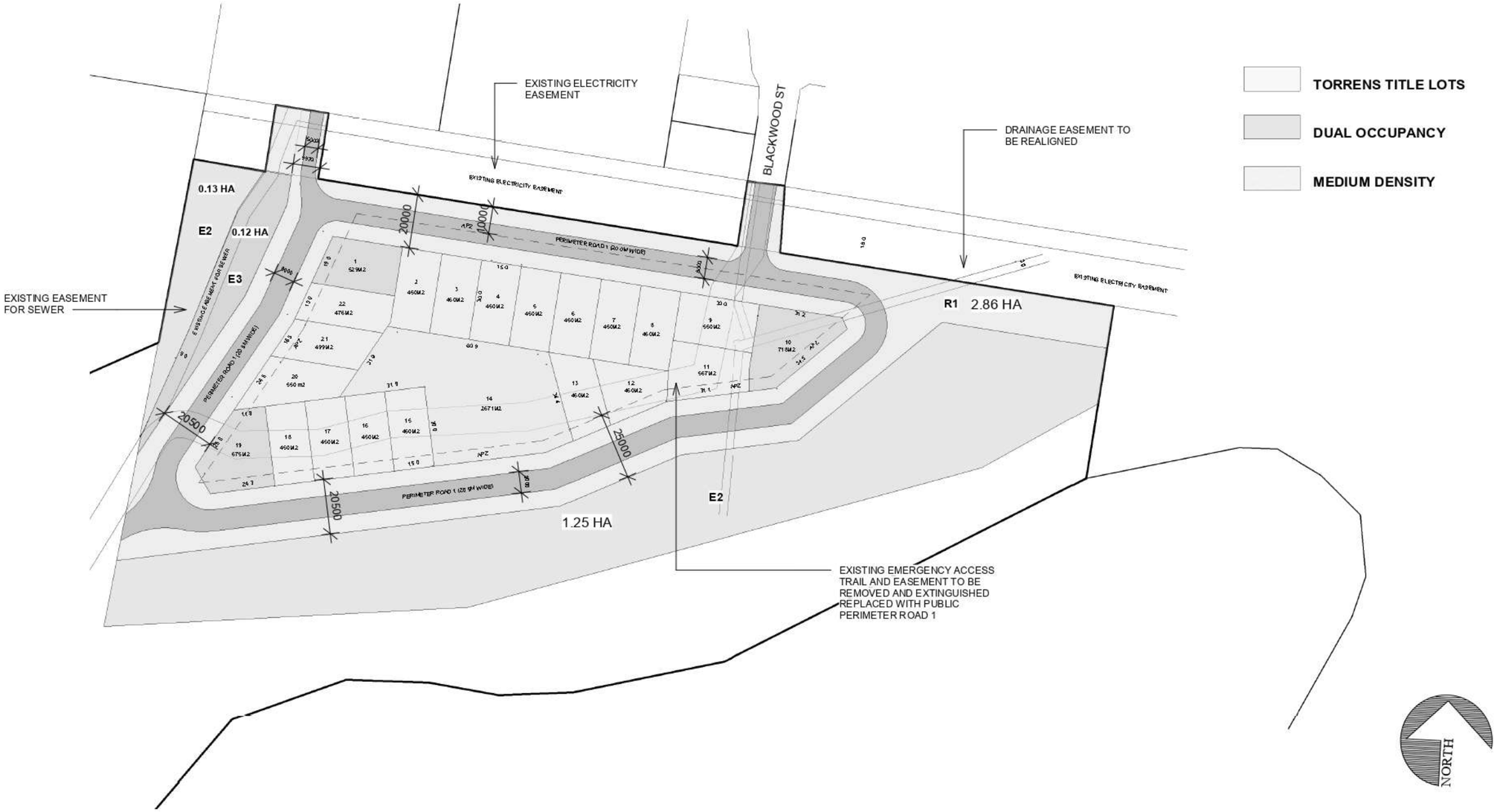

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CHARLEY BROTHERS PTY LTD

LOT 499 DP 1258597 INNES LAKE
PORT MACQUARIE NSW 2444

PRE DA

CONCEPT VERIFICATION

SUBDIVISION CONCEPT

Project number 2010	A06D
Date 29/01/2021 12:41:08 AM	
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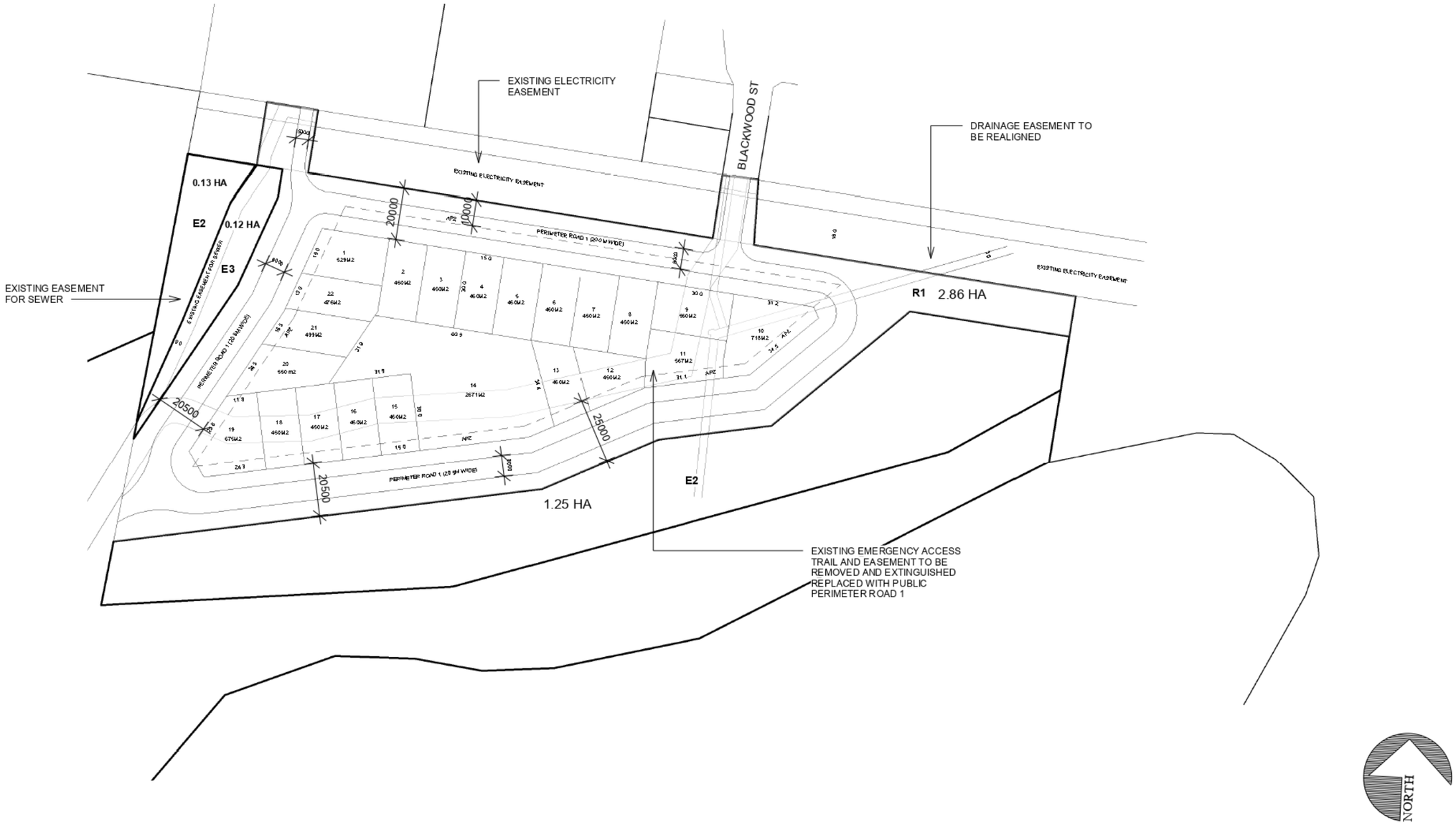

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CONCEPT VERIFICATION

SUBDIVISION CONCEPT

Project number 2010	A06E
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Birpai Local Aboriginal Land Council

Aboriginal Cultural Heritage Assessment

The Ruins Way

Port Macquarie

Prepared by

Birpai Local Aboriginal Land Council

In response to a

Request for Charlie Brothers Pty Ltd

PO Box 876 Port Macquarie NSW 2444 Tel: 02 65849066 Email: birpailalc@midcoast.com.au

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1. Introduction

The subject land is located at The Ruins Way Road Port Macquarie (Lot 245 DP 1227796 and Lot 299 DP 1234443). While the land is over 60ha in size, the study area is only around 4ha. The land is located approximately 5km southwest of the Port Macquarie CBD and is made up of three areas known as South Lindfield, Ruins Way West and Ruins Way East.

The aboriginal cultural heritage assessment focuses on the northern edge of the property adjoining the existing residential land to the South and East that is planned to be rezoned as residential land.

The remainder of the property was not investigated with vegetation generally comprising wetland and swamp forest areas.

The objectives of the Cultural Heritage Assessment are:

- To identify whether the subject land contains objects or is a place of importance or a part of the wider cultural landscape pertaining to local aboriginal people and the area.
- To determine if any potential harm on identified Aboriginal Cultural heritage would be likely to occur from the proposed rezoning and future development of the southern fringe of the land for residential uses.
- To determine the significance of potential harm to any identified Aboriginal objects, places or wider cultural heritage that may be associated with the subject land, should that be the case.

This report has been prepared for Charley Brothers Pty Ltd for their proposed rezoning. It is not to be used for any other purpose

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2. Investigator and Contributors

The Site Investigations have been undertaken by:

Mr. Jason Holten, Sites Officer of the Birpai Local Aboriginal Land Council

The site investigator has significant local experience in carrying out site survey investigations and regularly undertakes Sites works in the Port Macquarie area. Mr. Holten has a wealth of knowledge of Aboriginal Culture and Heritage in the local area.

3. Previous Archaeological work

Search of the Aboriginal Heritage Information Management System (AHIMS) – Basic search conducted 27 April 2018 using Longitude and Latitude coordinates with a buffer of 50 m.

- Basic search identified no Aboriginal Places and no Aboriginal Site in the vicinity of the 50 m buffer.

- Cultural Heritage records held with Birpai Land Council include:

  The Birpai Local Aboriginal Land Council holds no records of any items of cultural significance in the vicinity of the land in question.

Of the above resources, references to this area and the Birpai Aboriginal People were the primary search focus. Information relevant to the site or its immediate surrounds was identified as follows:

There are no known aboriginal cultural heritage sites within the subject land. Especially in the area of the proposed residential land.

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4. Landscape context

General Coastal character & predictive model

The results of reviews of archaeological investigations to date indicate that rocky shore, sandy beach, estuarine and hinterland environments were typically utilised by Aboriginal groups. The densest and most diverse archaeological remains are generally found along the coast where food resources were richer. Reliance on estuarine and adjacent hinterland areas was probably sporadic, possibly using freshwater swamps as a primary resource.

A large proportion of recorded sites indicate they have been found on flat terrain, predominantly in coastal heath, along estuarine stream banks, some woodland and dry sclerophyll eucalypt forest and in subtropical rainforest. Less commonly, sites are also found in undulating to hilly terrain either in dry sclerophyll eucalypt forest. Even less so in steep rugged terrain.

There is a greater likelihood of the existence and discovery of Aboriginal sites into the coastal plain. Particularly the crests and basal slopes of low spurlines that extend into and are situated adjacent to flood prone valley floors.

Stone artefacts may occur as open artefact scatters and isolated finds. Midden deposits may occur subsurface on former beach ridges and other alluvial or colluvial deposits which fringe valley floors. Including the former shoreline of the marine embayment and subsequent estuary which formed following the last sea level rise at around 6000 years BP.

Open artefact scatters (or campsites) are considered more likely to occur on relatively flat terrain, well-drained and not too distant from sources of freshwater or along the crests of low ridgelines.

Scarred trees may occur wherever old-growth trees remain. Potential locations include road reserves, remnant riparian vegetation on farmlands, and isolated trees within the state forests.

Prehistoric burial sites are most likely to be found in locally elevated landforms with a relatively deep profile of soft sediments of in the deposits of midden sites.

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Local Aboriginal History

Before European settlement, Aboriginal people roamed the area and used the land to hunt and gather food. Aboriginal ties to the land can be identified with the significant sites in and around the Port Macquarie area with some sites recorded, including burial sites at the Town Green in the CBD.

Location of the site

The subject land is located approximately 5km southwest of the Port Macquarie CBD. The site is generally surrounded by residential land to the North, South and East with generally forested land to the West.

On site, forest vegetation occurs throughout the site with cleared fringes along road frontages.

6 Site Survey & Results

Sampling Strategy

The sampling strategy is to attend the property by vehicle and undertake intensive walking inspection of the part of the site likely to be impacted upon by the proposed rezoning and future residential lots.

In a landscape context, this area is consistent with the landscape unit "crests and basal slopes of low spurlines that extend into and are situated adjacent to flood prone valley floors". In this context intensive walking survey of the area is considered the most appropriate survey strategy.

The site survey was undertaken on 19 March 2018 by Mr Jason Holten, Senior Site Officer of Birpai Local Aboriginal Land Council.

Survey Coverage

On 19 March 2018 exposure and visibility across the site is described as generally good.

No text excavations were considered necessary and were not undertaken.

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7. Results of Survey of 19 March 2018

After a lot of walking over the proposed rezoning area the senior site officer, Mr Jason Holten noted that there had been a lot of disturbance over the years, with the removal of trees and stumps from the site and movement of topsoil. Any sign of Aboriginal activity in the area is believed to have been lost or destroyed.

Mr Holten, Senior Sites Officer who attended the property and undertook the survey concluded that no evidence of Aboriginal activity was located on the site areas, being the Northern part of lot 245 DP 1227796 and Lot 299 DP 1234443.

Analysis & Discussion

Consultation with local Aboriginal peoples with a relationship to the area revealed no knowledge of occupation or cultural heritage associations with the subject land.

No site recording is required as there are no material traces, evidence or expressed knowledge of Aboriginal land use of the site.

The proposed development is not considered likely to impact upon or have any significance for the local Aboriginal community and their cultural heritage.

The assessing site officers can see no reason why the proposal cannot continue.

Recommendation

At such time as development site works start, should any artefacts be turned up or located, Birpai Local Aboriginal Land Council are to be contacted immediately and work on site stopped pending further assessment.

Signed

27/4/18.

Mr David Carroll

CEO - Birpai Local Aboriginal Land Council

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DAVID PENSINI
Building Certification and
Environmental Services

BUSHFIRE HAZARD STUDY

PROPOSED REZONING

**PART OF LOT 499 DP 1258597,
PHILIP CHARLEY DRIVE
PORT MACQUARIE**

CLIENT: CHARLEY BROTHERS

JANUARY 2021

51 Owen Street, Port Macquarie NSW 2444 – PO Box 5581, Port Macquarie NSW 2444 – Phone 0434 166 150 – Email kdpensini@bigpond.com
ABN 55 183 050 741

This report has been prepared by David Pensini – Building Certification and Environmental Services with all reasonable skill, care and diligence for Charley Brothers.

The information contained in this report has been gathered from discussions with representatives of Charley Brothers, a review of the plans provided on behalf of Charley Brothers and experience.

No inspection or assessment has been undertaken on other aspects of the proposed development outside the scope of this report.

This report does not imply, nor should it be implied, that the proposed development will comply fully with relevant legislation.

The report shall not be construed as relieving any other party of their responsibilities or obligations.

David Pensini – Building Certification and Environmental Services disclaims any responsibility Charley Brothers and others in respect of any matters outside the scope of this report.

The report is confidential, and the writer accepts no responsibility of whatsoever nature, to third parties who use this report, or part thereof is made known. Any such party relies on this report at their own risk.

For and on behalf of David Pensini – Building Certification and Environmental Services.

Prepared by: *David Pensini*

Signed:

Dated: *29th January 2021*

Version	Date	Information relating to report			
		Reason for issue			
1.0	4th January 2021		Draft		
2.0	29th January 2021		Issued to Client		
3.0	29th January 2021		Amendments to Appendices 2 and 4		
			Prepared by	**Verified by**	**Approved by**
		Name	David Pensini		David Pensini
		Signature			

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1.0 INTRODUCTION

The land which comprises the subject site is currently known as Part of Lot 499 DP 1258597, Philip Charley Drive, Port Macquarie.

It is proposed to rezone a portion of the aforementioned area of land, from its current RU1 (Primary Production) land use zoning to R1 (General Residential).

This report is based on site assessments carried out on 10th October and 3rd November 2013, 4th May 2018, 20th March 2020 and the 13th January 2021.

As the proposed rezoning of the subject land seeks to support its future use for residential developments, any future development of the subject areas of land for these purposes would be integrated development and would be subject to the issuing of a Bushfire Safety Authority under Section 100B of the *Rural Fires Act 1997*.

The purpose of this report is therefore to identify the bushfire hazard management planning principles and requirements which will be applicable to the future development of the subject land for residential development purposes.

This report therefore forms part of an overall planning process which will determine the suitability of the subject land for residential development and identify the bushfire related development principles and planning controls which will be applicable to any future development of the land for residential purposes.

NOTE

The report has been prepared with all reasonable skill, care and diligence.

The information contained in this report has been gathered from field survey, experience and has been completed in consideration of the following legislation.

- Rural Fires Act 1997.
- Environmental Planning and Assessment Act 1979.
- National Construction Code.
- Council Local Environment Plans and Development Control Plans where applicable.
- NSW Rural Fire Services, Planning for Bushfire Protection, 2019.
- AS 3959 - 2018 Construction of Buildings in Bushfire Prone Areas.

The report recognizes the fact that no property and lives can be guaranteed to survive a bushfire attack. The report examines ways the risk of bushfire attack can be reduced where the site falls within the scope of the legislation.

The report is confidential, and the writer accepts no responsibility of whatsoever nature, to third parties who use this report or part thereof is made known. Any such party relies on this report at their own risk.

This report has been based upon the vegetation characteristics observed at the time of site inspection. No responsibility is taken where the vegetation characteristics of the subject site or surrounding areas is changed or modified beyond that which is presented within this report.

1.1 Objectives

The objectives of this report are to:

- Ensure that the proposed rezoning of the land has measures sufficient to minimize the impact of bushfires; and

- Ensure that any development of the land has measures sufficient to minimize the impact of bushfires; and

- Reduce the risk to property and the community from bushfire.

1.2 Legislative Framework

On 1st August 2002 the Environmental Planning and Assessment Act 1979 and the Rural Fires Act 1997 were both amended to enhance bush fire protection through the development assessment process.

In broad terms, the planning considerations provide two main steps. These involve:

(a) Strategic Planning through;

• the mapping of bush fire prone;
• determining suitable bush fire requirements during the preparation of a Local Environmental Plan and/or Development Control Plan; and
• the identification of the extent to which land is bushfire prone.

(b) Development assessment through;

• obtaining a bush fire safety authority for residential or rural-residential subdivision and special fire protection purpose developments in bushfire prone areas from the Rural Fire Service (RFS);

• seeking advice from the RFS in relation to infill and other developments in bushfire prone areas that cannot comply with the requirements of NSW Rural Fire Service***, Planning for Bushfire Protection***, 2019; and

• the application of additional requirements of the National Construction Code (NCC) in relation to construction standards for Class 1, 2, 3, 4 and some Class 9 buildings in bushfire prone areas.

It is noted that this report focuses upon the strategic planning processes associated with the proposed rezoning of the subject site.

1.2.1 Strategic Planning Considerations

When preparing a draft LEP or planning proposal, local councils are required to apply the Environmental Planning and Assessment Act, 1979 - Section.9.1(2).

Direction 4.4 *Planning for Bush Fire Protection* applies to planning proposals that affect, or are in close proximity to, land mapped as Bush Fire Prone Land (BFPL). Under these directions, draft LEPs should follow the below objectives:

- to protect life, property and the environment from bush fire, by discouraging the establishment of incompatible land uses in bush fire prone areas; and
- to encourage sound management of bush fire prone areas.

Under Direction 4.4, a relevant authority must consult with the Commissioner of the NSW Rural Fire Service during the preparation of a draft LEP and take into account any comments made. The draft LEP shall also have regard to PBP.

As part of the consultation process with the NSW RFS, a bush fire assessment is required to be submitted to demonstrate compliance with the Section 9.1(2) Directions and NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019. Where the proposal is of a strategic nature, this should take the form of a Strategic Bush Fire Study.

1.2.2 Planning for Bushfire Protection Guideline 2019

It is noted that NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019 provides the current bushfire threat management standards which are applicable in NSW.

NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019 provides the development standards for designing and building on BFPL in New South Wales (NSW) as follows;

- strategic land use planning to ensure that new development is not exposed to high bush fire risk;
- specific provisions for creating new residential and rural residential subdivision allotments;
- specific provisions for special fire protection purpose (SFPP) development taking account of occupant vulnerability;
- bush fire protection measures (BPMs) for new buildings;
- guidance in upgrading and maintaining existing development.

The general principles underlying NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019 are that:

- BPMs are required to reduce the impact of a bush fire;
- protection measures are governed by the degree of threat posed to a development and the vulnerability of occupants;
- reducing the interface of a development to the hazard reduces the bush fire risk to the development;
- good practice in planning, building and management reduces the risk to developments and their occupants and increases their resilience.

(i) Objectives for Residential Subdivision Developments

The specific objectives for residential subdivision developments as provided for by NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 are to**;**

- *minimise perimeters of the subdivision exposed to the bush fire hazard (hourglass shapes, which maximise perimeters and create bottlenecks should be avoided);*
- *minimise vegetated corridors that permit the passage of bush fire towards buildings;*
- *provide for the siting of future dwellings away from ridge-tops and steep slopes, within saddles and narrow ridge crests;*
- *ensure that separation distances (APZs) between a bush fire hazard and future dwellings enable a radiant heat level not to exceed 29kW/m²;*
- *ensure the ongoing maintenance of APZs;*
- *provide adequate access from all properties to the wider road network for residents and emergency services;*
- *provide access to hazard vegetation to facilitate bush fire mitigation works and property protection; and*
- *ensure the provision of an adequate supply of water and other services to facilitate effective firefighting.*

It is noted that the proposed rezoning is consistent with the above objectives together with the relevant acceptable solutions/standards which are applicable to the residential subdivision and development of the subject site in particular the area of land which is proposed to be rezoned to support residential subdivision development.

1.3 Location and Site Description

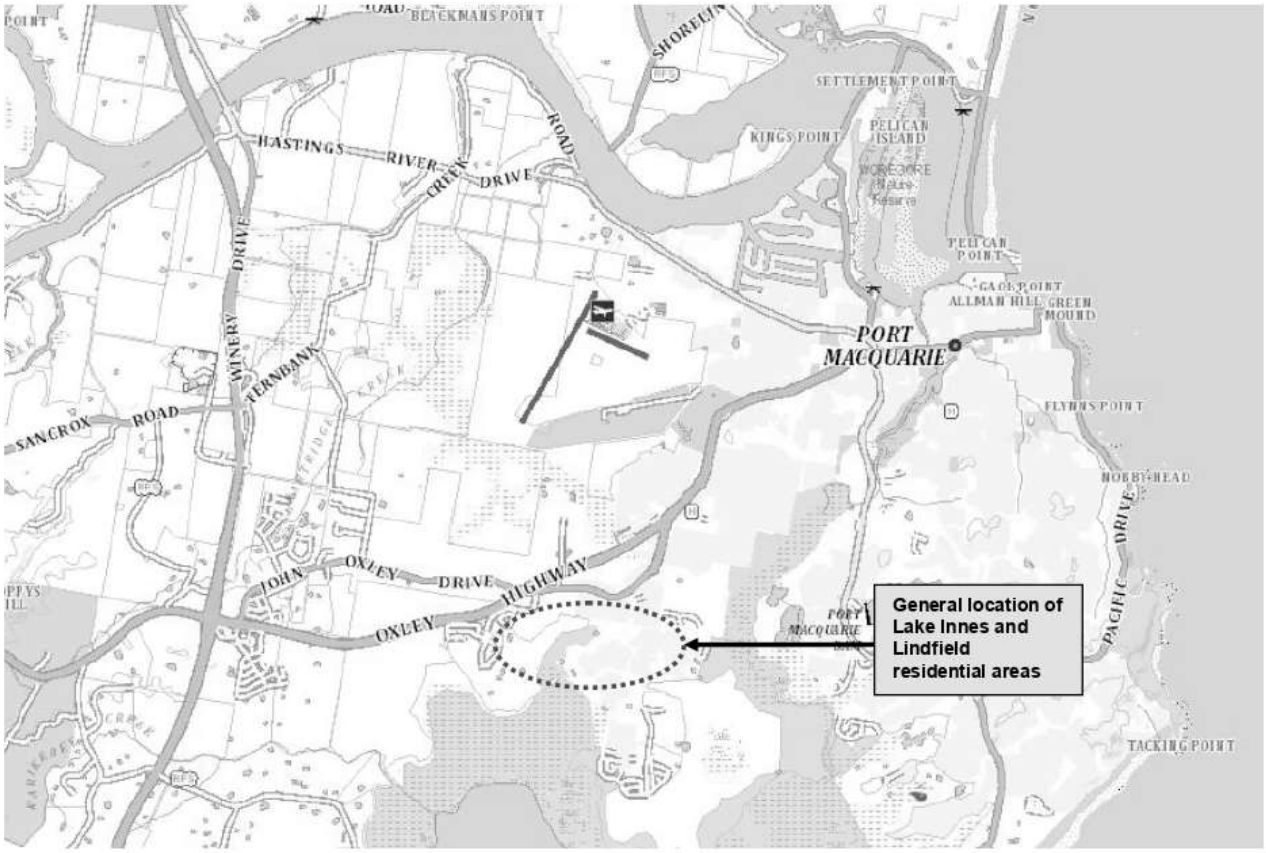
The subject site currently comprises a single allotment of land which is known as Part of Lot 499 DP 1258597, Philip Charley Drive, Port Macquarie.

The subject site is situated approximately 5.5km to the southwest of the Port Macquarie CBD.

Being located within the Lake Innes urban growth area, which is located on the south western fringes of the urbanized area of Port Macquarie, the land within this area has and will continue to experience significant urban expansion with a transitional land use setting and context.

The character of the locality is that of an urban fringe area with residential development expanding into the undeveloped but residentially zoned parcels of land that exist in the Lake Innes and Lindfield residential areas, refer to **Figure 1** below;

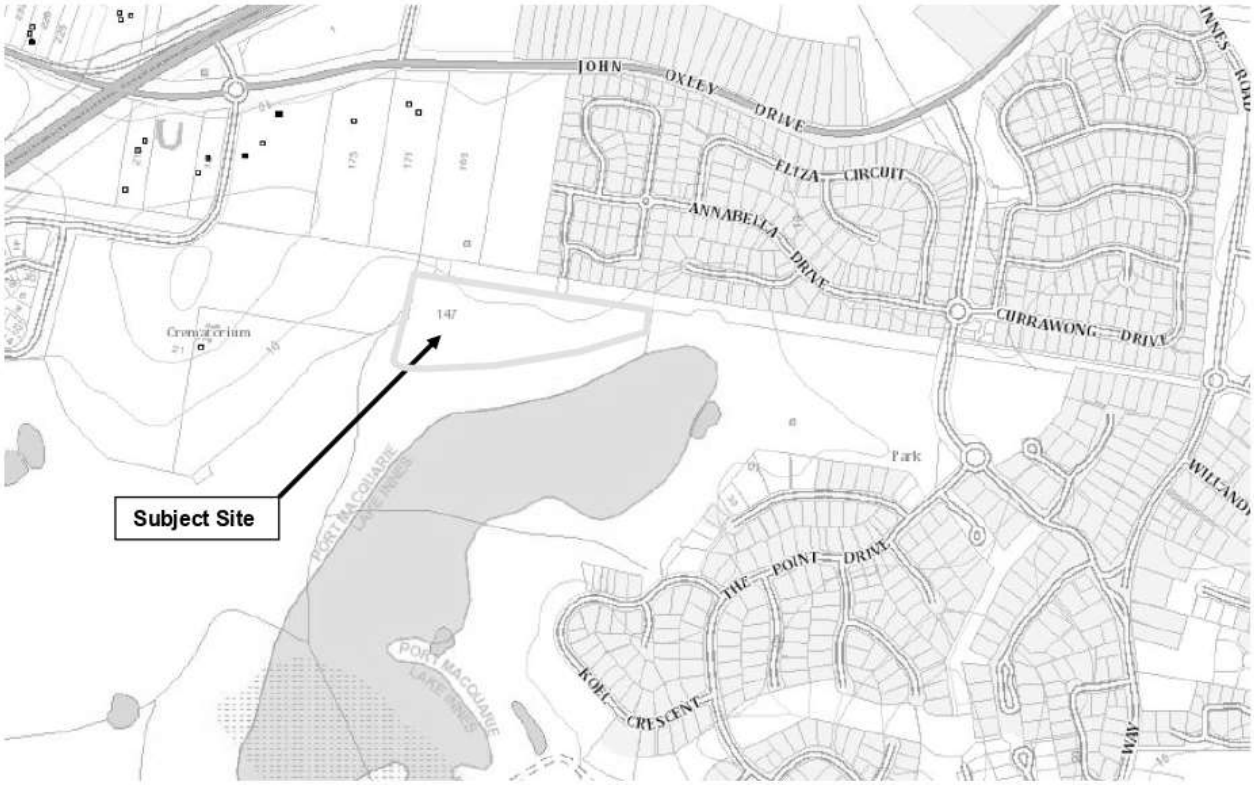
Figure 1 - Site Location



The character of the locality is that of an urban fringe area with residential development expanding into undeveloped residentially zoned parcels of land. The subject site is located immediately to the south of several historical rural residential lots which have been recently approved for residential subdivision whilst historically developed residential lots adjoin the eastern portion of the northern property boundary of the subject site whilst to the west of the subject site is the managed grounds of the Port Macquarie Crematorium and Lawn Cemetery. Undeveloped areas of the proposed Lake Innes Residential Estate golf course are present to the south and east of the subject site whilst the vegetated areas of the Lake Innes Nature Reserve are present to the south of the subject site, (beyond the areas of land set aside for the golf course.

All area of land which comprise the subject sites is irregular in shape with an area of approximately 4.36 Hectares, refer to **Figure 2** below.

Figure 2 – Subject Site



The subject site is accessed off existing road infrastructure within the developed urban areas to the north/northeast.

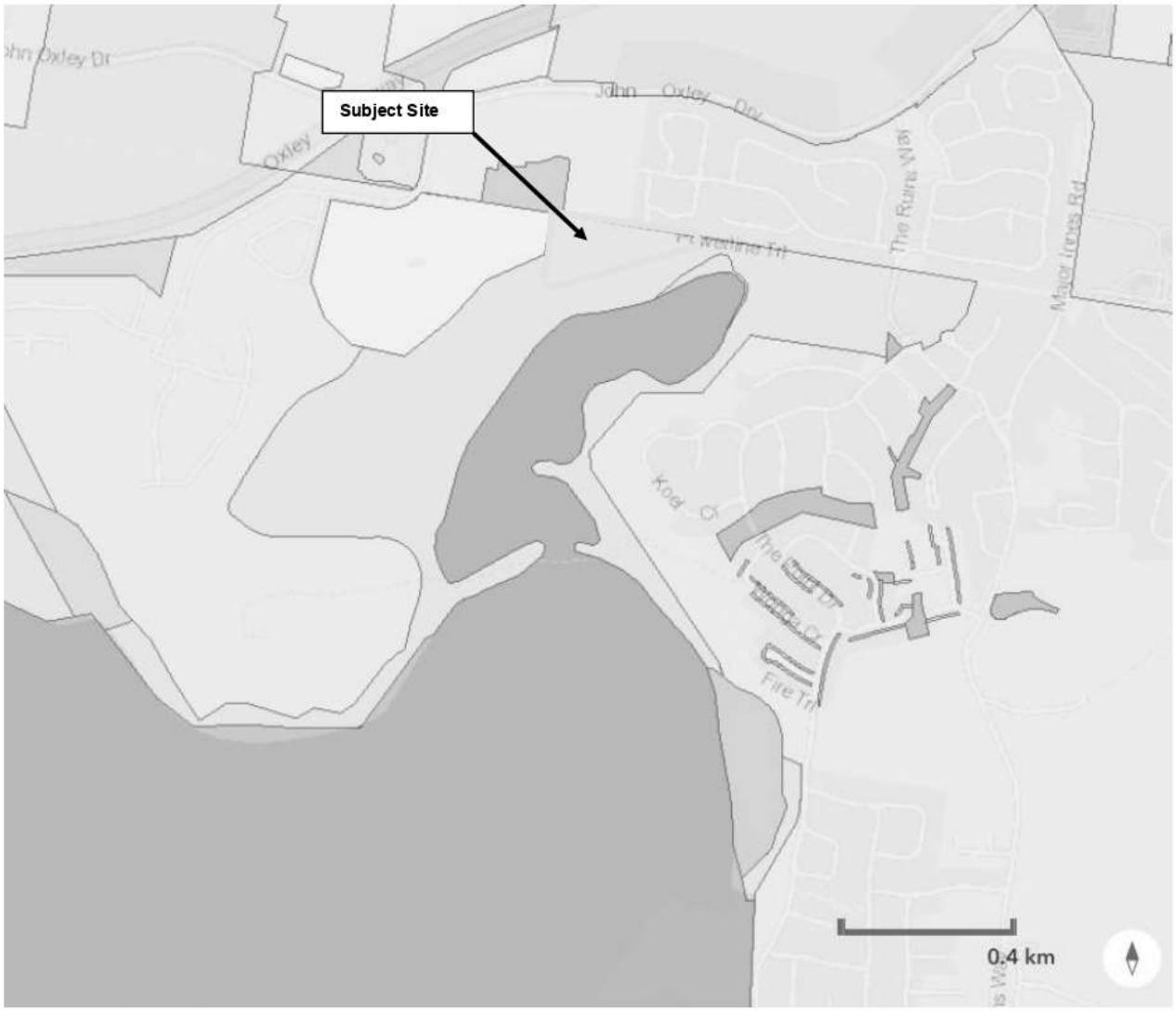
An electricity distribution line/easement is present along the far northern portion of the subject site with developed residential lots extending beyond the electricity distribution line easement to the northeast and undeveloped, (but recently approved for residential subdivision), rural residential land to the northwest. Undeveloped areas of the proposed Lake Innes Residential Estate golf course are present to the south and east whilst vegetated areas of the Lake Innes Nature Reserve are present at distance to the south. The managed grounds of the Port Macquarie Crematorium and Lawn Cemetery are present for the majority of the western aspect however a small area of bushland separates the subject site from the managed areas of the Crematorium and Lawn Cemetery.

The topography of the subject site and adjoining and adjacent land is dominated by gentle, (2˚ - 3˚), southerly downslope conditions with a south-easterly overland drainage pattern towards the Lake Innes Nature Reserve.

Vegetation on the subject site consists of grasslands with scattered and small clusters of trees with a narrow band of remnant forest vegetation fringing the southern boundary of the subject site. Vegetation on adjoining and adjacent land also consists of Dry Sclerophyll Forest to the northwest whilst grasslands with scattered and small clusters of trees are present to the north, south and east. A narrow area of remnant Forest vegetation is present to the west and separates the subject site from the managed vegetation within the Port Macquarie Crematorium and Lawn Cemetery. At distance to the south are Forested Wetland vegetation associated with the Lake Innes Nature Reserve.

The subject site has a current land use zoning of Rural (RU1), refer to **Figure 3** below.

Figure 3 – Landuse Zoning



The closest Fire Service is located approximately 3.5 km to the northeast of the subject site, (Port Macquarie Fire Brigade), with the closest Fire Control Centre being at Wauchope which is 20 kilometres west or 20 minutes by car from Port Macquarie.

1.4 Site History

The subject land has been in the ownership of the proponent's family for in excess of 100yrs. It forms part of a much larger holding, of which a significant portion has been previously excised to join the Lake Innes Nature Reserve, including the peninsular of Forested Wetland vegetation which is located to the south of the subject site. For most of its time, the property has been used for rural pursuits including cattle grazing and timber production.

In recent decades, cattle grazing has become the predominant land use with varying rotations. The Forested Wetland vegetation which is now located within the Lake Innes Nature Reserve only developed after drainage changes around the middle of the last century, (Dr Jim Charley, pers. comm.).

In the late 1980s, a Development Application, (DA 88/248), was approved for the development of a golf course and clubhouse on portion of the subject site. The golf course formed part of the residential development concept for the Lake Innes Residential Estate. Works on this development to date have consisted of clearing of the fairways and establishment of irrigation dams. Fairways run around the perimeter of Lake Innes Nature Reserve. Around the same time, other areas in the general locality have also been periodically subdivided and developed into residential precincts, (e.g., Mill Hill, Oxley Park, Ascot Park).

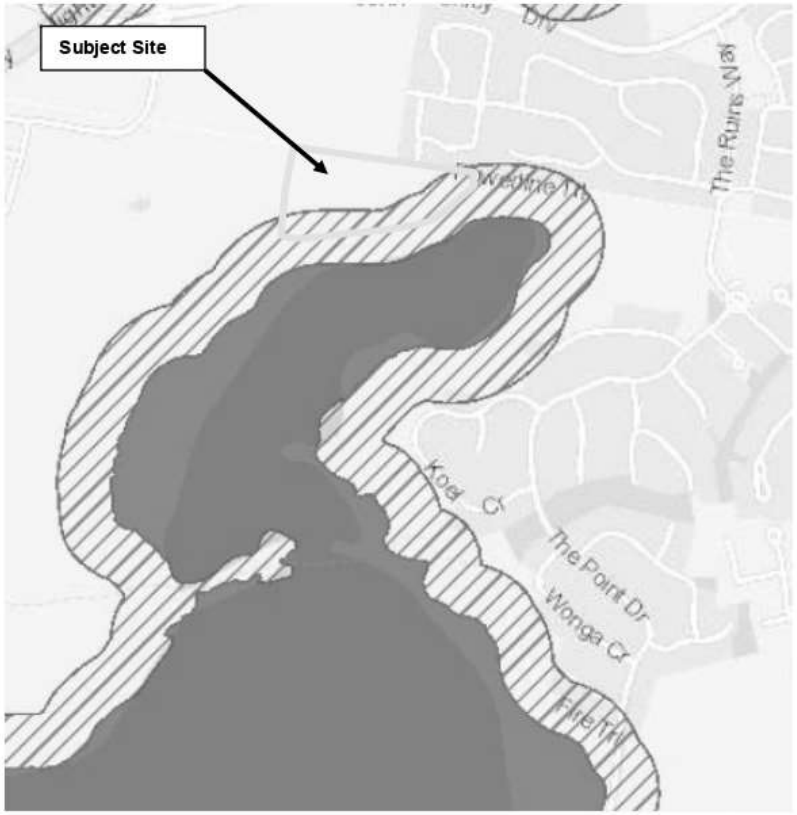
Despite the undeveloped nature of the subject site vegetation modification and management has and continues to occur over much of the land which forms the subject site as the subject landforms part of the historical golf course concept.

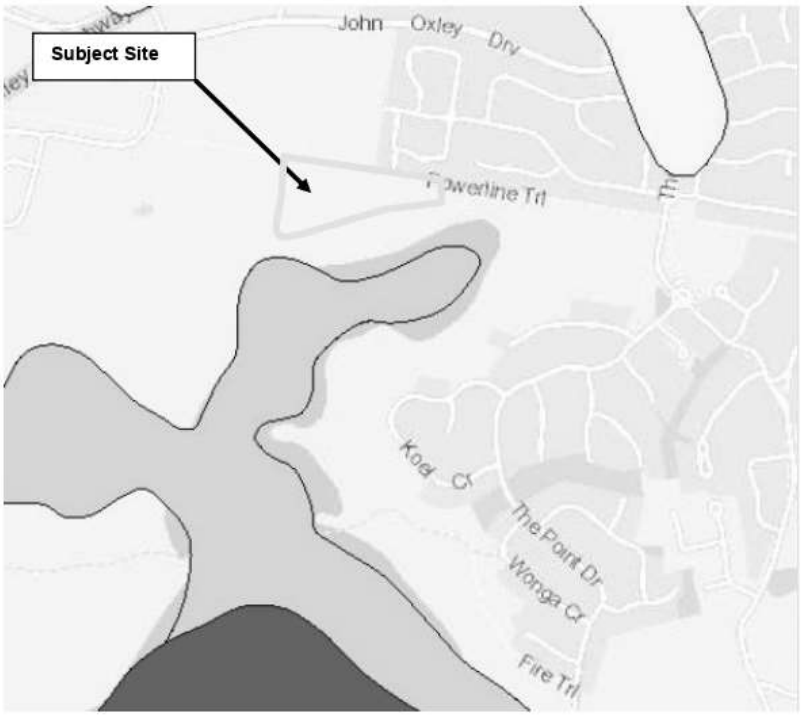
There are no improvements to the subject site other than some property fencing and dams.

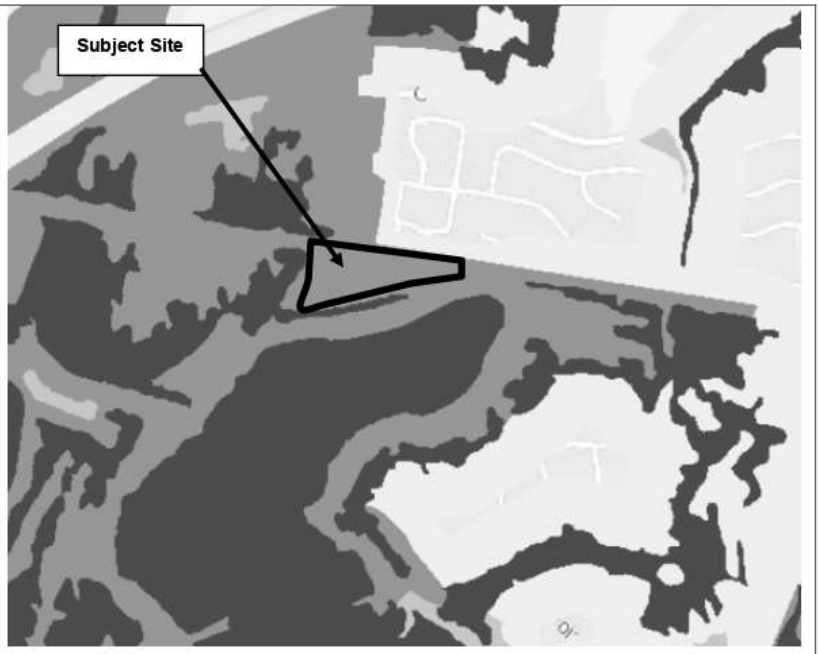
Fire has not recently occurred on the site despite recent bushfire activity further to the northwest and west of Port Macquarie, (November/December 2019 and January 2020).

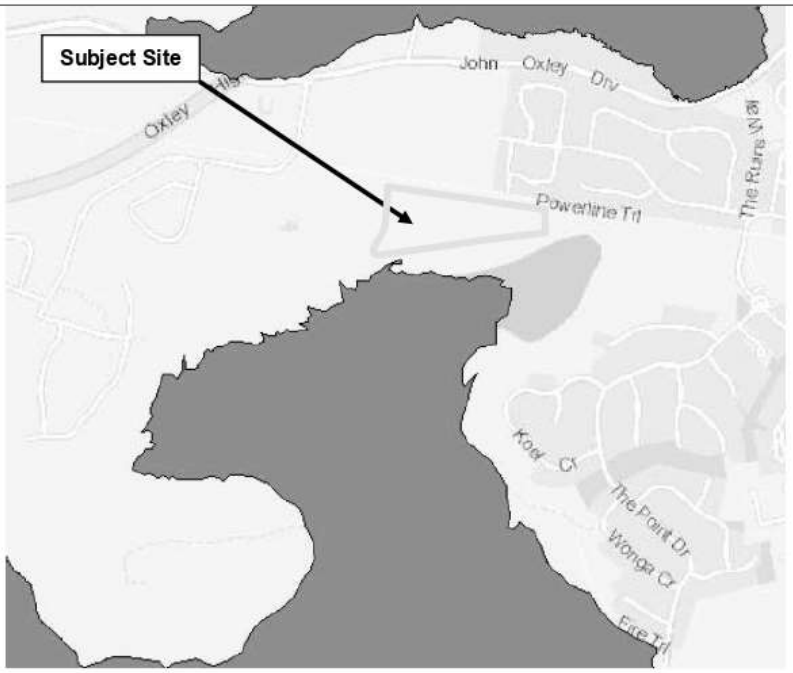
The environmental and heritage features of the subject site are summarized as follows;

Table 1 – Environmental and Heritage Features

ENVIRONMENTAL/ HERITAGE FEATURE	COMMENT
Riparian Corridors	There are no riparian corridors on the subject site.
SEPP (Coastal Management) 2018	The subject site is identified as being subject to the SEPP with the far southern portion affected by the buffer zone to areas of Coastal Wetlands, refer below. 
SEPP - Koala Habitat	Historic koala habitat assessment indicates the subject site overall qualifies

Protection	as Potential Koala Habitat. Hence a Koala Plan of Management is required to be submitted with any future Development Application for the development of the subject site.
Areas of geological interest	The subject site is not identified as potentially containing acid sulphate soils although it is noted that potential acid sulphate soils are indicated as being possible in the Lake Innes Nature Reserve, refer below.  Based upon previous land use it is expected that no land contamination issues will be relevant to the subject site.
Environmental Protection Zones	The subject site currently contains no Environmental Protection Zones. The subject site is zoned, pursuant to Port Macquarie-Hastings Councils LEP, (2011), Primary Production (RU1), refer to **Figure 3** above. It is however noted that land which has an environmental protection land use zoning is present to the southeast of the subject site – (Lake Innes Nature Reserve). .
Land slip	Given the gently undulating nature of the topography of the subject site and surrounding areas land slip is not considered to be an issue for the subject site.
Bushfire Prone Land	The subject site is identified as being Bushfire Prone Land, refer below;

	 As can be seen from the figure above the subject site contains Category 3, (Grassland), hazard vegetation. Areas of Category 3, (Grassland), hazard vegetation is present to the north, south and east although a narrow band of Category 1 hazard vegetation adjoins the southern boundary of the subject site. The subject site is also affected by the 100m buffer zone surrounding Category 1 bushfire hazard vegetation which is contained within the Lake Innes Nature Reserve which is present to the south of the subject site whilst Category 1 vegetation is also present on adjoining and adjacent land to the northwest and west.
Flood prone land	The subject site is not identified as being flood prone land and as such is not subject to compliance with the flood planning area provisions of Port Macquarie-Hastings Councils LEP, 2011, refer below;

	
National Park Estate or other Reserves	The subject sites do not form part of the National Park Estate or other Reserves. It is however noted that land which is contained within the Lake Innes Nature Reserve is present to the south/southeast of the subject site.
Threatened species, populations, endangered ecological communities and critical habitat	Threatened species, populations, endangered ecological communities and critical habitat are unlikely to be present as the subject site has been the subject of significant modification over time. This issue is to be the subject of separate assessment and is therefore outside the scope of this report.
Ecologically Endangered Communities (EEC's)	Given the level of historic disturbance of the subject site in the areas of the proposed development it is unlikely to contain or support EEC's. This issue is to be the subject of separate assessment and is therefore outside the scope of this report.
OEH Key Habitats and Corridors	The proposed development areas do not fall within a regional or sub-regional corridor. The section of the Lake Innes Nature Reserve which is present to the southeast of the subject site appears to form a cul-de-sac in the mid-north of the regional corridor, the bulk of which is centred on Lake Innes Nature Reserve. Regional corridors with effective linkages are mapped extending north via the Kooloonbung Creek Nature Reserve connection, and coastally including Sea Acres Nature Reserve. This issue is to be the subject of separate assessment and is therefore outside the scope of this report.
Aboriginal Heritage	Items of aboriginal heritage are unlikely to be present given the active vegetation modification and management which has occurred on the subject site and the level of site disturbance which is likely to have occurred over

	the years. This issue is to be the subject of separate assessment and is therefore outside the scope of this report.

1.5 Development Proposal

It is proposed to rezone the subject site as part of the ongoing residential development of the general area. This reflects the existing residential development within the area and the significant urban expansion which has occurred in the general locality over the past 20 – 25 years.

Being on the western fringes of Port Macquarie the general area has and will continue to experience significant residential development with the character of the area being consistent with that which would be expected for urban fringe areas.

The proposed rezoning provides for the following land use zones.

- R1 - General Residential (total of 2.86 hectares). The R1 zone will include the bushfire setback (APZ), access road/ residential streets, residential allotments and housing.
- E2 - Environmental Conservation
- E3 - Environmental Management

It is noted that the E2 and E3 account for a total area of 1.31 ha. Both the E2 and E3 zones are for protection and management of existing forested areas, as well as additional planting. No residential development, no roads, no bushfire threat management measures (APZ) are proposed for the E2 and E3 zones.

In support of the proposed rezoning of the land, a preliminary development concept has been prepared for the subject site, refer to **Appendix 2**. In this regard it has been assumed for the purposes of this report that the development concepts provide for residential development only.

Given that the nature and extent of any future development of the subject site is variable this report will focus upon detailing the strategic bushfire issues and constraints for the subject site and the identification of the bushfire threat management requirements which will be applicable to any future development of the land so as to allow for an assessment of the subject site's suitability for rezoning.

1.6 Fauna and Flora Issues

A fauna and flora evaluation has not been undertaken in conjunction with this bushfire hazard assessment and as such issues pertaining to fauna and flora are outside the scope of this report.

2.0 STRATEGIC BUSHFIRE STUDY

It is noted that NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 provides that for strategic development proposals in bush fire prone areas a Strategic Bush Fire Study is to be prepared.

The level of information required within such a study is dependent upon the nature of the LEP amendment, scale of the proposal, the bush fire risk and its potential impact upon the wider infrastructure network.

The Strategic Bush Fire Study provides the opportunity to assess whether new development is appropriate in the bush fire hazard context. It also provides the ability to assess the strategic implications of future development for bush fire mitigation and management.

In accordance with Table 4.2.1 of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 the following Strategic Bushfire Study is provided.

2.1 Landscape Assessment

2.1.1 Assessment Methodology

In order to determine the likelihood of a bush fire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape the following methodology was taken.

(i) Stage 1 - Desktop Survey.

The identification and assessment of existing and historic information pertaining to the subject site in relation to;

- Weather
- Vegetation.
- Topographic features.

(ii) Stage 2 - Field Survey.

Detailed inspections of the subject site were undertaken by David Pensini - Building Certification and Environmental Services on 10th October and 3rd November 2013, 4th May 2018, 26th March 2020 and 13th January 2021 in order to identify relevant bushfire hazard factors and characteristics such as;

- Topographic conditions.
- Vegetation characteristics.
- Weather
- Fire Danger

Each of the above factors need to be considered in determining the bushfire hazard for the subject site and proposed rezoning. These factors must be reviewed in determining the bushfire protection measures which are applicable to the subject site and the proposed rezoning of the area of land which is the subject of this report.

The assessment of slope and vegetation characteristics has been carried out in accordance with Appendix 1 of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

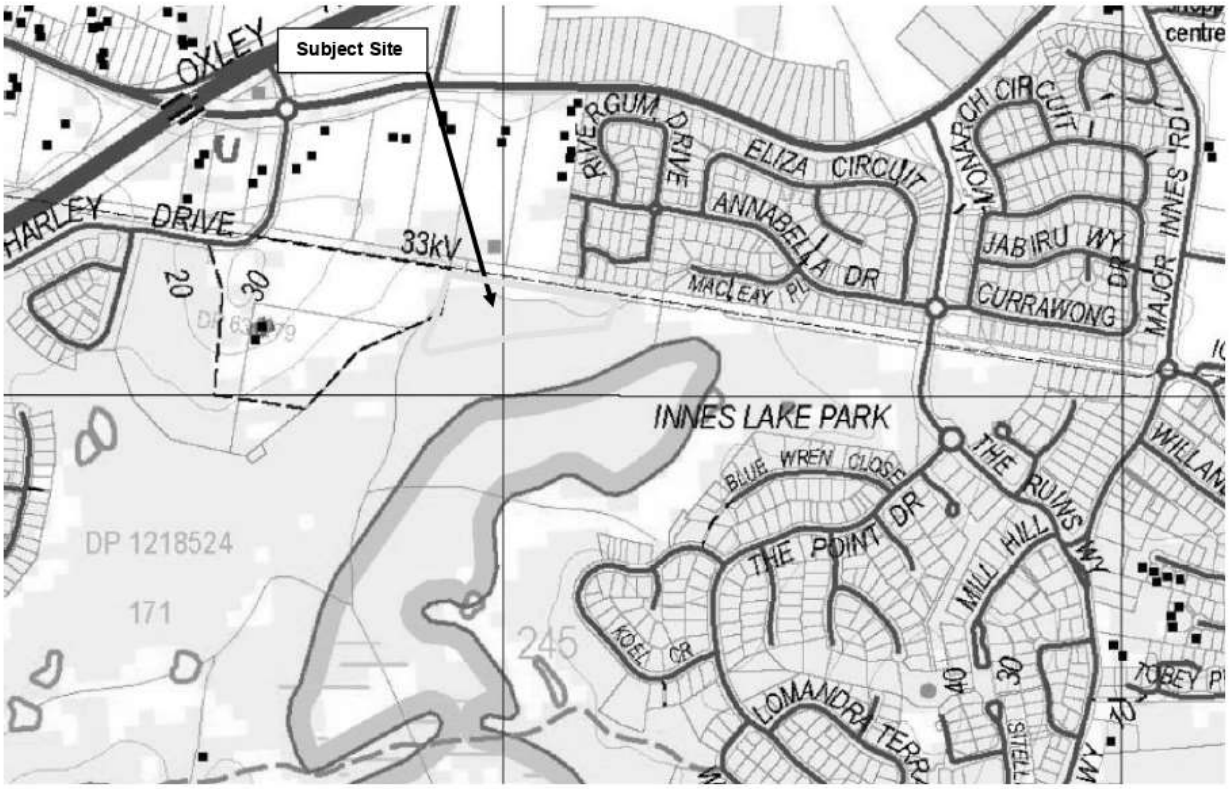
2.1.2 Topography

Topography is a major factor to consider when assessing the bushfire risk of any development which is subject to compliance with the requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019. Therefore, the slope of the subject site and surrounding area, (to a distance of 100m), was measured using a Suunto PM-5/360 PC Clinometer.

The topography of the subject site and surrounding areas is dominated by the southern side slopes of a small east to west ridgeline the crest of is located at distance to the north of the subject site. Accordingly, gentle (2˚ - 3˚) north to south downslopes predominate over the subject site and adjoining and adjacent land although some westerly upslope conditions are present to the west/northwest. The vegetated areas of the Lake Innes Nature Reserve define a transition to generally flat land with the margins of the Nature Reserve reflecting the gentle south/south-westerly downslopes which dominate slope conditions in the locality.

The topographical conditions on the subject site and on adjoining and adjacent land can be seen in **Figure 4** below;

Figure 4 – Topographic Conditions



The hazard vegetation on the subject site and on adjoining and adjacent land that was relevant to the proposed rezoning was identified and the slopes within the vegetation measured.

The following table shows the results. It is noted that the identification of hazard vegetation was based upon the preliminary development concepts which were provided, refer to **Appendix 2**.

Table 2 - Slope Assessment Results

DIRECTION OF HAZARD	SLOPE degrees)	UPSLOPE/DOWN SLOPE
Within subject area	2˚- 3˚	Down slope
North	0˚	Upslope
South	2˚- 3˚	Down slope
East	0˚ - 1˚	Down slope
West	2˚- 3˚	Down slope

The above slopes were considered when assessing the required defendable spaces and indicative Bushfire Attack Levels, (BAL's), for any future development/s.

2.1.3 Vegetation Assessment

The vegetation on and surrounding the subject site was assessed over a distance of 140m from the proposed development.

The vegetation formations were classified using the system adopted as per Keith (2004) and in accordance with Appendix 1 of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.
Given the size and fragmented nature of the various parcels of land which form the subject site bushfire hazard vegetation conditions are variable.

The following information is provided in relation to the floristic characteristics of the subject site and adjoining and adjacent land. In adopting a conservative approach to bushfire hazard assessment worst case vegetation characteristics have been identified.

(i) Vegetation within Subject Site

Vegetation within the subject site consists of Grasslands with scattered and clusters of trees.



Grasslands over the subject site

It has been assumed, for the purposes of this report, that vegetation of bushfire significance would be modified/removed from the areas of land identified as forming part of future development proposals (i.e., residential lots, public roads, etc.), as part of any future development proposals.

(ii) Vegetation on Adjoining and Adjacent Land to Subject Site

The following vegetation characteristics were identified as being relevant to the proposed rezoning of the subject site.

Grasslands adjoin the subject site to the north and east whilst an area of Dry Sclerophyll Forest is present to the northwest of the subject site. It is however noted that developed residential lots extend beyond the grasslands to the north/northeast of the subject site.



Grasslands within electricity supply easement immediately to the north of the subject site



Historical residential development to the northeast of the subject site



Grasslands within approved development lots to the north of the subject site



Dry Sclerophyll Forest to the northwest of the subject site

Grasslands with a narrow band of remnant Dry Sclerophyll Forest associated with the undeveloped golf course together with the Forested Wetland vegetation within the Lake Inness Nature Reserve are present to the south/southeast of the proposed rezoning area.



Grasslands and Forested Wetland vegetation to the south of the subject site

To the west of the subject site are some remnant areas of Dry Sclerophyll Forest and Forested Wetland vegetation before a transition to the managed grounds of the Lake Innes Crematorium and Lawn Cemetery. In adopting a conservative approach to bushfire hazard assessment, a Forested Wetland classification has been adopted for this aspect.



Forest and Forested Wetland ecotone to the west of the subject site



Managed vegetation within the grounds of the lawn cemetery

The vegetation relationships on the subject site and on adjoining and adjacent land are shown in **Figure 5** below;

Figure 5 – Vegetation Characteristics



The following table summarizes the various vegetation structures which are of bushfire significance to the proposed rezoning of land and future residential allotments.

Table 3 – Summary of Vegetation Characteristics

ASPECT	VEGETATION DESCRIPTION	VEGETATION CLASSIFICATION – (Keith, 2004)
Within the subject area	Managed vegetation associated with residential lots and associated infrastructure	N/A
North	Grasslands within electricity distribution easement and adjacent land to the north of the area	Grasslands
Northwest	Dry Sclerophyll Forest vegetation on adjacent land	Dry Sclerophyll Forest
South	Forested Wetland vegetation within the Lake Innes Nature Reserve	Forested Wetland
East	Grassland with scattered and small clusters of trees	Grassland
West	Dry Sclerophyll Forest and Forested Wetland vegetation on adjoining undeveloped land	Forested Wetland

2.1.4 Climate/Weather

The typical/average climate of the Port Macquarie area is a humid subtropical climate characterised by warm humid summers and mild winters. The average daily maximum temperature is around 21.5^{0}C, while the average daily minimum temperature is around 10^{0}C - 11^{0}C.

Long-term average annual rainfall is around 1,500mm whilst annual pan evaporation is estimated to be approximately 1,400mm.

Based on long-term, (1910–2011), observations, temperatures have been increasing in the North Coast Region since about 1970, with higher temperatures experienced in recent decades. This warming trend is expected to continue, with anticipated considerable rainfall variability across seasons and from year to year. These projected changes include increasing maximum and minimum temperatures, increasing number of hot days, decreasing number of cold nights together with winter rainfall and increasing autumn and spring rainfall. Average fire weather and severe fire weather days are projected to increase in summer and spring.

The bush fire season for the Port Macquarie area generally runs from July to November, however, can extend into December or January with low rainfalls. Strong northwest to southwest winds often prevail within that time of year. Longer bush fire seasons occur when summer rainfall is lower than normal, with the bush fire season extending through summer to early autumn. Serious fires have occurred late in the season under dry summer conditions.

Prevailing weather conditions associated with the bush fire season are characterised by dry north-westerly winds, usually associated with high pressure systems and the passage of cold fronts. Extended periods of low rainfall, and the resultant fuel moisture deficiencies, combined with summer temperatures and hot dry westerly winds form the circumstances for high intensity fires to develop. Although summer rains generally bring an end to the fire season, short dry spells can create extensive wildfires in the area as late as April. Generally, these fires have proved to be less damaging than those occurring in spring/early summer. The climate projections indicate that there is a likelihood of more frequent and higher intensity bushfires occurring when low seasonal rainfall occurs.

Notwithstanding the above, it is noted bushfires do not always conform to widely accepted characteristics. Other fire weather conditions must also be contemplated such as preceding weather conditions (such as low rainfall or drought), air temperature and relative humidity. If the area has been subject to drought or low rainfall for a period of time, vegetation health tends to deteriorate with increased leaf drop, curing and drying. This contributes to increased ground fuel loads and general ignition susceptibility. Prolonged dry periods also reduce soil moisture content.

Air temperatures of above 30 degrees Celsius are typically conducive to more severe fire weather, as are extended periods of higher-than-average air temperatures. In conjunction, low relative humidity (i.e., low air moisture content) is also a contributing factor to increased fire weather.

In concert, all the above factors can impact on the ability for fire to propagate, and alter behaviour and intensity characteristics and as such, fire weather is a significant component of bushfire hazard. Whilst an assessment of vegetation types, fuel loads, effective slope and other factors can be readily undertaken, fire weather can fluctuate across days, weeks and seasons and can have a significant impact on the potential for bushfire threat as well as influence bushfire behaviour and intensity.

The fire weather for the subject site is assumed on the worst-case scenario. In accordance with NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019, NSW Rural Fire Service, ***NSW Local Government Areas FDI*****,** May 2017 and Table 2.1 of AS 3959 - 2018, the fire weather for the site is based upon the 1:50 year fire weather scenario and has a Fire Danger Index (FDI) of 80.

Based upon the above it is considered that climatic conditions are at times conducive to supporting bushfire with the subject land being located adjacent to areas of vegetation which provide for fuel loads sufficient to support and promote bushfires. In this regard the most likely bushfire risk scenario would be a fire moving from the south towards the north within the Forested Wetland vegetation contained within the Lake Innes Nature Reserve. This risk is however tempered by the generally flat topography within the hazard vegetation and the reduced fuel loads associated with Forested Wetland vegetation.

2.2 Bushfire Risk Assessment

2.2.1 Overview of Bushfire Attack Mechanisms

Bushfires have long remained a fundamental characteristic of the Australian bush landscape, and likewise Australians have long retained a strong affinity with bush environments.

There remain a number of common factors which are associated with bushfire hazard and events and these include the incidence of fire weather, availability of fuel along with its type, structure and continuity or fragmentation, and the context of development at the urban / bushland interface.

Bushfire attack refers to the various methods in which bushfire may impact upon life and property and principally encompass the following modes of attack:

(i) Direct flame contact

Direct flame attack refers to flame contact from the main fire front, where the flame which engulfs burning vegetation is one and the same as that which assumes contact with the building. It is estimated that only 10 to 20 per cent of buildings lost to bushfire occur as a direct result of flame attack.

(ii) Ember and firebrand attack

The convective forces of bushfire raise burning embers into the atmosphere on prevailing winds and deposit them to the ground ahead of the fire front.

Typically, ember attack occurs approximately 30 minutes prior to the arrival of the fire front and continues during the impact of the fire front and for several hours afterwards, thus it is the longest lasting impact of bushfire attack. Firebrands occur in a very similar manner but relate to larger items of debris that may still be carried by the wind when alight, such as candle and ribbon barks. In essence, building loss via ember attack relates largely to the vulnerabilities and peculiarities of each building, its distance from hazardous vegetation and whether an occupant (or the like) is present to actively defend it. It is estimated by the CSIRO that approximately 80 to 90 per cent of buildings lost by bushfire are lost as a result of ember attack either in isolation or in combination with radiant heat impact.

(iii) Radiant heat flux

Exposure to radiant heat remains one of the leading causes of fatalities associated with bushfire events. Measured in kilowatts per m2, radiant heat is the heat energy released from the fire front which radiates to the surrounding environment, deteriorating rapidly over distance. In terms of impact on buildings, radiant heat can pre-heat materials making them more susceptible to ignition or can cause non-piloted ignition of certain materials if the energy transmitted reaches a threshold level. Radiant heat can also damage building materials such as window glazing, allowing openings into a building through which embers may enter. Radiant heat impact is an especially important factor in building-to-building ignition.

In terms of radiant heat exposure for humans, it can cause pain to unprotected skin in milder situations or life threatening and fatal injury in higher exposure thresholds.

(iv) Fire-driven wind

The convective forces of bushfire typically result in strong to gale force fire-driven winds which in itself, can lead to building damage. The typical effects of fire driven wind include the conveyance of embers, damage from branches and debris hitting the building, as well as direct damage to vulnerable building components such as lifting roofs or roof materials and the damage / breakage of windows.

(v) Smoke

Smoke emission remains a secondary effect of bushfire and is one which is typically not addressed by bushfire assessments. Irrespective, it is important to note the potentially severe impact of smoke emission on the human respiratory system. It can lead to difficulties in breathing, severe coughing, blurred or otherwise compromised vision, and can prove fatal. It is also important to note that toxic smoke can occur during bushfire, particularly where buildings or materials are ignited. With regard to evacuation, it can reduce visibility and create difficulties for particularly vulnerable persons.

In the progression of a bushfire event, the above five methods interact either exclusively or in concert. It is estimated that approximately 80 to 90 per cent of buildings lost to bushfire are located within 100m of the bushland interface, hence the relevance of statutory provisions and recommendations implemented across Australia which respond to various types of buildings within 100m of adjacent classifiable vegetation.

2.2.2 Bushfire Activity History

The Mid Coast Bush Fire Risk Management Plan (BFMP 2019) identifies that the main sources of ignition in mid coast area (includes the subject site) are:

- Escapes from Legal Burning off
- Incendiarism/arson
- Re ignition of previous wildfire or hazard reduction
- Illegal burning off
- Lightning

Many of the abovementioned fires occur as a result of private 'Hazard Reduction' burns by private landowners, which by act or omission have escaped into forested areas requiring major suppression efforts.

Incendiarism/arson commonly occurs in both grassland and forested areas across the Midcoast area.

Increased visitation is thought to be a contributing factor to increased incidence of incendiarism.

Lightning activity in the area is mainly associated with late spring and summer thunderstorm activity, which is normally (but not always) accompanied by rainfall.

The subject site and surrounds are not known to have an extensive history of bushfire.

Recent bushfire activity was not detected on or immediately adjacent to the areas of land which are the subject of this report despite bushfires to the northwest, southwest and west of Port Macquarie during November and December 2019 and January 2020.

It is noted that the bushfire activity around Port Macquarie in November/December 2019 and January 2020 was predominately to the east of the Pacific Highway with the closest areas of bushfire activity to the subject site being approximately 1.0 km to the south and approximately 1.5 km to the west of the subject site. The most recent bushfire activity being supported by Forested Wetland and Forest vegetation contained within the Lake Innes Nature Reserve and privately owned land under predominately southerly wind conditions. Not withstanding this more recent subdivision development to the south, (Lake Innes/Brierley Hill), and west, (Ascot

Park), of the subject site was not significantly impacted, from an asset protection and life safety perspective. This in part is a reflection of the bushfire threat management measures included in the construction of the more recent residential subdivisions.

The Mid Coast BFMC Bush Fire Risk Management Plan 2019 does not identify any particular 'at risk' assets on or adjacent to the subject site nor does it identify any specific bushfire threat management actions for the locality.

2.2.3 Potential Fire Behaviour

Whilst each bushfire event is different, fire spreads by responding to changes in fuel, terrain, and weather conditions. Therefore, based on landscape conditions and fire history, potential fire behaviour can be determined.

It is generally anticipated that a potential fire within the locality and surrounds, would spread more quickly and have the potential for higher intensities when burning under the influence of southerly winds, particularly during warmer summer months.

However, if a fire were to approach the subject site from the southern aspect, it is likely to be slower moving due to flatter land and a mosaic of land uses and management practices that has significantly reduced the available fuel in the areas immediately adjoining the subject site. In this regard the presence of grasslands between the subject site and the Forested Wetland vegetation within the Lake Innes Nature Reserve would assist in reducing bushfire impacts on the subject site.

It is also noted that the presence of the large waterbody and wetland fringes of Lake Innes which is located approximately 1.5km to the south of the subject site provides for disconnection of large landscape fire conditions in the southern aspect. The presence of Lake Innes provides for fragmentation of fire run conditions in the southern aspect. Coupled with the proposed golf course infrastructure fuels and fire run conditions are reduced to the south of the subject site.

There is also bushfire potential to the north and west of the subject site however the impacts of fire would be expected to be significantly reduced due to the landscape conditions in these aspects in particular the upslope topographic conditions in the northern aspect and the nature and fragmented condition of unmanaged vegetation in these aspects.

The potential fire attack relevant to the subject site is most likely from local bushfire ignitions rather than large landscape fires that would pose elevated risk.

The bushfire behaviour risk which is relevant to the subject site and proposed rezoning is summarized as follows;

Table 4 – Summary of Bushfire Behaviour Risk

ASPECT	VEGETATION DESCRIPTION	SLOPE CONDITION	WORST CASE WIND INFLUENCE
North	Grasslands within electricity distribution easement and adjacent land to the north of the area	0˚ Upslope	Northerly
Northwest	Dry Sclerophyll Forest vegetation on adjacent land	0˚ Upslope	Northerly
South	Forested Wetland vegetation within the Lake Innes Nature Reserve	2˚- 3˚ Down slope	Southerly
East	Grassland with scattered and small clusters of trees	0˚ - 1˚ Down slope	North-easterly
West	Dry Sclerophyll Forest and Forested Wetland vegetation on adjoining undeveloped land	2˚- 3˚ Down slope	South-westerly/southerly

2.2.4 Impacts of Climate Change

Climate change influences bushfires in the following four ways:

- **A longer fire season.** Hotter conditions mean a longer fire season, leading to more dangerous bushfires and leaving less time for hazard reduction.
- **Hotter temperatures.** Australia is getting hotter, with more extreme hot days and longer, hotter heatwaves. These conditions are increasing the risk of bushfires in many areas.
- **Drier vegetation & 'fuel'.** Hotter conditions and periods of low rainfall dry out soil and vegetation, increasing fire risk.
- **More lightning.** A warmer climate increases the chance of lightning, which is a key factor in starting fires.

The climate projections indicate that there is a likelihood of more frequent and higher intensity bushfires occurring when low seasonal rainfall occurs.

2.2.5 Summary of Landscape Bushfire Risk Assessment

The landscape assessment indicates the potential for bushfire attack of the subject site given the presence of bushfire hazard vegetation on adjacent and adjoining lands in particular land to the south of the subject site.

The likelihood of this potential bushfire attack is however decreased by the slope conditions, the nature and extent of fuel and fire run connectivity from adjoining and adjacent areas.

Available information indicates a limited fire history within the subject site and immediately surrounding area, with reduced potential to develop into major fires. Additionally, there are advantages to fire mitigation in the landscape that can be achieved by the provision of appropriate bushfire protection measures within the subject land. In particular, the subject land can facilitate APZ's without extensive vegetation clearing and design mechanisms including perimeter roads and a connected road network.

The landscape assessment and most recent fire activity in the locality indicates that it is feasible to design and build resilience into the community that matches or exceeds the bushfire protection requirements provided for by NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

2.3 Land Use Assessment

2.3.1 Existing Land Use Context

Being located within the Lake Innes urban growth area, which is located on the south western fringes of the urbanized area of Port Macquarie, the land within this area has and will continue to experience significant urban expansion with a transitional land use setting and context prevailing for a number of years.

An electricity distribution line/easement is present along the far northern portion of the subject site with developed residential lots extending beyond the electricity distribution line easement to the northeast and undeveloped, (but recently approved for residential subdivision), rural residential land to the northwest. Undeveloped areas of the proposed Lake Innes Residential Estate golf course are present to the south and east whilst vegetated areas of the Lake Innes Nature Reserve are present at distance to the south. The managed grounds of the Port Macquarie Crematorium and Lawn Cemetery are present for the majority of the western aspect however a small area of bushland separates the subject site from the managed areas of the Crematorium and Lawn Cemetery.

The recent approval of the residential subdivision of rural residential sized lots to the north of the subject site highlights the transitional nature of land use in the general area. Additionally, the progress development over the past 15 years of the Ascot Park residential estate to the west of the subject site highlights the westerly expansion of the urban footprint of Port Macquarie.

It is noted that the land which is the subject of rezoning forms part of the golf course which was approved to be constructed as part of the Lake Innes area albeit that the completion of the golf course has not been achieved. In this regard the proposed rezoning of the subject site is considered to be consistent with the use of land to support urban activities albeit that the form of land use from an urban use perspective is different to that which has been historically proposed.

2.3.2 Future Land Use Context

The area which is proposed to be rezoned has a direct context and relationship with existing developed residential areas and land which has been approved for residential subdivision with the area which is proposed to be rezoned being a logical extension to existing residential patterns within the Lake Innes area.

The presence of large areas of historic and recently approved residential development adjacent to the subject site reinforces the orderly and progressive development of land within the locality. It is also important to note that the proposed rezoning needs to be considered not only in the context of existing development but also having regard to the future development of residentially zoned but undeveloped parcels of land which adjoin or are adjacent to the subject site. In this regard land to the north and northwest of the subject site has been approved for residential subdivision, refer to **Appendix 3,** whilst planning is also being undertaken for the future residential development of the Kingston Town Loop and Black Caviar areas within the Ascot Park residential estate which are located to the west and southwest of the subject site.

The subject site provides a prime opportunity to accommodate additional housing without adverse environmental impacts or loss of agricultural land. The use of cleared land, as is the case with the subject site, adopts the sustainable land use principles, rather than utilizing land which is currently used for agricultural purposes or contains ecological features.

It is however acknowledged that the subject site does and will continue to have an interface with areas of land containing bushfire hazard vegetation. In this regard the ongoing presence of the vegetated finger of the Lake Innes Nature Reserve to the south and remnant forest vegetation to the west of the subject site needs to be taken into particular consideration in the identification of bushfire risk and the relevant threat management responses which are relevant to the future residential development of the area of land which is the subject of this report.

However, the generally cleared nature of the land which is the subject of this report and the absence of major constraints in terms of landform and topography to the future development of the subject land suggests that the proposed rezoning of the land is consistent with sound town planning outcomes.

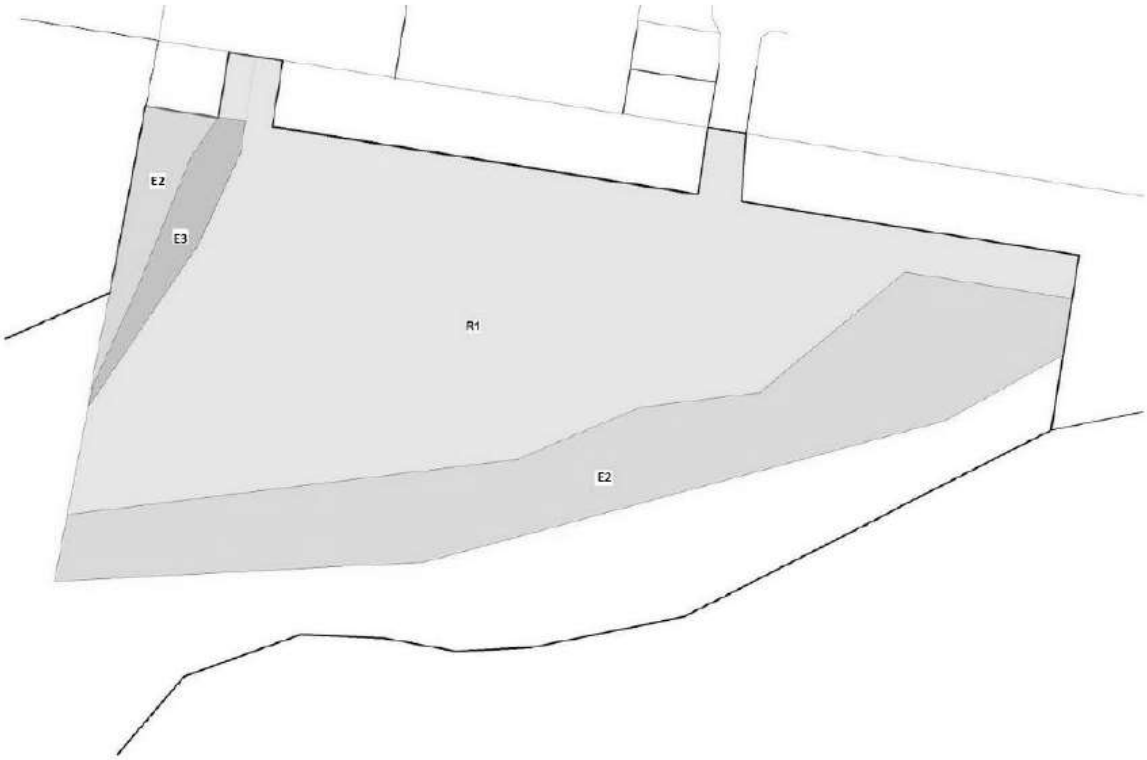
2.3.3 Proposed Land Uses and Occupant Characteristics.

The subject rezoning proposes the following land use zones;

- General Residential (R1); and
- Environmental Conservation (E2); and
- Environmental Management (E3).

The proposed zones are shown in **Figure 6** below;

Figure 6 – Proposed Land Use Zones



It is noted that the rezoning is proposed to facilitate the development of the subject site for residential dwelling development via separate Torrens Title lots. In this regard it would be expected that the density of future development and the characteristics of occupants would be entirely consistent with that expected within urban residential areas. The typical permitted land uses would be;

'2 Permitted without consent

Home-based child care; Home occupations

3 Permitted with consent

Attached dwellings; Boarding houses; Business identification signs; Child care centres; Community facilities; Dwelling houses; Group homes; Home industries; Hostels; Multi dwelling housing; Neighbourhood shops; Places of public worship; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Any other development not specified in item 2 or 4.

It is acknowledged that the permitted land uses as provided for by the proposed zonings could support higher densities of occupation and involve occupants with characteristics which increase their level of vulnerability to emergency events such as bushfire and may reduce their abilities to respond in an emergency. In the context of bushfire risk these vulnerabilities are

reflected in the Special Fire Protection Purpose development types, (NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019).

It is however noted that the form of development contemplated by the concept plan for the subject site would not be expected to support these forms of development. Notwithstanding this, future development proposals which contemplate Special Fire Protection Purpose developments would need to be assessed on their own merits in terms of responding to bushfire threat and management.

The use of cleared land, as is the case with the subject site, adopts the sustainable land use principles, rather than utilizing land which is currently used for agricultural purposes or contains ecological features.

Based upon the above information and the development concept provided as **Appendix 2** there would appear to be no major land use planning constraints to the proposed rezoning of the subject land and its future development as residential lots.

2.3.4 Defining 'Acceptable' Land Use Planning Risk

With respect to land use planning for natural hazards, defining exactly what represents 'acceptable' risk can be a difficult task. Understanding community expectation of what represents acceptable risk versus unacceptable risk is the basis of much research both in Australia and internationally.

It is noted that in NSW, NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 has been adopted as the appropriate risk management standard in relation to land use planning and development control in relation to property and life safety albeit that there remains an understanding that despite this combination of planning, building and other bushfire protection measures provided for in NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019, asset loss may still occur in more extreme events.

Having regard to the above the bushfire risk to assets can be minimized through compliance with the relevant threat management measures contained within NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 as this represents the appropriate land use planning and development control standards albeit that a level of property loss is 'accepted' to a degree by existing land use planning and building construction frameworks.

Property and infrastructure may be lost in a catastrophic event, but the key determinate of 'acceptable' risk is life safety risk, and whether the proposed land use rationale, density and settlement pattern supports and enables life safety, including safe evacuation.

In analysing the question of life safety, the following key points are considered to be relevant:

- the estimated population increase associated with the proposed rezoning is small in the context of existing and future development in the area. The proposed rezoning of the subject site will not significantly increase the density of development from that already contemplated for the area via existing residentially zoned but as yet to be developed land in the locality;
- the current and future population demographics for the area does not present as particularly 'vulnerable';
- the limited fire history within the subject site and surrounding areas and the reduced potential to develop into catastrophic fires;
- the generally cleared nature of the land which is the subject of this report and the absence of major constraints in terms of landform and topography to the residential development of the subject site;
- the risk benefit in relation to existing development in the area. Most of the historical residential subdivision to the north/northeast of the subject site has occurred without

the benefit of more recent land use planning consideration from a bushfire perspective. In this regard the rezoning of the subject site and its future residential subdivision development provides an opportunity to provide for improved bushfire threat management outcomes for historical residential development in the locality, in particular access and egress and the provision of relevant and appropriate asset protection zones; and

- the existing / proposed evacuation options out of the subject site all of which traverse existing and proposed residential subdivisions to the north which will be protected from the impacts of bushfire. In this regard travel distances to areas of safety will be short with alternative means of access to and egress from the subject site available.

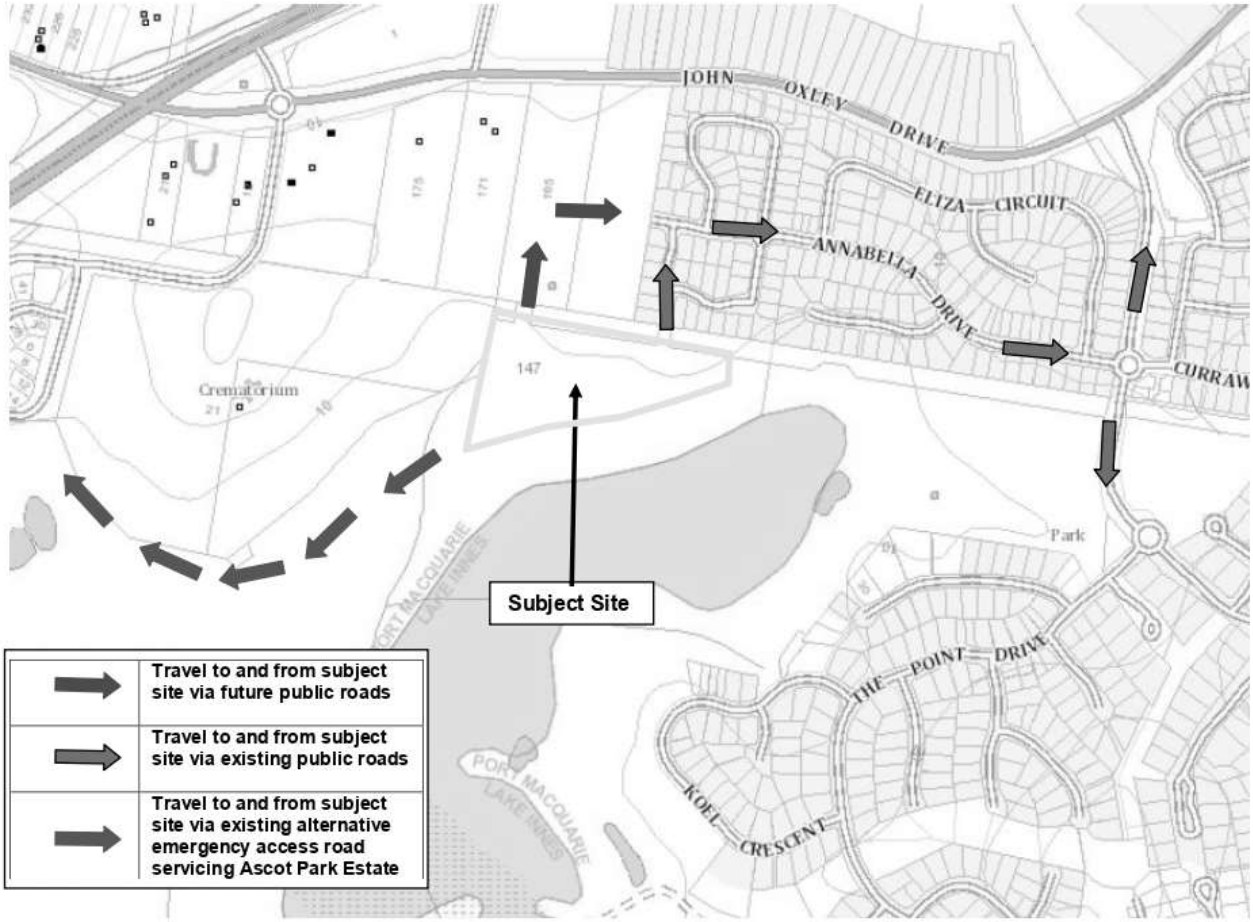
Having regards to the above it is considered that the level of asset and life safety risk associated with the proposed rezoning of the subject site is consistent with the relevant community expectations and the relevant land use planning and development control standards.

2.4 Access and Egress

The development concept for the subject site provides for the construction of new public road infrastructure which will connect with existing and proposed public road networks to the north of the subject site.

The access and egress strategy for the future development of the subject site involves the movement of vehicles to and from the north via new public road infrastructure. In this regard the presence two (2) access and egress opportunities along the northern boundary of the area provides for multiple opportunities for access to and egress from the north from areas which would be protected from the impacts of bushfire albeit that the availability of the access route in the north-western corner of the subject site is contingent upon the future residential development of land to the north of the subject site, refer to **Figure 7** below.

Figure 7 – Access and Egress Opportunities



Notwithstanding the above the planning for the historical development of land to the north/northeast and the more recent approval of the residential subdivision of land to the north/northwest of the subject site have made provision for multiple access and egress opportunities from the subject site which further supports its suitability for rezoning and residential subdivision development.

Having regards to the above, the access and egress strategy for the subject site takes advantage of existing and proposed public road infrastructure which in the main provides for access to and egress from areas which would be protected from the impacts of bushfire.

The development concept for the subject site also includes connection with the existing Ascot Park Estate to the west by virtue of the existing alternative emergency access road which is required to connect the Ascot Park Estate with developed residential areas within the Lake Innes/Annabella Downs area. Accordingly, the proposed rezoning of the subject site would provide for improved emergency access and egress arrangements for the Ascot Park residential area as well as providing for an alternative emergency access opportunity for the land which is the subject of this report.

The proposed rezoning of the subject site and its future development provides an opportunity for a more integrated and strategic approach to access and egress not only for the subject site but also in relation to existing residential development in the area.

It is also noted that the majority of historical residential subdivision to the north/northeast of the subject site has occurred without the benefit of more recent land use planning consideration from a bushfire perspective. In this regard the rezoning of the subject site and its future residential subdivision development provides an opportunity to provide for improved access and egress outcomes for historical residential development in the locality, in particular the provision of perimeter roads separating areas of hazard vegetation from residential assets.

The road hierarchy which has been adopted for the future development of the subject site provides for an efficient and effective movement of vehicles with a variety of access and egress opportunities available through the interconnection of the proposed public road network. This is important from an evacuation perspective whereby the proposed road system will provide for capacity of use, alternatives for travel and the minimization of conflict between residents and emergency services.

The existing / proposed evacuation options out of the subject site and future residential subdivision development will traverse existing and proposed residential subdivisions to the north which will be protected from the impacts of bushfire. In this regard travel distances to areas of safety will be short with alternative means of access to and egress from the subject site and future development available.

As can be seen in the future development concept for the subject site, the creation of lots with a direct interface with bushfire prone vegetation has been minimized with the use of perimeter roads maximized with a through 'loop' road approach proposed. The perimeter road approach which has been taken to the concept design of the public road infrastructure provides for alternatives in travel to and from the subject site and future residential lots as well as providing for high levels of access to the areas of hazard vegetation which are to be retained on adjoining land to the south, south-east and west. This is important not only from the perspective of providing suitable asset protection zones for future assets but also for the purposes of mounting bushfire control/suppression activities.

It is noted that compliance with the relevant access provisions of Chapter 5 of NSW Rural Fire Service**, *Planning for Bushfire Protection***, 2019 in relation to the future development of the subject site would be expected to provide for a threat management outcome which is not only relevant to the subject site but would also be of strategic planning value for existing development in the area.

2.5 Emergency Services

The question of increased demand for emergency services is a difficult one in a strategic land use planning context. On the one hand, the proposed development increases exposure of people, property and infrastructure, including increased exposure of firefighting personnel. However, the intent of this risk assessment process seeks to rationalise the strategic land use planning approach to mitigate this extent of risk exposure, acknowledging that not all risk can be avoided, and thus residual risk will remain and be transferred to others (emergency services, the community, insurers, etc.).

Notwithstanding the above, the proposed rezoning of the subject site does not significantly increase the demand for emergency services on the basis that the proposed rezoning of land does not significantly increase the interface between residential development and areas of bushfire hazard vegetation when considered in the context of the nature and extent of existing development in the locality.

In this regard existing residential estates to the north/northeast were approved and constructed without reference to documented bushfire threat management standards and as such existing subdivision development in the area does not reflect best practice bushfire threat management strategies including the minimization of bushland interfaces and the use of perimeter roads. In this regard the rezoning of the subject site provides an opportunity to reduce the existing extent of hazard vegetation interfaces and significantly improve access and asset protection outcomes for existing development in the area whilst providing for new development which reflects best practice from a bushfire threat management perspective.

Accordingly, any increase in demand for emergency services associated with the proposed rezoning of land, (and its subsequent development), needs to be balanced against the improved bushfire threat management outcomes which can be achieved for existing residential development in the locality.

It is however noted that the nature of urban expansion which is associated with the rezoning and development of land for residential purposes is such that increases in demand for emergency services is inevitable as emergency services are required for a range of population safety and health protection issues associated with population growth. For example, in an urban context firefighting resources are required not only to respond to bushfire incidents but also in relation to responding to a range of building fire scenarios and causes.

At present emergency services are centred predominately upon resources from Port Macquarie, with Wauchope also supporting a range of emergency services which can respond to any incidents. Travel distances and times to and for emergency services are appropriate for residential development and importantly the location of the subject site provides for a range of emergency service options and opportunities, refer to **Table 5** below.

Table 5 – Emergency Services Locations

EMERGENCY SERVICE	LOCATION	ROAD TRAVEL DISTANCE TO SUBJECT SITE	ROUTE TO SUBJECT SITE
State Emergency Service	Port Macquarie – Central Road	Approximately 4.5km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/Lake/Central Road
Police Service	Port Macquarie – Hay Street	Approximately 7.5km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/Lake/Gordon Street/Horton Street/Clarence Street/Hay Street
Ambulance Service	Approximately 4.5km	Approximately 4.5km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/Lake/Central Road
Hospitals	Port Macquarie – Wrights Road	Approximately 2.3km	Annabella Drive/The Ruins Way/John Oxley Drive/Wrights Road
NSW Fire and Rescue	Port Macquarie – Central Road	Approximately 4.5km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/Lake/Central Road
NSW RFS	Fire Control Centre – Cameron Street	Approximately 16km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/High Street/Cameron Street
	Sancrox-Thrumster Brigade – Bushland Drive	Approximately 8.5km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/Billabong Drive/Bushland Drive
	Lake Innes – Lake Innes Drive	Approximately 8km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/Pacific Highway/Lake Innes Drive
	Hastings-Wauchope – Cameron Street	Approximately 16km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/High Street/Cameron Street
Airport	Port Macquarie – Boundary Street	Approximately 3.5km (direct air travel distance) Approximately 7.7km	Annabella Drive/The Ruins Way/John Oxley Drive/Oxley Highway/Gordon Street/Clifton Drive/Hastings River

		(by road)	Drive/Boundary Road

An important consideration in relation to emergency services is the options and opportunities for evacuation. As mentioned in Section 2.4 of this report the existing / proposed evacuation options out of the subject site and future residential subdivision development will traverse existing and proposed residential subdivisions to the north which will be protected from the impacts of bushfire. In this regard travel distances to areas of safety will be short with alternative means of access to and egress from the subject site and future development available.

Accordingly, the risk for emergency service personnel of becoming isolated and at risk of harm is reduced by the scale of the proposed development and its spatial relationship to areas which would be protected from the impacts of bushfire.

2.6 Infrastructure

Given that the proposed rezoning and future subdivisions provide for residential allotments, all future residential lots will have access to the reticulated water supply, the extension of which will be required by Port Macquarie-Hastings Council to service future subdivisions. It is however noted that the determination of a guaranteed water supply is to be made by the water supply authority where mains water supply is available.

It is however noted that there are no apparent water servicing issues which would preclude the proposed residential development of the subject site particularly when considered in the context of the existing and proposed residential development within the locality.
Electricity supply and communications infrastructure is available in the locality and will be accessible for extension to the future residential development of the subject areas of land.

It is however noted that an overhead electricity transmission powerline is present immediately to the north of the subject site with the presence of this infrastructure being a risk in terms of bushfire ignition and spread. Electricity can start bushfires when infrastructure is damaged or foreign objects contact powerlines. This can cause arcing and generate sparks that can ignite dry vegetation. While the number of bushfires ignited by electricity is very low, (<3% of bushfires), once started they have the potential to burn large areas.

Whilst the risks posed to future development in the area from bushfires associated with the overhead electricity transmission powerline will be reduced via reduced areas of unmanaged vegetation in the locality it is acknowledge that the presence of the overhead electricity transmission powerline is an issue in terms of bushfire threat management albeit that the bushfire risk associated with the power line is considered to be low by virtue of the history of fire ignition associated with power lines in the area, the nature and extent of fuel loads adjacent to the route of the line and the high levels of access to the power line route.

Reticulated gas services are not available in the locality and are therefore not available to the subject areas of land.

It is noted that the rezoning and subdivision approval processes incorporate consideration of relevant servicing requirements and capabilities by relevant service providers/authorities with the relevant approval processes able to accommodate any issues which maybe relevant to any future development which is proposed.

2.7 Adjoining Land

It is noted that the rezoning of the subject site will not change or alter the ability of adjoining and adjacent landowners/managers to carry bushfire threat mitigation and management activities nor will the proposed rezoning of the subject site place increased pressure on adjoining landowners/managers to introduce or implement Bushfire Management Plans as a result of the proposed rezoning.

In this regard the rezoning of the subject site will provide for residential development to be present on adjoining and adjacent to the north with the Lake Innes Nature Reserve present to the south and southeast. To the west of the subject site will be the infrastructure and grounds of the Port Macquarie Lawn Cemetery and Crematorium. It is noted that a narrow electricity supply easement separates the subject land from historic residential development to the northeast and recently approved residential development to the north/northeast.

The rezoning of the land and its subsequent development as residential lots does not change or alter the ability of adjoining land to carry a bushfire as vegetation characteristics will remain relatively unchanged from the existing assessed level of bushfire threat. Importantly the management of the Lake Innes Nature Reserve is already subject to a Bushfire Management Plan whilst vegetation within the electricity supply easement is the subject of an ongoing management regime implemented by the relevant electricity infrastructure asset manager. Likewise, the vegetation management practices within the grounds of the Port Macquarie Lawn Cemetery and Crematorium will remain unchanged as a consequence of the proposed rezoning In this regard the proposed rezoning and future development of the land will impose no additional bushfire threat management obligations or responsibilities on adjoining land managers from that which currently exists.

By the contrary, the rezoning and future development of the subject area of land will provide for improved access to the hazard vegetation within the Lake Innes Nature Reserve and the bushfire hazard vegetation which separates the subject site from the Port Macquarie Lawn Cemetery and Crematorium which will be of benefit to the landowner/manager in terms of responding to bushfire threat management associated with their land.

3.0 BUSHFIRE THREAT REDUCTION MEASURES

In NSW, the risk to property and people of bushfire associated with new developments is subject to compliance with the relevant requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

Accordingly, the future development of the subject site for separate residential lots must meet the relevant bushfire threat management measures as provided for by of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

3.1 NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019

The following issues and constraints have been identified through considering the requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 as they apply to the proposed rezoning of the subject site and its future residential subdivision.

It is noted that for the purposes of this report it has been assumed that future development concepts of the proposed residential lots do not contain uses which are considered to be Special Fire Protection Purpose development in accordance with NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

3.1.1 Asset Protection Zone

To ensure that the aims and objectives of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 are achieved for the proposed rezoning and future subdivision of the subject areas of land, an Asset Protection Zone (APZ) between the asset and the hazard should be provided.

An APZ provides for; minimal separation for safe firefighting, reduced radiant heat, reduced influence of convection driven winds, reduced ember viability and dispersal of smoke. The APZ consists of an Inner Protection Area (IPA) and Outer Protection Area (OPA). The IPA is an area closest to the buildings that incorporates defendable space and is used for managing heat intensities at the building surface. The OPA is positioned adjacent to the hazard and the purpose of the OPA is to reduce the potential length of flame by slowing the rate of spread, filtering embers and suppressing the crown fire.

NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 provides that a defendable space is;

An area adjoining an asset that is managed to reduce combustible elements and is free from constructed impediments. It is a safe working environment in which active firefighting can be undertaken to defend the structure, before and after the passage of a bush fire.

The following assessment of APZ requirements which are relevant to the proposed rezoning and future residential subdivision of the subject site is provided as follows;

(i) Residential Subdivision Development

It is noted that the future residential subdivision of the subject areas of land will need to provide for APZ's in accordance with the residential subdivision requirements of Chapter 5 of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019. APZ's in residential situations must be such that radiant heat levels of greater than 29kW/m² will not be experienced at a residential building on a proposed residential allotment.

The following table indicates the minimum 'Deemed to Satisfy' Asset Protection Zones required from the identified areas of bushfire hazard vegetation to future residential buildings on future residential lots. The table is based upon the vegetation type, slopes, and fire weather (FDI) which is applicable to this assessment.

Table 6 – APZ Requirements for Residential Subdivision Developments (29kW/m^2)

DIRECTION OF HAZARD	VEGETATION TYPE	SLOPE	IPA	OPA	TOTAL REQUIRED APZ	APZ AVAILABLE
Within the Subject Site (western Aspect)	Dry Sclerophyll Forest	<5˚ Down slope	15m	10m	25m	>25m
North	Grassland	0˚ Upslope	10m	-	10m	>10m
Northwest	Forest	0˚ Upslope	10m	10m	20m	>20m
South	Forested Wetland	<5˚ Down slope	15m	10m	25m	>25m
East	Grassland	<5˚ Down slope	11m	-	11m	>11m
West	Dry Sclerophyll Forest	<5˚ Down slope	15m	10m	25m	>25m

Having regards to the above it is possible to locate future residential dwellings on future residential lots and comply with the relevant APZ performance requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 albeit that the final design and spatial relationships of future residential lots and buildings will need to be confirmed.

The APZ performance criteria and acceptable solution provisions which would apply to any future residential subdivision development on the subject areas are detailed in the following tables:

Table 7 – Residential Subdivision Development APZ Performance Requirements

Intent of measures: to provide sufficient space and maintain reduced fuel loads to ensure radiant heat levels at the buildings does not exceed 29kW/m².		
Performance Criteria	**Acceptable Solutions**	**Compliance Comment**
The intent may be achieved where:		
• potential building footprints will not be exposed to radiant heat levels exceeding 29 kW/m² on each proposed lot	•APZs are provided in accordance with Tables A1.12.2 and A1.12.4 based on the FDI	✔ To be complied with in relation to the design of the development.
• APZs are managed and maintained to prevent the spread of a fire towards the building.	•APZs are managed in accordance with the requirements of 'Appendix 4	✔ To be complied with in relation to the design of the development
• the APZ is provided in perpetuity	•the APZ is wholly within the boundaries of the development site.	✔ To be complied with in relation to the design of the proposed development All APZ's can be provided in accordance with PfBP Guideline requirements
• APZ maintenance is practical, soil stability is not	• APZ's is located on lands with a slope less than 18 degrees.	✔ To be complied with in relation to the design of

compromised and the potential for crown fires is minimised		the proposed development All APZ's can be provided on lands with a slope less than 18 degrees.

Whilst the required APZ's may not be achieved within the boundaries of all future proposed residential lots, it is considered that suitable APZ's can be available having regard to the opportunities to utilize managed infrastructure on adjoining and adjacent land as part of meeting the minimum required APZ's for future residential development.

Having regard to the above it will be necessary to ensure that the future design of any residential subdivisions provide for compliance with the minimum APZ requirements specified in **Table 6** above. In this regard, an indicative concept plan for the provision of APZ's to the subject site is included as **Appendix 4**.

It is future noted that the future residential subdivision of the subject site may require the preparation and implementation of property/vegetation management plans for those areas which are nominated as open space and public reserve or where staging of development requires temporary APZ's. The property/vegetation management plans are to provide for the ongoing management of any areas which form part of the minimum required APZ's with the ongoing implementation of the property/vegetation management plans to be imposed upon the landowners via positive covenants pursuant to section 88B of the Conveyancing Act, 1919.

Notwithstanding the above, based upon the size and shape of the subject areas of land, it is considered that the intent of the requirement for the provision of Asset Protection Zones as required by NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019 can be satisfied for the future development of the subject site for residential subdivision purposes albeit that the location, nature and form of construction of future development must reflect the performance objectives of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019.

3.1.2 Defendable Space/Asset Protection Zone Management

Areas identified as forming part of future APZ's for any future residential subdivision developments must be managed so as to comply with the standards which are applicable to Asset Protection Zones as follows;

(i) Inner Protection Area (IPA)

An IPA should provide a tree canopy cover of less than 15% and should be located greater than 2 metres from any part of the roofline of a building.

Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10m from an exposed window or door.

Trees should have lower limbs removed up to a height of 2 metres above the ground

(ii) Outer Protection Area (OPA)

An OPA should provide a tree canopy cover of less than 30% and should have the understorey managed (mowed) to treat all shrubs and grasses on an annual basis in advance of the fire season (usually September).

In this regard, it will be necessary to provide and maintain for the life of any future development the minimum Asset Protection Zones as required by **Table 6** of this report.

Based upon the size and shape of the subject site's compliance with the minimum APZ requirements is achievable for the future residential subdivision development of the subject site having regard to its size and the characteristics of the hazard vegetation which is relevant to any future residential developments.

3.1.3 Operational Access and Egress

Access to and egress from the subject site Area is via connection with Redgum Circuit which is an existing bitumen sealed two wheel drive all weather public road which terminates adjacent to the north-eastern portion of this area. Redgum Circuit services existing residential development to the northeast of the subject site with this road infrastructure eventually connecting with the Ruins Way road infrastructure.

It is also noted that the development concept for the subject site provides for access and egress opportunities through the development of recently approved residential subdivisions to the north/northwest. The development concept for the subject site also includes connection to the Ascot Park Estate which is present to the west of the subject site via the existing alternative emergency access road which services the Ascot Park Estate and transects the subject site.

Travel to and from the subject site can therefore be facilitated for future residential subdivision development from the north and west from areas which would be protected from the impacts of bushfire.



Redgum Circuit which connects with the West Lindfield Area in the eastern corner of the northern boundary of the area

In the context of the location of the subject site and its relationships with existing urban development it is considered that access and egress to and from any future development of the subject site can be provided in compliance with the relevant requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

Importantly the concept design for the future development of the subject site provides for a perimeter road to separate areas of hazard vegetation from proposed development lots. As mentioned in Section 2.3 of this report this is an important threat management outcome for not only future development but also for historic residential development in the area.

It will be necessary to construct all new public roads within future residential subdivision developments so as to comply with Chapter 5 of NSW Rural Fire Service, ***Planning for***

Bushfire Protection, 2019. The relevant public road provisions which are applicable to the future residential subdivision development of the subject areas are summarized as follows;

Table 8 - Public Road Requirements (PfBP 2019)

Performance Criteria	Acceptable Solutions	Compliance Comment
The intent may be achieved where:		
(i) General Requirements		
• firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation	• property access roads are two-wheel drive, all-weather roads; and • perimeter roads are provided for residential subdivisions of three or more allotments; and • subdivisions of three or more allotments have more than one access in and out of the development; and • traffic management devices are constructed to not prohibit access by emergency services vehicles; and • maximum grades for sealed roads do not exceed 15 degrees and an average grade of not more than 10 degrees or other gradient specified by road design standards, whichever is the lesser gradient; and • all roads are through roads. Dead end roads are not recommended, but if unavoidable, dead ends are not more than 200 metres in length, incorporate a minimum 12 metres outer radius turning circle, and are clearly sign posted as a dead end; and • where kerb and guttering is provided on perimeter roads, roll top kerbing should be used to the hazard side of the road; and • where access/egress can only be achieved through forest, woodland or heath vegetation, secondary access shall be provided to an alternate point on the existing public road system.	✔ Future design of road infrastructure to comply
• the capacity of access roads is adequate for firefighting vehicles	• the capacity of perimeter and non-perimeter road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridges/causeways are to clearly indicate load rating.	✔ Future design of road infrastructure to comply
• there is appropriate access to water supply	• hydrants are located outside of parking reserves and road carriageways to ensure accessibility to reticulated water for fire suppression; • hydrants are provided in accordance with	✔ Future design of road infrastructure to comply

	AS 2419.1:2005; • there is suitable access for a Category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available.	
(ii) Perimeter Roads		
• access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface	• perimeter roads are two-way sealed roads; and • 8m carriageway width kerb to kerb; and parking is provided outside of the carriageway width; and hydrants are located clear of parking areas; and • there are through roads, and • these are linked to the internal road system at an interval of no greater than 500m; and • curves of roads have a minimum inner radius of 6m; and the maximum grade road is 15° and average grade is 10°; and • the road crossfall does not exceed 3°; and a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	✔ Future design of road infrastructure to comply
(iii) Non-Perimeter Roads		
• access roads are designed to allow safe access and egress for medium rigid firefighting vehicles while residents are evacuating	• minimum 5.5m width kerb to kerb; and • parking is provided outside of the carriageway width; and • hydrants are located clear of parking areas; and roads are through roads, and these are linked to the internal road system at an interval of no greater than 500m; and curves of roads have a minimum inner radius of 6m; and • the road crossfall does not exceed 3°; and • a minimum vertical clearance of 4m to any overhanging obstructions, including tree branches, is provided.	✔ Future design of road infrastructure to comply

Subject to compliance with the requirements of **Table 8** above in relation to the design and construction of new public road infrastructure it is considered that the proposed access and egress arrangements will be acceptable for any future residential subdivision development of the subject areas given the nature, construction and extent of the existing public road infrastructure which is present in the locality and the future public road systems which will be required to be provided to serve any future residential development of the subject site.

3.1.4 Services - Water, Gas and Electricity

As set out in Chapter 5 of NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019, developments in bushfire prone areas must maintain a water supply reserve dedicated to firefighting purposes.

Given that the proposed rezoning and subdivision concept for the subject site provides for residential allotments, all proposed lots will have access to the reticulated water supply, the extension of which will be required by Port Macquarie-Hastings Council to service future residential subdivisions. It is however noted that in accordance with NSW Rural Fire Services,

Planning for Bushfire Protection, 2019 the determination of a guaranteed water supply is to be made by the water supply authority where mains water supply is available.

Electricity supply is available and will be accessible to service future residential subdivisions.

Reticulated gas services are not available in the locality and are therefore not available to the subject site.

The incorporation into any future residential subdivision of the subject site of the relevant provisions of the following acceptable solutions as provided for by Chapter 5 of NSW Rural Fire Services**, *Planning for Bushfire Protection***, 2019 will ensure compliance with the intent for the provision of services to future residential lots.

Table 9 – Service Provision Requirements (PfBP 2019)

Intent of measures: to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building.		
Performance Criteria	**Acceptable Solutions**	**Compliance Comment**
The intent may be achieved where:		
Water Supply • a water supply is provided for firefighting purposes	• reticulated water is to be provided to the development, where available; • a static water supply is provided where no reticulated water is available .	✔ To comply
• water supplies are located at regular intervals • the water supply is accessible and reliable for firefighting operations	• fire hydrant spacing, design and sizing comply with the Australian Standard AS 2419.1:2005; • hydrants are not located within any road carriageway; reticulated water supply to urban subdivisions uses a ring main system for areas with perimeter roads.	✔ To comply
• flows and pressure are appropriate	• fire hydrant flows and pressures comply with AS 2419.1:2005.	✔ To comply
• the integrity of the water supply is maintained	• all above-ground water service pipes are metal, including and up to any taps.	✔ To comply

Electricity Services
• location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings
	• where practicable, electrical transmission lines are underground;
	• where overhead, electrical transmission lines are proposed as follows:
	  • lines are installed with short pole spacing (30m), unless crossing gullies, gorges or riparian areas;
	  • no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines.
		✔ To comply

Gas services • location and design	• reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the	✔ To comply (where applicable)

of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	requirements of relevant authorities, and metal piping is used; • all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side; • connections to and from gas cylinders are metal; polymer-sheathed flexible gas supply lines are not used; • above-ground gas service pipes are metal, including and up to any outlets	

It is considered that the intent of the requirement for the provision of services as required by NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019 can be satisfied for any future residential subdivisions of the subject site.

3.1.5 Landscaping

Landscaping is a major cause of fire spreading to buildings, and therefore any landscaping proposed in conjunction with the future development of the subject areas will need consideration when planning, to produce gardens that do not contribute to the spread of a bushfire.

When planning any future landscaping surrounding any future development on the subject areas, consideration should be given to the following:

- The choice of vegetation – consideration should be given to the flammability of the plant and the relation of their location to their flammability and ongoing maintenance to remove flammable fuels.
- Trees as windbreaks/firebreaks – Trees in the landscaping can be used as windbreaks and also firebreaks by trapping embers and flying debris.
- Vegetation management – Maintain a garden that does not contribute to the spread of bushfire.
- Maintenance of property – Maintenance of the property is an important factor in the prevention of losses from bushfire.

Appendix 4 of NSW Rural Fire Services, ***Planning for Bushfire Protection***,2019 contain the standards that are applicable to the provision and maintenance of landscaping.

Any landscaping proposed to be undertaken in conjunction with the future development of the subject site is to comply with the principles contained in Appendix 4 of NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019.

Compliance with Appendix 4 of NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019 will satisfy the intent of the bush fire protection measures that are applicable to the provision of landscaping as part of the proposed subdivision development.

3.2 Construction of Buildings in Bushfire Prone Areas

3.2.1 General

The 'Deemed-to-Satisfy' provisions for construction requirements are detailed in AS 3959-2018 however in NSW the relevant Bushfire Attack Level and construction requirements must be determined in accordance with Appendix 1 of NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019 (in particular Table A1.12.6), rather than in accordance with Section 2 of AS 3959 - 2018.

It is noted that NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019 provides that AS3959-2018 is the relevant construction standard for Class 1, 2, 3, Class 4 parts of

buildings, some Class 10 buildings and Class 9 with AS 3959 - 2009 being the current construction standard in NSW.

It is however noted that NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019 seeks to modify certain provisions of the relevant referenced AS 3959 construction standards.

Given that the rezoning proposal which is the subject of this report does not involve the erection of any buildings, the determination of Bushfire Attack Levels that would be applicable to future residential buildings on future residential lots is not relevant at this time. It is however noted that compliance with the minimum Asset Protection Zone requirements for the future residential lots, as nominated in **Table 7** of this report, will provide for opportunities for future dwellings to be constructed upon future residential allotments in compliance with the requirements provided for in AS 3959 - 2018 (as modified by NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019).

The information presented in Section 3.1 of this report indicates that where the minimum required APZ's are provide in accordance with **Table 7** of this report, future dwellings erected within the subject site would be subjected to a worst-case Bushfire Attack Level of BAL 29. This is consistent with the acceptable solution requirements of NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019.

4.0 SUMMARY OF FINDINGS

The following findings are considered to be integral to this bushfire hazard assessment and must be incorporated into the design of any future residential subdivision of the subject site;

(i) Asset Protection Zones are to be provided in accordance with Section 3.1.1 of this report. Specifically, APZ's to future residential lots within the subject site must provide for a worst-case radiant heat exposure of 29kW/m^2 in accordance with the objectives of NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019– refer to **Table 7** of this report.

(i) Property/vegetation management plans are to be prepared for any areas of any future residential subdivision nominated as open space and public reserve APZ's or where staging of development requires temporary APZ's. The property/vegetation management plans are to provide for the ongoing management of any areas which form part of the minimum required APZ's with the ongoing implementation of the property/vegetation management plans to be imposed upon the landowners via positive covenants pursuant to section 88B of the Conveyancing Act, 1919.

(ii) Water and other services are to be provided to any future residential subdivisions in accordance with the requirements detailed in Section 3.1.3 of this report.

(iii) The design and construction of all public roads within future residential subdivision are to comply with the acceptable solutions provided for in Chapter 5 of NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019.

(iv) Adopt Landscaping principals in accordance with Section 3.1.4 of this report for any future residential subdivision of the subject site.

5.0 CONCLUSION

It is considered that the proposed rezoning of land known as Part of Lot 499 DP 1258597, Philip Charley Drive, Port Macquarie is at risk of bushfire attack; however, it is in our opinion that with the implementation of the bushfire threat reduction measures and consideration of the recommendations in this report, the bushfire risk is manageable for the proposed rezoning albeit that the design and construction of any future development within the rezoning area will need to demonstrate compliance with the relevant requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

With the implementation of the recommendations of this report, it is considered that it will be possible for the future residential development of the subject areas to meet the applicable performance objectives and acceptable solutions as provided for in NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

This report is however contingent upon the following assumptions and limitations.

Assumptions

(i) For a satisfactory level of bushfire safety to be achieved regular inspection and testing of proposed measures, building elements and methods of construction, specifically nominated in this report, is essential and is assumed in the conclusion of this assessment.

(ii) There are no re-vegetation plans in respect to hazard vegetation and therefore the assumed fuel loading will not alter.

(iii) It is assumed that the building works will comply with the DTS provisions of the NCC including the relevant requirements of Australian Standard 3959.

(iv) Any future developments are constructed and maintained in accordance with the risk reduction strategy in this report.

(v) The vegetation characteristics of the subject site and surrounding land remains unchanged from that observed at the time of inspection.

(vi) The information contained in this report is based upon the information provided for review, refer to **Figure 6** and **Appendix 2** inclusive.

No responsibility is accepted for the accuracy of the information contained within the above plans.

Limitations

(i) The data, methodologies, calculations and conclusions documented within this report specifically relate to the building and must not be used for any other purpose.

(ii) A reassessment will be required to verify consistency with this assessment if there is building alterations and/or additions, change in use, or changes to the risk reduction strategy contained in this report.

6.0 REFERENCES

NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2006

NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019

AS 3959-2009, ***Construction of Buildings in Bushfire Prone Areas***

AS 3959-2018, ***Construction of Buildings in Bushfire Prone Areas***

Keith David 2004, Ocean ***Shores to Desert Dunes, The Native Vegetation of New South Wales and the ACT***, Department of Environment and Conservation

NSW State Government***, Rural Fires Act***, 1997

NSW Rural Fire Service, ***Guideline for Bushfire Prone Land Mapping***, 2002

Australian Building Codes Board, ***National Construction Code***, 2019

NSW Rural Fire Service – *Guideline for Bushfire Prone Land Mapping 2002*

NSW Rural Fire Service, ***NSW Local Government Areas FDI,*** May 2017

Disclaimer

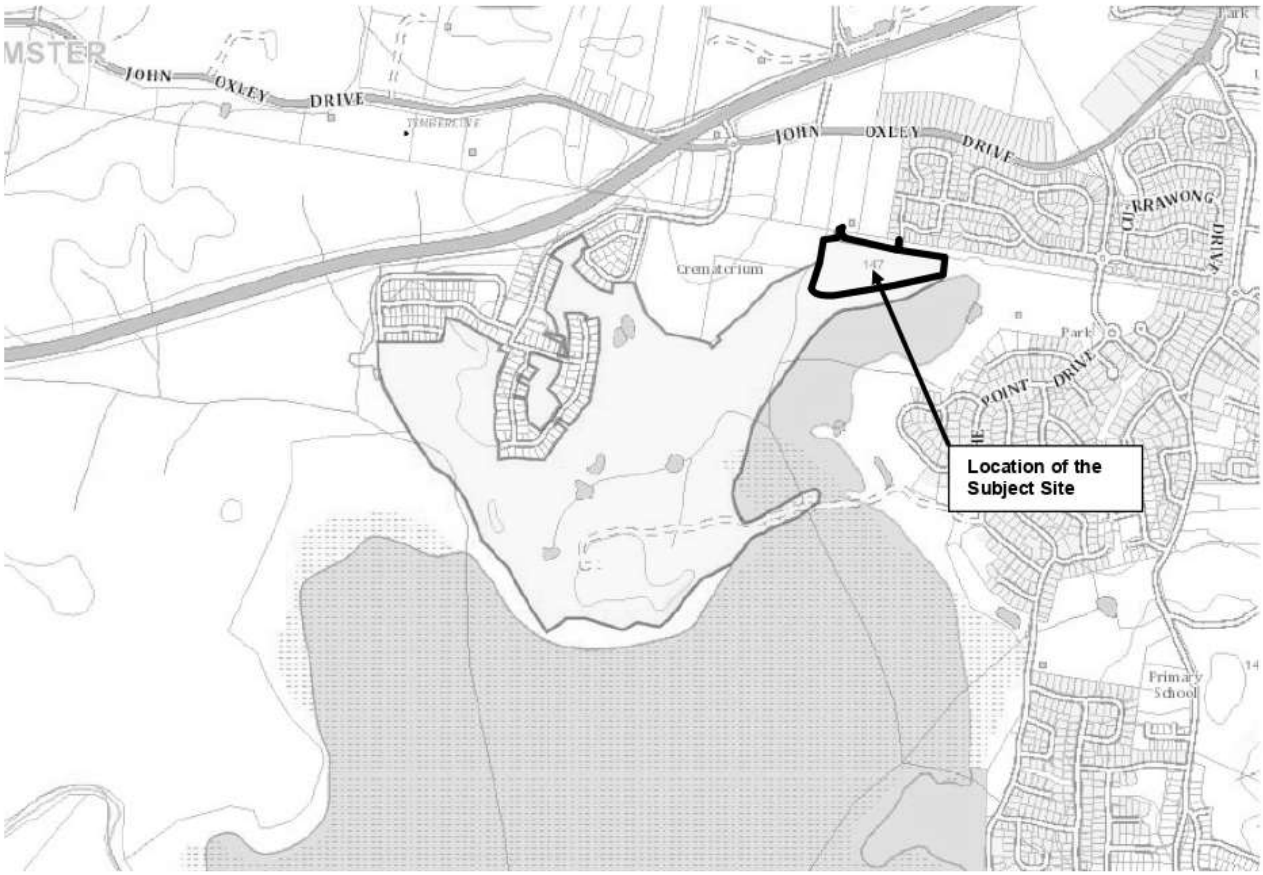
The findings referred to in this report are those which, in the opinion of the author, are required to meet the requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2006. It should be noted that the Local Authority having jurisdiction for the area in which the property is located may, within their statutory powers, require different, additional or alternative works/requirements to be carried out other than those referred to in this report.

This report has been prepared partially on information provided by the client. Information provided by the client in respect of details of construction.

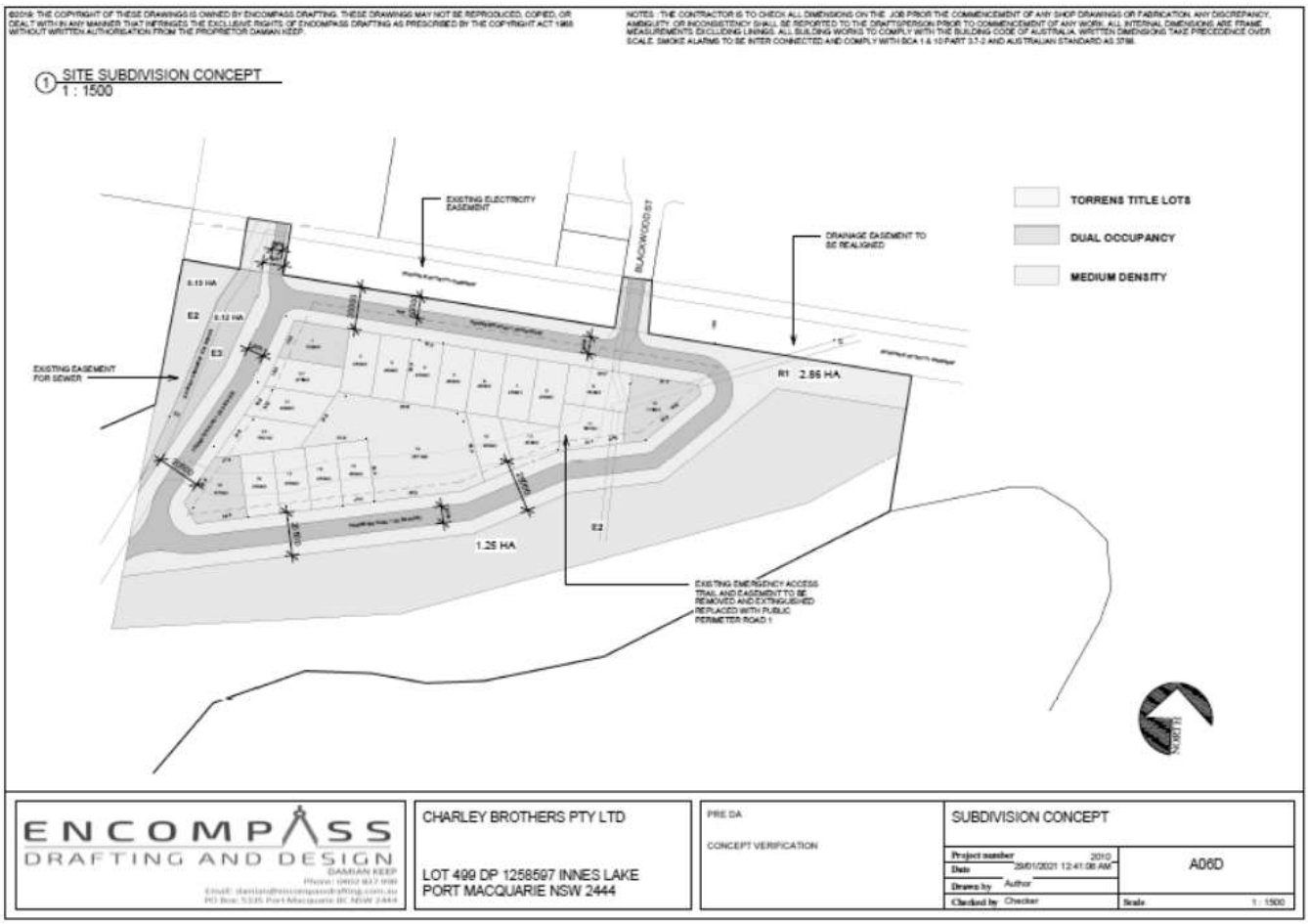
The author denies any legal liability for action taken as a consequence of the following:

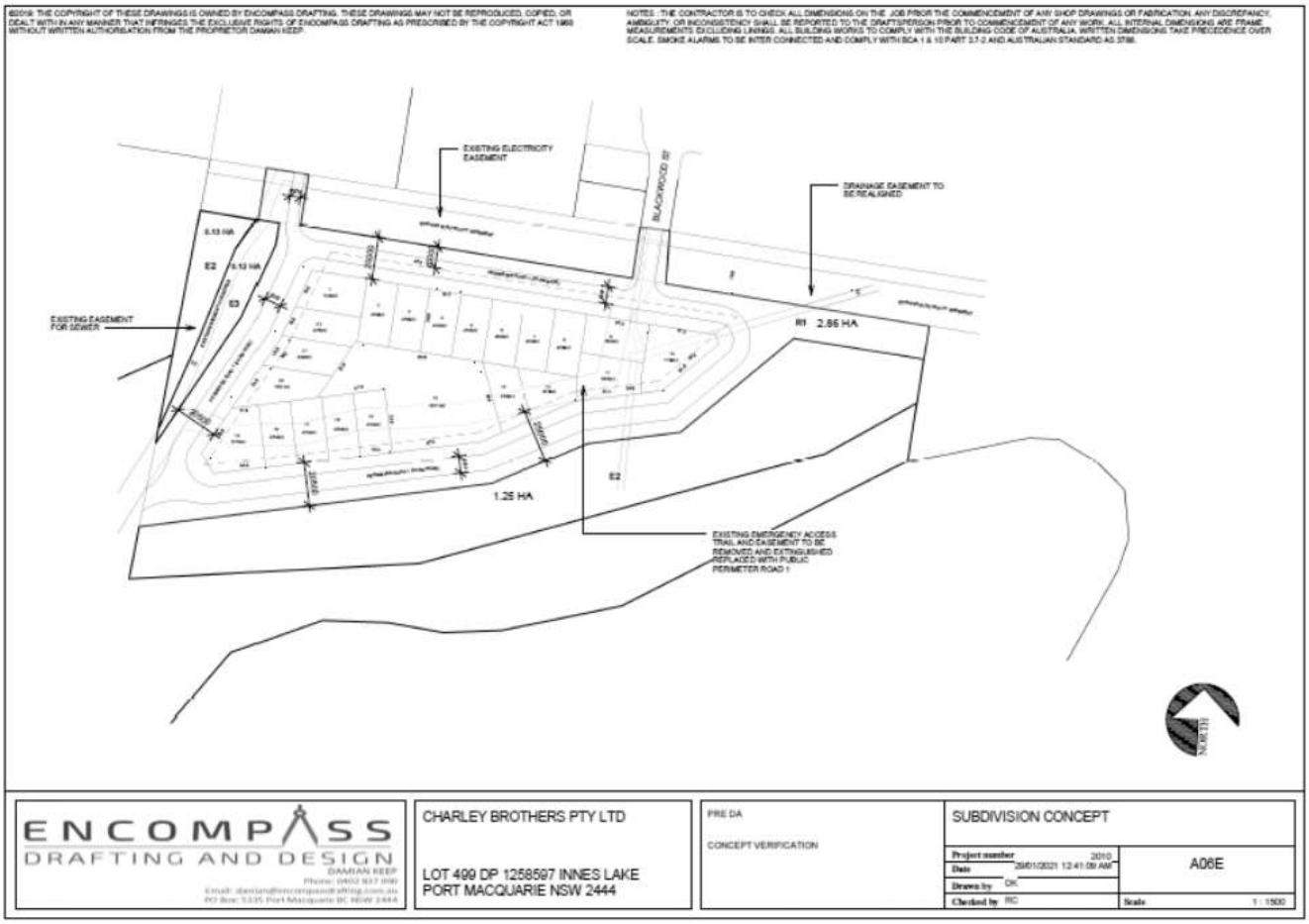
- The Local Authority requiring alternative or additional requirements to those proposed or recommended in this report.
- Incorrect information, or mis-information, provided by the client with regard the proposed development which is in good faith included in the strategies proposed in this report and later found to be false.

APPENDIX 1
Subject Site



APPENDIX 2
Development Concept

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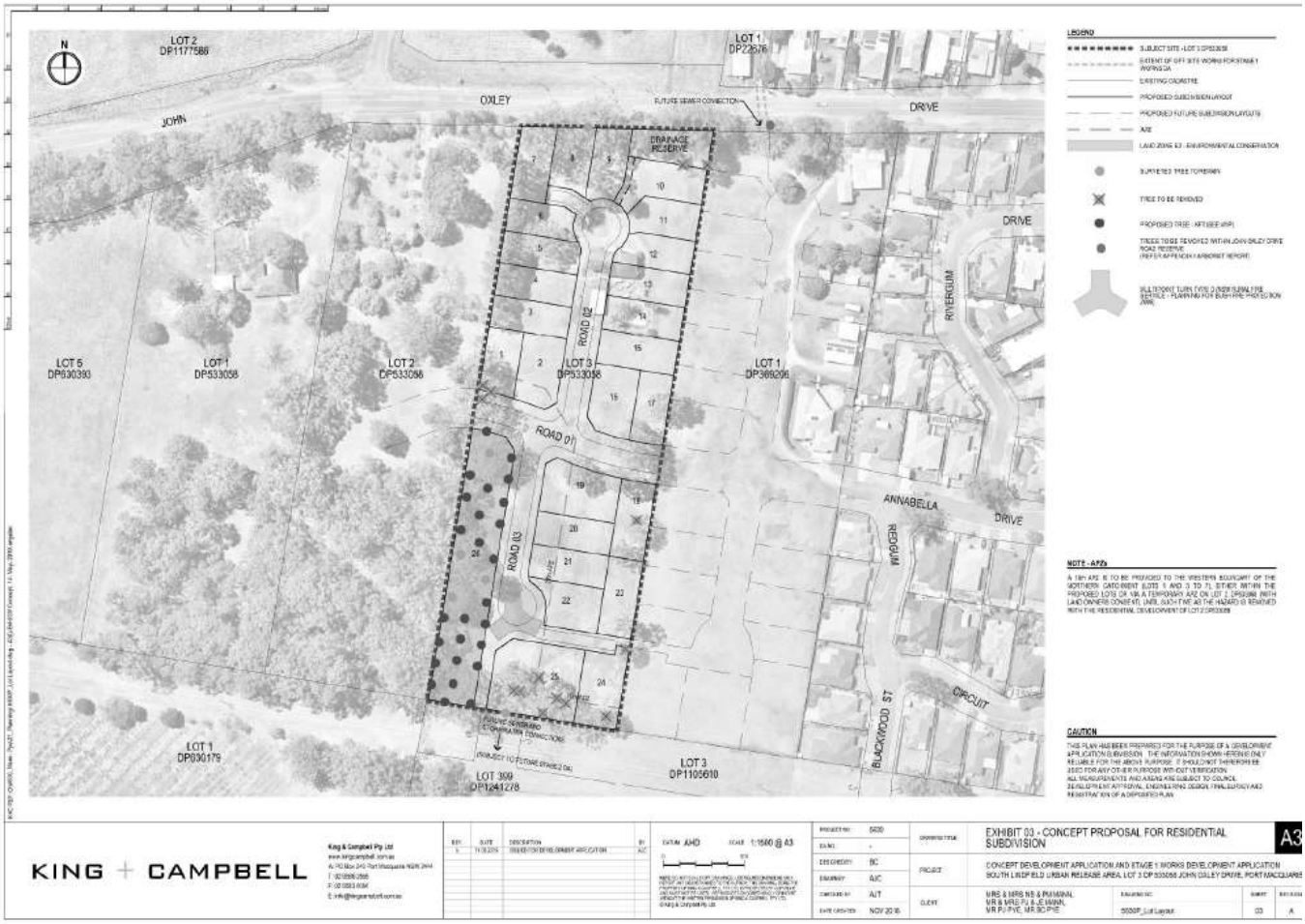
NOTES : THE CONTRACTOR IS TO CHECK ALL DIMENSIONS ON THE JOB PRIOR THE COMMENCEMENT OF ANY SHOP DRAWINGS OR FABRICATION. ANY DISCREPANCY, AMBIGUITY, OR INCONSISTENCY SHALL BE REPORTED TO THE DRAFTSPERSON PRIOR TO COMMENCEMENT OF ANY WORK. ALL INTERNAL DIMENSIONS ARE FRAME MEASUREMENTS. EXCLUDING LININGS. ALL BUILDING WORKS TO COMPLY WITH THE BUILDING CODE OF AUSTRALIA. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE. SMOKE ALARMS TO BE INTER CONNECTED AND COMPLY WITH BCA 1 & 10 PART 3.7.2 AND AUSTRALIAN STANDARD AS 3786.
EXISTING ELECTRICITY EASEMENT
BLACKWOOD ST
DRAINAGE EASEMENT TO BE REALIGNED
EXISTING EASEMENT FOR SEWER
E2
E3
R1 2.86 HA
1.25 HA
EXISTING EMERGENCY ACCESS TRAIL AND EASEMENT TO BE REMOVED AND EXTINGUISHED REPLACED WITH PUBLIC PERIMETER ROAD 1
ENCOMPASS
DRAFTING AND DESIGN
DAMIAN KEEP
CHARLEY BROTHERS PTY LTD
LOT 499 DP 1258597 INNES LAKE
PORT MACQUARIE NSW 2444
PRE DA
CONCEPT VERIFICATION
SUBDIVISION CONCEPT
Project number 2010
Date 28/01/2021 12:41:09 AM
Drawn by CK
Checked by RC
A06E
Scale 1 : 1500

APPENDIX 3
Approved Residential Subdivisions (Lindfield Area)

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OXLEY
DRIVE
DRAINAGE RESERVE
ROAD 02
ROAD 01
ROAD 03
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DP533058
LOT 2
DP533058
LOT 3
DP533058
LOT 1
DP369206
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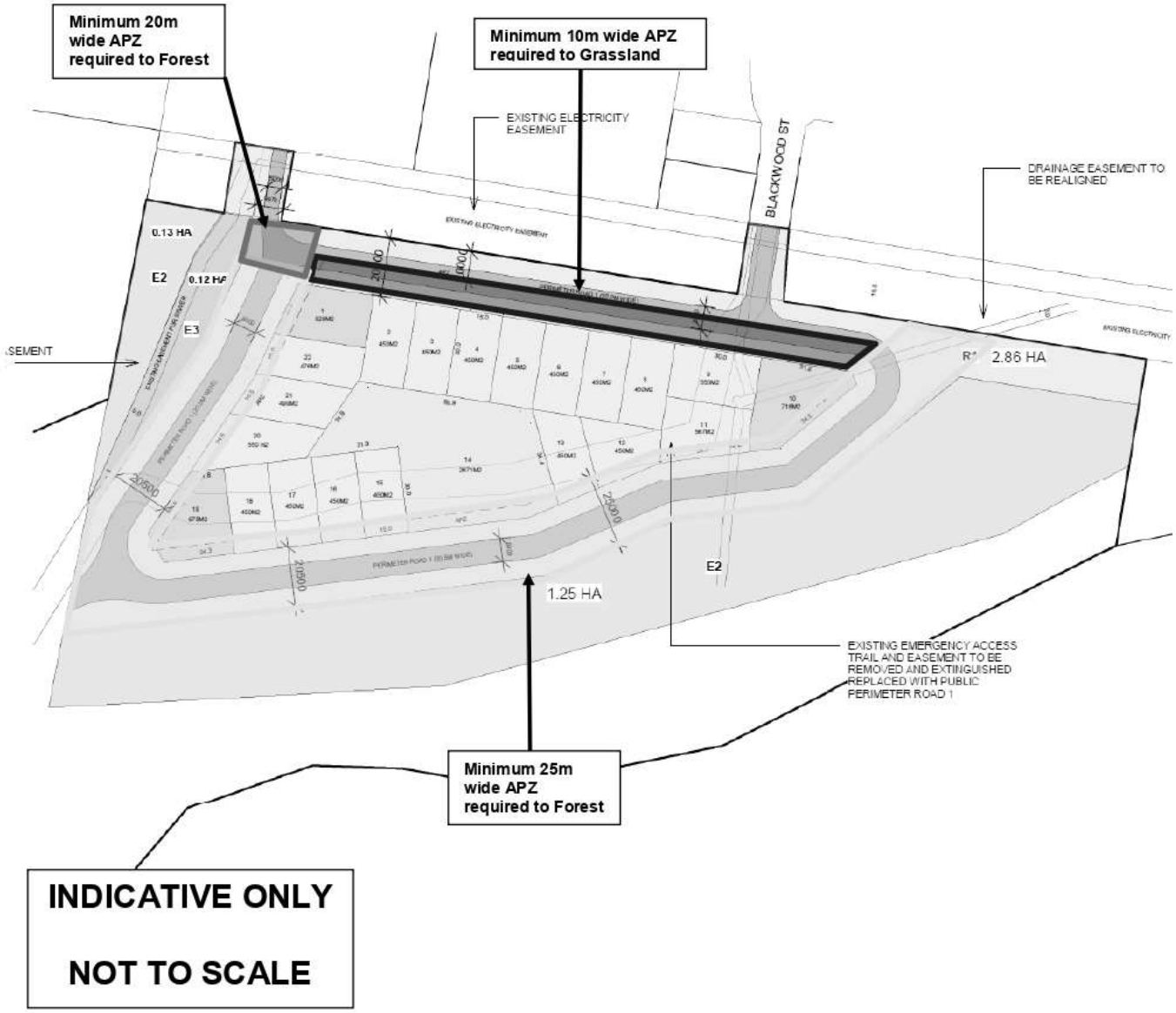
ANNABELLA
DRIVE
REDGUM
CIRCUIT
BLACKWOOD ST
LOT 1
DP630179
LOT 399
DP1241278
LOT 3
DP1105610
LEGEND
NOTE - APZs
CAUTION
KING + CAMPBELL
EXHIBIT 03 - CONCEPT PROPOSAL FOR RESIDENTIAL SUBDIVISION
A3
CONCEPT DEVELOPMENT APPLICATION AND STAGE 1 WORKS DEVELOPMENT APPLICATION
SOUTH LINDFIELD URBAN RELEASE AREA, LOT 3 DP533058 JOHN OXLEY DRIVE, PORT MACQUARIE
MRS & MRS NS & PM MANN,
MR & MRS PJ & JE MANN,
MR PJ PYE, MR BC PYE
5500P_Lot Layout
03
A

APPENDIX 4
APZ Concept



LPM
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ABN: 26 108 622 745

Response to BCD Consultation – Correspondence dated 20th September, 2020

BCD made a number of recommendations, but it is noted that these recommendations related to a Planning Proposal that included three residential areas and a significant area of land proposed for environmental conservation. Following a review of matters to date, the Planning Proposal has been reduced in area to relate to only South Lindfield, with the subject land now being an area of some 4.36 hectares. The BCD made a number of recommendations, and a response to these matters is provided, albeit some matters are not of particular relevance to the reduced Planning Proposal area.

BCD Recommendations:

The BCD recommends that to progress a planning proposal for the South Lindfield area:

1. *A strategic planning assessment should be undertaken for land that remains zoned RU1 Primary Production across the entire study area to identify all confirmed HEV land. This would include consideration of the suitability of the land for environmental protection and community needs for public open space. As a result of this assessment, it would be expected that no land would be retained as RU1 in the study area given it is no longer an appropriate zone in this location.*

This Planning Proposal applies to a study area of 4.36 hectares. The site has been thoroughly assessed in regards to the suitability of the site for both Environmental Conservation and Residential development. The studies lodged with the Planning Proposal have assessed the study area with regards to High Environmental Value lands. No land within the 4.36ha study area will be zoned RU1 – Primary Production.

2. *The planning proposal should identify HEV land across the entire study area in accordance with the North Coast Regional Plan 2037 and avoid future development impacts on confirmed HEV land to the greatest extent possible by applying the E2 Environmental Conservation zone to such land.*

The Environmental Assessments undertaken for the study area have identified areas which should be zoned Environmental Conservation. These areas, including land which will be the subject of offset planting areas, have been identified for E2 and E3 Environmental zones.

3. *In considering HEV across the entire study area, the following additional surveys should be undertaken to inform the planning proposal:*
    a. *A further and systematic targeted threatened plant survey for native guava across the entire study area.*

b. *Targeted fauna surveys in the South Lindfield area on land that has not been identified as HEV for other reasons, but that could provide habitat for species – credit species such as Petaurus norfolcensis (squirrel glider) and Litoria aurea (Green and Golden Bell Frog).*

The entire study site was surveyed for threatened plants, including native guava. Targeted fauna surveys were also undertaken to identify other threatened species which may be on the site. The squirrel glider and green and golden bell frog were not identified on the subject land.

4. *The targeted surveys in recommendation 2 above should be undertaken in accordance with the Biodiversity Assessment Method (BAM) and relevant survey guidelines.*

The targeted surveys were undertaken as part of a BAM assessment.

5. *In considering HEV across the entire study area, the ecological assessment should be revised to:*
    a. *Include the results of the above targeted fauna and flora surveys.*
    b. *Include the locations of threatened plants, or area/s of suitable habitat for species – credit – species recorded in the study area.*
    c. *Consider all coastal floodplain vegetation (including regeneration area) within the study area as a threatened ecological community (TEC) despite any underlying geology.*
    d. *Include consideration of the impacts to the local koala population from the 2019/2020 bushfires within the Lake Innes and Lake Cathie areas.*
    e. *Include consideration of the value of all vegetation within the study area to be zoned residential, including the revised list of koala trees according to the Koala Habitat Protection SEPP.*

The Environmental assessment has been revised and updated, with new fieldwork undertaken. The assessment includes the location of threatened plants and areas which may provide suitable habitat areas. EEC assessment has been addressed in the ecological report provided with this Planning Proposal and is consistent with current legislative requirements. The Environmental assessment includes consideration of the impacts of this proposal on the koala population including consideration of the impacts of the 2019/2020 bushfires. A comprehensive Koala Plan of Management has been lodged with this Planning Proposal and applies to the subject land, and is as per the current State Environmental Planning Policy legislation.

6. *The planning proposal should:*
    a. *Consider the Department's Guidelines for development adjoining land managed by the Office of Environment and Heritage and the potential impacts on the Lake Innes Nature Reserve from future development to be enabled by the planning proposal.*
    b. *Consider the Planning for Bushfire Protection 2019 guidelines that apply to all planning proposals to develop bushfire prone land.*

The Planning Proposal has considered the Department's Guidelines for development adjoining land managed by the Office of Environment and Heritage and the potential impacts on the Lake Innes Nature Reserve from development on the subject land. It is noted that the subject land does not adjoin land managed by the Office of Environment and Heritage. The land adjoining the Lake Innes

Nature Reserve does not form part of this Planning Proposal and it is noted that an approved golf course fairway is located between the subject land and the Lake Innes Nature Reserve. In addition, any future development of the subject land will require

The Planning for Bushfire Protection 2019 guidelines have been considered in relation to this Planning Proposal and a Bushfire Hazard Assessment has been undertaken with regard to the current requirements. This assessment has been lodged with and forms part of this Planning Proposal.

MLove.

28th January, 2021

Michelle Love
LPM
Certified Practicing Planner

January | 21

JBEnviro

KOALA PLAN OF MANAGEMENT:

Residential Subdivision of Part Lot 499 DP1258597, South Lindfield, Blackwood Street, Port Macquarie.

Prepared For: **Love Project Management Pty Ltd**

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User Notice

This report is presented on an objective basis to fulfil the stated legislative obligations, considerations and requirements in order to satisfy the client's instructions to undertake the appropriate studies and assessments. It is not directly intended to advocate the proponent's ambitions or interests, but is to provide information required in the determination of development consent by the decision-making authority for the subject proposal.

To the best of our knowledge, the proposal described in this assessment accurately represents the proponent's intentions when the report was completed and submitted. However, it is recognised and all users must acknowledge that conditions of approval at time of consent, post development application modification of the proposal's design, and the influence of unanticipated future events may modify the outcomes described in this document. Completion of this report has depended on information and documents such as surveys, plans, etc provided by the proponent. While checks were made to ensure such information was current at the time, this consultant did not independently verify the accuracy or completeness of these information sources.

The ecological information contained within this report has been gathered from field survey, literature review and assessment based on recognised scientific principles, techniques and recommendations, in a proper and scientific manner to ensure thoroughness and representativeness. The opinions expressed and conclusions drawn from this report are intended to be objective, based on the survey results and this consultant's knowledge, supported with justification from collated scientific information, references/citations or specialist advice.

Furthermore, it is clarified that all information and conclusions presented in this report apply to the subject land at the time of the assessment, and the subject proposal *only*.

This report recognises the fact, and intended users must acknowledge also, that all ecological assessments are subject to limitations such as:

- Information deficits (eg lack of scientific research into some species and availability of information)
- Influences on fauna detectability eg season in which survey is undertaken
- Influences on species occurrence eg stage of lifecycle, migratory, etc
- Time, resource and financial constraints.

All users should take into account the above information when making decisions on the basis of the findings and conclusions of this report.

Document Status	Distribution	Date	Authorised By
Revision 1	Love Project Management	28/1/2021	JB
Revision 2	LPM, PMHC	29/1/2021	JB

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1 INTRODUCTION

This Koala Plan of Management (KPoM) has been prepared under the *Koala Habitat Protection State Environmental Planning Policy* (KSEPP) *2020*.

It accompanies a Planning Proposal to rezone approximately 2.86ha of land in the northwest corner of part Lot 499 DP1258597, Blackwood Street, South Lindfield.

The proposal is to rezone the portion of the parent lot to R1 General Residential under the PMHC Local Environmental Plan (LEP) 2011, with the remainder being zoned Environmental. The current minimum Lot size is 40ha under the RU1 zoning, and will change to 450m^2 under the R1 zoning. A preliminary rezoning concept is shown in **Figure 2**.

2 BACKGROUND INFORMATION

2.1 Key Definitions

The **"study site/site**" is the area of land on the larger property owned by the proponent proposed to be rezoned, indicated by the polygon in **Figure 2**, and falls under the jurisdiction of this KPoM.

For the purposes of considering indirect impacts, the "**study area**" consists of the site and the adjacent land within 100m (the likely detectable limit of potential impacts associated with the proposal). The "**locality**" is defined as land within a 10km radius of the study site.

2.2 Site Location and Access

Refer to Figure 1 for the general location of the site and the locality.

The site is to be formally accessed via a formed road connection to Blackwood Street. A firetrail or at most one-way road may connect to future residential subdivision to the northwest.

Figure 1: Location of study site.



Figure 2: Nominal area under KPoM jurisdiction.



3 LEGISLATIVE AND POLICY FRAMEWORK

3.1 Commonwealth

3.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Federal Government's primary environmental legislative instrument. This act necessitates approval for any action that will have a Significant Impact on Matters of National Environmental Significance (MNES). MNES recognised under the EPBC Act, that act as a trigger for the Commonwealth assessment and approval process include;

- World Heritage properties;
- National Heritage Places;
- RAMSAR wetlands of international significance;
- Threatened species and ecological communities;
- Migratory species;
- Nuclear actions, including uranium mining;
- The Commonwealth marine environment;
- A water resource, in relation to coal seam gas development and large coal mining development

The Koala was listed as Vulnerable under the EPBC Act in April 2012. This listing covered the most at-risk Koala populations in Queensland, NSW and the ACT. As a result, any actions that are likely to have a significant impact on the Koala in these states must be referred to the Minister who will decide whether an assessment is required under the EPBC Act (DoE 2013).

3.2 NSW

3.2.1 Koala Habitat Protection SEPP 2020

State Environmental Planning Policy no. 44 – Koala Habitat Protection (SEPP 44) *1995* was replaced in early 2020 by the *Koala Habitat Protection SEPP 2019*. The 2019 SEPP was repealed from November 30 2020, and replaced with the *Koala Habitat Protection SEPP 2000* (KSEPP).

The KSEPP is essentially SEPP 44 with some minor amendments, and retains the planning policy that "*aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for Koalas to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline*".

The KSEPP requires the identification of Potential and Core Koala Habitat on development sites and planning areas, and the preparation of a Koala Plan of Management (KPOM) if Core Koala Habitat is found.

The KSEPP also allows local governments to prepare Local Government Area (LGA) wide Koala management plans referred to as Comprehensive Koala Plans of Management (CKPoM). Coastal LGA's that have implemented CKPoMs include Kempsey, Coffs Harbour, Port Stephens and Lismore.

No approved CKPoM has been prepared for the Port Macquarie-Hastings Council (PMHC) LGA to date, however a large Koala population study has recently been undertaken by Biolink (2013), with a draft updated Koala Plan of Management (PMHC 2018b) and Koala Strategy (PMHC 2018a) prepared by PMHC.

3.2.2 Koala Recovery Plan 2008

A NSW Recovery Plan for the Koala was prepared by the then Department of Environment and Climate Change (DECC) in 2008. The overall objective of the plan is "*to reverse the decline of the Koala in New South Wales, to ensure adequate protection, management and restoration of Koala habitat, and to maintain healthy breeding populations of Koalas throughout their current range.*"

The plan adopted the specific objectives of the National Koala Conservation Strategy (ANZECC 1998) to achieve broader conservation outcomes. A number of specific recovery actions and performance criteria were formulated to implement the objectives.

3.2.3 Biodiversity Conservation Act 2016

As of August 25th 2017, the *Biodiversity Conservation* (BC) *Act 2016* replaced the *Threatened Species Conservation Act 1995*. The Koala remains listed as Vulnerable under the Act.

A future Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* will have lodge a Biodiversity Development Assessment Report (BDAR), and obtain biodiversity credits to offset impacts. A provisional BDAR (JBE 2021) has been prepared, and identified a quantum of 6 Koala species credits as being required for the future development.

3.2.4 Saving our Species Iconic Koala Project and NSW Koala Strategy

The NSW Koala Strategy was adopted in 2018. With $44.7 million funding, it aims to secure the wild Koala population for the next 100 years via a series of actions (implemented by State and local government, to community groups), initially to stabilise and increase the Koala population across its NSW range, to maintain genetically viable populations.

The Strategy identifies 24 key actions to be implemented over 3 years, with annual reporting and an evaluation at the end to identify revisals and updates of the actions to achieve the objections.

The Saving our Species Iconic Koala Project forms a key part of the Strategy.

The 2019-2020 bushfire season was acknowledged as a catastrophic ecological event on the NSW Koala population, with 30.6% of high suitability habitat in the North Coast region burnt. A series of emergency actions were implemented under the Strategy in response to the event eg. post fire survivor search and recovery and installation of water stations.

The 2019-2020 annual report (DPIE 2020b) reports 7918ha of Koala habitat has been protected eg. via biodiversity credits and other agreements under the BC Act 2016 (eg. Conservation Agreements), and conversion of State Forest to Reserve. Other actions include support for rehabilitators, new research and sighting programs, and funding indirect conservation actions via community groups. eg. bush regeneration and habitat creation.

The Project has now identified a series of actions to address threats from 2017-2021. These actions include measures to address threats through to training programs for carers rehabilitating Koalas, and targeted research, as well as funding priorities. The Project's success is to be measured against specified performance criteria to refine the approach and achieve its objectives.

3.3 PMHC

3.3.1 Koala Recovery Strategy 2018

PMHC adopted the Koala Recovery Strategy in 2018. The Strategy has the following aims:

- safeguard the welfare of koalas and reverse the current population decline;
- encourage management of areas of Koala habitat and increase habitat linkage opportunities;
- maintain the genetic diversity of koalas in the LGA;
- reduce Koala road strike;
- reduce domestic dog attacks;
- assist in the development of Fire Management Plans for the LGA;
- increase community and public awareness concerning Koala conservation and management; and
- increase understanding of local threats to population by undertaking selective and localised research.

The Strategy has a series of recommended actions for the identified threats to the PMHC LGA Koala population, most of which involve developing or are to be detailed in a Comprehensive Koala Plan of Management (CKPoM). PMHC prepared an updated draft CKPoM (PMHC 2018b), but it has not been approved by DPIE or finalised.

4 KPoM Objectives and Performance Criteria

4.1 Guidelines for Individual Koala Plans of Management

The SEPP 44 B35 Circular (Department of Urban Affairs and Planning 1995) provides guidelines for the preparation of individual Koala plans of management. These are shown in **Table 1** below along with the section in which they are addressed in the KPoM.

Table 1: KSEPP KPoM guidelines

Number	Criteria	Section Addressed
i)	An estimate of population size	Section 5.3.1
ii)	Identification of preferred tree species for the locality and extent of resource available	Section 5.2.1, 5.3.2
iii)	An assessment of the regional distribution of Koalas and the extent of alternative habitat available to compensate for that to be affected by the actions	Section 5.3.3
iv)	Identification of linkages of Core Koala Habitat to other adjacent areas of habitat and movement of Kolas between areas of habitat. Provision of strategies to enhance and manage these corridors	Section 5.3.3 Section 6.1
v)	Identification of major threatening processes such as disease, clearance of habitat, road kill and dog attack which impact on the population. Provision of methods for reducing these impacts	Section 6
vi)	Provision of detailed proposals for amelioration of impacts on Koala populations from any anticipated development within zones of Core Koala Habitat	Section 7
vii)	Identification of any opportunities to increase size or improve condition of existing core habitat, this should include lands adjacent to areas of identified Core Koala Habitat	Section 7
viii)	The plan should state clearly what it aims to achieve (for example, maintaining or expanding the current population size or habitat area)	Section 4.2
ix)	The plan should state criteria against which achievement of these objectives is to be measured (for example, a specified population size or specific time frame or the abatement of threats to the population)	Section 4.3
x)	The plan should also have provisions for continuing monitoring, review and reporting. This should include an identification or who will undertake further work and how it will be funded.	Section 8 and appendices

4.2 Objectives

The principle objective of this Koala Plan of Management is to ensure the study area retains its ability to support a Koala population, and also to enhance this by increasing potential carrying capacity and linkages within the broader Core Koala Habitat.

The objective of this Koala Plan of Management (KPoM) is to maintain the viability of the current Koala population which occurs in the local area via:

- Retaining the majority of existing mature Koala food trees trees.
- Increasing the net extent of primary browse species to increase its carrying capacity and potentially allow population expansion;
- Maintaining and enhancing linkages with other habitat known to be required by the local Koala population; and,

- Effectively mitigate threats to the viability of Koalas induced by the proposal.

4.3 Performance Criteria

The criteria against which achievement of the objectives are to be measured are:

1. A net increase of food trees within the study area.
2. Maintenance of effective linkages within the study area.
3. Nil Koala losses or injury due to road strike, drowning in pools, or attack by dogs via adequate mitigation measures.
4. No increase in disease incidence.
5. No unmitigated increase in threats to Koalas within the study area.

5 KOALA HABITAT AND POPULATION CHARACTERISTICS

5.1 Site Vegetation Communities

As shown in **Figure 3**, the site vegetation consists of:

- Pasture over most of the site, comprising most of the R1 zone with a small patch of parkland vegetation dominated by Tallowwood.
- Wet sclerophyll forest in the eastern half of the southern remnant strip, where Tallowwood is common.
- Narrow band of wet sclerophyll in the northwest corner boundary, with Tallowwood present.
- Swamp forest dominated by paperbarks along the southwest corner, and forming a single line of trees along most of the southwest boundary. Forest Red Gum and more so Swamp Mahogany occur commonly.

The adjacent LINR vegetation consists of:

- Swamp forest dominated by paperbarks over most of this area. A localised cluster of Swamp Mahogany occurs on the southwest corner, but otherwise preferred Koala food trees occur in low abundance on the margins.
- Pasture along the cadastral boundaries, mostly in the north.

5.2 KSEPP KOALA HABITAT ASSESSMENT

5.2.1 Koala Habitat Assessment

5.2.1.1 Potential Koala Habitat assessment

Three Schedule 2 browse species are present on the site: Tallowwood, Forest Red Gum and Swamp Mahogany.

A formal Potential Koala Habitat Assessment was undertaken (JBE 2021), determining that at least 1ha of habitat surpassing the 15% threshold required is present. Potential Koala Habitat mapping is shown in **Figure 4**.

5.2.1.2 Core Koala Habitat assessment.

As detailed in JBE (2021), the site as part of a broader study area across Lot 499 and adjacent land owned or adjacent to that owned by the proponent has been subject to a series of surveys from 2011 to 2017, using diurnal and nocturnal Koala surveys, with the majority via a modified Dique *et al* (2004) methodology.

These surveys have consistently recorded 0-4 Koalas across, with seasonal usage varying as shown in the following table.

Table 2: Koala numbers in Innes Lake – South Lindfield residential area per season 2011-2017

	Summer	Autumn	Winter	Spring
Min. number of Koalas	0	0	0	0
Max. number of Koalas	2	2	4	3

Naturecall (2015a) also recorded irregular visitation of few Koalas in remnant habitat to the northwest, and Darkheart (2006a) and other surveys (Biodiversity Australia 2019, 2018) recovered similar numbers and irregular presence in the area now occupied by Ascot Park to the west.

No Koala scats were observed within the proposed development envelope over the recent survey period, or directly adjacent, but Koala scratches were confidently identified on the smooth bark of Forest Red Gums.

The data to date very clearly illustrates that the proposed re-zoning area forms part of Core Koala Habitat that extends to include habitat in the current study area.

5.2.1.3 Conclusion

Due to the presence of female Koalas with joeys and a breeding male in adjoining lands previously; and ongoing records of Koalas on site and within associated habitats: the site was considered to form part of a larger area of Core Koala Habitat.

Figure 3: Vegetation communities within the KPoM jurisdiction



Figure 4: Potential Koala Habitat on the site



5.3 Characteristics of the Core Koala Habitat

5.3.1 Estimate of Population Size

JBEnviro (2021) and previous studies (JBE 2017, Naturecall 2015a, Biolink 2005a, 2005b, 2005e, Darkheart 2006e, 2011) confirm that the site is part of a wider area of Core Koala Habitat used by a population of Koalas. This population appears to range well beyond the site, possibly over the wider Ruins Way/Mill Hill area, south to Lake Innes Nature Reserve, and west to Ascot Park. This wider population appears to be small, as suggested by the extensive and on-going survey for and by Vilro; other nearby studies (e.g. Naturecall 2015a, Darkheart 2006e, 2011) and sightings by this and previous surveys on and adjacent to the site.

Due to this wider landscape of Core Koala Habitat (eg. Mahers Headland, Lake Innes Nature Reserve, etc), there is also likely to be a periodic influx of recruits to maintain genetic diversity in the study area. Hence at certain times of the year, it is possible that temporary resident Koalas may be present in the study area eg. sub-dominant males.

In line with Koala ecology, the local aggregate using the site and adjacent habitat for at least a small part of their range is thus considered likely to be at most about 4 Koalas, constituting a dominant male, at least 1-2 breeding females, and their young.

5.3.2 Preferred Tree Species

From a collation of previous landscape-based Koala food tree research and data collected by the coastal LGA study, Biolink (2013a) determined that the following are the primary preferred Koala browse species in the PMHC LGA, depending on soil landscape:

Table 3: PMHC LGA primary preferred Koala food trees per soil landscape

Transferral, Alluvial, Swamp and Thrumster Residual (TASTr) Soil Landscapes: Medium to High Fertility	Erosional, other Residuals, Colluvial, Beach and Aeolian (ERCBA) Soil Landscapes: Low to Medium Fertility
Tallowwood (*E. microcorys*)	*Tallowwood (*E. microcorys*)
Swamp Mahogany (*E. robusta*)	Swamp Mahogany (*E. robusta*)
Grey Gum (*E. propinqua*)	
Forest Red Gum (*Eucalyptus tereticornis*)	

* Tallowwood use appears to be size dependent on low to medium soil landscapes (Biolink 2013).

Tallowwood, Swamp Mahogany and Forest Red Gum (in decreasing order of abundance) are the only preferred Koala browse species on site.

Naturecall (2015) recorded use of these species on adjoining land to the northwest. Biolink (2005a) and Darkheart (2005g, 2006e) recorded use of Tallowwood in Ascot Park to the southwest.

5.3.3 Distribution of Koala Populations, Site Context and Linkages

5.3.3.1 Regional Distribution of Koalas

Koala numbers have declined throughout most of their previous range in NSW, with the main occurrences being in the northeast of the state (DECC 2008). Most coastal populations now persist in fragmented and isolated areas of habitat (predominantly secondary class A with some localised primary areas supporting high density populations), with extensive areas of potential habitat appearing to be devoid of Koalas (DECC 2008). In contrast, some well-known western populations appear to be increasing. The difference is considered to primarily be due to increasing development pressure eg from agriculture and urban expansion in the coastal region (DECC 2008, AKF 2014, 2007).

In the north coast and mid-north coast regions, areas with large numbers of records are restricted to localities such as Ballina, Port Stephens, Port Macquarie, Coffs Harbour, Tweed and Lismore (Connell Wagner 2000b, Lunney *et al* 1999, Port Stephens Council 2001, DECC 2008, AKF 2008, 2007). The Koala Recovery Plan (DECC 2008) notes that in addition to these major population centres are numerous small populations many of which are disjunct to urban and rural development, as well as natural barriers (DECC 2008).

5.3.3.2 Distribution and Abundance of Koalas in the PMHC LGA:

The coastal sector of the Hastings Local Government Area (LGA) is well known to contain a viable Koala population in varying densities, generally within the following major areas (Biolink 2013, Connell Wagner 2000a, 2000b, Starr 1990, Biolink 2003, 2005a, 2005a, 2005c, 2008, 2013, AMBS 2003, Biosis 2004, Darkheart 2013, 2008a, 2008b, 2006e, 2005a-i, 2005a-h, Berrigan 2003a-d, 2002a-c, 2001a-e, 2000a-f, 1999a-c, 1998, 1997, Kendall 1993, 1991, Mt King Ecological Surveys 1993, OEH 2014a):

- Port Macquarie urban area
- Lake Cathie Plains to Lakes Innes/Thrumster area (approaching Sancrox)
- Lake Innes Nature Reserve/Kooloonbung Creek Nature Reserve and adjoining private lands
- Lake Cathie area
- Dunbogan Peninsula
- Point Plomer area

A number of other well-known smaller and/or low density population centres also occur in scattered occurrences eg. Broken Bago State Forest, Telegraph Point, North Brother, Bonny Hills, North Shore and Huntington area (OEH 2014a, Biolink 2005c, 2013, Darkheart 2005a, 2005b, 2004a, Kel Mackay pers. comm., Mrs Penny Marshall BHCC pers. comm.).

Biolink (2013a) in their major study estimated a population of approximately 2000 Koalas in the coastal LGA, occupying an Area of Occupancy of only 24% of available habitat.

Studies of the nearby Lake Innes Nature Reserve (Starr 1990, Mt King Ecological Surveys 1991, Connell Wagner 2000b), Thrumster (Biolink 2008, 2005a, 2005b, 2005d, 2003, Darkheart 2005g, 2006e) and Port Macquarie (Starr 1990, Mt King Ecological Surveys 1991, Connell Wagner 2000b, Wilkes and Snowden 1998, Martin 1996) have estimated that a sizeable Koala population exists in the locality. Estimates range from 400-500 in Port

Macquarie (Martin 1996) with a similar number in the northern reaches of Lake Innes Nature Reserve (NPWS 1999, Phillips unpub. data cited in Biolink 2008, 2005a, 2005b), to >200 in the Thrumster area (Biolink 2008, 2005a, 2005c). These are however only estimates or based on modelling and hence a number of limitations of this data must be considered eg. reliance on extrapolation from SAT data with limited validation.

An estimated 300 Koalas in the Lake Cathie area has been proposed though given limitations on survey methodology (ie public records which may be many sightings of the same Koala), this figure is recommended by Biolink to be treated with caution (Biolink 2005a, 2005c).

The Lake Innes-Thrumster population is considered by Biolink (2013) to be of national and state significance (Biolink 2008, 2005a, 2005b, 2013).

5.3.3.3 Local Populations

Studies of the adjacent Lake Innes Nature Reserve (Biolink 2013, Starr 1990, Mt King Ecological Surveys 1991, Connell Wagner 2000b), the majority of Vilro Pty Ltd land holding (Biolink 2005a, 2005b, Darkheart 2006e), Thrumster (Biolink 2008, 2003) and Port Macquarie (Starr 1990, Mt King Ecological Surveys 1991, Connell Wagner 2000b, Wilkes and Snowden 1998, Martin 1996) have determined that a sizeable Koala population exists in the locality.

As noted above, estimates have been proposed in the range of 400-500 in Port Macquarie (Martin 1996) with a smaller number in the northern reaches of Lake Innes Nature Reserve (NPWS 1999, Phillips unpub. data cited in Biolink 2005a, 2005c), and the Thrumster area (Biolink 2008). These numbers are only provisional estimates however, with no comprehensive survey or verified statistical census undertaken to date (DECC 2008). Biolink (2005a, 2008) has offered estimates from their work in the northern Lake Innes Peninsular and Thrumster area, but these have not been independently verified or validated by using comparative methodologies e.g. Dique et al 2004.

Any lack of firm knowledge about the extent and health status of the local Koala population is a significant concern for planning (PMHC 2018). Over-estimation of the Koala population size and poor understanding of health status (eg low fertility due to Chlamydia) can mask declines, hence in the absence of adequate data, the Uncertainty Principle must be applied to management of Koalas in Port Macquarie and its environs.

Nothwithstanding this limitation on the larger population size, the long term monitoring of the Mill Hill/Ruins Way and Ascot Park by Vilro coupled with studies by Darkheart and Naturecall provide a high level of confidence of the size and seasonal variation in use of habitat within the study area.

5.3.3.4 Linkages

Regional:

The former Office of Environment and Heritage (OEH) has mapped corridors at a regional scale throughout northern NSW. This map is shown in **Figure 5**.

The subject site does not fall within a regional or sub-regional corridor. As evident in Figure 6, a regional corridor is mapped to the south of the site within Lake Innes Nature Reserve, and a sub-regional corridor is mapped well to the west.

The focal species of these corridors are the Koala, Brushtailed Phascogale and the Eastern Chestnut Mouse (Scotts 2002). Due to the lack of fragmentation of this portion of the corridor, it is considered likely to support Koala movement as this species may use as little as 1 tree/ha - Wilkes and Snowden 1998).

Local:

As shown in Figures 1 and 5 the study area and immediate locality has a high level of fragmentation by urban development and historical rural land uses. Koalas occurring in this local matrix are also increasingly threatened by further fragmentation and gradual attrition of habitat via residential development, increased exposure to predators (wild and domestic dogs), and the introduction of barriers/mortality threats posed by local roads which may all contribute to the decline of the local population (DECC 2008, AKF 2006, 2006, 2011, Curtin *et al* 2002, Port Stephens Council 2001, Hindell and Lee 1990, Connell Wagner 2000b, Dique *et al* 2004, Hume 1995, Jurskis and Potter 1997, Phillips 2000, Phillips *et al* 2000, Biolink 2005a, 2005b, 2008, PMHC 2018).

The most important local linkage is Lake Innes – Kooloonbung Creek NR linkage which acts as link between the urban Port Macquarie Koala population and LINR Koala population (Connell Wagner 2000b, Wilkes and Snowden 1998). Post 2019-2020 fire season, the value of this linkage and unburnt habitat on private land (also currently owned by the proponent) off the southern end of The Ruins Way is likely to have become vital for the recovery of the LINR Koala population due to the extent of fire (as shown in **Figure 6**).

The peninsular of intact swamp forest within Lake Innes Nature Reserve between the West Lindfield and West Ruins Way precincts is the only fully intact forest in close proximity to the site. This forest has preferred Koala food trees (predominantly Swamp Mahogany) most commonly on the outer margins (particularly the west and northwest) and provides an intact arboreal and terrestrial link directly to the remainder of the Reserve, as well to significant Koala habitat along the northwest and northeast fringes of the Reserve where food trees are more common than they are immediately adjacent to the south (Biolink 2005a, 2005b, 2008, Phillips 2000b).

Linkage to the north is limited by fences and lack of habitat apart from a few scattered remnant trees along most of the northeast boundary and in Annabella Downs to West Ruins Way. The subdivision to the northeast was identified CKH (Berrigan 2003g), but only a few food trees have been retained in the road reserve of the estate (Oxley Grove) as an urban woodland. Koalas are known to continue to use these trees (evidenced by scats and sightings). Koala movement further north is minimal due to lack of sufficient habitat, as well as fences and barriers posed by more extensive cleared and low-lying land (Darkheart 2010a, 2010b, Biosis 2005, AMBS 2003), and now the Oxley Highway Deviation which has fauna fencing/sound barriers intended to direct fauna to designated underpasses.

Linkage northwest into identified CKH is facilitated by the western strip with canopy cover broken by the overhead powerline easement, with current fencing being permeable except around the Crematorium where Koalas must rely on overlapping trees on either side of the tall mesh fence for access/egress.

Linkage west is via remnant forest around on Lot 449 and the Crematorium boundary which links to CKH reserved within and adjacent to Ascot Park. Strips of swamp forest to wet sclerophyll forest provide linkages to the southwest to LINR.

Linkage east to southeast is provided by provided by narrow remnant strips of forest between fairways which link to a very well vegetated urban woodland which is adequate for the Koala to both inhabit and move through (Connell Wagner 2000b, Wilkes and Snowden 1998, AKF 2007). A distinct urban woodland corridor runs from The Ruins Way to Mill Hill via the wooded road reserve along The Ruins Way and Mill Hill Road. A cleared services easement, scattered trees and small remnants to the east also offer linkage (though barriers posed by fencing and yards with dogs would be a limitation) to the narrow link along Major Innes Drive which links to the Oxley Highway and Kingfisher Rd area, and other small remnants in the southeast Ruins Way area and ultimately Lake Innes Nature Reserve. These all link to a dedicated corridor off Mill Hill that links west to Lake Innes Nature Reserve. Koalas are periodically sighted in this main corridor, indicating its significance.

These links would be used by residential Koalas as part of their lifecycle movements, and at times by dispersing sub-adults from local Core Koala Habitat

Site Context:

In the local context, appraisal of Figure 5 shows that the site's and adjacent land's limited remnant habitat combined with the wooded road reserves form part of a larger matrix of remnants amongst mostly developed land in the John Oxley Drive/Ruins Way/Major Innes Drive area. Historical photos also show that this area has been subject to a cumulative loss of Koala habitat, particularly in the last 20 years.

As detailed previously, there are a plethora of Koala records in the locality. This includes several records on and close to the site, and numerous records within approximately 1km of the site (eg. DPIE 2020a, Biolink 2013a, 2008, 2005a, 2005b, Berrigan 2003c, 2003g, 2003h, 2001b, 2001c, 2001d, 2000b, 2000c, 1999a, 1999b, JBE 2017, Naturecall 2015a, Darkheart 2014, 2007e,2006e, 2005d, 2005f, 205l, 2004g, 2004l, 2004g, 2004l, 2004n, 2004p, 2004q, etc, Connell Wagner 2000b, Wilkes and Snowden 1998, Biosis 2005, 2004, AMBS 2003).

This and other studies have determined that the site and the Ruins Way/Lake Innes residential area to Ascot Park areas contains Core Koala Habitat spread over both the northern reaches of Lake Innes Nature Reserve and adjacent forested rural land (Biolink 2005a, 2005b, 2008, 2003), supported by a matrix of remnants, roadside trees and an urban woodland (Berrigan 1999c, 2001i, 2003m, 2003n, Darkheart 2007c, 2013, EcoPro 1999b, Connell Wagner 2000b, Hastings Council 2003, Wilkes and Snowden 1998, Biolink 2005a, 2005b, 2008).

Koalas occurring on site thus form part of the local sub-population within the larger population which use the site as part of their range. This range is likely to extend over the adjacent private lands, the crematorium, northern extent of Lake Innes Nature Reserve, and possibly west to Ascot Park and east to the Ruins Way area.

Figure 5: Regional corridors

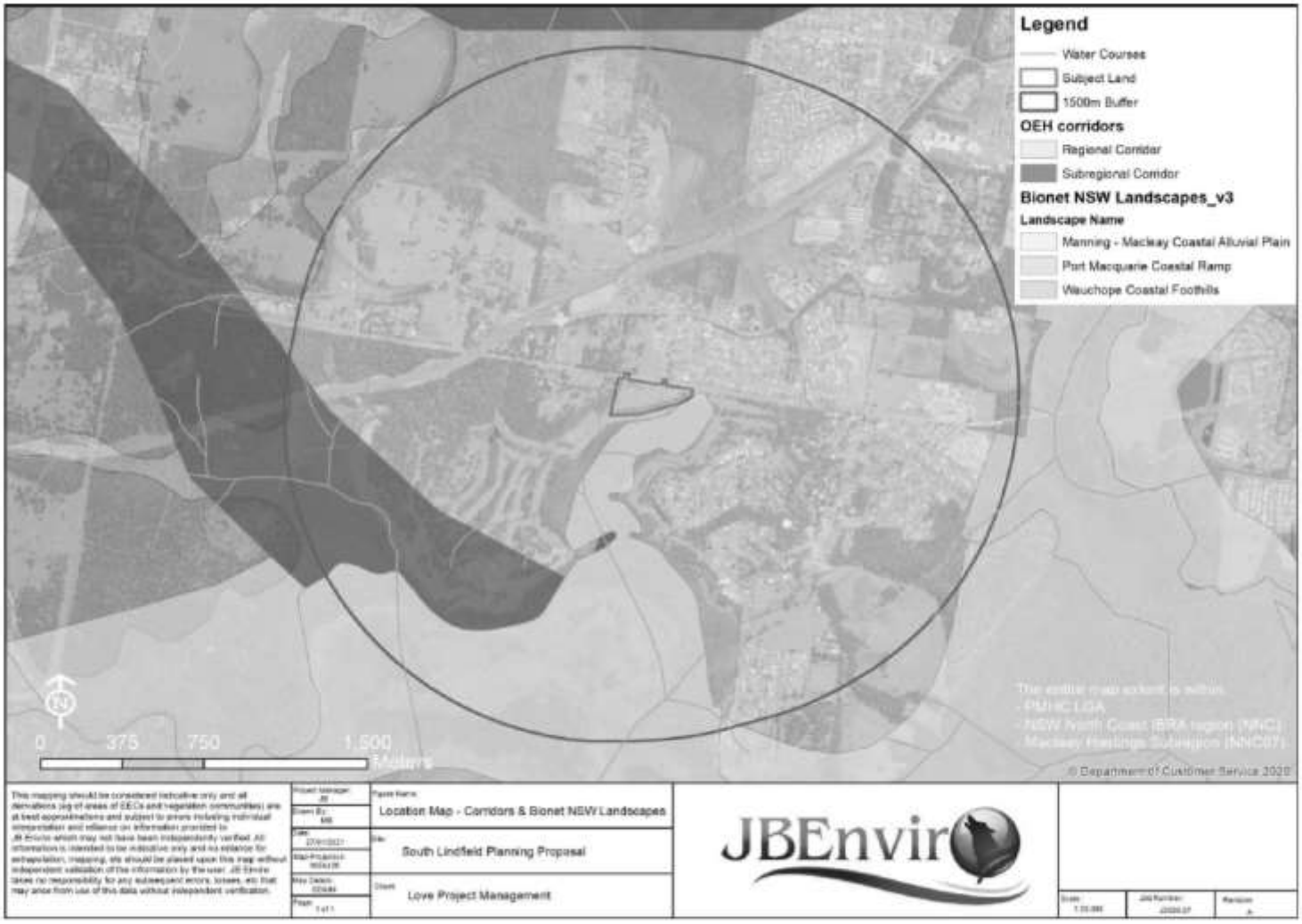
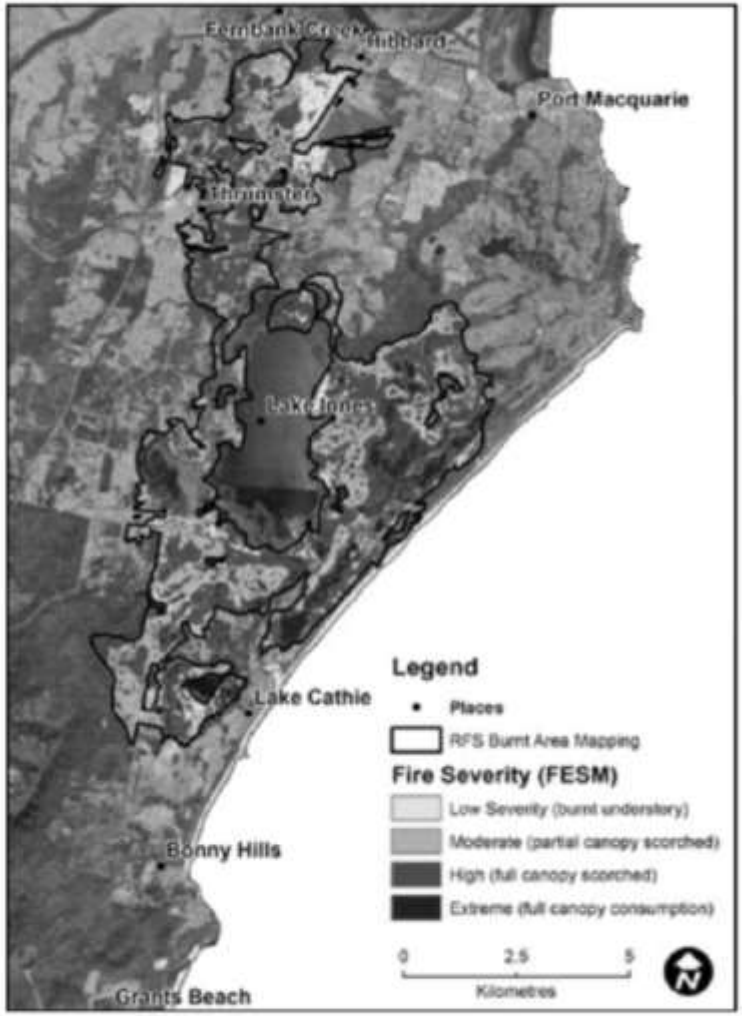
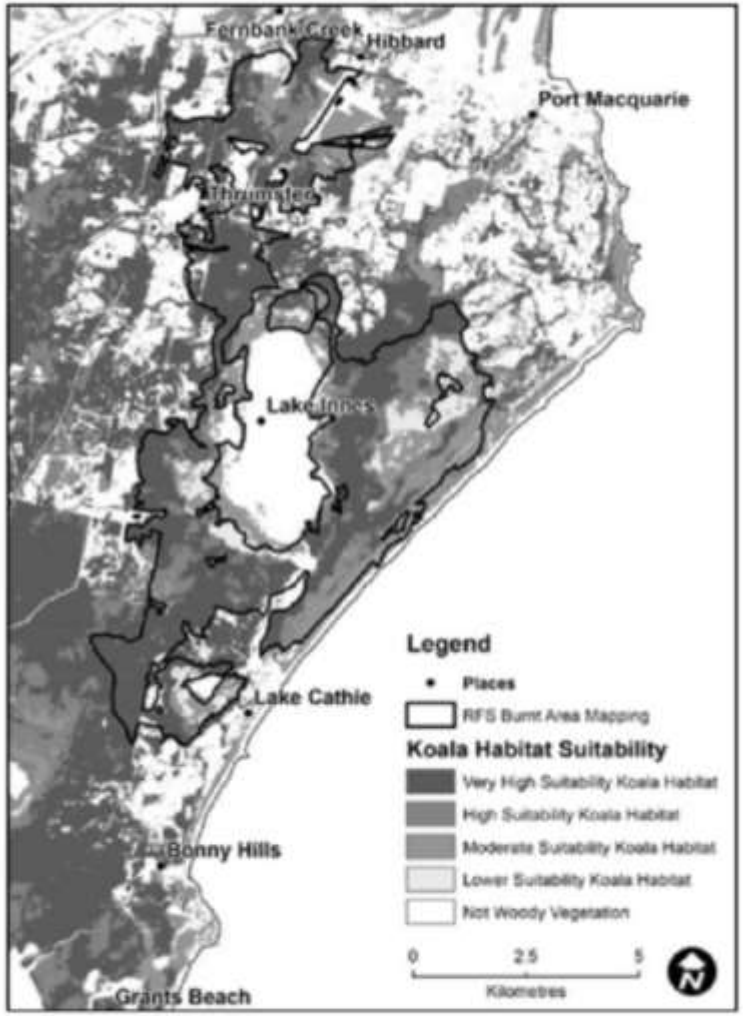


Figure 6: 2019-2020 fire intensity mapping and suitable Koala habitat (DPIE 2020b)





6 THREAT ASSESSMENT AND MITIGATION

The following impacts/threats are generally associated with development of Koala habitat (Connell Wagner 2000a, 2000b, Wilkes and Snowden 1998, Biolink 2003, 2005a, 2005b, 2005c, 2008, Dr Stephen Phillips pers. comm., Lunney *et al* 1999, Port Stephens Council 2001, AKF 2007, 2000, State Forests 2000, DECC 2008, PMHC 2018a).

In context of the anticipated rezoning, these are first identified, and then the ameliorative measures/recommendations to address this threat/impact are detailed.

6.1 Loss of Forage Trees/Habitat

6.1.1 Assessment

Habitat loss and/or fragmentation is the most serious threat to Koalas both historically and at present (DECC 2008, AKF 2014, 2007, 2000, Connell Wagner 2000b, Port Stephens Council 2001, Lunney *et al* 1999, Wilkes and Snowden 1998, PMHC 2018, etc.).

The proposed development footprint has attempted within consideration of all constraints to minimise loss of habitat via retaining all of the southern and western strips of forest which contain KFTs. Only the parkland dominated by 16 KFTs in the north of the proposed development envelope plus 4 young saplings growing in a windrow in the southwest corner of the development envelope is to be removed.

No trees are proposed to be retained within yards due to long term issues with future tree removal and lack of recruitment, and the impracticality of prohibiting dog ownership.

Connectivity will be retained via retention and augmentation of the southern and western strips as detailed in section 7.1. These will be reserves managed under a Vegetation Management Plan (VMP), with no public access needed as no linkage (eg. footpath or road) will pass through these areas.

6.1.2 Mitigation

6.1.2.1 Habitat Retention and Protection

Figure 2 shows that the development envelope comprising the R1 zone, with the residual comprising the majority of Potential Koala Habitat to be zoned Environmental under the PMHC LEP 2011.

As shown in **Figure 7**, the southern and less so the western remnant strips augmented with plantings of KFTs with understorey and edge plantings to deter public access. These strips are excluded from the Asset Protection Zones, and will not be able to be cleared/modified under the 10/50 Vegetation Clearing Code of Practice via specific planning provisions in the precinct's DCP.

Figure 7: Proposed offset planting areas under VMP



6.1.2.2 Habitat Replacement and Linkage Enhancement

Habitat replacement

Consistent with the KPoM for the adjoining South Lindfield development precinct (Naturecall 2015a) and the PMHC DCP, Koala food trees removed for the development will be subject to an offset ratio of 1:2.

These will mostly be located along the southern strip, widening this area to both increase its linkage value but also to create more habitat for the local population of the Critically Endangered Native Guava, which is locally common in the study area (JBE 2021). This area is outside any APZ and will be excluded from the 10/50 Vegetation Clearing Code of Practice; and will not conflict with any infrastructure.

Council policy requires that replacement plantings are to be spaced at a minimum of 10m apart on cleared land or 5m apart where existing canopy gaps exist to allow maximum crown development via allowing low branching (woodland form) and reduced competition. Trees to be used are preferred to abe dvanced size trees that meet NATSPEC *Specifying Trees*, unless plantings are undertaken pre-emptively (preferably at least 5 years before actual tree loss) in which case small size classes may be used.

The offset plantings are to comprise Tallowwoods, Forest Red Gum and Swamp Mahogany, with species selection being in accordance with the soils and environmental conditions at the planting location.

Offset plantings will be subject to a Vegetation Management Plan (VMP) to ensure success of all plantings.

In addition, the outside edge adjacent to the R1 area is to be planted with pungent leaved plants (eg. *Lomandra longifolia, Gahnia clarkei, Melaleuca styphelioides, etc*) to discourage public entry.

Transformer weeds (eg. Lantana) will be eliminated from the western and southern strips under the VMP.

6.2 Potential Injury During Clearing

6.2.1 Assessment

Tree-felling and clearing will pose an associated risk of injury or mortality to any Koalas present on site at the time (AKF 2007).

At least 1-4 Koalas are known to have an association with the site/study area, hence pre-clearing surveys and supervision by an ecologist will be required during any clearing undertaken on the site to reduce the risk of injury or mortality.

6.2.1.1 Mitigation

In order to minimize the risk of Koala's being killed or injured during any clearing works on the site; the following measures must be implemented:

- The area of work is to be inspected for Koalas by an ecologist immediately prior to commencement of any vegetation removal.
- The ecologist is to remain on-site during vegetation removal to maintain surveillance for Koalas and rescue other fauna as required.
- No such vegetation removal is to be carried out while any Koala is present in the area of operation unless a 50m buffer is established. If the Koala shows signs of sickness or injury, the Port Macquarie Koala Hospital is to be advised.
- A report by the ecologist is to be provided within 7 days of the clearing event detailing methods and results of the supervision.

6.3 Vehicle Strike/Road Kills

6.3.1 Assessment

Traffic collision (usually resulting in death) is a major threatening process to the Port Macquarie Koala population, particularly to males, who account for most of the injured animals (most likely due to more frequent and longer movements during their life cycle eg during breeding seasons) PMHC 2018a, Wilkes and Snowden 1998, Connell Wagner 2000b, DPIE 2020b-d).

This will be a very minor risk on site as no road will bisect habitat, and no habitat is to be created within the residential area. There will be the risk of a Koala crossing the roads regardless of the absence of habitat, hence in addition to zoning to 50 kph, any perimeter ring road will have physical speed reduction included in its design eg. as in Annabella Downs.

6.3.2 Mitigation

As discussed previously, no new internal roads will pass through vegetation that forms part of a linkage between retained habitat.

To reduce the risk of Koala road strike, the following measures will need to be implemented:

- Speed limit on all roads will be zoned 50kph, but design will aim to reduce effective speed to 40kph using measures as on Annabelle Drive.
- Koala warning signage to be erected at entry to the precinct, with the Koala Hospital number displayed on the sign.
- Street lighting to be strategically positioned to focus lighting on the road, not on adjacent bushland.

6.4 Pets and Feral Predators

6.4.1 Assessment

Domestic Dogs

Dog attack is a major cause of Koala mortality in the PMHC LGA (Wilkes and Snowden 1998, PMHC 2018a, Connell Wagner 2000). Domestic dogs are probably the main source of dog attack mortality near residential areas (Wilkes and Snowden 1998, Lunney *et al* 1999, Port Stephens Council 2001, Connell Wagner 2000, State Forests 2000, DPIE 2020g).

Dog ownership prohibition is however extremely difficult to enforce in the long term. Dogs may also enter from adjacent unregulated areas.

Feral Cats and Foxes

Cats are not considered a serious predator to the Koala (NWSC 2000a, Dickman 1996, Wilkes and Snowden 1998, DECC 2008, Lunney *et al* 1999, Connell Wagner 2000b, etc). Hence no specific prescription is provided in this KPoM.

Foxes are not considered a significant threat to Koalas, though there is the potential for attack on sick, injured or juvenile Koalas (DECC 2008). These vermin are also a serious threat to native species ie recognised as Key Threatening Processes (NSWSC 2000a, 2000b, Dickman 1996). These are subject to current controls under the PMHC Feral Species Management Strategy.

6.4.2 Mitigation

Dogs are permitted within the future development envelope, but only via use of Koala and dog impermeable fencing to separate dogs from Koala habitat on each residential lot i.e. dogs must be confined to yards with no Koala access.

Dogs must only be on leash when outside a yard.

These restrictions will be incorporated into Development Application approval for future dwellings.

No Koala food trees are to be retained or planted within the residential area to minimise the risk of dog and Koala contact.

Signage on the edge of the retained habitat to the south and west will advise dogs are prohibited at all times; must be leashed when outside yards; the contact number for reporting unleashed dogs to PMHC; and contact number of reporting sick or injured Koalas to the Koala Hospital.

6.5 Drowning In Pools

6.5.1 Assessment

Koalas can swim, but have been recorded drowning in pools where they could not climb out. Koalas may enter the pool via falling from overhanging branches, or walking in by mistake (DECC 2008). Wilkes and Snowden (1998) state that since the implementation of child-proof fencing around pools, accidental drowning has ceased to be a significant threatening process in Port Macquarie.

As pools may be installed by new landowners, there may be a risk of Koalas drowning if there are trees overhanging the pools if trees were located in rear yards.

This should be avoided as no Koala trees are to be retained in rear yards of residential lots, and all fencing will be Koala exclusive.

6.5.2 Mitigation

No specific provisions required as all house yard fencing will be required to be Koala exclusive and no KFTs to be retained in yards. Any pool established will also require a pool fence as per the *Swimming Pools Act 1992*. This should largely prevent Koalas from entering pools.

6.6 Barriers

6.6.1 Assessment

Developments may result in physical and behavioural barriers that impair Koala usage of the site or access to adjacent areas.

Fences offer the main physical barrier. Koalas can climb sturdy chain mesh, wooden paling or solid-type fences with wooden fences on both sides (Port Stephens Council 2001, Wilkes and Snowden 1998). Busy roads, barking or aggressive dogs, and adverse human contact may pose behavioural barriers (DECC 2008).

The site is currently partially fenced along boundaries to the west and northeast.

No habitat is proposed to be retained in yards, hence Koala friendly fencing is not required. Koala exclusion fencing around house yards is however required to minimise risk of dog-Koala contact. These will pose no barrier to Koala movement to access habitat or life cycle movements as the western and southern strips will be unfenced and retain connectivity.

6.6.2 Mitigation

No mitigation required. Some form of bollard fencing may be provided along the northern side of the southern strip to prevent parking and storage of vehicles, caravans, etc.

6.7 Bushfire

6.7.1 Assessment

Bushfires, particularly intense, crown-burning fires, are a major threat to wildlife and threatened fauna such as Koalas, as demonstrated in the 2019-2020 fire season (DPIE 2020b, DECC 2008). Extensive fires that burn out a large extent of habitat – particularly habitat that is isolated or fragmented, and thus limited in escape, refuge or re-colonisation potential, are particularly damaging if not catastrophic via direct mortality or indirectly (e.g. insufficient resources left to support the population, injured animals unable to climb exposed to predation, etc).

Less intense fires may also cause secondary problems such as smoke-inhalation/breathing disorders, loss of food supply, stress and displacement (e.g. via complete burning of an individual's home range).

Altered fire frequency can also ultimately simplify or alter the character of vegetation communities by removing fire sensitive species (e.g. convert wet sclerophyll to dry), and even develop fire-prone communities e.g. promote development of a grassy groundcover (NSWSC 2000).

The cleared and maintained fairways to the south and also to the east and southwest provide key firebreaks which significantly reduce the risk of catastrophic fire in the study area, with LINR to the south the most vulnerable to a crown fire. Consequently, there is only a low risk of bushfire impacting the site.

The study area remained unburnt after the 2019-2020 fire season, hence in the short to medium term, is likely to be important to the local Koala population.

6.7.2 Mitigation

Fire will remain excluded from any fuel reduction activities due to the presence of a Critically Endangered rainforest species. While the potential survival of the population of Native Guava on-site is unknown due to severe Myrtle Rust infection, fire would kill any potential immune plants and all seedlings. Hence fuel reduction is not to be permitted until there is research that shows any benefit to this species.

APZs outside these strips will fall over areas to be maintained ie. roads, road verges and front yards. These will be managed outside the KPoM.

6.8 Disease

6.8.1 Assessment

Most Koalas are naturally infected with Chlamydia pathogens (Sharp and Phillips 1999, Phillips 1997). Chlamydia and other diseases may develop when Koalas are under stress, of which one cause is habitat loss/disturbance (DECC 2008, Catling 1991, McFarland 1999, AKF 2007, Port Stephens Council 2001). Chlamydia infections may lead to urinary tract and reproductive tract infections which can cause female infertility.

This disease occurs throughout the Port Macquarie Koala population (Connell Wagner 2000b). A female was observed by Naturecall (2015a) to the northwest showing advanced infection signs. This is a concern given the risk of transmission of this disease through the population via breeding activity, and potential sterilisation of dominant adults limiting recruitment and fecundity.

The proposal will see loss of 16 Koala food trees, many of which show some evidence of at least periodic use. While this loss will be offset via replacement plantings, it will be at least 10 years before the value of the smaller trees is offset, and >50 years before the bigger trees are offset.

The loss of KFTs poses the risk of increasing stress on the local aggregate and this has the potential to increase vulnerability to Chlamydia (AKF 2007).

6.8.2 Mitigation

Monitoring and public awareness will be required to determine if any new infections are occurring and undertake remedial action, as follows:

- Contact details for Koala Hospital at site office during construction.
- Koala warning signage is to detail contact details for the Koala Hospital to facilitate prompt reporting of sick or injured Koalas.

7 IMPLEMENTATION, MONITORING AND COMPLIANCE

7.1 Monitoring and Review

Given that full development of the area will be realised in the long term, the monitoring regime has been devised to consider short and long term achievement of the KPoM objectives and measures.

The check list appended to this document summarises the specific actions required to be undertaken by responsible authorities to implement the recommendations of the KPoM. This can assist to ensure the provisions of the KPoM are implemented.

The provision of a KPoM Compliance Check with each DA will also assist in ensuring both the relevant provisions of the KPoM and conditions of consent of future are implemented and provide a means of feedback for compliance assessment.

The KPoM will be deemed successful if monitoring determines that the objectives stated in section 3.0 are achieved as per the listed specified performance criteria.

7.1.1 Per DA KPoM Compliance Checks

To ensure key measures of this KPoM are implemented, any future DA must demonstrate compliance with the provisions of the KPoM at various stages from the DA to post-construction eg. prior to issuing the Subdivision Certificate, it must be demonstrated that clearing was monitored and offset plantings have been established under a VMP.

Table 4 shows a provisional timeline for implementation of the KPoM measures and key reporting requirements. This is to ensure KPoM measures such as clearing monitoring and establishment of offset plantings are undertaken as required until the full development of the area is realised.

7.1.2 Koala Monitoring

The following is to be undertaken by an approved ecologist, and reported to PMHC:

1. **Koala Presence and Usage Survey**: A Koala survey is to be undertaken to census Koala usage of retained habitat and check for the incidence of disease. Methods are to:
    - Include a combination of survey techniques to be used eg. 100% coverage spotlighting surveys, call playback, day searches, and scat searches (with application of the SAT if statistical assumptions can be met). Objective is to detect Koalas present, indicate current population size, and assess health (eg. signs of Chlamydia) and fecundity (eg. presence of young, breeding activity of male).
    - Be undertaken during the Koala breeding season to increase detection; and include several non-consecutive day and night surveys.
    - In line with previous monitoring and to allow analysis of trends, the whole site must be surveyed on one night (or day).
2. **VMP Review**: The VMP is to be reviewed for success in reaching key performance indicators eg number of established offset plantings, improved condition as indicated by very low weed diversity and density, etc.

Annual reviews of the VMP are to be taken to ensure works are on track and recommendations/remediation measures implemented, and allow compliance enforcement.

Monitoring is recommended to be undertaken every 5 years until the development is completed to ensure the KPoM is addressing its objectives and the VMP are effectively implemented. Recommendations are to be implemented before the next review period.

7.2 Implementation Schedule

The following table provides a summary of the timeline for implementation of the ameliorative measures for assisting with compliance assessment.

Table 4: Implementation schedule for ameliorative measures

Issue	Pre-DA/Rezoning Stage	DA Approval	Construction Phase	Operation Phase
Retention and Protection of Key Habitat	• Koala food trees to be removed or retained identified. • Planning mechanisms to protect retained habitat implemented. • DA to demonstrate compliance with KPoM	• Approval of plan detailing trees/habitat to be removed. • VMP required to be prepared and commenced before clearing commences.	• Clear identification and fencing off of trees/vegetation to be removed/retained. • Construction undertaken in accordance with KPoM and consent conditions. • Compliance enforcement by Council.	• All planted trees managed and protected permanently. • Implementation of any recommendations for improvements of current measures. • Compliance enforcement by Council.
Habitat replacement	• Identify Koala food trees to be removed. • Identify and map proposed location of planting areas in relation to development, and estimate number of replacements.	• Plans for offset plantings regeneration approved and become binding on proponent to execute as detailed. • Commence and complete VMP and planting works.	• Maintain plantings as applicable per development stage.	• Maintenance of weeds and plantings until established. • Ongoing maintenance until all plantings self-sufficient. • Compliance enforcement by Council. Implementation of any recommendations for improvements until plantings are self-sufficient.
Predator Control	• Planning provisions to require Koala exclusion fencing around all year yards.	• Title covenant specifying Koala-proof fences where relevant. • Signage detailing dog provisions on west and southern strips.	• Compliance enforcement by Council.	• Compliance enforcement by Council. • Implementation of any recommendations for improvements of current measures.

Issue	Pre-DA/Rezoning Stage	DA Approval	Construction Phase	Operation Phase
Pools	• Planning provisions to manage pools.	• Council to ensure Koala-proof fencing around yards; and child proof fencing	• Compliance enforcement by Council.	• Compliance enforcement by Council.
Mortality/injury during clearing of habitat	• Survey and mapping of all habitat to be retained/removed.	• Consent condition specifying ecologist to supervise clearing and manage Koala welfare.	• Clearing as per protocol. • Report to PMHC confirming compliance.	• N/A
Vehicle Collision	• Identify where engineering designs required to control speed, signage required; and strategic lighting.	• DA approval of appropriate engineering mechanisms, lighting and signage installation.	• Measures implemented. • Road design as per KPoM.	• Measures effective. • Records kept of Koala incidents involving fences and vehicles included in monitoring reports.
Physical and Behavioural Barriers (fences and roads)	• DA plans to show permanent fencing is required. • Yard fencing to be Koala exclusive. • Any fencing along western and southern strips to be Koala friendly.	• Consent approval subject to Koala friendly or exclusion fencing where applicable. • Compliance enforcement by Council.	• Fencing constructed as per development consent conditions • Compliance enforcement by Council.	• Reporting of any injured Koalas to Koala Hospital. • Remedial action taken following reporting of injuries. • Compliance enforcement by Council.
Disease	• Provisions for signage to include Koala Hospital number.	• Signage required as condition of consent.	• Construction undertaken in accordance with plans. • Contact details for Koala Hospital provided on site during construction	• Records kept and included in monitoring reports. • Permanent public Koala signage with Koala Hospital phone number. • Compliance enforcement by Council.

8 REFERENCES

Berrigan J, A. (2003a). Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed School Playing Field On Lot 581 DP 754434, Major Innes Drive, Port Macquarie. Unpublished Report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan J, A. (2003b). Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed School Playing Field On Lot 581 DP 754434, Major Innes Drive, Port Macquarie. Unpublished Report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2003c). Threatened Species, EPBC Act and SEPP 44 Assessment for Proposed Manufactured Housing Estate (The Retreat) on Lot 2 DP 748837, off Lincoln Rd, Port Macquarie. Unpublished report to Luke and Co. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan J, A. (2003d). Threatened Species, EPBC Act and SEPP 44 Assessments for Residential Subdivision On Lot 9 DP 255991, The Ruins Way, Port Macquarie. Unpublished Report to King and Campbell Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2002a). Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed Port Oxley Residential Estate, Oxley Highway, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2002b) Threatened Species, EPBC Act and SEPP 44 - Koala Habitat Assessment For Proposed Multi-Storey Tourist Resort on Lot 331 DP 828346 and Lot 24 DP 22883 (Taskers Beachside Palms), Flynn St, Port Macquarie. Unpublished report to King and Campbell Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2002c). Northgate Koala Monitoring Report – 2002. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J.A. (2001a). Northgate Koala Monitoring Report – 2001. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J.A. (2001b). Threatened Species and SEPP 44 - Koala Habitat Assessment For Proposed Combined School on Lot 591 DP 754434, Major Innes Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2001c). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Residential Subdivision, Lot 4, DP 788598, The Oxley Highway, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2001d). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Residential Subdivision, Lot 581 DP 754434, Major Innes Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2001e). SEPP 44 Assessment for Lot 1 DP 536256, The Ruins Way. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J.A. (2000a). Threatened Species and SEPP 44 Assessment for Lot 1, DP 748977; Lot 21, DP 866801; and Lot 221, DP 868193, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2000b). Updated Threatened Species Assessment for Proposed Rezoning, Lot 1, DP 829920, Greenmeadows Drive. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J.A. (2000c). Threatened Species and SEPP 44 Assessment for Proposed Subdivision, "The Lowe Property", Lake Rd Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J.A. (2000d). Threatened Species and SEPP 44 Koala Habitat Assessment for Lot 8 in Plan of Subdivision of Lots 8 and 9 DP 263651, Kingfisher Rd, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J.A. (2000e). Threatened Species and SEPP 44 Assessment for Lot 1, DP 748977; Lot 21, DP 866801; and Lot 221, DP 868193, Yaluma Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2000f). Threatened Species and SEPP 44 Assessment for Proposed Subdivision, "The Lowe Property", Lake Rd Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J. A. (1999a). Threatened Species and SEPP 44 - Koala Habitat Assessment for Proposed Subdivision, Lot 2, DP 589082, The Ruins Way, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J. A. (1999b). Threatened Species and SEPP 44 - Koala Habitat Assessment for Proposed Residential Subdivision, Lots 3 and 5, The Ruins Way, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (1999c). Threatened Species and SEPP 44 Assessment for Hastings District Hospital - Residual Land. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J. A. (1998). Threatened Species Assessment for Proposed Development, Lot 496, Pacific Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J. (1997). Threatened Species Assessment for Proposed Rezoning at Willandra Park Estate, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Biodiversity Australia (2020). Ecological Constraints Assessments for Proposed Rezoning and Residential Subdivision of Lot 399 DP1241278 and Lot 340 DP1251842, Port Macquarie. Unpublished report to Love Project Management. BA, Port Macquarie.

Biodiversity Australia (2019). Ascot Park KPoM Monitoring Report 2019. Biodiversity Australia, Port Macquarie

Biodiversity Australia (2018a). Koala Plan of Management for South Lindfield. Unpublished report to PMCH. BA, Port Macquarie.

Biodiversity Australia (2018b). Ascot Park KPoM Monitoring Report 2018. Biodiversity Australia, Port Macquarie

Biolink (2013). Port Macquarie-Hastings Koala Habitat & Population Assessment. Final Report to Port Macquarie-Hastings Council. Biolink, Uki.

Biolink (2008). Area 13 UIA Koala Plan of Management. Unpublished report to Port Macquarie-Hastings Council, Port Macquarie.

Biolink (2005a). An Ecological Overview of Koalas and their Habitats on the Lake Innes Peninsula, Port Macquarie, NSW. Unpublished report to Villro Pty Ltd and Luke and Company Pty Ltd, Port Macquarie.

Biolink (2005b). Koala Plan of Management for Part Lot 32 DP 809231 – Mahers Headland, Port Macquarie, NSW. Unpublished report to Villro Pty Ltd and Luke and Company Pty Ltd, Port Macquarie.

Biolink (2005c). Area 14 Master Planning Area - Koala Plan of Management. Unpublished report to Port Macquarie-Hastings Council, Port Macquarie.

Biolink (2003). An Ecological Overview of the Area 14 Master Planning Area. Unpublished report to Hastings Council. Biolink – Natural History and Environmental Consultants, Uki.

Briggs, B. (1996). Tracks, Scats and Other Traces. Oxford University Press, Melbourne.

Connell Wagner Pty Ltd (2000a). Koala Plan of Management – Coastal Area. Part A: The KPOM – Hastings Council. Connell Wagner Pty Ltd, Neutral Bay.

Connell Wagner Pty Ltd (2000b). Koala Plan of Management – Coastal Area. Part B: Resource Study – Hastings Council. Connell Wagner Pty Ltd, Neutral Bay.

Darkheart Eco-Consultancy (2013a). Ecological Survey and Constraints Assessment: Part Lot 289 DP 1184284 and Lot 6 DP110560, The Ruins Way, Port Macquarie. Unpublished report to Charley Bros Pty Ltd. Darkheart Eco-Consultancy, Kew.

Darkheart Eco-Consultancy (2008a). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed for Residential Subdivision of Lot 5 DP 998125, The Ruins Way, Port Macquarie. Unpublished report to Luke and Co. Pty Ltd. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2007a). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Re-Development of Taskers Residential Village, Ocean St, Port Macquarie. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2007b). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Residential Subdivision of 168 Pacific Drive, Port Macquarie. Unpublished report to All About Planning Pty Ltd. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2006a). Commonwealth EPBCA 1999, NSW Threatened Species Conservation Act 1995: Fauna Assessments of Proposed Residential Subdivision of Part of Lot 32 DP 809231, Phillip Charley Drive, Port Macquarie. Unpublished report to Luke and Company Pty. Ltd. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2006b). Statutory Ecological Assessments of Proposed Residential Subdivision of Lot 5 DP 998125, The Ruins Way, Port Macquarie. Unpublished report to Luke and Company Pty. Ltd. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2005a). Flora and Fauna Survey and SEPP 44 Assessment of Proposed Rural-Residential Subdivision on Lot 1 DP 574308, and Lots 4 & 5 DP 785611, Sancrox Rd, Sancrox. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005b) Koala Threatened Species, EPBC Act and SEPP 44 Assessments for Rural Residential Subdivision on Portions 246 and 247 and Lot 2 DP 553191 and Lot 2 in DP 555095 Bushland Drive. Unpublished report to Luke and Company. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005c). SEPP 44 Assessment of Lot 22, Wrights Rd, Port Macquarie. Unpublished report to Budden Nandle Michael Hudson Architects. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005d) Koala monitoring study of Mahers Headland. Unpublished report to Luke and Company. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005e). Flora and Fauna Survey and SEPP 44 Assessment of Proposed Filling and Future Industrial Development on Lot 2, DP 442098 Boundary Street, Port Macquarie. Unpublished report to Luke and Company Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005f). Flora and Fauna Survey and SEPP 44 Assessment of Proposed Shopping Extension of Coastside Church on Lot 2 DP 601094, Mumford Street, Port Macquarie. Unpublished report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2004a) Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed Community Facilities Building, Lot 5 DP 790668, Tulloch Rd, Port Macquarie. Unpublished report to Hastings Council. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2004b) Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed Tourist Accommodation, Taskers Caravan Park, Port Macquarie. Unpublished report to King and Campbell Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2004c) Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed Emergency Services Centre, Lots 1 and 2 DP 804235, Central Rd, Port Macquarie. Unpublished report to Hastings Council. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy. (2004d). Threatened Species, EPBC Act and SEPP 44 Assessments for Residential Estate – "Innes Downs", Major Innes Drive. Unpublished report to O'Rourke and Associates. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy. (2004e). Threatened Species and State Environmental Planning Policy 44 - Koala Habitat Assessment for Proposed High School on Lot 12, DP 819462 & Pt Lots3 DP 813358 & Lot 2 DP 547484 and Lot 1 DP 242345 (Closed Road), Corner of Boundary Street and Tuffins Lane, Port Macquarie. Unpublished report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Davey, S.M. (1984). Habitat preferences of arboreal marsupials within a coastal forest in southern NSW. pp 509-16. In: Smith, A. and Hume, I.D. (Eds) (1984). Possums and Gliders. Australian Mammal Society.

Department of Agriculture, Environment and Water (2020). *Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)* in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat.

Department of the Environment (2013). Draft EPBC Act referral guidelines for the vulnerable Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory). Department of the Environment, Canberra.

DECC (2008). NSW Koala Recovery Plan. NSW Department of Environment and Climate Change, Hurstville.

Dept of Planning, Industry and Environment (2020a). NSW Koala Strategy 2019-20 Annual Report – Stabilising and Increasing Koala Populations in NSW. DPIE, Parramatta.

DPIE (2020b). Wildlife vehicle strike and contributing factors: Koala Vehicle Strike Fact sheet 1. https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/programs-legislation-and-framework/nsw-koala-strategy/local-government-resources-for-koala-conservation

DPIE (2020c). How to keep Koalas off the road: Koala Vehicle Strike Fact sheet 2. https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/programs-legislation-and-framework/nsw-koala-strategy/local-government-resources-for-koala-conservation

DPIE (2020d). How to change driver behaviour: Koala Vehicle Strike Fact sheet 3. https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/programs-legislation-and-framework/nsw-koala-strategy/local-government-resources-for-koala-conservation

DPIE (2020f). Koala habitat revegetation guidelines: A practical guide to identify, connect and revegetate koala habitat in New South Wales. https://www.environment.nsw.gov.au/research-and-publications/publications-search/koala-habitat-revegetation-guidelines

DPIE (2020g). Protecting wildlife from domestic dogs: A guide to community engagement. https://www.environment.nsw.gov.au/research-and-publications/publications-search/protecting-wildlife-from-domestic-dogs

Department of Urban Affairs and Planning (1995). Circular B35 – State Environmental Planning Policy 44 – Koala Habitat Protection.

Dickman, C. (1996). Overview of the Impacts of Feral Cats on Australian Native Fauna. Report prepared for the Australian Nature Conservation Agency, Canberra.

EcoPro (1999a). Koala Management Plan Mill Hill, Port Macquarie. Ecopro, Lansdowne.

EcoPro (1999b). Eight Point Test Assessment: Mill Hill Residential Development, Port Macquarie. Ecopro, Lansdowne.

Ellis, W.A., Hale, P.T. and Garrick, F.N. (2002). Breeding dynamics of Koalas in open woodlands. Wildl. Res. 29: pp 19-25.

Ellis, W.A., Sullivan, B.J., Lisle, A.T., and Garrick, F.N. (1998). The spatial and temporal distribution of Koala faecal pellets Wildl. Res. 25: pp 663-668.

Gilmore, A. and Parnaby, H. (1994). Vertebrate fauna of conservation concern in northeast NSW forests. Northeast Forests Biodiversity Study Report No. 3e. Unpublished report, NSW NPWS.

Hastings Council (2003). Development Control Plan 45: Innes Peninsula.

Hindell, M.A. and Lee, A.K. (1990). Tree preferences of the Koala. pp117-21 In: Biology of the Koala. Ed. by A.K. Lee, K.A. Handayde and G.D. Sanson. Surrey Beatty and Sons, Sydney.

Hume, I.D. (1995). The mystery of Koala food choice. In: Proceedings on a Conference on the Status of the Koala in 1995. pp 55-64. Australian Koala Foundation, Brisbane.

Imrie, M (2001). Correspondence to Hastings Council. Department of Urban Affairs and Planning.

JBEnviro (2017). Ecological Survey and Constraints Assessment: Part Lot 289 DP 1184284 and Lot 6 DP110560, The Ruins Way, Port Macquarie. Unpublished report to Love Project Management. JBE, Port Macquarie.

Jurskis, V. and Potter, M. (1997). Koala Surveys, Ecology and Conservation at Eden. Research Paper No. 34. State Forests, Sydney.

Jurskis, V., Rowell, D. and Ridley, D. (1994). Survey Techniques and Aspects of the Ecology of the Koala Near Eden. Research Paper No. 22. State Forests, Sydney.

King and Campbell Pty Ltd (2002). Koala Plan of Management for Residential Subdivision Lot 1 DP 387920 Part Lot 2 DP 369206, Oxley Highway, Port Macquarie. Unpublished report by King and Campbell Pty Ltd, Port Macquarie.

Kendall, K. and Kendall, P. (1993). Koala Survey on Land Owned by Jimneva Pty Ltd at Dunbogan. Kendall and Kendall Environmental and Ecological Consultants, Yessabah.

Kendall, K. and Kendall, P. (1991). Fauna Survey – Environmental Impact Statement – Camden Shores Residential Canal Development – Planning Workshop. Kendall and Kendall Environmental and Ecological Consultants, Yessabah.

Lee, A.K., Martin, R.W. and Handasyde, K.A. (1988). Experimental translocation of Koalas to new habitat. In: Biology of the Koala. Ed. by A.K. Lee, K.A. Handasyde and G.D. Sanson. pp 299-312. Surrey Beatty and Sons, Sydney.

Lee, A.K. and Martin, R.W. (1988). The Koala – A Natural History. NSW University Press, Kensington.

Lane, A., Wallis, K., and Phillips, S. (2020). A review of the conservation status of New South Wales populations of the Koala (*Phascolarctos cinereus*) leading up to and including part of the 2019/20 fire event (Addendum No. 2). *Report to International Fund for Animal Welfare* (IFAW). Biolink Ecological Consultants, Uki NSW.

Lunney, D, Moon, C, Matthews, A., and Turbill, J. (1999). Coffs Harbour City Koala Plan of Management: Part B Coffs Harbour Koala Study. NSW NPWS, Hurstville.

Mackay, K. (1996). Fauna Impact Statement for Portion 118, Padmans Rd, Elands, parish of Bulga for Boral Timber Division.

Martin, R.W. and Lee, A. (1984). The Koala, Phascolarctos cinereus, The Largest Marsupial Folivore. In: Possums and Gliders. Smith, A.P. and Hume, I.D. (Eds). Australian Mammal Society, Sydney.

Mt. King Ecological Surveys (1993a). Proposed residential canal development at Dunbogan - Fauna Impact Statement.

Mt. King Ecological Surveys (1993b). Fauna Survey of the Kempsey and Wauchope Forest Management Areas. Prepared for the Forestry Commission of NSW.

Naturecall (2016). South Lindfield KPoM Stage 2: Koala Plan of Management. Unpublished report to PMHC.

Naturecall (2015a). South Lindfield KPoM Stage 1: SEPP 44 Assessment, Literature Review, Tree Marking and Review of Development Concepts. Unpublished report to PMHC.

NSW National Parks and Wildlife Service (1999). Threatened Species Management – Species Information.

NSW National Parks and Wildlife Service (1996). Threatened Species Assessment under the EP&A Act: The '8 Part Test' of Significance. Threatened Species Management - Information Circular No. 2

NSW National Parks and Wildlife Service (1995). Integrated faunal information for public lands in northeastern NSW. NSW NPWS.

NSW National Parks and Wildlife Service (1994a). Lake Cathie/Lake Innes Management Study: Appendix D - Terrestrial Biological System.

NSW National Parks and Wildlife Service (1994b). Kempsey and Wauchope Management areas - Endangered Fauna License Application Draft Decision Report.

NSWSC (2000a). Predation by feral cats - Key Threatening Process declaration. www.npws.nsw.gov.au.

NSWSC (2000b). Predation by the European red fox - Key Threatening Process declaration. www.npws.nsw.gov.au.

Osawa, R. (1993). Dietary preferences of the Koala, Phascolarctos cinereus, for Eucalyptus spp. with a specific reference to their simple sugar contents. Aust. Mammalogy, 16:87-89.

Pahl, L.I. and Hume, I.D. (1990). Preferences for Eucalyptus species of the New England Tablelands and initial development of an artificial diet for Koalas. In: Biology of the Koala (Eds: Lee, A.K, Handasyde, K.A. and Sanson, G.D.). pp 123-128. Surrey Beatty and Sons, Sydney.

Phillips, S., Callaghan, J. and Thompson, V. (2000). The tree preferences of Koalas (Phascolarctos cinereus) inhabiting forest and woodland communities on Quaternary deposits in the Port Stephens area, NSW. Wildl. Res. 27: pp 1-10.

Phillips S, Wallis K, Lane A. 2020. Quantifying the impacts of bushfire on populations of wild koalas. Insights from the 2019/2020 fire season., Biolink, Uki, NSW.

Phillips, S. (1997). Some issues associated with the translocation of Koalas (Phascolarctos cinereus). Paper presented to the Australian Veterinary Association Symposium.

Port Stephens Council (2001). Port Stephens Council Comprehensive Koala Plan of Management (CKPoM) – June 2001). Prepared by Port Stephens Council with the Australian Koala Foundation.

Predavec, M. (2008). Review of progress inimplementing the 1998 National Koala Conservation Strategy. Report prepared by Parsons Brinckerhoff for the Commonwealth Department of the Environment, Water, heritage and the Arts, Canberra.

Reed, P.C, Lunney, D. and Walker, P. (1990). A 1986-87 survey of the Koala, Phascolarctos cinereus, in NSW, and an ecological interpretation of its distribution. In: Biology of the Koala. Lee, A.K. Handasyde, K.A. and Sanson, G.D. (Eds). Surrey Beatty and Sons, Sydney.

Sarre, A. (1999). Caught in the Crossfire – The Koala. Ecos 99, April-June: 9- 14.

Sharp, A. and Phillips, S. (1999). Koalas, Science and Conservation. In: Saving Our Natural Heritage - The role of science in managing Australia's ecosystems.

Standing, V. (1990). A Study Of Koalas in the Macleay Valley District - Past, Present and Future. Koala Preservation Society of NSW, Port Macquarie.

State Forests of NSW (2000). Koala Management Plan – Pine Creek State Forest. State Forest of NSW, North East Region.

State Forests of NSW (1994). Walcha/Nundle and Styx River MA Fauna Survey. State Forest of NSW, Sydney.

Strahan, D. (Editor) (1991 and 2000). Complete Book of Australian Mammals. Cornstalk Publishing, Sydney.

Ullrey, D.E., Robinson, P.T. and Whetter, P.A. (1981). Composition of preferred and rejected Eucalyptus browse offered to captive Koalas, Phascolarctos cinereus. Aust. J. Zool, 29: 839-846.

Wildthing (2001a). Statement of Effect on Threatened Flora and Fauna at Lot 5 DP 998125 The Ruins Way Port Macquarie NSW. Unpublished report to Luke and Co.

Wildthing (2001b) Statement of Effect on Threatened Flora and Fauna at Lot 1 DP 782186 The Ruins Way Port Macquarie NSW. Unpublished report to Luke and Co.

APPENDIX 1: COMPLIANCE CHECKLIST

The following checklist details the specific actions to be taken to achieve the objectives the KPoM and the responsible authorities for implementation. This Plan will help compliance assessment of the KPoM in regards to its performance criteria.

Number	Action	Responsible Organisation	Timeframe	Action completed	Comments
In-situ Habitat Retention					
1a	Koala food trees identified to be retained and protection via reserves and exclusion from 10/50 rule achieved.	PMHC Proponents	During rezoning and future development	☐	
Offset Plantings					
2a	Suitable offsets provided; and trees planted as per required specifications.	Proponents	Pre-DA DA Post DA	☐	
2b	Offsets located in secure area where cannot be removed under other planning processes and mechanisms.	Proponents PMHC	Pre-DA DA	☐	
2c	Prepare and implement VMP to manage plantings/offset areas	Proponents PMHC	Pre-DA DA Post-DA	☐	
Clearing and Construction Management					
3a	All trees to be removed surveyed by a registered surveyor and mapped on plan for DA approval to demonstrate KPoM Compliance	Surveyor PMHC	Pre-DA DA	☐	
3b	Pre-clearing survey by ecologist prior to clearing	Ecologist	Clearing Phase	☐	
3c	Clearing monitoring by ecologist	Ecologist		☐	
3d	Any Koalas found to be monitored during clearing and inspected for signs of disease. Any welfare concerns to be referred to the Koala Hospital	Ecologist		☐	

Number	Action	Responsible Organisation	Timeframe	Action completed	Comments
3e	Report to PMHC on clearing monitoring	Ecologist	Post-clearing.	☐	
Traffic Collision					
4a	Speed limitations by engineering measures to 40km/hr	Planner/Engineer PMHC	Design at pre-DA and DA.	☐	
4b	Koala warning signage	Planner PMHC	Pre-DA DA	☐	
4c	Strategic street lighting	PMHC, Proponent	Pre-DA DA	☐	
Dog Attack					
5a	Prohibition of dogs from reserves via planning provisions.	PMHC	Rezoning	☐	
5b	Dog ban to be noted on signage with Koala Hospital details for emergencies and Council Ordinance Officer number to report stray dogs.	PMHC Proponent	DA	☐	
5c	Koala exclusion fencing around all residential lots where dogs may be kept.	PMHC Proponent	DA	☐	
5d	Council Ordinance Officer to ensure compliance	PMHC	On-going	☐	
Pools					
6a	Pool fence to be Koala proof where required.	PMHC Proponent	DA	☐	

Number	Action	Responsible Organisation	Timeframe	Action completed	Comments
Barriers					
7a	No fence design (either temporary or permanent) is to include a material or design feature that may potentially injure Koalas (or other fauna) eg barbs and loose wire.	PMHC Proponents Construction Contractors	DA Construction	☐	
7b	No fence to form a barrier to access of retained or offset habitat.	PMHC Proponent	DA	☐	
Bushfire					
8a	Designation and management of APZs.	PMHC Planners/proponents	Pre-DA DA	☐	
Disease					
9a	Public signage detailing contact details for the Koala Hospital to facilitate prompt reporting of sick or injured Koalas.	PMHC Proponent	DA	☐	
9b	Monitoring to census Koala health and records of disease in Koalas in vicinity of site from Koala Hospital.	PMHC Ecologist	Operational phase	☐	
9c	Contact details for Koala hospital at construction site during construction to report any sick or injured Koalas	PMHC Construction Contractor	DA Construction Phase	☐	

January | 21

JBEnvir

BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT

part Lot 499 DP1258597, Blackwood Street, South Lindfield

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User Notice

This report is presented on an objective basis to fulfill the stated legislative obligations, consideration and requirements in order to satisfy the client's instructions to undertake the appropriate studies and assessments. It is not directly intended to advocate the proponent's ambitions or interests, but is to provide information required in the determination of development consent by the decision-making authority for the subject proposal.

To the best of our knowledge, the proposal described in this assessment accurately represents the proponent's intentions when the report was completed and submitted. However, it is recognised and all users must acknowledge that conditions of approval at time of consent, post development application modification of the proposal's design, and the influence of unanticipated future events may modify the outcomes described in this document. Completion of this report has depended on information and documents such as surveys, plans, etc provided by the proponent. While checks were made to ensure such information was current at the time, this consultant did not independently verify the accuracy or completeness of these information sources.

The ecological information contained within this report has been gathered from field survey, literature review and assessment based on recognised scientific principles, techniques and recommendations, in a proper and scientific manner to ensure thoroughness and representativeness. The opinions expressed and conclusions drawn from this report are intended to be objective, based on the survey results and this consultant's knowledge, supported with justification from collated scientific information, references/citations or specialist advice.

Furthermore, it is clarified that all information and conclusions presented in this report apply to the subject land at the time of the assessment, and the subject proposal *only*.

This report recognises the fact, and intended users must acknowledge also, that all ecological assessments are subject to limitations such as:

- Information deficits (eg lack of scientific research into some species and availability of information)
- Influences on fauna detectability eg season in which survey is undertaken
- Influences on species occurrence eg stage of lifecycle, migratory, etc
- Time, resource and financial constraints.

All users should take into account the above information when making decisions on the basis of the findings and conclusions of this report.

Document Control Register

Version	Distribution	Date	Approved by:
Rev1	Love Project Management, PMHC	29/1/21	JB

Conflict of Interest

The BAM assessment and this BDAR have been undertaken in line with the Accredited Assessors Conflict of Interest and professional behaviour code. The assessors declare no conflict of interest.

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GLOSSARY

Abbreviation/Term	Description
BAM	Biodiversity Assessment Method 2020
BAMC	Biodiversity Assessment Method Credit Calculator
BC Act	NSW Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BSSAR	Biodiversity Stewardship Site Assessment Report
CEEC	Critically Endangered Ecological Community
Development site/envelope	The area which is subject to the proposed future development including all infrastructure and services. For the proposal, it comprises the 2.86ha development envelope on the subject land.
DNG	Derived Native Grassland
DEE	Commonwealth Department of Environment and Energy
DPE	NSW Department of Planning and Environment
EEC	Endangered Ecological Community
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
FM Act	NSW Fisheries Management Act 1994
GIS	Geographic Information System
GPS	Global Positioning System
IBRA	Interim Biogeographic Regionalisation for Australia
KCNR	Kooloonbung Creek Nature Reserve
KSEPP	Koala Habitat Protection SEPP 2020
LGA	Local Government Area
LINR	Lake Innes Nature Reserve
LLS	Local Land Service
NSW	New South Wales
OoW	NSW Office of Water
OEH	NSW Office of Environment and Heritage

Abbreviation/Term	Description
PCT	Plant Community Type
PP	Planning Proposal
SEPP	State Environmental Planning Policy
Site	The area of land subject to the proposed development (development site). In this pBDAR, this is also referred to as the development envelope to separate this area from offset plantings on existing clearing land and retention of the western and southern forest strips.
Study Area	The land adjoining the site which may be impacted to varying extents by indirect impacts eg. downstream runoff, changes to hydrology, edge effects and changes to connectivity. As a minimum, this is a 100m radius as most edge effects have a detectable effect at this limit eg. nest raiding, artificial light penetration, etc.
Subject land	Refers to the land proposed as a development site in the BAM, but in this case, it refers to the entire proposed rezoning area as offset measures, which form part of the proposal, will be applied outside the development site.
SSD	State Significant Development
SSI	State Significant Infrastructure
TEC	Threatened Ecological Community
VIS	Vegetation Information System
VRZ	Vegetated Riparian Zone under the NSW *Water Management Act 2000*
VZ	Vegetation zone – a zone within a PCT of similar condition, usually due to disturbance
WM Act	NSW Water Management Act 2000

EXECUTIVE SUMMARY

Introduction:

This provisional Biodiversity Development Assessment Report (pBDAR) has been prepared for a Planning Proposal (PP) seeking suitable rezoning to allow future residential development of part Lot 499 DP1258597, Blackwood Street, South Lindfield.

The pBDAR is prepared to provide a provisional assessment of the NSW *Biodiversity Conservation* (BC) *Act 2016* and *Koala Habitat Protection SEPP 2020*, and the Commonwealth *Environment Protection and Biodiversity Conservation* (EPBCA) *Act 1999* - Matters of National Environmental Significance, to a standard that a Planning Proposal can be supported. As no final footprint has been developed, a final BDAR assessing a formal development proposal and all of its ancillary infrastructure will be provided in a future Development Application (DA).

A BDAR will be required for the future DA as it triggers the Biodiversity Offset Scheme (BOS) via the area and Sensitive Biodiversity Value land thresholds.

The subject land (the development envelope and the proposed Environmental zones) is the northwest portion of a much larger parent Lot which has been subject to proposals for residential rezoning for some time, and associated studies.

The proposal is to rezone approximately 2.86ha comprising the subject land to R1 General Residential under the PMHC Local Environmental Plan (LEP) 2011. The current minimum Lot size is 40ha under the RU1 zoning, and will change to 450m^2 under the R1 zoning.

Asset Protection Zones (APZs) will be retained within this envelope, and not extend into the adjacent remnant vegetation west and south. The remnant vegetation to the west and south is to be retained, improved and permanently protected in Environmental zones for its value to the Critically Endangered Native Guava (*Rhodomyrtus psidioides*) and as Core Koala Habitat.

A future DA may determine that off-site stormwater treatment infrastructure is required, and this is likely to be located near an existing sewage pump station on the residual Lot to the southwest, in an existing clearing. The proposed E3 zone in the west allows for a connection for this infrastructure to future development to the north (subject to avoiding any Native Guava). This is not assessed as part of this pBDAR, but would be assessed in a future DA if undertaken under Part 4, or by Council if under Part 5.

Offset plantings of Koala food trees (KFTs) are also proposed to be established on the edge of the remnants to the south with native understorey; and transformer weeds in the southern and western E2 zones will be managed a Vegetation Management Plan (submitted with a future DA) and a Koala Plan of Management to facilitate natural regeneration to re-establish forest in these currently maintained areas.

The subject land has been in the ownership of the proponent's family for >100yrs. It forms part of a formerly much larger holding, of which a significant portion has been previously excised to join Lake Innes Nature Reserve, including the peninsular of swamp forest to the south of the site.

For most of its time, the property has been used for rural pursuits of cattle grazing and timber production. In recent decades, the latter has become the predominant landuse with varying rotations. The swamp forest now falling into Lake Innes Nature Reserve (LINR), which was donated to the NSW National Parks and Wildlife (NPWS) by the proponents, was reported by

one of the late proponents to have only developed after drainage changes around the middle of the last century.

An underground and overhead services easement runs across the northern boundary of the site, with another overhead powerline easement running across middle of the western side. Periodic slashing is undertaken to manage the fairways and existing easements on site. A stormwater pipe is located in the northwest of this easement, discharging into the western remnant on site. This appears to be adversely affected eucalypts on the edge, with a cluster of dead trees and several showing stress in direct proximity. At the southern end of the western remnant, a table drain has been excavated running south.

While boundaries of the parent lot adjoining existing residential areas are fenced, the boundary with LINR is not. No grazing stock are currently kept on site.

The site adjoins Annabella Downs to the northeast, an existing residential estate established around 15 years ago under a Koala Plan of Management (KPoM). Adjoining land to the north and northeast has largely been rezoned to R1 and Environmental zoning to allow future residential development with a KPoM.

The Port Macquarie Crematorium adjoins to the west, grading to Ascot Park residential estate further west and southwest which also has a KPoM.

Land to the east, south, and southwest outside LINR occurs on the parent parcel, and comprises fairways for the approved golf course which have been cleared since the late 1980s, and is zoned RU1.

Landscape Features:

The site falls within the NSW North Coast IBRA region and Macleay Hastings IBRA subregion, and on the Manning-Macleay Coastal Alluvial Plains Mitchell landscape.

It does not contain an Area of Outstanding Biodiversity Value, an Important or Coastal Wetland, or Acid Sulfate Soils. No watercourses occur on site, although a 1st order appears to be mapped to the west and run south.

The site is not located within a regional corridor, and local corridors are limited to the western remnant and southern strips, which are limited by edge effects. Existing and future development to the north plus the Oxley Highway are key limitations on movement in this direction, as is fragmentation by the approved golf course, the Crematorium and cemetery, and Ascot Park residential area to the west. Linkage east is limited by similar issues. The portion of LINR to the south is a spur of swamp forest that links to the larger LINR, east to Kooloonbung Creek NR and west to Thrumster, and hence is the most significant local corridor.

The South Lindfield area falls over a declining slope, with a fall to the south measured with a declination of 4%. Level landforms occur well south of the site. Soils in the South Lindfield area are predominantly derived from this parent material, slowly intergrading downslope to the open drainage depression within the adjacent section of LINR. Soils on site are Podzolics, not alluvials. No Acid Sulfate Soils occur on site.

Native Vegetation:

Native vegetation cover within the buffer area is approximately 45% and is assigned to the <70% cover class.

Two PCTs in 4 vegetation zones (VZs) were identified on the site:

- PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion: Occurs in three forms. In its largely intact form, occurs in the adjacent southern strip (eastern half) and northern end of the western strip, which are outside the development envelope. In terms of VZs, occurs as a small area of mixed regrowth along a short stormwater drain; a parkland form which occurs in the development envelope; and the majority being essentially improved pasture.

- PCT 1724 Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast: Occurs in the development envelope, where only occurs as improved pasture. Adjacent to the development envelope, occurs in the southern end of the western strip; and eastern end of the southern strip.

Two of the VZs were below the minimum Vegetation Integrity (VI) level for requiring offsets. The other two were in a low-moderate condition.

Endangered Ecological Communities:

Soil profile examinations and a review of the Final Determinations in line with legal precedents and current accepted practice determined no EECs occur on site or in the study area under NSW or Commonwealth legislation.

Threatened Species:

Despite intensive targeted survey over the required survey seasons, only 1 Species Credit fauna species was detected: the Koala. While limited evidence was found in this survey, the species has been previously recorded on site and adjoining land, and appears to have limited use of the site as part of a larger Core Koala Habitat landscape.

The Critically Endangered Native Guava was previously recorded as common in the western strip, southern strip and edges of LINR where a mesophyllic tall shrub layer is present.

However, Myrtle Rust infection has since been catastrophic, with many dead trees and shrubs found. The plants that remain are either just shrubs 1-4m high or (predominantly) seedlings/root suckers. Most of the shrubs are distressed, though two plants flowered in the last season. Most of the seedlings/root suckers are <30cm tall and can be found at the base or within 2-3m of a dead shrub or tree, with a few true seedlings dispersed within 5m of an adult plant in the eastern end of the southern strip. Survivorship is however likely to be low, as evident by Myrtle Rust often occurring on the small plants.

A single Scrub Turpentine (Critically Endangered) was found on the boundary of the crematorium in the western strip. The young plant currently has a light Myrtle Rust infection hence its long term survival is uncertain.

Impact Assessment and Mitigation Summary:

The proponent has been seeking rezoning of the subject land for over a decade, with the recent listing of Native Guava and Scrub Turpentine adding to the Core Koala Habitat constraints.

The proposed development envelope has thus been largely restricted to the most modified/degraded vegetation on the subject land, and avoids all Native Guava and Scrub Turpentine. These are to be protected permanently under Environmental zoning.

The 16 Koala food trees in the parkland vegetation that is VZ 3 was considered for retention as public space, but long term management and viability, as well as encouraging Koalas into the residential environment discounted the ecological merits of this. The loss of this habitat plus 4 saplings <3m tall regenerating in a windrow awaiting destruction from previous clearing is to be offset via planting at least 40 trees in existing portions of VZ 1 and 4 which are currently slashed pasture, but show resilience. This will see a net increase in Koala habitat, and widening the linkage values of these remnant strips.

Indirect impacts are expected to be pre-existing (eg. edge effects) or relatively localized (eg. given runoff will continue to move downslope into the existing stormwater treatment network before discharge into the groundwater dependent ecosystems), and can be mitigated by standard measures.

A range of mitigation measures are proposed including protection measures during construction, dog restrictions, fauna welfare during vegetation removal and control of secondary impacts such as erosion and sedimentation.

Native Guava, Scrub Turpentine and the Swift Parrot (low potential to occur foraging opportunistically as minute part of non-breeding range) are Serious and Irreversible Impact (SaII) entities. The proposal is not likely to exceed thresholds for these species.

A preliminary credit estimate required to offset the development of the nominated R1 zone is as follows:

Table A: Ecosystem credits

PCT ID	Candidate SaII	VZ	VI	Direct impact (ha)	Biodiversity Risk Weighting	Credits required
690	No	1	33.1	0.09	1.75	1
690	No	3	39.3	0.24	1.75	4
Total						**5**

Table B: Species credits

Species	Candidate SaII	Direct impact (number of individuals / habitat (ha)	Biodiversity Risk Weighting	Credits required
Koala	No	0.25ha	2	**6**

Koala Habitat Protection SEPP 2020:

Tallowwood, Swamp Mahogany and Forest Red Gum are the only Schedule 2 species which occur on site and the subject land, and both are sufficiently common to qualify the site and subject land as Potential Koala Habitat.

The subject land was determined to be Core Koala Habitat by previous observation of Koalas on and adjacent to the site, although minimal evidence was found by this survey.

A Koala Plan of Management has been prepared to accompany the Planning Proposal.

EPBC Act MNES:

1. World Heritage Properties: The site/study area is not listed as a World Heritage area nor does the proposal affect any such area.

2. Ramsar Wetlands of International Significance: No Ramsar wetland occurs on or adjacent to the site, nor does the proposal affect a Ramsar Wetland.

3. EPBC Act listed Threatened Species and Communities: In addition to Native Guava and Scrub Turpentine (Critically Endangered), and the Koala (Vulnerable) which were recorded on site; the Grey-headed Flying Fox (Vulnerable) and White-throated Needletail (Vulnerable) are considered potential occurrences in the study area. These were assessed and not considered likely to be significantly impacted.

4. Migratory Species Protected under International Agreements: No migratory species is likely to be significantly affected by the proposal.

5. Nuclear Actions: The proposal is not a nuclear action.

6. The Commonwealth Marine Environment (CME): Listed as relevant to the site though is not within the CME nor does it affect such.

7. The Great Barrier Reef Marine Park: The proposal does not affect the Great Barrier Reef Marine Park.

8. National Heritage: The site does not contain an item of National Heritage.

9. **A water resource, in relation to coal seam gas development and large coal mining development**: The proposal is not a mining development.

The proposal thus is not considered to require referral to the Department of Agriculture, Water and the Environment (DAWE) for approval under the EPBC Act.

PMHC DCP:

There are no EECs on site or in the study area, hence no buffers are required.

Three hollow-bearing trees and a number of termitaria occur in the adjacent remnants, but none are to be removed. Hence no offsets are required. Sufficient buffers are provided via APZs.

A total of 20 KFTs (ranging from 3m to 20m high, and trunk DBH 5cm to 80cm) will be removed by the proposal. A minimum of 40 offsets are proposed to address the required 1:2 offset ratio.

These are to be replaced under the KPoM in an existing clearing in the Environmental zones at 100m^2 spacings, with associated understory, and managed for 5 years under a Vegetation Management Plan.

INTRODUCTION

This firm has been requested to undertake a provisional Biodiversity Development Assessment Report (pBDAR) for a Planning Proposal (PP) seeking suitable rezoning to allow future residential development of part Lot 499 DP1258597, Blackwood Street, South Lindfield.

The pBDAR forms part of the PP to Port Macquarie-Hastings Council (PMHC), and is also intended to address DPIE (2020a) requirements.

The pBDAR is prepared to provide a provisional assessment of the NSW *Biodiversity Conservation* (BC) *Act 2016* and *Koala Habitat Protection SEPP 2020*, and the Commonwealth *Environment Protection and Biodiversity Conservation* (EPBCA) *Act 1999* - Matters of National Environmental Significance, to a standard that a Planning Proposal can be supported. As no final footprint has been developed, a final BDAR assessing a formal development proposal and all of its ancillary infrastructure will be provided in a future Development Application (DA).

A BDAR will be required for the future DA as it triggers the Biodiversity Offset Scheme (BOS) via two thresholds, as follows:

Table 1: BOS threshold assessment

BOS Trigger	BDAR required?
Native vegetation clearing or a prescribed biodiversity impact on land mapped on the Sensitive Biodiversity Values Map	Yes – remnant vegetation plus some pasture areas on edges of development envelope appear to fall on the SBV map (subject to limitations of the map's accuracy eg. some obviously cleared land is mapped).
Clearing of native vegetation that exceeds the area threshold	Yes – current zoning allows up 1ha before BOS threshold, but new zoning size will only allow 0.25ha.
The proposal is likely to significantly affect threatened species or ecological communities or their habitats according to the threatened species test of significance	No. Some Koala food trees which show low use in larger matrix of Core Koala Habitat is unlikely to have a significant impact given low use and net increase in habitat and connectivity; and Koala Plan of Management required. All Native Guava and Scrub Turpentine habitat avoided and to be protected and managed.
The proposed activity requires environmental assessment under Part 5 of the EP&A Act and will be carried out in a declared Area of Outstanding Biodiversity Value	Planning Proposal and future DA under Part 4, and no Area of Outstanding Biodiversity Value in the LGA.

This pBDAR has been prepared using the 2020 Biodiversity Assessment Method (BAM) by the following Accredited Persons under the NSW *Biodiversity Conservation Act 2016* (BC Act).

- Jason Berrigan (BAAS 18079)
- Matthew Bailey (BAAS 18021)

STAGE 1: BIODIVERSITY ASSESSMENT

1.0 DESCRIPTION OF THE DEVELOPMENT SITE

The subject land (the development envelope and the proposed Environmental zones) is the northwest portion of a much larger parent Lot which has been subject to proposals for residential rezoning for some time, and associated studies (eg. Darkheart 2013, JBE 2017, Biodiversity Australia 2020).

The subject land is located in the South Lindfield urban growth area of Port Macquarie (see **Figure 1**). Access to the property is via an unformed road access to a future subdivision of Lot 3 DP533058 to the northwest, and to the northeast via Blackwood Street.

The subject site/development envelope in this assessment is the 2.86ha proposed development envelope on the parent lot. The entire lot is currently zoned RU1 but no change is proposed to current zoning of the residual.

1.1 The Development Proposal

The proposal is to rezone 2.86ha comprising the subject land to R1 General Residential under the PMHC Local Environmental Plan (LEP) 2011. The current minimum Lot size is 40ha under the RU1 zoning, and will change to 450m^2 under the R1 zoning.

Figure 2 shows the proposed new zones which includes roads and future residential area. Asset Protection Zone (APZs) will be retained within this envelope, and not extend into the adjacent remnant vegetation west and south. The remnant vegetation to the west and south is to be retained, improved and permanently protected in Environmental zones for its value to the Critically Endangered Native Guava (*Rhodomyrtus psidioides*) and as Core Koala Habitat.

A future DA may determine that off-site stormwater treatment infrastructure is required, and this is likely to be located near an existing sewage pump station on the residual Lot to the southwest, in an existing clearing. The proposed E3 zone in the west allows for a connection for this infrastructure to future development to the north (subject to avoiding any Native Guava). This is not assessed as part of this pBDAR, but would be assessed in a future DA if undertaken under Part 4, or by Council if under Part 5.

Offset plantings of Koala food trees (KFTs) are also proposed to be established on the edge of the remnants to the south with native understorey; and transformer weeds in the southern and western E2 zones will be managed a Vegetation Management Plan (submitted with a future DA) and a Koala Plan of Management (JBE 2021b) to facilitate natural regeneration to re-establish forest in these currently maintained areas.

1.2 Site Landuses

1.2.1 Past and current landuses

The subject land has been in the ownership of the proponent's family for >100yrs. It forms part of a formerly much larger holding, of which a significant portion has been previously excised to join Lake Innes Nature Reserve, including the peninsular of swamp forest to the south of the site.

For most of its time, the property has been used for rural pursuits of cattle grazing and timber production. In recent decades, the latter has become the predominant landuse with varying

rotations. The swamp forest now falling into Lake Innes Nature Reserve (LINR), which was donated to the NSW National Parks and Wildlife (NPWS) by the proponents, only developed after drainage changes around the middle of the last century (the late Jim Charley, pers. comm.).

In the late 1980s, a Development Application (DA 88/248) was approved on Lot 499. Works on this development to date have consisted of clearing and preliminary leveling of the fairways, preliminary drainage works and establishment of irrigation dams. Fairways run through and to the adjacent south of the site.

An underground and overhead services easement runs across the northern boundary of the site, with another overhead powerline easement running across middle of the western side. A track on some fill runs under the latter, with another on the edge of the western remnant. Periodic slashing is undertaken to manage the fairways and existing easements on site. A stormwater pipe is located in the northwest of this easement, discharging into the western remnant on site. This appears to be adversely affected eucalypts on the edge, with a cluster of dead trees and several showing stress in direct proximity. At the southern end of the western remnant, a table drain has been excavated running south.

While boundaries of the parent lot adjoining existing residential areas are fenced, the boundary with LINR is not. No grazing stock are currently kept on site.

1.2.2 Fire history

A major fire occurred in the study area in 1994. This saw much of LINR burnt with a crown fire, including that adjacent to the site (Jim Charley, pers. comm.).

As shown in **Figure 3**, fire has not recently occurred on the site or in the adjacent section of LINR in the catastrophic 2019-2020 season. However, LINR burnt out extensively at varying intensity to the southwest and west into Thrumster and Fernbank Creek, and the northern end of LINR near its junction with Kooloonbung Creek Nature Reserve (KCNR).

1.2.3 Weed invasion

Weed invasion varies widely over the site, with the highest areas of weed invasion occurring in the pasture. Weeds here are primarily common pasture species such as Common and Broad-leaved Paspalum, Carpet Grass, *Setaria sphacelata**, Cobblers Pegs, Billygoat Weed and Lambs Tongue.

Some dense areas of Lantana occur in the northern end and around the edges of the LINR swamp forest. Lantana occurs only as small plants on site. *Ochna serrulata** is very common in one area within the proposed development envelope but suppressed by slashing.

Figure 1: Location of subject land on parent parcel

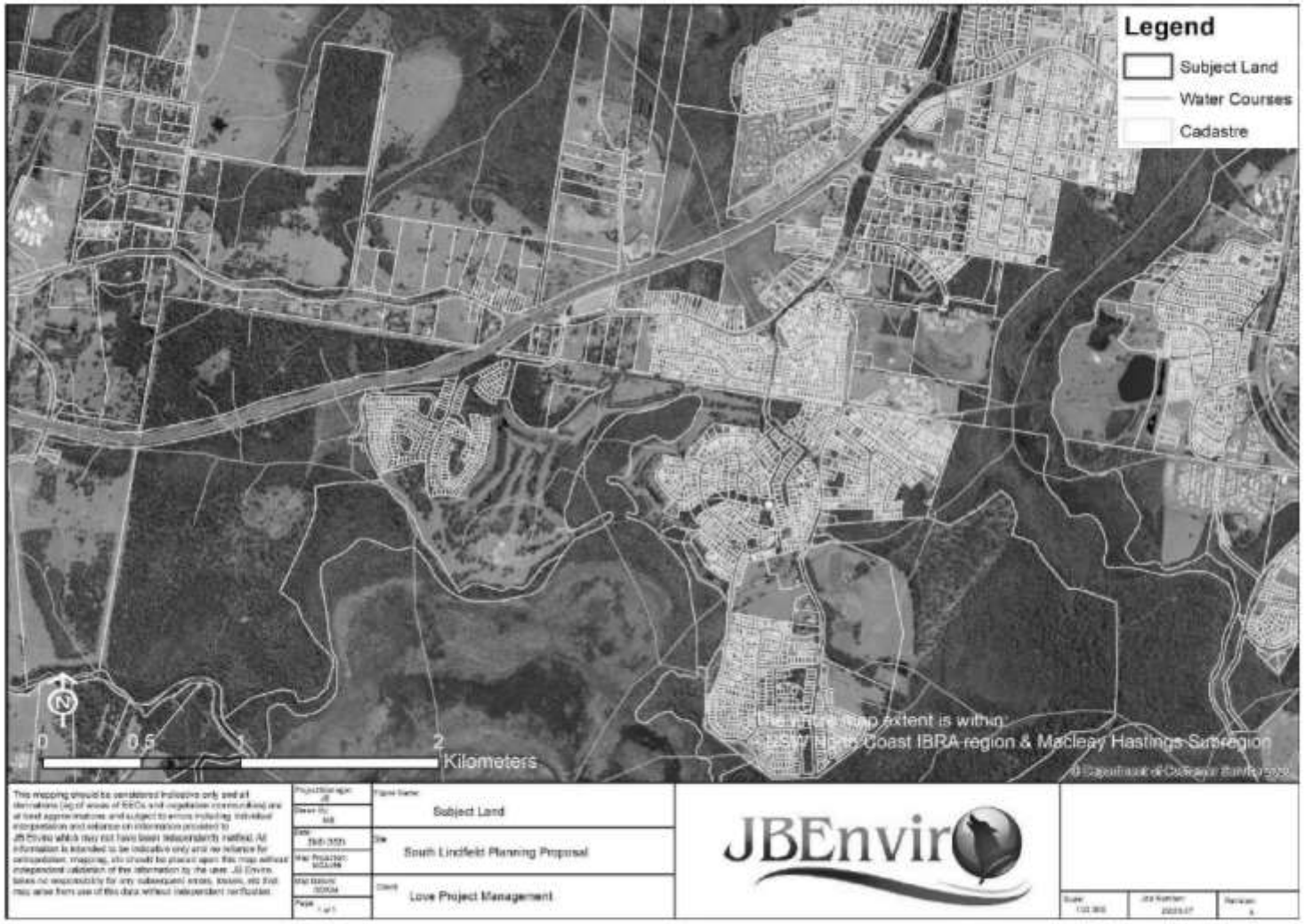


Figure 2: Proposed new zones on the subject land



Figure 3: GEEBAM fire mapping of the locality relative to the subject land



1.3 Adjacent landuses

The site adjoins Annabella Downs to the northeast, an existing residential estate established around 15 years ago.

Adjoining land to the north and northeast has largely been rezoned as part of an earlier rezoning (Naturecall 2016) to R1 and Environmental zoning to allow future residential development. A Koala Plan of Management (Biodiversity Australia 2020) applies to this land.

The Port Macquarie Crematorium adjoins to the west, grading to Ascot Park residential estate further west and southwest.

Land to the east, south, and southwest outside LINR occurs on the parent parcel, and comprises fairways for the approved golf course.

1.4 Sources of information used

The following data sources were reviewed as part of this report, in addition to the references cited:

1.4.1 Websites/Databases

- BioNet Vegetation Classification (http://www.environment.nsw.gov.au/NSWVCA20PRapp/search/keysearch.aspx#):
- Bionet Atlas (DPIE 2021a) (http://www.bionet.nsw.gov.au/):
- Threatened Biodiversity Data Collection (DPIE 2021b):
- BOSET tool (https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=BOSETMap)
- Key Fish Habitat maps (https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/key-fish-habitat-maps.
- Native Vegetation Regulatory map (https://www.lmbc.nsw.gov.au/Maps/index.html?viewer=NVRMap): accessed 19/1/2021
- EPBC Act Protected Matters Search Tool (http://www.environment.gov.au/epbc/pmst/)
- Six Maps (http://maps.six.nsw.gov.au):
- NSW Planning Portal (https://www.planningportal.nsw.gov.au/find-a-property)
- NSW Coastal SEPP viewer (http://webmap.environment.nsw.gov.au/PlanningHtml5Viewer/?viewer=SEPP_CoastalManagement)

1.4.2 Spatial Data

Spatial data encompassing the site boundary and development site was made using the layout provided by the proponent.

Aerial base map data was obtained from DFSI NSW databases, with cadastral data obtained from DFSI digital cadastral database. Mapping for stream orders was obtained from DFSI NSW Hydrography database.

The following spatial datasets were utilised during the development of this report:

- GEEBAM (https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-

AU&runWorkflow=AppendLayerCatalog&CatalogLayer=SEED_Catalog.250.GEEBAM%20Burnt%20Area%20Class)

- Mitchell Landscapes Version V3.1 (OEH 2016a);
- Interim Biogeographic Regionalisation of Australia (IBRA) Version 7 (DotEE 2013);
- Directory of important wetlands (DotEE 2010);
- NSW Wetlands (OEH 2010);
- SEPP (Coastal Management) 2018 (DPE 2018)
- Port Macquarie-Hastings Council LGA Vegetation Mapping (Biolink 2013a)
- Port Macquarie-Hastings Council LGA Koala Habitat Mapping (Biolink 2013b)
- Fauna Corridors and Key Habitats for North East NSW (OEH 2010)
- NSW National Parks and Wildlife Service (NPWS) Estate (OEH 2011)
- Troedson A.L. & Hashimoto T.R. (2008). Coastal Quaternary Geology – north and south coast of NSW. Geological Survey of New South Wales, Bulletin 34.

Mapping undertaken during the site assessment was conducted using a hand-held GPS unit (GDA94). Mapping has been produced using a Geographic Information System (GIS; ArcGIS 10.5).

1.4.3 Reports

- Abel Ecology (2017). A Critical Evaluation of the Status of Some Endangered Ecological Communities Mapped on Vilro Land at Port Macquarie – Part A: Soils and Landforms. Unpublished report to Vilro Pty Ltd and Love Project Management. Abel Ecology, Sydney.
- Abel Ecology (2016). Mahers East and Dam Flat soils – A Preliminary Investigation. Unpublished report to Vilro Pty Ltd. Abel Ecology, Sydney.
- Bale, C.L. (2005). Flora Survey: Mahers Spur. A report on a portion of Innes Lake prepared for Charley Brothers March 2005. C. Bale Vegetation Consultant, Armidale.
- Berrigan, J.A. (2003). Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed Residential Estate, Lot 9, The Ruins Way, Port Macquarie. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Port Macquarie.
- Berrigan, J.A. (2001a). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Residential Subdivision, Lot 4, DP 788598, The Oxley Highway, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.
- Berrigan, J.A. (2001b). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Combined High School, Lot 581 DP 754434, Major Innes Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.
- Berrigan, J.A. (2001c). SEPP 44 Assessment for Lot 1 DP 536256, The Ruins Way. Darkheart Eco-Consultancy, Port Macquarie.
- Berrigan, J.A. (2001d). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Residential Subdivision, Lot 4, DP 788598, Major Innes Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.
- Berrigan, J. A. (1999a). Threatened Species and SEPP 44 - Koala Habitat Assessment for Proposed Subdivision, Lot 2, DP 589082, The Ruins Way, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.
- Berrigan, J. A. (1999b). Threatened Species and SEPP 44 - Koala Habitat Assessment for Proposed Residential Subdivision, Lots 3 and 5, The Ruins Way, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

- Biodiversity Australia (2020). Ecological Constraints Assessment for Proposed Rezoning and Residential Subdivision of Lot 399 DP1241278 and Lot 340 DP1251842, Port Macquarie.
- Biodiversity Australia (2019). Ascot Park KPoM Monitoring Report 2019. Biodiversity Australia, Port Macquarie.
- Biodiversity Australia (2018). Ascot Park KPoM Monitoring Report 2018. Biodiversity Australia, Port Macquarie.
- Biolink (2013a). Vegetation of the Port Macquarie-Hastings Local Government Area. Unpublished report to PMHC, Port Macquarie. Biolink Ecological Consultants, Uki, NSW.
- Biolink (2013b). Port Macquarie – Hastings Koala Habitat and Population Assessment. Unpublished report to PMHC, Port Macquarie. Biolink Ecological Consultants, Uki, NSW.
- Biolink (2008). Area 13 UIA Koala Plant of Management Final Draft. Unpublished report for Hastings Council. Biolink Pty Ltd, Ecological Consultants, Uki NSW.
- Biolink (2005a). An Ecological Overview of Koalas and their Habitat on the Innes Peninsula, Port Macquarie NSW. Unpublished report for Vilro Pty. Ltd. Biolink Pty Ltd, Ecological Consultants, Uki NSW.
- Biolink (2005b). Koala Plan of Management for Part Lot 32 DP 809231 – Maher's Headland Port Macquarie, NSW. Unpublished report for Charley Brothers. Biolink Pty Ltd, Ecological Consultants, Uki NSW.
- Biolink (2005c). Area 13 Urban Investigation Area Local Environmental Study (Ecological Constraints). Unpublished report. Biolink Pty Ltd, Ecological Consultants, Uki NSW.
- Biolink (2005d). Ecological Assessment South Lindfield). Unpublished report to Vilro Pty Ltd. Biolink Pty Ltd, Ecological Consultants, Uki NSW.
- Biosis Research (2005). Oxley Highway Deviation - Supplement to Species Impact Statement. Unpublished Report. Biosis Research Pty. Ltd. Natural and Cultural Heritage Consultants, Chippendale NSW.
- Biosis Research (2004a). Oxley Highway Deviation Species Impact Statement. Unpublished Report. Biosis Research Pty. Ltd. Natural and Cultural Heritage Consultants, Chippendale NSW.
- Connell Wagner Pty Ltd (2000a). Koala Plan of Management – Coastal Area. Part A: The KPOM – Hastings Council. Connell Wagner Pty Ltd, Neutral Bay.
- Connell Wagner Pty Ltd (2000b). Koala Plan of Management – Coastal Area. Part B: Resource Study – Hastings Council. Connell Wagner Pty Ltd, Neutral Bay.
- Darkheart Eco-Consultancy (2014). Review of Coastal Floodplain EEC Mapping in the PMHC LGA. Unpublished report to PMHC. Darkheart Eco-Consultancy, Kew.
- Darkheart Eco-Consultancy (2013). Ecological Survey and Constraints Assessment: Part Lot 289 DP 1184284 and Lot 6 DP110560, The Ruins Way, Port Macquarie. Unpublished report to Charley Bros Pty Ltd. Darkheart Eco-Consultancy, Kew.
- Darkheart (2012). Ecological Survey and Constraints Assessment: Part Lot Part Lot 289 DP 1184284 and Lot 6 DP 110560, The Ruins Way, Port Macquarie. Darkheart Eco Consultancy, Kew.
- Darkheart Eco-Consultancy (2008). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed for Residential Subdivision of Lot 5 DP 998125, The Ruins Way, Port Macquarie. Unpublished report to Luke and Co. Pty Ltd. Darkheart Eco-Consultancy, Laurieton.

- Darkheart Eco-Consultancy (2007). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Residential Development of Lot 5 DP 998125, The Ruins Way, Port Macquarie. Unpublished report to Luke and Co. Pty Ltd. Darkheart Eco-Consultancy, Laurieton.
- Darkheart Eco-Consultancy (2006a). Fauna Survey and Assessment of Proposed Residential Subdivision of Part of Lot 32 DP 809231, Phillip Charley Drive, Port Macquarie. Unpublished report to Luke and Company Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.
- Darkheart Eco-Consultancy (2006b). Statutory Ecological Assessments of Proposed Residential Subdivision of Lot 5 DP 998125, The Ruins Way, Port Macquarie. Unpublished report to Luke and Company Pty. Ltd. Darkheart Eco-Consultancy, Laurieton.
- Darkheart Eco-Consultancy (2005a). Flora and Fauna Survey and SEPP 44 Assessment of Proposed Shopping Centre and Future Residential Development on Lot 2 DP, and Ecological Assessment of Adjacent Rd Reserve, Cnr Major Innes Drive/Oxley Highway, Port Macquarie. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Port Macquarie.
- Darkheart Eco-Consultancy (2005b). SEPP 44 Assessment of Lot 22, Wrights Rd, Port Macquarie. Unpublished report to Budden Nandle Michael Hudson Architects. Darkheart Eco-Consultancy, Port Macquarie.
- Darkheart Eco-Consultancy (2005c). Threatened Species, EPBCA and SEPP 44 Assessments for Part of Proposed School on Lot 2 DP 584232, Oxley Highway, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie. Unpublished report to Luke and Company. Darkheart Eco-Consultancy, Port Macquarie.
- Darkheart Eco-Consultancy (2004a). Threatened Species, EPBCA and SEPP 44 Assessments for Sports Field, St Columba Anglican School, Major Innes Drive. Unpublished report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.
- Darkheart Eco-Consultancy (2004b) Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Community Facilities Building, Lot 5 DP 790668, Tulloch Rd, Port Macquarie. Unpublished report to Hastings Council. Darkheart Eco-Consultancy, Port Macquarie.
- Darkheart Eco-Consultancy (2004c) Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Emergency Services Centre, Lots 1 and 2 DP 804235, Central Rd, Port Macquarie. Unpublished report to Hastings Council. Darkheart Eco-Consultancy, Port Macquarie.
- JBEnviro (2019). Preliminary constraints assessment for future residential development of Lot 245 DP1227796, Koel Crescent, Port Macquarie. Unpublished report to Land Dynamics, Port Macquarie.
- JB Enviro (2017). Ecological and Constraints Assessment. Part Lot 289 DP 1184284 and Lot 6 DP 110560, The Ruins Way, Port Macquarie. JB Enviro, Port Macquarie.
- Naturecall (2016). South Lindfield KPoM Stage 2: Koala Plan of Management. Unpublished report to PMHC.
- Naturecall (2015a). South Lindfield KPoM Stage 1: SEPP 44 Assessment, Literature Review, Tree Marking and Review of Development Concepts. Unpublished report to PMHC.

2.0 LEGISLATIVE FRAMEWORK

The following table summarises the relevant legislative considerations assessed in this report:

Table 2: Legislative pathways

Name	Relevance to the project	Report Section
Commonwealth		
Environmental Protection and Biodiversity Conservation Act 1999	Matters of National Environmental Significance have been identified on or near the site. This report assesses impacts to MNES and concludes that the development is not likely to have a significant impact on MNES.	4
State		
Environmental Planning and Assessment Act 1979	This report forms part of a Planning Proposal submitted under s56 of the EP&A Act and will form part of the information to be placed on public exhibition.	All sections
Biodiversity Conservation Act 2016	The clearing associated with the proposal exceeds the minimum area threshold specified in s7.2 of the Act, thus a BDAR is thus required for any future Development Application. The site/study area also contains the edges of area of Sensitive Biodiversity Value Land (SBVL), on the basis of "*Threatened species or communities with potential for serious and irreversible impacts*." (see **Figure 4**)	2, 3
Fisheries Management Act 1994	The development does not involve impacts to Key Fish Habitat, does not involve harm to marine vegetation, dredging, reclamation or obstruction of fish passage. A permit or consultation under the FM Act is not required.	No further assessment required.
Local land Services Amendment Act 2016	The LLS Act does not apply to areas of the state to which the SEPP Vegetation applies. Review of the Native Vegetation Regulatory Map shows the property is covered by the LLS Act as it zoned RU1. No assessment under the LLSA is required as a future Development Application would be lodged under Part 4.	No further assessment required.
Water Management Act 2000	No mapped watercourses occur on site, but a 1st order drainage line is mapped as rising just over the western boundary, and onto the parent parcel. If a future DA involves works on waterfront land (land within 40m of the watercourse), a Controlled Activity Approval under s91 of the WM Act will be required.	Not addressed in this report
State Planning Instruments		
Vegetation SEPP (VSEPP)	The Vegetation SEPP applies to development that does not require consent under Part 4 of the EP&A 1979 on land zoned Urban, or E2, E3, E4 or R5. The subject land is currently zoned RU1, hence the VSEPP does not apply. Post-rezoning to R1, the VSEPP will apply unless a Development Application is being lodged under Part 4.	No further assessment required.
Coastal SEPP	The proposed development envelope is not located on land that is mapped as a Coastal Wetland or Littoral Rainforest hence does not trigger off Designated Development. The swamp forest to the south	Not addressed in this report

Name	Relevance to the project	Report Section
	generally encapsulated within LINR is mapped as a Coastal Wetland, with the Proximity Area extending over the southern portions of the site, existing golf fairways, and a number of residential dwellings within Annabella Downs (see **Figure 5**).	
Koala Habitat Protection SEPP 2020	The PMHC LGA is listed under Schedule 2 and hence assessment is required.	5

3.0 LANDSCAPE FEATURES

3.1 IBRA Regions and Mitchell Landscapes

The site falls the following regions and landscapes:

Table 3: Biodiversity regions and landscapes

IBRA region	Area within site (ha)
NSW North Coast	All
IBRA subregion	**Area within site (ha)**
Macleay Hastings	All
Mitchell Landscapes	**Area within site**
Manning-Macleay Coastal Alluvial Plains	All of site

3.2 Native Vegetation Extent

Vegetation within the study area and the 1500m buffer area was assessed using aerial photographic interpretation, field survey results and existing vegetation mapping within a GIS (ArcGIS10.5). The extent of native vegetation within the study site and buffer is outlined in the following table:

Table 4: Native vegetation extent

Area within the subject land (ha)	Area within the 1500m buffer area (ha)
Approximately 0.32ha in development envelope (excluding the degraded areas)	851.ha

There are no differences between the mapped vegetation extent and the aerial imagery.

3.3 Rivers and Streams

No defined watercourses occur on site, but a 1st order stream is mapped as rising off the mid-west boundary and running south (**Figure 5**). If present, under the *Water Management Act 2000*, this would need a 10m wide (either side) Riparian Protection Zone.

Figure 4: Sensitive Biodiversity Value Land in the study area



3.4 Wetlands

The proposed development is not located on land that is mapped as a Coastal Wetland or an Important Wetland.

Figure 5 shows the adjacent section of LINR is mapped as Coastal Wetland, and about half of the proposed development envelope falls within the proximity area.

3.5 Connectivity Features

The site contains the connectivity features shown in **Figure 6**.

3.5.1 Regional Corridors

Regional corridors are typically >500m wide and provide a link between major and/or significant areas of habitat in the region. Ideally they are of sufficient size to provide habitat in their own right and at least twice the width of the average home range area of fauna species identified as likely to use the corridor (Scotts 2003).

Figure 6 shows the site does not fall into a regional corridor. The nearest is the section of LINR to the south, which essentially appears to form a cul-de-sac in the mid-north of the LINR regional corridor, the bulk of which is centred on Lake Innes Nature Reserve. This regionally significant corridor interconnects to significant areas of habitat within State Forest and some private lands west to King Creek, Bago and Byabarra; south and southwest to North Haven and Heron's Creek.

Some tentative connectivity for habitat generalist and urban woodland tolerant species from the northern cul-de-sac of this corridor is provided via strips and patches of derived woodland vegetation towards the east on land owned by the proponent, and retained trees in streetscaping, southeast to retained habitat on land largely also owned by the proponent, which links to Kooloonbung Creek Nature Reserve; and to identified Core Koala Habitat to the northwest (Naturecall 2016). Linkage north is however hampered by current and future urban growth, and the Oxley Highway.

3.5.2 Sub-Regional Corridors

Sub-regional corridors connect larger landscaped features and are of sufficient width to allow movement and dispersal (generally >300m), but may not provide substantial species habitat (Scotts 2003).

No sub-regional corridors are mapped in close proximity to the site. The nearest is the Lake Innes-Cowarra >800m southwest. This crosses the Oxley Highway and John Oxley Drive northwest to a link to an eastern branch of this corridor that links east to the northern end of the LINR regional corridor.

Both sub-regional corridors have significant limitations for non-flying fauna: they cross over residential areas; arterial roads and highways; and cleared lands.

3.5.3 Local Corridors and Habitat Links

Habitat links are evaluated in this report as links from habitat on-site directly to similar habitat on adjacent land. These would be used by fauna, which depend solely or at least partially on the site and adjacent habitats for all of their lifecycle requirements (eg a colony of Brushtailed Phascogale), and/or dispersal (eg Koalas). Local corridors are larger habitat links or an

aggregation of links which provide connections between remnant patches of habitat and landscape features, and are used for larger scale movement of genes and/or animals eg dispersal, colonisation, nomadic seasonal movements, etc. Due to their relatively small area and width (they may be <50m), these corridors and links are vulnerable to edge effects (Scott 2003, Lindenmayer and Fisher 2007).

Local corridors occur to the west, south and east of the site, via the remnant forest along the western boundary; and the strips of forest retained between fairways south and east. These are however narrow, especially the inter-fairway strips which are only 10-40m wide, hence are exposed to extreme edge effects.

The western boundary corridor is the most significant as it is widest and links to identified Core Koala Habitat to the north, and west to Ascot Park (Naturecall 2016, BA 2019, 2018).

Mobile, derived and urban woodland species would facilitate these corridors (eg. Koala, Squirrel Glider), but small terrestrial species (eg. Common Planigale) would not due to the lack of sufficient cover, physical barriers and exposure to predators.

3.6 Areas of Geological Significance and Soil Hazard Features

The site contains no areas of geological significance and soil hazard features as shown in **Figure 7**.

Figure 5: Coastal SEPP wetlands and watercourse in proximity to site



Figure 6: Corridors and Mitchell Landscapes relative to site

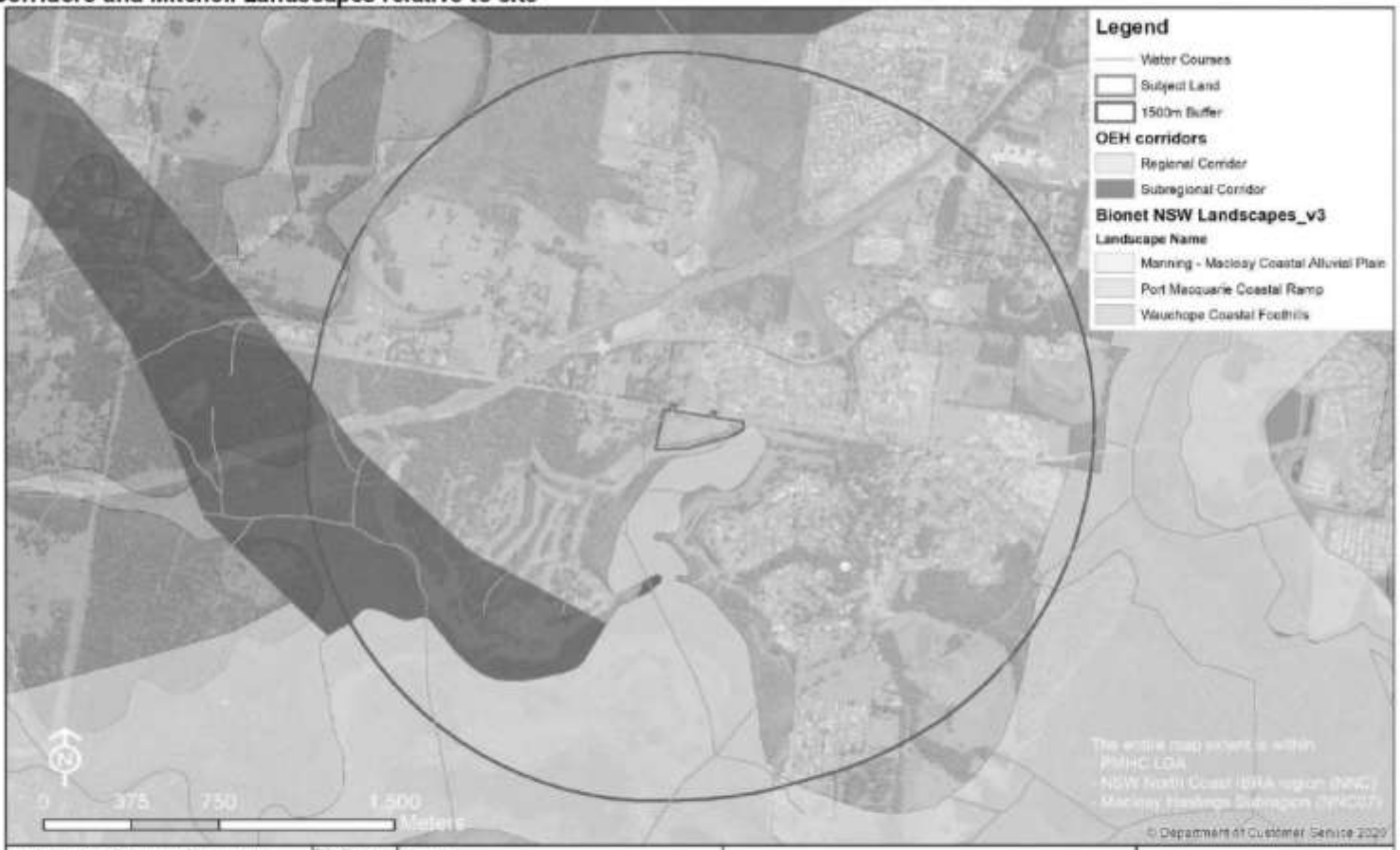


Figure 7: Acid Sulfate Soils Risk relative to site



3.7 Topography, Geology and Soils

3.7.1 Topography

The South Lindfield area falls over a declining slope, with a fall to the south measured with a declination of 4%. Level landforms occur well south of the site (Abel Ecology 2017). A slightly lower area lies in the southwestern boundary where an open drainage depression occurs.

3.7.2 Geology and Geomorphology

Bedrock geology of the locality as mapped by Leitch (1980) was incorporated into coastal Quaternary geology mapping by Troedson and Hashimoto (2008). Minview (https://minview.geoscience.nsw.gov.au/) shows the majority of the site falls on Touchwood formation siltstone, with the eastern end on Karikeree metadolerite.

Soils in the South Lindfield area are predominantly derived from this parent material (Abel Ecology 2017), slowly intergrading downslope to the open drainage depression within the adjacent section of LINR.

The LINR segment to the south of the South Lindfield precinct falls on this underlying parent geology, and is mapped at the 1:25 000 scale (Troedson and Hashimoto 2008) as likely to have a complex mix of Pleistocene clay, silt, and fluvial and marine sands comprising the shallow upper layers. Due to this complexity of geomorphological origins (ie. colluvial, estuarine and lacustrine), this area was classed as undifferentiated (Troedson and Hashimoto 2008).

3.7.3 Landscape Scale Soil Landscape Mapping

There are two levels of current landscape-scale soil landscape mapping. These are reviewed for later context to site-specific soil investigations (Abel Ecology 2017).

3.7.3.1 Atkinson 1999

The Kempsey 1:100 000 Soil Landscape map sheet (Atkinson 1999, DLWC 1999) shows the locality has an intricate soil landscape due to the complex range of geomorphological processes eg. the coastal faults, volcanics and mantle intrusions. On these maps, the study area appears to fall close to the boundary of the Thrumster and Cowarra soil landscapes, with the adjacent section of the LINR occurring on the Cairnscross soil landscape.

In terms of geomorphology, the Thrumster soils are developed on residual landscapes; whereas those of Cairnscross are transferal, which typically includes deep deposits of eroded soil and materials washed downslope (colluvium) from residual areas, and often merging with the periphery of alluvial landscapes on their downslope edge. Transferral landscapes are thus defined by contours (Atkinson 1999).

Dominant great soil groups in each of these broad classes are mapped at the 1:100 000 scale as Krasnozems in the Thrumster landscape; and Yellow Podzolics, Soloths and Humic Gleys in the Cairnscross soil landscape.

Specific soil profile investigations have been undertaken (Abel Ecology 2017, 2016) to verify this soil landscape mapping (see section 3.7.4) to assist determination of the presence/absence of Endangered Ecological Communities (EECs).

3.7.3.2 Hashimoto and Troedson 2008

As part of the Comprehensive Coastal Assessment (CCA), a series of 1:25 000 geological maps of Quaternary deposits were made for the coverage area. These maps were prepared to provide a uniform and robust dataset for land use planning and management, and to provide information on issues such as acid sulphate soils and land use capability. These maps are considered the most accurate to date for soil landscape mapping at this scale (Troedson and Hashimoto 2008, Hashimoto and Troedson 2008), but limitations have to be acknowledged at the site scale e.g. use of low resolution (landscape scale) soil profile sampling interopolated with models to map soil landscapes (Abel Ecology 2016, 2017, Hashimoto and Troedson 2008).

Figure 8 shows this mapping overlaid over the study area, with the following table summarising the properties of the soil landscapes. This mapping clearly shows the complex geology of the locality due to the faults, combined with lacustrine/estuarine processes associated with Lake Innes, which was formerly open to the ocean and later altered to an estuarine lagoon, and eventually a freshwater lake with the development of the barrier dune system (Hashimoto and Troedson 2008).

Table 5: Coastal Quaternary soil landscape mapping of the property

Soil Landscape	General Location	Geomorphic Origin	Characteristics
Qpu (Quaternary Unit 1)	Section of LINR to south, southwest corner of site.	Undifferentiated/Mixed	Pleistocene undifferentiated clay, silt, fluvial sand, marine sand.
D-Ct (Quaternary Unit 1)	Upper western half of site	Bedrock	Devonian to Carboniferous sedimentary rocks (Tamworth Belt)
Pzs	Eastern-most part of site	Bedrock	Cambro-Ordovician, Devonian and Carboniferous sedimentary and minor volcanic rocks

3.7.4 Site Soil Landscape Investigations

In order to more clearly define the boundaries of the landscape units with greater precision than shown on the DLWC (1999) 1:100 000 map, which also appears to conflict with the underlying geological mapping by Hashimoto and Troedson (2008) and Leitch (1980); the proponent engaged specialist soil investigations over the South Lindfield area and the adjacent LINR area (Abel Ecology 2016, 2017).

Soils were examined in a catenary sequence downslope in the western end of the South Lindfield area. The soil profile and its geomorphological and pedogenesis origins were examined via a site soil survey since it is critical for legal clarification to distinguish between well drained and poorly drained landscape elements, and soils which match the Final Determination where vegetation that matches the Final Determination, is present (NSWSC 2004d, *CBD Prestige Holdings Pty Ltd v Lake Macquarie City Council [2005] NSWLEC 367, Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209, Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74*).

Soil profiles were sampled across the soil landscape gradients mapped by Atkinson (1999) and Hashimoto and Troedson (2008). Methods used included field and laboratory examination and are detailed in Abel Ecology (2016, 2017).

Site investigations found that the soil landscape mapped by Atkinson (1999) as Thrumster (th) on the South Lindfield precinct are clearly not Krasnozems, hence this soil landscape does not exist in this precinct.

Rather, they are Podzolics, defining the classic upper to lower slope catenary elements so common on fine-grained sedimentaries of this part of the coast. Of particular significance is the influence of previous lateritisation of the saprolite and the inherited characteristics in the present solum, which have given this soil profile its characteristic colours and hence its superficial resemblance to Kraznozem. Similar profiles may be found in parts of the Sovereign Hills area south of the Oxley Highway. These soils are clearly forms or variants of the Kundabung (kg) landscape (Atkinson 1999). Other evidence supporting the soils were not derived from alluvial processes include angular lithic fragments of varying sizes; lack of truncated or multilayered soil profiles; and a dominance by heavy clays.

It also is relevant to note here that Atkinson (1999) states that the 1:100 000 scale of mapping does not allow delineation of soil landscape occurrences smaller than about 40 hectares, hence the complex folding of the locality (see Figure 2) has had a more localised effect on soil landscapes than could be shown by Atkinson (1999).

Furthermore, other soil profile examinations (Abel Ecology 2016, 2017) across the area mapped as Qpu by Hashimoto and Troedson (2008) found that the soils to the eastern boundary of the Hastings Crematorium and in the middle of the fairway are gleyed podzols which contain lithic fragments and pedogenic grit. This indicates that they are derived from weathering of the parent material, with upper layers indicating colluvial processes, as expected given their position on a footslope. These soils are mottled and poorly drained, but by no means at the more hydromorphic end of the gleyed sequence of variants in the landscape classification, and only indicate a long history of alternating periods of wetting and drying (Abel Ecology 2016, 2017).

Abel Ecology (2016, 2017) thus clearly determine that there are no alluvial soil landscapes in the study area.

A separate soil profile examination in the LINR area found the soils were again heavily influenced by the residual substrate, with the upper horizons a mix of colluvial (slope wash from the adjacent areas), estuarine and lacustrine origins (the latter increasing towards Lake Innes). These soils were again in-line with Atkinson's Cairnscross classification, which includes complex intergrades at merge zones between colluvial and alluvial, estuarine and lacustrine soil forming processes (Atkinson 1999).

Alluvial processes are not evident in the soil profile in the adjacent section of LINR e.g. layering and sorting.

3.8 Areas of Outstanding Biodiversity Value

The site does not contain Areas of Outstanding Biodiversity Value.

Figure 8: 1:25 000 Quaternary soil landscape mapping of the site
(Source: Troedson and Hashimoto 2008a)



4.0 SITE CONTEXT

4.1 Method applied

The site-based method has been applied to this development in accordance with section 4.3 of BAM (DPIE 2020a). Accordingly, a 1.5km buffer zone was used to assess the landscape around the development site (Figure 1).

4.2 Percent native vegetation cover in the landscape

The current percent native vegetation cover in the landscape was assessed in ArcGIS 10.5 using aerial imagery sourced from Department of Finance, Services & Innovation (DSI) 2018 (public/NSW Imagery) viewed at 1:500 map scale.

Approximately 380.64ha of native vegetation was mapped within the 850.9ha buffer area (total buffer area (855.076ha) – water bodies (4.2ha). Native vegetation cover within the buffer area is approximately 45% and is assigned to the <70% cover class. Native vegetation cover is shown in **Figure 9**.

4.3 Patch size

A patch is defined in the BAM (DPIE 2020a) and BAM Operational Manual (2020b) as an area of native vegetation (disturbed or intact) that occurs on the subject land and on interconnected land (with the upper range limit defined by the following gaps).

The patch may extend onto adjoining land beyond the footprint of the subject land for forest to derived shrub and grass communities separated by ≤100m from the next area of native vegetation of the same condition as the VZ. For non-woody vegetation (natural grasslands, sedgelands, etc), this gap is reduced to ≤30m. Patch size is required to be assessed as one of 4 classes per VZ: <5ha, 5-24ha, 25-100ha or >100ha.

Patch size was calculated using aerial imagery via a select process in ArcGIS as well as the field validated map of vegetation types identified for the study site. A patch size was assigned to each vegetation zone as per the BAM (DPIE 2020a). A vegetation zone is defined as an area of native vegetation on the site that is the same PCT and has a similar broad condition state.

Table 6: Patch size

Vegetation Zone	VZ area (subject land)	VZ area (site)	Patch size area (ha)
VZ 1 PCT 690 Moderate A	0.09	0.09	>500ha
VZ 2 PCT 690 very low	1.86	1.56	~70ha
VZ 3 PCT 690 Moderate B	0.24	0.24	>500ha
VZ 4 PCT 1724 very low	1.22	0.99	~70ha

5.0 NATIVE VEGETATION

5.1 BAM survey effort

The BAM plot based survey was undertaken within the subject site by Jason Berrigan over various dates in January 2021. The following tables summarises the BAM effort. In addition to this survey, the entire site and subject land was traversed numerous times during other aspects of the survey.

Plot locations are shown in **Figure 10**. All field data collected at full-floristic and vegetation integrity plots data are included in **Appendix 4**.

Table 7: BAM vegetation survey effort on the subject land

PCT ID	Veg Zone	Condition	VZ area (subject land)	VZ area (site)	Plots Required as per BAM (2020)	No. Full floristic composition/PCT identification/Vegetation Integrity Plots	No. Function Plots
690	1	Moderate	0.09	0.09	1	1	1
690	2	Very low	1.86	1.56	1	2	2
690	3	Moderate	0.24	0.24	1	1	1
1724	4	Very low	1.22	0.99	1	1	1

5.2 Plant Community Types

Two PCTs were identified on the site. Both show various levels historical disturbance from past selective logging, historical clearing (the adjacent area of LINR was reported by the late co-owner to have been cleared and maintained in his childhood), and direct and indirect impacts of clearing associated with establishing the fairways.

Figure 9: Native vegetation cover within 1500m^2 buffer

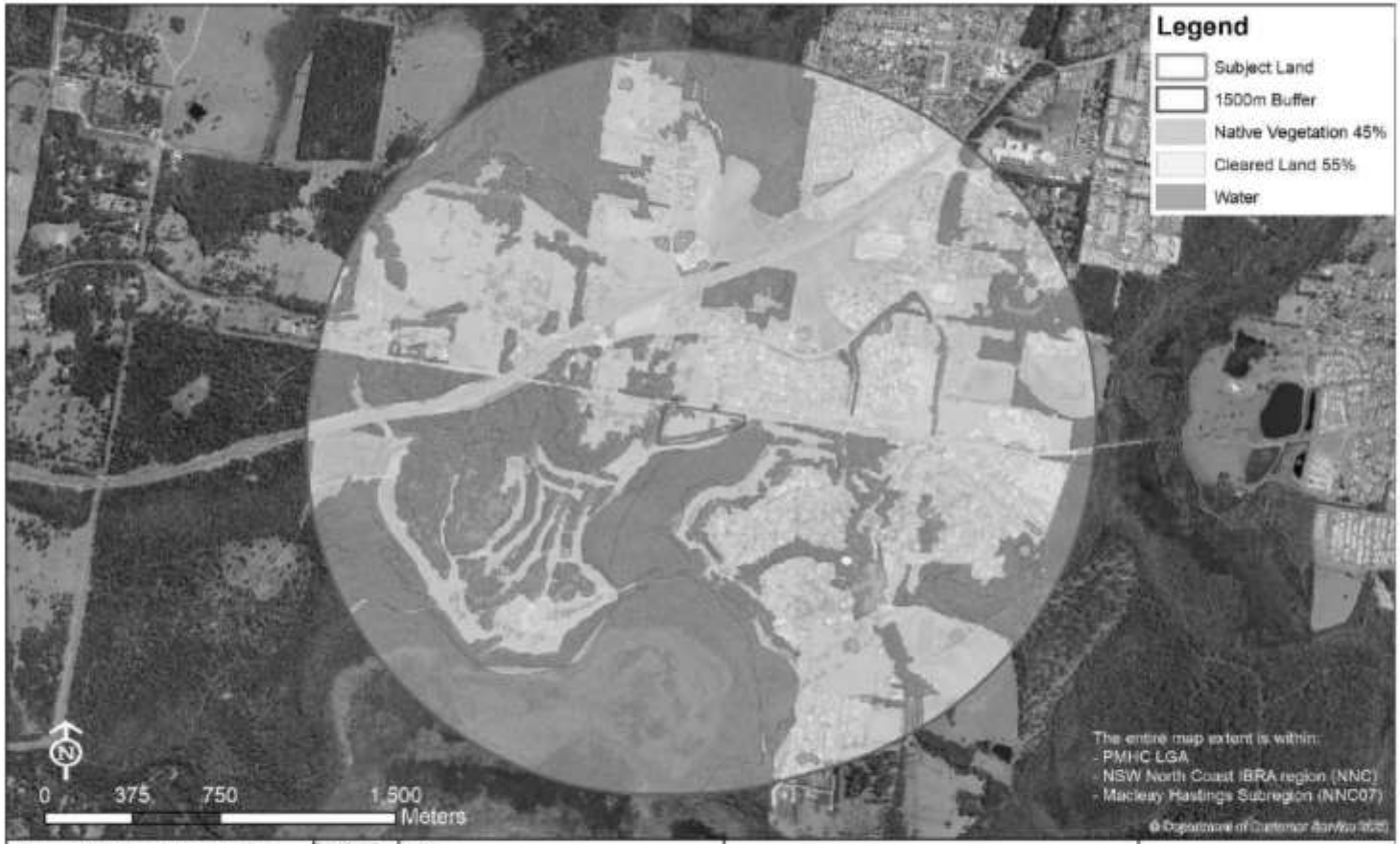


Figure 10: Plot locations, vegetation zones and PCTs



5.2.1 VZ 1 PCT 690 Moderate A

PCT	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion
Percent cleared	55%
Class	Northern Hinterland Wet Sclerophyll Forests
Formation	Wet Sclerophyll Forests (Grassy sub-formation)
Location	Comprises mixture of plantings and regrowth along an open stormwater drain in central south-southeast of site.
Condition	Moderate. Groundcover has high weed content, and is immature regrowth.
Extent within Development Site	0.09ha in total; 0.09ha in development envelope
Description	(a) Canopy: Structure and Species: Consist mostly of colonizing Swamp Oak (*Casuarina glauca*) with Blackbutt (*Eucalyptus pilularis*) and Pink Bloodwood (*Corymbia intermedia*). These are all immature trees, up to about 10m high, with trunk diameter at breast height (DBH) 10-30cm. (b) Understorey: Not a true stratum per se, as mostly just a few young Swamp Oak, Blackbutt and Pink Bloodwood, with some young Broad-leaved Paperbarks (*Melaleuca quinquenervia*) and Weeping Bottlebrush (*Callistemon salignus*). These are generally 3-6m tall. (c) Shrub Layer: Structure and Species: Generally sparse, comprising some White Sally (*Acacia floribunda*) seedlings with a few adults, and numerous Prickly Beard-heath *(Leucopogon juniperinus)* <0.5m tall. (d) Ground Layer: Structure and Species: Ranges 10-70cm. Contains a mix of native and exotic species, with sedges dominating the stormwater channel. Dominant terrestrial natives are planted Spiney-Headed Matrush with some Wiry Panic (*Entolasia stricta*), Weeping Grass (*Microlaena stipoides*), Indian Pennywort (*Centella asiatica*), and Couch (*Cynodon dactylon*). In the drain, Cumbungi (*Typha orientalis*) with Water Pepper (*Persicaria hydropiper*) are the dominant natives with a patch of *Elaeocharis acuta*. Weeds are very common, particularly *Setaria sphacelata**, Carpet Grass (*Axonopus affinis**), Torpedo Grass (*Panicum repens**), *Polygala paniculata** and Goatweed (*Ageratum houstonianum**). (e) Lianas, scramblers, epiphytes, mistletoe etc.: Restricted to few young Monkey Rope (*Parsonsia straminea*) and Australian Bindweed (*Convulvus erubescens embescens*).
Justification for PCT Identification	Visually, this VZ presents as a Swamp Oak forest PCT. However, it occurs on residual soils where the original community was this PCT; elements of this PCT are colonizing from the adjacent intact remnant strip; and Swamp Oak is renowned for its extremely broad edaphic range and colonising ability in disturbed habitats. In time, the Blackbutt's would overshadow and probably out-compete the Swamp Oak,

	especially in a series of prolonged dry periods. The choice between this PCT and PCT 686 was very difficult to make as the latter is a better match for the areas where a shrubby mesophyllic understory not grassy is dominant; and both PCTs appear to occur either side of the Oxley Highway. The lack of Tallowwood as a key associate in PCT 686 and absence of Red Mahogany on site and adjacent in more intact remnants led to the decision to select PCT 690. However, both have only Very Low PCT Classification Level (as many North Coast PCTs do under the current classification system), and hence this is a constraint in enabling comparisons.
TEC Status	Does not correlate to any TEC under NSW or Commonwealth legislation – see section 6.

5.2.2 VZ 2 PCT 690 Very Low

PCT	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion
Percent cleared	55%
Class	Northern Hinterland Wet Sclerophyll Forests
Formation	Wet Sclerophyll Forests (Grassy sub-formation)
Location	Comprises pasture on northern half of site.
Condition	Very low. Long cleared and cultivated at some time to establish pasture. Dominated by pasture grasses. Compaction evident.
Extent within Development Site	1.86ha in total; 1.56ha in development envelope
Description	(a) Canopy: Structure and Species: Limited to a single near mature Pink Bloodwood. (b) Understorey: Absent. (c) Shrub Layer: Restricted to a single White Sally about 3m tall and two young Pink Bloodwoods about 2m tall. (d) Ground Layer: Structure and Species: Dominated by Setaria with Catsear (*Hypochaeris radicata**), *Polygala paniculata**, Centella, *Plantago lanceolata** and Carpet Grass. Minor element of various native and exotic herbs, sedges and grasses depending on local relief, Dominant natives were *Eragrostis brownii, Gonocarpus* sp., Spiney-headed Matrush, *Fimbristylis dichotoma, Juncus* sp., *Goodenia heterophylla,* Bog Rush *(Schoenus apogon)* and Couch. Some seedling Forest Red Gum, Blackbutt, *Callistemon salignus*, Broad-leaved Paperbark and Pink Bloodwood suppressed by slashing. (e) Lianas, scramblers, epiphytes, mistletoe etc.: Limited to Australian Bindweed which can be common.

Justification for PCT Identification	As above, and ecotonal as demonstrated by variable groundcover, with sedges occurring in small depressions, possibly former stump holes.
TEC Status	Does not correlate to any TEC under NSW or Commonwealth legislation – see section 6.

5.2.3 VZ 3 PCT 690 Moderate B

PCT	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion
Percent cleared	55%
Class	Northern Hinterland Wet Sclerophyll Forests
Formation	Wet Sclerophyll Forests (Grassy sub-formation)
Location	Comprises area of parkland in the northwest of the development envelope.
Condition	Moderate. Remnant trees underscrubbed historically with regrowth suppressed by slashing.
Extent within Development Site	0.24ha in total; 0.24ha in development envelope
Description	(a) Canopy: Structure and Species: Well-spaced canopy eucalypts 16-28m in height in a parkland form. Trunk DBH ranges from 20-80cm. Dominated by Tallowwood (*Eucalyptus microcorys*) with Pink Bloodwood and two large Forest Red Gums (*E. tereticornis*). (b) Understorey: Consists of a handful of younger Tallowwoods and Bloodwoods 5-8m tall, with trunk DBH 10-20cm. (c) Shrub Layer: Limited to some remnant trees that have escaped slashing at the base of the trees, with some low slashed shrubs and seedlings. Dominated by common wet sclerophyll species such as Cheese Tree (*Glochidion ferdinandi*), White Sally, Scentless Rosewood (*Synoum glandulosum*), *Myrsine variabilis, Acronychia oblongifolia*, with *Breynia oblongifolia* and *Ochna serrulata**. (d) Ground Layer: Structure and Species: Comprises a diverse mix of native and exotic herbs and grasses from 10-70cm in height with species composition varying on location. Height varies depending on the time since slashing. Dominant native grasses and sedges include Spiney Matrush, *Lomandra multiflora, Gahnia aspera*, Weeping Grass, Wiry Panic, Bladey Grass (*Imperata cylindrica*), Barbed Wire Grass (*Cymbopogon refractus*), Forest Hedgehog Grass (*Echinopogon ovatus*), and Basket Grass (*Oplismenus imbecillis*). Herbs and forbs include *Gonocarpus* sp., Spadeflower (*Hybanthus stellarioides)*, Centella, *Cheilanthes sieberi* and Pastel Flower (*Pseuderanthemum variabile*). Exotic grasses comprise Setaria and Carpet Grass with most common exotic herbs being Goatweed, *Polygala paniculata**, *Plantago lanceolata** and Cudweed (**Gamochaeta* sp.).

	(e) Lianas, scramblers, epiphytes, mistletoe etc.: Limited to some Scrambling Lily (*Geitonoplesium cymosum*), Wombat Berry (*Eustrephus latifolius*), Devils Twine (*Cassytha* sp.), and Snake Vine (*Stephania japonica*).
Justification for PCT Identification	While lacking Blackbutt, this VZ has some ecotonal qualities of the two PCTs on site, which are also apparent in remnant vegetation to the west and south. Hence the species on site are a sub-set of the two, not a distinct PCT, as evidenced by vegetation community associations north and south of the Oxley Highway (Biosis 2002, AMBS 2001).
TEC Status	Does not correlate to any TEC under NSW or Commonwealth legislation – see section 6.

5.2.4 VZ 4 PCT 1724 Very Low

PCT	PCT 1724 – Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast.
Percent cleared	75%
Class	Coastal Swamp Forest
Formation	Forested Wetland
Location	Comprises pasture on lower southwest of site.
Condition	Very low. Long cleared and cultivated at some time to establish pasture. Compaction evident.
Extent within Development Site	1.22ha in total; 0.99ha in development envelope
Description	(a) Canopy: Structure and Species: Absent (b) Understorey: Restricted to some young Swamp Oak in the open area, and a couple of Broad-leaved Paperbark and a Forest Red Gum around a windrow in the west. (c) Shrub Layer: Absent. (d) Ground Layer: Structure and Species: Dominated by Setaria and Carpet Grass with *Polygala paniculata**, Goatweed, Centella, Carrotweed (*Bifora testiculata**), Catsear, *Goodenia heterophylla* and Couch. Minor element of various native and exotic herbs, sedges and grasses depending on local relief eg. *Dampiera stricta*. Some seedling Forest Red Gum, *Callistemon salignus*, Broad-leaved Paperbark and Swamp Oak suppressed by slashing. (e) Lianas, scramblers, epiphytes, mistletoe etc.: Absent

Justification for PCT Identification	High level floristic match and geomorphological match for western end of southern strip and swamp forest on southern end of western strip. Adjacent northern reaches of LINR swamp forest is the outer ecotone before grading into 1724 Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast, as soils become progressively more lacustrine towards the lake.
TEC Status	Does not correlate to any TEC under NSW or Commonwealth legislation – see section 6

5.2.5 PCT 690 High Condition

PCT	PCT 686 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion
Percent cleared	50%
Class	Northern Hinterland Wet Sclerophyll Forests
Formation	Wet Sclerophyll Forests (Grassy sub-formation)
Location	Comprises northern end of western strip, and eastern half of the southern strip.
Condition	High. All layers present, including epiphytes. Some transformer weeds present in low abundance. Groundcover dominated by natives.
Extent within Development Site	Outside development envelope.
Description	(a) Canopy: Structure and Species: The open canopy is between 25-28m tall. Crown separation ranged from touching to slight separation to clearly separated (mid-dense to sparse). Trunk diameter at breast height (DBH) ranges from 40-115cm. Blackbutt (*Eucalyptus pilularis*) was the dominant species, with Tallowwood (*E. microcorys*) the co-occurrence in lower frequency. (b) Understorey: Varies with location. Open canopy between 5-15m tall, with a better developed stratum 5-7m tall dominated by mostly pioneer mesophyllic species. Crown separation ranged mid-dense to sparse in the upper layer, to mid-dense in the lower layer. Trunk diameter at breast height (DBH) ranges from 5-25cm (most 5-15cm). Taller layer dominated by eucalypt saplings plus 2 Broad-Leaved Paperbarks, and a *Callistemon salignus*. Lower stratum dominated by at times dense Cheese Tree, White Sally, *A. longifolia*, Narrow-leaved Paperbark and Cherry Ballart (*Exocarpos cupressiformis*), (c) Shrub Layer: Structure and Species: Open and generally ranging from 0.4-5m. Dominated by at times dense Cheese Tree, with other species being less common e.g. White Sally, Narrow-Leaved Paperbark, *Pultenaea retusa, Ozothamnus diosmifolius, Daviesia genistifolia, Phyllanthus gunnii* and *Leucopogon juniperinus*. Native Guava (*Rhodomyrtus psidioides*) was once very common here, but many have died. Numerous seedlings were noted, but Myrtle Rust infection rate was very high.

	(d) Ground Layer: Structure and Species: Ranges 10-50cm. Contains a mix of native and exotic species, with sedges appearing to invade due to increased waterlogging. Dominant natives are Spiney-headed Matrush, Bladey Grass and Bracken Fern, with Wiry Panic, native violets, Short-hair Plume Grass (*Dichelachne micrantha*), Basket Grass, *Poa* spp., and *Dianella caerulea*. Weeds constitute Broad-leaved Paspalum, Setaria, Carpet Grass and Paspalum (*Paspalum dilatatum**) (e) Lianas, scramblers, epiphytes, mistletoe etc.: A mix of common climbers and scramblers were present. The most commonly occurring species included Climbing Guinea Flower (*Hibbertia scandens*), Snake Vine, Scrambling Lily, Australian Bindweed and Native Raspberry (*Rubus moluccana*).
Justification for PCT Identification	As previously detailed.
TEC Status	Does not correlate to any TEC under NSW or Commonwealth legislation – see section 6.

5.2.6 PCT 1724 High Condition

PCT	PCT 1724 Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast
X	50%
Class	Coastal Swamp Forest
Formation	Forested Wetland
Location	Majority of spur of LINR to south
Condition	High. All layers present, including epiphytes. Some transformer weeds present in low abundance. Groundcover dominated by natives.
Extent within Development Site	Outside development envelope.
Description	(a) Canopy: Structure and Species: Dominated by a tall open canopy cover of Broad-leaved Paperbark around 20-25m high, with tree crowns often touching. Swamp Oak occurs sporadically, mostly on the higher western edges. On the outermost northern fringes of LINR, some young Pink Bloodwood, Forest Red Gum and Grey Ironbark occur, comprising the remnants of a former ecotone. Swamp Mahogany occurs very rarely in this part of LINR. Trunk DBH is around 20-60cm. (b) Understorey: Mid-dense to sparse, with an upper and lower component. In upper component is mainly young Broad-Leaved Paperbarks with *Callistemon salignus*, 10-14m tall, and trunk DBH 10-15cm. Lower stratum is often well developed throughout and consists of a mix of young paperbarks, *M. sieberi, M. linariifolia*, *Acmena smithii,* Cheese Tree, Sandpaper Fig (*Ficus coronata*), White Sally, and *Acacia maidenii*. (c) Shrub Layer:

	Open to absent in the interior, and generally ranging from 0.4-5m. Dominated by young Cheese Tree, Narrow-Leaved Paperbark, *Callistemon salignus* and White Sally. Pioneer rainforest species common. Some dense lantana and Winter Senna occurs in the northern to northeast fringes of LINR. (d) Ground Layer: Structure and Species: Outer fringe often dominated by Setaria with *Gahnia clarkei*, Goatweed and Broad-leaved Paspalum. Inner forest varies with local relief, but generally comprises a varying mix of Spiney-headed Matrush, *Gahnia clarkei*, Common Ground Fern (*Hypolepsis muelleri*), Tassel Sedge (*Carex fascicularis*) and *Viola hederacea*. (e) Lianas, scramblers, epiphytes, mistletoe etc.: Common, mainly Monkey Rope and *Morinda jasminoides*, with Twining Lily, Snake Vine, *Glycine clandestina* and Australian Bindweed.
Justification for PCT Identification	As previously detailed.
TEC Status	Does not correlate to any TEC under NSW or Commonwealth legislation – see section 6

Photo 1: VZ 1 PCT 690 Moderate A



Photo 2: VZ 3 PCT 690 Moderate B



Photo 3: VZ 2 PCT 690 very low



Photo 4: VZ 4 PCT1724 – very low



5.3 Vegetation Integrity Assessment

The Vegetation Integrity (VI) assessment using the Credit Calculator (BAMC) results are summarised in **Table 8**.

Table 8: Vegetation integrity

PCT ID	Veg Zone	Condition	Area on site (ha)	Composition Condition Score	Structure Condition Score	Function Condition Score	Current vegetation integrity score
690	1	Moderate	0.09	29.7	33	36.9	33.1
690	2	Very low	1.56	35.9	0.2	15.2	4.8
690	3	Moderate	0.24	79.9	22.8	33.3	39.3
1724	4	Very low	0.99	35.3	0.4	15.2	5.9

6.0 TECs

6.1 DPIE Advice

DPIE (2020) advise that they no longer support the plethora of NSW Land and Environment Court case law precedents that have defined the interpretation of EECs on the basis of descriptive information provided in the Final Determinations, and subsequently defined the assessment of EECs in all levels of planning by the industry and government agencies, and prosecutions since EECs were listed under the *Threatened Species Conservation Act 1995* (eg. BGP Properties Pty Ltd v Lake Macquarie City Council [2004] NSWLEC 399; (2004) 138 LGERA 237, B T Goldsmith Planning Services Pty Ltd v Blacktown City Council[2005] NSWLEC 210, Director-General, Department of Environment, Climate Change and Water v Venn [2011] NSWLEC 118, Gales Holdings Pty Ltd v Tweed Shire Council [2008] NSWLEC 209, Hornsby Shire Council v Vitone Developments Pty Ltd [2003] NSWLEC 272; (2003) 132 LGERA 122, Motorplex (Australia) Pty Ltd v Port Stephens Council [2007] NSWLEC 74, Newcastle & Hunter Valley Speleological Society Inc v Upper Hunter Shire Council and Stoneco Pty Limited [2010] NSWLEC 48, Plumb v Penrith City Council [2002] NSWLEC 223, Providence Projects Pty Ltd v Gosford City Council [2006] NSWLEC 52, Rocla Pty Ltd v Minister for Planning and Sutherland Shire Council[2007] NSWLEC 55, VAW (Kurri Kurri) Pty Ltd v Scientific Committee [2003] NSWCA 297; (2003) 58 NSWLR 631; (2003) 128 LGERA 419 affirming[2002] NSWLEC 60; (2002) 122 LGERA 231).

According to recent advice by the NSW Scientific Committee (NSCSC) to DPIE (which is not supplied for independent review), their view is that an EEC should be assumed on the basis of occurring in the defined bioregion and a floristic match, and not rely on other criteria in the Final Determination: in particular, "*the soil landscape should not be used to discount vegetation from qualifying as an EEC*".

This approach appears to suggest that any matching vegetation communities over 5.6 million ha of NSW that comprise the North Coast Bioregion (in relevance to this PP) should automatically be considered to be an EEC.

DPIE also advise that current Final Determinations will be progressively revised by the NSSC on this basis by the NSWSC.

Under s4.19 of the BC Act, a provision is made for minor amendments without publishing a Preliminary Determination for public submissions, to "clarify a description of an ecological community (including to reflect new surveys or research information)." It has done this in the past eg. Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions - Determination to make a minor amendment to Part 3 of Schedule 1 of the *Threatened Species Conservation Act 1995* (NSWSC 2011).

Given the colossal legal implications of this purported intention of the NSWSC to re-interpret EEC Final Determinations despite nearly two decades of case law, it is very unlikely that the NSWSC will not call for public comment, if not agency comment, and consult with the relevant Ministers; and seek legal advice.

A plethora of industry groups (eg. mining sector) would undoubtedly also seek input, legal advice, and consultation with the relevant Ministers.

This purported approach seems antithetical not only to the case law, but also to the almost identical methodology used to define EECs under the *Environment Protection and Biodiversity Conservation Act 1999* and associated bilateral agreements; and to fundamental ecological principles eg. how the abiotic and biotic characteristics of the 'particular area' define the physiognomy of the supported vegetation and hence ecological community (Preston and Adams 2004a, 2004b), within their identified range eg. the bioregion.

First, it seems its antithetical to case law as interpretation of the Final Determinations have been tested for nearly 20 years (over which time the NSWSC has not mooted nor initiated a comprehensive revisal of EEC Final Determinations in this manner); and these precedents have been adopted across the NSW planning regime by DPIE and other agencies, including the NSW Environment Protection Authority (EPA) with the NSW Forest Corporation in the definition and mapping of EECs in the Integrated Forestry Operations Approvals (IFOAs).

The latter is particularly significant in legal, legislative and ecological terms as the Coastal IFOAs were recently remade (EPA 2016a), and set out conditions to protect EECs and other threatened biodiversity over major areas of NSW: breaches of which can be prosecuted.

The re-making of the Final Determinations at this time thus would have been critical in both legal, legislative and conservation outcomes if the NSWSC's intention was to revise the interpretation as purported by DPIE.

Rather, the approach used (EPA 2016a, 2016b) followed that previously adopted by DPIE in their EEC identification guides (eg. identifying locations of alluvial soils as a primary criteria for the Indicative Coastal Floodplain Endangered Ecological (EEC) Map Series), which follow the case law; and acknowledged the limitations to reduce uncertainty.

Most notably, the NSWSC was consulted in the process.

As stated in EPA (2018a), the project was "*a coordinated approach to resolve long standing issues surrounding the identification, extent and location of priority TECs that occur on the NSW State Forest estate included within eastern Regional Forest Agreements*."

It also states "*The EPA and project team have engaged with the NSW Scientific Committee on a regular basis throughout the Project; providing updates on key findings and in relation to issues encountered in interpreting final determinations. A sitting member of the NSW Scientific*

Committee has attended most TEC Panel sessions. The project outputs have been submitted to the NSW Scientific Committee."

The NSWSC's involvement and approach in this State significant project appears very incongruous to the NSWSC's purported current approach to identification of EECs which DPIE is advising to be adopted in this PP.

Conversely, the industry and government adopted approach, the EEC listings over at least the last 16-18 years, and the case law follows two seminal legal papers (Preston and Adams 2004a, 2004b) prepared by the long term (2005-present) chief judge Brian Preston of the NSW L&EC and former NSWSC chairperson Associate Professor Dr Paul Adam (latter holding the position during when the subject Coastal Floodplain EEC listings were made eg. NSWSC 2004a, 2004b, 2004c), and now a NSW L&EC Acting Commissioner.

These papers (now cited in subsequent legal precedents) detail the process and combination of scientific and legal evaluation of the Final Determinations: not just in terms of identifying and applying the diagnostic criteria, but how the legal and ecological interpretation of "*an assemblage of species in a particular area*" is defined to support the listing as an EEC in a Final Determination. The papers explain why such detail is needed to filter out the specific "assemblage of species" and "particular area" ie. to reduce uncertainty.

Contrary to DPIE's discounting view that the criteria is only a summary of the range of conditions where the EEC may occur and not intended to be diagnostic or definitive: such detailed criteria essential in a Final Determination as it not only defines the characteristics associated with the EEC and 'particular area' it occurs in, but also why it meets the specific eligibility criteria of section 4.5 of the BC Act.

The Final Determination needs to distinguish the assemblage that is threatened, from similar assemblages that are not, to scientifically and objectively demonstrate it is indeed threatened. As detailed in Preston and Adams (2004a, 2004b), it thus cannot be too general or vague: it legally has to provide sufficient criteria to allow the layman to separate EECs from non-EECs (ie. in order to comply with defence provisions under the Act for claims of accidental clearing).

As stated in Preston and Adams (2004a:

> *"The environmental legislation creates offences in relation to harming threatened ecological communities and their habitats. These consequences render it necessary to imply a requirement of reasonable certainty in describing threatened ecological communities. People need to know when they are, or are likely to be, at risk of committing an offence.*
>
> *In order to achieve this practical purpose, the description of the community must work not only as a broad concept, but also in detail. The person in the field who applies the concept needs details. The clearer and more approachable the description, the greater the chance of being understood and accepted. People tend to mistrust that which they cannot comprehend.19 They also may ignore it, which undermines the objects and implementation of the environmental legislation.*
>
> *The practical aspects of description that may assist in the understanding and application of the description of an ecological community include the structure and physiognomy of the ecological community, the abiotic factors influencing the community and the ecological and biotic factors of the community."*

Indeed, these papers clarify to the layman how an EEC Final Determination's diagnostic criteria are to be used to separate non-EECs from EECs, and how the Final Determinations have been structured to facilitate this process.

For many listed EECs which are not geographically restricted to a limited and readily identifiable area but can be confused with non-EECs based on floristic and range criteria (eg. Coastal Floodplain EECs), it is the subsequent diagnostic criteria in the hierarchy that separates the specific assemblage and the 'particular area' which defines the physiognomy of the EEC, in line with fundamental ecological principles.

It is these fundamental ecological attributes and their interaction (eg. abiotic and biotic interactions) which define the overwhelming majority of EECs via their 'particular area' eg. the edaphic situation where it has evolved, and hence developed to match the defining 'assemblage'. This is particularly critical for the Coastal Floodplain EECs, but also others such as Shale/Sandstone Transition Forest in the Sydney Basin Bioregion EEC.

The bioregion is not such a critical influence, as demonstrated by EECs which stretch over more than one bioregion. It is a high level location descriptor (ie. the range of the EEC), with subsequent criteria provided to refine the definition of the 'particular area' that causes the 'assemblage of species' (eg. LGA, elevations, landforms, and soil landscapes) to separate EECs from non-EECs eg. coastal sandplain swamp forest from alluvial floodplain swamp forest. This is fundamental ecology.

Conversely, some EECs are clearly restricted to specific location, elevation, topography, geology and/or soils over multiple bioregions eg. Coastal Floodplain EECs, Robertson Basalt Tall Open-forest, Fuzzy Box Woodland on alluvial soils, Mount Kaputar high elevation and dry rainforest land snail and slug community, etc. Hence bioregion is only a first broad sieving descriptor in many EECs.

These papers and the Final Determination also acknowledge that the Final Determinations are not intended to cover the entire spectrum of forms an EEC can present as (eg. one reason why species lists are indicative, not comprehensive). This is addressed in most Final Determinations by stating limitations to be considered (eg. disturbance history); and clarified by legal precedents eg. a site does not to have all of the specified species present (*VAW (Kurri Kurri) Pty Ltd v Scientific Committee (2002) 122 LGERA 231*).

They also allow flexibility in determining location by phrases such as "and "may be found elsewhere in the bioregion", the upper limit of which is often the bioregion. This prevents negation of an assemblage being considered as an EEC because it is outside specific localities within the bioregion listed in the Final Determination (eg. VAW (Kurri Kurri) Pty Ltd v Scientific Committee [2003] NSWCA 297).

To conclude: review of the Preston and Adam's papers (2004a, 2004b) clarify how Final Determinations are to be interpreted and are formulated to assist such to reduce uncertainty but also not exclude atypical examples of the EEC; and this is the current accepted and adopted industry and current NSW government approach, and the approach followed by the NSW L&EC. The process is essentially the same under the EPBC Act, often with more prescriptive criteria provided which may be different to listings in NSW (eg. Coastal Swamp Oak (*Casuarina glauca*) Forest of South-east Queensland and New South Wales), but nonetheless follows the same case law and fundamental ecological principles.

Regardless, aside from the highly significant legal implications this proposed change will need to come to terms with before it can be finalised: this purported intent of the NSWSC to revise EEC Final Determinations is irrelevant to this PP, as the consent authorities, NSW Land &

Environment Court, and the Minister (as for a DA) can only consider and apply the current legislation, and this includes the current Final Determinations and associated legal precedents, and the current legal applications and practices adopted to date by the State (and where applicable) Commonwealth government.

6.2 NSW

6.2.1 EEC - Swamp Forest on Coastal Floodplains Assessment

On site, PCT 1724 is the only PCT that confirms to the floristic criteria of this EEC (NSWSC 2004b). As detailed in section 3.2, the occurrence on site is extremely degraded (below VI level for offsets). Adjacent to the site, the PCT occurs in high quality form in the southern end of the western strip, the western end of the southern strip, and in the adjacent section of LINR.

These areas were originally mapped as EECs by Biolink (2013b) based on floristics and then further refined after correlation to 1:25 000 soil landscape data (Darkheart 2014), as shown in **Figure 11**.

The desktop classification based on the soil landscape mapping was made on a precautionary basis due to the limited description of the 'undifferentiated' soil landscape mapping unit on which these areas fell (Darkheart 2014, Hashimoto and Troedson 2008), with a recommendation for further site specific examination to clarify geomorphology and pedogensis. The review also noted that many degraded or disturbed forms of EECs were omitted by the limitations of the Biolink mapping eg. partly cleared or regrowth swamp forest was treated as cleared land in their vegetation mapping, hence seral forms of Coastal Floodplain EECs for instance were not picked up when correlated with Quaternary soil landscape mapping. Consequently, site review was recommended as essential to validate Biolink's vegetation mapping and the EEC mapping and compensate for these limitations.

Supported by recent detailed site specific soil examinations (Abel Ecology 2016, 2017), the following table reviews these areas in line with the legal precedents and literature to determine if they meet the Final Determination for the EEC – *Swamp Sclerophyll Forest on Coastal Floodplains of the North Coast Bioregion* (NSWSC 2004d, *CBD Prestige Holdings Pty Ltd v Lake Macquarie City Council [2005] NSWLEC 367, Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209*, *Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74*, Preston and Adam 2004a, 2004b).

Figure 11: PMHC EEC mapping prior to site soil landscape survey



Table 9: Swamp Sclerophyll Forest on Coastal Floodplain EEC review

Final Determination Criteria	Lake Innes Nature Reserve	Western half of southern strip	Southwest corner South Lindfield – on crematorium boundary)
Location: Site located in the North Coast Bioregion, and in a specified LGA	Yes: Port Macquarie-Hastings LGA listed in Final Determination.	Yes: Port Macquarie-Hastings LGA listed in Final Determination.	Yes: Port Macquarie-Hastings LGA listed in Final Determination.
Soils: Soils are "humic clay loams and sandy loams" which are *inter alia* predominantly derived from alluvial processes (NSWSC 2004d).	No. Soils are on Cairnscross landscape and show both colluvial to residual influences in the soil profile. No indication of alluvial layer. Hence no evidence to indicate alluvial processes have been dominant, as required.	No. Soils are grading from Kundabung to Thrumster in upper area, grading to Cairnscross landscape, with soil profile showing non-alluvial origins.	No. Soils are grading from Kundabung to Thrumster in upper area, grading to Cairnscross landscape, with soil profile showing non-alluvial origins.
Topographic Location: Occur on waterlogged or periodically inundated alluvial flats and drainage lines associated with coastal floodplains	No. Mostly occurs in open depression that formerly formed uppermost part of originally estuarine lake, which was cut off via a sand barrier and later infilled via colluvium.	No – occurs on poorly drained footslope adjacent to very broad drainage depression.	No – occurs on poorly drained footslope adjacent to very broad drainage depression.
Elevation: Below 50m.	Yes	Yes	Yes
Below 1: 100 ARI?	Yes	No	No
Structural formation: Forest, woodland, shrub, scrub, fernlands, tall reedland, sedgeland,	Yes: Forest	Yes: Forest (remnant strip).	Yes: Forest
Floristics: Should contain indicator canopy species, and have floristic mix/structure as detailed in the Final Determination.	Yes – readily met.	Yes – readily met.	Yes – readily met.
Is it an EEC?	**No** – not alluvial soils (Abel Ecology 2016, 2017) and fails key edaphic criteria (Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209, Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74, Preston and Adam 2004a, 2004b).	**No** – does not meet soils or landform criteria, hence fails "habitat" test (Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209, Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74, Preston and Adam 2004a, 2004b).	**No** – does not meet soils or landform criteria, hence fails "habitat" test (Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209, Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74, Preston and Adam 2004a, 2004b).

The above table shows that despite the floristics matching the Final Determination, the swamp forest PCT 1724 on and adjacent to the south and southwest of South Lindfield (adjacent to the crematorium/cemetery boundary) does not meet the geomorphological criteria (*Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209, Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74,* Preston and Adam 2004a, 2004b).

The swamp forest in the segment of Lake Innes Nature Reserve adjacent falls in the upper transition zone between the residual soil landscapes in the north, and the estuarine soils in the south around the lake (Hashimoto and Troedson 2008). Soil profile tests have demonstrated no evidence of sorting or layering associated with alluvial processes, but rather indicates predominantly colluvial processes in upper stratums over residual soils. Legal precedents indicate this area does not satisfy the Final Determination (*Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209, Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74,* Preston and Adam 2004a, 2004b).

Hence there are no EECs in the study area.

6.3 Commonwealth

No relevant EECs listed under the EPBC Act occur on-site or in the study area.

7.0 THREATENED SPECIES

7.1 Fauna Habitat Assessment

To inform the assessment of ecosystem credit species predicted to occur within the site in accordance with Section 5.1 of the BAM (DPIE 2020a), and to assist in developing a list of candidate threatened species requiring further assessment in accordance with Section 5.2 of the BAM (DPIE 2020a), a qualitative evaluation of habitat on the site was undertaken.

7.1.1 Methodology

The site was surveyed to determine the available potential habitats, and the support value of these habitats for threatened species. Habitats were defined according to parameters such as:

- Structural and floristic characteristics of the vegetation e.g. understorey type and development, crown depth, groundcover density, etc.
- Degree and extent of disturbance e.g. fire, logging, weed invasion, modification to structure and diversity, etc.
- Soil type and suitability e.g. for digging and burrowing.
- Presence of water in any form e.g. dams, creeks, drainage lines, soaks.
- Size and abundance of hollows and fallen timber.
- Availability of shelter e.g. rocks, logs, hollows, undergrowth.
- Wildlife corridors, refuges and proximate habitat types.
- Presence of mistletoe, nectar, gum, seed, sap, etc. sources.

Habitat in the adjacent section of LINR are also described for reference.

7.1.2 Results

The following table summarises the results of the habitat evaluation survey:

Table 10: Habitat evaluation results

Habitat Component	South Lindfield	Lake Innes Nature Reserve
Groundcover	Generally low open pasture periodically slashed over most of site except VZ 1, and the adjacent strips to the south and west. Fairway to south between LINR and southern strip slashed. Best developed in forest along western boundary adjacent to proposed development envelope; narrow band along drain in VZ1; strip of swamp forest to south; and less so in the remnant wet sclerophyll forest in eastern end. No threatened species significance as too limited in extent and separated where taller from adjacent habitat by maintained area.	The adjacent swamp forest has an open to some dense patches of sedges (e.g. *Gahnia*, *Carex* spp. and matrushes) and ferns (e.g. Harsh Ground Fern) mixed with some lantana. Heights range from about 30-60cm, but as mostly open, provides limited cover for rodents, small dasyurids, frogs, reptiles, etc. No considered preferred habitat of Eastern Chestnut Mouse or New Holland Mouse. Insufficient cover for Common Planigale.
Leaf litter	Generally very sparse in paddock. Well developed under small patch of wet sclerophyll in eastern end of southern strip, and in forest strip along western boundary	Leaf litter layer more developed in parts of the swamp forest, where it formed a deep layer ideal for frog, small reptile and invertebrate refugia. No specific threatened species significance.
Logs and debris	Windrow in southwest of site consist of a number of logs around 20-50cm DBH. No hollows present. Would provide refugia for common frogs, rodents and perhaps dasyurids and reptiles.	Occasional well-rotted logs throughout. Few stumps noted also well rotted. Some generic refuge value for frogs and invertebrates.
Rocks, scree slopes, rock formations, etc	Absent (some large rocks emerging in VZ 3 but still buried in soil).	Absent
Wattles, Melaleucas, Callistemons and Banksias (shrub layer)	Only present in forest in west and southeast corner where consists of common wattles. Some Banksia in swamp forest to southwest offers minor nectar/pollen source for small terrestrial mammals and some birds.	Limited to few juvenile Melaleucas and Callistemons – no specific significance.

Habitat Component	South Lindfield	Lake Innes Nature Reserve
Passerine bird habitat/diversity/abundance	Small areas of passerine and woodland bird habitat in the dry, wet and swamp sclerophyll forest. Generic threatened raptor foraging habitat.	Swamp forest has areas of dense cover providing good passerine bird habitat for species which use dense forest, but unsuitable for open woodland or shrub dependant species.
Hollows	None on site – 3 in western boundary patch (see **Table 11** and **Photo 5** and **6**) and several termitaria, and a termitaria in the southern strip. Only small to medium hollows – not suitable for large forest owls or cockatoos.	Absent
Flowering canopy species (key nectar/pollen sources)	Few Forest Red Gum on site and southern strip, and Swamp Mahogany in south and western remnants offer key winter foraging resources, albeit in limited abundance, with more *Melaleuca quinquenervia* on and more so adjacent, offering values as detailed for LINR.	Winter flowering Swamp Mahogany is rare – mostly on margins. Few Grey Ironbark, Pink Bloodwood and Narrow-Leaved Red Gum as well as *C. saligna*, *M. linariifolia* and *M. stypheloides* offer spring and autumn flowerers. sparsely scattered throughout the Abundance of *Melaleuca quinquenervia* which is a significant species as it may flower from late Summer to mid-winter, but usually peaks in autumn. This area plus remainder of northern LINR is a key local food source for Grey-Headed Flying Fox and possibly the Eastern Blossom Bat.
Sap and gum sources	Forest Red Gum and Pink Bloodwood are preferred species. No active incisions noted – some natural exfoliation on a Pink Bloodwood.	Limited to few individual Bloodwood, Narrow-Leaved Red Gum, and Grey Ironbark. No active incisions noted
Primary preferred Koala browse species	Tallowwood co-dominant in eastern end of southern strip, and common in northwest end of western boundary strip. Forest Red Gums and Swamp Mahogany in eastern end of southern strip. Swamp Mahogany common in southern end of western strip. Tallowwood dominant with 2 large Forest Red Gums on site in VZ 3. Potential Koala Habitat.	Rare or localised Swamp Mahogany and Forest Red Gum mostly on margins, and no active recruitment. Not Potential Koala Habitat.
Allocasuarinas	Handful of trees in southern strip, no fruit at time of survey.	Absent

Habitat Component	South Lindfield	Lake Innes Nature Reserve
Yangochiropteran bat foraging habitats	Mix of forest strips and forest interface suits range of bat species. Detention basin adjacent to site has some potential for Southern Myotis.	Dense swamp forest canopy suitable for supra canopy species. Long forest interface also good.
Aquatic/wetland habitat	Only stormwater drain which has no significant pools and does not hold water for long enough time; has poor water quality (noted to stagnate after rainfall); and prone to scouring flows.	The swamp forest had only a series of small, shallow pools following major of rainfall over the survey period, which quickly stagnated. Considered marginal for frog breeding (only common frogs heard during rainfall but no tadpoles observed); and unsuitable for Wallum Froglet.
Marine/estuarine habitats e.g. estuarine, rocky foreshores, open beaches, Open ocean.	Absent	Absent
Key larval food plants	*Viola betonicifolia* absent.	*Viola betonicifolia* absent.
Fruiting species	Some common wet sclerophyll rainforest species in understorey of adjacent remnants, but very small number/area. Very low abundance and extent discounts any potential for threatened rainforest birds. Only common frugivorous birds likely.	Some mature fruiting species present in the swamp forest e.g. Sandpaper Fig and *Acmena smithii*, with two young Moreton's Bay Fig and Cabbage Palms. No significant threatened species values as only a tall shrub layer, not an understorey of such species.
Caves, cliffs, overhangs, culverts, bridges	Absent	Absent
Small terrestrial prey	Some limited areas of dense cover present only in adjacent strips of forest. At best some common native and exotic rodents may occur eg. Swamp Rat, Bush Rat, Antechinus – very limited prey base.	Dense lantana thickets and some dense groundcover offers cover and foraging habitat for common small to medium mammals, range of passerine birds, reptiles and frogs.

Three hollow-bearing trees occur in the strip of forest to the west as follows:

Table 11: Hollow-bearing tree data

HBT ID	Tree Species	Location (GDA 94)	Hollow Location	Opening Type/Size	Evidence Of Current Usage	Potential Fauna Species
1	Paperbark stag	56487353 6519116	Top of trunk at base of crown, facing north-south	Vertical fissure <10cm wide and about 40cm long.	Nil	Marginal potential for Yangochiropteran bats and Antechinus.
2	Blackbutt #1	56487505 6519091	Large fissure with hollows in top and bottom plus narrow fissure in low broken crown limb	Main fissure <10, with similar size hollows at top and probably bottom. Branch fissure <5cm.	Indeterminable.	Yangochiropteran bats and Antechinus
3	Stag #1	5648692 6519160	Numerous hollows in ends of limbs. Larger limbs appear likely to be hollow pipes. Two hollows in a termitaria at top of crown.	Mostly 5-10cm, with 1 >10cm.	Indeterminable	Yangochiropteran bats, Sugar Glider, Squirrel Glider, common rosellas and lorikeets, Forest Kingfisher, Antechinus.

Figure 12: Hollow-bearing trees and termitaria adjacent to the development envelope



Photo 5: HBT 1



Photo 6: HBT 2



7.2 Ecosystem Credit Fauna Species

The BAMC predicted the occurrence of Ecosystem Credit threatened fauna species listed in the following table. These were evaluated as per section 5.2 of the BAM in **Table 12** after survey. Those marked [DC] indicate Dual Credit species.

Potential occurrence was evaluated on the basis of presence/absence of habitat within the site; distribution of the species in scientific literature, Bionet and the Threatened Biodiversity Profile Database (OEH 2020b); ecological information in scientific literature and the Threatened Biodiversity Profile Database; literature records in the bioregion within similar habitat; and the results of site survey and previous surveys on site and in the adjoining lands.

Those listed as likely to occur were included in the BAMC calculations.

Table 12: Ecosystem Credit species evaluation

Species	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria met	Sensitivity to gain class	Sall	Justification for inclusion/exclusion
Pale-vented Bush-hen (*Amaurornis moluccana*)	V	-	North of South West Rocks (SWR).	High	No	No waterbodies, and lack of dense vegetation. No records in locality and south of SWR.
[DC]Regent Honeyeater (*Anthochaera phrygia*)	CE	CE	Foraging: N/A	High	No	Excluded: Not in mapped area and extremely vagrant in sub-region. Only listed for PCT 1724 which lacks any trees.
Dusky Woodswallow (*Artamus cyanopterus cyanopterus*)	V	-	N/A	Moderate	No	**Included** – generic potential habitat
[DC]Glossy Black Cockatoo (*Calyptorhynchus lathami*)	V	-	Foraging: Presence of *Allocasuarina* and *Casuarina* species	High	No	Excluded: No foraging habitat.
Hoary Wattled Bat (*Chalinolobus nigrogriseus*)	V	-	N/A	High	No	**Included**: Assumed present although not detected by survey. Potential for foraging and roosting adjacent in rare tree hollows.

Species	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria met	Sensitivity to gain class	Sall	Justification for inclusion/exclusion
Brown Treecreeper (eastern subspecies) (*Climacteris picumnus victoriae*)	V	-	N/A	High	No	**Included**: Not detected by survey but recorded locally in broadly similar habitat.
Barred Cuckoo-shrike (*Coracina lineata*)	V	-	Known from the Harrington rainforest	Moderate	No	Excluded: No or minimal fruiting species/very degraded. Not detected by any survey to date
Varied Sittella (*Daphoenositta chrysoptera*)	V	-	N/A	Moderate	No	**Included**: Not detected by survey but site habitat adjoins a large area of potential habitat, and recorded in similar habitat locally and in sub-region.
Spotted-tailed Quoll (*Dasyurus maculatus*)	E	E	N/A	High	No	Excluded: Local records and extensive potential habitat interconnected to far south, but site and study area too degraded, and very high risk of predation or mortality eg. nearest record is vehicle strike.
Black-necked Stork (*Ephippiorhynchus asiaticus*)	E	-	• Swamps: No • Shallow, open freshwater or saline wetlands or shallow edges of deeper wetlands within 300m of these swamps.|Waterbodies: No • Shallow lakes, lake margins and estuaries within 300m of these waterbodies: No	Moderate	No	Excluded: No wetlands on site, and not adjacent to any such area suitable for this bird (avoids forested wetlands) and only stormwater drain and shallow table drain on or adjacent. Nearby dam too deep and enclosed by trees.
Eastern False Pipistrelle (*Falsistrellus tasmaniensis*)	V	-	N/A	High	No	**Included:** Recorded within 1km to west. Low potential to forage over adjacent remnants and over site as marginal fringe of wider local foraging range.

Species	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria met	Sensitivity to gain class	SaII	Justification for inclusion/exclusion
Little Lorikeet (*Glossopsitta pusilla*)	V	-	N/A	High	No	**Included**: Assumed present as preferred foraging species common and local records. No potential breeding hollows on site, and not known to breed locally.
[DC]White-bellied Sea Eagle (*Haliaeetus leucogaster*)	V	-	N/A	High	No	Excluded: No nests and no significant foraging habitat
[DC]Little Eagle (*Hieraaetus morphnoides*)	V	-	Foraging: N/A	Moderate	No	**Included**: Generic potential for foraging as minute part of very large range.
Black Bittern (*Ixobrychus flavicollis*)	V	-	• Waterbodies: No. • Land within 40 m of freshwater and estuarine wetlands, in areas of permanent water and dense vegetation: LINR to south offers some very marginal potential for roosting.	Moderate	No	Excluded: No potential roosting or foraging habitat (adjacent section of LINR not adjacent to foraging habitat).
[DC]Swift Parrot (*Lathamus discolor*)	E	CE	Foraging: N/A	Moderate	Yes	Excluded: No preferred forage species in 1724 VZ which is only PCT listed.
[DC]Square-tailed Kite (*Lophoictinia isura*)	V	-	Foraging: N/A	Moderate	No	**Included**: Assumed present although not detected by survey as large territory, recorded close by with previous nest <1km to west, and recorded widely in region in similar habitats.
East-coast Freetail-bat (*Micronomus norfolkensis*)	V	-	N/A	High	No	**Included**: Foraging – recorded previously recorded nearby.
[DC]Little Bentwing Bat (*Miniopterus australis*)	V	-	Foraging: N/A	High	Yes	**Included**: Foraging – recorded previously recorded nearby.

Species	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria met	Sensitivity to gain class	Sall	Justification for inclusion/exclusion
[DC]Eastern Bent-wing Bat (*Miniopterus schreibersii oceanensis*)	V	-	Foraging: N/A	High – foraging	No	**Included**: Foraging – recorded previously recorded nearby.
[DC]Barking Owl (*Ninox connivens*)	V	-	Foraging: N/A	High	No	Excluded: Not detected by surveys to date for >20 years in locality.
[DC]Powerful Owl (*Ninox strenua*)	V	-	Foraging: N/A	High	No	**Included**: Detected previously foraging within 1km west and southeast. Marginal potential foraging habitat on site and study area.
[DC]Eastern Osprey (*Pandion cristatus*)	V	-	-	Moderate	No	Excluded: No evidence of nesting detected by targeted survey. No foraging habitat.
Yellow-bellied Glider (*Petaurus australis*)	V	-	Hollows > 25cm diameter: Absent	High	No	Excluded: No potential hollows and not detected by site recent or past surveys, or on adjoining lands.
[DC]Koala (*Phascolarctos cinereus*)	V	V	Foraging: N/A	High	No	**Included**: Core Koala Habitat identified adjacent to site, and on-site.
Golden-tipped Bat (*Phoniscus papuensis*)	V	-	N/A	High	No	Excluded: Not preferred forest type, prey species or potential roosts.
Eastern Chestnut Mouse (*Pseudomys gracilicaudatus*)	V	-	N/A	High	No	Excluded: Not preferred habitats, and not detected by survey onsite adjoining lands. Nearest records north of Oxley Highway in large open wetland dominated by sedges grading to heath; and similar habitat in Fernbank Creek wetland in UIA 13.
[DC]Grey-headed Flying-fox (*Pteropus poliocephalus*)	V	V	Foraging: N/A	High	No	**Included**: Recorded previously by foraging nearby and foraging on-site. Known breeding roost in Kooloonbung Creek NR

Species	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria met	Sensitivity to gain class	Sall	Justification for inclusion/exclusion
Yellow-bellied Sheathtail-bat (*Saccolaimus flaviventris*)	V	-	N/A	High	No	**Included**: Assumed present as seasonal survey required, recorded locally in Port Macquarie fringes, and in similar habitat in the sub-region.
Greater Broad-nosed Bat (*Scoteanax rueppellii*)	V	-	N/A	High	No	**Included**: Moderate to high potential to forage over site as small part of larger area of habitat, and roost in tree hollows. Recorded locally in similar habitat. Assumed present.
[DC]Masked Owl (*Tyto novaehollandiae*)	V	-	Foraging: N/A	High	No	**Included**: Foraging habitat present but degraded – support common arboreals and perhaps hares, rats, etc. Not detected but assumed present as large territory and recorded locally in similar habitats. Recorded foraging in urban remnants near hospital.

7.3 SCS Potential Occurrence Assessment

7.3.1 Threatened Flora

7.3.1.1 Local records

Bionet (DPIE 2021a) and the literature record 13 threatened species in the locality. Those not predicted by the BAM, and not planted ornamentals or orchard species outside their native range (ie. *Eucalyptus nicholii, Macadamia)*) were added to the assessment.

7.3.1.2 Species credit species potential occurrence assessment

A list of SCS potentially occurring in the study area was derived in accordance with s5.2 of the BAM, including information from the TBDC. Potential for these species to occur in is evaluated below in line with s5.2.3 and s5.2.4 of the BAM.

Table 13: Candidate species credit species assessment - flora

Common Name	NSW listing status	EPBC Listing status	Survey Season	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate SaII	Included/Excluded/Targeted Survey
North Brother Wattle (*Acacia courtii*)	V	V	N/A	N/A	High	3	Yes	Excluded: Beyond known range (restricted distribution) and unsuitable habitat.
Trailing Woodruff (*Asperula asthenes*)	V	V	Oct-Dec	N/A	High	2	No	**Included**: Very low potential artificial habitat in stormwater drain.
Eucalyptus seeana population in the Greater Taree local government area	EP	-	All year	Within the Greater Taree LGA: yes	High	2	No	Excluded: Way north of known range.
Noah's False Chickweed (*Lindernia alsinoides*)	E	-	Nov-Feb	• Damp areas or adjacent to riparian areas (including disturbed areas: Marginal yes. • Swamp: Marginal yes.	High	3	Yes	**Included**: Very low potential artificial habitat in stormwater drain.

Common Name	NSW listing status	EPBC Listing status	Survey Season	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate Sall	Included/Excluded/Targeted Survey
Maundia triglochinoides	V	-	Nov-Feb (all year)	• Riparian areas/drainage lines, water ponding, man-made dams and drainage channels up to 1 m deep; semi-permanent/ephemeral wet areas; swamps: Yes - nearby • Shallow swamps up to 1 m deep; waterbodies: Marginal yes adjacent.	High	2	No	**Included**: Very low potential artificial habitat in stormwater drain. Edge of LINR and stormwater basin also checked, although not detected previously. This plant can be identified from similar plants when non-flowering by the cross-section shape of leaves and habitat.
Biconvex Paperbark (*Melaleuca biconvexa*)	V	V	All year	N/A	High	2	No	**Included:** Recorded just outside study area, marginal potential habitat as not preferred soils
Grove's Paperbark (*Melaleuca groveana*)	V	-	All year	N/A	High	2	No	Excluded: Unsuitable habitat.
Rusty Plum, Plum Boxwood (*Niemeyera whitei*)	V	-	All year	N/A	High	2	No	**Included:** Targeted survey required as marginal generic potential habitat, although not detected previously on site or adjacent lands.
Milky Silkpod (*Parsonsia dorrigoensis*)	V	E	All year	N/A	High	2	No	**Included:** Targeted survey required as marginal generic potential habitat, although not detected previously on site or adjacent lands.
Scant Pomaderris (*Pomaderris queenslandica*)	E	-	All year	Dense shrub layer or alternatively high canopy cover exceeding 70% (i.e. to capture populations inhabiting wet sclerophyll and rainforest): No	High	2	No	**Included:** Targeted survey required as marginal generic potential habitat, although not detected previously on site or adjacent lands.

Common Name	NSW listing status	EPBC Listing status	Survey Season	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate Sall	Included/Excluded/Targeted Survey
Native Guava (*Rhodomyrtus psidioides*)	CE	-	All year	-	-	-	-	**Included:** Known to occur in study area.
Scrub Turpentine (*Rhodamnia rubescens*)	CE	-	All year	N/A	High	3	Yes	**Included:** Known to occur in study area.

7.3.1.3 Fauna

Bionet (DPIE 2021a) and the literature record the following threatened species in the locality (excluding marine and estuarine species due to location inland):

Table 14: Bionet fauna records

Scientific Name	Common Name	BC Act	EPBC Act	Bionet records	BAMC predicted species?	Species or Ecosystem Credit	Included/Excluded from further assessment
Crinia tinnula	Wallum Froglet	V		7	Yes	Species	**Included**: no suitable habitat on site but routine survey of edge of LINR to confirm absence.
Litoria aurea	Green and Golden Bell Frog	E	V	6	Yes	Species	**Included**: Marginal potential foraging habitat within 100m of a potential breeding habitat.
Dromaius novaehollandiae	Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area	E		1	No	Species	Excluded: Erroneous local record from a former zoo. Way outside known range.
Anseranas semipalmata	Magpie Goose	V,P		7	No	Ecosystem	Excluded: Dam enclosed by trees and not preferred habitat.

Scientific Name	Common Name	BC Act	EPBC Act	Bionet records	BAMC predicted species?	Species or Ecosystem Credit	Included/Excluded from further assessment
Oxyura australis	Blue-billed Duck	V,P		2	No	Ecosystem	Excluded: Dam enclosed by trees and not preferred habitat.
Stictonetta naevosa	Freckled Duck	V,P		13	No	Ecosystem	Excluded: Dam enclosed by trees and not preferred habitat.
Ptilinopus magnificus	Wompoo Fruit-Dove	V		11	No	Ecosystem	Excluded: no suitable habitat.
Ephippiorhynchus asiaticus	Black-necked Stork	E1		50	No	Ecosystem	Excluded: Dam enclosed by trees and not preferred habitat.
Botaurus poiciloptilus	Australasian Bittern	E	E	5	No	Ecosystem	Excluded: Dam too small
Ixobrychus flavicollis	Black Bittern	V		3	Yes	Ecosystem	Excluded: Dam too small
Circus assimilis	Spotted Harrier	V		15	No	Dual	Excluded: Sightings are non-breeding coastal migrants.
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	C	34	No	Dual	Excluded: no suitable habitat.
Hieraaetus morphnoides	Little Eagle	V		1	Yes	Dual	**Included**: Survey to verify no raptor nests.
Lophoictinia isura	Square-tailed Kite	V		14	Yes	Dual	**Included**: Survey to verify no raptor nests.
Pandion cristatus	Eastern Osprey	V		22	Yes	Dual	Excluded: no suitable habitat.
Grus rubicunda	Brolga	V		5	No	Ecosystem	Excluded: Nearby dam too small
Burhinus grallarius	Bush Stone-curlew	E		2	Yes	Species	**Included:** Generic potential foraging habitat in maintained fairways.

Scientific Name	Common Name	BC Act	EPBC Act	Bionet records	BAMC predicted species?	Species or Ecosystem Credit	Included/Excluded from further assessment
Irediparra gallinacea	Comb-crested Jacana	V		4	No	Ecosystem	Excluded: no suitable habitat (detention basin lacks preferred macrophyte cover, small and enclosed by trees).
Calyptorhynchus lathami	Glossy Black-Cockatoo	V		36	Yes	Dual	Excluded: No potential foraging or nesting habitat on site.
Glossopsitta pusilla	Little Lorikeet	V		22	Yes	Ecosystem	**Included**: Potential foraging habitat.
Lathamus discolor	Swift Parrot	E	CE	46	Yes	Dual	Excluded: No trees in VZ of PCT listed.
Ninox connivens	Barking Owl	V		4	Yes	Dual	Excluded: Not recorded locally to date despite numerous surveys.
Ninox strenua	Powerful Owl	V		14	Yes	Dual	**Included**: Potential foraging habitat only (marginal).
Tyto novaehollandiae	Masked Owl	V		9	Yes	Dual	**Included**: Potential foraging habitat only (marginal).
Tyto longimembris	Eastern Grass Owl	V		30	No	Dual	Excluded: no suitable habitat.
Daphoenositta chrysoptera	Varied Sittella	V		38	Yes	Ecosystem	**Included**: Potential habitat (marginal).
Coracina lineata	Barred Cuckoo-shrike	V		16		Ecosystem	Excluded: Habitat on site all too degraded.
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V		4	No	Ecosystem	**Included**: Potential foraging habitat (marginal).
Petroica boodang	Scarlet Robin	V		1	No	Ecosystem	Excluded: Habitat too degraded

Scientific Name	Common Name	BC Act	EPBC Act	Bionet records	BAMC predicted species?	Species or Ecosystem Credit	Included/Excluded from further assessment
Dasyurus maculatus	Spotted-tailed Quoll	V	E	9	Yes	Ecosystem	Excluded: Habitat too degraded
Phascogale tapoatafa	Brushtailed Phascogale	V		1	Yes	Species	**Included**: Potential habitat (marginal).
Planigale maculata	Common Planigale	V		3	Yes	Species	Excluded: Habitat too degraded
Phascolarctos cinereus	Koala	V	V	6277	Yes	Dual	**Included**: Core Koala Habitat.
Cercartetus nanus	Eastern Pygmy-possum	V		2	Yes	Species	Excluded: Habitat too degraded
Petaurus australis	Yellow-bellied Glider	V		8	Yes	Ex	Excluded: Not detected by previous surveys in site or adjoining land; no potential den sites on site and rare in study area.
Petaurus norfolcensis	Squirrel Glider	V		34	Yes	Species	**Included**: Potential habitat.
Aepyprymnus rufescens	Rufous Bettong	V		1	Yes	Species	Excluded: habitat too degraded. Novel local record in LINR near ruins.
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	34	Yes	Dual	**Included**: Potential habitat.
Syconycteris australis	Common Blossom-bat	V		1	Yes	Ecosystem	Excluded: no suitable habitat.
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V,P		3	Yes	Ecosystem	**Included:** Potential habitat.
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V		19	Yes	Ecosystem	**Included**: Potential habitat.
Chalinolobus nigrogriseus	Hoary Wattled Bat	V		1	Yes	Ecosystem	**Included**: Potential habitat.

Scientific Name	Common Name	BC Act	EPBC Act	Bionet records	BAMC predicted species?	Species or Ecosystem Credit	Included/Excluded from further assessment
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V		4	Yes	Ecosystem	**Included**: Potential habitat.
Myotis macropus	Southern Myotis	V		13	Yes	Dual	**Included**: Suitable foraging and roosting habitat within 200m adjacent to site.
Scoteanax rueppellii	Greater Broad-nosed Bat	V		14	Yes	Ecosystem	**Included**: Potential habitat.
Vespadelus troughtoni	Eastern Cave Bat	V		4	Yes	Dual	**Included**: Potential foraging habitat only.
Pseudomys gracilicaudatus	Eastern Chestnut Mouse	V		14	Yes	Ecosystem	Excluded: Habitat too degraded
Miniopterus australis	Little Bent-winged Bat	V		39	Yes	Dual	**Included**: Potential foraging habitat only.
Miniopterus orianae oceanensis	Large Bent-winged Bat	V		24	Yes	Dual	**Included**: Potential foraging habitat only.
Petalura gigantea	Giant Dragonfly	E		1	Yes	Species	Excluded: No suitable habitat.

No additional species not predicted by the BAMC were added to the candidate species list for further assessment.

7.3.1.4 Potential occurrence assessment

The BAMC predicted the following species credit species (SCS) as potential occurrences on the site. These were reviewed for potential to occur in terms of habitat constraints, geographic limitations and the same criteria and reference information as for ecosystem credit species.

Table 15: Potentially occurring candidate species credit species – fauna

Common Name	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate SaII	Included/Excluded from further assessment	Targeted survey required
Rufous Bettong (*Aepyprymnus rufescens*)	V	-	N/A	High	2	No	Excluded: No potential habitat	No
[DC]Regent Honeyeater (*Anthochaera phrygia*)	CE	CE	Breeding: [1]As per mapped areas.	High	3	Yes	Excluded: Not in mapped area and extremely vagrant in sub-region; and no trees in VZ of listed PCT.	No
Bush Stone-curlew (*Burhinus grallarius*)	E	-	Fallen/standing dead timber including logs.	High	2	No	**Included**: Targeted survey required although no local records	Yes
[DC]Glossy Black Cockatoo (*Calyptorhynchus lathami*)	E	V	Breeding: Living or dead tree with hollows greater than 15cm diameter and greater than 5m above ground.	High	2	No	Excluded: No suitable hollows, and no forage trees onsite.	Yes
Eastern Pygmy-possum (*Cercartetus nanus*)	V	-	N/A	High	2	No	Excluded: Habitat too degraded	No
Wallum Frog (*Crinia tinnula*)	V	-	Within 10km of coast.	Moderate	1.5	No	**Included**: No habitat on site but edge of LINR routinely checked.	Yes
[DC]White-bellied Sea-Eagle (*Haliaeetus leucogaster*)	V	-	Living or dead mature trees within suitable vegetation within 1km of a rivers, lakes, large dams or creeks, wetlands and coastlines: yes	High	2	No	Excluded: no nests, no foraging habitat in close proximity.	No

Common Name	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate Sall	Included/Excluded from further assessment	Targeted survey required
[DC]Little Eagle (*Hieraaetus morphnoides*)	V	-	Breeding: Nest trees - live (occasionally dead) large old trees within vegetation.	Moderate	1.5	No	**Included**: Survey to confirm no nest.	Yes
Pale-headed Snake (*Hoplocephalus bitorquatus*)	V	-	N/A	High	2	No	Excluded: No local records, habitat is not preferred, severe rarity of hollows, and degraded habitat.	No
Stephens' Banded Snake (*Hoplocephalus stephensii*)	V	-	N/A	High	2	No	Excluded: No local records, habitat is not preferred, severe rarity of hollows, and degraded habitat.	No
Swift Parrot (*Lathamus discolor*)	E	CE	Foraging: [1]As per mapped areas	Moderate	3	Yes	Excluded: Not in mapped area.	No
Green and Golden Bell Frog (*Litoria aurea*)	E	V	• Semi-permanent/ephemeral wet area: No • Within 1km of wet areas/swamps: yes • Within 1km of swamps/waterbodies: yes • Within 1km of waterbody: yes	High	2	No	**Included**: Very marginal potential habitat in stormwater pond to east, as per DPIE request. However pond is full of Plague Minnow (unsuitable for breeding) and has very limited emergent vegetation.	Yes
Green-thighed Frog (*Litoria brevipalmata*)	V	-	N/A	Moderate	1.5	No	Excluded: No suitable breeding habitat.	No

Common Name	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate Sall	Included/Excluded from further assessment	Targeted survey required
[DC]Square-tailed Kite (*Lophoictinia isura*)	V		Breeding: Nest trees	Moderate	1.5	No	Included: Survey to confirm no nest.	Yes
Parma Wallaby (*Macropus parma*)	V	-	N/A	High	2	No	Excluded: Not suitable habitat and no coastal records; and highly degraded.	No
[DC]Little Bentwing Bat (*Miniopterus australis*)	V	-	Breeding: Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding.	Very high	3	Yes	Excluded: No suitable structures.	No
[DC]Eastern Bent-wing Bat (*Miniopterus schreibersii oceanensis*)	V	-	[DC]Breeding: Cave, tunnel, mine, culvert or other structure known or suspected to be used for breeding.	Very high	3	Yes	Excluded: No suitable structures.	No
Stuttering Frog (*Mixophyes balbus*)	E	V	N/A	Very high	3	No	Excluded: No suitable habitat. No local records.	No
Southern Myotis (*Myotis macropus*)	V	-	• Hollow-bearing trees • Within 200m of riparian zone; bridges, caves or artificial structures. • Bridges, caves or artificial structures within 200m of riparian zone; waterbodies • This include rivers, creeks, billabongs, lagoons, dams and other waterbodies on or within 200m of the site	High	2	No	**Included**: Potential foraging habitat within 200m of site in form of detention basin.	Yes

Common Name	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate Sall	Included/Excluded from further assessment	Targeted survey required
[DC]Barking Owl (*Ninox connivens*)	V	-	[DC]Breeding: Hollow-bearing trees	High	2	No	Excluded: No potential suitable breeding hollows	No
[DC]Powerful Owl (*Ninox strenua*)	V	-	Breeding: Living or dead trees with hollow greater than 20cm diameter	High	2	No	Excluded: No potential suitable breeding hollows	No
Red-backed Button-quail (*Turnix maculosus*)	V	-	N/A	High	2	No	Excluded: Not suitable structure and no local records, and highly degraded.	No
Eastern Osprey (*Pandion cristatus*)	V	-	Breeding: Living and dead trees (>15m) or artificial structures within 100m of a floodplain for nesting.	Moderate	1.5	No	Excluded: Too far from foraging habitat	No
Giant Dragonfly (*Petalura gigantea*)	E	-	• Swamps • Within 500m of swamps	Very high	3	No	Excluded: No suitable breeding habitat within 500m.	No
Squirrel Glider (*Petaurus norfolcensis*)	V	-	N/A	High	2	No	**Included**: Targeted survey required as potential habitat and local records	Yes
Brushtailed Rock-wallaby (*Petrogale penicillata*)	E	V	N/A	Very high	3	Yes	Excluded: No suitable habitat.	No
Brushtailed Phascogale (*Phascogale tapoatafa*)	V	-	Hollow-bearing trees	High	2	No	**Included**. Targeted survey required as potential habitat and local records	Yes

Common Name	BC Act	EPBC Act	Step 2: Habitat Constraints and Geographic Limitations criteria	Sensitivity to gain class	Biodiversity Risk Weighting	Candidate Sall	Included/Excluded from further assessment	Targeted survey required
Koala (*Phascolarctos cinereus*)	V	V	Breeding: Areas identified via survey as important habitat defined by the density of koalas and quality of habitat determined by on-site survey.	High	2	No	**Included**: Previously known from adjoining habitats.	Yes
Common Planigale (*Planigale maculata*)	V	-	N/A	High	2	No	Excluded – too degraded.	No
[DC]Grey-headed Flying-fox (*Pteropus poliocephalus*)	V	V	Breeding: Breeding camps	High	2	No	Excluded: Not preferred type, and not a known site.	No
[DC]Masked Owl (Tyto novaehollandiae)	V	-	Breeding: Living or dead trees with hollows greater than 20cm diameter.	High	2	No	Excluded: No suitable breeding hollows present.	No
Eastern Cave Bat (*Vespadelus troughtoni*)	V	-	Within 2km of rocky areas containing caves, overhangs, escarpments, outcrops, crevices or boulder piles, or within 2km of old mines, tunnels, old buildings or sheds."	Very high	3	Yes	Excluded: No suitable structures.	No

7.4 Species credit species requiring survey

If a species credit species (SCS) is considered to have potential to occur, and it not assumed to occur for the purposes of the BAMC, targeted survey is required to verify its presence or absence (BAM Step 3).

7.4.1 Flora

7.4.1.1 Methods and effort

Targeted survey is required for the following species:

Table 16: Species Credit targeted flora survey species

Species	Species Credit	Potential habitat on site	Survey season	Survey methods
Trailing Woodruff (Asperula asthenes)	Known habitat	Marginal potential in stormwater drain.	Oct-Dec	Habitat survey
Noah's False Chickweed (Lindernia alsinoides)	Known habitat	Marginal potential in stormwater drain.	Nov-Feb	Habitat survey
Maundia triglochinoides	Known habitat	Marginal potential in stormwater drain.	Nov-Feb (all year)	Habitat survey
Melaleuca biconvexa	Known habitat	Paperbark swamp forest in western strip and edge of LINR	All year	Habitat survey
Rusty Plum, Plum Boxwood (*Niemeyera whitei*)	Known habitat	Wet sclerophyll in eastern end of southern strip and northern end of western strip.	All year	Habitat survey
Milky Silkpod (*Parsonsia dorrigoensis*)	Known habitat	Wet sclerophyll in eastern end of southern strip and northern end of western strip.	All year	Habitat survey
Scant Pomaderris (*Pomaderris queenslandica*)	Known habitat	Wet sclerophyll in eastern end of southern strip and northern end of western strip.	All year	Habitat survey
Native Guava *(Rhodomyrtus psidioides)*	Known habitat	Wet sclerophyll in eastern end of southern strip and northern end of western strip; and mesophyllic understory in paperbark swamp forest.	All year	Habitat survey
Scrub Turpentine *(Rhodamnia rubescens)*	Known habitat	Wet sclerophyll in eastern end of southern strip and northern end of western strip.	All year	Habitat survey

The species were surveyed in line with OEH (2016) ie. belt transects. The development envelope was systematically searched by an ecologist inspecting all habitat on site, plus the strip of forest along the southern and southeast boundary; the strip adjacent on the west boundary. A single transect was made in the first 20m of the adjacent outer edge of LINR in December 2020.

A total of 4hrs and 8hrs was spent on this aspect of the survey in late December 2020 and mid January 2021.

7.4.1.2 Results

Melaleuca biconvexa

Survey confirmed previous surveys (Darkheart 2013, BA 2020) findings that *M. biconvexa* does not occur on the site or the adjacent margins of LINR.

The species has a consistent association with Kraznozem soils on the Thrumster soil landscape in the LGA, and these soils only occur on the western boundary with the crematorium (reflecting the complex geological striation due to a series of folds). A small number of plants occur on these soils to the southwest of the site (BA 2020), disjunct from the nearest known population about 1km west on land owned by the proponent, just south of the Oxley Highway (pers. obs.).

Native Guava

Native Guava was previously recorded as common in the western strip, southern strip and edges of LINR where a mesophyllic tall shrub layer is present (Darkheart 2013).

Myrtle Rust infection has since been catastrophic, with many dead trees and shrubs found. The plants that remain are either just shrubs 1-4m high or (predominantly) seedlings/root suckers. Most of the shrubs are distressed, though two plants flowered in the last season.

Most of the seedlings/root suckers are <30cm tall and can be found at the base or within 2-3m of a dead shrub or tree, with a few true seedlings dispersed within 5m of an adult plant in the eastern end of the southern strip. Survivorship is however likely to be low, as evident by Myrtle Rust often occurring on the small plants.

Plants within the southern and western strip and the nearest plants recorded in LINR are shown in **Figure 13**. None occur in the proposed development envelope.

Exact counts of individuals is superfluous as root suckers are difficult to distinguish from true seedlings; and the population is likely to significantly decline due to infection mortality eg. most if not all of the adults are likely to die in the short term. As part of the VMP, the species will be monitored for potential resistant plants than can form part of its recovery in the Saving Our Species program.

Scrub Turpentine

A single Scrub Turpentine was found on the boundary of the crematorium in the western strip. The young plant currently has a light Myrtle Rust infection hence its long term survival is uncertain. The location is shown in Figure 13.

Figure 13: Native Guava and Scrub Turpentine on and adjacent to site



Photo 7: Young Native Guava (tagged) in western end of southern strip retained in E2 zone



No other threatened flora were detected, confirming the previous survey results (Darkheart 2013, BA 2020).

7.4.2 Fauna

The following table summarises survey method and season for the species identified to require survey to confirm presence/absence:

Table 17: Species Credit fauna species targeted survey

Species	Species Credit	Potential habitat on site	Survey season	Survey methods
Wallum Froglet	Breeding and foraging	No. Marginal at best in adjacent LINR. Routine survey as ideal conditions to confirm absence.	All year.	Call detection, call playback, and call recording.
Green and Golden Bell Frog	Breeding and foraging	Foraging habitat within 100m of marginal potential breeding habitat	Nov-Mar	Call detection, call recording, diurnal surveys, nocturnal surveys, tadpole surveys.

Species	Species Credit	Potential habitat on site	Survey season	Survey methods
Bush Stone-curlew	Known habitat	Dry sclerophyll forest	Year round	Call playback (dusk) and diurnal survey to flush birds.
Little Eagle	Breeding	Dry sclerophyll forest	Aug-Oct	Nest survey in breeding season
Square-tailed Kite	Breeding	Dry sclerophyll forest	Sep-Jan	Nest survey in breeding season
Squirrel Glider	Foraging and breeding	Dry sclerophyll forest	All year	Camera traps, spotlighting, call detection
Brushtailed Phascogale	Known habitat	Dry sclerophyll forest	All year	PIR cameras and spotlighting
Koala	Breeding	Dry sclerophyll forest	All year	Spot Assessment Technique, spotlighting, call playback and diurnal surveys.
Southern Myotis	Breeding	Hollows adjacent to west; and dam to east.	Oct-March	Call detection, harp trapping, mist nets.

7.4.3 Targeted fauna surveys

This is in line with Step 4 of the BAM.

7.4.3.1 Methods and effort

Targeted surveys for species credit species were undertaken at the site on the dates outlined in **Table 18**.

The location of targeted surveys are shown in **Figure 14.** Methods such as diurnal bird searches generally followed the route indicated by the spotlighting transect. As these methods as well as spotlighting were undertaken with numerous repeats, only one indicative route is shown to indicate comprehensive coverage of the site's habitats.

Table 18: Survey effort for fauna survey

Method	Habitat (ha)	Stratification units	Total effort	Target species
Arboreal Elliot A	~2ha	1 (<50ha)	5 PIR cameras set for 4 weeks (total effort of 140 trap nights)	Squirrel Glider, Brushtailed Phascogale, Eastern Pygmy Possum
Arboreal Elliot B	~2ha	1 (<50ha)		
Arboreal hair tubes	~2ha	1 (<50ha)		
Nest boxes	~2ha	N/A	Not used as no suitable habitat/too degraded.	Eastern Pygmy Possum
Area search	~2ha	1 (<50ha)	December: 2hr/day search over 3 days (6hrs) January: 2hr/day search over 3 days (6hrs) Incidental checks over other surveys >12hrs.	Ecosystem credit species, diurnal raptors, Bush-stone Curlew, Koala, Powerful Owl, Masked Owl, Barking Owl
Cage traps	Not used as no relevant Species Credit target species.			
Call playback/detection	~2ha	1 (<50ha)	4 nights Dec-Jan: 12hrs.	Bush-stone Curlew, Koala
Call recording (Anabat)	~2ha	1 (<50ha)	Anabat set at nearby dam for 18 nights (216 hours call detection).	Southern Myotis and all other Ecosystem Credit microchiropteran bat species.
Harp trapping	~2ha	1 (<50ha)	Not undertaken as no clearly defined flyway where a harp trap can be effective. Assumed breeding of Southern Myotis if detected by Anabat.	Southern Myotis, Eastern Cave Bat and all other Ecosystem Credit microchiropteran bat species.
Mist netting	Not used as Eastern Blossom Bat and Golden-tipped Bat not likely potential occurrences.			
Pitfall traps with drift net	~2ha	1 (<50ha)	Not used as no suitable habitat/too degraded.	Common Planigale, Eastern Pygmy Possum
Terrestrial camera traps	~2ha	1 (<50ha)	Not used as no suitable habitat/too degraded.	Ecosystem credit species, Rufous Bettong
Sand plots	Not used as PIR cameras more effective.			
Search for scats and signs; turning over logs and raking leaf	~2ha	1 (<50ha)	1hr spent on Koala scat searches on site. 0.5hr inspection of windrow for potential dens, nests,	Glossy Black Cockatoo, Powerful Owl, Masked Owl, Barking Owl, Koala, Pale-

Method	Habitat (ha)	Stratification units	Total effort	Target species
litter			etc.	headed Snake, Stephen's Banded Snake, Three-toed Snake-toothed Skink
Spotlighting from vehicle	~2ha	1 (<50ha)	N/A	Powerful Owl, Masked Owl, Barking Owl, Koala, Yellow-bellied Glider, Greater Glider, Squirrel Glider, Brushtailed Phascogale, Spotted-tail Quoll, Ecosystem credit species, Pale-headed Snake, Stephen's Banded Snake
Spotlighting on foot	~2ha	1 (<50ha)	4 nights Dec-Jan: 8hrs total	
Stagwatching	~2ha	1 (<50ha)	4 events (45 mins from dusk) watching hollows on western boundary	Glossy Black Cockatoo, Powerful Owl, Masked Owl, Barking Owl, Greater Glider, Squirrel Glider, Brushtailed Phascogale, Pale-headed Snake, Stephen's Banded Snake, Ecosystem credit species
Terrestrial Elliot A	~2ha	1 (<50ha)	Not used as no suitable habitat/too degraded.	Common Planigale, Eastern Pygmy Possum, New Holland Mouse
Terrestrial Elliot B	Not used as no suitable habitat/too degraded.			
Terrestrial hair tubes				
Watercourse search	-	1	Call playback and detection at detention basin, stormwater drain, and edge of LINR over 4 major rainfall events in Dec-Jan. Torch searches for frogs around edge of all water; and where frogs heard calling. Total of 10hrs spent on this survey.	Ecosystem credit species, Green-thighed Frog, Green and Golden Bell Frog, Pale Headed Snake.
Wetland census (diurnal)	-	1	Nearby detention basin emergent plants (Cumbungi) searched for basking Green and Golden Bell Frogs on days >26°C Dec-Jan over 4 surveys in Dec-Jan (4hrs).	Ecosystem credit species, Green-thighed Frog, Green and Golden Bell Frog (non-breeding)

Method	Habitat (ha)	Stratification units	Total effort	Target species
Wetland census (nocturnal)	-	1	Call playback and detection at detention basin, stormwater drain, and edge of LINR over 4 major rainfall events in Dec-Jan. Torch searches for frogs around edge of all water; and where frogs heard calling. Total of 10hrs spent on this survey.	Ecosystem credit species, Green-thighed Frog, Green and Golden Bell Frog (non-breeding)

Weather conditions during the targeted surveys are outlined in **Table 19**.

Table 19: Survey and weather conditions

(source: BoM 2020, Port Macquarie airport)

Date	Survey Methods	Min. temp. °C	Max. temp. °C	Rainfall (mm)
8/12/2020	PIR cameras set, nocturnal survey, stagwatch, call playback	16.5	28.0	0
9/12	diurnal area search survey, Koala scat search, Anabat set	9.6	25.2	0
16/12	Nocturnal frog survey	21.1	25.9	138.4
17/12	Diurnal frog survey, diurnal area search survey	22.4	27.8	1.6
18/12	nocturnal survey, stagwatch, call playback	21.6	31.0	1.0
22/12	Nocturnal frog survey	21.2	25.2	43.6
23/12	diurnal area survey, stagwatch, spotlighting, call playback, Anabat retrieval	17.2	25.8	0
1/1/2021	Nocturnal frog survey	20.6	26.0	37.2
4/1	Diurnal frog survey, diurnal area search survey,	21.2	28.0	14.6
6/7	diurnal area search survey, stagwatch, spotlighting, call playback	9.8	27.5	9.8
7/1	Nocturnal frog survey	19.2	23.6	49.0

Date	Survey Methods	Min. temp. ^{0}C	Max. temp. ^{0}C	Rainfall (mm)
15/1	Diurnal frog survey, PIR cameras retrieved.	21.0	29.2	19.8
19/1	Diurnal frog survey, diurnal area search survey, stagwatch, call playback	18.8	28.9	0

Figure 14: Targeted fauna surveys



7.4.3.2 Survey results

Arboreal Fauna

The PIR cameras confirmed the 2011 survey results, recording only common arboreals ie: Brushtail Possum, Feathertail Glider, and Sugar Glider.

No fauna were observed by stagwatching or spotlighting.

No Koala scats were found under trees on site. Only kangaroo and wallaby scats, as well as arboreal mammal scratches were the other secondary evidence found. Scratches confidently identified of the Koala were noted on the two Forest Red Gums in VZ 3.

No sap incisions of the Yellow-bellied Glider were recorded, or calls of this species detected. A single weeping Bloodwood in VZ 2 was considered to natural exfoliations, but could be used by the Sugar Glider.

Birds

Only common species of birds were detected by the diurnal and nocturnal surveys. The latter was dominated by medium to large woodland birds.

There are no large raptor nests on site or in adjacent areas.

Frogs

Only common frogs were recorded calling and detected via day and night searches in the nearby stormwater detention basin just adjacent to the east of the site after major rainfall over the summer survey period; from the edge of LINR; and in the stormwater drain. This confirmed previous survey findings (Darkheart 2013).

Reptiles:

Only common grass skinks and Red-bellied Black Snakes were observed.

Microchiropteran bats:

An Anabat set at the nearby detection basin recorded the following species:

Table 20: Microchiropteran bat survey results

Scientific name	Common species names	Definite passes	Probable passes	Possible passes
Miniopterus australis	Little Bent Wing Bat	Y	-	-
Vespadelus pumilus	Eastern Forest Bat	-	-	Y
Austronomus australis	White-striped Free-tailed Bat	-	Y	-

This compliments previous results (JBE 2017, Darkheart 2013):

Table 21: Lot 499 Microchiropteran bat survey results

Scientific name	Common species names	No. Of definite passes	No. Of probable passes	No. Of possible passes
Chalinolobus gouldii	Gould's Wattled Bat	-	-	Y
Chalinolobus morio	Chocolate Wattled Bat	-	Y	Y
Miniopterus australis	Little Bent Wing Bat	Y	-	Y
Scotorepens sp.	Undescribed Broad-Nosed Bat	Y	-	Y
Scotorepens orion	Eastern Broad-nosed Bat	-	-	Y
Vespadelus pumilus	Eastern Forest Bat	Y	Y	Y
Vespadelus vulturnus	Little Forest Bat	-	-	Y
Vespadelus troughtoni	Eastern Cave Bat	-	-	Y*

The Eastern Cave Bat (*Vespadelus troughtoni*) is only considered a default precautionary "*possible*" occurrence as it is virtually indiscernible from its common related *Vespadelus* species (Reinhold *et al* 2001). Lack of potential roosts on the site or nearby, or known roosts locally disqualifies this species from further consideration.

All other fauna species recorded to date on the parent Lot are listed below:

Table 22: Fauna species recorded on the property to date

Group	Common Name	Scientific Name
BIRDS	Brown Thornbill	*Acanthiza pusilla*
	Brown Goshawk	*Accipiter fasciatus*
	Chestnut Teal	*Anas castanea*
	Pacific Black Duck	*Anas superciliosa*
	Galah	*Cacatua roseicapilla*
	Little Corella	*Cacatua sanguinea*
	Fan-tailed Cuckoo	*Cacomantis flabelliformis*
	Yellow-tailed Black Cockatoo	*Calyptorhynchus funereus*
	Pheasant Coucal	*Centropus phasianinus*
	Australian Wood Duck	*Chenonetta jubata*
	Shining Bronze Cuckoo	*Chrysococcyx lucidus*
	White-headed Pigeon	*Columba leucomela*
	White-throated Treecreeper	*Cormobates leucophaea*
	Australian Raven	*Corvus coronoides*

Group	Common Name	Scientific Name
	Pied Butcherbird	*Cracticus nigrogularis*
	Grey Butcherbird	*Cracticus torquatus*
	Laughing Kookaburra	*Dacelo novaeguineae*
	Wandering Whistling Duck	*Dendrocygna arcuata*
	Intermediate Egret	*Egretta intermedia*
	Eastern Yellow Robin	*Eopsaltria australis*
	Common Koel	*Eudynamys scolopacea*
	Dollarbird	*Eurystomus orientalis*
	Australian Hobby	*Falco longipennis*
	Buff-banded Rail	*Gallirallus philippensis*
	Bar-shouldered Dove	*Geopelia humeralis*
	White-throated Gerygone	*Gerygone olivacea*
	Magpie Lark	*Grallina cyanoleuca*
	Magpie	*Gymnorhina tibicen*
	Yellow-faced Honeyeater	*Lichenostomus chrysops*
	Brown Cuckoo-dove	*Macropygia amboinensis*
	Superb Fairy-wren	*Malurus cyaneus*
	Noisy Miner	*Manorina melanocephala*
	Lewin's Honeyeater	*Meliphaga lewinii*
	Crested Pigeon	*Ocyphaps lophotes*
	Golden Whistler	*Pachycephala pectoralis*
	Spotted Pardalote	*Pardalotus punctatus*
	House Sparrow*	*Passer domesticus*
	Pelican	*Pelecanus conspicillatus*
	Little Black Cormorant	*Phalacrocorax sulcirostris*
	Pied Cormorant	*Phalacrocorax varius*
	Noisy Friarbird	*Philemon corniculatus*
	White Cheeked Honeyeater	*Phylidonyris albifrons*
	Eastern Rosella	*Platycercus eximius*
	Tawny Frogmouth	*Podargus strigoides*
	Eastern Whipbird	*Psophodes olivaceus*
	Satin Bowerbird	*Ptilonorhynchus violaceus*

Group	Common Name	Scientific Name
	Grey Fantail	*Rhipidura fuliginosa*
	Willie Wagtail	*Rhipidura leucophrys*
	Rufous Fantail	*Rhipidura rufifrons*
	Channel-billed Cuckoo	*Scythrops novaehollandiae*
	Yellow-throated Scrubwren	*Sericornis citreogularis*
	Pied Currawong	*Strepera graculina*
	Spotted Turtle-dove*	*Streptopelia chinensis*
	Forest Kingfisher	*Todiramphus macleayii*
	Sacred Kingfisher	*Todiramphus sanctus*
	Scaly-breasted Lorikeet	*Trichoglossus chlorolepidotus*
	Rainbow Lorikeet	*Trichoglossus haematodus*
	Masked Lapwing	*Vanellus miles*
Mammals	Feral Deer*	*Dama dama*
	Eastern Grey Kangaroo	*Macropus giganteus*
	Red-necked Wallaby	*Macropus rufogriseus*
	Domestic Dog	*Canis familiaris**
	House Mouse*	*Mus musculus*
	Koala	*Phascolarctos cinereus*
	Grey-headed Flying-fox	*Pteropus poliocephalus*
	Bush Rat	*Rattus fuscipes*
	Swamp Rat	*Rattus lutreolus*
	European Rat*	*Rattus rattus*
	Brushtailed Possum	*Trichosurus vulpecula*
	Sugar Glider	*Petaurus breviceps*
	Feathertail Glider	*Acrobates pygmaeus*
	Swamp Wallaby	*Wallabia bicolor*
Reptiles	Garden Sun-skink	*Lampropholis delicata*
	Common Blue-tongue	*Tiliqua scincoides*
Amphibians	Common Eastern Froglet	*Crinia signifera*
	Striped Marsh Frog	*Limnodynastes peronii*
	Green Tree Frog	*Litoria caerulea*
	Bleating Tree Frog	*Litoria dentata*

Group	Common Name	Scientific Name
	Dwarf Tree Frog	*Litoria fallax*
	Dainty Tree Frog	*Litoria gracilenta*
	Rocket Frog	*Litoria nasuta*
	Emerald Spotted Tree Frog	*Litoria peronii*
	Laughing Tree Frog	*Litoria tyleri*
	Great Barred Frog	*Mixophyes fasciolatus*
	Dusky Toadlet	*Uperoleia fusca*
Fish	Long-finned Eel	*Anguilla reinhardtii*
	Plague Minnow*	*Gambusia holbrooki*

7.4.4 Final Species Credit species

The Koala, Scrub Turpentine and Native Guava were the only Species Credit species confirmed to occur on site and/or in the study area, as follows:

Table 23: Final Species credit species

Common Name	Species presence	Dual or Species Credit	Number of individuals / Habitat (ha) on site	Biodiversity Risk Weighting
Koala	Known habitat	Dual	0.25ha	2
Native Guava	Known habitat	Species	Not found on site – adjacent in study area.	3
Scrub Turpentine	Known habitat	Species	Not found on site – adjacent in study area.	3

DPIE (2020) requested target survey of the Squirrel Glider and Green and Golden Bell Frog due to local records (Bionet 2021).

The Squirrel Glider has been clearly identified occupying urban remnants within western Port Macquarie (Darkheart 2005b, 2005e, 2005gm 2005h, 2004a, 2004b, 2004c, 2004d), but surveys of adjacent land to the east, north, west and southwest or for the Oxley Highway deviation have failed to detect it (Darkheart 2013, 2006b. AMBS 2001, Biosis 2002). It pops up again in the northern Sancrox area (Darkheart 2005a) and on a localized coastal sandplain west of the airport (Redpath 2002), but has not been recorded in southern Sancrox (JBE 2021, Darkheart 2005j), nor was it recorded in UIA 13 (Biolink 2003c), or during clearing of the Oxley Highway (Darkheart 2010a-e). Targeted survey by Darkheart (2013) and for this survey of the study area have only recorded Sugar Gliders.

The closest record is road kill to the northeast detected by the consultant at the Major Innes Drive/John Oxley Drive intersection (Darkheart 2005b), adjacent to where the species has since been confirmed to occur in the Highlands to Ruins Way area of remnants which interlink to Kooloonbung Creek NR.

Both species occur in the landscape in an occupation pattern of either co-habitation or exclusion depending on habitat quality (Smith and Murray 2003). Generally, the Squirrel Glider is found in areas where habitat is more productive due to fertile soils or complex mosaics of vegetation types and associations offering year round understory and canopy food sources. Failure to detect thus indicates the study area does not meet the species needs.

The Green and Golden Bell Frog has been historically recorded in the stormwater pond at the junction of the Ruins Way/John Oxley Drive intersection in 2001. This pond has long been heavily over-grown with self-composting cumbungi, and is considered structurally unsuitable for the frog.

This old record and a nearby record in another pond off Yarra Avenue and near Lindfield Park Rd in 2001 contributed to formulation of the Port Macquarie Green and Golden Bell Frog Management Plan (White 2006). Another Bionet record at that time states “near crematorium and margins of Lake Innes NR”, suggesting either on or very close to the site, yet no approved surveys of the site exist for this time. There is also no waterbody in that area.

The nearby basin to the east as noted previously, has some very broad potential for this species based on structure, but is only at best extremely marginal due to shadowing by the surrounding trees (Pyke et al 2000, Fyke et al 2001, Hamer et al 2002, etc); contains an abundance of Plague Minnow (Sanders et al 2015, Pyke et al 2000); and has only a very small (<75m^2) of potential basking habitat in the form of a patch of cumbungi at the southern end (Pyke et al 2000, White and Pyke 1996).

The 2001 sightings were followed by over a decade of failure to detect (even in ideal conditions) the species again, including during the construction of the Oxley Highway (Darkheart 2010a, 2010b), and during this survey.

The species was considered likely to have become locally extinct, until the recent record (2018) in freshwater wetland Kooloonbung Creek NR, and more significantly, a breeding boom in early 2020 after the first significant rainfall in several years and post-bushfire in LINR and northwest edge of Lake Cathie (Bionet 2021a, pers. obs). The latter followed NPWS records in late 2019 of calling frogs from the edge of Lake Innes (then closed, and only brackish which would also be hostile to Chytrid but potentially suitable for breeding as salinity up to 3-4ppm are tolerated (Stockwell et al 2012, Threlfall et al 2008), with young adults observed along the Perch Track, and in front lawns of Dirah St to Evans St in Lake Cathie, and in two ephemeral ponds just inside the Nature Reserve boundary (pers. obs.). Adults have since been recently (November-December 2020) reported on the southern side of Lake Cathie in a house yard on Tallong Drive, suggesting frogs may have crossed the lake (possible – the species has been recorded crossing mangrove estuaries), or another population occurs around southern Lake Cathie.

The species has a novel ecology of population booms in ideal seasons, followed by equally dramatic if not catastrophic declines due to Chytrid, and a retreat to refuge habitats (Daly 2014, Hamer 2002a, 2002b, Hamer et al 2008).

Post-breeding, the frog has an extraordinary drive and ability to widely disperse to discover and colonise new habitats, often ephemeral, and extending well into residential areas (Daly 2014). Individuals have been recorded moving 4km from their spawning habitat, and returning (Hamer et al 2016).

Changes to breeding conditions (eg. subsequent dry years) and mortality from Chytrid has been documented to see such booms collapse, with the species either retreating to core

refuge areas (eg. large areas of sedgeland/freshwater wetlands with acidity hostile to Chytrid (Daly 2014, Goldingay 1996), or locally dying out (Daly 2014).

The historical observations in 2001 are highly likely to represent such unsuccessful dispersals which have since died out, with the recent records indicating probably small and currently viable populations persisting in parts of Kooloonbung and Lake Innes NR where refuge can be sought from Chytrid due to abiotic conditions (eg. low pH and/or elevated salinity, and/or heavy metal levels (Stockwell et al 2012, Threlfall et al 2008).

Given this, the study area does not offer any significant potential habitat for the Green and Golden Bell Frog: only a cul-de-sac. It is thus unlikely to occur other than as an extremely rare dispersing adult from potential core refuge and breeding habitat nearly a kilometer south.

7.5 Species polygons

For the Koala, the area of known habitat was determined as the distribution of Schedule 2 species on site, which is restricted to VZ 3 and the 4 young trees in a windrow in VZ 4 as shown below:

Figure 15: Koala species polygon



STAGE 2: IMPACT ASSESSMENT – BIODIVERSITY VALUES

8.0 AVOIDING AND MINIMISING IMPACTS ON VEGETATION AND HABITAT

8.1 Avoiding and minimising impacts

8.1.1 Locating a Project to Avoid and Minimise Impacts

The following table details where the proposal has aimed to avoid and minimise impacts on vegetation and habitat.

Table 24: Locating a project to avoid and minimise impacts on vegetation and habitat

Approach	How addressed	Justification
Locating the proposal in areas where there are no biodiversity values	The development envelope is centred on existing cleared land which includes utilising two overhead powerline easements. The E3 zone also includes a former track running along the edge of the western remnant. All Native Guava habitat avoided. Intact areas of High Environmental Value (HEV) avoided: southern and western strips.	As per DPIE (2020), all Native Guava/Scrub Turpentine habitat is avoided, including the seedlings in the east. These areas will be protected in Environmental zones. While the E3 zone may potentially allow infrastructure to be established, this will have to avoid the Native Guava should the seedlings/root suckers in this area survive. VZ 3 comprises HEV as it forms part of Core Koala Habitat. An option to retain VZ 3 in its current parkland form was considered but long term security was an unknown issue, as well as public liability if it were made into a public park (ie. falling limbs). Infill planting to restore intact forest in this VZ was not a viable option due to incurred bushfire risk, and edge effects would be higher than on the adjacent strips of HEV which can be permanently protected and improved in condition under a Vegetation Management Plan (VMP). As the 16 KFTs in VZ 3 and 4 saplings in the windrow in VZ 4 will fall into residential lots, they will be offset with replantings at a ratio of 1:2 off the southern side of the southern strip of HEV, to widen this area and enhance its values. APZs use existing cleared land within the development footprint, and do not extend into the retained HEV in the south and west. Future additional ancillary infrastructure outside the site will use existing cleared land on adjoining land eg. if a filtration basin is needed, it will be located in maintain grassland to the southwest near an existing sewage pump station.

Approach	How addressed	Justification
Locating the proposal in areas where the native vegetation or threatened species habitat is in the poorest condition	Utilised northeast fringes where previously cleared and no/few mature trees.	As above.
Locating the project in areas that avoid habitat for species and vegetation in high threat categories (e.g. an EEC or CEEC), indicated by the biodiversity risk weighting for a species	No CEEC or EEC is present on the site.	Section 6 clearly determines no EEC occurs on site. Regardless, the swamp forest habitat is retained to the south and west.
Locating the proposal such that connectivity enabling movement of species and genetic material between areas of adjacent or nearby habitat is maintained	Western linkage is fully retained. Southern strip is completely retained with some widening to include KFT offset plantings.	As stated above – the location of the development envelope aimed to best minimise fragmentation via clustering development in the existing cleared areas. APZs also have been set back from these remnant strips of vegetation.

8.1.2 Designing a Project to Avoid and Minimise Impacts

The development has been designed in a way which avoids and minimises impacts as outlined below:

Table 25: Designing a proposal to avoid and minimise impacts on vegetation and habitat

Approach	How addressed	Justification
Reducing the clearing footprint of the project	Original development footprint was for more R1 land to southwest. Now reduced to area smaller than proposed footprint originally proposed in the South Lindfield rezoning (JBE 2017). All remnant strips of intact forest retained.	As detailed previously.

Approach	How addressed	Justification
Locating ancillary facilities in areas where there are no biodiversity values	APZs located in existing cleared land. Existing stormwater infrastructure to be re-used, or to lie in APZs or fairways. Northwest firetrail connection narrowed to avoid all Native Guava/Scrub Turpentine habitat.	As above. Some seedling/root sucker Native Guava occurs in the E3 zone. An E3 was required due to an existing stormwater easement in this location (Michelle Love, LPM, pers. comm.).
Locating ancillary facilities in areas where the native vegetation or threatened species habitat is in the poorest condition (i.e. areas that have a lower Vegetation Integrity score)	As above.	As above.
Locating ancillary facilities in areas that avoid habitat for species and vegetation in high threat status categories (e.g. an EEC or CEEC)	No EECs or CEECs. All Native Guava and Scrub Turpentine plants in Environmental zones.	As above, no EECs or CEECs on site or study area. Some Native Guava seedlings/root suckers are located in the E3 zone, and the zoning could permit future infrastructure. Any such works would need approval under Part 4 or 5, and the plants (if still present) would need to be avoided. An E3 zone is advised as required due to an existing stormwater easement in this area.
Providing structures to enable species and genetic material to move across barriers or hostile gaps	Not applicable as not fragmenting any vegetation into patches which require structures. Offset plantings south of the southern strip will incrementally improve this linkage.	As stated above – the location of the development envelope aimed to best minimise fragmentation via clustering development in a largely existing cleared area. Removal of the parkland in VZ 3 will have low impact on linkage value as only mobile species tolerant of derived woodlands would use this habitat. No linear infrastructure barrier created to justify measures such as overpasses, underpasses or rope bridges. No lot boundaries or roads will bisect any forest habitat.

Approach	How addressed	Justification
Making provision for the demarcation, ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation habitat on the development site.	Loss of 20 KFTs to be met by infill planting in existing clearing on southern side of site, with compliance under a KPoM and VMP.	Clearing of some native vegetation was unavoidable with the regrowth along the stormwater drain in VZ 1, and the parkland vegetation in VZ 3 impacting the ability to create a clearly defined residential precinct without containing habitat which may attract wildlife such as Koalas into areas where they may be subject to threats such as vehicle strike and dog attack. The loss is to be offset via some expansions of the edge of the western strip; infilling gaps in the eastern end and widening the southern side of the southern strip with Koala food trees and native understorey to increase Koala and Native Guava habitat; and closing the edge of the strips with shrubs and pungent-leaved plants, plus controlling transformer weeds and discouraging public entry.
Efforts to avoid and minimise impacts through design must be documented and justified.	Initial constraints assessment as follows: • Location of Native Guava and Scrub Turpentine. • Location of KFTs. • Overlay of development concept with Native Guava/Scrub Turpentine and KFTs. • Reduction of lots and configuration to retain KFTs in southern strip. • Accept loss of 16 KFTs in VZ 3 and offset with augmentation of southern strip and bush regeneration of southern and western strips for net gain in habitat. • Minimum possible APZ incorporated.	As stated above – the location of the development envelope aimed to best minimise fragmentation via clustering development over largely cleared land, but had to accept loss of parkland in VZ 3. This is offset via 4800m^2 of land being regenerated under the VMP. The APZs are setback from the retained vegetation, and provisions will be emplaced to negate the use of the 10/50 rule to modify the remnants. All Native Guava and Scrub Turpentine habitat is to be rezoned Environmental, and subject to a VMP. Any potential infrastructure in the E3 will need to avoid these species, if they are still present in the future when such works may be required.

8.2 Prescribed biodiversity impacts

8.2.1 Identifying prescribed biodiversity impacts

The future development is assessed for prescribed biodiversity impacts as follows:

Table 26: Prescribed biodiversity impacts assessment

Prescribed biodiversity impact	Description in relation to the development site	Threatened species or ecological communities affected
Impacts of development on the habitat of threatened species or ecological communities associated with: • karst, caves, crevices, cliffs and other geological features of significance, or • rocks, or • human made structures, or • non-native vegetation	No karst, caves, abandoned buildings, mines, etc, on site. No non-native vegetation providing habitat.	N/A
Impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range	Very low – strategic location of development envelope in to retain the key links ie. the western and southern strips of forest. Parkland in VZ 3 is a poor linkage. No road to bisect any retained forest habitat.	Koala – loss of some parkland trees which offer no significant linkage values. Key linkage west retained and to be augmented with more KFTs. Linkage provided by southern strip also retained.
Impacts of development on movement of threatened species that maintains their lifecycle	Low – all Native Guava/Scrub Turpentine habitat avoided, and overwhelming majority of KFTs, which form part of Core Koala Habitat.	Reduced impact on Koala and other fauna.

Prescribed biodiversity impact	Description in relation to the development site	Threatened species or ecological communities affected
Impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining).	Existing stormwater drain in VZ 1 to be replaced and upgraded to current statutory requirements (currently only an unfiltered discharge which runs over surface to LINR). Current stormwater easement along western side of site, which potentially services adjacent future subdivision to the north, will be upgraded to connect to new system servicing the new precinct. Stormwater treatment on adjacent future developed land should also assist in maintaining current water quality discharged at this point. Current discharge by existing pipe in electricity easement is impacting Native Guava habitat. This will be rectified. Any new pipes will need to avoid Native Guava and Scrub Turpentine plants, if any remain. All stormwater will be treated as per statutory requirements. No natural watercourse impacted.	No threatened frogs recorded at nearby dam and abundant Plague Minnow likely to exclude potential breeding. Adjacent forest in LINR too dense for Wallum Froglet. No EECs present in study area.
Impacts of vehicle strikes on threatened species or on animals that are part of a TEC.	Minimal – no bisection of habitat by roads; new dwellings will incrementally increase traffic volume on local roads, but these predominantly have existing speed restrictions via zoning and engineering measures.	Koala: but effect considered negligible given no habitat to be bisected by roads or enclosed within the residential area; and incremental increase on local roads insignificant.

8.2.2 Locating a project to avoid and minimise prescribed biodiversity impacts

The following table evaluates if the development has been located in a way which avoids and minimises prescribed biodiversity impacts:

Table 27: Locating a project to avoid and minimise prescribed biodiversity impacts

Approach	How addressed	Justification
Locating the envelope of surface works to avoid direct impacts on the habitat features	No hollow-bearing trees are impacted. The open stormwater drain will be removed. Log pile (if still present) will be removed. Western and southern strip retained.	Parkland containing 16 KFTs elected to be removed due to practical constraints, and loss of 4 young saplings within a windrow. Offsets to KFTs via widening southern strip.
Locating the envelope of sub-surface works, both in the horizontal and vertical plane, to avoid and minimise operations beneath the habitat features, e.g. locating long wall panels away from geological features of significance or water dependent plant communities and their supporting aquifers	Some cut and fill will be required to allow roads and suitable building platforms. This may slightly alter local groundwater and current surface runoff patterns eg. less runoff into the southwestern area which is dominated by Broad-leaved Paperbark. Unlikely to have a significant adverse impact given the wide edaphic tolerance of the species present in all stratums. Surface and groundwater patterns in study area will largely remain the same.	Limited cutting and filling will be required – topsoil stripping to enable suitable foundations, as the slope will be preferred to be maintained for stormwater management.
Locating the project to avoid severing or interfering with corridors connecting different areas of habitat, migratory flight paths to important habitat or preferred local movement pathways	The location of the development envelope aimed to best minimise fragmentation via clustering development in a largely existing cleared envelope, which includes fairways and two overhead powerline easements, and two existing stormwater easements. The key linkages along the western and southern boundaries will be retained and augmented.	As detailed previously – majority of KFTs and all Native Guava habitat is retained in the adjacent forest strips, hence these are avoided and are to be augmented with additional planting supplementing natural regeneration.
Optimising project layout to minimise interactions with threatened and protected species and ecological communities, e.g. designing turbine layout to allow buffers around features that attract and support aerial species, such as forest edges, riparian corridors and wetlands, ridgetops and gullies	As detailed previously, majority of KFTs and all Native Guava and Scrub Turpentine habitat is retained in the adjacent forest strips, hence these are avoided and are to be augmented with additional planting supplementing natural regeneration.	As above.

Approach	How addressed	Justification
Locating the project to avoid direct impacts on water bodies	No waterbodies on site. Open stormwater drain to be removed but offers no significant frog or waterfowl habitat and is unsuitable for Southern Myotis.	No waterbodies on site, and dam to east is a stormwater detention basin subject to low quality water flows. No threatened frogs known or likely to breed on site.

8.2.3 Designing a project to avoid and minimise prescribed biodiversity impacts

The following table evaluates if the development has been designed in a way which avoids and minimises prescribed biodiversity impacts.

Table 28: Designing a project to avoid and minimise prescribed biodiversity impacts

Approach	How addressed	Justification
Engineering solutions, e.g. proven techniques to minimise fracturing of bedrock underlying features of geological significance, water dependent communities and their supporting aquifers; proven engineering solutions to restore connectivity and favoured movement pathways	N/A	N/A
Design of project elements to minimise interactions with threatened and protected species and ecological communities	Strategic location of development envelope with APZ inside precinct, allowing retention of the southern and western strips. No roads bisecting any forest habitat. No lots to contain residual habitat. Western and southern residual habitat to be augmented with additional KFT plantings and regenerating to widen the vegetation remnants outside APZs. Existing APZ to LINR maintained to south to increase protection of retained habitat on site, so that is unlikely to burn in a catastrophic event, and hence offer short term shelter to fauna.	As detailed previously – majority of KFTs and all Native Guava/Scrub Turpentine habitat is retained in the adjacent forest strips, hence these are avoided and are to be augmented with additional planting supplementing natural regeneration. An option to retain the parkland containing KFTs in VZ 3 was considered but long term security was an unknown issue, as well as public liability if it were made into a public park (ie. falling limbs). Infill planting to restore intact forest here was not a viable option due to incurred bushfire risk and would be undermined by edge effects and incurred risks to fauna especially Koala eg. vehicle strike and dog attack. Without natural recruitment or continuous replacement, these trees would eventually die out.

Approach	How addressed	Justification
Design of the project to maintain environmental processes critical to the formation and persistence of habitat features not associated with native vegetation	Changes to landform are not expected to significantly alter runoff or groundwater patterns, hence adjacent wetland communities not likely to be subject to less runoff/groundwater recharge. A current stormwater pipe discharges into the proposed E3 zone, and dieback is evident in current Blackbutt and Tallowwood since the 2013 survey, indicating this is unsuitable. This should be rectified as part of the future development of the R1' zone.	Slope will be desired to be retained to enable effective stormwater. Soils are also characteristically poorly drained and prone to waterlogging, and the southern strip is ecotonal, hence currently variable edaphics, as evidenced by the assemblage of species. Stormwater pipe is under unformed overhead powerline maintenance trail. Future development provides a mean to rectify the situation.
Design of the project to maintain hydrological processes that sustain threatened species and TECs	Changes to landform are not expected to significantly alter runoff or groundwater patterns, hence adjacent wetland communities not like to be subject to less runoff/groundwater recharge.	Slope will be desired to be retained to enable effective stormwater. Soils are also characteristically poorly drained and prone to waterlogging, and the southern strip is ecotonal, hence currently variable edaphics, as evidenced by the assemblage of species. Pollen and fruit dispersal of plants is unaffected as common frugivores and pollinators will retain access.
Design of the project to avoid and minimise downstream impacts on rivers, wetlands and estuaries by control of the quality of water released from the site.	Standard stormwater controls will be implemented, and a buffer to the LINR will be retained via the existing fairways.	Current stormwater from Annabella Downs is directed to a basin to east of site on the parent land parcel, and flow from here is directed straight into LINR. Litter (mainly plastics) is very common in the basin, and water quality varies eg. some bacterial scums and odour noted before recent significant rain. Future stormwater management will have to meet current standards which have higher requirements that this historical treatment.

8.3 Direct impacts

The direct impacts of the development on:

- native vegetation are outlined in **Table 29**
- threatened species and threatened species habitat is outlined in **Table 30**
- prescribed biodiversity impacts

8.3.1 Habitat loss

Direct impacts including the final project footprint (construction and operation) are shown in **Figure 16**.

Table 29: Direct impacts to native vegetation

VZ	PCT Name	EEC	VI	Direct impact (ha)
1	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion (moderate)	No	33.1	0.09
2	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion (very low)	No	4.8	1.56
3	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion (moderate)	No	39.3	0.24
4	PCT 1724 Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast (very low)	No	5.9	0.99

Table 30: Direct impacts on threatened species and threatened species habitat

Common Name	Species	BC Act	EPBC Act	Direct impact number of individuals / habitat (ha)	Biodiversity Risk Weighting
Native Guava	*Rhodomyrtus psidioides*	CE	CE	0	3
Scrub Turpentine	*Rhodamnia rubescens*	CE	CE	0	3
Koala	*Phascolarctos cinereus*	V	V	0.25ha	2

8.3.2 Prescribed biodiversity impacts

The development has the prescribed biodiversity impacts as outlined in the table below.

Table 31: Direct impacts on prescribed biodiversity impacts

Prescribed biodiversity impact	Nature	Extent	Frequency	Duration	Timing
Impacts of development on the habitat of threatened species or ecological communities associated with: • karst, caves, crevices, cliffs and other geological features of significance, or • rocks, or • human made structures, or • non-native vegetation	N/A	N/A	N/A	N/A	N/A
Impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range	Minimal – loss of VZ 3 which is only parkland and has poor interconnectivity role to adjacent remnant vegetation with higher linkage values.	0.24ha	Single removal event	Permanent	Construction Operation
Impacts of development on movement of threatened species that maintains their lifecycle	Minimal – loss of VZ 3 which is only parkland and has poor interconnectivity role to adjacent remnant vegetation with higher linkage values.	0.24ha	Single removal event	Permanent	Construction Operation
Impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining)	Low risk of nutrient impacts from on-site effluent and erosion and sedimentation during construction is expected to be arrested by standard measures and existing stormwater treatment chain.	All site	During construction and immediately post-construction during rain events	Construction phase	Construction

Prescribed biodiversity impact	Nature	Extent	Frequency	Duration	Timing
Impacts of vehicle strikes on threatened species or on animals that are part of a TEC.	Minimal risk as no bisection of habitat by roads and no proposal to create habitat within the residential precinct.	All site.	Daily	Permanent	Construction Operation

9.0 SERIOUS AND IRREVERSIBLE IMPACTS (SAII)

There are three relevant Serious and Irreversible Impacts (SaII) candidate entities in the study area: Native Guava (known), Scrub Turpentine (known) and Swift Parrot (likely).

These species thus needs to be assessed under the SaII criteria as detailed below.

Table 32: Candidate Serious and Irreversible Impacts entities

Species / Community	Principle	Direct impact individuals / area (ha)	Threshold for SaII Assessment Required?
Swift Parrot	1 - a species, population or ecological community that is a candidate entity because it is in a rapid rate of decline.	4 food trees (2 being saplings <3m tall)	Mapped important areas: Not impacted. No further SaII assessment required.
Native Guava and Scrub Turpentine	None specified in Threatened Biodiversity Data Collection (TBDC). Principle 1 is however the likely to apply due to catastrophic decline from Myrtle Rust.	No loss of known habitat (see Figure 13). All protected in E2 zoning. VZ 3 is maintained by slashing, hence unlikely to colonise from adjacent habitat.	No threshold specified in TBDC: presumed zero loss is the threshold. Further SaII assessment required.

Table 33: Determining whether impacts are serious and irreversible

Determining whether impacts are serious and irreversible	Assessment: Native Guava
Principle 1	
Does the proposal impact on a species, population or ecological community that is a candidate entity because it is in a rapid rate of decline?	No – all known plants located directly adjacent to site by targeted survey, and all outside development envelope in retained habitat.
If yes, is the impact in excess of any threshold identified and therefore likely to be serious and irreversible? Note: where candidate entities have no listed threshold, any impact is considered likely to be serious and irreversible	N/A
Principle 2	
Does the proposal impact on a species that is a candidate entity because it has been identified as having a very small population size?	Not listed in TSDB Presumably is due to Critically Endangered status and infected plants do not appear produce viable seeds.
If yes, is the impact in excess of any threshold identified and therefore likely to be serious and irreversible? Note: where candidate entities have no listed threshold, any impact is considered likely to be serious and irreversible	No – no loss of any plants, and all potential habitat retained.
Principle 3	
Does the proposal impact on the habitat of a species or an area of an ecological community that is a candidate entity because it has a very limited geographic distribution?	No.
If yes, is the impact in excess of any threshold identified and therefore likely to be serious and irreversible? Note: where candidate entities have no listed threshold, any impact is considered likely to be serious and irreversible.	N/A
Principle 4	
Does the proposal impact on a species, a component of species habitat or an ecological community that is a candidate entity because it is irreplaceable?	No
If yes, is the impact in excess of any threshold identified and therefore likely to be serious and irreversible? Note: where candidate entities have no listed threshold, any impact is considered likely to be serious and irreversible.	N/A

The following table evaluates the significant of the proposal's impacts on the candidate SaII species:

Table 34: Evaluation of impact significance on a candidate SaII species

Impact Assessment Provision	Assessment
(a) the action and measures taken to avoid the direct and indirect impact on the potential entity for a SaII	All habitat of the plants are to be avoided. Retained habitat will be subject to a VMP to infill edges and removal transforming weeds. Risk of clearing during any future replacement or maintenance of the western boundary fence will have to avoid and protect plants during construction.
(b) the size of the local population directly and indirectly impacted by the development, clearing or biodiversity certification	None occur in the proposed development envelope. A single Scrub Turpentine, and <100 individuals of Native Guava, of which >80% are seedlings or root suckers occur in the directly adjacent habitat to the south and west, and some more in the northern limits of LINR (DPIE 2020). All small trees of the Native Guava have died, and the shrub-sized plants are currently in the epicormic sprouting stage due to major infections. It is reported that infected plants do not appear to produce viable seeds, though seedlings appear to occur near one stand in the eastern end of the southern strip (given distance from adult plants), while other small plants are clearly roost suckers. Majority of these small plants and all adults have signs of infection, hence survivorship is expected to be very low, if any. Scrub Turpentine is currently restricted to a single plant with a light Myrtle Rust infection.
(c) the extent to which the impact exceeds any threshold for the potential entity that is specified in the Guidance to assist a decision-maker to determine a serious and irreversible impact	No loss of any plants or potential habitat – all retained outside footprint. Indirect impacts managed via VMP which will see key transformer weeds controlled and edges closed with infill plantings.
(d) the likely impact (including direct and indirect impacts) that the development, clearing or biodiversity certification will have on the habitat of the local population, including but not limited to: (i) an estimate of the change in habitat available to the local population as a result of the proposed development (ii) the proposed loss, modification, destruction or isolation of the available habitat used by the local population, and (iii) modification of habitat required for the maintenance of processes important to the species' life cycle (such as in the case of a plant – pollination, seed set, seed dispersal, germination), genetic diversity and long-term	(i) No loss of any potential or known habitat. (ii) As above, and current connectivity retained. Birds capable of potentially dispersing any fruit will still have access to the plants, should they be viable post-infection. (iii) All live plants are considered important to these Critically Endangered species, as some may prove resistant to the disease and prove viable fruit. Hence all plants must be retained to maximise the potential for this to occur. The proposal achieves this via avoiding all known and potential habitat.

Impact Assessment Provision	Assessment
evolutionary development.	
(e) the likely impact on the ecology of the local population. At a minimum, address the following: (i) for fauna: – breeding – foraging – roosting, and – dispersal or movement pathways (ii) for flora, address how the proposal is likely to affect the ecology and biology of any residual plant population that will remain post development including where information is available: – pollination cycle – seedbanks – recruitment, and – interactions with other species (e.g. pollinators, host species, mycorrhizal associations)	(i) The only fauna habitat impacted is pasture, 0.09ha of regrowth swamp forest, and 0.24ha of parkland. Only the regrowth and parkland offers habitat for generalists, highly mobile species, and the Koala. These will continue to use the remaining habitat which comprises the more intact strips of forest adjacent and which contains known and potential habitat for this species. This includes habitat for frugivorous birds which can disperse any viable seed, as well as pollinator insects. This will retain current ecological functions. (ii) Native Guava was previously very common in the study area (Darkheart 2013) and both species were previously common in the locality, often found in regenerating forest and is recognised as colonisers, with their fruit very attractive to common frugivorous birds. These birds will retain their ability to use the remnant habitat as they are known to occur in urban remnants eg. Figbird (*Sphecotheres vieilloti*)), Black-faced Cuckoo-shrike (*Coracina novaehollandiae*), White-headed Pigeon (*Columba leucomela*) and Noisy Miner (*Manorina melanocephala*). The edaphics of the known habitat adjacent to the precinct is unlikely to see significant edaphic changes (eg. changes to runoff), hence will retain its support potential. Insect pollinator will face no barrier to access.
(f) a description of the extent to which the local population will become fragmented or isolated as a result of the proposed development	Nil. The plants have seeds dispersed via edible fruit and no barrier to such birds will be created, and are known to occur in urban remnants. The habitat is also located outside the residential precinct, allowing terrestrial fauna to access from LINR and rural land.
(g) the relationship of the local population to other population/populations of the species. This must include consideration of the interaction and importance of the local population to other population/populations for factors such as breeding, dispersal and genetic viability/diversity, and whether the local population is at the limit of the species' range	Native Guava occurs in the adjacent LINR, previously in abundance (Darkheart 2013), with recent records over the larger parent parcel (BA 2020, DPIE 2020a). It and Scrub Turpentine are expected to have been widespread over wet sclerophyll forest and rainforest in the locality, with Native Guava in particularly known to have been locally common prior to the introduction of Myrtle Rust. Genetic interchange is via dispersal of seeds by frugivorous birds over this area, with some local exchange via pollen. The study area population is thus not at the limits of the species range.

Impact Assessment Provision	Assessment
(h) the extent to which the proposed development will lead to an increase in threats and indirect impacts, including impacts from invasive flora and fauna, that may in turn lead to a decrease in the viability of the local population	Current habitat is highly exposed to edge effects for about 30 years when the golf course was approved and constructed, and the overhead powerlines, adjacent crematorium, and more recent residential development to the north. The proposal will incrementally and cumulatively increase edge effects, hence a VMP will be implemented to control transformer weeds, and close edges via infill planting and assisting regeneration.
(i) an estimate of the area, or number of populations and size of populations that is in the reserve system in NSW, the IBRA region and the IBRA subregion	Native Guava was previously known to occur from Broken Bay in New South Wales to Maryborough in Queensland; and Scrub Turpentine from Bateman's Bay to Gympie: distributed coastally and sub-coastally, and considered very common. Both would be widely recorded in the reserve system where wet sclerophyll, subtropical and littoral rainforest occurs, and locally is known to occur in LINR, Kooloonbung Creek NR, Limeburners Creek NR, Hat Head NP, Dooragan NP and Crowdy Head NP; as well as Queens Lake Conservation Area. Reservation is not an effective conservation measure for this plant as the disease is spread across its range.
(j) the measure/s proposed to contribute to the recovery of the species in the IBRA subregion.	Under the Saving Our Species (DPIE 2020c) program, the species is a Landscape species. Management activities include documenting populations for potential genetic recovery/perpetuation (eg. via growing in sterile environments), collecting (viable) seed, and controlling transformer weeds. The proposal contributes via retaining all known habitat, and the VMP will both control transformer weeds and close the edges, buffering edge effects and also increasing the extent of potential habitat which this species can expand into, if it recovers.

10.0 INDIRECT IMPACTS

The indirect impacts of the development are outlined below and a nominal 100m radius for indirect impact zone assessment is shown on **Figure 16**.

A hundred metre radius is nominated as edge effects which have a notable effect associated with the type and order of magnitude of this kind of development are generally limited to this (Lindenmayer and Fisher 2006, Goosem et al 2002).

Figure 16: Nominal indirect and direct impact zones for assessment



Table 35: Indirect impacts

Indirect impact	Project phase	Probability/Nature of impact if not mitigated	Extent	Frequency	Duration	Timing
Sedimentation and contaminated and/or nutrient rich run-off	Construction	Risk of sediment being directed into southern and western strip during construction, which would facilitate weed invasion. Unlikely given statutory requirements for erosion and sedimentation control, and overflows can be directed to pasture area to southwest where can be cleaned up. Western strip currently subject to stormwater runoff discharge point form land to north, which will increase with future residential development to north, but that development will have its own stormwater controls to improve the quality of discharge before it reaches the current discharge. This easement is expected to be formalized to direct flow to the treatment basin servicing the proposed new residential precinct on site. The discharge point in the central part of the site will be upgraded to current standards for stormwater, to ensure water discharged to LINR is of similar or better quality than present.	Generally downstream habitats within 100m of site. Effects reduce with groundcover filtering sediment and nutrient concentrations reducing via absorption. The acidic nature of swamp forest is also an effective phosphorus sink.	After each rainfall event	After each rainfall event during construction	Construction in short term and long term during Operation
Noise, dust or light spill	Construction Operation	Noise and light currently elevated as edge effects due to location on edge of existing residential area, and future growth area to north. Light noted to impact the remnant strips of vegetation and nearby dam to east. Less impact to southwest. Proposal will see light pollution increase on adjacent habitats, including LINR. This will be buffered slightly by retention of the southern strips. No hollows occur in the	Adjacent forest within 100m. Light may affect the western remnant most. Density of vegetation in LINR will significantly reduce light penetration.	Construction phase Operation phase	Construction phase – day time Operation phase – day and early night	Construction in short term and long term during Operation

Indirect impact	Project phase	Probability/Nature of impact if not mitigated	Extent	Frequency	Duration	Timing
		southern strip, hence hollow-obligate nocturnal fauna should be minimally impacted given records of recorded species in urban remnants and peri-urban habitats. Grey-headed Flying Foxes and Koala also use such habitats. The nearby dam is set back and has the densest part of the southern strip buffering it from noise and light. Noise in residential areas is highest during the day, with low levels at night, especially after 10pm. Noise will peak during construction, which is diurnal. As the site is not adjacent to rainforest or areas where wading birds are present, diurnal noise impacts should have nil impact. Dust is a negligible risk given the nature of the development, the soils present, the limited scale of construction, and proximity to houses will see standard dust control measures in effect during construction.				
Inadvertent impacts on adjacent habitat or vegetation	Construction	Risk of dumping building wastes, parking of plant or storage of construction materials. Readily mitigated via controls such as fencing during construction.	Boundary of residual with development envelope.	Unpredictable	Temporary during construction – obligated to manage to avoid this. Permanent during operation.	Construction Operation

Indirect impact	Project phase	Probability/Nature of impact if not mitigated	Extent	Frequency	Duration	Timing
Transport of weeds and pathogens from the site to adjacent vegetation	Construction Operation	Post-development, the remnant habitat will be on private land, which will minimise risk of track-making. A fence can be erected, with signage clarifying that unauthorized access is trespassing. Low risk of greenwaste dumping on boundary could lead to establishment of new weeds, but will be on private land hence would be trespassing. During operation, can be mitigated by avoiding having rear yards adjunct to remnant habitat ie. by having road between front yard and adjacent vegetation.	Boundary of residual with development envelope as this is closest to residential lots which are primary source.	Unpredictable	Temporary – obligated to manage	Construction Operation
Vehicle strike	Construction / operation	Minimal risk on site as no habitat bisected or proposed to be created for Koalas within the residential precinct. Low risk of Koalas crossing perimeter roads, but will be zoned 50kph and alignment will reduce effective speed. Incremental increase to cumulative traffic levels on local roads. These generally have existing traffic controls, and future upgrades of Ruins Way/John Oxley Drive intersections will further slow traffic in the medium term.	John Oxley Drive, Ruins Way, Annabella Drive, on-site road.	When roads used but most risk at night when fauna most active	Permanent after construction	Operation
Rubbish dumping	Construction / operation	Low risk of greenwaste and other rubbish dumping in residual outside site could lead to establishment of new weeds, dumping of debris which may include contaminants. Via layout design, this can be mitigated by avoiding having rear yards adjunct to remnant habitat ie. by having road between front yard and adjacent vegetation.	Boundary of residual with development envelope.	Very low – private ownership by proponent should deter this risk	Temporary – can be readily remediated	Construction Operation

Indirect impact	Project phase	Probability/Nature of impact if not mitigated	Extent	Frequency	Duration	Timing
Wood collection	Construction / operation	Nil – residents entering residual land adjacent to collect wood would be trespassing.	N/A	N/A	N/A	Operation
Bush rock removal and disturbance	Construction / operation	N/A.	N/A.	N/A.	N/A.	N/A.
Increase in predatory species populations	Construction / operation	Feral cats and foxes known and wandering domestic dogs and cats known or likely to be present from adjacent residential areas.	Residual	Ongoing	Permanent	Operation
Increase in pest animal populations	Construction / operation	Feral rodents already present. Low risk of increase. Feral cats and foxes already present.	Residual	Ongoing	Permanent	Operation
Increased risk of fire	Construction / operation	Low risk of residents perceiving fire risk in adjacent remnant forest in LINR (unless the entire current fairway currently providing a firebreak were re-afforested), and lighting fires as locate design intended to maximise fire protection: this would be trespassing as well as arson given Nature Reserve. Establishing dwellings will also encourage high vigilance of for bushfire reporting hence uncontrolled fires should be suppressed.	Residual. LINR fire management is responsibility of NPWS, who strategically manage the urban/park interface.	Ongoing	Permanent	Operation
Disturbance to specialist breeding and foraging habitat, e.g. beach nesting for shorebirds, frogs	Construction / operation	No such species present. No threatened frogs confirmed to use nearby dam or swamp forest.	-	-	-	-
Increased risk of starvation, exposure and loss of shade or shelter	Construction	Very low risk – no hollow-bearing trees or significant extent of intact native vegetation to be removed. Loss of 20 KFTs offset by replanting at least 40.	Site and study area	Single event during construction	Permanent	Construction

11.0 IMPACT SUMMARY

Following implementation of the BAM and the BAMC, the following impacts have been determined.

11.1 Serious and Irreversible Impacts (SAII)

The development does not have any Serious and Irreversible Impacts (SAII) as all Native Guava and Scrub Turpentine is avoided, and habitat will zoned Environmental Protection and will be managed under a VMP to control transforming weeds.

11.2 Impacts requiring offsets

Impacts requiring offset for native vegetation loss are shown below:

Table 36: Impacts to native vegetation that require offsets

Vegetation Zone	PCT Name	Vegetation Class/Trading Group	Vegetation Formation	Direct impact (ha)	Candidate SaII
VZ 1	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion (Moderate A)	Northern Hinterland Wet Sclerophyll Forests - ≥ 50% - < 70% cleared group (including Tier 3 or higher threat status).	Wet sclerophyll forest (grassy sub-formation)	0.09	No
VZ 3	PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion (Moderate B)	Northern Hinterland Wet Sclerophyll Forests - ≥ 50% - < 70% cleared group (including Tier 3 or higher threat status).	Wet sclerophyll forest (grassy sub-formation)	0.24	No

Table 37: Impacts on threatened species and threatened species habitat that require offsets

Species	Common Name	BC Act	EPBC Act	Direct impact (number of individuals / habitat (ha)	Candidate SaII
Koala	*Phascolarctos cinereus*	V	V	0.25ha	No

11.3 Impacts not requiring offsets

VZ 2 and 4 within the site are below the minimum VI threshold, hence no offsets are required.

11.4 Areas not requiring assessment

All areas on the site are considered vegetated with native vegetation and were all assessed. Clearing is not proposed of the western or southern strips, as these are to be protected and managed under a KPoM and VMP, hence no BAM assessment was required to determine offsets.

Indirect impacts on these habitats are mitigated by the VMP and other mitigation measures detailed below.

12.0 MEASURES TO MINIMISE IMPACTS

Measures proposed to minimise impacts at the development site before, during and after construction are outlined below:

Table 38: Measures proposed to minimise impacts

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Western and southern strips of habitat to be permanently protected via Environmental zoning under PMHC LEP (see Figure 2)	Very high – currently zoned rural with an approved golf course development.	Nil	Planning Proposal to result in rezoning of the habitat areas into Environmental.	Permanent protection under LEP.	Rezoning.	PMHC DPIE

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
VMP to manage western and southern strips of residual forest as follows (see Figure 17): • Offset planting of at least 40 KFTs in existing clearing on residual land on the edge of the southern strip, supplemented (if needed) with infill planting to create a linear edge on the western strip. • Assisting natural regeneration to restore undergrowth in the eastern end of southern strip. • Controlling transformer weeds in the eastern and southern strips to support Native Guava viability. • VMP monitoring period to annually report survivorship of Native Guava and Scrub Turpentine over 5 year period, to identify any potential resistant plants than can assist the SoS program.	High – unavoidable loss of proportion of KFTs in development footprint. No current weed management, with Setaria invading remnants. Seedling/root suckers at risk of being slashed by current management regime.	Nil	Development consent with VMP plus KPoM will require offset plantings to be undertaken and secured.	No net loss of Koala habitat. Greater edge protection of residual habitat. Control of transformer weeds in Native Guava habitat.	After DA approval.	Proponent PMHC
Avoiding all Native Guava and Scrub Turpentine and their habitat via development design.	Very low: all plants located and considered as hard constraints in layout design.	Nil	Layout to avoid Native Guava and Scrub Turpentine by locating lots and infrastructure outside known habitat. If any future infrastructure in E3, must avoid any extant Native Guava and Scrub Turpentine via location and/or design.	No loss of Native Guava or potential habitat.	Subdivision DA approval.	Proponent PMHC
Instigating clearing protocol including pre-clearing surveys and staged clearing, and the presence of a trained ecologist or licensed wildlife handler during clearing events	High – Koala recorded. No hollow-bearing trees to be removed.	Very low	Consent condition requiring the measure.	No Koalas injured or killed.	Prior to and during clearing.	Proponent PMHC Ecologist.

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Clearing protocols that identify vegetation to be retained, prevent inadvertent damage and reduce soil disturbance eg. exclusion fencing prior to commencing construction and maintained over construction phase.	Moderate – risk of impacts on retained KFTs and Native Guava	Very low	Consent condition requiring the measure in future DA.	KFTs and Native Guava protected during construction.	DA consent and construction phase.	Proponent PMHC
Sediment barriers/ponds to control the quality of water released from the site into the receiving environment during construction	High – risk of impacts on downstream impacts on LINR	Low	Consent condition requiring the measure.	Erosion controlled during construction.	DA consent and construction phase.	Proponent PMHC
Stormwater not directed into Native Guava habitat to avoid adverse changes to edaphic conditions.	Low – known constraint and stormwater to be directed to existing cleared area to southwest.	Very low	Stormwater infrastructure to avoid Native Guava habitat with infrastructure and direction of discharge.	No loss of Native Guava habitat; no adverse changes to edaphics.	DA and DA consent.	Proponent PMHC
Hygiene protocols to prevent the spread of weeds or pathogens between infected areas and uninfected areas	Low – risk of introduction of frog and plant diseases. Myrtle Rust already present and readily spread by wind, but risk that VMP works could spread to other sites.	Very low	Consent condition in DA for hygiene measures ie. washdown of construction machinery before entering site. VMP to include hygiene measures.	No disease introduced during major earthmoving works, or spread by VMP.	DA consent and construction phase.	Low
Staff training and site briefing to communicate environmental features to be protected and measures to be implemented.	High – risk of impacts on Native Guava and retained habitat.	Very low	Consent condition requiring include toolbox talks to ensure all workers aware of issues.	No impacts during construction.	DA consent and construction phase.	Proponent PMHC

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
If the boundary fence between the site and crematorium is ever to be replaced, the alignment and construction must avoid all Native Guava or Scrub Turpentine. During any such fence construction, the nearby plants are to be protectively fenced to avoid any accidental damage.	High – seedling Native Guava and single Scrub Turpentine occur within potential clearing limits of boundary fence.	Very low	Consent condition requiring any boundary fencing to avoid Native Guava and single Scrub Turpentine.	Native Guava and Scrub Turpentine avoided.	Operation	Future owners of residual land containing western strip.

13.0 CREDIT SUMMARY

The number of ecosystem credits required for the development are outlined in **Table 39**. The number of species credits required for the development are outlined in **Table 40**. A biodiversity credit summary report is included in **Appendix 3**.

Table 39: Ecosystem credits required

PCT Name	Candidate SAII	VZ	VI	Direct impact (ha)	Biodiversity Risk Weighting	Credits required
PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion (Moderate A)	No	1	33.1	0.09	1.75	1
PCT 690 – Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion (Moderate B)	No	3	39.3	0.24	1.75	4
Total						**5**

Table 40: Species credit summary

Common Name	Species	Candidate SAII	Direct impact (number of individuals / habitat (ha)	Biodiversity Risk Weighting	Credits required
Koala	*Phascolarctos cinereus*	No	0.25ha	2	**6**

Figure 17: Proposed offset replanting areas and Environmental zones



14.0 BIODIVERSITY OFFSET RETIREMENT STRATEGY

The proponent intends to retire the necessary credits in line with the like-for-like requirements of the BC Act via purchasing from the market, or if unavailable, from the NSW Biodiversity Conservation Trust.

EPBC ACT – MNES ASSESSMENT

15.0 GENERAL ASSESSMENT OVERVIEW

The provisions of the EPBC Act require determination of whether the proposal has, will or is likely to have a significant impact on a "*matter of national environmental significance"*. These matters are listed and addressed as follows:

1. World Heritage Properties: The site/study area is not listed as a World Heritage area nor does the proposal affect any such area.

2. Ramsar Wetlands of International Significance: No Ramsar wetland occurs on or adjacent to the site, nor does the proposal affect a Ramsar Wetland.

3. EPBC Act listed Threatened Species and Communities: The Koala (Vulnerable), Swift Parrot (Critically Endangered), Grey-headed Flying Fox (Vulnerable), Scrub Turpentine (Critically Endangered), Native Guava (Critically Endangered) and White-throated Needletail (Vulnerable) are known or considered potential occurrences in the study area. These were assessed and not considered likely to be significantly impacted.

4. Migratory Species Protected under International Agreements: No migratory species is likely to be significantly affected by the proposal, as detailed in section 18.

5. Nuclear Actions: The proposal is not a nuclear action.

6. The Commonwealth Marine Environment (CME): Listed as relevant to the site though is not within the CME nor does it affect such.

7. The Great Barrier Reef Marine Park: The proposal does not affect the Great Barrier Reef Marine Park.

8. National Heritage: The site does not contain an item of National Heritage.

9. **A water resource, in relation to coal seam gas development and large coal mining development**: The proposal is not a mining development.

The proposal thus is not considered to require referral to the Department of the Agriculture, Water and Environment (DAWE) for approval under the EPBC Act.

16.0 EECs

As detailed in section 6, no EECs occur on site or in the study area.

17.0 THREATENED SPECIES

17.1 Koala

The habitat on site has been assessed using the Koala habitat assessment tool from the EPBC Act Referral Guidelines (DotE 2014). To qualify as critical habitat, it must score 5 or more. This is shown in the following table:

Table 41: Critical Koala Habitat assessment

Attribute	Score	Reason	
Koala occurrence	2	Desktop	Recorded within <1km of the site on Bionet Atlas
		On-ground	Recorded on-site and adjacent to Core Koala Habitat.
Vegetation structure and composition	2	Desktop	Biolink (2013) maps the forest along western boundary and strip to south as Secondary A
		On-ground	Potential Koala Habitat under KSEPP 2020.
Habitat connectivity	2	Site is part of a contiguous landscape >500ha	
Key existing threats	1	Desktop	DPIE Bionet has records of Koala road kill in local area.
		On-ground	No evidence of Koala road kill found during survey. History of wild dogs recorded within the locality. Site is adjacent to residential area where dogs found.
Recovery value	1	The following factors indicate that the habitat on the site is part of a larger area important for achieving the interim recovery objectives for the Koala: • Minor link along western boundary to a Koala's home range. • Linkage east-west to south for local population. • Breeding activity known to occur within 100m. The following limits its value: • Only low carrying capacity – small part of home range of a single Koala. • Does not provide key linkage at landscape scale.	
Total	8	Site qualifies as critical habitat	

As per the Koala habitat assessment tool, the site qualifies as critical habitat. An assessment has been undertaken to determine if the proposal will adversely affect this habitat and/or interfere substantially with the recovery of the Koala and require referral to the Minister.

The following table derived from the Koala Referral Guidelines (DotE 2014) assesses whether the proposal is likely to adversely affect habitat critical to the survival of the Koala.

Table 42: Critical habitat assessment

Factor	Y/N	Reason
Does impact area contain habitat critical to the survival of the Koala	Y	Site scores 8 as per the Koala habitat assessment tool.
Do the areas proposed to be cleared contain known Koala food trees	Y	Yes – 16 Tallowwoods and 4 Forest Red Gum occur in development envelope plus secondary and tertiary browse species. Offset plantings plus Species and Ecosystem Credits will see no net loss.
Are you proposing to clear <2ha of habitat containing known Koala food trees in an area with a habitat score of ≤5	N	Proposal will remove/modify 0.25ha of potential habitat containing primary preferred Koala food trees in an area that scores 8. These will be offset via replanting 40 along the southern strip and retirement of 6 species credits.
Are you proposing to clear >20ha of habitat containing known Koala food trees in an area with a habitat score of ≥8	N	Proposal will remove/modify 0.25ha of potential habitat containing primary preferred Koala food trees in an area that scores 8. These will be offset via replanting 40 along the southern strip and retirement of 6 species credits.
Outcome	Impact unlikely to be significant	

The Guidelines also require consideration of whether the proposed action may interfere with the recovery of the Koala, as follows:

Table 43: Impact on recovery assessment

Threat	Likely to increase Y/N	Reason
Increasing Koala fatalities in habitat critical to the survival of the Koala due to dog attacks to a level that is likely to result in multiple, ongoing mortalities.	N	Dogs currently present in adjacent residential areas, will be allowed on site, but no habitat retained where dogs will be kept. Unleashed dogs in street and adjacent Environmental zones to be prohibited under KPoM.
Increasing Koala fatalities in habitat critical to the survival of the Koala due to vehicle-strikes to a level that is likely to result in multiple, ongoing mortalities.	N	No new road will bisect habitat, but will see incremental increase in local traffic volume and frequency on local roads, which pass through landscapes known to contain Koalas eg. John Oxley Drive. However, this is countered onsite by road design to slow speeds and does not bisect

Threat	Likely to increase Y/N	Reason
		habitat, and hence should not be a significant risk.
Facilitating the introduction or spread of disease or pathogens for example *Chlamydia* or *Phytophthora cinnamomi*, to habitat critical to the survival of the Koala, that are likely to significantly reduce the reproductive output of Koalas or reduce the carrying capacity of the habitat.	N	*Phytophthora cinnamomi* introduction can be mitigated if required via appropriate controls.
Creating a barrier to movement to, between or within habitat critical to the survival of the koala that is likely to result in a long-term reduction in genetic fitness or access to habitat critical to the survival of the Koala.	N	The proposal has reduced its footprint to maintain all of the southern and western strips to minimise habitat loss, and maintain linkage around the residential area, minimising the need for Koalas to encounter traffic or dogs. No road to bisect retained habitat. Fencing of these areas will be at most be bollards to exclude parking of boats, caravans, etc.
Changing hydrology which degrades habitat critical to the survival of the Koala to the extent that the carrying capacity of the habitat is reduced in the long-term.	N	No significant changes to hydrology of local catchment – water will still flow downslope after stormwater treatment.
Outcome	Referral **not required** as impact unlikely to be significant as: • Measures generally at least meet the low criteria for mitigation. • No site Koala population impacted.	

17.2 Native Guava (CE), Swamp Turpentine (CE), Swift Parrot (CE), Grey-Headed Flying Fox (V), White-throated Needletail (V)

For the purposes of discussion, the "*important population*" of Grey-Headed Flying Foxes is defined as that population of the species likely to depend on colonial roosts in the locality or within foraging range of the site.

The White-throated Needletail breeds in Asia, spending a non-breeding migration mainly in eastern Australia with vagrants in the west. The population is thus the group of birds visiting the locality during their non-breeding seasons.

The population of Swift Parrot (which only occur locally when non-breeding migrations) is any birds which use habitat in the locality as part of their seasonal non-breeding range.

The population of Native Guava and Scrub Turpentine in terms of the DotE (2013) guidelines would be those within pollen and seed dispersal range of the site, which would extend at least 2km around the site (Keith 2000).

a. Lead to a long-term decrease in the size of an important population (Vulnerable) or population (Endangered/Critically Endangered) of a species, or:

Grey-headed Flying Fox:

The proposal may result in the loss of about 30 potential food trees which may be used as a minute fraction the important population's seasonal range. The site and study area also does not contain a known or likely camp.

Hence, the proposal will thus not lead to a long-term decrease in the size of an important population.

Swift Parrot:

For these birds, only 4 preferred potential food species (only 2 being mature) in an broader area where they are common but not abundant, and only used opportunistically, not annual consistent use as in areas such as the Hunter valley. This area is not mapped as important habitat. The proposal thus has no potential to lead to a long term decrease in the size of the population, and the habitat loss will be offset via replanting at least 40 Swamp Mahogany and Forest Red Gum along the southern strip which will be protected within an Environmental zone.

White-throated Needletail:

This non-breeding aerial insectivorous migrant will not be impacted detectably by the development given the miniscule impact on prey habitat and potential roosting habitat relative to the scale of habitat used by this international migrant.

Native Guava and Scrub Turpentine:

Native Guava was formerly locally abundant both on site and in LINR, but both have been catastrophically reduced by Myrtle Rust. Plants onsite show various states of infection. A mix of young seedlings and root suckers suggest potential for some to survive if any remain resistant from the on-going infection, but the observed pattern across its range is generally a progressive mortality.

These plants and their habitat is to be retained and protected under Environmental zoning; and managed under a VMP to control transformer weeds, and maximise the potential survival of any resistant plants than can contribute to the species recovery. Hence, the proposal will thus not lead to a long-term decrease in the size of an important population.

b. Reduce the area of occupancy of an important population (Vulnerable) or population (Endangered), or:

For the Grey-Headed Flying Fox, the proposal will not result in the loss of any roosting habitat, as the site is not known or suitable to be a roost site. Foraging habitat of this species is measured in terms of hundreds of thousands of hectares, hence the loss of habitat on site is insignificant relative to the area of occupancy.

For the Swift Parrot, only a handful of preferred potential food species in an area where they are uncommon, and hence probability of occurrence very low, will be lost. This area is not mapped as important habitat, and the locality is not an annually visited foraging area.

The White-throated Needletail is a non-breeding migrant, ranging extensively across Australia, and can be observed foraging over natural to highly modified habitats eg. residential areas. The modification of 2.86ha of generic prey habitat and potential roosts is clearly inconsequential to this species area of occupancy.

All Native Guava and Scrub Turpentine habitat is to be retained and protected, with a slight increase via widening of the southern strip.

c. Fragment an existing important population (Vulnerable) or population (Endangered) into two or more populations, or:

The Grey Headed Flying Fox is highly mobile and known to be capable of crossing human-modified habitat. The proposal will offer no barrier to movement. Thus it will not fragment an existing important population.

The Swift Parrot ranges over significant parts of Australia's east coast when non-breeding, hence have no barriers to movement. The proposal will offer no barrier to movement. Thus it will not fragment an existing important population.

The White-throated Needletail is a non-breeding migrant, ranging extensively across Australia and eastern Australia respectively. The proposal will offer no barrier to movement. Thus it will not fragment an existing population.

Native Guava and Scrub Turpentine disperse via pollen transported by insects, and via birds consuming their edible fruit. These vectors will still retain access to the plants on site as all habitat is retained and the birds which eat the fruit are widely found in urban remnants. Hence no barrier to genetic dispersal will be created.

d. Adversely affect habitat critical to the survival of a species, or:

"*Critical habitat*" refers to areas critical to the survival of a species or ecological community may include areas that are necessary for/to:

- Activities such as foraging, breeding, roosting or dispersal.
- Succession.
- Maintain genetic diversity and long term evolutionary development, or
- Reintroduction of populations or recovery of the species/community.

The vegetation on the study site or in the study area is not considered potential roosting habitat for the Grey-Headed Flying Fox. It does contain about 30 potential forage trees, which forms a small fraction of such habitat in the locality. Most of the habitat would be used in the later stages of breeding due to flowering in summer-autumn, with limited potential resources available in winter-spring which is the critical period (DPIE 2020b). Blackbutt also has a low flowering frequency (about once a decade) hence this is a further limitation on its values.

Thus while the site has value as foraging habitat, it is not considered critical habitat for the survival of the important population.

For the Swift Parrot, only 4 preferred potential food trees in an area where they are common, and will be replaced by planting about 40 trees including preferred species. This area is not mapped as important habitat, and the locality is not an annually visited foraging area. Hence it is not critical habitat.

The White-throated Needletail is a non-breeding migrant, ranging extensively across Australia. Hence the study area is not breeding habitat which is critical to the species survival; and the loss/modification of 2.86ha of non-breeding habitat and potential roosting habitat is clearly not critical given the extent remaining in the study area and in the locality.

All known Native Guava and Scrub Turpentine habitat is critical to its survival, and all such habitat on site is to be retained, permanently protected, and managed via a VMP to control transformer weeds. A slight increase in potential habitat will also be established via widening of the southern strip.

e. Disrupt the breeding cycle of an important population (Vulnerable) or population (Endangered or:

The proposal is unlikely to disrupt the breeding cycle of an important population/population given that:

- The site does not represent potential breeding habitat for the Grey-Headed Flying Fox, with extensive habitat more likely to support breeding in the surrounding locality which includes Conservation Reserves as well as State Forest;
- The extent of potential foraging habitat to be removed comprises a miniscule fraction of their local extent.
- Swift Parrot and White-throated Needletail only occurs locally as a non-breeding migrant.
- No Native Guava or Scrub Turpentine plants are to be removed, and dispersal vector access will not be prevented.
- The subject fauna species have large to very large ranges that far exceed the site and study area,
- The potential for these species to occur within the study area will be retained post-development; and
- Alternative potential habitat in the locality is extensive for all the fauna species.

f. Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, or:

As detailed previously, the site and the degree of vegetation/habitat loss is not significant enough to affect the local population of the subject fauna species to the point it could cause a decline of the species due to their ecological requirements.

No Native Guava or Scrub Turpentine habitat is to be removed, with a slight increase via widening of the southern strip to result under the VMP for the residual land.

g. Result in invasive species, that are harmful (by competition, modification of habitat, or predation) to a Vulnerable and/or Endangered species, becoming established in the Vulnerable and/or Endangered species' habitat, or:

No new species that affects any of the subject species is likely to be introduced as a direct result of the proposed works.

h. Introduce disease that may cause a species to decline; or

No disease that affects either of the subject species is likely to be introduced as a direct result

i. Interferes substantially with the recovery of the species.

Ideally, the goal in threatened species recovery is to increase the number and extent of the threatened species, so that it is not in risk of becoming extinct.

As detailed previously, the proposal will result in the modification of a relatively minute area of potential habitat for the fauna species that is not significant enough to interfere with the recovery of either of the subject species.

No Native Guava or Scrub Turpentine habitat is to be removed, maximizing the potential for any plants potentially resistant to Myrtle Rust to survive and spread their genes.

17.2.1.1 Conclusion

The proposal will not have a significant impact on the Grey Headed Flying Fox, Native Guava, Scrub Turpentine, Swift Parrot, or White-throated Needletail.

18.0 MIGRATORY SPECIES

No EPBC Act listed migratory species was recorded on the site. However several species (eg. Rufous Fantail, Rainbow Bee-eater, White-throated Needletail, Fork-tailed Swift) are considered potential occurrences.

a. Substantially modify (including fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat of the migratory species, or;

First, the site is not considered likely to constitute an *important area of habitat* on the basis of the following:

- A number of species are considered potential occurrences, mostly as vagrants or seasonal foragers utilising the general area of part of their large seasonally nomadic range. The value of this habitat is as a fraction of a significant extent of similar habitat not only in the LGA, but the North Coast Bioregion. The study area and site are not known breeding habitat for any of these species. The study area is not considered capable of supporting an ecologically significant proportion of any of these species (for some at most only a small group or transient individuals).

- While some migratory species occurring in the locality may be at the limits of their range, no such species were recorded in the study area. Additionally, similar habitat is known to occur both north and south of the locality.
- If the site were located at the limits of a species whose abundance and range is declining, it would not be considered significant as such habitat is locally abundant in the area, and habitat with greater capability occurs within 10km eg. Conservation Areas, Nature Reserves, State Forests, etc.

In regards to point (**a**): The proposal does not affect important habitat, and while the proposal will most likely see a small reduction in the potential habitat for migratory species on the site, the area and locality contains an abundance of alternative habitat which is available to those species.

b. Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat of the migratory species, or;

In regards to point (**b**): An invasive species is one that may become established in the habitat, and harm the migratory species by direct competition, modification of habitat, or predation.

Foxes and cats currently on site and will occur post-development. Their abundance is not expected to change as a result of the proposal.

No other invasive species is likely to be introduced by the proposal that is capable of being harmful to the subject species.

c. Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of the species.

In regards to point (**c**): No disruption on the lifecycle of any migratory bird is likely as:

- Potential habitat to be affected is either only marginally suitable, and/or locally abundant.
- No nesting/breeding habitat is affected.
- Key habitat areas are not impacted.

In view of the above, no migratory bird is considered likely to be significantly affected by the proposal

KOALA HABITAT PROTECTION SEPP 2020

As of 30th November 2020, the *Koala Habitat Protection State Environmental Planning Policy* (KSEPP*) 2019*, was replaced by KHP SEPP 2020. The KSEPP is to be updated in 2021 with a new SEPP.

KSEPP 2020 is essentially the same as the former *SEPP 44 – Koala Habitat Protection*.

19.0 POTENTIAL KOALA HABITAT

19.1 Introduction

The identification of an area of land as Potential Koala Habitat is determined by the presence of primary Koala food tree species. These species are listed under Schedule 2 of the KSEPP 2020.

The definition "an area of land" is interpreted as the land to which the Development Application applies (if it exceeds 1ha in area, together with any land in the same ownership). The assessment however only applies to the area of land affected by the development.

Potential Koala Habitat is defined as areas where the tree species listed under Schedule 2 constitute at least 15% of the total number of trees in the upper and lower strata of the tree component. Some of the Schedule 2 Primary Preferred food species occurring in the Hastings Valley are: Tallowwood *(E. microcorys*), Scribbly Gum (*E. signata*), Swamp Mahogany, Grey Gum (*E. punctata*) and Forest Red Gum.

19.2 Assessment

The remnant vegetation in the South Lindfield area readily qualifies as Potential Koala Habitat as VZ 3 is >50% Schedule 2 species, and the southern strip also contains many Tallowwood plus some Swamp Mahogany and Forest Red Gum; and Swamp Mahogany and Tallowwood are very common in the western strip.

20.0 CORE KOALA HABITAT ASSESSMENT

Under the KSEPP 2020, Core Koala Habitat is defined as "*an area of land with a resident population of Koalas, as evidenced by attributes such as breeding females (that is, females with young) and recent sightings of and historical records of a koala population"*.

Furthermore, the KSEPP does not differentiate between a site that contains all or part of identified Core Koala Habitat.

The definition "*an area of land*" is interpreted as the land to which the development application applies (if it exceeds 1ha in area, together with any land in the same ownership).

Information to determine if a resident population of koalas exists on the site was obtained by direct survey of the site using standard survey techniques (direct survey of koalas, call

playback, scat searches, and tree usage/activity levels assessment) and review of relevant published information and records.

Information to determine if a resident population of Koalas exists on the site is obtained by direct survey of the site using standard survey techniques (direct survey of Koalas, call playback, scat searches, and tree usage assessment) and review relevant published information, ecological assessments and records.

20.1 Literature and Database Review

20.1.1 DPIE Bionet

Bionet database (2020) search detected 6277 records of Koalas in the locality. These include records on and adjacent to the study site from recent and past surveys detailed as follows.

20.1.2 Naturecall (2016) South Lindfield Urban Growth Area draft KPoM.

Naturecall (2015a) were engaged by PMHC to undertake require a detailed study of Koala habitat, usage, population size and distribution within the area nominated as South Lindfield. The study facilitated the development of a draft Koala Plan of Management (Naturecall 2016).

The South Lindfield area included the study site and land to the north to the edge of the Oxley Highway. Vegetation consisted of mostly regrowth forest to a number of trees in yards and a paddock.

The subject land and study area was surveyed for Koalas via day searches for 4 days and spotlighting/call playback for 4 nights spread over 2 weeks. Two Koalas were directly observed during the study. The first was seen adjacent to John Oxley Drive and appeared to be a young female. The second was an adult female that was seen in a Grey Ironbark in the far west of that study site next to the Oxley Highway on two occasions. This Koala showed advanced signs of Chlamydia. No Koalas were recorded on the site at the time.

A single male Koala was also heard calling from the eastern end of the crematorium on the first night of call playback and spotlighting.

In addition to scat searches under all primary browse trees on site, a total of five SAT surveys were undertaken based on the 100m grid described above, with two SATs undertaken in preliminary site investigations earlier (none on site due to insufficient trees and contagious spacing which violates statistical assumptions). The SAT results scored in the low use threshold (<22.52%) for the East Coast (Med-High) range.

In contrast, Biolink (2009) previously performed 3 SATs in the South Lindfield UGA, and recorded activity levels of 53.3-73.3% (one SAT scored 100%, but did not sample 30 trees hence did not satisfy the statistical assumptions), and sighted one Koala during the survey.

On the basis of the SAT results at the time, Biolink concluded the site was the northern limit of a larger area Core Koala Habitat extending south and southwest. Usage in 2015 was postulated to have possibly declined due to disturbances or other factors since Biolink's survey (e.g. barrier

effect of the Oxley Highway Deviation), but there was still sufficient evidence to satisfy the SEPP 44 definition for Core Koala Habitat ie ongoing Koala records on site. Consequently, the site (including the South Lindfield precinct identified as part of this proposal) was considered to form part of a broader landscape of Core Koala Habitat.

20.1.3 Biolink (2013)

Biolink (2013) were engaged by PMHC to undertaken vegetation community mapping and a Koala study over the coastal portion of the LGA.

In addition to classifying Potential Koala Habitat, the study undertook a review of historical extent of occurrence and generational persistence, and a landscape scale regularised grid spot assessment technique (RGSAT).

Koala habitat mapping under this study is shown in **Figure 18**. No RGSAT survey sites are shown to have been located on the site (i.e. no site specific data) but activity contour modelling is shown based on off-site data.

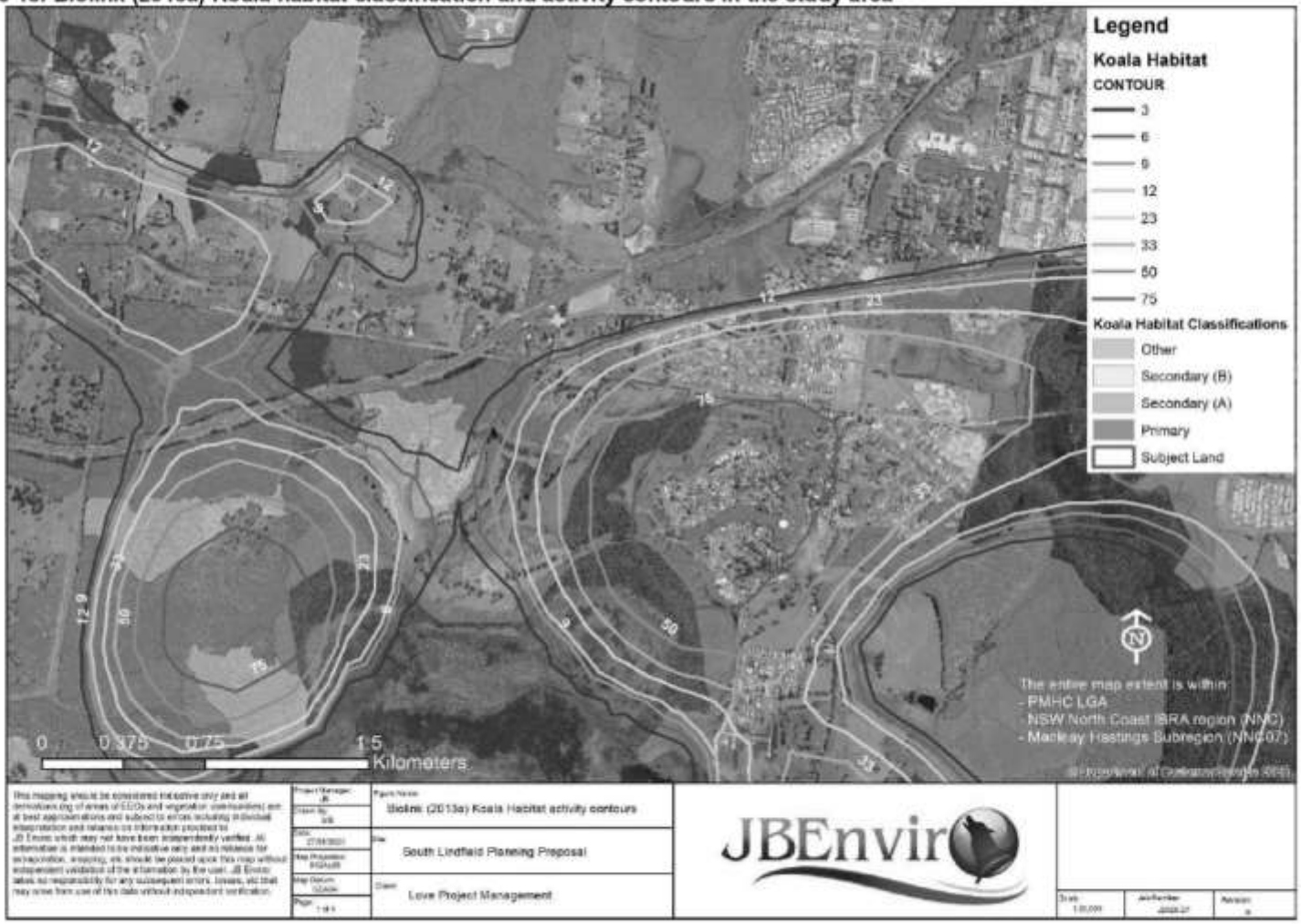
20.1.4 Biolink – local studies

Biolink (2005a, 2005b) were engaged to survey the Koala population and its habitat over the larger body of land owned by the proponent to the west, colloquially known as the Lake Innes peninsula.

Based on non-peer reviewed extrapolation from the SAT technique, a population of up to 226 Koalas was predicted to occur (Biolink 2005a). No review (e.g. via using other Koala population census methods) has been undertaken to date of this estimation, and recent studies have shown this methodology has low accuracy (Ellis et al 2013, Woosnam-Merchez et al 2012).

Biolink (2005b, 2005e) also predicted that a population of 15-60 Koalas occurred in the approximately 40ha area known as Ascot Park/Maher's Headland (west of the crematorium, and interlinked to the site). Survey by Darkheart (2006e), and Wildsearch Environmental Services over 4 years using the modified Dique *et al* (2004) saturation method recorded a maximum of only 5 Koalas (usually below this number). This long-term monitoring study that commenced in 1998 and still continues, also showed this small population to have a complex landscape movement pattern, with no Koalas recorded at times over the area that is now largely within Ascot Park.

Figure 18: Biolink (2013a) Koala habitat classification and activity contours in the study area



20.1.5 Draft Hastings Council – KPoM: Coastal Area

The draft *Hastings Council Koala Plan of Management* (Connell Wagner 2000a, 2000b) illustrates a high abundance of Koala records in the locality that include State Forests, community and NPWS/OEH records. There is a plethora or records within approximately 5km of the site.

20.1.6 Darkheart Eco

The site was surveyed as part of a larger rezoning proposal (JBE 2017, Darkheart 2013). An adult male was recorded in a young Tallowwood in VZ 3, and in 2011 resting in a Blackbutt in the wet sclerophyll forest on the boundary of the Crematorium.

In addition to Maher's Headland, Darkheart Eco has completed earlier assessments which have identified Core Koala Habitat on adjoining land to the north (Berrigan 2003g), as well as Koala sightings over extensive forest along the Oxley Highway deviation (Darkheart 2010h).

Other areas have been identified nearby along The Ruins Way/Major Innes Drive area (Berrigan 2001d, 2003h, 1999b). The formerly much wider forested road reserve along Major Innes Drive was also noted to be an important link for Koalas (Berrigan 2001b), but this has been degraded by clearing for road re-alignment and bus standing areas (pers. obs.).

20.1.7 Other Records

A number of other small (e.g. EcoPro 1999a, 1999b) and major (Biolink 2008, 2003, Biosis 2005, 2004a, AMBS 2004) ecological studies have been undertaken in the Lake Innes and Thrumster area. These studies have recorded Koalas and identified Core Koala Habitat.

20.1.8 Proponent Surveys

20.1.8.1 Methods

Wildsearch Environmental Services undertook diurnal and nocturnal Koala surveys over the site, the remnant vegetation in the Lake Innes Residential area, Mahers Headland, and the Ruins Way down to Lake Innes for many years. A total of 125 days of targeted Koala surveys have been undertaken over the site since 2011 (David Charley, unpublished data). Additional surveys were conducted by Darkheart/JBEnviro (2011, 2014, 2017) to provide comparative data.

The survey methodology was as per the modified Dique *et al* (2004) method:

- Two observers (with a 50/100w spotlight if at night), traversing the entire study site by foot over one night.
- The site was divided into an eastern and western half by the existing access track. Two observers assessed the same side the same day/night.
- The observers spotlight separate parallel transects 20-30m wide (walking down centre of transect, and checking all trees 10m either side) until the total site is covered.
- Each observer inspects every single tree on the study site for Koalas regardless of whether it is a preferred browse species or not.

The primary objectives of this long term monitoring was:

- To census the local Koala population size and constitution.
- Identify areas of preferred habitat use.

- Identify linkages.
- Identify seasonal trends in movement.

20.1.9 Long term monitoring

Over the 125 days surveys over all seasons, Koalas were only recorded on 64 (52%) days. This indicates the home range of these Koalas extends beyond the area subject to the monitoring including the site i.e. they are moving outside the survey area at times. The following table shows maximum and minimum number of Koalas recorded by this monitoring per season:

Table 44: Koala numbers per season 2011-2017

	Summer	Autumn	Winter	Spring
Min. number of Koalas	0	0	0	0
Max. number of Koalas	2	2	4	3

The following table shows the varying locations of the 39 Koala records (0-4 Koalas at any given time, but most commonly only 1 Koala at most) in the study area surveyed over this time frame:

Table 45: Koala occurrence locations over time

Survey session	East Ruins Way			West Ruins Way			South Lindfield			Adjacent to study area			Total Number Koalas recorded:			
Sex	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1: 11/5/2011									1						1	1
2: 21/10/2011												1			1	1
3: 7/11/2011						3									3	3
4: 15/11/2011						1	1						1		1	2
5: 25/11/2011						1									1	1
6: 29/11/2011					1		1						1	1		2
7: 14/3/2012									1						1	1
8: 28/9/2012																
#9: 7/12/2013											*2			*2		2
10: 10/1/2013									1						1	1
11: 19/2/2013												1				
12: 22/4/2013			1												1	1
13: 7/5/2013			1												1	1

Survey session	East Ruins Way			West Ruins Way			South Lindfield			Adjacent to study area			Total Number Koalas recorded:			
Sex	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
14: 10/5/2013			1												1	1
15: 21/5/2013			1												1	1
16: 22/5/2013			1												1	1
17:23/5/2013			1												1	1
18: 3/6/2013			1												1	1
19: 4/6/2013			1												1	1
20: 5/6/2013			1												1	1
21: 11/7/2013					1									1		1
22:12/7/2013					1									1		1
23: 25/7/2013		1		1		2							1	1	2	4
24: 2/8/2013					2									2		2
25: 18/9/2013		1												1		1
26: 11/9/2014			1												1	1
27: 17/9/2014											1			1		1
28: 18/8/2016			1													
29: 2/9/2016								1						1		1
30: 11/10/2016		1												1		1
31: 19/7/2017		1												1		1
32: 22/7/2017		1												1		1
33: 29/7/2017		1												1		1
Total No. Sightings	0	6	11	1	5	7	2	1	3	0	1	2	3	13	19	39

*M = male; F = female; U = unknown; T = total' # = female and joey

The table very clearly illustrates that the proposed zoning area plus habitat from the southern end of The Mill Hill and Major Innes Drive supports a small (about 4, but mostly 0 or 1 at any given time) residential population of Koalas. These Koalas range widely spatially and temporally from the southern end of The Ruins way to the subject land, using both intact forest remnants and trees within the urban woodland. Joeys are not often seen, and the dominant adult male was reported to show signs of Chlamydia infection in 2011 (Dr Jim Charley, pers. comm.). A female with advanced signs of Chlamydia was also noted in the South Lindfield rezoning precinct in 2015 (Naturecall 2015a).

This aggregate or some its members may also utilise habitat to the northwest in South Lindfield given the proximity and connectivity, and are likely to be related to the similar sized group identified on and adjacent to Ascot Park (Naturecall 2015a).

20.2 Site Survey Methods and Results

20.2.1 Methods

20.2.1.1 Diurnal Direct Observation

The site was surveyed for Koalas by the following methods:

- Anecdotal observations during other activities e.g. trapping and vegetation analysis.
- Walking throughout the study site searching the crowns and boughs of trees for Koalas.

After threatened plant survey and BAM plots, all trees in the precinct and the eastern and western strip, as well as the outer margins of LINR were scanned for Koalas by an ecologist. This generally involved walking along the strips and remnants in West Ruins Way and South Lindfield, and along the edge of PLINR.

20.2.1.2 Spotlighting

This repeated the above process at night over 4 non-consecutive nights in December-January.

20.2.1.3 Call Playback

Call playback of a male territorial Koala can be played for possible detection of a dominant breeding male that would indicate females in the area, and a local viable population on-site. Calls are played at a moderate volume, through a portable amplifier. Male Koalas are usually the only respondents to playback of male territorial calls and female encounter calls, and have been known to respond out of the breeding season. Calls may be audible up to 2km away, depending on topographical and weather conditions (Jurskis and Potter 1997). However, they have also been known to not respond at all, or their response is not detectable e.g. Koalas in sight of the observer may only respond by looking, not calling (Jurskis and Potter 1997).

Survey is best done in the local Koala-breeding season (about July to December, sometimes earlier to later) as this is when Koalas are expected to be particularly active, responsive and thus readily detectable. This period is also characterised by elevated sub-adult and juvenile activity (DECC 2008, AKF 2007, 2011, Jurskis and Potter 1997).

Anecdotal observation indicates male activity accelerates in the local region around September-October (Jason Berrigan and Kel Mackay pers obs.), thus the main survey occurred during this expected peak activity period. Jurskis and Potter (1997) note that call playback is also limited in success by the following factors:

- Survey timing – best success during breeding season (Spring-early summer).
- Call playback method – amplifier/P.A. system set at moderate volume better than megaphone.
- Varying individual responses – from Koalas attacking observers, to total disinterest.
- Lack of female response – limited to detecting territorial/breeding males.

Nonetheless, call playback like spotlighting has proven useful in other areas, and is considered one of a number of Koala detection methods that should be used in combination e.g. with spotlighting and scat searches (Jurskis and Potter 1997, NPWS 2001, DEC 2004, 2008). As

noted previously, Koala calls can be heard up to 2km away, especially on still, humid nights, which enable contact to be made amongst individuals of highly dispersed populations (Jurskis and Potter 1997).

Call playback was not used for this survey as recent survey (Naturecall 2015) previously recorded a male Koala call to the west; and to avoid disturbing neighbouring residents with barking dogs (the closest residence had two large dogs which consistently barked during site survey).

20.2.1.4 Scat and Scratch Searches

All Schedule 2 Koala food trees (ie. Tallowwood and Forest Red Gum) in the development envelope were flagged with ribbon and searched for scats and inspected for scratches on the trunk.

In general, scat searches involved checking the ground and leaf litter in a 2m radius around trees. This technique is recognised as a very efficient method of detecting Koala presence (Biolink 2008, 2005a, 2005b, 2003, AKF 2011, 2007).

This technique is however limited by the following factors:

- *Scat life* – scats naturally deteriorate over time due to insect attack, weather condition (e.g. rain), fire (though scats have been recorded surviving wildfire) and other disturbances e.g. mowing and slashing, bulldozing, etc.
- *Groundcover/leaf litter density*: Scats may be hidden in dense groundcover or leaf litter, or searches may be physically impossible in areas of tall, dense groundcover, or waterlogged/swampy areas.
- *Identification*: The observer must be able to identify Koala scats and scratches from other scats and scratches e.g. Brushtail Possums and Laced Monitors.
- *Bark type*: Rough barked trees do not show evidence of scratch marks like smooth barks, thus identification or even detection of climbing may not be determinable. Scratch marks are not usually obvious on Swamp Mahogany and Tallowwood unless the tree is heavily used, for example a home range tree.

The Spot Assessment Technique (SAT) is not statistically valid for use on site due to the spatial arrangement of the trees, but routine scat searches were made using the 2m rule in case some broad comparison could be made to the methodology's designation of activity thresholds.

20.2.2 Results

20.2.2.1 Daily Searches

No Koalas were observed in the 8 daily searches over Dec-Jan. No Koalas were recorded in VZ 3 on the 26/1 during a short site visit to take additional photos.

20.2.2.2 Spotlighting

No Koalas were observed during spotlighting.

20.2.2.3 Scat and Scratch Searches

The detectability of scats on site was generally considered to be under most of the trees in VZ 3 due to the low groundcover, except for the base of a large Forest Red Gum which has very dense cover for up to 3m around its base.

No Koala scats were detected under the trees within the development envelope.

20.3 Site Context and Linkages

20.3.1 Linkages

As detailed in section 4.4 and shown in Figures 1 and 6, the site, study area and immediate locality has a high level of fragmentation.

The peninsula of intact swamp forest within Lake Innes Nature Reserve is the only sizeable area of fully intact forest in close proximity to the site. However, this forest has very few preferred Koala food trees (hence very limited forage potential and minimal carrying capacity), but it does provide an intact arboreal and terrestrial link directly to the remainder of the Reserve, as well as to the significant Koala habitat along the northwestern fringes of the Nature Reserve where food trees are more common (Biolink 2005a, 2005b, 2008, Phillips 2000b).

Conversely, this linkage (and more importantly the Kooloonbung Creek Nature Reserve corridor) may also be important for Koalas temporarily moving out of Lake Innes NR when burnt out by major bushfire, to unburnt refuge habitat within the Lake Innes residential precinct, or dispersing between the urbanised population in Port Macquarie and the Lake Innes Peninsular population (Connell Wagner 2000b, Wilkes and Snowden 1998). Similar use of non-primary habitat was observed in the Limeburners Creek NR and north into paperbark forest on the Goolawah Plain following the major fire in the Nature Reserve (JBE 2018, Bill Larkin DPIE, pers. comm.).

Linkage across South Lindfield and across the northeast of Lot 499 is only provided by narrow remnant strips of forest between fairways. As the Koala will cross open ground and use scattered trees in urban woodlands (AKF 2007, Wilkes and Snowden 1998, Biolink 2013), these strips are adequate for use in Koala movement west to east across the site. These areas would be used by residential Koalas as part of their lifecycle movements, and less frequently by dispersing sub-adults from local Core Koala Habitat.

Linkage to the north is limited by fences and lack of habitat along most of the boundary due to the overhead powerline. Land within the subdivision to the mid-north of the site is identified Core Koala Habitat (Berrigan 2003g), but only a few food trees have been retained in the road reserve of the estate (Oxley Grove) as an urban woodland. Koalas are known to continue to use these trees (evidenced by scats and sightings). Koala movement further north is minimal due to lack of sufficient habitat and barriers posed by more extensive cleared and low-lying land (Darkheart 2010a, 2010b, Biosis 2005, AMBS 2003), and now the Oxley Highway which has fauna fencing/sound barriers intended to direct fauna to designated underpasses.

Linkage east to southeast of the northern end of Ruins Way is provided by a very well vegetated urban woodland in Lake Innes Estate which is adequate for the Koala to both inhabit and move through (Connell Wagner 2000b, Wilkes and Snowden 1998, AKF 2007). Figure 1 shows that a distinct urban woodland corridor runs from the remnant in northeast Ruins Way to Mill Hill via the wooded road reserve along The Ruins Way and Mill Hill Road. A cleared services easement, scattered trees and small remnants to the east also offer linkage (though

barriers posed by fencing and yards with dogs would be a limitation) to the narrow link along Major Innes Drive which links to the Oxley Highway and Kingfisher Rd area, and other small remnants in the southeast Ruins Way area and ultimately Lake Innes Nature Reserve. These all link to a dedicated corridor off Mill Hill that links west to Lake Innes Nature Reserve. Koalas are periodically sighted in this main corridor, indicating its significance (Dr Jim Charley, pers. comm.).

Overall thus, there are no effective barriers across the site to the Koala despite the level of fragmentation, but movement in the adjacent urban areas is limited by lack of/limited habitat, fences, dogs (outside areas currently under KPoMs) and major roads.

20.3.1.1 Locally Identified Koala Populations and Habitats

Studies of the adjacent Lake Innes Nature Reserve (Starr 1990, Mt King Ecological Surveys 1991, Connell Wagner 2000b), the majority of Vilro Pty Ltd land holding (Biolink 2005a, 2005b, Darkheart 2006e), Thrumster (Biolink 2008, 2003) and Port Macquarie (Starr 1990, Mt King Ecological Surveys 1991, Connell Wagner 2000b, Wilkes and Snowden 1998, Martin 1996) have determined that a sizeable Koala population exists in the locality.

Estimates have been proposed in the range of 400-500 in Port Macquarie (Martin 1996) with a smaller number in the northern reaches of Lake Innes Nature Reserve (NPWS 1999, Phillips unpub. data cited in Biolink 2005a, 2005c), and the Thrumster area (Biolink 2008). These numbers are only provisional estimates however based on extrapolation of various data sources, with no comprehensive or verified statistical census undertaken to date (DECC 2008), or assessment using a comparative methodology e.g. Dique *et al* 2004.

As noted above, periodic survey by the proponent of the Lake Innes residential area (including the site) has indicated only a small group of Koalas are present, with usage in specific areas varying with season and lifecycle stage. This is further supported by survey over Ascot Park and the South Lindfield area which also recorded a significantly smaller Koala population than previously predicted (Naturecall 2016, Darkheart 2006e).

20.3.1.2 Site Context

As detailed previously, there are a plethora of Koala records in the locality. This includes numerous records within approximately 1km of the site (e.g. Naturecall 2015a, Biolink 2008, 2005a, 2005b, Berrigan 2003c, 2003g, 2003h, 2001b, 2001c, 2001d, 2000b, 2000c, 1999a, 1999b, Darkheart 2007e,2006e, 2005d, 2005f, 205l, 2004g, 2004l, 2004g, 2004l, 2004n, 2004p, 2004q, etc., Connell Wagner 2000b, Wilkes and Snowden 1998, Biosis 2005, 2004, AMBS 2003).

Previous local studies have determined that the immediate locality contains Core Koala Habitat within both the northern reaches of Lake Innes Nature Reserve and adjacent forested rural land (Biolink 2005a, 2005b, 2008, 2003), supported by a matrix of remnants, roadside trees and an urban woodland (Naturecall 2015a, Berrigan 1999c, 2001i, 2003m, 2003n, Darkheart 2007c, EcoPro 1999b, Connell Wagner 2000b, Hastings Council 2003, Wilkes and Snowden 1998, Biolink 2005a, 2005b, 2008).

In the local context, appraisal of Figure 1 shows that the site's limited remnant habitat nearby fragments on site and in the study area on Lot 499 and adjacent undeveloped R1 land to the north, and the adjacent wooded road reserves to the east form part of a larger matrix of remnants amongst mostly developed land in the Ruins Way/Major Innes Drive area, which is gradually being converted from rural to residential areas.

As noted above, the site itself has limited corridor values for biodiversity maintenance due to the condition of the site vegetation and narrowness of the western and southern strips; and present and future residential development to the north. This landscape mosaic is however Koala permeable (Wilkes and Snowden 1998, Connell Wagner 2000b, Starr 1990, Biolink 2008, 2005b, AKF 2007), as illustrated by the long term monitoring of the study area detailed in Table 44-45.

Coupled with the road reserve habitat links along Mill Hill and the Ruins Way, the Ruins Way precincts provide linkages for Koalas from Lake Innes Nature Reserve to other remnants in the Major Innes Drive area. These links collectively provide connectivity for movement between the local remnants, and assist genetic exchange between the urban and Nature Reserve populations to maintain viability of the local Koala population (Connell Wagner 2000b, Biolink 2008, 2005a, 2005b).

As the site and local area of interlinked fragments is adjacent to identified major Koala habitat areas (ie Lake Innes Nature Reserve and the urban Koala population of Port Macquarie), it is likely to support both resident and periodically transient Koalas moving through the wider area of Core Koala Habitat at various times according to their lifecycle stage, territory size and sex (NPWS 2003a, Biolink 2008, 2005a, 2005b, Wilkes and Snowden 1998, AKF 2007).

Koalas occurring in this local matrix are increasingly threatened by further fragmentation and gradual attrition of habitat via residential development, increased exposure to predators (wild and domestic dogs), and the introduction of barriers/mortality threats posed by local roads which may all contribute to the decline of the local population (DECC 2008, AKF 2007, 2006, 2011, Curtin *et al* 2002, Port Stephens Council 2001, Hindell and Lee 1990, Connell Wagner 2000b, Dique *et al* 2004, Hume 1995, Jurskis and Potter 1997, Phillips 2000, Phillips *et al* 2000, Biolink 2005a, 2005b, 2008).

20.4 Bushfire

DPIE (2020a) request a consideration of the site's role in the conservation of the wider Koala population after the catastrophic fire season of 2019-2020. Research has shown a significant change to Koala occupancy in areas impacted by severe fire including LINR (Lane and Phillips 2020).

In short, the site as well as habitat north is evidently of limited current and future value to the wider population. This is evidenced by the failure to detect any Koalas during not only the recent survey (as it could have been argued that the lack of sightings is a symptom of catastrophic population decline post-fire), but the previous long term monitoring by Wildsearch which showed only a handful of Koalas occupying the original area and adjoining urban woodland to the east and southeast of the Ruins Way residential area. It does not appear to have the capacity to support a large Koala population e.g. due to soil fertility (not on Kraznozems or alluvials).

Major studies of the wider Koala population have identified that Lake Innes Nature Reserve is the population reservoir that maintains the Port Macquarie and Thrumster Koala populations (both being urbanised or becoming urbanised and hence subject to elevated mortality rates than wild populations from disease, dog attack and vehicle strike (Connell Wagner 2000b, Biolink 2013b). In addition to much of LINR, the habitat in the Thrumster area, much of the habitat on land also owned by the proponent to the west identified as Core Koala Habitat (BA 2019, 2018), and some KCNR however has been burnt to various degrees. There is no doubt that will have reduced the current meta-population in size and distribution, and recruitment into the northern populations will be reduced in the short to medium term at least. It is thus pertinent to manage areas of high significance to the Koala meta-population to minimise the

risk of a bottleneck in recruitment and rises in mortality, and mitigate the risk of increased local extinction in another future major fire event.

Review of Biolink's (2013b) Koala habitat mapping with the GEEBAM fire occurrence map note a significant area of high quality (on Kraznozem soils) is retained to the southeast on private land currently owned by the proponent and in LINR/KCNR. These areas are critical to the Koala population's recovery, as well as Koala recruits that may come from habitat north in KCNR, and hence focus is best directed on these, as well as monitoring the recovery post-fire in Thrumster and LINR.

The proposal sees almost all CKH retained in perpetuity, plus expansion of habitat in the medium term, with loss of only consistently low use habitat. Hence its incremental contribution to the cumulative impact of the 2019-2020 bushfire season is unlikely to be significant.

20.5 Discussion and Conclusion

KSEPP 2020 defines Core Koala Habitat as "an area of land with a resident population of Koalas, as evidenced by attributes such as breeding females (that is, females with young) and recent sightings of and historical records of a Koala population". The attributes are provided as examples of only some characteristics Core Koala Habitat may demonstrate, and thus to meet the definition of Core Koala Habitat, a site does not necessarily need to show all of these attributes, and may even show other evidence indicating the site is Core Koala Habitat.

In regards to the two identified attributes though, the following is provided:

1) "*Breeding females (that is, females with young)"*. This survey failed to directly record Koalas with joeys on the site. However breeding males (responding to call playback) have been reported by residents in the East Ruins Way precinct and in the grounds of the adjacent crematorium (Naturecall 2015a), and regular presence of an adult male has been reported by the proponents.
2) "*Recent sightings and historical records of a Koala population*". As mentioned earlier, an larger ongoing survey has recorded up to 4 Koalas in the northern end of Lot 499. This correlates to reports by adjacent residents and survey by the proponent from 2011 recording 1-3 Koalas. Historical records also occur in the study area and within range of a resident Koala (predominantly along the Ruins Way). There are also numerous records of Koalas within 1km of the site which include Core Koala Habitat (e.g. Berrigan 2003c, 2003g, 2003h, 2001b, 2001c, 2001d, 2000b, 2000c, 1999a, 1999b, Darkheart 2007e,2006e, 2005d, 2005f, 205l, 2004g, 2004l, 2004g, 2004l, 2004n, 2004p, 2004q, etc, Biolink 2005a, 2005b, EcoPro 1999a, OEH 2013a, Connell Wagner 2000b) which is within dispersal range of the site (DECC 2008). Thus, it is considered that there is ample recent and historical evidence of a local population in the area and this population includes the site as part of its home range.

The information collated for this assessment thus indicates that the subject land qualifies as Core Koala Habitat. Hence a Koala Plan of Management will be required to be submitted with future Development Applications. .

PMHC DCP 2013

Under the Port Macquarie-Hastings Council Local Environmental Plan (PMHC LEP) 2010, Council has prepared and implemented the PMHC Development Control Plan (DCP) 2013.

The DCP has relevant provisions for EECs, hollow-bearing trees and Koala food trees which apply to the proposed development.

21.0 EECs

Section 2.3.3.4 of the DCP specifies that a 35m fully vegetated buffer is required around non-floodplain or wetland EECs. These buffers are expected to be exclusive of road infrastructure and APZs.

No EECs occur on site or in the study area, hence no buffers are required.

22.0 HOLLOW-BEARING TREES

22.1 DCP Assessment

This section has relevant provisions for hollow-bearing trees. The DCP requires hollow-bearing trees (HBTs) affected by development proposal to be assessed under a HBT assessment. This assessment assigns nominal scores to various attributes of the subject tree. Based on the scores from assessment, the following provisions apply:

- **Score <8**: Tree may be considered for removal subject to compensatory measures.
- **Score 8-12**: Tree may be considered for removal if management measures are 'impractical to allow retention' (determined by an arborist). Compensatory measures required.
- **Score >12**: Tree must be retained within an exclusion zone/buffer (minimum 1.25x the tree height, measured horizontally), or located with an area protected as environmental land.

The following table assesses the trees which fall adjacent to the site (in the western strip).

Table 46: South Lindfield HBT assessment

Tree	Alive/Dead		Trunk DBH		No. Hollows		Hollow Size (mm)		Habitat Proximity		Longevity		Total Score
Paperbark Stag	Dead	1	40cm	0	1	0	>5cm	2	i/s	3	Low	0*	7
Blackbutt #1	Alive	3	>100	3	2	1.5	>10cm	3	i/s	3	Low	0	13.5
Stag #1	Dead	1	>100	3	>5	3	5-10cm	2	i/s	3	Low	0	12

The stag was assigned a 'low' longevity as it is rapidly declining via decay. The Blackbutt leans heavily to the north and the ground is evidently increasing in frequency of waterlogging due to redirection of stormwater from the north into this area from the adjacent easement (as evidenced by dieback of eucalypts along the western boundary).

None of these trees will be removed as they fall into a proposed Environmental zone. No dwellings will be erected within the potential fall zone, hence no offset provisions are required.

22.2 Koala Food Trees

Section 2.6.3.2 specifies that Koala food tree removal must be replaced at ratio of 1:2.

A total of 20 KFTs (ranging from ~3m to ~28m high, and trunk DBH ~5cm to 80cm) will be removed by the proposal (see Figure 15). A total of 40 offsets are proposed.

These are to be replaced under the KPoM via widening of the southern strip under a VMP in an area and infilling existing gaps in the E3 and portions of the E2 zone (see Figure 17). These currently degraded areas will be planted out in all stratums to widen this area of habitat and improve its resilience to edge effects.

REFERENCES

Abel Ecology (2017). A Critical Evaluation of the Status of Some Endangered Ecological Communities Mapped on Vilro Land at Port Macquarie – Part A: Soils and Landforms. Unpublished report to Vilro Pty Ltd and Love Project Management. Abel Ecology, Sydney.

Abel Ecology (2016). Mahers East and Dam Flat soils – A Preliminary Investigation. Unpublished report to Vilro Pty Ltd. Abel Ecology, Sydney.

Australasian Bat Society (2021). Australian Bat Society website. www.abs.org.au

AMBS (2003). *Ecological Assessment: Corridor Options Study, Proposed Upgrade of Oxley Highway*. Prepared for Roads and Traffic Authority of NSW. Australian Museum Business Services, Sydney.

Berrigan, J.A. (2004a). Threatened Species, EPBCA and SEPP 44 Assessment for Proposed Community Title Rural Subdivision, Lot 2 DP 754441, Beranghi Rd, Parish Of Beranghi Shire Of Kempsey. Unpublished report to M.L. Corbett. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan J, A. (2003a). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed School Playing Field On Lot 581 DP 754434, Major Innes Drive, Port Macquarie. Unpublished Report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2003b). *Threatened Species, EPBCA and SEPP 44 Assessments for Flynn St Tourist Resort (Taskers Holiday Park), Port Macquarie* Unpublished report to King and Campbell Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2003d). *Flora and Fauna Survey of St Vincents Land Between Bonny Hills and Lake Cathie*. Unpublished report to Luke and Company. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2003e). Threatened Species, EPBC Act and SEPP 44 Assessment for Proposed Residential Subdivision – "Port Oxley", Lot 1 DP 387920 & Part Lot 2 DP 369206, Oxley Highway Port Macquarie. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2003d). Threatened Species, EPBC Act and SEPP 44 Assessments for Proposed Residential Estate, Lot 9, The Ruins Way, Port Macquarie. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2002a) Threatened Species, EPBC Act and SEPP 44 - Koala Habitat Assessment For Proposed Multi-Storey Tourist Resort on Lot 331 DP 828346 and Lot 24 DP 22883 (Taskers Beachside Palms), Flynn St, Port Macquarie. Unpublished report to King and Campbell Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2001a). *Northgate Koala Monitoring Report – 2001*. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J.A. (2001b). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Residential Subdivision, Lot 4, DP 788598, The Oxley Highway, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2001c). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Combined High School, Lot 581 DP 754434, Major Innes Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2001d). *SEPP 44 Assessment for Lot 1 DP 536256, The Ruins Way*. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2001e). Threatened Species and SEPP 44 – Koala Habitat Assessment for Proposed Residential Subdivision, Lot 4, DP 788598, Major Innes Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2000a). Threatened Species and SEPP 44 Assessment for Lot 1, DP 748977; Lot 21, DP 866801; and Lot 221, DP 868193, Yaluma Drive, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2000b). Threatened Species and SEPP 44 Assessment for Proposed Subdivision, "The Lowe Property", Lake Rd Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (2000c). Threatened Species and SEPP 44 Koala Habitat Assessment for Lot 8 in Plan of Subdivision of Lots 8 and 9 DP 263651, Kingfisher Rd, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie

Berrigan, J. A. (1999a). Threatened Species and SEPP 44 - Koala Habitat Assessment for Proposed Subdivision, Lot 2, DP 589082, The Ruins Way, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J. A. (1999b). Threatened Species and SEPP 44 - Koala Habitat Assessment for Proposed Residential Subdivision, Lots 3 and 5, The Ruins Way, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie.

Berrigan, J.A. (1999c). Threatened Species and SEPP 44 Assessment for Hastings District Hospital - Residual Land. Darkheart Eco-Consultancy, Port Macquarie.

Biodiversity Australia (2020). Ecological Constraints Assessments for Proposed Rezoning and Residential Subdivision of Lot 399 DP1241278 and Lot 340 DP1251842, Port Macquarie. Unpublished report to Love Project Management. BA, Port Macquarie.

Biodiversity Australia (2019). Ascot Park KPoM Monitoring Report 2019. Biodiversity Australia, Port Macquarie

Biodiversity Australia (2018a). Koala Plan of Management for South Lindfield. Unpublished report to PMCH. BA, Port Macquarie.

Biodiversity Australia (2018b). Ascot Park KPoM Monitoring Report 2018. Biodiversity Australia, Port Macquarie

Biosis Research (2005). Oxley Highway Deviation - Supplement to Species Impact Statement. Unpublished Report. Biosis Research Pty. Ltd. Natural and Cultural Heritage Consultants, Chippendale NSW.

Biosis Research (2004a). Oxley Highway Deviation Species Impact Statement. Unpublished Report. Biosis Research Pty. Ltd. Natural and Cultural Heritage Consultants, Chippendale NSW.

Biolink (2013a). Vegetation of the Port Macquarie-Hastings Local Government Area. Unpublished report for Port Macquarie-Hastings Council. Biolink Pty Ltd, Ecological Consultants, Uki NSW.

Biolink (2013b). Port Macquarie-Hastings Koala Habitat & Population Assessment. Unpublished report for Port Macquarie-Hastings Council. Biolink Pty Ltd, Ecological Consultants, Uki NSW.

Biolink (2012). Port Macquarie Airport Precinct Ecological Assessment. Unpublished report for Port Macquarie-Hastings Council. Biolink Pty Ltd, Ecological Consultants, Uki NSW.

Biolink (2008a). *Area 13 UIA Koala Plan of Management*. Unpublished report to Port Macquarie-Hastings Council, Port Macquarie.

Biolink (2005a). *An Ecological Overview of Koalas and their Habitats on the Lake Innes Peninsula, Port Macquarie, NSW*. Unpublished report to Villro Pty Ltd and Luke and Company Pty Ltd, Port Macquarie.

Biolink (2005b). *Koala Plan of Management for Part Lot 32 DP 809231 – Mahers Headland, Port Macquarie, NSW*. Unpublished report to Villro Pty Ltd and Luke and Company Pty Ltd, Port Macquarie.

Biolink (2005b). Area 14 Master Planning Area - Koala Plan of Management. Unpublished report to Port Macquarie-Hastings Council, Port Macquarie.

Biolink (2005c). Area 13 Urban Investigation Area Local Environmental Study (Ecological Constraints). Unpublished report. Biolink Pty Ltd, Ecological Consultants, Uki NSW.

Biolink (2003). An Ecological Overview of the Area 14 Master Planning Area. Unpublished report to Hastings Council. Biolink – Natural History and Environmental Consultants, Uki.

Biosis Research (2005). *Oxley Highway Deviation - Supplement to Species Impact Statement*. Unpublished Report. Biosis Research Pty. Ltd. Natural and Cultural Heritage Consultants, Chippendale NSW.

Biosis Research (2004a). *Oxley Highway Deviation Species Impact Statement*. Unpublished Report. Biosis Research Pty. Ltd. Natural and Cultural Heritage Consultants, Chippendale NSW.

Briggs, B. (1996). Tracks, Scats and Other Traces. Oxford University Press, Melbourne.

Connell Wagner Pty Ltd (2000a). Koala Plan of Management – Coastal Area. Part A: The KPOM – Hastings Council. Connell Wagner Pty Ltd, Neutral Bay.

Connell Wagner Pty Ltd (2000b). Koala Plan of Management – Coastal Area. Part B: Resource Study – Hastings Council. Connell Wagner Pty Ltd, Neutral Bay.

Connell Wagner Pty Ltd (1998a). **King Creek Threatened Species Management Plan**. Hastings Council. Port Macquarie.

Connell Wagner Pty Ltd (1998b). **King Creek Koala Management Plan**. Hastings Council. Port Macquarie.

Daly G. (2014) From rags to riches and back again: fluctuations in the green and golden bell frog Litoria aurea population at Nowra on the south coast of New South Wales. Australian Zoologist 37: 157 – 172.

Darkheart Eco-Consultancy (2014). Review of Coastal Floodplain EEC Mapping in the PMHC LGA. Unpublished report to PMHC. Darkheart Eco-Consultancy, Kew.

Darkheart Eco-Consultancy (2013a). Ecological Survey and Constraints Assessment: Part Lot 289 DP 1184284 and Lot 6 DP110560, The Ruins Way, Port Macquarie. Unpublished report to Charley Bros Pty Ltd. Darkheart Eco-Consultancy, Kew.

Darkheart Eco-Consultancy (2010a). Preliminary Pre-Clearing Fauna Survey from Oxley Highway Overpass to Lindfield Park Rd, Oxley Highway Deviation (Chainage 6060-6540). Unpublished report to BMD Construction Pty Ltd. DEC Pty Ltd, Laurieton.

Darkheart Eco-Consultancy (2010b). Preliminary Pre-Clearing Fauna Survey from Wrights Rd/Oxley Highway Intersection, Oxley Highway Deviation (Chainage 4800-5060). Unpublished report to BMD Construction Pty Ltd. DEC Pty Ltd, Laurieton.

Darkheart Eco-Consultancy (2010c). Preliminary Pre-Clearing Fauna Survey from Wrights Rd/Oxley Highway Intersection (Chainage 5160-6060): Eastern Half, Oxley Highway Deviation. Unpublished report to BMD Construction Pty Ltd. DEC Pty Ltd, Laurieton.

Darkheart Eco-Consultancy (2010d). Preliminary Pre-Clearing Fauna Survey (Western Half): Oxley Highway/Pacific Highway Intersection to Oxley Highway Overpass: Chainage 6600-7100 and 8600-10 000. Unpublished report to BMD Construction Pty Ltd. DEC Pty Ltd, Laurieton.

Darkheart Eco-Consultancy (2010e). Preliminary Pre-Clearing Fauna Survey (Western Half): Oxley Highway/Pacific Highway Intersection to Oxley Highway Overpass: Chainage 7100-8600. Unpublished report to BMD Construction Pty Ltd. DEC Pty Ltd, Laurieton.

Darkheart Eco-Consultancy (2007a). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Re-Development of Taskers Residential Village, Ocean St, Port Macquarie. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2007b). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Residential Development of 168 Pacific Drive, Port Macquarie. Unpublished report to All About Planning, Pty Ltd. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2007c). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Residential Development of Lot 5 DP 998125, The Ruins Way, Port Macquarie. Unpublished report to Luke and Co. Pty Ltd. Darkheart Eco-Consultancy, Laurieton.

Darkheart Eco-Consultancy (2006a). Flora and Fauna Survey and SEPP 44 Assessment of Proposed Residential Subdivision of Lot 1 DP 506306 Lighthouse Road, Port Macquarie. Unpublished report to Frank O'Rourke and Associates Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2006b). Fauna Survey and Assessment of Proposed Residential Subdivision of Part of Lot 32 DP 809231, Phillip Charley Drive, Port Macquarie. Unpublished report to Luke and Company Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005a) *Flora and Fauna Survey and SEPP 44 Assessment of Freeman, Flood and Stubbs lands, Sancrox Rd, Sancrox*. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005b). Flora and Fauna Survey and SEPP 44 Assessment of Proposed Shopping Centre and Future Residential Development on Lot 2 DP, and Ecological Assessment of Adjacent Rd Reserve, Cnr Major Innes Drive/Oxley Highway, Port Macquarie. Unpublished report to King and Campbell. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005e). Flora and Fauna Survey and SEPP 44 Assessment of Proposed Filling and Future Industrial Development on Lot 2, DP 442098 Boundary Street, Port Macquarie. Unpublished report to Luke and Company Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005f). *SEPP 44 Assessment of Lot 22, Wrights Rd, Port Macquarie*. Unpublished report to Budden Nandle Michael Hudson Architects. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005g) *Flora and Fauna Survey and SEPP 44 Assessment of Lot 1 DP 583403 and Lot 3 DP 264071 Toorak Court, Port Macquarie*. Unpublished report to Ian Basset and Partners Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005h). Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Extension of Coastside Church on Lot 2 DP 601094, Mumford Street, Port Macquarie. Unpublished report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005i). Threatened Species, EPBCA and SEPP 44 Assessments for Part of Proposed School on Lot 2 DP 584232, Oxley Highway, Port Macquarie. Darkheart Eco-Consultancy, Port Macquarie. Unpublished report to Luke and Company. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2005j). Flora and Fauna Survey, and Threatened Species, EPBC Act and SEPP 44 Assessment for Proposed Rezoning for Rural-Residential Subdivision, Bushland Drive, Sancrox. Unpublished report to Luke and Company. Darkheart Eco-Consultancy, Port Macquarie

Darkheart Eco-Consultancy (2004a). *Threatened Species, EPBCA and SEPP 44 Assessments for Sports Field, St Columba Anglican School, Major Innes Drive*. Unpublished report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2004a) Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Community Facilities Building, Lot 5 DP 790668, Tulloch Rd, Port Macquarie. Unpublished report to Hastings Council. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2004b) Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Tourist Accommodation, Taskers Caravan Park, Port Macquarie. Unpublished report to King and Campbell Pty Ltd. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy (2004c) Threatened Species, EPBCA and SEPP 44 Assessments for Proposed Emergency Services Centre, Lots 1 and 2 DP 804235, Central Rd, Port Macquarie. Unpublished report to Hastings Council. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy. (2004d). *Threatened Species, EPBCA and SEPP 44 Assessments for Residential Estate – "Innes Downs", Major Innes Drive*. Unpublished report to O'Rourke and Associates. Darkheart Eco-Consultancy, Port Macquarie.

Darkheart Eco-Consultancy. (2004d). Threatened Species and State Environmental Planning Policy 44 - Koala Habitat Assessment for Proposed High School on Lot 12, DP 819462 & Pt Lots3 DP 813358 & Lot 2 DP 547484 and Lot 1 DP 242345 (Closed Road), Corner of Boundary Street and Tuffins Lane, Port Macquarie. Unpublished report to Hopkins Consultants. Darkheart Eco-Consultancy, Port Macquarie.

Dept Environment and Climate Change (2008a). **Recovery Plan for the Koala (*Phascolarctos cinereus*)**. NSW DECC, Hurstville.

DECC (2008b). Best Practice Guidelines for Green and Golden Bell Frog Habitat. DECC, Hurstville.

Department of Environment and Conservation, NSW (2005). Draft Recovery Plan – Green and Golden Bell Frog, *Litoria aurea* (Lesson 1829) – Recovery Plan: Draft for Public Comment. DEC, Hurstville.

Dept. of Planning, Infrastructure and Environmental (2020). Bionet /Atlas of Wildlife (http://www.environment.nsw.gov.au/atlaspublicapp/UI_Modules/ATLAS_/AtlasSearch.aspx)

DPIE (2021b). Threatened Biodiversity Data Collection. www.threatenedspecies.environment.nsw.gov.au

DotEE (2021a). Matters of National Environmental Significance Search Tool. http://www.environment.gov.au/epbc/pmst/index.html

DotEE (2021b). Species Profiles and Threats (SPRAT) Database. http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

DotEE (2018). Conservation advice (incorporating listing advice) for the Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community.

DotE (2013). Matters of National Environmental Significance - Significant Impact Guidelines 1.1: *Environment Protection and Biodiversity Conservation Act 1999*.

Department of the Environment, Water, Heritage and the Arts (DEWHA) (2009b). EPBC Act Policy Statement 3.19. Significant Impact Guidelines for the vulnerable green and golden bell frog *Litoria aurea*. Canberra, ACT: DEWHA. Available from: http://www.environment.gov.au/epbc/publications/litoria-aurea.html.

Department of the Environment and Heritage (2006a). Background Document For The Threat Abatement Plan: Infection Of Amphibians With Chytrid Fungus Resulting In Chytridiomycosis. DEH, Canberra.

Department of the Environment and Heritage (2006b). Background Document For The Threat Abatement Plan: Infection Of Amphibians With Chytrid Fungus Resulting In Chytridiomycosis. DEH, Canberra

DSEWPC (2014).Interim Koala Referral Advice for Proponents. www.environment.gov.au/epbc

DEWHA (2011a). Survey guidelines for Australia's threatened mammals: Guidelines for detecting mammals listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. Department of Environment, Water, Heritage and the Arts, Canberra.

DEWHA (2011b). Survey guidelines for Australia's threatened bats: Guidelines for detecting bat listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. Department of Environment, Water, Heritage and the Arts, Canberra.

DEWHA (2010a). Survey guidelines for Australia's threatened reptiles: Guidelines for detecting reptiles listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. Department of Environment, Water, Heritage and the Arts, Canberra.

DEWHA (2010b). Survey guidelines for Australia's threatened birds: Guidelines for detecting birds listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. Department of Environment, Water, Heritage and the Arts, Canberra.

DEWHA (2010c). Survey guidelines for Australia's threatened frogs: Guidelines for detecting frogs listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. Department of Environment, Water, Heritage and the Arts, Canberra.

Dique, D.S., Preece, H.J., Thompson, K. and de Villiers, D.L. (2004). Determining the distribution and abundance of a regional koala population in southeast Queensland for conservation management. *Wildlife Research* **31**(3): 109-119

Dique, D.S., de Villiers, D.L. and Preece, H.J. (2003). Evaluation of line transect sampling for estimating koala abundance in Pine Rivers Shire, southeast Queensland. *Wildlife Research* **30**(2): 127-135

Ellis, W., Fitzgibbon, S., Melzer, A., Wilson, R., Johson, S., Bercovitch, F., Dique, D. and Carrick, F. (2013). Koala habitat use and population density: using field data to test the assumptions of ecological models. *Australian Mammalogy*, 2013, **35**, 160–165

Environmental Protection Authority, NSW (2016a). Assessment of Threatened Ecological Communities of the Coastal Integrated Forestry Operations Approval Region. Environment Protection Authority 59 Goulburn Street, Sydney.

EPA, NSW (2016b). Assessment of Swamp Sclerophyll Forest on Coastal Floodplains TEC on NSW Crown Forest Estate (South Coast Region) Survey, Classification and Mapping Completed for the NSW Environment Protection Authority. Environment Protection Authority, 59 Goulburn Street, Sydney.

Fyke, G.H., White, A.W, Bishop, I. and Waldman, B. 2001. Habitat-use by the Green and Golden Bell Frog (Litoria aurea) in Australia and New Zealand. Unpublished Ms.

Goldingay, R. 1996. The Green and Golden Bell Frog Litoria aurea – from riches to ruins: conservation of a formerly common species. Australian Zoologist 30(2): 248-256

Hashimoto, T.R. and Troedson, A.L. (2008). Port Macquarie 1:100 000 and 1:25000, Coastal Quaternary Geology Map Series. Geological Survey of NSW, Maitland.

Hamer, A.J., van der Ree, R., Harrison, L., Wattus, R and Mitchell, B. 2016. Green and Golden Bell Frog Population Study, South Nowra. Final Report Contract No. 12.2574.2779. Unpublished report for NSW Road and Maritime Services. Australian Research Centre for Urban Ecology, University of Melbourne

Hamer, A. J. 2002a. Ecology of the endangered green and golden bell frog Litoria aurea: roles of habitat determinants, spatial dynamics, population demography and threatening processes. PhD Thesis, University of Newcastle.

Hamer, A. J. 2002b. Management of freshwater wetlands for the endangered green and golden bell frog (Litoria aurea): roles of habitat determinants and space. Biological Conservation, 106, 413-424.

Hamer, A. J., Lane, S. J. & Mahony, M. J. 2008. Movement patterns of Adult Green and Golden Bell Frogs Litoria aurea and the implications for conservation management. Journal of Herpetology, 42, 397-407.

JBEnviro (2021a). Koala Plan of Management for proposed rezoning of Part Lot 499 DP1258597, Blackwood Street, South Lindfield. Unpublished report to Love Project Management. JBE, Port Macqaurie.

JBEnviro (2021b). Biodiversity Certification Assessment Report for future residential development of Le Clos, Sancrox. Unpublished report to Land Dynamics. JBE, Port Macquarie

JBEnviro (2019). Preliminary constraints assessment for future residential development of Lot 245 DP1227796, Koel Crescent, Port Macquarie. Unpublished report to Land Dynamics, Port Macquarie.

JBEnviro (2017). Ecological Survey and Constraints Assessment: Part Lot 289 DP 1184284 and Lot 6 DP110560, The Ruins Way, Port Macquarie. Unpublished report to Love Project Management. JBE, Port Macquarie.

Goosem, M. (2002). Effects of tropical rainforest roads on small mammals: fragmentation, edge effects and traffic disturbance. *Wildl. Res.* **2**: 1035-3712.

Jurskis, V. and Potter, M. (1997). Koala Surveys, Ecology and Conservation at Eden. Research Paper No. 34. State Forests, Sydney.

Jurskis, V., Rowell, D. and Ridley, D. (1994). Survey Techniques and Aspects of the Ecology of the Koala Near Eden. Research Paper No. 22. State Forests, Sydney.

Keith (2004). Ocean shores to desert dunes: the native vegetation of New South Wales and the ACT. NSW Department of Environment and Conservation, Sydney.

Keith, D. and Scott, J. (2005). Native vegetation of coastal floodplains – a diagnosis of the major plant communities in New South Wales. Pacific Conservation Biology, 11: 81-104.

Keith, D.A. (2000). Sampling designs, field techniques and analytical methods for systematic plant population surveys. *Ecological Management and Restoration*. **1** (2): 125-139.

Lane, A., Wallis, K., and Phillips, S. (2020). A review of the conservation status of New South Wales populations of the Koala (*Phascolarctos cinereus*) leading up to and including part of the 2019/20 fire event (Addendum No. 2). *Report to International Fund for Animal Welfare* (IFAW). Biolink Ecological Consultants, Uki NSW.

Lewis, B. (2008). Pre-clearing survey for the removal of habitat on the Port Gateway Oxley Highway Upgrade Project: Lindfield Park Rd to Wrights Rd. Unpublished report to NSW RTA. Lewis Ecological Surveys, Bucca Wauka.

Lindenmayer DB, Welsh A, Donnelly C, Crane M, Michael D, Macgregor C, Mcburney L, Montague-Drake R, Gibbons P (2009) Are nest boxes a viable alternative source of cavities for hollow-dependent animals? Long-term monitoring of nest box occupancy, pest use and attrition. Biological Conservation 142:33–42

Naturecall (2016). South Lindfield KPoM Stage 2: Koala Plan of Management. Unpublished report to PMHC.

Naturecall (2015a). South Lindfield KPoM Stage 1: SEPP 44 Assessment, Literature Review, Tree Marking and

NSWSC (2011). Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions - Determination to make a minor amendment to Part 3 of Schedule 1 of the Threatened Species Conservation Act. http://www.environment.nsw.gov.au/determinations/bangalay36a.htm

NSWSC (2004a). Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions - endangered ecological community listing: final determination. www.npws.nsw.gov.au.

NSWSC (2004b). Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions - endangered ecological community listing: final determination. www.npws.nsw.gov.au.

NSWSC (2004c). Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions - endangered ecological community listing: final determination. www.npws.nsw.gov.au.

Office of Environment and Heritage (2004). Identification of Old Growth Forests: Field Identification on Private Land. OEH, Coffs Harbour. https://www.epa.nsw.gov.au/~/media/EPA/Corporate%20Site/resources/pnf/OGRFreviewFieldIdent.ashx

Phillips, S., Callaghan, J. and Thompson, V. (2000). The tree preferences of Koalas (Phascolarctos cinereus) inhabiting forest and woodland communities on Quaternary deposits in the Port Stephens area, NSW. Wildl. Res. 27: pp 1-10.

Preston, B.J. and Adam, P. (2004a). Describing and listing threatened ecological communities under the *Threatened Species Conservation Act 1995* (NSW): Part 1 – the assemblage of species and the particular area. *Environmental and Planning Law Journal*, **21**:250-263

Preston and Adams (2004b). Describing and listing threatened ecological communities under the *Threatened Species Conservation Act 1995* (NSW): Part 2 – the role of supplementary descriptors and the listing process. *Environmental and Planning Law Journal*, **21**:372-390

Pyke, G.H. & White, A.W. (2000). Factors influencing the predation on eggs and tadpoles of the endangered Green and Golden Bell Frog (*Litoria aurea*) by the introduced Plague Minnow (*Gambusia holbrooki*). *Aust. Zool.* **31** (3): pp 496-506.

Pyke, G.H. and White, A.W. (1996). Habitat requirements of the Green and Golden Bell Frog (*Litoria aurea*). In: Pyke, G.H. and Osborne, W.S. (eds: The Green and Golden Bell Frog (Litoria aurea) – Biology and Conservation. *Aust Zool* **30**(2) 218-224

Redpath, P. (2002). Partridge Creek Acid Sulfate Soil Hotspot Project Targeted Fauna Survey and 8 Part Test Assessment. Resource Analysis Unit, North Coast Region, Department of Land and Water Conservation.

Reinhold, L., Law, B., Ford, G. and Pennay, M. (2001). Key to the Calls of Southeast Queensland and Northeast NSW. Queensland Natural Resources and Mines, Brisbane.

Royal Botanical Gardens Herbarium. Plantnet website (www.plantnet.rbgsyd.nsw.gov.au/search)

Smith GC, Agnew G (2002) The value of 'bat boxes' for attracting hollow dependent fauna to farm forestry plantations in southeast Queensland. Ecological Management and Restoration 3:37–46

Scotts, D. (2002) editor. Key Habitats and Corridors for Forest Fauna of North-East NSW: A regional landscape to focus conservation, planning, assessment and management. NSW NPWS, Hurstville.

Scotts, D. and Drielsma, M. (2003). Developing landscape frameworks for regional conservation planning: an approach integrating fauna spatial distributions and ecological principles. *Pacific Conservation Biology* **8**(4): 233-254.

Sanders, M,R., Clulow, S., Bower, D.S. and Mahony, M.J. 2015. Predator presence and vegetation density affect capture rates and detectability of *Litoria aurea* tadpole: wide-ranging implications for a common survey technique. PloSOne 10

Smith A.P. and Murray M. (2003) Habitat requirements of the Squirrel Glider on the New South Wales central coast. *Wild. Res.* **30**: 291-301.

Smith, A.P. (2002a). Squirrel Glider (Petaurus norfolcensis) Conservation Management Plan for Wyong Shire Council. Unpublished report to Wyong Shire Council. Austeco, Armidale.

Smith, A.P. (2002b). *Effects of clearing on the Squirrel Glider (Petaurus norfolcensis)*. Unpublished report to Wyong Shire Council. Austeco, Armidale.

Stockwell, M.P., Clulow, J. and Mahony, M.J. 2012. Sodium Chloride Inhibits the Growth and Infective Capacity of the Amphibian Chytrid Fungus and Increases Host Survival Rates. PLoS ONE 7, e36942. doi: 10.1371/journal.pone.0036942

Threlfall, C., Jolley, D. F., Evershed, N., Goldingay, R. & Buttemer, W. A. (2008). Do Green and Golden Bell Frogs *Litoria aurea* occupy habitats with fungicidal properties? Australian Zoologist, 34 (3), 350-360.

Troedson A.L. & Hashimoto T.R. (2008). Coastal Quaternary Geology – north and south coast of NSW. Geological Survey of New South Wales, Bulletin 34.

White, A. (2006). Green and Golden Bell Frog (*Litoria aurea*) – Port Macquarie Key Population Plan of Management. Unpublished report to Port Macquarie-Hastings Council. Biosphere Environmental Consultants Pty Ltd, Sydney.

White, A.W. & Pyke, G.H. (1996). Distribution and conservation status of the Green and Golden Bell Frog *Litoria aurea* in New South Wales. In: Pyke, G.H. and Osborne, W.S. (eds). The Green and Golden Bell Frog (*Litoria aurea*): Biology and Conservation. pp 177-190. Royal Zoological Society of NSW, Mosman.

Woosnam-Merchez, O., Cristescu, R., Dique, D., Ellis, B., Beeton, R.J.S, Simmonds, J. and Carrick, F. (2012). What faecal pellet surveys can and can't reveal about the ecology of koalas Phascolarctos cinereus. Australian Zoologist 36(2), 192-200.

Land and Environment Court Citations:

CBD Prestige Holdings Pty Ltd v Lake Macquarie City Council [2005] NSWLEC 367

Gales Holdings Pty Limited v Tweed Shire Council [2008] NSWLEC 209

Motorplex (Australia) Pty Limited v Port Stephens Council [2007] NSWLEC 74.

APPENDIX 1: REPORT AUTHORSHIP

Table 47: Sections completed by accredited assessors and other persons

Section	Completed by accredited person	Completed by non-accredited person
2.1	Jason Berrigan	-
2.2	Jason Berrigan	-
2.3	Matt Bailey, Jason Berrigan	-
2.4	Matt Bailey, Jason Berrigan	-
2.5	Matt Bailey, Jason Berrigan	-
3.1	Matt Bailey, Jason Berrigan	-
3.2	Jason Berrigan	-
3.3	Jason Berrigan	-
3.4	Jason Berrigan	-
3.5	Jason Berrigan	-
3.6	Jason Berrigan	-
3.7	Jason Berrigan	-
4	Jason Berrigan	-
5	Jason Berrigan	-
Appendix 2	Jason Berrigan	-

APPENDIX 2: EPBC ACT MNES SPECIES OCCURRENCE ASSESSMENT

The following table assesses threatened species determined listed in the Protected Matters search tool as likely to occur in the locality:

Table 48: Potential to occur - Flora

Species	Legal Status	Local records	Habitat Requirements	Likelihood of Occurrence	MNES assessment
Scented Acronychia (*Acronychia littoralis*)	E-BCA E-EPBCA	2	An understorey tree found in littoral rainforest on sand. Clonal and often confused with *A. oblongifolia* which has wider edaphic range.	The study site was considered to be not preferred habitat and was not found Unlikely to occur.	Unlikely to occur and unsuitable habitat, hence no risk of significant impact. MNES not required.
Allocasuarina thalassoscopica (Allocasuarina emuina)	E-EPBCA	1	Dioecious, root-suckering with spreading habitat up to 1.5m high in graminoid low heath on coastal flats to coastal rhyolite and granite outcrops. Found in North Coast Bioregion from Diamond Head to Noose Heads in SE Qld.	Not preferred habitat. No found on site. Unlikely to occur.	Unlikely to occur hence assessment not required
Allocasuarina defungens	E-BCA E-EPBCA	7	A straggly oak about 2m high with blue-green foliage found in heath on sand (sometimes clay and sandstone soils), and swamp sclerophyll forest margins	Nil – no suitable habitat.	Unlikely to occur hence assessment not required
Hairy-joint Grass (*Arthraxon hispidus*)	V-BCA V-EPBCA	0	A grass found in (or is likely to occur in) littoral rainforest, dry rainforest, subtropical rainforest, warm-temperate rainforest, cool-temperate rainforest, wet sclerophyll forest and riparian forests (including gallery rainforests) at no particular altitude. Variable geology and various, mainly richer loams soils are favoured	Unlikely – no local records and not found as targeted threatened species surveys would've detected it.	Unlikely to occur hence assessment not required
Trailing Woodruff (*Asperula asthenes)*	V-BCA V-EPBCA	3	A herb found in damp sites along riverbanks and similar areas.	Targeted survey undertaken around dam without result. Not recorded in edge of LINR. Unlikely to occur.	Unlikely to occur hence assessment not required

Species	Legal Status	Local records	Habitat Requirements	Likelihood of Occurrence	MNES assessment
Leafless Tongue-orchid (*Cryptostylis hunteriana*)	V-BCA V-EPBCA	0	A leafless saprophytic terrestrial orchid with a poorly developed root system. This orchid is only detectable during the flowering period of Nov-Feb (Bell 2001). It has been described from isolated records as occurring in a variety of habitats from swamp fringes to bare hillsides in eucalypt forest, with favoured soils being sandy but with records in clay (Bishop 1996	Unlikely – no LGA records and very patchy distribution in NSW. Not suitable soils.	Unlikely to occur hence assessment not required
White-flowered Wax Plant (*Cynanchum elegans*)	E-BCA E-EPBCA	4	A twiner occurring predominately in dry rainforest, littoral rainforest and the ecotone between dry rainforest and open forest, however it has been found in the Manning Valley and Hastings in Open Forest types on specific geologies eg limestone and serpentine respectively (Garry Germon pers. comm. 2004, personal observations). It occurs on a variety of lithology's and soil types. It has been found between the altitudinal ranges of 0 to 600 metres ASL and rainfall >760mm annually (NPWS 1999). Common associated species include *Geijera parviflora, Notelaea microcarpa, Banksia integrifolia, Ficus spp., Guioa semiglauca, Melia azedarach, Streblus brunonianus* and *Pittosporum revolutum*	Unlikely – found in littoral rainforest at Lake Cathie, and in dry sclerophyll on ultra-basic parent materials in Cowarra State Forest. Not preferred vegetation type and failed to detect by targeted survey.	Unlikely to occur hence assessment not required
Euphrasia arguta	CE-BCA CE-EPBCA	0	Erect annual herb to 20-35cm only found in Nundle area of NSW north-western slopes and tablelands, and originally from Sydney to Bathurst.	Site is far beyond range.	Unlikely to occur hence assessment not required
Smooth-shelled Macadamia (*Macadamia integrifolia*)	V-EPBCA	0	Rainforest tree to 20m high (now commercially cultivated) from Mt Bauple to Lismore area.	Far south of known range and absent.	Unlikely to occur hence assessment not required

Species	Legal Status	Local records	Habitat Requirements	Likelihood of Occurrence	MNES assessment
Marsdenia longiloba	E-BCA V-EPBCA		A slender climber with clear, watery latex (sap). Occurs in rainforest and moist eucalypt forest adjoining rainforest, at no particular altitude, sometimes in areas with rock outcrops. Found at scattered sites from Barrington Tops to SE Queensland (NPWS 2000). Recorded northeast of Byabarra in the Hastings LGA	Suitable habitat in some broad generic sense in WSF but not found. It is considered an unlikely potential occurrence given the disturbance history of the site, and lack of local records.	Unlikely to occur, hence no risk of significant impact. No Seven Part Test required.
Biconvex Paperbark (*Melaleuca biconvexa*)	V-BCA V-EPBCA	37	A paperbark shrub/small tree found in damp places, often near streams, on the coast and adjacent tablelands from Jervis Bay to Port Macquarie. Restricted to Thrumster soil landscape in PMHC LGA	Not suitable habitat (only found on Krasnozems in the LGA) and not found by targeted survey.	Unlikely to occur hence assessment not required
Parsonsia dorrigoensis	V-BCA E-EPBCA	0	A climber found in sub-tropical and warm temperate rainforest, and sclerophyll forest often on brown clay soils on the north coast south to the Hastings River. It is associated with Blackbutt, Tallowwood, Brush Box, Crabapple, Lilly Pilly, Tree Heath and Water Gum. It may favour some disturbance, including fire.	Suitable habitat in some broad generic sense in WSF but not found. It is considered an unlikely potential occurrence given the disturbance history of the site, and lack of local records.	Unlikely to occur hence assessment not required
Tall Knotweed *(Persicaria elatior)*	V-BCA V-EPBCA	0	Herb up to 90cm tall found in damp places, especially beside streams and lakes. Occasionally in swamp forest or associated with disturbance. Recently found north of Kempsey	Marginal generic potential around dam – not found by targeted survey.	Unlikely to occur hence assessment not required

Species	Legal Status	Local records	Habitat Requirements	Likelihood of Occurrence	MNES assessment
Lesser Swamp-orchid (*Phaius australis*)	E-BCA E-EPBCA	0	Generally grow in *Melaleuca quinquenervia* swamps on the coast or at sea level, as well as littoral rainforest, dunes (including stabilised dunes), riparian forests (including gallery rainforests), swamp forests, swamps (including marshes and intermittent wetlands), and Blackbutt-dominated wet sclerophyll on clay, mainly at low altitudes. Sandy alluvium is the favoured geology and sandy, damp to humic soils are favoured.	Habitat adjacent in LINR and remnant strips offer some generic potential but not found by targeted survey in 2011, or random meander in 2020. No local records – long lost to collectors.	Unlikely to occur hence assessment not required
Magenta Lilly Pilly *(Syzygium paniculatum)*	V-BCA V-EPBCA	0	A type of Lilly Pilly, which has a shrub to small tree habit and grows in subtropical and littoral rainforest on sandy soils or stabilised dunes on the coast. It is also widely cultivated as an ornamental.	No suitable habitat and no planted ornamentals. Unlikely to occur.	Unlikely to occur hence assessment not required
Austral Toadflax (*Thesium australe*)	V-BCA V-EPBCA	3	A parasitic herb commonly associated with Kangaroo Grass, and has been recorded on coastal headlands at Coffs Harbour, Hat Head, Crescent Head, Diamond Head and Perpendicular Point in Kangaroo Grass areas.	Unlikely – no local records and very patchy distribution. Not suitable habitat on site or in study area. Failed to detect by targeted survey.	Unlikely to occur hence assessment not required
Tylophora woolsii	E-BCA E-EPBCA	MNES search tool	A twiner found in wet sclerophyll and rainforest in the northern ranges and slopes of NSW from Barrington Tops NP to southern Queensland (NPWS 1999). It has also been recorded within in the Bonville-Archville area and along disturbed roadside verges (NPWS 1999). Associated species include: Acacia melanoxylon, A. binervata, Caldcluvia, Ehretia, Schizomera, Syncarpia, Eucalyptus microcorys and E. saligna. Recorded from upper Hunter north.	Suitable habitat in some broad generic sense in WSF but not found. It is considered an unlikely potential occurrence given the disturbance history of the site, and lack of local records.	Modification of site of no significance as no habitat potential. No significant impact likely to occur. No MNES required.

Table 49: Potential to occur – Fauna

Marine and estuarine fauna and all fish are not assessed due to complete lack of habitat on site or in the study area.

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
Australian/Laced Fritillary ((*Argyreus hyperbius* spp. *inconstans*)	E-BCA CE-EPBCA	-	Open, coastal grassy sedgelands, wetlands and swamps with *Viola betonicifolia* (the egg laying substrate and larval food species). Occasionally occurs in (swampy) disturbed areas (eg drainage ditches of sugarcane farms) where *Viola betonicifolia* is abundant, and may occur in other watercourse plant communities where *Viola betonicifolia* is present. Anything affecting the reduction in density of the *Viola*, including lowering of the watertable and loss of nutrients in the soil and water, grazing and weed invasion is a threat to the species. This is a 'boom and bust' species, triggered by flooding. Average offspring is about 30. Adults live for only about 2 weeks.	*V. betonicifolia* absent. Unlikely to occur. Old record in Limeburners Creek Nature Reserve.	Unlikely to occur hence assessment not required
Dwyer's Bat/Large Eared Pied Bat (*Chalinobus dwyeri)*	V-BCA V-EPBCA	-	Found in moderately wooded habitats such as dry sclerophyll forest, tall open eucalypt forests, woodlands, sub-alpine woodlands, edge of rainforest and wet sclerophyll forest. Roosts in caves, mines and abandoned bottle-shaped mud nests of Fairy Martins. In caves and mines, tend to roost in twilight sections near entrance. Insectivorous but habits poorly known. Fly relatively slowly, direct and maneuverable, low to ground or 6-10m above ground.	General foraging preferences of this poorly known species suggests locality potentially generically structurally suitable foraging habitat. No cave, mines, etc on or near site for roosting. Not recorded within 10km radius of site (or LGA, and very few regional records). Likelihood to occur on site considered unlikely.	Unlikely to occur hence assessment not required

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
Grey-headed Fruit-bat/Flying Fox (*Pteropus poliocephalus*)	V-BCA V-EPBCA	213	Nomadic frugivore and nectarivore on rainforest, eucalypt, melaleuca and banksia. Recorded flying up to 45km from roost (generally max. of 20km). Roosts colonially with short term individual or small groups, mostly near watercourses. Spring or Summer roosts are maternity sites. Dependent on Winter flowering species eg. *E. robusta* and *E. tereticornis*.	Site contains some potential nectar and pollen and fruit sources, and is considered highly likely to form a small part of the species wider foraging range. No roosting habitat on/adjacent to the site. Recorded foraging adjacent to site by previous survey	Proposal will remove some potential foraging resources and observed adjacent – **MNES assessment required**.
Spotted-tail Quoll (*Dasyurus maculatus*)	V-BCA E-EPBCA	9	Various forested habitats with preference for dense forests. Requires tree hollows, hollow logs or caves for nesting. Large home range (>500ha) and may move over several kilometres in a few days. Tends to follow drainage lines.	Site is too degraded for this species and extremely exposed to foxes. Unlikely to occur.	Unlikely to occur hence assessment not required
Greater Glider (*Petauroides volans*)	V-EPBCA	3	Restricted to eucalypt forests and woodlands of eastern Australia. Its diet is mostly eucalypt leaves and occasional flowers and is found in highest abundance in taller, montane, moist eucalypt forests, with relatively old trees and abundant hollows. The distribution may be patchy even in suitable habitat. Forests with a diversity of eucalypt species, due to seasonal variation, is its preferred tree species.	Not recorded on-site and not preferred forest types in adjacent LINR, or adjacent, or too fragmented. Considered an unlikely occurrence.	Unlikely to occur hence assessment not required

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
Long-nosed Potoroo (*Potorous tridactylus*)	V-BCA V-EPBCA	0	Coastal heath and shrublands; paperbark forest; woodland with dry heathy understorey; dry and wet sclerophyll forests; high elevation rainforest or moist hardwood forest; moist shrublands with dense or moderately dense understoreys and sedge-dominated groundcover; wet or dry sclerophyll forests where average annual precipitation exceeds 760mm. Requires thick groundcover for refuge, while foraging in open areas on ridges, slopes or gullies, typically on ecotones, and prefers sandy soils for digging. Eats roots, tubers, fungi, fleshy fruits, leaves, insects and other soil invertebrates. Optimum habitat generally considered a mosaic of regenerating dense understorey vegetation as result of patchwork of periodic low to medium intensity fires. Home range 2-5ha (NSW NPWS 2000).	Not recorded on-site and not preferred forest types in adjacent LINR, or adjacent, or too fragmented. Considered an unlikely occurrence.	Unlikely to occur hence assessment not required
Koala (*Phascolarctos cinereus*)	V-BCA V-EPBCA	6277	Areas where preferred food species occur in sufficient concentrations and diversity, and generally on more fertile soils.	**Recorded on site**.	**MNES assessment as per Koala protocol automatically required**.

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
New Holland Mouse (*Pseudomys novaehollandiae*)	V-EPBCA	0	Swamp forest, heath, open forest on sand. Most often found in heath dominated by leguminous shrubs <1m high with sparse groundcover. Depends on a specific fire regime – prefers early stages of post-fire recovery. Diet varies with season. Seeds preferred in spring-summer, with insects and invertebrates in winter, plus leaves, flowers and fungi. Nocturnal with burrows in sandy soil, temporary to up to 5m long with nest chamber and various residences, and expected to be occupied by family groups. Home range of breeding females overlap but not males. Breeds in late winter to early summer, with peak breeding in 2nd year (only live for about 2 years), with peak size in 2nd year. Population peaks in autumn, lowest in spring, with peak density of 17/ha in ideal conditions.	No potential habitat – too degraded. No local records. Not recorded by targeted survey. Unlikely to occur.	Unlikely to occur hence assessment not required
Australasian Bittern (*Botaurus poiciloptilus*)	E-BCA E-EPBCA	5	Inhabits estuarine and freshwater wetlands, generally with permanent water and dense vegetation of sedges, rushes and reeds, particularly Bullrush and Spikerush. Solitary or groups up to 12. Usually sedentary. Roosts in reeds by day, forages in shallow water at dusk/night for frogs, fish, invertebrates, fruit, leaves. Tramples reeds, sedges to make a foraging platform. Nests in dense vegetation over water. (NSW NPWS 2000)	No suitable habitat – dam too small and adjacent LINR lacks foraging habitat.	Unlikely to occur hence assessment not required

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
Eastern Bristlebird (*Dasyornis brachypterus*)	E-BCA E-EPBCA	0	This species habitat is characterised by dense, low vegetation including heath and open woodland with a heathy understorey. Age of habitat since fires (fire-age) is of paramount importance to this species; Illawarra and southern populations reach maximum densities in habitat that has not been burnt for at least 15 years.	Outside known range of southern and northern NSW populations and unsuitable habitat. Unlikely to occur.	Unlikely to occur hence assessment not required
Red Goshawk (*Erythrotriorchis radiatus*)	CE-BCA V-EPBCA	0	Found in tropical open woodland, taller woodland, open forests, rainforest edges and dense riparian vegetation of coastal and subcoastal drainages. Territorial and utilise same nest. Breeding territories estimated 50-220km^2. Preys on bird especially Honeyeaters, parrots, kookaburras and slight waterbirds, as well as some mammals, reptiles and large insects. No recent records south of Clarence.	Not recorded on-site or in locality (nearest record is in Kempsey Shire but this is old – no recent records south of Clarence Valley). General locality is potentially suitable. Site may form marginal part of larger territory. Unlikely potential to occur due to sparseness of records – possibly only as extremely rare occurrence.	Outside known range and very low at best chance of occurrence as transient in extreme climate conditions – assessment not required.
Painted Honeyeater (*Grantiella picta*)	V-BCA V-EPBCA	0	Strongly migratory and locally nomadic. Exploits almost exclusively mistletoe-infested (mainly *Amyema* genus) eucalypt forest/woodland in mainly drier areas particularly Boree, Brigalow and Box-Gum woodlands – core range is inland central NSW (New England to west of Canberra) with limited coastal occurrences eg Hunter and Cumberland Valleys). Leaf insects occasionally taken. May extend range or visit woodland remnants and suburban gardens during poor seasons. Breeding habitat is mistletoe-laden eucalypt forest/woodland.	Not recorded on site or in locality. No significant mistletoe infestations on site. Overall thus site has unlikely potential for foraging as part of nomadic range for this species. Very unlikely potential to occur at best as rare transient.	Unlikely to occur hence assessment not required

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
White-throated Needletail (*Hirundapus caudacutus*)	V-EPBCA	36	Forages aerially over a variety of habitats usually over coastal and mountain areas, most likely with a preference for wooded areas (Marchant & Higgins 1993; Simpson & Day 2010). Has been observed roosting in dense foliage of canopy trees, and may seek refuge in tree hollows in inclement weather (Marchant & Higgins 1993).	Regularly recorded in similar habitat in locality. Likely to periodically forage over site as minute part of nomadic migratory range.	Likely to occur hence **assessment required.**
Swift Parrot (*Lathamus discolour*)	CE-BCA E-EPBCA	46	Breeds in Tasmania and winters in Victoria with some dispersal northwards. Feeds mostly on pollen and nectar of winter flowering eucalypts, but also feeds on fruit, seeds, lerps and insect larvae (Schodde and Tideman 1990). Also favours profusely flowering banksias. Favoured species are *E. robusta, Corymbia gummifera, E. globulus, E. sideroxylon, E. leucoxylon, E. labens, E. ovata, C. maculata, Banksia serrata* and *B. integrifolia*	Few preferred foraging species and recorded very close to site from 2002 to recent, suggesting period occurrence in study area in low numbers.	Likely to occur hence **assessment required.**
Painted Snipe (*Rostratula benghalensis*)	E-EPBCA	-	Prefers shallow, freshwater swamps and bogs. Most active at night, feeding on aquatic insects, grasshoppers, crickets, earthworms and various plant seeds. Usually solitary and nomadic.	No suitable habitat	Unlikely to occur hence assessment not required

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
Regent Honeyeater (*Xanthomyza phrygia*)	CE-BCA CE-EPBCA	0	Nomadic. Inhabits temperate eucalypt woodlands and open forest, including forest edges, woodland remnants on farmland and urban areas. Also uses *Casuarina cunninghamiana* gallery forests. Requires reliable and ample nectar supplies to support semi-permanent (core breeding) habitat. Favoured nectar sources are *E. sideroxylon, E. albens, E. melliodora, E. leucoxylon, E. robusta, E. planchoniana*, and heavy infestations of mistletoe. Also take insects and orchard fruits. Breeds in pairs or small colonies in open woodland/forest and occasionally more disturbed woodland near housing and farmland, depending on food availability, from August-January. Breeding less likely to occur if nectar flows are low or unreliable, or heavy competition with more aggressive honeyeaters eg Noisy Miner, Red Wattlebirds and Noisy Friarbirds.	No preferred species present or very rare – extreme rarity of this bird renders coastal records only as rare vagrants (eg. 2 birds recorded at Lake Cathie in 2015). Site does not have any significant habitat which would attract this bird.	Unlikely to occur hence assessment not required
Green and Golden Bell Frog (*Litoria aurea*)	E-BCA V-EPBCA	6	Found in permanent swamps and ponds. Prefers water bodies which are: still; shallow; unshaded; ephemeral; unpolluted; generally isolated; and free of native fish species or Plague Minnow (Gambusia holbrooki) and little macro-algae. Requires emergent vegetation, grass tussocks or rocks for shelter. May use disturbed sites opportunistically - may depend on several stages. Eats insects and other frogs. Summer breeder. (Hero et al 2004).	Dam contains abundant Plague Minnow and not found by targeted survey. Unlikely to occur.	Unlikely to occur hence not required

Name	Legal Status	Records	Habitat Requirements	Likelihood Of Occurrence	EPBC Act assessment required?
Giant Barred Frog (*Mixophyes iteratus*)	E-BCA, E-EPBCA	0	Moist hardwood forest, Antarctic Beech and rainforest near flowing streams. May also occur in coastal riverine rainforest and riparian vegetation. Forages in areas adjacent to riparian zones. Males call from under leaf litter or rocks by flowing streams. Eggs laid at streamside to await washing into stream by rainfall.	No suitable habitat on site or in study area. No local records. Unlikely to occur.	Unlikely to occur hence not required

APPENDIX 3: BIODIVERSITY CREDIT REPORT

BAM Credit Summary Report

Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00023700/BAAS18079/21/00023701	part Lot 499 Rezoning	21/12/2020
Assessor Name	Report Created	BAM Data version *
Jason A Berrigan	28/01/2021	36
Assessor Number	BAM Case Status	Date Finalised
BAAS18079	Open	To be finalised
Assessment Revision	Assessment Type	BOS entry trigger
0	Part 4 Developments (General)	BOS Threshold: Area clearing threshold

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

Zone	Vegetation zone name	TEC name	Current Vegetation integrity score	Change in Vegetation integrity (loss / gain)	Area (ha)	BC Act Listing status	EPBC Act listing status	Species sensitivity to gain class (for BRW)	Biodiversity risk weighting	Potential SAII	Ecosystem credits
Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion											
1	690_Moderate	Not a TEC	33.1	33.1	0.09			High Sensitivity to Potential Gain	1.75		1
2	690_Very_Low01	Not a TEC	4.8	4.8	1.6			High Sensitivity to Potential Gain	1.75		0
3	690_Moderate_B	Not a TEC	39.3	39.3	0.24			High Sensitivity to Potential Gain	1.75		4

BAM Credit Summary Report

									Subtotal	**5**
Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast										
4	1724_Very_low	Not a TEC	5.9	5.9	0.99			High Sensitivity to Potential Gain	1.50	0
									Subtotal	**0**
									Total	**5**

Species credits for threatened species

Vegetation zone name	Habitat condition (Vegetation Integrity)	Change in habitat condition	Area (ha)/Count (no. individuals)	BC Act Listing status	EPBC Act listing status	Biodiversity risk weighting	Potential SAII	Species credits
Phascolarctos cinereus / Koala (Fauna)								
690_Moderate_B	39.3	39.3	0.24	Vulnerable	Vulnerable	2	False	5
690_Very_Low01	4.8	4.8	0.1	Vulnerable	Vulnerable	2	False	1
							Subtotal	**6**

Biodiversity payment summary report

Assessment Id	Payment data version	Assessment Revision	Report created
00023700/BAAS18079/21/00023701		0	28/01/2021

Assessor Name	Assessor Number	Proposal Name	BAM Case Status
Jason A Berrigan	BAAS18079	part Lot 499 Rezoning	Open

Assessment Type	Date Finalised	BOS entry trigger
Part 4 Developments (General)	To be finalised	BOS Threshold: Area clearing threshold

PCT list

Price calculated	PCT common name	Credits
Yes	**690 -** Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion	5
Yes	**1724 -** Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	0

Species list

Price calculated	Species	Credits
Yes	***Phascolarctos cinereus*** (Koala)	6

Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

Biodiversity payment summary report

IBRA sub region	PCT common name	Threat status	Offset trading group	Risk premium	Administrative cost	Methodology adjustment factor	Price per credit	No. of ecosystem credits	Final credits price
Macleay Hastings	**690** - Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion	No	Northern Hinterland Wet Sclerophyll Forests >=50% and <70%	20.69%	$121.92	2.0131	$3,800.61	5	$19,003.07
Macleay Hastings	**1724** - Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	No	Coastal Swamp Forests <50%	19.23%	$215.80	2.1608	$6,648.25	0	$0.00

Subtotal (excl. GST)	**$19,003.07**
GST	**$1,900.31**
Total ecosystem credits (incl. GST)	**$20,903.38**

Species credits for threatened species

Species profile ID	Species	Threat status	Price per credit	Risk premium	Administrative cost	No. of species credits	Final credits price
10616	***Phascolarctos cinereus*** (Koala)	Vulnerable	$495.24	20.6900%	$80.00	4	$2,710.82

Biodiversity payment summary report

	Subtotal (excl. GST)	**$2,710.82**
	GST	**$271.08**
Total species credits (incl. GST)		**$2,981.90**
	Grand total	**$23,885.28**

BAM Biodiversity Credit Report (Like for like)

Proposal Details

Assessment Id
00023700/BAAS18079/21/00023701

Proposal Name
part Lot 499 Rezoning

BAM data last updated *
21/12/2020

Assessor Name
Jason A Berrigan

Assessor Number
BAAS18079

BAM Data version *
36

Proponent Names

Report Created
28/01/2021

BAM Case Status
Open

Assessment Revision
0

Assessment Type
Part 4 Developments (General)

Date Finalised
To be finalised

BOS entry trigger
BOS Threshold: Area clearing threshold

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		

Species
Nil

Additional Information for Approval

BAM Biodiversity Credit Report (Like for like)

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

Name
Amaurornis moluccana / Pale-vented Bush-hen
Calyptorhynchus lathami / Glossy Black-Cockatoo
Dasyurus maculatus / Spotted-tailed Quoll
Ephippiorhynchus asiaticus / Black-necked Stork
Ixobrychus flavicollis / Black Bittern
Phoniscus papuensis / Golden-tipped Bat
Lathamus discolor / Swift Parrot
Ninox connivens / Barking Owl
Syconycteris australis / Common Blossom-bat
Anthochaera phrygia / Regent Honeyeater
Hieraaetus morphnoides / Little Eagle
Haliaeetus leucogaster / White-bellied Sea-Eagle
Pandion cristatus / Eastern Osprey
Petaurus australis / Yellow-bellied Glider
Pseudomys gracilicaudatus / Eastern Chestnut Mouse

BAM Biodiversity Credit Report (Like for like)

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
690-Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion	Not a TEC	1.9	0	5	5
1724-Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	Not a TEC	1.0	0	0	0

690-Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region
Northern Hinterland Wet Sclerophyll Forests This includes PCT's: 690, 1281, 1558, 1845, 1846, 1847, 1914	Northern Hinterland Wet Sclerophyll Forests >=50% and <70%	690_Moderate	No	1	Macleay Hastings, Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Like for like)

	Northern Hinterland Wet Sclerophyll Forests This includes PCT's: 690, 1281, 1558, 1845, 1846, 1847, 1914	Northern Hinterland Wet Sclerophyll Forests >=50% and <70%	690_Very_Low01	No	0	Macleay Hastings, Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Northern Hinterland Wet Sclerophyll Forests This includes PCT's: 690, 1281, 1558, 1845, 1846, 1847, 1914	Northern Hinterland Wet Sclerophyll Forests >=50% and <70%	690_Moderate_B	No	4	Macleay Hastings, Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
1724-Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	**Like-for-like credit retirement options**					
	Class	Trading group	Zone	HBT	Credits	IBRA region

BAM Biodiversity Credit Report (Like for like)

	Coastal Swamp Forests This includes PCT's: 839, 923, 1064, 1227, 1230, 1231, 1232, 1649, 1716, 1717, 1718, 1719, 1721, 1722, 1723, 1724, 1725, 1726, 1729, 1730, 1731, 1794, 1795, 1798	Coastal Swamp Forests <50%	1724_Very_low	No	0	Macleay Hastings, Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Phascolarctos cinereus / Koala	**690_Moderate_B, 690_Very_Low01**	0.3	6.00

Credit Retirement Options

Like-for-like credit retirement options

	Spp	IBRA subregion
Phascolarctos cinereus / Koala	**Phascolarctos cinereus** / Koala	Any in NSW

BAM Biodiversity Credit Report (Variations)

Proposal Details

Assessment Id
00023700/BAAS18079/21/00023701

Proposal Name
part Lot 499 Rezoning

BAM data last updated *
21/12/2020

Assessor Name
Jason A Berrigan

Assessor Number
BAAS18079

BAM Data version *
36

Proponent Name(s)

Report Created
28/01/2021

BAM Case Status
Open

Assessment Revision
0

Assessment Type
Part 4 Developments (General)

Date Finalised
To be finalised

BOS entry trigger
BOS Threshold: Area clearing threshold

* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

Potential Serious and Irreversible Impacts

Name of threatened ecological community	Listing status	Name of Plant Community Type/ID
Nil		
Species		
Nil		

Additional Information for Approval

PCTs With Customized Benchmarks

PCT
No Changes

Predicted Threatened Species Not On Site

BAM Biodiversity Credit Report (Variations)

Name
Amaurornis moluccana / Pale-vented Bush-hen
Calyptorhynchus lathami / Glossy Black-Cockatoo
Dasyurus maculatus / Spotted-tailed Quoll
Ephippiorhynchus asiaticus / Black-necked Stork
Ixobrychus flavicollis / Black Bittern
Phoniscus papuensis / Golden-tipped Bat
Lathamus discolor / Swift Parrot
Ninox connivens / Barking Owl
Syconycteris australis / Common Blossom-bat
Anthochaera phrygia / Regent Honeyeater
Hieraaetus morphnoides / Little Eagle
Haliaeetus leucogaster / White-bellied Sea-Eagle
Pandion cristatus / Eastern Osprey
Petaurus australis / Yellow-bellied Glider
Pseudomys gracilicaudatus / Eastern Chestnut Mouse

Ecosystem Credit Summary (Number and class of biodiversity credits to be retired)

Name of Plant Community Type/ID	Name of threatened ecological community	Area of impact	HBT Cr	No HBT Cr	Total credits to be retired
690-Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion	Not a TEC	1.9	0	5	5.00
1724-Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	Not a TEC	1.0	0	0	0.00

BAM Biodiversity Credit Report (Variations)

690-Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion

Like-for-like credit retirement options

Class	Trading group	Zone	HBT	Credits	IBRA region
Northern Hinterland Wet Sclerophyll Forests This includes PCT's: 690, 1281, 1558, 1845, 1846, 1847, 1914	Northern Hinterland Wet Sclerophyll Forests >=50% and <70%	690_Moderate	No	1	Macleay Hastings,Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
Northern Hinterland Wet Sclerophyll Forests This includes PCT's: 690, 1281, 1558, 1845, 1846, 1847, 1914	Northern Hinterland Wet Sclerophyll Forests >=50% and <70%	690_Very_Low01	No	0	Macleay Hastings,Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Variations)

	Northern Hinterland Wet Sclerophyll Forests This includes PCT's: 690, 1281, 1558, 1845, 1846, 1847, 1914	Northern Hinterland Wet Sclerophyll Forests >=50% and <70%	690_Moderate_B	No	4	Macleay Hastings,Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Variation options					
	Formation	Trading group	Zone	HBT	Credits	IBRA region
	Wet Sclerophyll Forests (Grassy sub-formation)	Tier 3 or higher threat status	690_Moderate	No	1	IBRA Region: NSW North Coast, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Wet Sclerophyll Forests (Grassy sub-formation)	Tier 3 or higher threat status	690_Very_Low01	No	0	IBRA Region: NSW North Coast, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Wet Sclerophyll Forests (Grassy sub-formation)	Tier 3 or higher threat status	690_Moderate_B	No	4	IBRA Region: NSW North Coast, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

BAM Biodiversity Credit Report (Variations)

1724-Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	**Like-for-like credit retirement options**					
	Class	Trading group	Zone	HBT	Credits	IBRA region
	Coastal Swamp Forests This includes PCT's: 839, 923, 1064, 1227, 1230, 1231, 1232, 1649, 1716, 1717, 1718, 1719, 1721, 1722, 1723, 1724, 1725, 1726, 1729, 1730, 1731, 1794, 1795, 1798	Coastal Swamp Forests <50%	1724_Very_ low	No	0	Macleay Hastings,Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.
	Variation options					
	Formation	Trading group	Zone	HBT	Credits	IBRA region
	Forested Wetlands	Tier 4 or higher threat status	1724_Very_ low	No	0	IBRA Region: NSW North Coast, or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

Species Credit Summary

Species	Vegetation Zone/s	Area / Count	Credits
Phascolarctos cinereus / Koala	**690_Moderate_B, 690_Very_Low01**	0.3	6.00

BAM Biodiversity Credit Report (Variations)

Credit Retirement Options

Like-for-like options

Phascolarctos cinereus/ Koala	Spp		IBRA region
	Phascolarctos cinereus/Koala		Any in NSW
	Variation options		
	Kingdom	Any species with same or higher category of listing under Part 4 of the BC Act shown below	IBRA region
	Fauna	Vulnerable	Macleay Hastings, Carrai Plateau, Coffs Coast and Escarpment, Comboyne Plateau, Karuah Manning, Macleay Gorges, Mummel Escarpment and Upper Manning. or Any IBRA subregion that is within 100 kilometers of the outer edge of the impacted site.

APPENDIX 4: VEGETATION PLOT DATA SHEETS

-This document has not been endorsed or approved by Office of Environment and Heritage or Muddy Boots Environmental Training-

BAM Site – Field Survey Form

Site Sheet no: 1 of 2

		Survey Name	Zone ID	Recorders			
Date	2 / 1 / 2021	South Lindfield	VZ1	JB			
Zone 56	Datum	**Plot ID**	1	**Plot dimensions**	40x10	**Photo #**	
Easting 487112	Northing 6519136	**IBRA region**	NC	**Midline bearing from 0 m**	80		
Vegetation Class							Confidence: H M L
Plant Community Type		690		**EEC:** tick			Confidence: **H** M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m^2 plot)		Sum values
Count of **Native Richness**	**Trees**	4
	Shrubs	2
	Grasses etc.	5
	Forbs	3
	Ferns	4
	Other	1
Sum of **Cover** of native vascular plants by growth form group	**Trees**	19.2
	Shrubs	4.2
	Grasses etc.	34.7
	Forbs	4
	Ferns	0.3
	Other	0.1
High Threat Weed cover		16.1

BAM Attribute (1000 m^2 plot)		
DBH	**# Tree Stems Count**	**# Stems with Hollows**
80 + cm	-	0
50 – 79 cm	-	0
30 – 49 cm	-	0
20 – 29 cm	17	0
10 – 19 cm	24	0
5 – 9 cm	19	0
< 5 cm	9	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	N/A	

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree**, only the largest living stem is included in the count/estimate. **Tree stems must be living.**

For **hollows**, count only the presence of a stem containing hollows. For a **multi-stemmed tree**, only the largest stem is included in the count/estimate. **Stems may be dead and may be shrubs.**

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	20	10	22	55	90	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	**39.4**																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			Completely underscrubbed, frequent truck/plant, compaction of soil.
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			No CWD remains.
Grazing (identify native/stock)			
Fire damage			Some fire marks including canopy scorch of single trees.
Storm damage			
Weediness			Minimal – some common garden weeds on edge
Other			High activity of heavy plant and trucks on site and adjacent. Debris piles, plastic, fill.

Severity: 0=no evidence, 1=light, 2=moderate, 3=severe

Age: R=recent (<3yrs), NR=not recent (3-10yrs), O=old (>10yrs)

-This document has not been endorsed or approved by Office of Environment and Heritage or Muddy Boots Environmental Training-

400 m^2 plot: Sheet _ of _	Survey Name	Plot Identifier	Recorders
Date 2_ _ / 1_ _ /21 _	SL	1	JB

GF Code	*Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable*	N, E or HTE	Cover	Abund	stratum	voucher
	Setaria sphaceolata	E	3	>1000		
T	Casuarina glauca	N	15	12		
T	Blackbutt (Eucalyptus pilularis)	N	4	4		
F	Centella asiatica	N	0.1	500		
GG	Lomandra longifolia	N	30	100		
S	*Acacia floribunda*	N	3	4		
S	*Leucopogon juniperinus*	N	1	11		
	Senecio madagascariensis	HTE	1	0.1		
	Polygala paniculata	E	1	11		
	Paspalum mandiocanum	E	0.1	36		
	Axonopus fissifolius	HTE	1	100		
	Ageratum houstonianum	E	1	250		
GG	Typha orientalis	N	0.1	20		
F	Persicaria spp.	N	0.2	200		
	Verbena bonariensis	E	0.1	6		
OG	Parsonsia straminea	N	0.1	4		
	Taraxacum officinale	E	0.1	1		
GG	Entolasia marginata	N	0.1	50		
F	Pratia purpresecens	N	0.1	52		
	Carrot Weed Daucus carota	E	0.1	40		
	Common Sow-thistle *Sonchus oleraceus*	E	0.1	1		
T	Guoia semiglauca	N	0.1	1		
	Conyza spp.	E	0.1	20		
GG	Carex sp.	N	0.1	1		
	Panicum repens	HTE	15	500		
GG	*Microlaena stipoides*	N	4	100		
	Oxalis sp	E	0.1	50		
T	Corymbia intermedia	N	0.1	3		
S	Callistemon saligna	N	0.2	12		
GG	Cynodon dactylon	N	0.3	100		
GG	Elaeocharis acuta	N	0.1	150		
	Sida rhombifolia	E	0.1	1		
	Cirsium vulgare	E	0.1	1		

GF Code: see Growth Form definitions in Appendix 1 **N:** native, **E:** exotic, **HTE:** high threat exotic **GF – circle code** if 'top 3'.

Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); ***Note:*** *0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m*

Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …

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BAM Site – Field Survey Form

Site Sheet no: 1 of 2

		Survey Name	Zone ID	Recorders			
Date	2 / 1 / 2021	South Lindfield	VZ 2	JB			
Zone 56	Datum	**Plot ID**	2	**Plot dimensions**	50x20	**Photo #**	
Easting 487058	Northing 6519122	**IBRA region**	NC	**Midline bearing from 0 m**	125		
Vegetation Class							Confidence: H M L
Plant Community Type		690		**EEC:** No			Confidence: **H** M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m^2 plot)		Sum values
Count of **Native Richness**	**Trees**	4
	Shrubs	2
	Grasses etc.	8
	Forbs	7
	Ferns	0
	Other	1
Sum of **Cover** of native vascular plants by growth form group	**Trees**	0.4
	Shrubs	0.3
	Grasses etc.	2.2
	Forbs	1.6
	Ferns	0
	Other	0.1
High Threat Weed cover		20.3

BAM Attribute (1000 m^2 plot)		
DBH	**# Tree Stems Count**	**# Stems with Hollows**
80 + cm	-	0
50 – 79 cm	-	0
30 – 49 cm	-	0
20 – 29 cm	-	0
10 – 19 cm	-	0
5 – 9 cm	-	0
< 5 cm	Yes	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	N/A	

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree**, only the largest living stem is included in the count/estimate. **Tree stems must be living.**

For **hollows**, count only the presence of a stem containing hollows. For a **multi-stemmed tree**, only the largest stem is included in the count/estimate. **Stems may be dead and may be shrubs.**

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	10	15	15	15	10	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	**13**																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

-This document has not been endorsed or approved by Office of Environment and Heritage or Muddy Boots Environmental Training-

400 m^2 plot: Sheet _ of _	Survey Name	Plot Identifier	Recorders
Date 2_ _/ 1_ _ /2020_		2	JB

GF Code	*Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable*	N, E or HTE	Cover	Abund	stratum	voucher
	Setaria sphaceolata	E	50	>2000		
GG	Lomandra longifolia	N	0.3	29		
OG	Australian Bindweed (*Convulvus erubescens embescens*)	N	0.1	1		
	Axonopus fissifolius	HTE	20	1000		
F	Centella asiatica	N	0.1	100		
	Hypochaeris radicata	E	0.3	200		
	Polygala paniculata	E	0.1	150		
GG	Lomandra multiflora	N	0.1	4		
T	Eucalyptus tereticornis	N	0.1	7		
T	C. intermedia	N	0.1	3		
	Verbena bonariensis	E	0.1	1		
F	Chocolate Lily (Dichopogon strictus)	N	0.1	6		
GG	Eragostis brownii	N	0.2	30		
	Cyperus rotundus	E	0.1	100		
F	Golden Weather Grass Hypoxis hygrometrica	N	0.1	10		
	Gnaphalium sp.	E	0.1	50		
GG	Ehinopogen spp.	N	0.1	10		
F	Gonocarpus salsoloides	N	0.1	2		
F	Gonocarpus sp.	N	0.1	100		
	Pasplalum dilatatum	HTE	0.1	5		
	Plantago lanceolata	E	0.1	50		
GG	Paspalum orbiculare	N	0.1	5		
GG	Juncus sp.	N	0.1	150		
GG	Bog Rush Schoenus apogon	N	0.3	150		
SG	Melaleuca linarifolia	N	0.2	4		
	Senecio madagascariensis	HTE	0.2	50		
	Dianella caerulea	N	0.1	5		
	Gonocarpus sp. 2	N	1	1000		
T	Casuarina glauca	N	0.1	3		
T	M. quinquenervia	N	0.1	3		
S	Callistemon saligna	N	0.1	10		
GG	Cynodon dactylon	N	1	200		
	Ageratum conyzoides	E	0.1	1		

-This document has not been endorsed or approved by Office of Environment and Heritage or Muddy Boots Environmental Training-

GF Code: see Growth Form definitions in Appendix 1 **N:** native, **E:** exotic, **HTE:** high threat exotic **GF – circle code** if 'top 3'.

Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); ***Note:*** *0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m*

Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …

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BAM Site – Field Survey Form

Site Sheet no: 1 of 2

		Survey Name	Zone ID	Recorders			
Date	2 / 1 / 2021	South Lindfield	VZ 3	JB			
Zone 56	Datum GDA94	**Plot ID**	3	**Plot dimensions**	50x20	**Photo #**	
487023	6519151	**IBRA region**	NC	**Midline bearing from 0 m**		303	
Vegetation Class							Confidence: H M L
Plant Community Type		690		**EEC:** No			Confidence: **H** M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m^2 plot)		Sum values
Count of **Native Richness**	**Trees**	5
	Shrubs	8
	Grasses etc.	11
	Forbs	8
	Ferns	1
	Other	6
Sum of **Cover** of native vascular plants by growth form group	**Trees**	35.7
	Shrubs	1
	Grasses etc.	9.8
	Forbs	0.7
	Ferns	0.1
	Other	0.5
High Threat Weed cover		0.7

BAM Attribute (1000 m^2 plot)		
DBH	**# Tree Stems Count**	**# Stems with Hollows**
80 + cm	-	-
50 – 79 cm	2	0
30 – 49 cm	5	0
20 – 29 cm	4	0
10 – 19 cm	3	0
5 – 9 cm	-	-
< 5 cm	Yes	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	N/A	

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree**, only the largest living stem is included in the count/estimate. **Tree stems must be living.**

For **hollows**, count only the presence of a stem containing hollows. For a **multi-stemmed tree**, only the largest stem is included in the count/estimate. **Stems may be dead and may be shrubs.**

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	25	10	15	10	55	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	23																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

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400 m^2 plot: Sheet _ of _	Survey Name	Plot Identifier	Recorders
Date 2_ _ / 1 _ / 2021_		3	JB

GF Code	*Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable*	N, E or HTE	Cover	Abund	stratum	voucher
T	E. microcorys	N	12.5	4		
T	C. intermedia	N	15	3		
T	E. tereticornis	N	8	1		
GG	Lomandra longifolia	N	5	120		
GG	Themeda triandra	N	0.1	20		
	Lantana	HTE	0.1	5		
GG	Cymbopogon refractus	N	1	100		
	Polygala paniculata	E	0.1	100		
	Ochna serrulata	HTE	0.5	20		
S	Breynia oblongifolia	N	0.3	20		
S	Myrsine variable	N	0.1	7		
GG	D. caerulea	N	0.1	12		
S	*Leucopogon juniperinus*	N	0.1	6		
OG	Geitonoplesium cymosum	N	0.1	11		
GG	Entolasia marginata	N	1	500		
GG	Oplismenus aemulus	N	0.2	500		
	Plantago lanceloata	N	0.2	200		
	Oxalis sp.	E	0.2	300		
T	Glochidion ferdinandi	N	0.1	8		
GG	Ehinopogon ferdinandi	N	0.5	200		
FG	Pratia purparescens	N	0.1	40		
	Verbena bonariensis	E	0.1	10		
	P. mandiocanum	E	0.1	40		
S	A. floribunda	N	0.1	6		
	Senecio madagascariensis	HTE	0.1	10		
GG	L. multiflora	N	0.5	30		
FB	Hybanthus spp.	N	0.1	50		
FB	C. asiatica	N	0.1	100		
GG	*Microlaena stipoides*	N	0.5	200		
	Ageratum houstonianum	E	0.1	10		
	Sporobulus africanus	E	0.1	5		
	Carrot Weed Daucus carota	E	0.1	50		
FN	Cheilanthes sieberi	N	0.1	50		
	Taraxacum officinale	E	0.1	10		
	P. straminea	N	0.1	1		
GG	Paspalum orbiculare	N	0.1	10		
S	Babingtonia plurifolia	N	0.1	1		
OG	Australian Bindweed (*Convulvus erubescens embescens*)	N	0.1	12		
FB	Golden Weather Grass Hypoxis hygrometrica	N	0.1	3		
OG	Eustrephus latifolius	N	0.1	1		
S	M. linariifolia	N	0.1	1		
S	M. styphelioidies	N	0.1	1		
FB	Wahlenbergia sp.	N	0.1	1		
GG	Gahnia aspera	N	0.5	17		

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OG	Cassytha pubescens	N	0.1	1		
OG	Stephania japonica	N	0.1	2		
FB	Gonocarpus sp.	N	0.1	100		
SG	Synoum glandulosum	N	0.1	100		
T	Acronychia oblongifolia	N	0.1	2		
GG	Imperata cylindrica	N	0.5	100		

GF Code: see Growth Form definitions in Appendix 1 **N:** native, **E:** exotic, **HTE:** high threat exotic **GF – circle code** if 'top 3'.

Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); ***Note:*** *0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m*

Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …

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BAM Site – Field Survey Form

Site Sheet no: 1 of 2

		Survey Name	Zone ID	Recorders			
Date	3 / 1 / 2021	South Lindfield	VZ 2	JB			
Zone 56	Datum GDA94	**Plot ID**	4	**Plot dimensions**	50x20	**Photo #**	
487131	6519147	**IBRA region**	NC	**Midline bearing from 0 m**	103		
Vegetation Class							Confidence: H M L
Plant Community Type		690		**EEC:** No			Confidence: **H** M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m² plot)		Sum values
Count of **Native Richness**	**Trees**	2
	Shrubs	2
	Grasses etc.	5
	Forbs	6
	Ferns	-
	Other	1
Sum of **Cover** of native vascular plants by growth form group	**Trees**	0.2
	Shrubs	0.2
	Grasses etc.	0.9
	Forbs	0.8
	Ferns	0
	Other	0.1
High Threat Weed cover		4.2

BAM Attribute (1000 m² plot)		
DBH	# Tree Stems Count	# Stems with Hollows
80 + cm	-	-
50 – 79 cm	-	0
30 – 49 cm	-	0
20 – 29 cm	-	0
10 – 19 cm	-	0
5 – 9 cm	-	-
< 5 cm	Yes	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	N/A	

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree**, only the largest living stem is included in the count/estimate. **Tree stems must be living.**

For **hollows**, count only the presence of a stem containing hollows. For a **multi-stemmed tree**, only the largest stem is included in the count/estimate. **Stems may be dead and may be shrubs.**

BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	5	8	10	5	5	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	6.6																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
Clearing (inc. logging)			
Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

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400 m^2 plot: Sheet _ of _	Survey Name	Plot Identifier	Recorders
Date 3 _ / 1 _ _ / 21 _ _		4	JB

GF Code	*Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable*	N, E or HTE	Cover	Abund	stratum	voucher
	Setaria sphaceolata	E	75	>5000		
	Gamochaeta calviceps	E	0.1	100		
OG	*Convulvus erubescens embescens*	N	0.1	50		
FB	Centella asiatica	N	0.3	>2000		
GG	Cynodon dactylon	N	0.5	100		
	Senecio madagascariensis	HTE	0.1	20		
	Hypochaeris radicata	E	1	2000		
	Polygala paniculata	E	0.2	200		
	Axonopus affinis	HTE	4	2000		
GG	Eragrostis brownii	N	0.5	200		
GG	Isolepsis sp.	N	0.1	100		
FB	Hybanthus sp.	N	0.1	10		
	Conyza sp.	E	0.1	20		
	Verbena bonariensis	E	0.1	30		
	Plantago lanceolata	E	0.5	1000		
FB	Gonocarpus sp. 1	N	0.1	10		
FB	Ladies Tresses Orchid, Spiranthes australis	N	0.1	1		
S	Callistemon saligna	N	0.1	2		
GG	Lomandra longifolia	N	0.1	2		
FB	Gonocarpus sp. 2	N	0.1	8		
FB	Hypericum gramineum	N	0.1	6		
T	Corymbia intermedia	N	0.1	1		
GG	Carex sp.	N	0.1	2		
GG	Lomandra multiflora	N	0.1	2		
T	Eucalyptus pilularis	N	0.1	1		
	Australian Centaury, *Centaurium erythraea*	E	0.1	20		
	Paspalum mandiocanum	E	0.1	4		
SG	*Leucopogon juniperinus*	N	0.1	1		
	Paspalum dilatatum	HTE	0.1	20		

GF Code: see Growth Form definitions in Appendix 1 **N:** native, **E:** exotic, **HTE:** high threat exotic **GF – circle code** if 'top 3'.

Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); ***Note:*** *0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m*

Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …

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BAM Site – Field Survey Form

Site Sheet no: 1 of 2

		Survey Name	Zone ID	Recorders			
Date	3 / 1 / 2021	South Lindfield	VZ 4	JB			
Zone 56	Datum GDA94	**Plot ID**	5	**Plot dimensions**	50x20	**Photo #**	
486955	6519075	**IBRA region**	NC	**Midline bearing from 0 m**	303		
Vegetation Class							Confidence: H M L
Plant Community Type		1724		**EEC:** No			Confidence: **H** M L

Record easting and northing at 0 m on midline. Dimensions (Shape) of 0.04 ha base plot.

BAM Attribute (400 m^2 plot)		Sum values
Count of **Native Richness**	**Trees**	3
	Shrubs	1
	Grasses etc.	3
	Forbs	5
	Ferns	0
	Other	0
Sum of **Cover** of native vascular plants by growth form group	**Trees**	0.3
	Shrubs	0.1
	Grasses etc.	5.2
	Forbs	0.13
	Ferns	0
	Other	0
High Threat Weed cover		3.1

BAM Attribute (1000 m^2 plot)		
DBH	**# Tree Stems Count**	**# Stems with Hollows**
80 + cm	-	-
50 – 79 cm	-	0
30 – 49 cm	-	0
20 – 29 cm	-	0
10 – 19 cm	-	0
5 – 9 cm	-	-
< 5 cm	Yes	n/a
Length of logs (m) (≥10 cm diameter, >50 cm in length)	N/A	

Counts apply when the **number of tree stems** within a size class is ≤ 10. Estimates can be used when > 10 (eg. 10, 20, 30…, 100, 200, 300…). For a **multi-stemmed tree**, only the largest living stem is included in the count/estimate. **Tree stems must be living.**

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BAM Attribute (1 x 1 m plots)	Litter cover (%)					Bare ground cover (%)					Cryptogam cover (%)					Rock cover (%)				
Subplot score (% in each)	5	5	5	5	10	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e
Average of the 5 subplots	6																			

Litter cover is assessed as the average percentage ground cover of litter recorded from five 1 m x 1 m plots centred at 5, 15, 25, 35, 45 m along the plot midline. Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10 cm in diameter). Assessors may also record the cover of rock, bare ground and cryptogams.

Physiography + site features that may help in determining PCT and Management Zone (optional)

Morphological Type		Landform Element		Landform Pattern		Microrelief	
Lithology		Soil Surface Texture		Soil Colour		Soil Depth	
Slope		Aspect		Site Drainage		Distance to nearest water and type	

Plot Disturbance	Severity code	Age code	Observational evidence:
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Cultivation (inc. pasture)			
Soil erosion			
Firewood / CWD removal			
Grazing (identify native/stock)			
Fire damage			
Storm damage			
Weediness			
Other			

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400 m^2 plot: Sheet _ of _	Survey Name	Plot Identifier	Recorders
Date 3_1_/21__		5	JB

GF Code	*Top 3 native species in each growth form group: Full species name mandatory All other native and exotic species: Full species name where practicable*	N, E or HTE	Cover	Abund	stratum	voucher
	Setaria sphaceolata	E	85	>10000		
FB	Centella asiatica	N	0.5	>1000		
	Axonopus affinis	HTE	3	>2000		
	Polygala paniculata	E	0.1	200		
	Senecio madagascariensis	HTE	0.1	20		
	Carrot Weed Daucus carota	E	0.1	100		
T	Eucalyptus tereticornis	N	0.1	5		
S	Callistemon saligna	N	0.1	1		
T	Melaleuca quinquenervia	N	0.1	11		
FB	Dampiera stricta	N	0.1	15		
	Hypochaeris radicata	E	0.1	50		
FB	Gonocarpus sp. 1	N	0.5	50		
T	Casuarina glauca	N	0.1	1		
	Ageratum houstonianum	E	0.5	200		
	Senecio sp.	N	0.1	6		
	Paspalum urvillei	E	0.1	4		
FB	Hypericum gramineum	N	0.1	3		
GG	Fimbrostylis sp..	N	0.1	20		
GG	Chorizandra cymbaria	N	0.1	10		
FB	Gonocarpus sp.	N	0.1	10		
GG	Cynodon dactylon	N	5	1000		
	Ambrosia artemisiifolia	E	0.1	1		

GF Code: see Growth Form definitions in Appendix 1 **N:** native, **E:** exotic, **HTE:** high threat exotic **GF – circle code** if 'top 3'.

Cover: 0.1, 0.2, 0.3, …, 1, 2, 3, ..., 10, 15, 20, 25, ...100% (foliage cover); ***Note:*** *0.1% cover represents an area of approximately 63 x 63 cm or a circle about 71 cm across, 0.5% cover represents an area of approximately 1.4 x 1.4 m, and 1% = 2.0 x 2.0 m, 5% = 4 x 5 m, 25% = 10 x 10 m*

Abundance: 1, 2, 3, …, 10, 20, 30, … 100, 200, …, 1000, …

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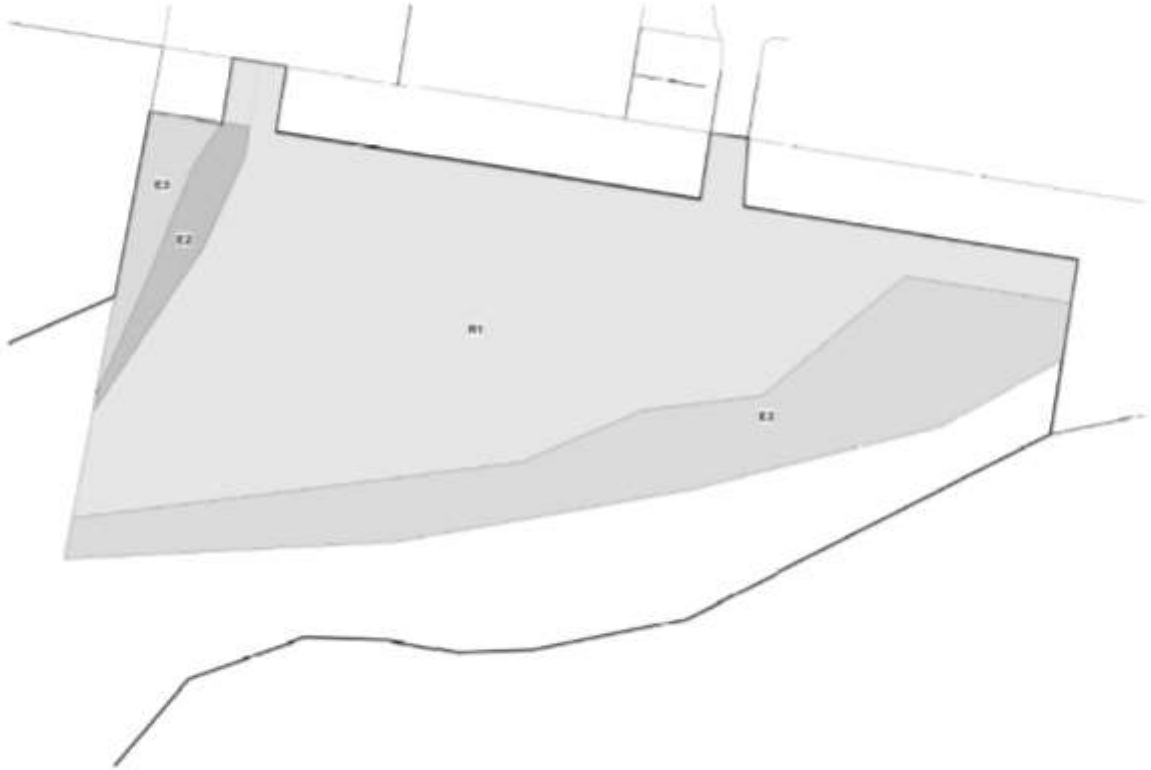
1 SITE REZONING OVER SURVEY
1 : 1500



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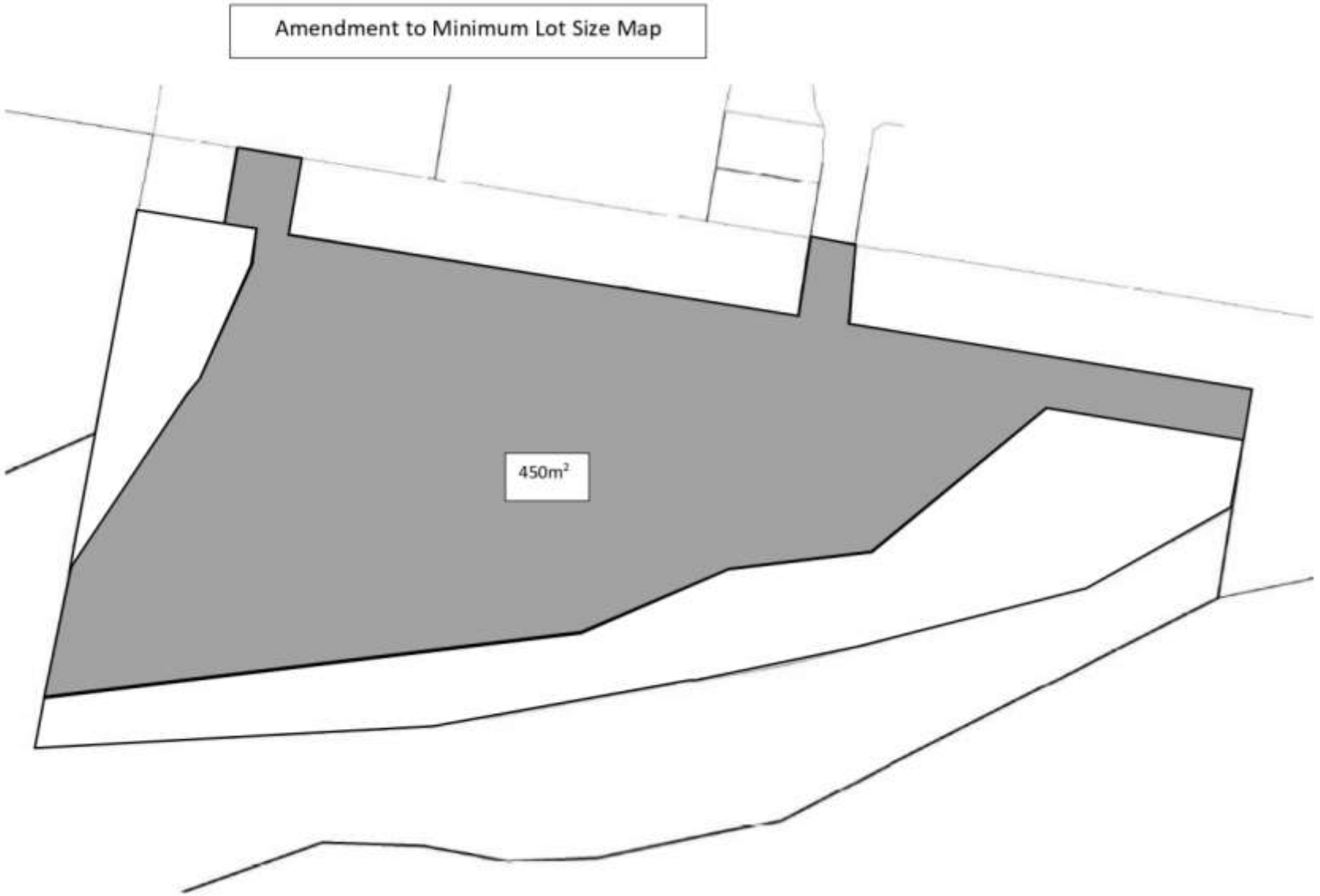
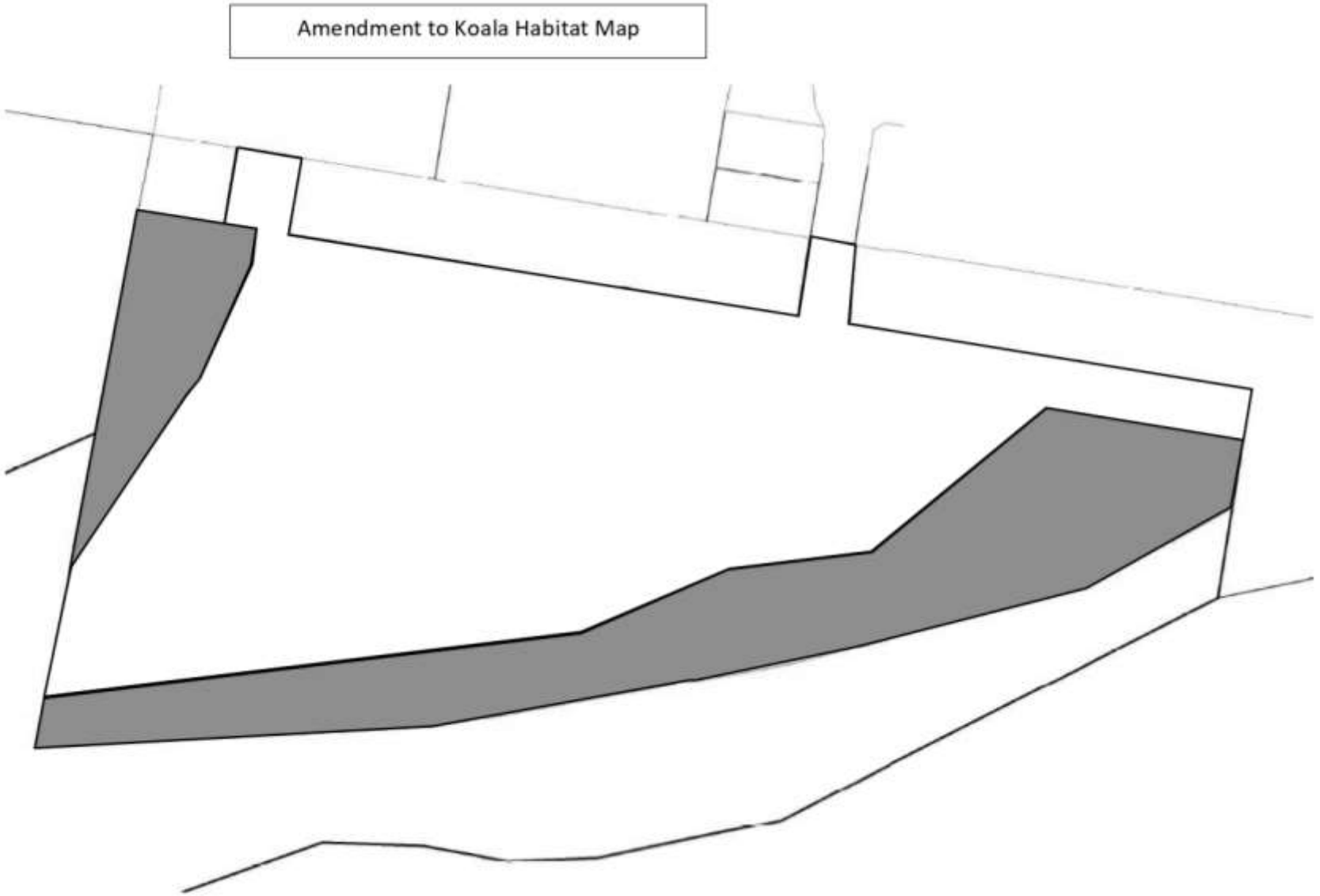
PRE DA

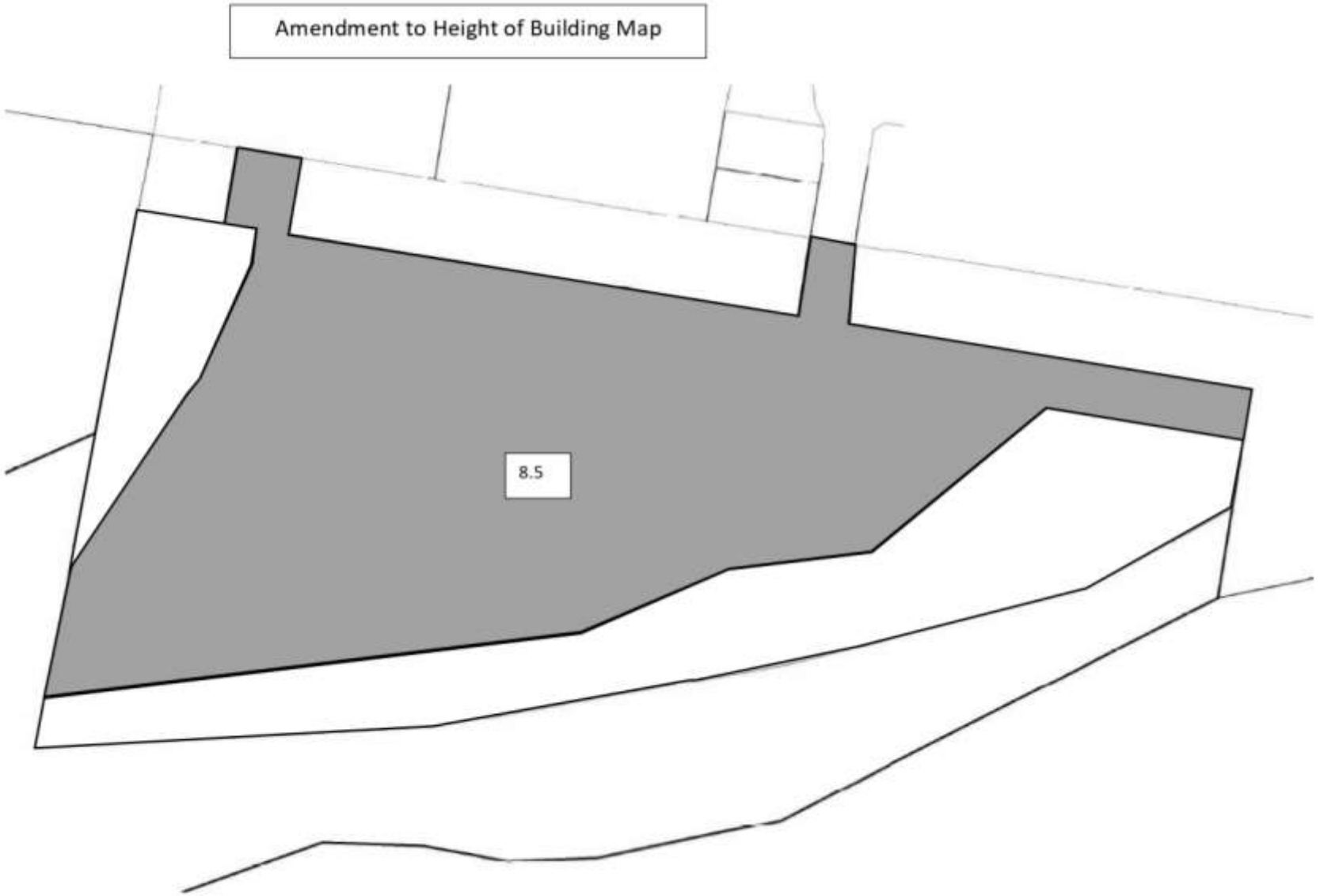
CONCEPT VERIFICATION

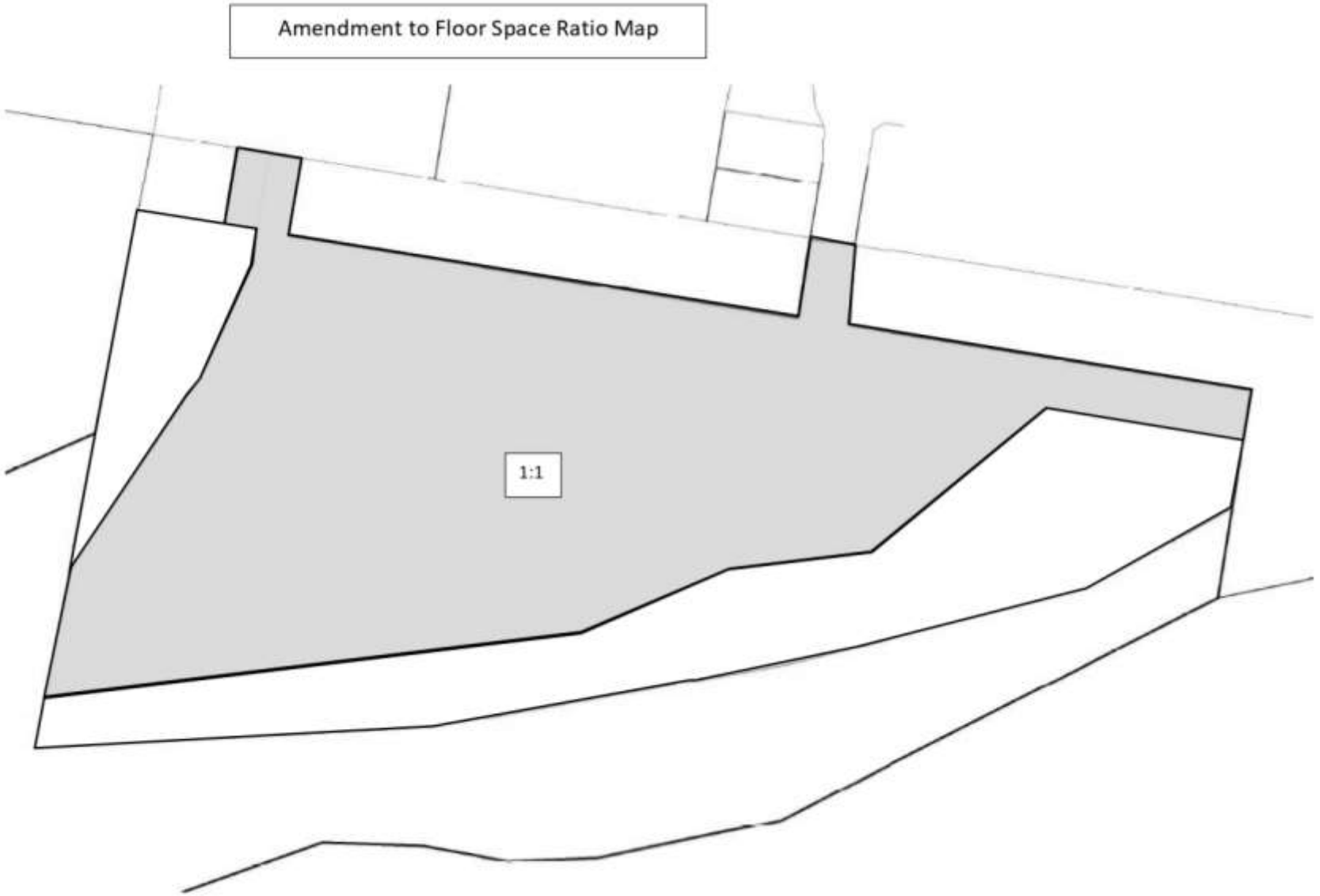
SITE ZONING

Project number	2010	A06A
Date	25/01/2021 8:32:01 AM	
Drawn by	DK	
Checked by	RC	Scale 1 : 1500


Amendment to Minimum Lot Size Map
450m²


Amendment to Koala Habitat Map


Amendment to Height of Building Map
8.5


Amendment to Floor Space Ratio Map
1:1

Planning, Industry & Environment

Our Ref: DOC21/65777
Your Ref: E-mail dated 03/02/2021

Chief Executive Officer
Port Macquarie Hastings Council
PO Box 84
Port Macquarie NSW 2444

Attention: Ms Leanne Fuller, Land Use Planning

Dear Dr Allen

RE: Revised planning proposal for the Charley/Vilro land at Lake Innes (South Lindfield)

Thank you for your e-mail dated 3 February 2021 about the revised planning proposal for the Charley/Vilro land at Lake Innes seeking comments from the Biodiversity and Conservation Division (BCD) of the Biodiversity, Conservation and Science Directorate in the Environment, Energy and Science Group of the Department of Planning, Industry and Environment. I appreciate the opportunity to provide input.

We have reviewed the documents supplied and advise that we have identified several biodiversity issues for the proposed planning proposal. These issues are discussed in detail in **Attachment 1** to this letter.

In general, the BCD considers some residential development could be supported in the planning area, but there are some significant environmental issues that require careful management to avoid and minimise impacts on biodiversity values.

We support an E2 Environmental Conservation zone being applied to land in the south and west for areas that contain critically endangered native guava plants as well as primary koala habitat. However, we consider these areas to be at risk of fragmentation and significant edge effects given their narrow, linear shape.

The E2 areas need to be connected where possible to other habitat areas and be of a viable size and shape. Also, consideration must be given to how the E2 lands will be protected and managed over time.

Our submission also discusses the importance of strengthening and protecting corridor linkages, particularly for the koala. We consider this planning proposal offers an opportunity to rezone some adjoining land that is mapped coastal wetland from RU1 Primary Production to E2 in accordance with the North Coast Regional Plan 2036, as the area is of high environmental value. There is also an opportunity to rezone the currently cleared area in the south of the planning area to create a vegetated buffer to the coastal wetland. This would then be a suitable location in which to establish supplementary koala habitat to offset the loss of some primary koala habitat.

Level 8, 24 Moonee Street, (Locked Bag 914), Coffs Harbour, NSW 2450 | Ph (02) 6659 8200 | dpie.nsw.gov.au |

We also discuss the consultant's argument regarding the NSW Scientific Committee's Determinations regarding threatened ecological communities (TECs). We conclude supplementary descriptors are important additional information but are not key to defining a TEC according to the definition in the *Biodiversity Conservation Act 2016*.

In summary, the BCD recommends:

1. For the planning proposal:
    a. The R1 General Residential zone should only be applied to suitable land within the planning area mapped for urban investigation.
    b. The area to be zoned E3 should instead be zoned E2 given it is habitat for the critically endangered native guava (*Rhodomyrtus psidioides*) pending the council's advice on the maintenance requirements for the sewer easement.
    c. The E2 zone should be extended along the length of the western side of the planning area to provide a secure and viable north-south corridor linkage.
    d. The proposed E2 zone area in the south should be extended to the coastal wetland / Lake Innes Nature Reserve (LINR) boundary and be revegetated, including with plantings of koala feed trees, to form a vegetated buffer to the wetland and LINR.
    e. The planning area should be expanded to include the privately owned mapped coastal wetland south of the existing planning area so that this is also zoned E2.
    f. Suitable land use zones and minimum lot sizes should be applied to minimise and mitigate the impacts on the LINR that could arise from the future residential subdivision of the planning area.
    g. A planning agreement should be executed between the council and the landholder that commits the landholder to:
        i. protecting and managing the E2 zoned land through the preparation and implementation of a Vegetation Management Plan (VMP).
        ii. Preparing and implementing a sub-plan to the VMP containing specific measures for the protection and management for threatened entities such as the native guava, including consideration of whether the area should be fenced to restrict access from the reserve areas into the residential area to reduce injury and mortality risks for koalas.
2. For subsequent development applications arising from the planning proposal:
    a. The subdivision layout should be redesigned to exclude the road network indicated in the proposed subdivision layout which extends east and south west and retain the access track to Ascot Park for emergency access purposes only.
    b. The sewer easement and any stormwater management infrastructure should be excluded from the land to be zoned E2.
    c. The draft Koala Plan of Management (KPoM) should be updated to include a map describing the local koala habitat linkages as described in the KPoM text.
    d. The proposed revegetation to create koala habitat should reference local government resources for koala conservation on the Department's website including the koala habitat revegetation guidelines, noting that the currently cleared area that adjoins the

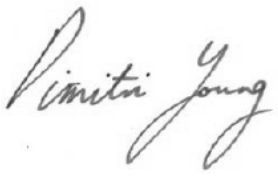
coastal wetland and is within the coastal wetland proximity area would be a suitable site for revegetation if it was rezoned to E2.

e. The BDAR should be updated to include more advice on how the surveys for squirrel glider were undertaken and provide sufficient advice for the decision maker on Serious and Irreversible Impacts (SAIIs) in accordance with Section 9.1 and 9.1.2 of the BAM 2020, particularly actions and measures taken to avoid indirect impacts on the species at risk of an SAII.

f. In determining a koala habitat polygon, the BDAR should be revised to consider BAM support guidance on koala surveys if available. If not available, the BDAR should consider connectivity between Plant Community Types with confirmed koala presence in the overall extent of the species polygon, with justification for decisions provided in the BDAR.

If you have any questions about this advice, please do not hesitate to contact Ms Rachel Lonie, Senior Conservation Planning Officer, at rachel.lonie@environment.nsw.gov.au or 6650 7130.

Yours sincerely



24 February 2021

DIMITRI YOUNG
Senior Team Leader Planning, North East Branch
Biodiversity and Conservation

Enclosure: Attachment 1. BCD Detailed Comments - Revised planning proposal for the Charley/Vilro land at Lake Innes

cc: Mr Dan Croft, Land Use Planning

Attachment 1: Detailed BCD Comments – Revised planning proposal for the Charley/Vilro land at Lake Innes

The Biodiversity and Conservation Division (BCD) in the Department of Planning, Industry and Environment provided previous advice in our letter dated 11 September 2020 on a planning proposal for a broader planning area at South Lindfield (known as the Charley Brothers land). In that letter we concluded that the smaller extent of high environmental value (HEV) land in the South Lindfield area suggested that some residential zoning could be applied there. However, we also stated that further studies would be required to accurately identify all the HEV land in that part of the planning area so that impacts on such land can be avoided to the greatest extent possible by applying appropriate land use zones and minimum lot sizes, including the E2 Environmental Conservation zone.

1. Extent of Urban Investigation Area

The current planning proposal now only applies to a study area of 4.36 ha. It proposes to rezone approximately 2.86 ha of land to R1 General Residential, 1.38 ha to E2 Environmental Conservation and 0.12 ha to E3 Environmental Management under the Port Macquarie-Hastings Local Environmental Plan (LEP) 2011 and to amend the minimum lot size map to 450 m^2 for the R1 zoning. Most of the land identified in the planning area is mapped as *Investigation Area – Urban Land* in the North Coast Regional Plan 2036, as shown in Figure 1 below.



Figure 1. Mapped Investigation Area – Urban Land in the North Coast Regional Plan 2036

While we support the planning area being expanded to include the land to the south of the mapped urban land investigation area, we do not support land that was not mapped for urban investigation land being rezoned to R1 without adequate justification.

2. Proposed subdivision and road network

The proposed subdivision layout provided with the planning proposal shows a road network extending toward the east, as shown in Figure 2 below.

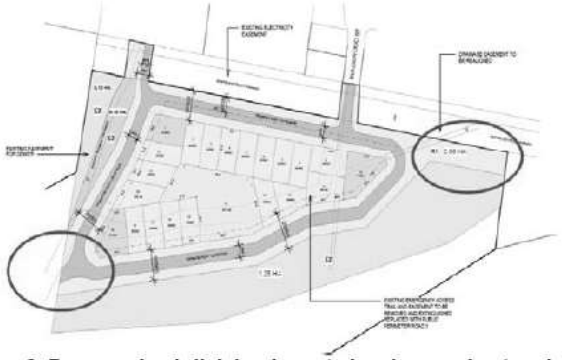


Figure 2. Proposed subdivision layout showing road network to the east and south west (circled in red)

We do not consider these roads should be enabled as a result of the planning proposal as there is no broader strategic plan for adjoining residential development and as we have previously commented there are significant environmental constraints in the adjoining lands that should preclude further residential development.

The proposed layout also indicates a more substantial road network to the west is proposed. There is currently only an access track in this location. The planning proposal report indicates that there is a requirement for emergency bushfire access for Ascot Park to the west. We would not support a rezoning that enabled any further extension of residential development in the southern Charley Brothers' land, as no further areas have been identified as urban growth areas and there has been no strategic plan to support this. Also, as discussed below this could sever a north-south habitat link.

3. Primary koala habitat

The planning proposal identifies vegetation within the area to be zoned R1 as primary koala habitat. Residential development in this area will directly impact on koalas through the loss of such habitat and will likely introduce threats to koalas including dogs and vehicular traffic, and possibly make them more stressed and susceptible to disease such as chlamydia.

We have not reviewed the draft Koala Plan of Management (KPoM) in detail as this would be required at a future development application stage and is not required as part of a planning proposal. We note however the KPoM discusses the importance of habitat linkages and provides a map that shows the extent of koala habitat areas that were burnt in the catastrophic 2019/2020 fires. The only map to describe koala habitat linkages is a regional corridors map prepared in 2002 by Scotts. The KPoM should be updated to include a map that describes the local linkages that are described in the KPoM text.

4. Local habitat linkages

A previous draft KPOM (May 2017) identified an east-west habitat link south of the planning area, as shown in Figure 3 below.

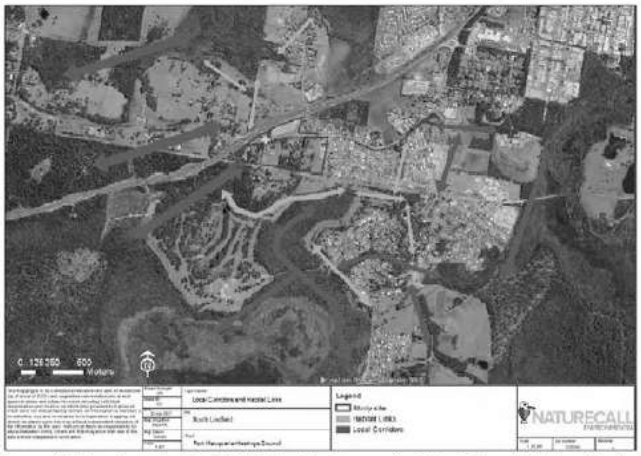


Figure 3. Earlier draft KPOM by Naturecall dated May 2017 with habitat links and corridor mapping

As the planning proposal report states, the vegetation retained on the western side creates a habitat linkage to the retained habitat area location on the adjoining northern residential area recently approved by the Port Macquarie Hastings Council. The planning proposal report states that no road will bisect habitat. However, a constructed road network to Ascot Park south of the planning area would bisect this habitat linkage.

The BCD has long maintained the importance of a north south corridor linkage along the western boundary of the Vilro land. Our letter dated 21 September 2016 discussed the status of the cemetery land and the recommendation for a configuration that included a habitat link for native wildlife. This

would connect habitat from the Lake Innes Nature Reserve to koala habitat in the north, such as within the E2 land in South Lindfield that will become a council reserve. Such linkages are not only important in enabling koalas to access feed trees but also to allow for fauna movements if for example there are bushfires.

We note the council has recently sold the cemetery land and this will become a private crematorium. There is no certainty for how native vegetation will be managed in the future in this adjoining land. A viable north south linkage is needed and should not be bisected by a fully formed road.

5. Threatened species and BDAR requirements

We previously recommended targeted surveys be undertaken on land that has not been identified as High Environmental Value (HEV) land for other reasons, but that could provide habitat for species-credit species such as *Petaurus norfolcensis* (squirrel glider) and *Litoria aurea* (green and golden bell frog). We also recommended a further and systematic targeted threatened plant survey for native guava (*Rhodomyrtus psioides*).

The BDAR outlines the fauna and flora surveys and these appear to have been done in accordance with the Biodiversity Assessment Method (BAM) and relevant survey guidelines. However, we have not reviewed the BDAR in detail and note that we could provide such advice at development assessment stage if requested.

We note the surveys for the squirrel glider involved the use of five cameras over four weeks, with a total effort of 140 trap nights, but it is not clear if there was regular spraying of the tree trunks and fresh baits provided which are needed to attract the animals and would demonstrate sufficient survey effort rather than the recommended Elliot traps. While we accept that the surveys that have been undertaken are adequate to determine the likely presence of HEV in the planning area, the BDAR should be updated at the development application stage to clarify how the surveys for squirrel glider were undertaken.

Figure 15 in the BDAR maps a koala habitat polygon. The BCD has been advised that a BAM Koala Survey guide is being prepared. It is expected this will be available soon, and, if so, it should be referenced in the BDAR. Until this time, the BCD advises that connectivity between PCTs with confirmed koala presence must be considered in the overall extent of the species polygon, with justification for decisions provided in the BDAR. The koala species polygon in the BDAR should be updated at the development application stage.

We do not consider the BDAR assessment of Serious and Irreversible Impacts (SAIIs) provides sufficient advice for the decision maker in accordance with Section 9.1 and 9.1.2 of the BAM 2020, particularly actions and measures taken to avoid indirect impacts on the species at risk of an SAII. The SAII assessment in the BDAR should be updated at the development application stage.

6. Extending E2 zonings

We support the proposed rezoning of land to E2 in the southern and western parts of the planning area. However, both areas are narrow and have a large perimeter to surface area ratio with greater threat exposure and which could become isolated.

As stated previously, the BCD's preference would be that all land currently zoned RU1 Primary Production across the broader area is assessed to identify and confirm HEV land. Such areas would then be zoned E2, given RU1 is no longer an appropriate zone in this location. While we accept that this is not occurring for this planning proposal, the E2 zone area proposed in the south should be extended to the coastal wetland / Lake Innes Nature Reserve (LINR) boundary as shown in Figure 4 below.

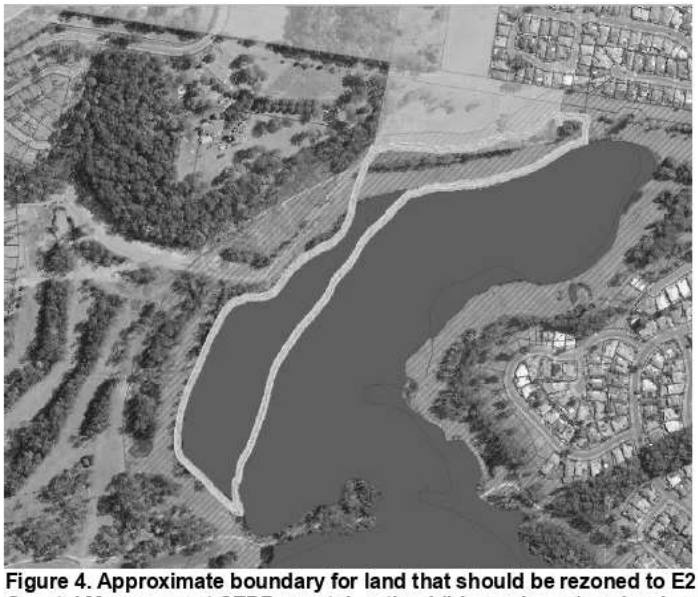


Figure 4. Approximate boundary for land that should be rezoned to E2 (outlined in yellow) which includes both the Coastal Management SEPP coastal wetland (blue polygon) and a cleared area to the Lake Innes NR that is within the wetland proximity area (blue hatched area).

Although this area is currently slashed it could be rehabilitated to form a vegetation buffer to the wetland and LINR and would be a suitable area to establish the koala feed trees that are proposed to offset the loss of primary koala habitat.

Studies have shown that koalas need to vary their habitat and feeding requirements seasonally (Ellis et al 1995). The future development to be enabled by the planning proposal would effectively reduce the diversity of koala habitat (and concomitantly feed trees) available in the area, by reducing the available Wet Sclerophyll Forests (Grassy Sub-formation) leaving predominantly Coastal Swamp Forest. While individual Tallowwood, Forest Red Gum and Swamp Mahogany primary koala feed trees, together with other secondary feed trees, are present in the Coastal Swamp Forest community, habitat diversity and availability of koala browse trees across a broader area will be reduced by this future development.

Furthermore, the future development to be enabled by the planning proposal is likely to remove areas of koala habitat situated in areas outside drainage lines, leaving only lower lying areas. Cold air drainage is a significant issue for koalas, particularly in winter when energy requirements are higher (see Ellis et al 1995) and indeed, was used as a predictor in the NSW Government Koala Habitat Suitability Model. Hence, maintaining and promoting habitat in areas outside low-lying Coastal Wetlands is an important element of protecting the variety of koala habitat present. Replanting the proposed E2 buffer with a variety of koala feed tree species would therefore assist with ensuring diversity of koala habitat for seasonal habitat partitioning.

The Department has produced koala habitat revegetation guidelines available at https://www.environment.nsw.gov.au/research-and-publications/publications-search/koala-habitat-revegetation-guidelines. These provide evidence-based recommendations including tree planting (8-10 metres apart) and optimal sizes and locations for koala feed tree planting. Any revegetation to create koala habitat should reference these guidelines and other supporting information on the local government resources for koala conservation on the Department's website.

This planning proposal offers an opportunity to appropriately zone the coastal wetland as it has high environmental conservation values, is mapped as coastal wetland in the Coastal Management SEPP, adjoins the LINR and is not appropriate to remain as RU1 zoned land. The planning area should be expanded to include the privately owned coastal wetland south of the existing planning area so that this is also zoned E2 (see Figure 3 above).

The area proposed to be zoned E3 in the western part of the planning area would be better zoned E2 to better protect habitat including for the critically endangered native guava. This is however a matter for the council given there is an existing sewer easement located in this area that we understand may need to be maintained from time to time.

The relocation of the existing electricity easement and location of any stormwater management infrastructure associated with the residential development should not be located within the land to be zoned E2.

6. Threatened ecological communities

The consultant has concluded in the BDAR that no threatened ecological communities (TECs) occur in the study area as the areas do not meet the geomorphological criteria and the soil profile tests have demonstrated no evidence of sorting or layering associated with alluvial processes. The consultant supports his position by drawing on a review of papers by Preston and Adam (2004a, 2004b) and states this is the current accepted and adopted industry and current NSW government approach, and the approach followed by the NSW Land and Environment Court.

There are however more recent guidelines dated 2018 prepared by the NSW Threatened Species Scientific Committee (TSSC) to assist interpretation of the concepts and terms in the listing criteria given in the Biodiversity Conservation (BC) Regulation 2017, which discuss the current format of the NSW Threatened Species Scientific Determinations. The guidelines are available at https://www.environment.nsw.gov.au/resources/threatenedspecies/1AGuidelines20180302.pdf.

These guidelines state that the NSW TSSC "*has developed a format for listing of threatened ecological communities that contains the following elements:*

> *Parts 1 & 2: Section 1.6 of the Act defines an ecological community as "an assemblage of species occupying a particular area". These features of an ecological community are described in Parts 1 and 2 of this Determination, respectively.*
>
> *Part 3: Part 3 of the Determination describes the eligibility for listing of the ecological community in Schedule 2 of the Act according to criteria as prescribed by the Biodiversity Conservation Regulation 2017.*
>
> *Part 4: Part 4 of the Determination provides additional information intended to aid recognition of this community in the field. Rather than being diagnostic, information in Part 4 is a guide to assist recognition and given natural variability, along with disturbance history, the ecological community may sometimes occur outside the typical range of variation in the features described in Part* 4". (added underlining)

As the TSCC has expressed a clear intention to revise the coastal floodplain threatened ecological community (TEC) determinations to accord with the new format, the BCD continues to advise that all coastal floodplain vegetation (including regenerating areas) within the study area should be considered as a TEC despite any underlying geology.

The definition of an ecological community is discussed under 4.1 of the guidelines, which state that.

"*The BC Act (section 1.6) defines an ecological community as 'an assemblage of species occupying a particular area'. This definition closely follows modern scientific texts (e.g. Begon et al. 2006) and embodies three requirements (Preston & Adam 2004a):*

i) the constituents of a community must be species;
ii) the species need to be brought together into an assemblage; and
iii) the assemblage of species must occupy a particular area."

The consultant has also argued that:

> "*It is these fundamental ecological attributes and their interaction (eg. abiotic and biotic interactions) which define the overwhelming majority of EECs via their particular area eg. the edaphic situation where it has evolved, and hence developed to match the defining assemblage… The bioregion is not such a critical influence, as demonstrated by EECs which stretch over more than one bioregion. It is a high level location descriptor (ie. the range of the EEC), with subsequent criteria provided to refine the definition of the 'particular area' that causes the 'assemblage of species' (eg. LGA, elevations, landforms, and soil landscapes) to separate EECs from non-EECs eg. coastal sandplain swamp forest from alluvial floodplain swamp forest. This is fundamental ecology.* "

Under Section 4.2.2, the guidelines discuss the 'particular area' and state that:

> "*In NSW, the Land and Environment Court and the Court of Appeal have held that it is sufficient to specify the bioregions in which a community occurs and the local government areas in which it has been recorded (Preston & Adam 2004a). Consequently, for most ecological communities listed in NSW, the 'particular area' is defined by one or more bioregions"*

The guidelines also state:

> "*The question of whether supplementary descriptors can be determinative regarding the occurrence of a listed community at a given location has been controversial. Some environmental consultants have argued that a listed community cannot be present at a site if the features of the site do not match the supplementary descriptors in the Final Determination, irrespective of whether the assemblage of species and particular area match those described in the Final Determination (e.g. NSWLEC 1022).*
>
> *This determinative interpretation is rarely consistent with the NSW TSSC's intent in providing information about supplementary descriptors to assist identification of a community. Courts have generally taken a broad (non-determinative) interpretation of supplementary descriptors (e.g. NSWLEC 2971 - VAW Kurri Kurri vs Scientific Committee 2003, NSWLEC 7703). Preston & Adam (2004b) stress that supplementary descriptors… "cannot be used as a substitute for a description of the assemblage of species and the particular area in which the community is located. Rather they should be seen as a valuable adjunct." This reasoning stems from the statutory definition of an ecological community. Nonetheless determinative interpretations of supplementary descriptors continue to be presented (e.g. NSWLEC 1022), and it is important that wording of Determinations gives guidance as to whether a broad interpretation is intended.*" (added underlining)

We therefore refute the consultant's argument that the bioregion is not a critical influence in determining the criteria for a TEC, and we also refute the definitions that the consultant has used to describe the particular area (e.g. edaphic criteria, LGA, elevations, landforms, and soil landscapes). As discussed above, these supplementary descriptors are important additional information but are not key to defining an ecological community according to the definition in the BC Act.

7. Impacts on the adjoining Lake Innes Nature Reserve

The planning proposal does not appear to consider the Department's *Guidelines for development adjoining land managed by the Office of Environment and Heritage* as previously recommended. If the planning proposal proceeds and is placed on public exhibition, we will seek the advice of the NSW National Parks and Wildlife Service (NPWS) about the potential impacts arising from the proposed rezoning to provide a consolidated response.

The guidelines (see https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Development-guidelines/guidelines-for-developments-adjoining-land-managed-by-OEH-130122.pdf) cover issues such as stormwater runoff,

wastewater, management implications relating to pests, weeds and edge effects, fire and the location of asset protection zones, boundary encroachments and access through NPWS estate lands, visual, odour, noise, vibration, air quality and amenity impacts, threats to ecological connectivity and groundwater dependent ecosystems and cultural heritage.

While the guidelines are for considering impacts at the development assessment stage, the planning proposal should consider how the rezoning to enable a residential subdivision could negatively impact on the LINR and how these impacts could be minimised and mitigated at the planning proposal stage. For example, issues such access into the LINR and stormwater management should be considered.

8. Planning Agreement

The planning proposal report refers to a Vegetation Management Plan (VMP) that will guide the management of the reserves including that no public access (e.g. footpath or road) will pass through them. The planning proposal should be supported by a planning agreement between the council and the landholder that commits the landholder to protecting and managing the E2 zoned land through the preparation and implementation of a VMP. This should include a sub-plan containing specific measures for the protection and management for threatened entities such as the native guava. including consideration of whether the area should be fenced to restrict access from the reserve areas into the residential area to reduce injury and mortality risks for koalas.

BCD Recommendations

In summary, the BCD recommends that:

1. For the planning proposal:
    a. The R1 General Residential zone should only be applied to suitable land within the planning area mapped for urban investigation.
    b. The area to be zoned E3 should instead be zoned E2 given it is habitat for the critically endangered native guava (*Rhodomyrtus psidioides*) pending the council's advice on the maintenance requirements for the sewer easement.
    c. The E2 zone should be extended along the length of the western side of the planning area to provide a secure and viable north-south corridor linkage.
    d. The E2 zone area in the south should be extended to the coastal wetland / Lake Innes Nature Reserve (LINR) boundary, as per Figure 3 above, and be revegetated, including with plantings of koala feed trees, to form a vegetatedl buffer to the wetland and LINR.
    e. The planning area should be expanded to include the privately owned mapped coastal wetland south of the existing planning area so that this is also zoned E2.
    f. Suitable land use zones and minimum lot sizes should be applied to minimise and mitigate the impacts on the LINR that could arise from the future residential subdivision of the planning area.
    g. A planning agreement should be executed between the council and the landholder that commits the landholder to:
        i. protecting and managing the E2 zoned land through the preparation and implementation of a Vegetation Management Plan (VMP).
        ii. Preparing and implementing a sub-plan to the VMP containing specific measures for the protection and management for threatened entities such as

the native guava, including consideration of whether the area should be fenced to restrict access from the reserve areas into the residential area to reduce injury and mortality risks for koalas.

2. For subsequent development applications arising from the planning proposal:

    a. The subdivision layout should be redesigned to exclude the road network indicated in the proposed subdivision layout which extends east and south west and retain the access track to Ascot Park for emergency access purposes only.

    b. The sewer easement and any stormwater management infrastructure should be excluded from the land to be zoned E2.

    c. The draft Koala Plan of Management (KPoM) should be updated to include a map describing the local koala habitat linkages as described in the KPoM text.

    d. The proposed revegetation to create koala habitat should reference local government resources for koala conservation on the Department's website including the koala habitat revegetation guidelines, noting that the currently cleared area that adjoins the coastal wetland and is within the coastal wetland proximity area would be a suitable site for revegetation if it was rezoned to E2.

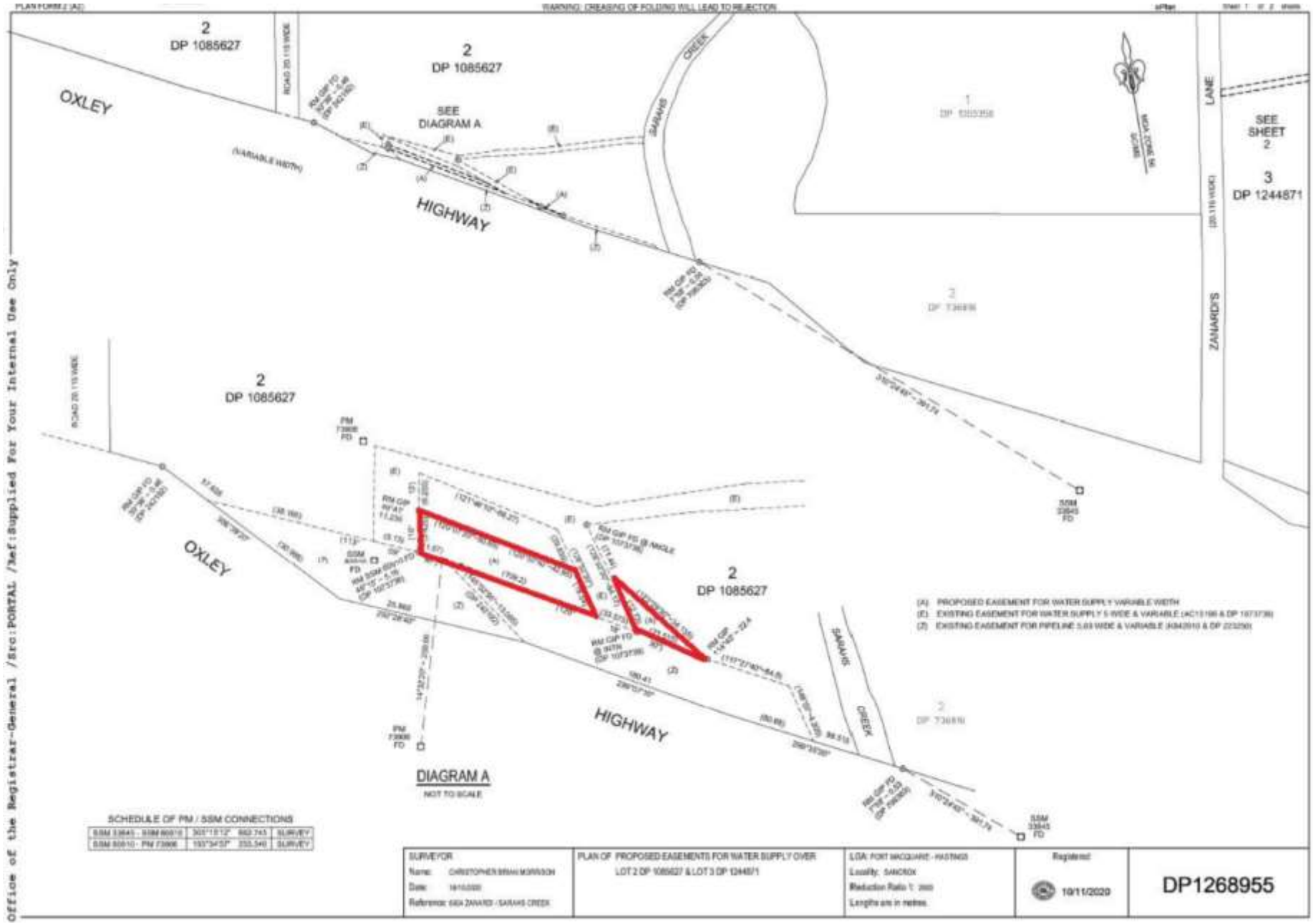
    e. The BDAR should be updated to include more advice on how the surveys for squirrel glider were undertaken and provide sufficient advice for the decision maker on Serious and Irreversible Impacts (SAIIs) in accordance with Section 9.1 and 9.1.2 of the BAM 2020, particularly actions and measures taken to avoid indirect impacts on the species at risk of an SAII.

    f. In determining a koala habitat polygon, the BDAR should be revised to consider BAM support guidance on koala surveys if available. If not available, the BDAR should consider connectivity between Plant Community Types with confirmed koala presence in the overall extent of the species polygon, with justification for decisions provided in the BDAR.

10. References

Ellis WAH , Melzer A , Green B , Newgrain K , Hindell MA Carrick FN (1995) Seasonal-Variation in Water Flux, Field Metabolic-Rate and Food-Consumption of Free-Ranging Koalas (Phascolarctos-Cinereus). *Australian Journal of Zoology* **43**, 59-68.

NSW Threatened Species Scientific Committee (2018) *Guidelines for interpreting listing criteria for species, populations and ecological communities under the NSW Biodiversity Conservation Act 2016* (accessed from https://www.environment.nsw.gov.au/resources/threatenedspecies/ on 22/02/20121)


WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION
2
DP 1085627
OXLEY
ROAD 20.115 WIDE
SEE
DIAGRAM A
(VARIABLE WIDTH)
HIGHWAY
SARAHS
CREEK
SEE
SHEET
2
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DP 1244871
LANE
ZANARDI'S
PM
73906
FD
SSM
33645
FD
(A) PROPOSED EASEMENT FOR WATER SUPPLY VARIABLE WIDTH
(E) EXISTING EASEMENT FOR WATER SUPPLY 5 WIDE & VARIABLE (AC113186 & DP 1073738)
(J) EXISTING EASEMENT FOR PIPELINE 5.03 WIDE & VARIABLE (KM2010 & DP 223250)
DIAGRAM A
NOT TO SCALE
SCHEDULE OF PM / SSM CONNECTIONS
SURVEYOR
PLAN OF PROPOSED EASEMENTS FOR WATER SUPPLY OVER
LOT 2 DP 1085627 & LOT 3 DP 1244871
LGA: PORT MACQUARIE - HASTINGS
Locality: SANCROX
Reduction Ratio 1: 2000
Lengths are in metres
Registered
10/11/2020
DP1268955
Office of the Registrar-General /Src:PORTAL /Ref:Supplied For Your Internal Use Only



PORT MACQUARIE HASTINGS COUNCIL

Printed on 03/03/2021

Compiled by $username

General Location of Easement to be Acquired

Lot 2 Deposited Plan 1085627

1:2,000 @A3

DISCLAIMER

This map was produced by the Geographic Information Services section of the Port Macquarie-Hastings Council using information available to Port Macquarie-Hastings Council and the Department of Lands, Bathurst. The data was captured at a scale of 1:25000 for rural areas and 1:4000 for urban areas. The positional accuracy of plots becomes less reliable when viewed at scales greater than the capture scale. Port Macquarie-Hastings Council accepts no responsibility either in contract or tort (and particularly in negligence) for any errors, omissions or inaccuracies whatsoever contained within or arising from this map.NOTE: Cadastral information outside the Port Macquarie-Hastings LGA not updated. © Land and Property Information, © Nearmap, © Port Macquarie-Hastings Council

PORT MACQUARIE
HASTINGS
COUNCIL

Draft Structure Plan

Fernbank Creek and Sancrox Villages

February 2021



Your input on the draft Fernbank Creek and Sancrox Villages Structure Plan is important and will inform the future direction of this proposal.

You can have your say by:

- Getting in touch on-line through Council's Have Your Say webpage: https://haveyoursay.pmhc.nsw.gov.au/
- Emailing your submissions to: council@pmhc.nsw.gov.au
- Posting your submission to: PO Box 84, Port Macquarie NSW 2444

Or for further information you can contact Port Macquarie-Hastings Council's Strategic Planning team on (02) 6581 8529

Comments should be received in writing no later than 5pm on ** 2021.

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Glossary of Abbreviations

AADT Average Annual Daily Trips

ABS Australian Bureau of Statistics

AHIMS Aboriginal Heritage Information Management System

APZ Asset Protection Zone

BC Act Biodiversity Conservation Act 2016

BLALC Birpai Local Aboriginal Land Council

CSP Community Strategic Plan

DP Deposited Plan

DCP Development Control Plan

DPIE Department of Planning, Industry and Environment

DoPE [former] Department of Planning and Environment

DSP Development Servicing Plan

EESG Environment, Energy and Science Group

EIS Environmental Impact Statement

ERM Environmental Resources Management Pty Ltd

FPL Flood Planning Level

GSA Greater Sancrox Area

GSNSW Mining, Exploration and Geoscience, Geological Survey NSW

HAD Healthy Active by Design (Heart Foundation 2018)

Ha Hectares

HSR High Speed Rail

ILSR Port Macquarie Hastings Industrial Land Strategy Review 2015

LGA Local Government Area

LSPS Local Strategic Planning Statement

MRF Materials Recovery Facility

NBN National Broadband Network

NCRP North Coast Regional Plan

NCSPG North Coast Settlement Planning Guidelines

NSW New South Wales

OEH [former] Office of Environment and Heritage

ORRF Organics Resource Recovery Facility

PBP Planning for Bush Fire Protection 2019 (NSW Rural Fire Service 2019)

PIA Planning Investigation Area

PMH LEP Port Macquarie-Hastings Local Environmental Plan 2011

RMS [former] Roads and Maritime Services

TfNSW Transport for New South Wales

UGMS Urban Growth Management Strategy

DRAFT

Executive Summary

The purpose of this draft Structure Plan is to provide a framework for the logical and sustainable long term conservation and development of the Fernbank Creek and Sancrox Planning Investigation Area (PIA). In this regard, this document provides a framework to facilitate achievement of Council's vision for the Port Macquarie-Hastings Local Government Area: *'A sustainable high quality of life for all'* in relation to conservation and development within the PIA. This document also summarises the assessment process and information used in the development of this framework.

Internal Council consultation in relation to the preparation of this draft Structure Plan was undertaken as part of an internal working group on 17 September 2019. Feedback from this working group has been used to inform the development of a subsequent Discussion Paper and Fact Sheet. These documents were formally placed on public exhibition for a period of 28 days from 22 January 2020 until 19 February 2020. 45 submissions were received as a result of this public exhibition, including submissions from six government agencies. The issues raised within the submissions received have been considered during the preparation of this draft Structure Plan. Ongoing stakeholder consultation in relation to the preparation of this document has also been undertaken with various project stakeholders including landholders, community members and Government Agencies. This consultation has included a community information session on 24 September 2020 and a Government Agency reference group meeting on 30 November 2020.

This draft Structure Plan has assessed the relationship between NSW Government and Council's existing strategic planning framework and has sought to align this document with this framework where applicable. Relevant legislative, policy and guidelines have also been considered.

This document has analysed the supply and demand for new urban land in relation to the PIA and the wider Local Government Area (LGA). This analysis, which considers significant land constraints, found that in March 2020 Port Macquarie had 369 hectares of unconstrained developable residential land. This land has the potential to facilitate the establishment of 3,356 dwellings. With an uptake of 340 dwellings per year (as detailed within the Urban Growth Management Strategy (UGMS)), this equates to 9.9 years land supply. The Fernbank Creek and Sancrox Planning Investigation Area is forecast to add a further 10 years land supply, with an additional 3,410 dwellings.

In relation to employment land, this draft Structure Plan incorporates two new potential village business centres within Sancrox and Fernbank Creek respectively. These potential village business centres would incorporate community facilities and be collocated with public open space within the heart of the surrounding village areas. These village centres would support the surrounding community and support the role of the existing Thrumster town centre in providing higher order services to the wider community.

Assessment undertaken to inform the development of this draft Structure Plan has included the preparation of an agricultural impact assessment, environmental values review and employment lands review. In addition, this draft Structure Plan has also considered natural hazards, liveability and infrastructure constraints and opportunities. This assessment has resulted in the identification of potential conservation and development areas to facilitate a network of well connected village communities, set within a framework of environmental corridors and rural landscapes.

Change in land use is generally achieved through a combination of planning controls, design guidelines and contributions planning and/or planning agreements. The framework outlined within this document is intended to inform the role of these mechanisms in delivering the vision as outlined within this draft Structure Plan.

In addition to the provision of a draft Structure Plan map, this document also provides a framework for the implementation of planning proposal and strategic planning investigations within the PIA.

Following consideration by Council, it is intended that this document would be placed on public exhibition to invite further stakeholder feedback.

1 Introduction and Purpose of this Draft Structure Plan

The purpose of this draft Structure Plan is to provide a framework for the logical and sustainable long term conservation and development of the Fernbank Creek and Sancrox Planning PIA. The PIA is illustrated within Figure 1 below. In order to achieve this, the draft Structure Plan:

- Identifies areas of high conservation value and aims to conserve these areas.
- Identifies areas of high environmental risk and aims to avoid development intensification within these areas.
- Considers factors likely to contribute to providing a high level of liveability for future residents within areas that may be suitable for development.
- Considers the services and infrastructure required to service future urban growth.

In consideration of the above, this draft Structure Plan provides a framework to facilitate achievement of Council's vision for the Port Macquarie-Hastings Local Government Area: *'A sustainable high quality of life for all'* in relation to the conservation and development of the PIA. This document also summarises the assessment process and information used in the development of this framework.

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Figure 1 - Fernbank Creek and Sancrox Planning Investigation Area

2 Vision and Key Objectives

This section of the report outlines the vision and strategic objectives that will guide the future conservation and development of the PIA. This vision and the associated strategic objectives will be reviewed following stakeholder input into this draft Structure Plan.

2.1 Vision statement

The vision for the PIA is summarised within the statement below. This statement is based on the original vision statement included within the Greater Sancrox Structure Plan (February 2015), feedback received as a result of the public exhibition of the Fernbank Creek and Sancrox Planning Investigation Area Discussion Paper (January 2020) and as a result of further land use investigations and consultation undertaken as part of the development of this draft Structure Plan.

Fernbank Creek and Sancrox will provide opportunities for sustainable conservation and development as a network of well-serviced villages set within a framework of environmental corridors and rural landscapes.

Land use and development will respect the area's important environment, heritage and local character and ensure the establishment of highly liveable, unique and thriving communities.

An efficient and effective pedestrian, cyclist, public transport and road network will provide good access between the villages and existing services, employment, social and recreational opportunities.

2.2 Key objectives

To facilitate the above vision, this draft Structure Plan is guided by the following key strategic objectives:

Environment

- Protect, maintain and enhance significant vegetation communities and fauna, habitat areas and wildlife corridors.
- Protect and maintain water quality in local streams and in downstream receiving waters of the Hastings River.
- Ensure environmental and adjoining land use hazards are avoided and/or adequately managed.

Social and Heritage

- Ensure residents have good access to community services and facilities.
- Minimise potential for future land use conflict.
- Ensure Aboriginal and Non-Aboriginal heritage and cultural values are respected in the planning of conservation and development areas.
- Ensure adequate access and connectivity is provided to the future users of the area.
- Avoid the exposure of the community to risks associated with natural and urban hazards.

Economic

- Ensure land use does not restrict or prohibit the development potential of important extractive resources.
- Ensure land use minimises impacts to important farmland.
- Ensure a suitable supply of future urban development which complements future growth plans for the Port Macquarie - Hastings region.
- Ensure that the provision of infrastructure and services by Council does not place an unreasonable burden on the existing community.
- Ensure infrastructure can be provided at a reasonable cost and in time to serve growth.

Governance

- Ensure the process of planning for the area is open and transparent.
- Provide opportunities to engage with all interested stakeholder groups.

3 Stakeholder Consultation

Internal Council consultation in relation to the preparation of this draft Structure Plan was undertaken as part of an internal working group on 17 September 2019. Feedback from this working group has been used to inform the development of a subsequent Discussion Paper and Fact Sheet. These documents were formally placed on public exhibition for a period of 28 days from 22 January 2020 until 19 February 2020. During this period, feedback from the community was sought through:

- Addressed letters and fact sheets posted to landholders within and adjoining the PIA,
- A landholder workshop / presentation at Council's Port Macquarie Customer Service Centre on 6 February 2020,
- Provision of information on Council's website,
- Advertisement in local print media on 22 and 29 January and 5 and 12 February 2020; and
- A 'pop up' session held at Sovereign Place Town Centre, Thrumster on 12 February 2020.

45 submissions were received as a result of this public exhibition, including submissions from six government agencies, being Transport for New South Wales, the Department of Planning, Industry and Environment (Planning Division), Essential Energy, the Department of Primary Industries (Agriculture), the Department of Primary Industries (Fisheries) and the Department of Planning, Industry and Environment (Biodiversity Conservation Division). The main topics raised within these submissions included:

- Notwithstanding some objections to future development within the subject area, overall support for the Structure Planning process.
- Concern regarding the proposed expansion of the Sancrox Quarry.
- Where development occurs, a preference for large (rural residential) lots.
- Where development occurs, a preference for high density living.
- The need to address traffic congestion on the Oxley Highway.
- The need to consider ecological constraints and opportunities.
- The need to address road safety issues on Fernbank Creek Road.
- The value of creating a residential corridor on the eastern side of the Pacific Highway between Thrumster and Fernbank Creek and keeping industrial land on the western side of the Pacific Highway in this location.
- Potential noise impacts from roads on existing and future development.
- The need to improve public transport links within the area.
- A preference to maintain the existing character and amenity of the Fernbank Creek and Sancrox area.
- The need to retain existing vegetation (particularly mature trees and vegetated corridors).
- Avoidance of areas of high environmental risk such as flood prone and bushfire prone land.
- The importance of considering and minimising land use conflict.
- The need to ensure high quality community facilities and services.
- The importance of high quality transport, pedestrian and cyclist links.
- The importance of high quality urban amenity outcomes.
- The importance of ensuring high quality services are available to service the existing and future population of the area such as electricity, sewerage and NBN (broadband internet).
- The importance of considering water security and climate change in land use planning.
- The need to consider sequence and staging of land release.
- The need to consider the subject planning investigation with regard to other relevant state and local planning policies, statements, directions, strategies and plans.
- Protecting the remaining koala population in Port Macquarie after recent bushfires, and the relationship between the bushfire requirements for future development and ecology as a whole will be a critical consideration for this project.
- In addition to investigating the potential impacts of the Sancrox Quarry, the projected lifespan should be established to assist with the sequence of land release, including development within Areas A1, B1 and B3.
- If the proposed suitability of the long term light industrial investigation area to the east of Area B1 can be demonstrated, the strategic structure planning for it and the surrounding

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lands should be undertaken in a holistic manner to avoid introducing any additional incompatible land uses or constraints.

- Support for undertaking assessment of mapped important farmland using the North Coast Regional Plan Appendix B: Important Farmland Interim Variation Criteria in consultation with the Department of Primary Industries and the DPIE (Planning and Assessment) to determine recommendations for the farmland consistent with the North Coast Regional Plan along with the undertaking of an Agricultural Impact Statement.
- A request that the Structure Plan include an updated traffic study to identify likely traffic impacts on the classified (State) roads, the impact on any and all affected intersections and the surrounding road network.
- That Council should refer to Goal 1 of the North Coast Regional Plan to further elaborate the vision for the Port Macquarie - Hastings Local Government Area.
- That development in the investigation area be focused to areas of least biodiversity and should implement the 'avoid, minimise offset' hierarchy.
- That Council should take a precautionary approach when determining biodiversity value.
- The Structure Plan should be informed by an assessment of Aboriginal Cultural Values.
- Council should adopt a more holistic approach to assessing the suitability of the Sancrox locality to higher density urban land use.
- Rather than relying solely on future development of greenfield sites, that Council should re-examine and strengthen other opportunities to cater for anticipated population growth through mechanisms such as urban consolidation.
- The occurrence of key threatening processes as a result of the planning proposal should be considered as part of the planning investigation.
- The Department of Primary Industries (Fisheries) policy and guidelines for fish habitat conservation and management should be considered as part of the planning investigation.

The above issues raised within the submissions received have been considered during the preparation of this draft Structure Plan.

Ongoing stakeholder consultation in relation to the preparation of this draft Structure Plan has also been undertaken with various project stakeholders including landholders, community members and Government Agencies. This consultation has included a community information session on 24 September 2020 and a Government Agency reference group meeting on 30 November 2020.

Following consideration by Council, it is intended that this document would be placed on public exhibition to invite further stakeholder feedback.

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4 Planning Framework

The following section details the planning framework that applies to this draft Structure Plan.

4.1 North Coast Regional Plan

The North Coast Regional Plan (NCRP) guides the NSW Government's land use planning priorities and decisions to 2036. The NCRP provides an overarching framework to guide subsequent and more detailed land use plans, development proposals and infrastructure funding decisions. While a series of priority actions are included, medium and longer-term actions have been identified to coincide with population growth and economic change.

Priorities for each council are set out in Local Government Narratives, which provide guidance for further investigations and implementation.

The NCRP generally does not include the PIA. As such, in order for the potential land use changes to occur as outlined within this draft Structure Plan, unless otherwise advised by the DPIE, amendment to the NCRP would be required.

4.2 Local Strategic Planning Statement

Local strategic planning statements (LSPSs) are a pivotal tool for local strategic planning in NSW. They inform local statutory plans and development controls, and give effect to regional and district plans. LSPSs can also identify where further strategic planning effort may be needed.

The statements act as a unifying document, drawing together and summarising planning priorities identified through State, regional, district and local strategic work. They provide the local context and local-scale expression of actions and priorities from these plans.

In practice, the statements shape how the local environmental plan (LEP) and development control plans (DCP) evolve over time.

The Port Macquarie-Hasting's Shaping Our Future 2040 (Shaping our Future) is Port Macquarie-Hastings Council's LSPS (front cover shown below). The LSPS provides the basis for strategic planning in the area to guide the local community towards a 20-year strategic planning vision.

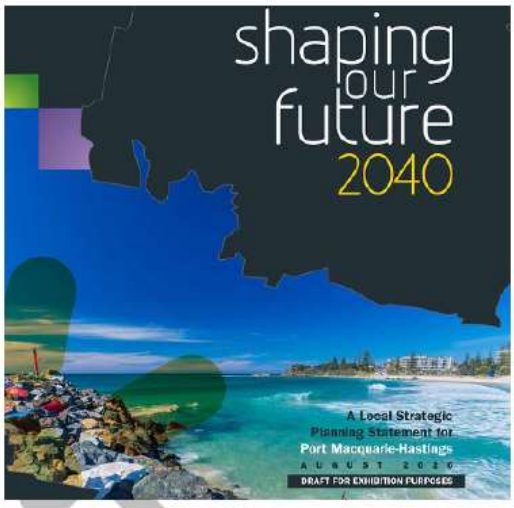

Figure 2 - Shaping Our Future 2040

This draft Structure Plan will be used to inform the LSPS in outlining the vision for the PIA in relation to the future conservation and development of the Fernbank Creek and Sancrox area.

4.3 Community Strategic Plan

The Community Strategic Plan (CSP) is an overarching 10 year plan that is prepared by Council and the community based on community priorities. It enables Council to coordinate its funding priorities, activities and services.

NSW Government legislation recognises that Council's and communities don't exist in isolation and that different planning documents must be integrated. The legislation guidelines indicate the CSP should be based on the social justice principles of equity, access, participation and rights. The CSP should also consider how social, economic, environmental and civic leadership issues can be addressed.

The CSP is a reference tool for Council, the community, government agencies and other stakeholders. It identifies the community's aspirations for the future and outlines priority areas to achieve them. The community owns this plan and it serves as the primary resource for guiding councillors on what the community wants.

Whilst the PIA is not specifically included within the CSP, the CSP details the framework for such investigations, which includes reference to the NCRP and the Port Macquarie - Hastings Urban Growth Management Strategy (UGMS).

In addition to the above, Council is currently preparing an updated CSP (Think 2050, banner shown in Figure 3 below). Once adopted by Council, this updated CSP will replace the current 'Towards 2030' Community Strategic Plan. As with the

'Towards 2030' Community Strategic Plan, while the PIA is unlikely to be specifically included within the CSP, the CSP will likely detail the framework for such investigations and the community's overall vision for the growth of the Port Macquarie Local Government Area.



Figure 3 - Community Strategic Plan

4.4 Urban Growth Management Strategy

The Urban Growth Management Strategy (UGMS) has been prepared by Port Macquarie - Hastings Council in consultation with the community and the DPIE. The aim of the strategy is to ensure that Council can make informed urban growth management decisions in the best interest of the community and future generations.

The UGMS looks at population projections and the expected demand for new dwellings. It looks at our natural environment, housing and employment growth. It also considers the infrastructure that will provide for this growth and what we can do to make our towns and villages better places for the community as a whole.

The UGMS is focused on our major towns and villages in the next 20 years and beyond, since this is where urban growth is expected to occur. It has particular focus on Port Macquarie, which has been identified by the NSW Government as the primary focus for future growth on the NSW North Coast, along with Tweed Heads, Lismore and Coffs Harbour. This strategy follows on from the 2011 Urban Growth Management Strategy for the Port Macquarie Hastings. While each strategy looks ahead 20 years and beyond, the strategy itself can only reliably plan for the short term due to the increasing uncertainty in long term demographic projections and a range of unknown factors that can affect the key assumptions we make. The UGMS is therefore focussed on actions over a 5 year period, up to the next planned UGMS review in 2023, and in the context of what might be expected in the next 20 years.

An objective of the UGMS is to identify opportunities for new economic development and housing that will meet the future needs of our growing community. The aim is to achieve well-planned growth in the right places, to create a more diverse and prosperous economy and maintain a healthy environment and great places to live.

As detailed previously within this document, when the former Department of Planning and Environment (now DPIE) approved the UGMS, it was subject to the potential release areas outside of the urban growth areas (including Fernbank Creek and Sancrox) being endorsed as 'only for investigation'. The DPIE advised that the NCRP will not be changed until the investigations have been completed and appropriate structure plans endorsed by the DPIE. The advice also stated that detailed assessment of site specific development constraints such as proximity to mineral resources, regionally significant farmland and potential high-environmental-value land will be required at the structure plan or planning proposal stage to confirm consistency with relevant state environmental planning policies and section 9.1 directions.

This draft Structure Plan provides assessment of site specific development constraints such as proximity to mineral resources, regionally significant farmland and potential high-environmental-value land. It also considers consistency with relevant state environmental planning policies and section 9.1 directions. In doing so, this draft Structure Plan is intended to facilitate progression of the assessment of this proposal and respective UGMS, LSPS and NCRP amendments as required.

4.5 Local Housing Strategy

Council is currently developing a local housing strategy to provide for a range of housing choices in suitable locations now and into the future. Council's aim in developing the housing strategy is to provide a planning framework for residential land which allows for a mix of housing choice, is responsive to the character of our towns and villages and addresses the needs of our future population.

The preparation of the local housing strategy is a key action of Council's CSP, LSPS and UGMS. It involves a review of the Port Macquarie - Hastings Local Environmental Plan 2011 (LEP 2011), Development Control Plan 2013 (DCP 2013) and planning policies in order to promote housing choice options.

The local housing strategy, once adopted by Council, will likely further inform the strategic conservation and development of the PIA.

4.6 State Environmental Planning Policies

State Environmental Planning Policies (SEPPs) can specify planning controls for certain areas and/or types of development.

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SEPPs can also identify:

- The development assessment system that applies to developments (e.g. whether a development is State significant); and
- The type of environmental assessment that is required (e.g. whether an environmental impact statement is required).

The consistency of the proposal with relevant SEPPs, subject to more detailed assessment during the planning proposal phase as relevant, is detailed within Appendix A of this report.

4.7 Section 9.1 Ministerial Directions

The NSW Minister for Planning, Industry and Environment issues Ministerial Directions to local Council's for consideration in the preparation of plans to rezone land. Relevant directions are discussed within Appendix B of this document and will also be required to be addressed as part of any subsequent planning proposals.

4.8 Port Macquarie-Hastings Local Environmental Plan 2011

The key planning controls applying to the PIA are included in the Port Macquarie - Hastings Local Environmental Plan 2011 (PMH LEP). Under the PMH LEP, land within the study areas is predominantly zoned RU1 Primary Production, with R5 Large Lot Residential existing predominantly to the west of the Sancrox investigation area and clusters of industrial, residential, business and environmental land use zonings existing along the Pacific Highway corridor and to the east of the PIA within the locality of Thrumster. Existing land use zones within and adjacent to the site are illustrated within Figure 4 below.

Land within the PIA zoned RU1 has a minimum lot size of 40 hectares. The only other areas of the PIA that are subject to lot size controls include R5 Large Lot Residential zoned land to the west (1.2 hectare minimum) and R5 Large Lot Residential zoned land to the north of Sancrox Road (8,000 square metre minimum). PMH LEP makes provision for rural-residential lots down to a minimum size of 4,000 square metres where part of a Community Title subdivision and where each lot is served by a co-operative scheme for the common disposal of effluent.

The aim of this draft Structure Plan is to facilitate logical and sustainable long term conservation and development within the PIA. In order to achieve this, this draft Structure Plan outlines proposed land uses within the PIA and provides a framework to progress future planning proposals in accordance with this draft Structure Plan.

Such planning proposals would seek to amend PMH LEP provisions applying to the land to facilitate highest and best use as identified within this draft Structure Plan. This would include residential, business and open space zoning for areas that are relatively unconstrained by environmental and other constraints, and environmental zonings for higher quality environmental areas where strategic conservation may have positive environmental outcomes.

In addition to land use zoning, amendments to other PMH LEP provisions such as height of buildings, minimum lot size and floor space ratio would also be considered as part of future planning proposals in order to facilitate preferred conservation and development outcomes.

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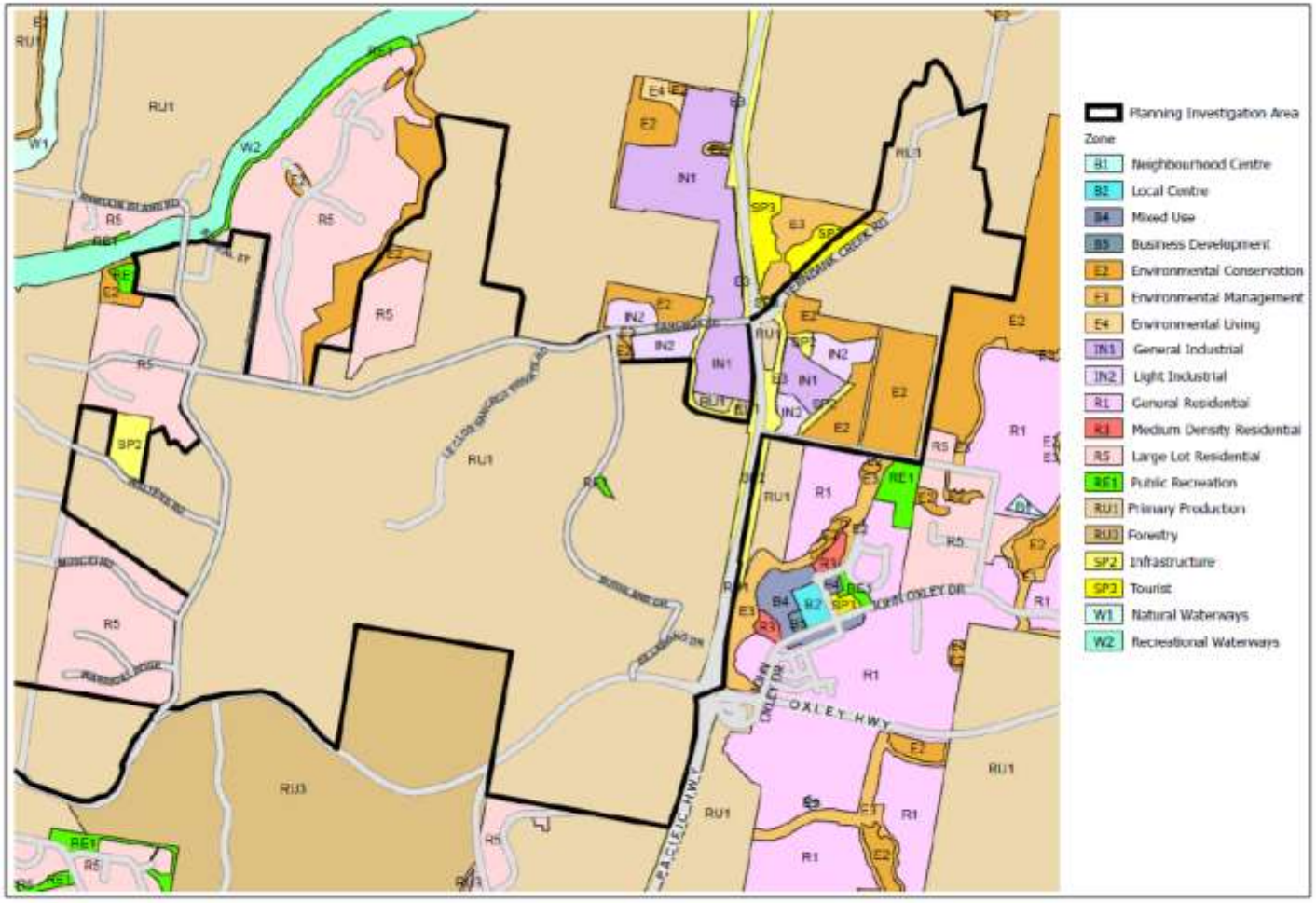

Figure 4 - Existing Land Use Zonings within the Planning Investigation Area

4.9 Port Macquarie-Hastings Development Control Plan 2013

A Development Control Plan (DCP) is the key supporting document to an LEP. A DCP provides detailed guidance for the design considerations, general standards and area-based provisions related to development.

The DCP that applies to the Port-Macquarie-Hastings Local Government Area is the Port Macquarie-Hastings Development Control Plan 2013 (DCP 2013). DCP 2013 provides information that should be taken into account when preparing a development application.

Should Council Resolve to adopt this draft Structure Plan, DCP 2013 may be reviewed and amended to capture relevant site specific provisions from this document and other relevant sources. These provisions would then be taken into consideration during the preparation and assessment of development applications relating to the PIA with regard to assessment of compliance against DCP 2013.

4.10 Development Contributions

Port Macquarie-Hastings Council has adopted a number of Development Contributions Plans and Development Servicing Plans. These plans set out contributions required from new development to cater for additional works and services that will need to be provided by Council as a consequence of that development. Planning agreements are also a mechanism that may be used to achieve such contributions.

Should Council Resolve to adopt this darft Structure Plan, the relevant development contributions plan(s) and development servicing plan(s) may be reviewed and amended to ensure that works and services that would need to be provided by Council as a consequence of development within the PIA can be appropriately funded and delivered. Planning agreements may also be used for this purpose and would be considered on a case by case basis.

4.11 Other relevant legislation, plans and policies

Other relevant legislation, plans and policies that apply to this draft Structure Plan include, but are not limited to the following:

4.11.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The *Environment Protection and Biodiversity Conservation Act* 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places defined in the EPBC Act as matters of national environmental significance.

Landowners, developers, companies, individuals and governments must seek Australian Government approval in addition to state, territory or local government approvals if their plans might impact on matters of national significance.

The provisions of the EPBC Act will apply to nationally and internationally important flora, fauna, ecological communities and heritage places as defined in the EPBC Act within the PIA as applicable.

4.11.2 Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Conservation Act* 2016 (BC Act) is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development as detailed within the BC Act.

The provisions of the BC Act will apply as part of any future Planning Proposals or Development Applications within the PIA as applicable.

4.11.3 National Parks and Wildlife Act 1974

In summary, the objectives of this Act are as follows:

(a) The conservation of nature, including, but not limited to, the conservation of:

- Habitat, ecosystems and ecosystem processes,
- Biological diversity at the community, species and genetic levels,
- Landforms of significance, including geological features and processes,
- Landscapes and natural features of significance including wilderness and wild rivers,

(b) The conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including, but not limited to:

- Places, objects and features of significance to Aboriginal people,

- Places of social value to the people of New South Wales,
- Places of historic, architectural or scientific significance,

(c) Fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation; and

(d) Providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation.

The objectives of this Act are achieved by applying the principles of ecologically sustainable development.

The provisions of the *National Parks and Wildlife Act* 1974 will apply to conservation of applicable environmental, heritage and other relevant values within the PIA.

4.11.4 Water Management Act 2000

The objectives of this Act are to provide for the sustainable and integrated management of the water sources of NSW for the benefit of both present and future generations and, in particular:

- Ecologically sustainable development,
- Protect, enhance and restore water courses,
- Recognise and foster social and economic benefits,
- Recognise the role of the community,
- Provide efficient and equitable sharing of water,
- Management of water sources with other aspects of the environment including native vegetation and native fauna,
- Encourage the sharing of responsibility and efficient use of water; and
- Encourage best practice management and use of water.

The provisions of the *Water Management Act* 2000 will apply to relevant development and activities within the PIA that impact upon matters listed under the Act.

4.11.5 Planning for Bush Fire Protection 2019

All development on Bushfire Prone Land (as outlined within Section 6.7 of this document) must satisfy the aim and objectives of Planning for Bush Fire Protection 2019 (PBP). The aim of PBP is to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment. The objectives are to:

- Afford buildings and their occupants protection from exposure to a bush fire,
- Provide for a defendable space to be located around buildings,
- Provide appropriate separation between a hazard and buildings which, in combination with other measures, minimises material ignition,
- Ensure that appropriate operational access and egress for emergency service personnel and residents is available,
- Provide for ongoing management and maintenance of Bushfire Management Plans; and
- Ensure that utility services are adequate to meet the needs of firefighters.

As detailed within Section 6.7 of this report, it is recommended that detailed bushfire hazard assessment in accordance with PBP 2019 be undertaken as part of the progression of any subsequent planning proposal applying to the PIA. This would ensure that bushfire hazard, and subsequent appropriate safeguards, can be considered in relation to specific development types and locations.

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5 Supply and Demand Analysis

Demand for new urban land is driven primarily through population growth. The type of urban land that is required to service a given population can be influenced by the demographics of a given community, economic factors and market trends. Population and demographic information for the Port Macquarie - Hastings LGA is analysed in detail within the LSPS and UGMS.

The following section considers the supply and demand for new urban land in relation to the PIA and the wider LGA. The information contained within this section has been used to assist in informing the proposed land uses contained within Section 7 of this document.

5.1 Residential Land

Council's current adopted position is to maintain a 15-year supply of zoned residential land, ready for development, including allowance for lead-in times for investigation and rezoning. The intent is to promote market choice, competition and affordability in the housing market, allowing for growth cycles whilst also providing reasonable certainty for builders, developers and government regarding return on investment, particularly in relation to up-front infrastructure costs.

In July 2017, the estimated supply of residentially zoned land in Port Macquarie was 16.4 years (UGMS). It can be noted that this land supply figure is based on total available undeveloped residentially zoned land and does not take into account significant development constraints (such as environmental constraints) that exist on some of this land supply.

A more recent review undertaken as part of the development of this document, which considers significant land constraints, found that in March 2020 Port Macquarie had 369 hectares of unconstrained developable residential land. This land has the potential to facilitate the establishment of 3,356 dwellings. With an uptake of 340 dwellings per year (as detailed within the UGMS), this equates to 9.9 years land supply.

The Fernbank Creek and Sancrox Planning Investigation Area is forecast to add a further 10 years land supply, with an additional 3,410 dwellings.

The addition of residential areas within Fernbank Creek and Sancrox will mean that Port Macquarie will have a total of 19.9 years supply of undeveloped land, identified for future potential residential development.

In addition to undeveloped identified residential land supply, it can be noted that in September 2019 Council adopted the Port Macquarie Health and Education Precinct Master Plan. This Master Plan includes high density type residential and mixed use components and has the potential to generate a forecast 2,229 dwellings as units within this precinct. The addition of these dwellings would provide a further 6.6 years of housing supply, resulting in a total of 26.5 years of supply.

The Fernbank Creek and Sancrox PIA and the Port Macquarie Health and Education Precinct are currently the only two major residential investigation areas within Port Macquarie. Quantification of potential housing yield from these areas has been based on draft structure plan and master plan investigations respectively.

In addition to the above areas, housing yield is also likely to be provided through urban consolidation within existing developed areas such as the Port Macquarie Central Business District. Such development is likely to occur incrementally over time and be influenced by changing housing trends and associated market demands. Whilst future housing yield through urban consolidation within existing developed areas is more difficult to quantify than structure planned or master planned communities, this urban consolidation is also likely to contribute housing supply over the coming years and will likely be further analysed during future land use and master plan investigations.

In relation to existing undeveloped rural residential land supply, approximately 266 hectares of land is zoned for this purpose within the LGA. This land would likely facilitate the establishment of approximately 139 rural residential dwellings and is predominantly clustered adjacent to the Hastings River, north of the PIA and within the King Creek, Beechwood and Camden Haven localities. Potential rural residential land identified within Section 7 of this draft Structure Plan has the potential to add an additional 76 dwellings to this existing supply.

Types of residential development proposed for the PIA are discussed further within Section 6.10 of this document.

5.2 Employment Land

For the purpose of this draft Structure Plan, employment land can be classified as any existing or potential business or industrial land within the PIA.

As detailed within Figure 4, the PIA contains land zoned for industrial purposes east of the Pacific Highway. The PIA also contains an area identified as 'potential long term industrial investigation

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land' on the western side of the Pacific Highway, between Sancrox Road and the Oxley Highway. The PIA currently contains no business zoned land.

During the development of this draft Structure Plan, Council commissioned the preparation of an 'Employment Land Use Review' (included as Appendix E to this document). This review aims to update Council's strategic planning information relating to industrial and retail development via assessments undertaken by HillPDA in 2015 and reviewing the NSW Department of Planning, Industry and Environment projections for

population growth and accounting for the demand and supply of both industrial and business land across the LGA. The findings of this review have been used to inform the proposed employment land uses identified within this draft Structure Plan. Business and industrial land uses associated with this draft Structure Plan are discussed further under the headings below.

5.2.1 Business Land

The employment land use review included within Appendix E has found that demand for business land is likely to require upto 296,164 square metres of retail floor space to satisfy demand across the LGA to 2041. To date approximately 158,000 square metres of business floor space has been developed across the LGA over a total zoned area of 125 hectares under Port Macquarie LEP 2011 in either the B1, B2, B3 and B4 zones.

The analysis into business land found that about 75 per cent of the existing floor space is made up of retail uses, whilst the remaining 25 per cent comprises non-retail uses. Much of this development, with the exception of the Port Macquarie Central Business District and Settlement City, has generally been developed at low densities, in many cases well below the nominated floor space ratio. With the finalisation of the Health and Education Precinct Master Plan, an opportunity to realise up to a projected 212,489 square metres of non-residential gross floor area together with the opportunities to intensify and develop existing zoned business lands will more than satisfy demand to 2041.

In relation to business and retail land, Council's policy is to promote a clear hierarchy of centres, ranging from the Port Macquarie Central Business District and Settlement City at the top of the hierarchy, to local neighbourhood retail centres at the bottom.

In the development of this draft Structure Plan, consideration has been given to what business and retail land may be required to service the future potential residential community within the PIA. To do this, the location of potential business areas were nominated based on the liveability considerations detailed within Section 6.10 of this document. Within these locations, the potential size of such business areas was assessed based on the retail hierarchy as detailed within Council's UGMS and LSPS. In order to verify suitability, the size and location of these areas was considered as part of the employment land use review included as Appendix E to this document. The employment land use review found that a consolidated 2 hectare business site may be suitable for Sancrox Village, given the central location of this site within the wider PIA and to ensure consistency with other neighbourhood centres within the LGA. However, the review also found that multiple neighbourhood sites in the order of 1 hectare within the structure plan area could be considered to facilitate the establishment several smaller business zones to service surrounding residential development.

Given the above, in order to miaximise the access for potential future residents to these business areas, two potential future business areas have been identified, one within Sancrox Village, and the other within Fernbank Creek Village to the east as detailed within Section 7 of this document. Whilst maximising liveability and sense of place for individual villages within the wider PIA, the one hectare size, which also includes a potential community facility component, will also ensure that the integrity of the nearby Thrumster Town Centre (also considered within the employment land review) is maintained in accordance with the hierarchy set out within Council's UGMS and LSPS.

5.2.2 Industrial Land

The analysis into the demand for industrial land as included within Appendix E to this document found that the Port Macquarie-Hastings LGA will need between 257 hectares and 341 hectares of industrial zoned land to 2041 to meet the projected resident workforce. Given the current supply of 458 hectares of industrial zoned land within the B5, B7, IN1, IN2, IN3 and IN4 zones, it is estimated that there is between 148 and 231 hectares more zoned industrial land than is required to 2041.

This analysis also noted that notwithstanding this oversupply, the geographical distribution of the vacant land across each zone may not always match demand as some areas may be more attractive for industrial development than others. Similarly, land already zoned may be constrained by other environmental factors such as biodiversity, flooding, access etc. The analysis therefore reviewed each locality to determine industrial land requirements at a local level.

The PIA currently contains land zoned for industrial purposes immediately east of the Pacific Highway at Thrumster. The PIA also contains an area

identified as 'potential long term industrial investigation land' on the western side of the Pacific Highway, between Sancrox Road and the Oxley Highway.

As part of the development of this draft Structure Plan, the conversion of the above existing industrial land to residential land was assessed. The site is undulating (making it more suitable for smaller lot residential development rather than larger format industrial development) and is located within close proximity to the existing Thrumster Town Centre. In addition to the above, the conversion of this land to residential would have the following potential benefits:

- Amalgamation or primarily residential land uses on the eastern side of the Pacific Highway in this location, minimising the potential for land use conflict.
- Ability to facilitate the logical expansion of the existing Thrumster residential area, taking advantage of the sites location within close proximity to the existing Thrumster Town Centre and access to existing services.
- Ability to provide connections through the site to facilitate direct linkages between any potential future development within Fernbank Creek Village and the existing Thrumster Town Centre through a residential corridor.
- A significant oversupply of industrial land currently exists within the LGA. Therefore, the loss of this land from the industrial land supply would be likely to have limited implication in relation to the overall quantity of supply.
- Notwithstanding the above, there may be the potential to offset the loss of industrial land at this location with the area of 'potential long term industrial investigation land' on the western side of the Pacific Highway, between Sancrox Road and the Oxley Highway.

Given the above, and in consideration of the lack of environmental constraints on the site, this site may be suitable for residential development.

However, while the employment land use review has found that there is sufficient land available for industrial purposes to 2041, this site is considered to be strategically important for long term employment generating land as it possesses the requisite characteristics required for large format industrial land (i.e. it has good access to an arterial road network, is relatively isolated from sensitive land uses). It is also advantageous to encourage agglomeration or clustering of industrial land uses, particularly given the proximity of the Sancrox employment area.

The employment land review also notes that residential development is not considered an appropriate use for the site, as the supply of residential development is occurring in adjacent locations suited to support intensive lifestyle settlements with amenity, whilst this location provides a unique opportunity for an industrial estate with proximity to the Pacific Highway.

In addition to the above, consideration of existing undeveloped industrial land with direct access to the Pacific Highway in the neighbouring Mid Coast and Kempsey LGAs has also been undertaken in the development of this draft Structure Plan to assess whether neighbouring LGAs may have more suitable locations for such development. This assessment has found that there is approximately 39 hectares of land available in South Kempsey and approximately 7 hectares available in Cundletown respectively. However, it has been noted that of the 39 hectares available in South Kempsey, approximately 28 hectares is either vegetated or is occupied by an existing quarry operation.

Despite the availability of the above industrial land, the opportunity to retain industrial zoned land with direct access to the Pacific Highway within the Port Macquarie-Hastings LGA and within relative close proximity to existing townships and future potential village areas as detailed within this draft Structure Plan has also been considered.

In consideration of the above factors, retention of the subject land as industrial land has been considered appropriate in the development of this draft Structure Plan.

Investigation of the 'potential long term industrial investigation land' on the western side of the Pacific Highway, between Sancrox Road and the Oxley Highway has also been considered in the development of this draft Structure Plan. This land has not been identified for further investigation at this stage in consideration of the current significant oversupply of industrial land within the LGA to 2041 and the environmental values of the site. However, given the strategic location of this site, it remains identified as 'potential long term industrial investigation land' as it may be suitable for future long term investigation.

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6 Opportunities and Constraints of the Planning Investigation Area

The following section considers the potential development opportunities and constraints of the PIA.

6.1 Biodiversity

Goal 1 of the NCRP aims to achieve *'the most stunning environment in NSW'*. To assist in achieving this vision, Action 2.1 under Direction 2 of the NCRP requires development to be focused to areas of least biodiversity sensitivity in the region and the implementation of the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value.

The importance of protecting areas of high environmental value within the PIA has been further highlighted by recent bushfires, which have impacted significant areas of native vegetation within the LGA. These bushfires have had a direct impact on biodiversity values within the LGA, including Koala populations.

Given the above, the holistic identification of areas of high environmental value have formed the basis for the potential land use investigation as detailed within Section 7.1 of this report.

To identify potential areas of high environmental value, and to subsequently inform the implementation of the avoid, minimise, offset' hierarchy, Niche Environment and Heritage Pty Ltd (Niche) were commissioned to undertake an Environmental Values Review (EVR) as part of the development of this draft Structure Plan.

The EVR has identified that a large proportion of the PIA is highly constrained due to extensive presence of areas of High Environmental Value (HEV) throughout the Study Area, known threatened species habitat and the key role of much of the existing vegetation in regional and sub-regional wildlife corridors.

Areas of potential environmental constraint determined as a result of the EVR process are illustrated within Figure 5 below.

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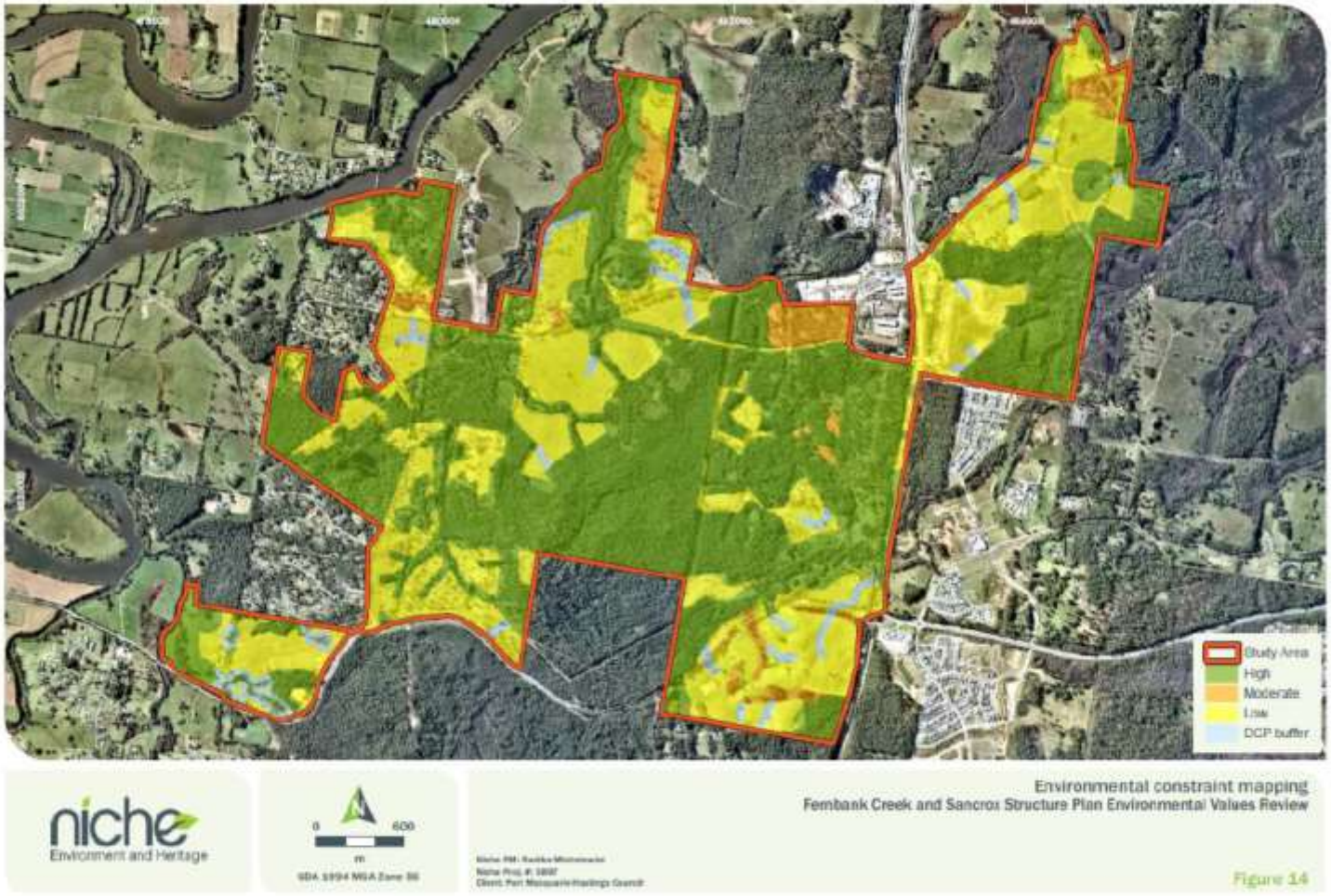

Figure 5 - Environmental Constraint Mapping

In relation to the assessment of environmental values, the Biodiversity Conservation Division (BCD) of the Environment, Energy and Science Group (EESG) of the Department of Planning, Industry and Environment (DPIE) was consulted during the preparation of the abovementioned EVR and the subsequent draft Structure Plan. As a result of this consultation, the following recommendations were provided in relation to future biodiversity management within the PIA:

- Opportunities for the long-term protection and management of HEV should be investigated. This should include consideration of biodiversity conservation mechanisms available in accordance with the *Biodiversity Conservation Act 2016* (BC Act), such as Stewardship Site Agreements, Conservation Agreements and Wildlife Refuges.

- For non-HEV native vegetation, efforts are to be taken to:
  - Avoid and minimise direct impacts on native vegetation.
  - Direct development to areas of native vegetation in poor condition.
  - Avoid habitat for species that have a high biodiversity risk rating or are listed as a potential Serious and Irreversible Impact species in the DPIE's Threatened Biodiversity Data Collection.

- Avoid habitat for species that have a high biodiversity risk rating or are listed as a potential Serious and Irreversible Impact species in the DPIE's Threatened Biodiversity Data Collection.

The above recommendations are to be considered, as applicable, in relation to all future planning proposals and development applications within the PIA.

In addition to the above, the Hastings River, immediately north of the PIA, contains oyster aquaculture. This aquaculture is generally limited to between Limeburners Creek in the east and the confluence of the Hastings and Maria Rivers in the west, approximately 2.7 kilometres to the north east of the PIA. However, some oyster aquaculture activities extend up stream to Rawdon Island in the west, directly north of the PIA.

Urban development, including the proposed residential, business, recreation and tourism land uses, has the potential to impact on oyster aquaculture through reduction in fish habitat and water pollution from sources such as urban runoff.

In order to assess the potential impact of the subject proposal on oyster aquiculture, the Department of Primary Industries - Fisheries (DPI Fisheries) was consulted in relation to the Fernbank Creek and Sancrox Planning Investigation Area Discussion Paper in January 2020. DPI Fisheries provided a response to this Discussion Paper on 13 March 2020 and raised a number of issues that were to be addressed as part of the development of this draft Structure Plan. These issues have been considered within this document, including the ecology assessment included as Appendix D.

Following the above consideration, land uses (such as residential, business, recreation and tourism) that may result in adverse impacts on water quality and consequently on the health of oysters and oyster consumers have substantially been avoided within identified key fish habitats, SEPP 2018 Coastal Wetlands and third order and greater waterways including Fernbank Creek, Partridge Creek and the Hastings River. The subject avoidance of land use intensification in these areas and associated buffers is intended to minimise key threatening processes and any subsequent water pollution to these ecosystems in accordance with Schedule 6 of the *Fisheries Management Act* 1994 and Policy and Guidelines for Fish Habitat Conservation and Management (2013 Update).

Potential impacts to in-stream aquatic habitat associated with the proposal (including native riparian vegetation and large woody debris) have also been minimised through substantial avoidance of land use intensification within identified key fish habitats, SEPP 2018 Coastal Wetlands and third order and greater waterways including Fernbank Creek, Partridge Creek and the Hastings River. Any development within these areas subsequent to changes in adjoining land use provisions (such as waterway crossings) would be required to comply with relevant legislation, regulations and guidelines, including the provisions of the *Fisheries Management Act* 1994.

Further detail in relation to the environmental values of the site are provided within Appendix D of this report.

6.2 Flooding

Figure 6 below illustrates the identified flooding constraints (including potential climate change impacts) within the PIA. Within this draft Structure Plan, urban development within the illustrated flood affected areas has been avoided as far as practical, to both reduce the risk of flooding impacts to new development, and reduce the risk of development affecting existing floodplain capacity and flood characteristics.

If encroachment within the flood planning area for development is appropriately justified and supported, analysis of the effects of the encroachment would be required as part of the planning proposal process in accordance with the NSW Government's Flood Prone Land Policy and Floodplain Development Manual as applicable. In addition to the consideration of the flood planning area, localised catchment drainage and flooding constraints will also need to be assessed and considered in the preparation of any relevant planning proposal within the PIA.

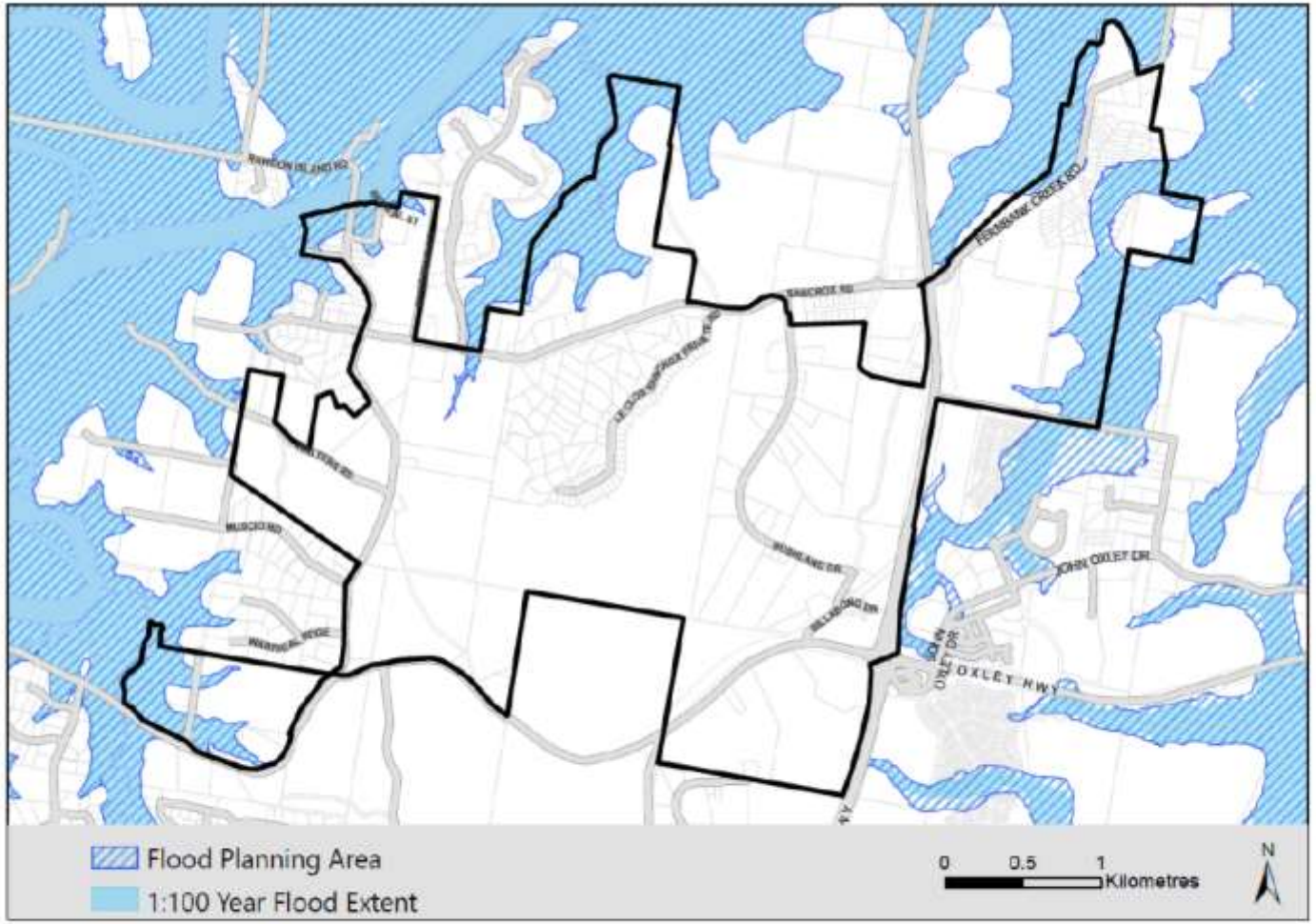

Figure 6 - Flood Mapping

6.3 Aboriginal Heritage

In relation to the potential Aboriginal Archaeological and Cultural Significance of the PIA, the (former) NSW Office of Environment and Heritage (OEH) has advised that a number of Aboriginal open camp sites and scattered artefacts have been identified in the area and are recorded on the Aboriginal Heritage Information Management System (AHIMS), particularly to the north of Sancrox Road.

OEH has also flagged that it is possible that additional sites of tangible and/or intangible Aboriginal Cultural Heritage significance may exist in potential urban, employment and rural-residential areas, which may warrant further consideration through the planning process in consultation with the Local Aboriginal Community.

Given the above, a basic search of the AHIMS was undertaken on 1 December 2020. This search identified 34 sites within and adjacent to the PIA. An extensive AHIMS search was subsequently undertaken on 1 December 2020 to more accurately determine the location of these 34 sites.

The above searches identified various sites within Sancrox Village north of Sancrox Road and within the centre and the east of the PIA. It will be critical that these sites, and the potential for additional sites, are investigated in detail as part of any future planning proposal which may impact upon land within the PIA. These investigations are to assist in understanding the location, extent and significance of known and potential sites in consultation with the Birpai Local Aboriginal Land Council (BLALC), Traditional Owners and other Aboriginal Community groups. Information gained through these investigations are to assist in directly informing the conservation and development outcomes of any given area of the PIA.

In addition to the above, the BLALC were consulted during the development of this draft Structure Plan. This correspondence outlined the following requirements for future Planning Proposals within the PIA:

- It is good that a number of areas (open camp sites and scattered artefacts) have been identified already to be considered as part of the assessment process.
- Aboriginal Culture is predominantly oral and therefore there are few documented recordings of areas of cultural significance in the region. That information is known by a variety of Aboriginal Elders and Knowledge holders.
- There are likely to be a number of areas of Cultural Heritage Significance to the Aboriginal Community that have not been identified in AHIMS. These may be able to be identified through further consultation and investigation.
- The Birpai LALC is happy to be involved in discussions of the proposal but recommends also consulting with Traditional Owners and other Aboriginal Community groups.
- Full Aboriginal Heritage Investigations, including engaging Aboriginal Sites Workers needs to be done as part of the Planning Investigations to feed into the recommendations for the project moving forward.

The above requirements are to be implemented in relation to any future planning proposals within the PIA.

In addition to the above, an intensive Aboriginal Cultural Heritage Survey should be undertaken to inform any given development application in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales. This survey is to determine whether Aboriginal Objects are likely to occur within any given proposed development footprint within the PIA. Such surveys should be conducted by an appropriate qualified and experienced archaeologist(s) and Aboriginal Sites Worker(s) and be informed through consultation with the BLALC, Traditional Owners and other Aboriginal Community groups.

6.4 Non-Aboriginal Heritage

In relation to areas of potential non-Aboriginal archaeological and cultural heritage significance, no sites have been identified within the PIA as detailed within the Port Macquarie-Hastings Local Environmental Plan 2011 and the NSW Heritage Register, with the nearest identified site being the Old School House on Rawdon Island, approximately 850 metres to the north west of the PIA.

Notwithstanding the above, further assessment and consideration of potential non-Aboriginal Heritage should be undertaken during future planning proposal investigations as relevant to determine the potential non-Aboriginal archaeological and cultural heritage significance of any given proposed development site.

6.5 Important farmland

The NCRP has identified five areas within the PIA as Important Farmland. These areas are illustrated within Appendix C of this report.

Any areas identified within the NCRP as Important Farmland which have not been identified as an Investigation Area for Urban or Employment Land in the NCRP and are proposed for urban use have been subject to further assessment as part of this report. This is intended to ensure that any proposed

intensification in land use does not impact upon the viability of important farmland resources.

The above assessment incorporates an Agricultural Impact Assessment, including assessment against Appendix B of the NCRP Important Farmland Interim Variation Criteria, as detailed within Appendix C of this document. For the purpose of this assessment, only areas proposed for potential intensification of land use outside of the NCRP identified Urban Growth Area have been considered.

The agricultural impact assessment included as Appendix C to this report has found that the soil characteristics are favourable for agriculture. This assessment has also identified that the sites have been subject to past agricultural land use, including viticulture.

Notwithstanding the above, the assessment has found that the subject mapped Important Farmland is generally isolated from other Important Farmland and is not capable of supporting sustainable agricultural production due to significant land fragmentation. This assessment has also found that the land use does not increase the likelihood of conflict and does not affect current adjoining land (given the current absence of agricultural land use), or future (given the current constraints and surrounding land uses) agricultural activities in the locality. This assessment has also demonstrated consistency against Appendix B of the NCRP.

Notwithstanding the above, the NCRP recognises that agricultural activities, such as horticulture, are growing rapidly on smaller holdings across the North Coast. The NCRP states that local planning controls can help to support these industries by identifying potentially suitable locations for small-lot primary production. The NCRP also recognises that encouraging greater diversity in the agricultural sector, for example, through agritourism and the processing and packaging of produce and associated retail services, can make the sector more sustainable. The plan also states that boutique commercial, tourist and recreation activities that do not conflict with primary production offer similar opportunities.

In acknowledgement of the above, the strategic location of the Bushland Drive Site (as detailed within Appendix C) to existing urban areas and key transport corridors, and both the environmental and agricultural value of portions of the site have been identified. As such, investigation of 'Environmental Living' land use has been proposed to retain the small scale agricultural and environmental conservation values of the site within constrained areas, while facilitating urban development in less constrained areas.

Given the significant isolation, fragmentation and location of the Fernbank Creek Site (as detailed within Appendix C) in relation to a proposed residential area, along with limited other development constraints, it is proposed to integrate this site with the adjoining proposed residential land.

Given the above, it has been determined that the proposed changes in land use identified within this draft Structure Plan would not impact upon the viability of Important Farmland resources. It has also been determined that the proposed land uses recommended by this draft Structure Plan will both complement and enhance the small scale agricultural viability of the Bushland Drive Site.

6.6 Mineral Resources

The Sancrox Quarry is an existing quarry which is located to the immediate north of the PIA. It is an identified mineral resource which supplies the construction industry with a range of products. The quarry currently has an approval to operate for 20 years. However, a state significant development application is currently being assessed by the NSW Government, which in addition to expansion of the quarry, seeks to extend the operation of the quarry to 30 years. Given this operating timeframe, it is likely that the quarry would continue to operate throughout the duration of substantial development within the PIA as outlined within Section 7 of this document. The development staging of the quarry would also generally reflect the logical east to west development staging within the PIA as also discussed within Section 7 of this document.

The Department of Regional NSW – Mining, Exploration and Geoscience, Geological Survey NSW (GSNSW) was consulted in relation to this identified mineral resource in March 2020. In its response dated 23 September 2020, the Department advised *'Any determination of the Sancrox Quarry Expansion Project (SSD 7293) would likely see GSNSW place a 1km transition area (buffer) around any approved expansion disturbance area (as the quarry uses blasting techniques). Accordingly, GSNSW advise that the associated transition area would slightly encroach further into Areas B3, B1 and A1. Transition areas are an indicative area surrounding an identified resource (or operating mine or quarry). They indicate an area that may possibly be impacted by potential activities associated with mining or quarrying operations such as noise, vibration, dust, traffic etc. Transition areas 'flag' the possibility of not only potential impacts from active extractive operations, but conversely potential impacts from proposed development close to (and possibly encroaching on) identified resource areas.*

GSNSW also advised that *'Exploration Licence (EL) 8733 held by Clean Power Resources Pty Ltd exists over a broad regional area overlapping all investigation areas excluding Area A1 (Figure 1).*

Identification of the title is to make the Council aware that there are other mineral stakeholders with interests in the region.'

Nearby identified mineral resources, the proposed Sancrox Quarry Expansion Project and associated transition areas are illustrated within Figure 7 below.

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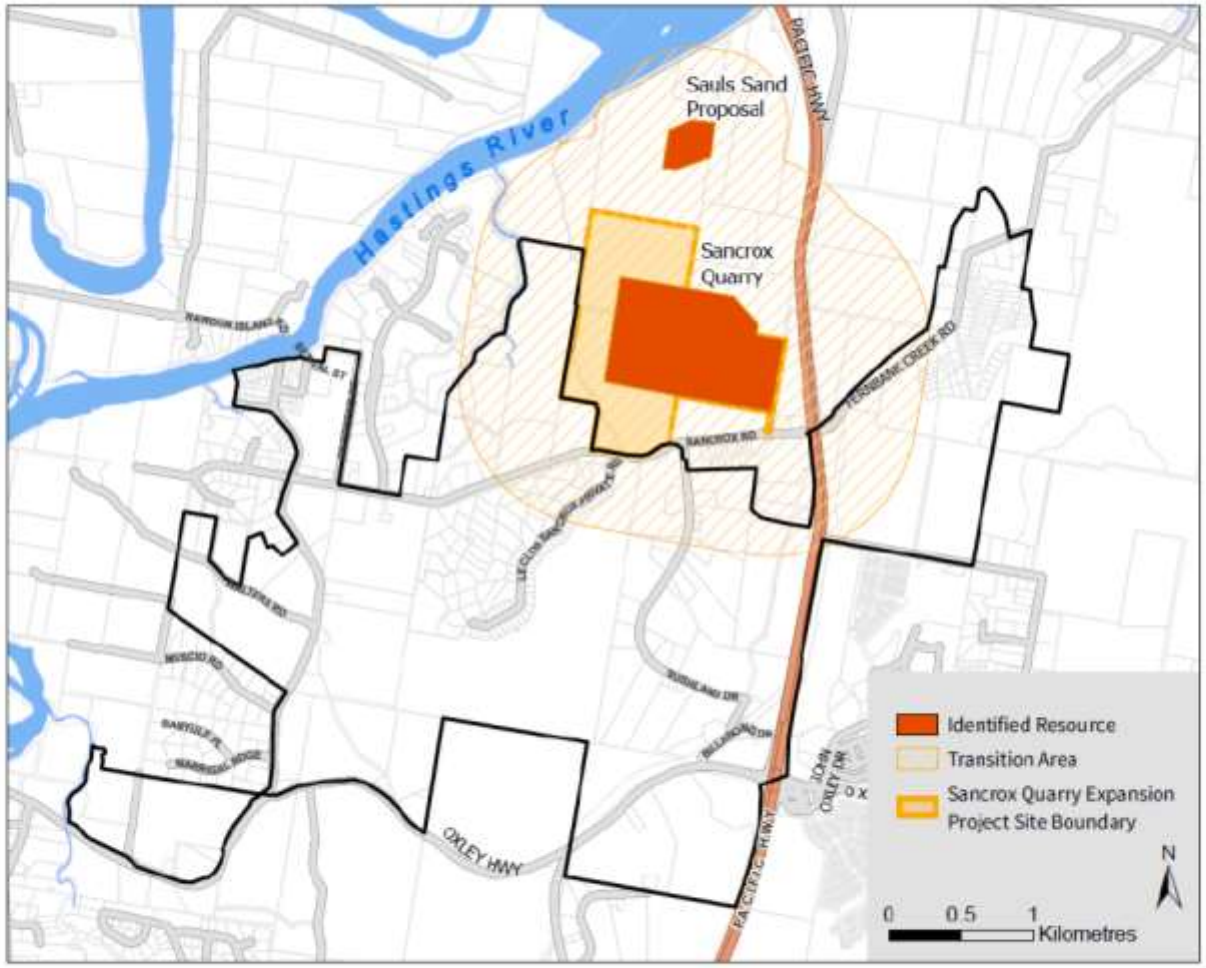

Figure 7 - Mineral Resources

In relation to potential land use conflicts between the proposed Sancrox Quarry, the Sancrox Quarry Expansion Project and adjoining areas within the PIA, the Sancrox Quarry Expansion Project Environmental Impact Statement (EIS) (ERM 2019) has been considered in the development of this draft Structure Plan. Whilst it is understood that the quarry expansion proposal may be refined in response to submissions received in relation to the public exhibition of the EIS, the EIS has been referenced as the best available source of information at the time that this draft Structure Plan was developed. It is also anticipated that any existing quarry impacts, or any impacts as a result of the refinement of the proposal are likely to be less than those associated with the current Sancrox Quarry Expansion proposal as detailed within the EIS.

In relation to the potential impacts of the quarry expansion, the EIS identified that both construction and operational noise levels have the potential to exceed the applicable criteria, limits and thresholds if they are not suitably mitigated. The assessment also identified that blasting overpressure and vibration levels have a limited potential to exceed the applicable criteria. In addition to noise and vibration, the EIS assesses other potential impacts including air quality, hydrology, soil and water, traffic, social and amenity impacts which may occur as a result of the construction and operation of the quarry.

In relation to potential impacts, the EIS recommends a number of mitigation, management and monitoring options to reduce these potential impacts. In relation to potential exceedances of the Approved Methods Criterion for air quality, the EIS found that the level of impact to surrounding sensitive receptors is considered to be acceptable under the Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industries Developments (NSW Government 2018).

Overall, the EIS concluded that there were no significant environmental impacts identified during the preparation of the EIS that cannot be mitigated by appropriate mitigation and management strategies.

Notwithstanding the above, as this draft Structure Plan proposes land use intensification within the vicinity of the quarry, the potential impacts of quarry operations in relation to any change in land use should be considered as part of any subsequent relevant Planning Proposal within the PIA. This consideration is particularly important for any proposed land use intensification within the 'transition area' within the north eastern section of the PIA.

6.7 Bush Fire

The majority of the PIA is prone to bush fire hazard due to its highly vegetated nature and setting (see figure 8 below).

Significant vegetation and subsequent high risk bush fire prone land is concentrated in the central and eastern sections of the Sancrox area of the PIA, particularly along the ridgelines. In relation to the Fernbank Creek Area, significant vegetation and subsequent high risk bush fire prone land is concentrated along parts of the riparian corridor in the west and within the highly vegetated areas to the south and east. Land use intensification has been avoided within these areas as part of the development of this draft Structure Plan.

Bush fire constraints associated with existing vegetation are considered a major issue within the PIA and are likely to be exacerbated by climate change impacts over coming years. In consideration of this risk, in relation to areas identified within the draft Structure Plan for potential land use intensification, areas of Category 1 and 2 vegetation and vegetated ridgelines have generally been avoided and the suitability of the road network (which may facilitate evacuation and access for emergency services) has been considered. Consideration of these factors will also assist to ensure that any potential future development will not adversely affect existing development in relation to potential bush fire risk.

Any future development of land within bushfire prone areas of the PIA will be required to provide asset protection zones, access/egress for emergency services, adequate water supply and meet other relevant requirements of the Rural Fire Service's Planning for Bushfire Protection 2019 Guideline. This information is to be assessed as part of a Strategic Bush Fire Study (SBFS) which is to be undertaken as part of the progression of any subsequent planning proposal applying to the PIA. Any given SBFS will also need to consider existing development land use activity, be it realised or approved and current land use zoning opportunities. The SBFS will also need to identify current and required emergency management provisions for the study area including road linkages to the Port Macquarie Town Centre, hospitals and other community facilities, reticulated water services, emergency services provisions (delivery and meeting/information hubs), communication and electricity services (use of appropriate materials to resist bush fire impacts and retain continuation of services). This will ensure that bush fire hazard, and subsequent appropriate safeguards, can be considered in relation to specific development types and locations.

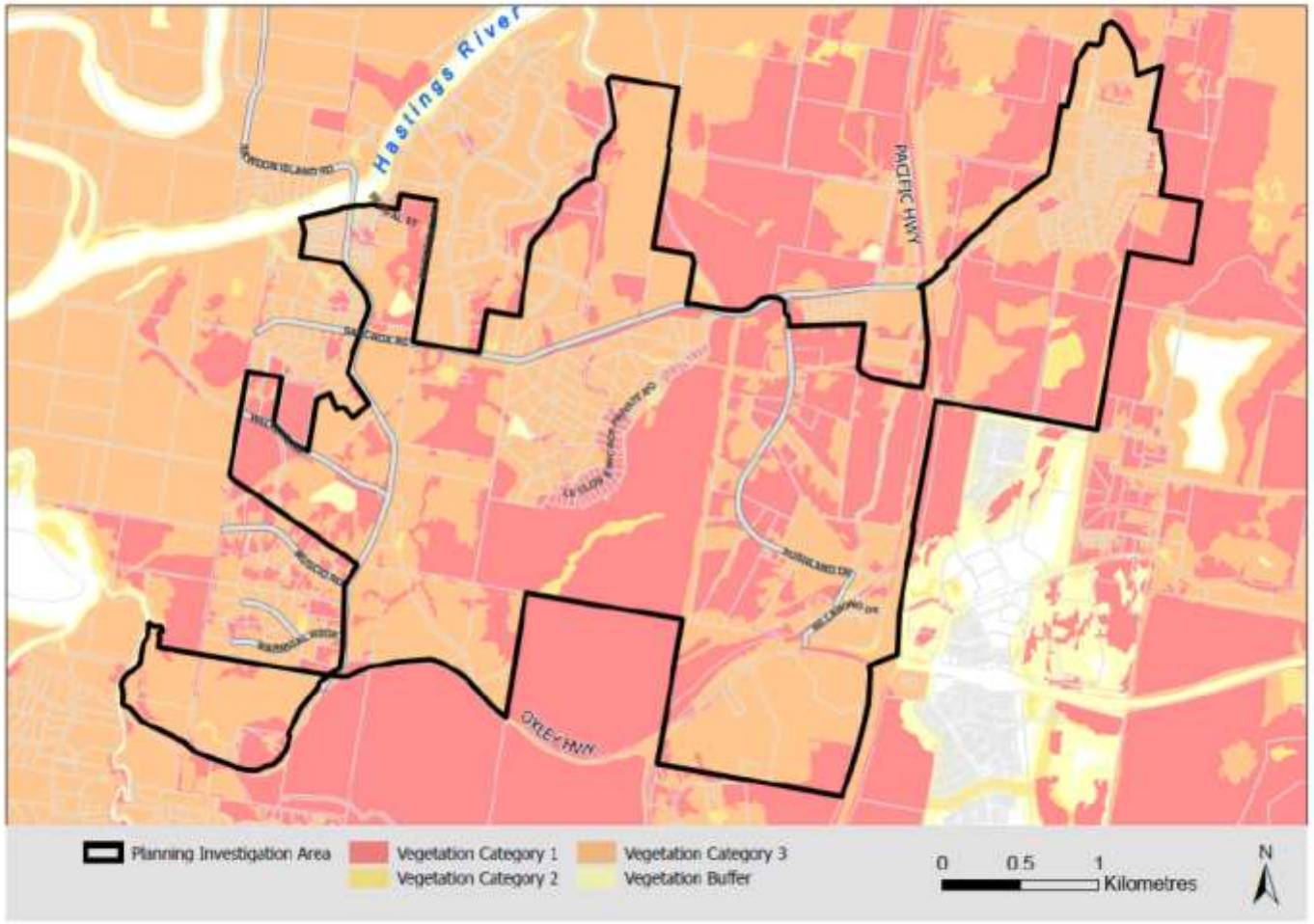

Figure 8 - Bush Fire Prone Land

6.8 Acid Sulphate Soils

Figure 9 illustrates identified acid sulphate soils within the PIA from Council's Local Environmental Plan Mapping. Within this draft Structure Plan, land use intensification within identified acid sulphate soil areas has generally been avoided, to both reduce the risk of impacts to new development, and reduce the risk of development affecting existing acid sulphate soil areas and the environment.

Where proposed development encroachment into acid sulphate soil areas is identified within this draft Structure Plan or is otherwise appropriately justified and supported, analysis of the effects of the encroachment would be required as part of the planning proposal process in accordance with the NSW Government's Acid Sulphate Soil Manual.

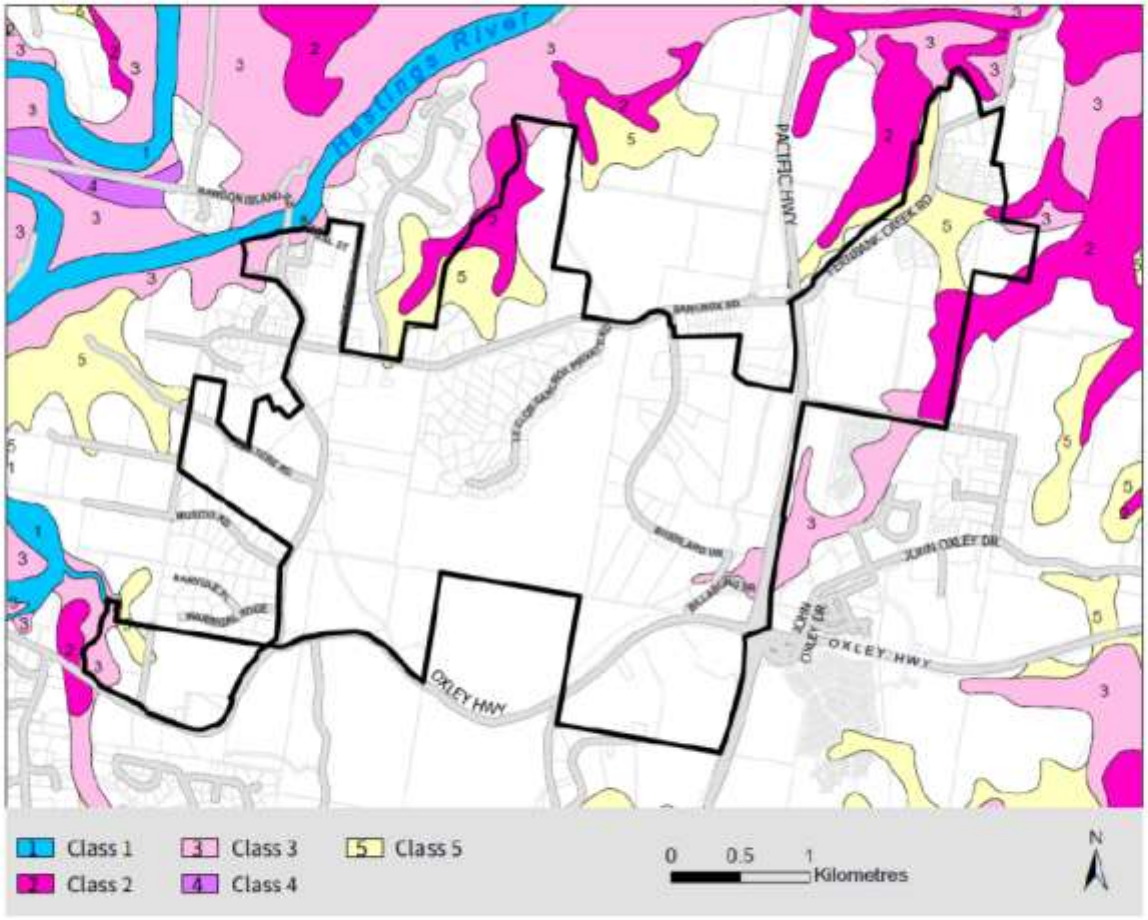

Figure 9 - Acid Sulphate Soil Map

6.9 Contaminated Land

In relation to contaminated land, a search of the NSW Environment Protection Authorities contaminated land register has been undertaken to determine the presence of such known sites within the PIA. While no sites where identified, further desktop assessment of Council's records has identified mapped isolated potential contaminated land within the PIA at Lot 21 DP0884483 (former Service Station and General Store on Rawdon Island Road) and Lot 49 DP0776681 (former Fuel Storage Site and former workshop on Sancrox Road).

It can be noted that a Stage 1 Site Contamination Assessment was undertaken for Lot 49 DP0776681 associated with the preparation of a Planning Proposal for 'Le Clos Sancrox' in September 2019. This assessment found the site to be appropriate for proposed residential development from a site contamination perspective provided the recommendations and advice of the report are adopted.

In accordance with NSW State Government requirements, a preliminary investigation of the land is to be carried out in accordance with the contaminated land planning guidelines with the progression of any relevant planning proposal within the PIA. Subsequent assessment and works may be required depending on the outcomes of the Stage 1 assessment.

6.10 Social, Economic and Liveability Considerations

According to the Australian Bureau of Statistics (ABS), based on information from the 2016 census, Sancrox had a population of 572, with a median age of 46. This population is made up of mostly couple families without children (53%), followed by couple families with children (38.6%). Detached housing makes up 94.2% of housing, predominantly of three or more bedrooms. 79.5% of people travel to work by car, with only 6.2% of people being a passenger. The highest industries of employment for residents are education and healthcare, with median personal income of $682, median family income of $1,662 and median household income of $1,449 per week respectively. These income levels are generally comparable with NSW and Australian averages.

For Fernbank Creek the population was 133, with a median age of 45. This population is made up of mostly families with children (50%), followed by couple families without children (33.3%). Detached housing makes up all housing, predominantly of three or more bedrooms. 62.1% of people travel to work by car, with only 4.8% of people being a passenger and 20.6% of people working from home. The highest industries of employment for residents are government administration and medical services, with median personal income of $587, median family income of $1,392 and median household income of $1,321 per week respectively. These income levels are below NSW and Australian averages in all instances.

In relation to Thrumster, the population was 417, with a median age of 30. This population is made up of mostly families with children (56.4%), followed by couple families without children (38.5%). Detached housing makes up all housing, predominantly of three or more bedrooms. 77.6% of people travel to work by car, with only 5.9% of people being a passenger and 4.8% of people working from home. The highest industries of employment for residents are aged care residential services and hospitals, with median personal income of $829, median family income of $1,916 and median household income of $1,885 per week respectively. These income levels are above NSW and Australian averages in all instances.

In relation to the demographics of the Port Macquarie - Hastings Local Government Area (LGA), the LGA had a population of 78,539 in 2016, with a median age of 48. This population is made up of couple families without children (49.1%), followed by couple families with children (33.4%). Detached housing makes up 73.4% of housing, predominantly of three bedrooms. 75.6% of people travel to work by car, with only 4.3% of people being a passenger. The highest industries of employment for residents are healthcare and aged services, with median personal income of $540, median family income of $1,300 and median household income of $1,042 per week respectively. These income levels are below NSW and Australian averages in all instances and are also below the statistics for the PIA.

As detailed within the UGMS, between 2017 and 2036, the age structure forecasts for the Port Macquarie - Hastings Council area indicate a decrease in the proportion of the population under working age (17 years and under) and an increase in population of retirement age (70 years and over). The number of people in the population aged over 60 years is forecast to reach 37,000 by 2036, about 36% of our predicted population.

In consideration of the LGA's aging population, as detailed within the UGMS, the challenges that the community will face in the coming 20 years include a decline in the percentage of our population that is active in the workforce and the need to encourage builders and developers to provide a variety of housing products that fit a wide range of lifestyle choices, with a particular focus on providing dwellings that suit an older population. These challenges have been taken into consideration as part of the subject planning investigation to ensure appropriate consideration is given to providing

housing, facilities and services to cater for the future needs of the community.

In relation to wider social and liveability considerations, the Heart Foundations Healthy Active by Design (HAD) principles have been used as a reference to determine how we can promote healthy lifestyles through strategic planning of communities. These principles are:

Public Open Space - A range of walkable, appealing and public open spaces helps meet recreational, play and social needs. An example of an existing public open space (Sancrox Reserve) immediately west of the PIA is provided within Plate 1 below.



Plate 1 - Public Open Space (Sancrox Reserve)

The HAD specifies that residents with larger neighbourhood parks within 1600 metres engage in 150 minutes more recreational walking per week than those with smaller parks. In order to ensure that this can be achieved, centrally located larger neighbourhood parks within Sancrox Village, Fernbank Creek Village and East Sancrox Village would ensure all residents have access to a large public open space within 1600 metres. These public open spaces would be a minimum of 1 hectare in size, would incorporate other public open space elements and would be interconnected using shared movement networks (such as pedestrian and cycle routes) as discussed below. In addition, these larger parks would be supported by smaller public open spaces with a minimum size of 5,000m² within each of the villages to ensure that all community members have access to an open space within 400 to 800 metres of each residence as recommended by the HAD.

The large public open spaces at Sancrox Village, Fernbank Creek Village and East Sancrox Village would also be co-located with community facilities, neighbourhood centres and medium density housing to create a destination and sense of place for the future village centres. Each village centre would be centrally located within the residential area to balance passive surveillance, visual prominence within the neighbourhood and accessibility.

Community Facilities - Co-located and integrated facilities, such as schools and recreational facilities, maximise community interaction and efficiency of travel. In order to ensure these facilities are centrally located within the community, multifunctional villages centres within Sancrox Village, Fernbank Creek Village and East Sancrox Village will combine medium density living, commercial and open space uses to create a sense of place and destination within the village centres.

The Sancrox and Fernbank Creek Village centres are proposed to have dedicated community facilities with a floor space of approximately 580m² on land of approximately 2000m².

The East Sancrox Village will untilise the nearby Sovereign Hills Community facility. These villages would also utilise and support existing schools, businesses and community facilities within Thrumster due to the proximity of these areas to existing Thrumster services and facilities.

Buildings - Consideration can be given to designing buildings and sites that specifically support increased levels of physical activity, whether incidental or deliberate. While not specifically relevant to the current planning investigation phase, provisions to achieve optimal building design should be considered in the preparation of planning proposals, development applications and development control plan(s) applicable to the PIA.

Destinations - Consideration has been given to creating compact mixed-use neighbourhood centres within the PIA which may include employment, education, public transport and fresh food outlets interwoven with cycling, walking and public transport access. The HAD states that people with access to 'main-street' centres are over 7 times more likely to walk for over an hour each week and people living within 1600m of a 'big-box' shopping centre are 3 times more likely to walk within their neighborhood. This tendency towards active transport assists in promoting healthy lifestyles, a more connected community and a stronger community identity. As detailed within the HAD, higher-density housing in and around the centre is also important, to support the destinations, facilities and high-frequency public transport.

In consideration of the above, multifunctional village centres have been proposed within the Sancrox Village, Fernbank Creek Village and East Sancrox Village Centres to achieve these principles.

East Sancrox Village would also utilise existing 'destination' or 'town centre' facilities within Thrumster, east of the Pacific Highway due to the relatively close proximity of these existing facilities to these locations.

Movement Networks - Consideration has been given to safe and convenient travel within

neighbourhoods through accessible and connected walking, cycling, and public transport routes. Such movement networks have been integrated into this draft Structure Plan to connect residential areas, open space, village centres and community facilities between villages. These wider connections would be supported by footpaths within residential and medium density residential areas throughout all areas of the PIA.

Housing Diversity - Housing density and diversity can support critical infrastructure, connect neighbourhoods and help people age in place. The importance of encouraging a diversity in housing choice is detailed within Part 3 of the UGMS and Planning Priority 7 of the LSPS.

Specifically in relation to higher density living, Planning Priority 7 of the LSPS describes the benefits of medium density (which is referred to as the 'missing middle', refer to Figure 10 below) and higher density housing. This includes social, economic, health and environmental benefits of higher density living.

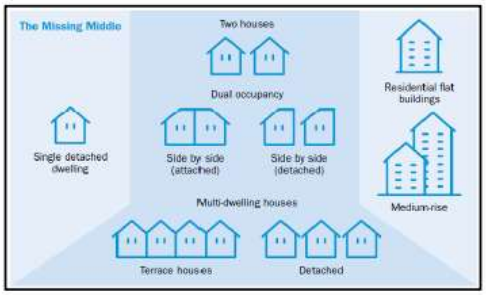

Figure 10 - 'The Missing Middle'

The LSPS also highlights the current dominance of low density housing within the Port Macquarie - Hastings LGA and the need to encourage more higher density living. In this regard, to support the changing population and dwelling needs and encourage higher density development, a 40 per cent target has been set for new dwellings within the LSPS and NCRP to be in the form of apartments, dual occupancies, townhouses, villas and homes on lots less than 400 square metres by 2036. In order to ensure the social, economic, health and environmental benefits of such housing can be maximised, concentration of this type of housing close to services and facilities is preferable. These factors have been considered alongside the geographic distribution of developable land within the PIA, forecast housing demands as detailed within the UGMS and LSPS, other HAD principles as detailed within this report and the submissions received in relation to the public exhibition of the Fernbank Creek and Sancrox Planning Investigation Area Discussion Paper to develop a framework of three main housing types for the PIA. These housing types are medium, general and low density housing.

High density housing (for example residential flat buildings) has not been proposed for the PIA as locations such as the Port Macquarie Central Business District and Health and Education Precinct are likely to be more appropriate for this type of development. These locations would ensure a high density of residents are concentrated within areas very well serviced by infrastructure, employment and services.

In relation to the location of medium density housing, this housing type would be located within Sancrox, East Sancrox and Fernbank Creek Villages within close proximity to services and facilities. However, in order to determine the appropriate geographic distribution of medium density housing, the 'Plan Melbourne' principle of 20-minute neighbourhoods has been considered. This principle outlines that access to services should be provided within a 10 minute walk (or 20 minute round trip), which can be represented by an 800m return walking radius as detailed within the figure below.



Figure 11 - The measure of 20-minute neighbourhoods (800 metre walkable catchments). Source: DELWP Victoria

Given the above, the geographic distribution of the medium density housing area is based on proximity to the Sancrox Village Centre, East Sancrox Village Centre and Fernbank Creek Village Centre and topography, which directly influences walkability.

In consideration of these factors, the southern side of Sancrox Road, the north and south of the East Sancrox Village centre and to the south, north and east of the Fernbank Creek Village centre comprise elongating slopes which, despite being within close proximity of the village centres within these locations, limit the walkability of the site and subsequent access to facilities and services. Therefore, the amount of medium density housing within the 20-minute round trip walking radius is restricted. Lots on the eastern side of the proposed village centre at Sancrox Village are also segregated by an environmental corridor, also restricting

walkability. On the northern side of Sancrox Road, the topography is relatively flat. As such, in this location a 400m radius of medium density housing has been adopted.

Lower density general residential housing would then be established outside of these medium density areas to support the core areas in Sancrox Village, East Sancrox and Fernbank Creek Village. This type of housing, while still being connected to Sancrox Village, East Sancrox, Fernbank Creek Village and the Thrumster Town Centre, would provide generally for larger lot sizes and detached dwellings as pictured within Plate 2 below.



Plate 2 - Detached Residential Housing Construction West of Port Macquarie

The third housing type which has been proposed within the PIA is rural residential and environmental living. This type of housing is generally comprised of single dwellings and ancillary buildings on large lots (for example 4000m² -10,000m²). These locations may facilitate significantly lower density residential development in consideration of environmental values, distance from facilities and services and a number of submissions received in relation to the public exhibition of the Fernbank Creek and Sancrox Planning Investigation Area Discussion Paper which sought future residential development on large lots. This type of housing, while facilitating significantly less housing opportunity to meet forecast demand in comparison to the other housing types as described above, will facilitate semi-rural lifestyle opportunities and maintain a level of rural amenity within areas that are more disconnected from village and town centres and/or adjoin existing rural and rural residential land uses.

In relation to the long term economic sustainability of each of the housing types discussed above, Planning Priority 2 of the LSPS discusses the economics of 'greenfield development' as opposed to 'urban consolidation' and the importance of assessing the efficiency and long-term economic sustainability of development for Council and the community.

Initial work undertaken by Council in early 2021 to assess community income in relation to housing types identified the examples provided within Table 1 below.

Table 1 - Community income per hectare by housing type

Location	Housing Type	Rates Income Per Hectare (000s)
Port Macquarie	High Density Residential	$381,000
Thrumster	Duplex	$49,000
Thrumster	Single Detached Dwelling	$46,000
King Creek	Rural Residential	$2,000

The above examples show that high density residential development within existing town centres can generate more than 7 times more income per hectare for the community compared with duplexes, more than 8 times more income per hectare than detached standard residential houses and more than 190 times more income per hectare when compared with rural residential development.

In relation to expenditure to service these development types, lower density development further from town centres such as Port Macquarie and Wauchope require more infrastructure such as roads, drainage, water, sewer and services such as waste collection (as applicable) over greater distances to service fewer residents. This discrepancy between income and expenditure results in fewer resources being available to the community for other services and may ultimately result in an income deficit to service economically inefficient development types.

This draft Structure Plan has sought to increase the efficiency of land use and housing supply in comparison with earlier work undertaken by Council to inform the Greater Sancrox Structure Plan 2014 - 2034. However, the most efficient and high value development type for the community will continue to be infill development, including high density development within existing town centres. Promotion of this development type is a key focus of the LSPS and the NCRP.

Sense of Place - A sense of community emerges when residents have opportunities to meet and interact in attractive places of interest. Such a community 'hub' is provided by the existing Thrumster town centre and is also proposed through the establishment of the Sancrox Village, East Sancrox and Fernbank Creek Village centres. These hubs are proposed to be supported by a diverse range of housing types, with higher density housing closer to services and facilities, bordered

by green space and connected by transport links, including pedestrian and cycle paths radiating from the fringes of the PIA into the Thrumster Town Centre, Sancrox Village and Fernbank Creek Village centres.

Heathy Food - Planning for food demands focus on production space, transport infrastructure and availability and access to healthy food options within walking distance of houses, as well as in schools and workplaces. On a broader social level, improving transport and accessibility to healthy food options promotes healthy eating, particularly to the disadvantaged. Wider again, creating community gardens can help community interaction while promoting mental, physical and environmental aspects. And, finally, safeguarding land for food growing and ensuring efficient transport infrastructure to deliver food should also be considered.

To integrate the above considerations into the PIA, an agricultural impact assessment has been undertaken to assess the impact of land use intensification on the food production capacity of land. Opportunity would also be provided for fresh food retail in the Thrumster town centre, the Fernbank Creek Village centre and Sancrox Village centre. Efficient transport links have been proposed within the precinct, prioritising pedestrian mobility, then cyclist mobility, public transport and finally vehicular transport. The PIA is also located adjacent to the major logistics corridors of the Pacific Highway and Oxley Highway. Community gardens (as illustrated within Plate 3), edible landscapes and activities such as farmers markets could also be facilitated through the proposed establishment of green spaces within the PIA, particularly within the Sancrox and Fernbank Creek Village centres.



Plate 3 - Example of a community garden

In applying the above principles, centrally locating public open space, community facilities and destinations and connecting them through efficient movement networks is intended to maximise the promotion of healthy lifestyles within the PIA.

In addition to the HAD, the draft discussion paper 'Greener places: establishing an urban Green Infrastructure policy for New South Wales' (Government Architect, October 2017) is intended to guide the planning, design and delivery of Green Infrastructure in urban areas across NSW. It aims to create a healthier, more liveable and sustainable urban environment. It states 'Green infrastructure should be developed as a network rather than separate elements. Green Infrastructure is essential and needs to be considered as an asset in its own right.' The principles of the draft policy are:

- **Integration** - combine Green Infrastructure with urban development and grey infrastructure.
- **Connectivity** - create an interconnected network of open space.
- **Multifunctionality** - deliver multiple ecosystem services simultaneously.
- **Participation** - involve stakeholders in development and implementation.

Each of the above principles has a series of 'design actions' which can be implemented to achieve the intent of the principles. It can also be noted that similar objectives are also included within the NSW Government Architect's guide 'Urban Design for Regional NSW'.

There are many similarities between the principles detailed within 'Greener places: establishing an urban Green Infrastructure policy for New South Wales', the 'Urban Design for Regional NSW' and the HAD. Relevant aspects of all three documents have been considered in the development of this draft Structure Plan to ensure the relevant environmental, economic and social benefits of these documents are realised in relation to the PIA.

6.11 Water, Sewerage, Stormwater, Electricity and Telecommunications

There is currently no reticulated sewer within much of the PIA. In addition, a high level review in relation to sewerage infrastructure undertaken as part of the development of this draft Structure Plan has identified that many areas, including west of Sancrox Employment Precinct, are outside of the existing sewer design catchment. As such, much of the area within the PIA has not been included within existing design flow calculations. Subsequently, there is currently no capacity in the existing infrastructure or future designed infrastructure to support development within much of the PIA.

Given the above, it is likely to be most cost effective to rebuild existing sewerage infrastructure and construct required new sewerage infrastructure in a staged manner in consideration of ultimate design loads for the wider catchment. Respective property developers would be responsible for the cost of investigation and implementation of such sewerage infrastructure.

With regard to water supply, based on current projections it is likely that existing major water infrastructure will be sufficient to cater for the increased demand. With regard to direct servicing, dual reticulation will be required for future urban areas and Council will consider options to achieve this in the most economical manner, including possible connections from the Thrumster Release Area to the east and the Sancrox Reservoir.

In addition to the above, it can be noted that the preparation of an Integrated Water Cycle Management Strategy (IWCMS) to determine future water, sewerage and stormwater needs is currently being undertaken. The IWCMS will include regional planning strategies for a minimum of 30 years and will consider best practice water sensitive urban design in order to minimise potential stormwater impacts on aquatic environments. The IWCMS will also assist to address overall water security and sustainability considerations.

With regard to site drainage and waterways, the majority of the Sancrox and Fernbank Creek PIA drains to the Hastings River, with the exception of a small catchment in the far south east of the site which drains towards Lake Innes.

Controls for stormwater capture, treatment and re-use will need to be devised to accommodate future growth within the PIA. Detailed stormwater analysis will need to be undertaken as part of any subsequent planning proposal and include:

- Identification of existing stormwater quantity site constraints and local stream and riverine flood extents within the catchment.
- Identification of existing water quality characteristics and potential impacts on downstream waters.
- Recommendations for best practice stormwater treatment systems.
- Demonstrated ability to access downstream areas to accommodate post-development flows, including a stormwater model for the precinct and overall catchment.
- Identification of approximate locations for critical stormwater infrastructure with the aim of ensuring a low on-going maintenance burden to Council.

In relation to electricity and telecommunications, upgrades to this infrastructure to cater for development within the PIA will be required. In order to determine the required extent of such upgrades, consultation with network operators has been undertaken in the development of this draft Structure Plan. Initial feedback received by Council is that further consultation with utility operators should be undertaken until the draft Structure Plan has been prepared. As such, further consultation with Essential Energy, Telstra and NBN Co will be undertaken in relation to this draft Structure Plan, with any requirements resulting from this consultation informing the final Structure Plan, subject to a Council Resolution to facilitate this process.

6.12 Waste Management

The Cairncross Waste Management Facility, an existing Council owned waste management facility, is located approximately 10 kilometers north of the PIA. Under existing operating conditions this facility is anticipated to run out of landfill space in early 2022. However, a new cell will be constructed in 2021. Once the new landfill cell is completed, the overall landfill life of the facility will be approximately 36 years.

Forecast additional waste generation attributable to potential development within the PIA, based on the most recent domestic kerbside domestic waste audit (2015), is detailed within Table 2 below.

Table 2 - Forecast Waste Generation

Domestic kerbside waste forecast	
Domestic kerbside waste tonnes landfilled per year (2019/2020)	11,058
Additional potential domestic kerbside waste tonnes landfilled per year with new development	992
Percentage increase of domestic kerbside waste	9.0%
Domestic kerbside recycling forecast	
Domestic kerbside recycling tonnes per year (2019/2020)	7,329
Additional domestic kerbside recycling tonnes per year with new development	1,046
Percentage increase of domestic kerbside recycling	14.3%
Domestic kerbside organics forecast	
PMHC Domestic kerbside organics tonnes per year (2019/2020)	12,406
Additional Domestic kerbside organics tonnes per year with new development	1,630
Percentage increase of PMHC domestic kerbside organics	13.1%

As detailed above, the development within the PIA is forecast to increase the demand on waste

collection services with increases in tonnages for the red bin (9 per cent per year), green bin (14.3 per cent per year) and yellow bin (13.1 per cent per year). It can be noted that these figures include the impact on domestic kerbside collections only, and do not include waste dropped off to facilities or construction waste.

In addition to the above, Council currently owns a Materials Recovery Facility (MRF) to manage and process household recyclables and an Organics Resource Recovery Facility (ORRF) to process food and garden organics. The MRF is outdated and is likely to require significant refurbishment or replacement within the next two years. These options are being addressed in an options report soon to be developed. However, the ORRF is currently operating under capacity and is able to accommodate the proposed increase in material generated as a result of development within the PIA.

In relation to the pursuance of sustainable waste management, Council adopted the *Developments, Public Place & Events, Waste Minimisation and Management Policy* in June 2020. This Policy sets out standards for the construction of new developments and ongoing waste management as well as public place waste infrastructure. This Policy must be referred to when new houses, parks and commercial areas are being proposed. The primary objectives of this Policy are to:

- Reduce waste to landfill.
- Maximise source separation of general waste, recycling and food and garden organics.
- Embed circular economy principles by supporting the minimisation of waste and promoting the continued use of resources.
- Establish standard provisions for determining waste management requirements in developments.
- Ensure developments are designed with adequate storage, access and management of waste.
- Embed sustainable and effective waste management practices at public places and at public events.

The Policy is referenced within Council's Development Control Plan (DCP) and is to be applied to any new development within the PIA to ensure sustainable waste management practices are sought.

6.13 Traffic and Transport

The section of the PIA west of the Pacific Highway is currently accessed from the Pacific and Oxley Highways. Primary access for the eastern side of the Pacific Highway is currently provided from the Pacific Highway to the west and Hastings River Drive to the north. The PIA also incorporates a number of local roads including Sancrox Road, Rawdon Island Road and Fernbank Creek Road. Transport services are generally limited to school bus services and local taxi services. Rail and air services are available at Wauchope and Port Macquarie respectively.

Rawdon Island Road and Sancrox Road are bitumen sealed with average carriageway widths of 5.5m to 6.0m. These roads have capacity to cater for up to 12,000 average annual daily trips (AADTs) before any additional travel lanes are required. Both Rawdon Island and Sancrox Roads are in fair to poor condition with many road segments showing signs of major pavement failures. The alignment of Rawdon Island Road north of the Oxley Highway intersection to Muscio Road is substandard, along with road shoulders in many locations.

Fernbank Creek Road is bitumen sealed with a narrow alignment susceptible to flooding in some sections. The road also incorporates several sharp corners and large trees exist within close proximity to the road formation. In addition, the current intersection configuration of Hastings River Drive and Fernbank Creek Road is also inadequate to cater for any significant increase in use. The road and intersection will require significant realignment and widening works to cater for any increased usage attributable to new development facilitated through this draft Structure Plan and any subsequent planning proposal. These realignment and widening works should occur prior to any such development which may generate increased vehicle usage of Fernbank Creek Road.

The intersection of Sancrox Road, Fernbank Creek Road and the Pacific Highway and the intersection of the Oxley Highway and Rawdon Island Road have recently been upgraded by Transport for New South Wales. In addition, the intersection of Bushland Drive and the Oxley Highway is currently subject to a Voluntary Planning Agreement which includes realignment and upgrading of the intersection to facilitate the gateway development on the western side of the Pacific Highway.

More broadly, existing and emerging traffic congestion occurs during peak times at the intersection of the Oxley Highway and Pacific Highway and further to the east at the intersection of the Oxley Highway and Wrights Road and the intersection of the Oxley Highway and Lake Road. TfNSW and Council are currently assessing traffic and transport challenges associated with the Oxley Highway corridor and the wider road network respectively.

The ability of the above existing and proposed intersection upgrades to cater for projected traffic increases attributable to development associated with this draft Structure Plan will be required to be considered as part of any subsequent planning proposal, along with required future upgrades to State and local roads. This is to include

consideration of potential traffic and transport impacts and opportunities associated with the wider transport network as relevant, including the Oxley Highway.

With regard to the Fernbank Creek Village, and more broadly the Sancrox and Rawdon Island Road villages, there is potential to connect these areas with the existing Thrumster Town Centre via Wambuyn Drive and via the establishment of a new pedestrian/cycle/road link. This link will assist in achieving improved connectivity within the locality and the liveability objectives detailed within Section 6.10 of this document and has been incorporated into the draft Structure Plan.

Council is currently undertaking a traffic and transport assessment for the Thrumster, Sancrox and Fernbank Creek localities, in addition to assessment of the wider road network. This assessment will inform future transport and infrastructure planning within the area and considers the potential development types and yields as detailed within this draft Structure Plan. The above Council assessments are in addition to the assessment of the Oxley Highway corridor by TfNSW.

Should any planning proposal within the PIA seek to proceed prior to the finalisation of these assessments, a traffic and transport assessment which considers this draft Structure Plan, including potential development yield, will be required to be prepared by the proponent to seek consistency with the overall strategic planning for the area.

With regard to public transport, there would be additional demands on local bus, air, taxi and state rail services as a result of additional urban development. It is expected these services would adjust to cater for the additional demands generated from the area. Given the proximity of the PIA to the major transport corridors of the Oxley Highway, Hastings River Drive and the Pacific Highway, the area would be well suited to future 'park and ride' facilities and services.

In addition to the above, given the proximity of the PIA to the Hastings River, maritime transport has also been considered as part of the draft Structure Plan development. Within this draft Structure Plan, maritime infrastructure (vessel launching, retrieving and docking infrastructure) has been proposed on the southern side of the Rawdon Island Road Bridge as illustrated within Figure 12 of this document, given the ability for direct access to the river from the PIA in this location. This infrastructure would allow access for vessels to the Hastings River and may also facilitate the investigation of future public maritime transport along the Hastings River to service the PIA.

With regard to future high speed rail (HSR) infrastructure, in 2013 the Australian Government released a report on the implementation of HSR on the east coast of Australia (Brisbane to Melbourne) following-on from earlier work completed in 2011. The report identified a potential high speed rail corridor and station location within the Investigation Area, immediately west of Bushland Drive. It can be noted that under the recommendations of the study the HSR network would not be fully operational until 2058.

More recently, Action 10.3 of Direction 10 *'Facilitate air, rail and public transport infrastructure'* of the North Coast Regional Plan includes the following action: *Protect the North Coast Rail Line and high speed rail corridor to ensure network opportunities are not sterilised by incompatible land uses or fragmentation*. Following on from this, in July 2018, the NSW Government released a 20-Year Economic Vision for Regional NSW. One of the key elements of the vision is better connectivity between regional centres, and from cities and international gateways, including investigation of faster and high speed rail between Sydney and Port Macquarie.

The implementation of the HSR project would be dependent on the Australian and NSW Government's interest in continuing the necessary preparatory works to inform a formal Ministerial decision to proceed.

Consultation with the NSW and Australian Government's in relation to HSR proposal has been undertaken during the development of this draft Structure Plan. Whilst Council has not been provided with any specific additional information in relation to the proposal as a result of this consultation, the proposed corridor has been indicatively included within this draft Structure Plan to ensure it is considered as part of the land use planning associated with the PIA.

7 Implementation

This section discusses the assessment process and provides a framework to determine potential land uses, implementation staging and high level process administration associated with the implementation of this draft Structure Plan.

It can be noted that change in land use is generally achieved through a combination of planning controls, design guidelines and contributions planning and/or planning agreements. Ultimately, the framework outlined within this section is intended to inform the role of these mechanisms in delivering the vision as outlined within this draft Structure Plan.

7.1 Potential Land Uses

The purpose of this draft Structure Plan is to provide a framework for the logical and sustainable long term conservation and development of the PIA. To identify which areas should be conserved or avoided, which areas may be appropriate for land use intensification and what type of intensification may be appropriate, the following key principles have been considered.

7.1.1 Which areas should be avoided?

To determine areas of the PIA where development should be avoided, the following methodology has been applied:

- Consideration of environmental and heritage constraints as detailed within Section 6 of this Structure Plan, with avoidance of areas of high environmental value and heritage in the first instance (it can be noted that identified DCP buffers have not been mapped within Figure 4, as existing DCP buffers requirements as detailed within the Port Macquarie-Hastings Development Control Plan 2013 will apply).
- Identification and avoidance of areas below the flood planning level (FPL) as detailed within the Port Macquarie-Hastings LEP 2011 as far as practical, to both reduce the risk of flooding impacts to new development, and reduce the risk of development affecting existing floodplain capacity and flood characteristics. Note that any areas illustrated as being within the flood planning area in Figure 6 should also be considered as a 'potential environmental management area' as illustrated within Figures 12 and 13.
- Application of best available information in relation to environmental values and hazards where more detailed recent and relevant planning information can be practically applied (for example where more detailed recent information has been produced to support a planning proposal).

Variations to the above principles have been illustrated within Figures 12 and 13 where justified to ensure a logical framework for land use throughout the PIA, subject to more detailed investigation during the planning proposal stage as applicable. These variations include:

- Identification of cleared areas above the FPL north of Fernbank Creek Road for potential residential development, to ensure a logical footprint for any future development.
- 'Smoothing' of serrated interfaces between the FPL and potential residential areas to ensure a logical footprint for any future development along this interface.
- Identification of isolated areas of moderate and low environmental value adjoining environmental conservation areas as environmental conservation areas.
- Identification of isolated areas of moderate and low environmental value adjacent to potential residential areas as potential residential areas.
- Identification of the Bushland Drive area as predominantly environmental living, in acknowledgement of the existing significant fragmentation of this area by rural residential development and the need to protect the environmental values of the area.
- Identification of previously identified potential long-term light industrial investigation land west of the Pacific Highway as potential long-term light industrial investigation land in accordance with Council's existing UGMS.
- Adjustment of some potential development areas to match actual mature vegetation footprints, existing land uses and/or to ensure a logical footprint for any future development.
- Adjustment of development, environmental conservation, environmental management and recreation areas to align with infrastructure such as roads.
- Adjustment of environmental land uses to ensure logical corridors and ecological footprints, this includes identification of small and fragmented areas of low and medium value environmental land for environmental conservation.

7.1.2 What type of intensification may be appropriate and when should it happen?

Following consideration of the above principles and the application of the above variations, potential areas of land use intensification have been assessed in relation to the highest and best potential development in consideration of the factors detailed within Section 6.10 of this document.

In consideration of highest and best use, the planning investigation has identified that development will likely be confined to individual development precincts. These precincts have been identified as 'villages' for predominantly residential areas and rural residential and environmental living areas as relevant based on development constraints and opportunities applicable to each site. These precinct areas are illustrated within Figure 12 below.

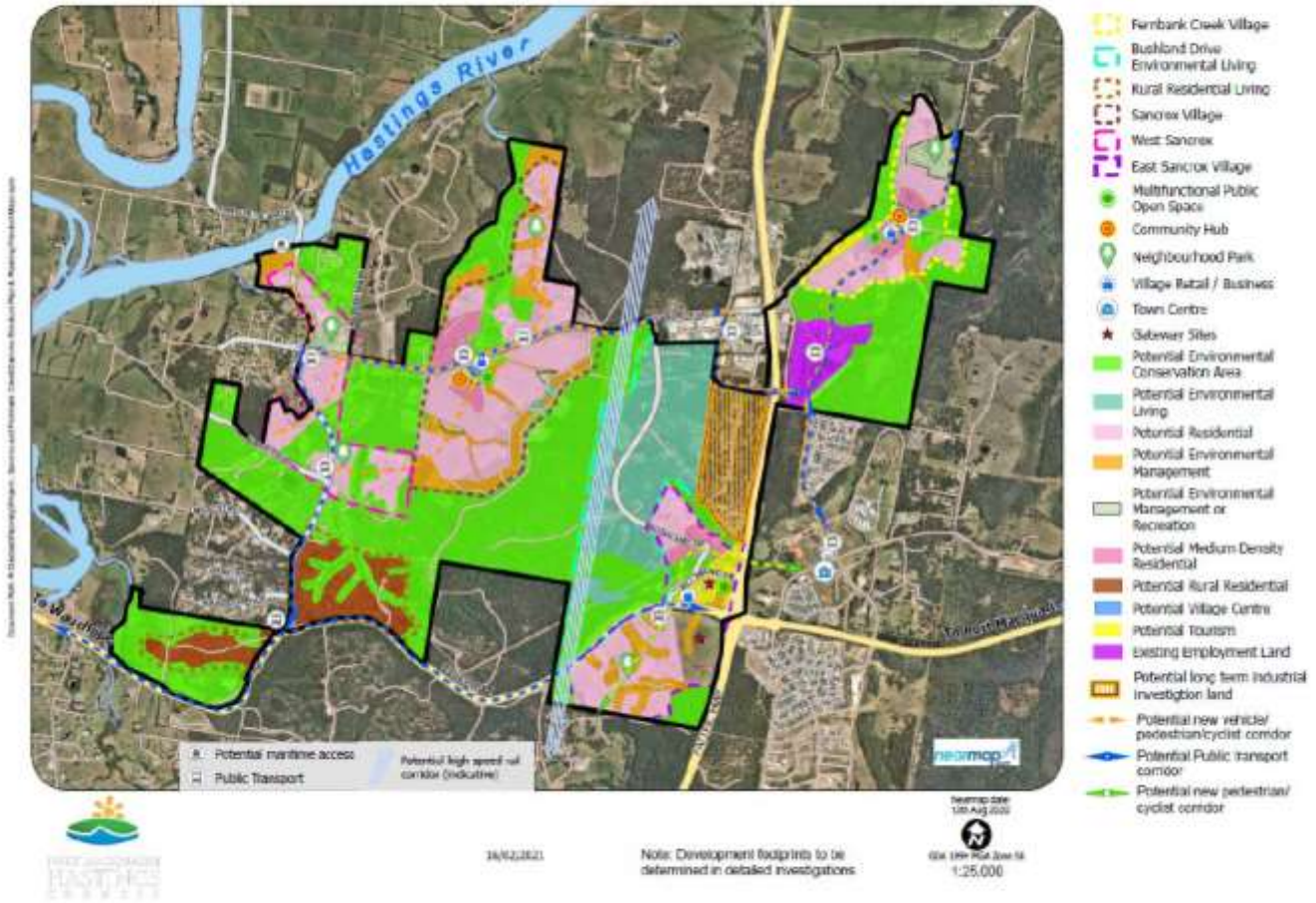

Figure 12 - Draft Fernbank Creek and Sancrox Villages Structure Plan

In consideration of existing setting, geographic distribution and potential future land use, the following section describes the opportunities, constraints and staging of each of the potential development precincts within the PIA. In relation to timeframes, the following terminology has been used to describe the staging of development:

Short term = 2 - 9 years

Medium term = 9 - 17 years

Long term = 17 - 26 + years

It can be noted that the above timeframes are indicative only and that the rate of development will not be consistent over time. As such, development staging should also be guided by land uptake and new stages of development should not be pursued until a minimum of 70 per cent of the previous phase has been developed.

Precinct 1 - Fernbank Creek Village

Description

The Fernbank Creek Village is located in an elevated position above the Hastings River Floodplain in the north east of the PIA, adjacent to Fernbank Creek Road.

At the heart of this village will be collocated neighbourhood shops, multifunctional public open space, community facilities and medium density housing. This area will provide a community hub which is centrally located within the community.

The village will also be located within close proximity to existing tourism and industrial employment opportunities immediately to the west.

Opportunities

- The site is within proximity of existing open space, education and higher order commercial opportunities at Thrumster, subject to the establishment new links between these areas.
- The site has good access to the Pacific Highway to the west and nearby future sewerage infrastructure.

Constraints

- As detailed within Section 6.13 of this document, Fernbank Creek Road is significantly under designed to cater for additional traffic. As such, substantial realignment and upgrade of Fernbank Creek Road would be required to cater for any additional traffic. The subject upgrade of Fernbank Creek Road and the establishment of pedestrian and cyclist infrastructure to connect the site to the Thrumster Town Centre would be required prior to any substantial residential development within this location.
- Commercial development is unlikely to be viable within this location until demand is generated through residential development. Likewise, medium density residential development is unlikely to be viable until the commercial centre is established.

Development staging

Due to the location of the site within close proximity to Thrumster and the proximity to existing future infrastructure such as sewer, Fernbank Creek Village will be a logical development location over the short to medium term, subject to required infrastructure upgrades and the establishment of new, more direct links between the site and the Thrumster Town Centre.

Precinct 2 - Bushland Drive Environmental Living

Description

The Bushland Drive area is located to the west of the Pacific Highway, between Sancrox Road and the Oxley Highway. The site is generally heavily vegetated and provides important habitat for flora and fauna, including endangered ecological communities.

Opportunities

- The area has ready access to East Sancrox to the south, Sancrox Village to the north west and Thrumster to the east (subject to the establishment of a formal pedestrian and cycle link across the Pacific Highway for the southern section of the precinct).
- The area has high and environmental and aesthetic value.
- Some limited opportunity exists for additional development within more significant cleared areas of the site.

Constraints

- Significant environmental constraints across much of the site, including significant vegetation and endangered ecological communities.

Development staging

The proposed land use (which may facilitate limited large lot subdivision and housing) is comparable with surrounding existing rural residential land uses. It is also unlikely to compete with the other higher density residential land use areas within the PIA or to generate significant demand for infrastructure or servicing. As such, it is considered

that the subject development within this location may proceed in the short term.

Precinct 3 - East Sancrox Village

Description

This area is located immediately west of the Pacific Highway, west of the existing township of Thrumster. The area extends both north and south of the Oxley Highway with 'gateway sites' at the core of this precinct which includes multifunctional open space, neighbourhood shops, medium density residential and tourism employment opportunities.

This core is supported by residential areas to the north and south and beyond to environmental living and environmental conservation areas.

Opportunities

- This site is geographically close to the existing town centre at Thrumster.
- The site sits on the intersection of two major road corridors, minimising the need for creation of new and upgraded road infrastructure to service the location and facilitating the utilisation of existing public transport corridors.
- An opportunity exists to establish new sewerage infrastructure to not only service the new community, but also existing and future development such as the Billabong Zoo and a future potential highway service centre on the western side of the Pacific Highway. Such infrastructure has the potential to minimise potential water quality impacts of development related to the use of large-scale on-site sewerage management systems on the sensitive receiving environment of Partridge Creek.

Constraints

- There is currently no pedestrian or dedicated cyclist access between the western and eastern sides of the Pacific Highway in this location. This inhibits pedestrian and cyclist opportunities and encourages the use of vehicles to travel even short distances to existing education, recreation and higher order commercial services within the existing Thrumster Town Centre. Such pedestrian and cyclist infrastructure should be established prior to intensification of residential development occurring on the western side of the Pacific Highway in this location.
- Substantial sewerage infrastructure to service the site will likely be required to be established between the site and new major sewerage infrastructure to the south east via the Sancrox employment precinct.
- Some potential land use conflict between the existing Billabong Zoo and adjacent proposed residential areas (for example in relation to noise, odour and traffic). Any future planning proposal for residential development adjacent to the Billabong Zoo should consider and address any such potential land use conflict.

Development staging

With the implementation of a formal pedestrian and cyclist link across the Pacific Highway in this location to allow access to the existing Thrumster Town Centre, this development is considered suitable within the short term.

Precinct 4 - Sancrox Village

Description

Sancrox Village is located within the geographical centre of the PIA. As such, Sancrox Village will be the main service area for the surrounding residential community.

At the heart of this village will be collocated neighbourhood shops, multifunctional public open space, community facilities and medium density housing. This area will provide a community hub which is centrally located within the Sancrox community.

The site will be linked to surrounding residential communities through a network of pedestrian and cycle ways, which will extend from West Sancrox to the Thrumster town centre in the east.

Opportunities

- The site is within the centre of the PIA and provides a logical location for commercial development and medium density residential living opportunities.
- While the site is located more than 4 kilometres from existing services at Thrumster, there is the potential to establish pedestrian and cyclist infrastructure to connect the site to this area via the Sancrox employment precinct.

Constraints

- Commercial development is unlikely to be viable within this location until demand is generated through residential development. Likewise, medium density residential development is unlikely to be viable until the commercial centre is established.

Development staging

While Sancrox Village is in a strategic location to develop as a village centre and destination for the wider Sancrox area, the site is not currently as serviceable as other precincts to the east (Fernbank Creek Village and East Sancrox). As such, development within this location should occur within the medium term, once more logical and easily serviced areas to the east have substantially developed.

Should development within Fernbank Creek and East Sancrox not occur within the short term due to the cost of infrastructure provision (such as road upgrades and pedestrian/cyclist links), consideration could be given to facilitating development within this location in the short term. Such development within the short term would be subject to the establishment of vehicle, pedestrian and cycle links between the site and the existing Thrumster town centre via Sancrox Road, Frogs Road and Thrumster Street.

Precinct 5 - West Sancrox Village

Description

West Sancrox Village sits immediately west of the commercial and residential core of Sancrox Village. The site will provide long term housing opportunities within close proximity to the future Sancrox Village Centre. The site will have pedestrian and cyclist access to the services and facilities within the Sancrox Village, facilitating the logical expansion of Sancrox over the long term.

Opportunities

- The site can be readily serviced by the future Sancrox Village Centre via Sancrox Road for the northern section of the site and via a new collector road for the southern section of the site.
- The site is within the vicinity of existing pubic open space at Sancrox Reserve and the Hastings River.

Constraints

- The site is generally located geographically further from existing and future infrastructure and services than any other residential area in the PIA.
- Maritime access at Sancrox is currently limited. Vessel ramp and docking facilities would need to be established in order to maximise access to the Hastings River at this location.

Development staging

Given that the site is generally located geographically further from existing and future infrastructure and services than any other residential area in the PIA, it will subsequently be more expensive to develop and maintain. As such, to ensure the efficient use of infrastructure and services and the logical development of the PIA, development of this area should not occur in the short or medium term, until substantial take up of land within other residential precincts of the PIA occurs.

Precinct 6 - Rural Residential Living

Description

The proposed rural residential living area exists within the far south west of the PIA. This area is located to the immediate east and west of Rawdon Island Road, west of the Oxley Highway.

This area will facilitate some further subdivision and development of land on the periphery of the PIA. Such development will be significantly lower in density than the other residential areas of the PIA and will be consistent with existing rural residential land use to the north and south. This area will assist in providing a diversity of housing choice within an area of the PIA that is not located within ready access of community services and facilities.

Opportunities

- The site is bounded by existing rural residential land use and provides an opportunity to facilitate further complimentary development within a relatively fragmented, topographically and environmentally constrained area of the PIA.
- The site will provide a buffer between existing rural land uses further to the west and higher density residential areas to the east within an existing north-south corridor of rural residential development.

Constraints

- The subject area is not readily accessible to the future Sancrox Village or the current Thrumster town centre.
- The area is comprised of undulating hills and gullies crossed by waterways and vegetation.
- This site is within close proximity to the Oxley Highway. Any future development proposal for this site should consider the suitability of this site for rural residential development in consideration of noise generated from the Oxley Highway and its potential impact on any future residents.

Development staging

The proposed land use is consistent with adjacent rural residential land uses. It is also unlikely to

generate significant demand for infrastructure or servicing and will supplement an existing modest supply of this housing type within the LGA. As such, it is considered that this type of development may proceed in the short to medium term.

7.1.3 Planning Proposal Areas

A planning proposal is required to change the panning provisions (or planning rules) applying to land specified within the proposal under the PMH LEP. Planning proposals include a clear explanation of the change to the planning rules along with appropriate justification for the proposed changes.

As detailed previously within this report, the aim of the Fernbank Creek and Sancrox Villages Structure Plan is to facilitate logical and sustainable long term conservation and development within the PIA. In order to achieve this, this draft Structure Plan outlines proposed land uses within the PIA and provides a framework to progress future planning proposals in accordance with this draft Structure Plan.

Such planning proposals would seek to amend PMH LEP provisions applying to the land to facilitate highest and best use as identified within this draft Structure Plan. This would include residential, business, tourism and open space zoning for areas that are relatively unconstrained by environmental and other constraints, and environmental zonings for higher quality environmental or heritage areas where strategic conservation may have positive environmental or heritage outcomes.

In addition to land use zoning, amendments to other PMH LEP provisions such as height of buildings, minimum lot size and floor space ratio would also be considered as part of future planning proposals in order to facilitate preferred conservation and development outcomes.

Significant resources and timeframes can be required to progress some planning proposals. This is particularly the case for complex sites where specialist assessments are required to be undertaken to support the planning proposal (such as ecology, heritage, servicing and traffic) and/or where multiple stakeholders are required to work cooperatively to progress a proposal.

Given the above, progression of a planning proposal for the entire PIA is likely to be highly complex, resource intensive and potentially unachievable. In addition, as detailed above, not all proposed urban land will be required at the same time and staging has been proposed to ensure the logical development of land over time.

In consideration of the above, in order to ensure the efficient and strategic progression of planning proposals, eight individual planning proposal areas have been identified for future investigation. Identification of these areas has been based on:

- Grouping of similar and/or complementary urban land use types with ancillary conservation land.
- Grouping of areas based on geographical distribution.
- Grouping of areas with similar known infrastructure constrains.
- Land ownership.

Progression of planning proposals and associated strategic planning tasks would generally be subject to application to Council from coordinated stakeholder groups for each of the identified planning proposal areas.

These planning proposal areas are illustrated within Figure 13 below.

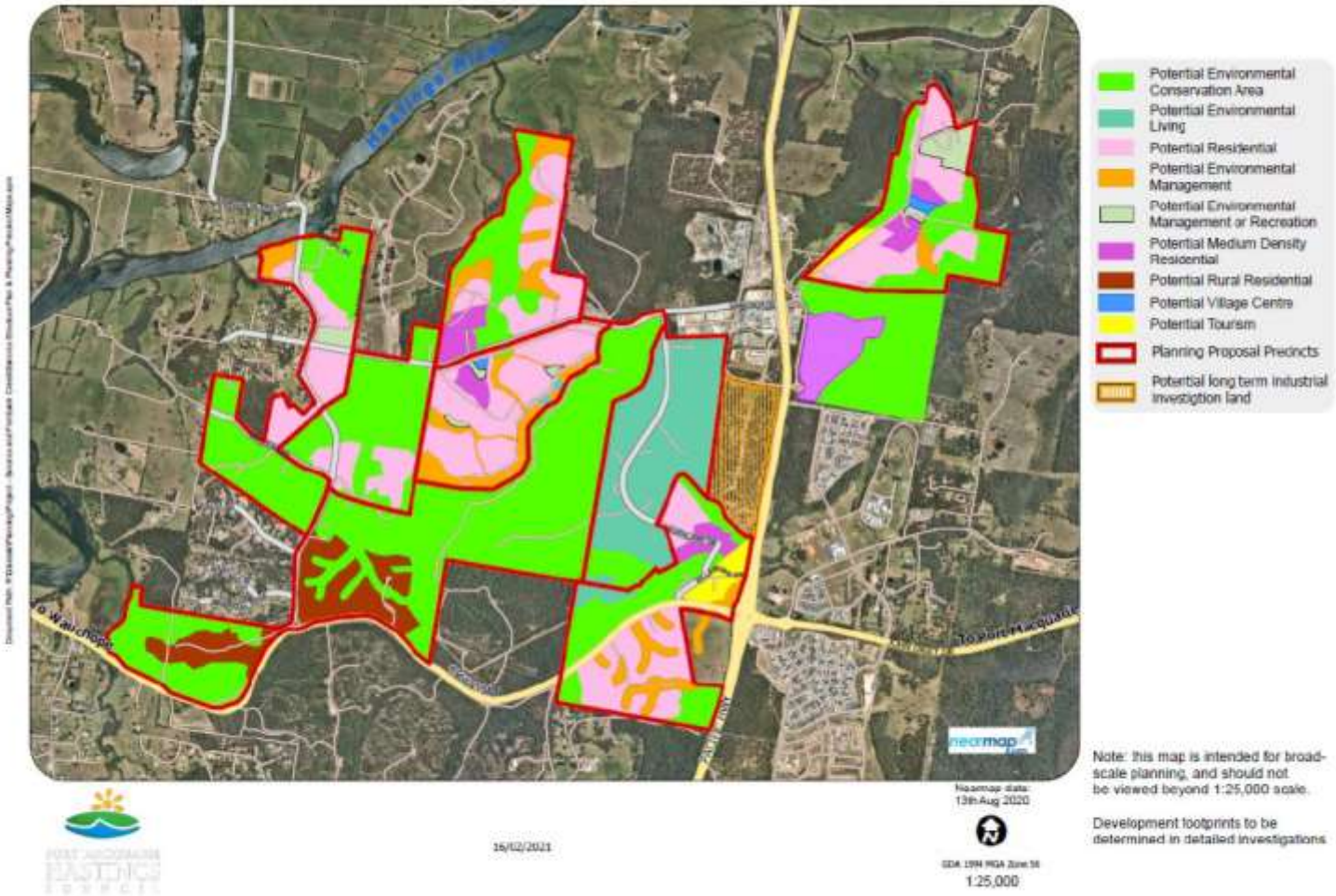

Figure 13 - Planning Proposal Areas

8 Adaptation and Change Management

Due to the significant timeframe in which the PIA would be developed (over a period of more than 20 years based on the projections detailed within Section 5 of this draft Structure Plan), consideration must be given to how community needs and expectations may change over time and how the planning framework responds to this change.

In order to ensure that development and conservation outcomes remain consistent with community requirements and expectations, potential development and conservation outcomes should be reviewed regularly as part of future reviews of Council's strategic planning documents such as Council's Community Strategic Plan, Local Strategic Planning Statement and Urban Growth Management Strategy or equivalent. Where any refinements to these documents are inconsistent with the content of this draft Structure Plan, the relevant strategic planning document will prevail to the extent of the inconsistency.

Appendix A - Consideration of Applicable State Environmental Planning Policies

Consideration of Applicable State Environmental Planning Policies

The table below provides consideration of the proposed land use changes as detailed within the draft Structure Plan against applicable State Environmental Planning Policies (SEPPs). The relevant section of this draft report where each of the applicable SEPPs are considered is also detailed within this table.

Table A1 - Consideration of Applicable SEPPs

State Environmental Planning Policy	Discussion	Reference
State Environmental Planning Policy (Affordable Rental Housing) 2009	This SEPP may apply to future development within the PIA, in seeking to achieve the affordable rental housing aims of the policy.	Section 6.10
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	This SEPP will apply to the development of residential land within the PIA. Such development will be required to demonstrate consistency with the provisions of this SEPP.	N / A
State Environmental Planning Policy (Coastal Management) 2018	There are no Littoral Rainforest or Proximity Areas for Littoral Rainforest mapped within the Study Area. Coastal Wetlands and Proximity Areas for Coastal Wetlands are mapped in the south-east, south-west and centre-north of the Study Area. Land use intensification of these areas has been avoided as a first principle in the development of this draft structure plan. Notwithstanding, the provisions of this SEPP may apply to future development proposals within the PIA. The consistency of any such proposal with this SEPP would be required to be demonstrated as part of the subsequent planning proposal investigation process.	Section 6.1 and Appendix D
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017	The proposed urban land uses within the PIA facilitate a framework for land use zones which would allow educational establishments or child care facilities, consistent with the SEPP.	Section 7
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	This SEPP contains a range of exempt and complying provisions that are likely to apply to future development within the PIA.	Section 7
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004	The proposed urban land uses within the PIA facilitate a framework for land use zones which would allow seniors housing or aged care facilities, consistent with the SEPP.	Section 7
State Environmental Planning Policy (Infrastructure) 2007	This SEPP is relevant to the future infrastructure (roads, sewerage systems, stormwater management systems, water supply systems) required in relation to	Section 6.11 - 6.13

State Environmental Planning Policy	Discussion	Reference
	development within the PIA. The Oxley Highway, the Pacific Highway and Hastings River Drive are classified roads, with access to the precinct. Therefore, clause 104 of the SEPP will apply to the future development types listed in Column 2 at Schedule 3 of the SEPP. These development types will require consultation with TfNSW as part of the development approval process. The development of sewerage, water and stormwater infrastructure to service the PIA is able to be carried out by or on behalf of Council in any zone under this SEPP.	
State Environmental Planning Policy (Koala Habitat Protection) 2020	The Port Macquarie - Hastings Local Government Area is listed within Schedule 1 of State Environmental Planning Policy (Koala Habitat Protection) 2020. The area also contains identified core Koala Habitat. While intensification of land use within core koala habitat has generally been avoided as a first principle in the development of this Structure Plan, the provisions of this SEPP are likely to apply to future planning proposals within the PIA, which will be required to demonstrate consistency with this SEPP.	Section 6.1 and Appendix D
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007	Mineral resources have been considered and the Mining, Exploration and Geoscience Division of the Department of Regional NSW has been consulted in the development of this draft structure plan. Relevant provisions of this SEPP will continue to apply to land within the PIA under this SEPP.	Section 6.6
State Environmental Planning Policy No 55—Remediation of Land (1998 EPI 520)	Potential contaminated sites have been identified as part of land use investigations undertaken to inform the development of this structure plan. The provisions of this SEPP will apply to relevant development proposals within the PIA, including the requirement to undertake site investigations as part of planning proposal and development applications as applicable.	Section 6.9

Appendix B - Consideration of Applicable Section 9.1 Ministerial Planning Directions

Consideration of Applicable Section 9.1 Ministerial Directions

The table below provides consideration of the proposed land use changes as detailed within the draft Structure Plan against applicable Section 9.1 Ministerial Directions. The relevant section of this draft report where each of the applicable Section 9.1 Ministerial Directions are considered is also detailed within this table.

Table B1 - Consideration of Applicable Section 9.1 Ministerial Directions

Section 9.1 (2) Direction Objectives	Discussion	Reference
1 Employment and Resources		
1.1 Business and Industrial Zones The objectives of this direction are to: (a) encourage employment growth in suitable locations, (b) protect employment land in business and industrial zones, and (c) support the viability of identified strategic centres.	As detailed within Figure 3 of this report, the PIA contains land zoned for industrial purposes east of the Pacific Highway. The PIA also contains an area identified as 'potential long term industrial investigation land' on the western side of the Pacific Highway, between Sancrox Road and the Oxley Highway. The PIA currently contains no business zoned land. During the development of the draft Structure Plan, Council commissioned the preparation of an 'Employment Land Use Review' (included as Appendix E to this Plan). This review aims to update Council's strategic planning information relating to industrial and retail development via assessments undertaken by HillPDA in 2015 and reviewing the NSW Department of Planning, Industry and Environment projections for population growth and accounting for the demand and supply of both industrial and business land across the LGA. The findings of this review have been used to inform the proposed employment land uses identified within this draft Structure Plan as discussed within Section 5 of this document. As detailed within Section 5 of this document, the proposal gives effect to the objectives of this direction in retaining existing employment land and ensuring consistency with the objectives of Council's UGMS in relation to the hierarchy of business centres.	Section 5, Appendix E
1.2 Rural Zones The objective of this direction is to protect the agricultural production value of rural land.	The subject proposal incorporates the intensification of conservation and development land use of rural zoned land. This intensification would incorporate a change in land use from rural land to a mixture of environmental, residential, recreation, business and tourism uses as detailed within Section 7 of this report.	Section 6.5, Appendix C, This Report

Section 9.1 (2) Direction Objectives	Discussion	Reference
	In consideration of clause (5) of this direction, the subject Proposal will be justified by the draft Structure Plan, prepared in support of any subsequent planning proposal which gives consideration to the objectives of this direction.	
1.3 Mining, Petroleum Production and Extractive Industries The objective of this direction is to ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development.	Mining, petroleum production and extractive resources have been considered and the Mining, Exploration and Geoscience Division of the Department of Regional NSW has been consulted in the development of this draft Structure Plan. Based on the findings as detailed within this report, the land uses as detailed within the draft Structure Plan are unlikely to impact on the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials.	Section 6.6
1.4 Oyster Aquaculture The objectives of this direction are: (a) to ensure that Priority Oyster Aquaculture Areas and oyster aquaculture outside such an area are adequately considered when preparing a planning proposal, (b) to protect Priority Oyster Aquaculture Areas and oyster aquaculture outside such an area from land uses that may result in adverse impacts on water quality and consequently, on the health of oysters and oyster consumers.	The Hastings River, immediately north of the subject Planning Investigation Area, contains oyster aquiculture. Urban development, including the proposed residential, recreation, business and tourism land uses have the potential to impact on oyster aquiculture through reduction in fish habitat and water pollution from sources such as urban runoff. In order to assess the potential impact of the subject proposal on oyster aquiculture, the Department of Primary Industries - Fisheries (DPI Fisheries) was consulted in relation to the Fernbank Creek and Sancrox Planning Investigation Area Discussion Paper in January 2020. DPI Fisheries provided a response to this Discussion Paper on 13 March 2020 and raised a number of issues that were to be addressed as part of the development of a Fernbank Creek and Sancrox Structure Plan. These issues have been considered within Section 6.1 and the ecology assessment included as Appendix D to this report. Following the above consideration, land uses (such as residential, recreation, business and tourism zones) that may result in adverse impacts on water quality and consequently, on the health of oysters and oyster consumers have been avoided within identified key fish habitats, SEPP	Section 6.1, and Appendix D

Section 9.1 (2) Direction Objectives	Discussion	Reference
	2018 Coastal Wetlands and third order and greater waterways including Fernbank Creek, Partridge Creek and the Hastings River. The subject avoidance of land use intensification in these areas is intended to minimise key threatening processes and any subsequent water pollution to these ecosystems in accordance with Schedule 6 of the *Fisheries Management Act 1994* and Policy and Guidelines for Fish Habitat Conservation and Management (2013 Update) (DPI Fisheries P&G). In addition to the above, best practice water sensitive urban design will be considered within the Integrated Water Cycle Management Strategy which will apply to the Planning Investigation Area in order to minimise potential stormwater impacts on aquatic environments.	
1.5 Rural Lands The objectives of this direction are to: (a) protect the agricultural production value of rural land, (b) facilitate the orderly and economic development of rural lands for rural and related purposes.	The subject proposal would effect land within existing rural zones and proposes the facilitation of change to existing rural land uses. Notwithstanding, this report has: (a) considered and can be consistent with the applicable regional plan and Local Strategic Planning Statement (upon amendment to this plan and statement if required to incorporate the relevant provisions of the draft Structure Plan). (b) considered the significance of agriculture and primary production to the State and rural communities as detailed within Section 5.5 and Appendix C of this report. (c) identified and protected environmental values, including but not limited to, maintaining biodiversity, the protection of native vegetation, cultural heritage, and the importance of water resources as detailed within Sections 6.1, 6.3 and Appendix D of this report. (d) considered the natural and physical constraints of the land, including but not limited to, topography, size, location, water availability and ground and soil conditions as detailed within Sections 6.1, 6.2, 6.7, 6.8 and Appendix D of this report. (e) promoted opportunities for investment in productive, diversified, innovative and sustainable rural economic activities as detailed within Section 5.5 and Appendix C of this report. (f) considered support of farmers in exercising their right to farm as	Sections 3-6, Appendix C, Appendix D

Section 9.1 (2) Direction Objectives	Discussion	Reference
	detailed within Section 6.5 and Appendix C of this report. (g) prioritised efforts and considered measures to minimise the fragmentation of rural land (where applicable) and reduce the risk of land use conflict, particularly between residential land uses and other rural land uses as detailed within 5.5 and Appendix C of this report. (h) considered State significant agricultural land identified in State Environmental Planning Policy (Primary Production and Rural Development) 2019 for the purpose of ensuring the ongoing viability of this land as detailed within Section 6.5 and Appendix C of this report. (i) Considered the social, economic and environmental interests of the community as detailed within Section 3 of this report. In consideration of the above, it has been demonstrated that the proposal: a) is consistent with the priority of minimising rural land fragmentation and land use conflict, particularly between residential and other rural land uses. b) will not adversely affect the operation and viability of existing and future rural land uses and related enterprises, including supporting infrastructure and facilities that are essential to rural industries or supply chains. c) is appropriately located taking account of the availability of human services, utility infrastructure, transport and proximity to existing centres as detailed within Section 6 of this document and is necessary taking account of existing and future demand and supply of rural residential land as detailed within Section 5 of this report. In addition to the above, proposed minimum lot sizes within environment protection zones would be sought in accordance with the Rural Subdivision Principles in clause 5.16 of the Port Macquarie - Hastings Local Environmental Plan.	
2 Environment and Heritage		
2.1 Environmental Protection Zones	The draft Structure Plan includes provisions that facilitate the protection and	Section 4.8, Section 6.1

Section 9.1 (2) Direction Objectives	Discussion	Reference
The objective of this direction is to protect and conserve environmentally sensitive areas.	conservation of environmentally sensitive areas as detailed within Section 6.1 of this report. This draft Structure Plan does not apply to land within an environment protection zone or land otherwise identified for environment protection purposes as detailed within Section 4.8. Additionally, this proposal will not reduce the environmental protection standards that apply to the land.	
2.2 Coastal Management The objective of this direction is to protect and manage coastal areas of NSW.	The Planning Investigation Area incorporates areas identified under State Environmental Planning Policy (Coastal Management) 2018 as detailed within Section 6.1 and Appendix D of this report. However, the subject proposal avoids increased development or more intensive land-use on land in areas as defined under the *Coastal Management Act 2016* comprising coastal wetlands and littoral rainforests area, coastal vulnerability area, coastal environment area and coastal use area - and as identified by the State Environmental Planning Policy (Coastal Management) 2018.	Section 6.1 and Appendix D
2.3 Heritage Conservation The objective of this direction is to conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance.	As detailed within Section 6.3 of this report, the draft Structure Plan provides a framework to facilitate the conservation of: (a) items, places, buildings, works, relics, moveable objects or precincts of environmental heritage significance to an area, in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area, (b) Aboriginal objects or Aboriginal places that are protected under the *National Parks and Wildlife Act 1974*; and (c) Aboriginal areas, Aboriginal objects, Aboriginal places and landscapes.	Section 6.3
2.4 Recreation Vehicle Areas The objective of this direction is to protect sensitive land or land with significant conservation values from adverse impacts from recreation vehicles.	The subject proposal does not enable land to be developed for the purpose of a recreation vehicle area (within the meaning of the *Recreation Vehicles Act 1983*). The intended conservation and development outcomes for the Planning Investigation Area are detailed within Sections 6 and 7 of this report.	Section 6 and Section 7
2.6 Remediation of Contaminated Land	In accordance with NSW State Government requirements, a preliminary	Section 6.9

Section 9.1 (2) Direction Objectives	Discussion	Reference
The objective of this direction is to reduce the risk of harm to human health and the environment by ensuring that contamination and remediation are considered by planning proposal authorities.	investigation of the land is to be carried out in accordance with the contaminated land planning guidelines with the progression of any relevant planning proposal within the Planning Investigation Area. Subsequent assessment and works may be required depending on the outcomes of the Stage 1 assessment.	
3 Housing, Infrastructure and Urban Development		
3.1 Residential Zones The objectives of this direction are: (a) to encourage a variety and choice of housing types to provide for existing and future housing needs, (b) to make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services, and (c) to minimise the impact of residential development on the environment and resource lands.	The subject proposal incorporates the creation of additional residentially zoned land within generally undeveloped areas between the townships of Port Macquarie and Wauchope. In relation to Clause (5) of this Direction, the proposal contains requirements that residential development is not permitted until land is adequately serviced (or arrangements satisfactory to the council, or other appropriate authority, have been made to service it). Additionally, the proposal does not contain provisions which will reduce the permissible residential density of land. It can be noted that the provisions of the proposal will be justified by a strategy which gives consideration to the objective of this direction, identifies the land which is the subject of the proposal and is sought to be approved by the Director-General of the Department of Planning, Industry and Environment (or an officer of the Department nominated by the Director-General). In seeking this approval, the subject proposal is justified by the draft Structure Plan, which has been prepared in support of the proposal which gives consideration to the objective of this direction.	Section 4.5, Sections 5-8
3.4 Integrating Land Use and Transport The objective of this direction is to ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts achieve the following planning objectives: (a) improving access to housing, jobs and services by walking, cycling and public transport, and (b) increasing the choice of available transport and reducing dependence on cars, and	The subject proposal incorporates creation of new urban land that will generate increased demand for transport as discussed within Section 6.13 of this Structure Plan. Notwithstanding the above, the proposal is justified within Section 5 of this report and appropriate provisions to support integration of land use and transport are detailed within Sections 6.10, 6.13 and Section 7 of this report in consideration of the objectives of this direction.	Section 5, Section 6.10, Section 6.13 and Section 7

Section 9.1 (2) Direction Objectives	Discussion	Reference
(c) reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and (d) supporting the efficient and viable operation of public transport services, and (e) providing for the efficient movement of freight.		
4 Hazard and Risk		
4.1 Acid Sulfate Soils The objective of this direction is to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils.	Within the draft Structure Plan, recommended development within illustrated acid sulphate soil areas has been avoided where practicable, to both reduce the risk of impacts to new development, and reduce the risk of development effecting existing acid sulphate soil areas and the environment. Where proposed development encroachment into acid sulphate soil areas is identified within the draft Structure Plan or is otherwise appropriately justified and supported, analysis of the effects of the encroachment would be required as part of the planning proposal process in accordance with the NSW Government's Acid Sulphate Soil Manual.	Section 6.8
4.3 Flood Prone Land The objectives of this direction are: (a) to ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005, and (b) to ensure that the provisions of an LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land.	Within the draft Structure Plan, recommended development within the illustrated flood effected areas has been avoided, to both reduce the risk of flooding impacts to new development, and reduce the risk of development effecting existing floodplain capacity and flood characteristics. If encroachment within the flood planning area for development is appropriately justified and supported, analysis of the effects of the encroachment would be required as part of the planning proposal process in accordance with the NSW Government's Flood Prone Land Policy and Floodplain Development Manual as applicable.	Section 6.2
4.4 Planning for Bushfire Protection The objectives of this direction are: (a) to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and (b) to encourage sound management of bush fire prone areas.	As detailed within Section 6.7 of this report, significant vegetation and subsequent high risk bush fire prone land is concentrated in the central and eastern sections of the Sancrox area of the PIA, particularly along the ridgelines. In relation to the Fernbank Creek Area, significant vegetation and subsequent high risk bush fire prone land is concentrated along parts of the riparian corridor in the west and within the highly vegetated areas to the south and east.	Section 6.7

Section 9.1 (2) Direction		
Objectives	Discussion	Reference
Further details: When this direction applies This direction applies when a relevant planning authority prepares a planning proposal that will affect, or is in proximity to land mapped as bushfire prone land. What a relevant planning authority must do if this direction applies (4) In the preparation of a planning proposal the relevant planning authority must consult with the Commissioner of the NSW Rural Fire Service following receipt of a gateway determination under section 56 of the Act, and prior to undertaking community consultation in satisfaction of section 57 of the Act, and take into account any comments so made, (5) A planning proposal must: (a) have regard to Planning for Bushfire Protection 2006, (b) introduce controls that avoid placing inappropriate developments in hazardous areas, and (c) ensure that bushfire hazard reduction is not prohibited within the APZ. (6) A planning proposal must, where development is proposed, comply with the following provisions, as appropriate: (a) provide an Asset Protection Zone (APZ) incorporating at a minimum: (i) an Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property, and (ii) an Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road, (b) for infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning	Land use intensification has been avoided within these areas as part of the development of the draft Structure Plan. Bush fire constraints associated with existing vegetation are considered a major issue within the PIA and are likely to be exacerbated by climate change impacts over coming years. In consideration of this risk, in relation to areas identified within the draft Structure Plan for potential land use intensification, areas of Category 1 and 2 vegetation and vegetated ridgelines have generally been avoided and the suitability of the road network (which may facilitate evacuation and access for emergency services) has been considered. Consideration of these factors will also assist to ensure that any potential future development will not adversely affect existing development in relation to potential bush fire risk. Any future development of land within bushfire prone areas of the PIA will need to provide the required asset protection zones, access/egress for emergency services, adequate water supply and meet other relevant requirements of the Rural Fire Service's Planning for Bushfire Protection 2019 Guideline. This information is to be assessed as part of a Strategic Bush Fire Study (SBFS) which is to be undertaken as part of the progression of any subsequent planning proposal applying to the PIA. Any given SBFS will also need to consider existing development land use activity, be it realised or approved and current land use zoning opportunities. The SBFS will also need to identify current and required emergency management provisions for the study area including road linkages to the Port Macquarie Town Centre, hospitals and other community facilities, reticulated water services, emergency services provisions (delivery and meeting/information hubs), communication and electricity services (use of appropriate materials to resist bush fire impacts and retain continuation of services). This will ensure that bush fire hazard, and subsequent appropriate safeguards, can be considered in relation to specific development types and locations.	

Section 9.1 (2) Direction Objectives	Discussion	Reference
proposal permit Special Fire Protection Purposes (as defined under section 100B of the Rural Fires Act 1997), the APZ provisions must be complied with, (c) contain provisions for two-way access roads which links to perimeter roads and/or to fire trail networks, (d) contain provisions for adequate water supply for firefighting purposes, (e) minimise the perimeter of the area of land interfacing the hazard which may be developed, (f) introduce controls on the placement of combustible materials in the Inner Protection Area.		
5 Regional Planning		
5.4 Commercial & Retail Development along the Pacific Hwy, North Coast The objectives for managing commercial and retail development along the Pacific Highway are: (a) to protect the Pacific Highway's function, that is to operate as the North Coast's primary inter- and intra-regional road traffic route; (b) to prevent inappropriate development fronting the highway; (c) to protect public expenditure invested in the Pacific Highway; (d) to protect and improve highway safety and highway efficiency; (e) to provide for the food, vehicle service and rest needs of travellers on the highway; and (f) to reinforce the role of retail and commercial development in town centres, where they can best serve the populations of the towns.	The subject planning investigation may facilitate future planning proposals on land defined as "out-of-town" within the vicinity of the Pacific Highway as detailed within this direction. Given the above, in accordance with Section (5) (c) of this Direction, any subsequent Planning Proposal must provide that: (a) New commercial or retail development must not be established near the Pacific Highway if this proximity would be inconsistent with the objectives of this direction; and (b) Development with frontage to the Pacific Highway must consider the impact the development has on the safety and efficiency of the highway. The establishment of new road links within Sancrox, between Fernbank Creek and Thrumster and the use of Winery Drive to ensure ongoing access between the Pacific Highway, Fernbank Creek Road and Hastings River Drive as detailed within Section 6.13 of this report will significantly assist in achieving the requirements of this direction, improving road safety and minimising the interface of local traffic with the Pacific Highway. This will be achieved through the use of service roads for both local traffic connections and to access new development.	Section 6.13

Section 9.1 (2) Direction Objectives	Discussion	Reference
5.10 Implementation of Regional Plans The objective of this direction is to give legal effect to the vision, land use strategy, goals, directions and actions contained in Regional Plans.	As detailed within Section 4 of this report, the subject Planning Investigation is consistent with Council's Community Strategic Plan and Urban Growth Management Strategy and will inform Council's Local Strategic Planning Statement to ensure consistency between the Structure Plan and the wider Local Strategic Planning Framework. With the exception of 'Area B2' as detailed within Council's Urban Growth Management Strategy, the NCRP does not include the Fernbank Creek and Sancrox Planning Investigation Area. As such, in order for the potential land use changes to occur, unless otherwise advised by the DoPIE, amendment to the NCRP would be required following the finalisation of the draft Structure Plan to ensure consistency with the relevant Regional Plan.	Section 4
6 Local Plan Making		
6.1 Approval and Referral Requirements The objective of this direction is to ensure that LEP provisions encourage the efficient and appropriate assessment of development.	The subject proposal will not introduce any additional requirements for concurrence with other Government agencies.	N / A
6.2 Reserving Land for Public Purposes The objectives of this direction are: (a) to facilitate the provision of public services and facilities by reserving land for public purposes, and (b) to facilitate the removal of reservations of land for public purposes where the land is no longer required for acquisition.	The draft Structure Plan includes changes to land uses to facilitate land for future public purposes such as public open space and environmental conservation. The nature and timing of provision of such land for these purposes would be detailed within documentation in relation to future planning proposals such as the planning proposal documentation itself and/or associated planning agreements and/or contributions plans and/or associated development control provisions.	Section 6.1, Section 6.10 and Section 7

Appendix C - Agricultural Impact Assessment

1 Introduction

The North Coast Regional Plan (NCRP) has identified five areas within the Planning Investigation Area as Important Farmland. These areas are illustrated within Figure C1 below.

Any areas identified within the NCRP as Important Farmland which have not been identified as an Investigation Area for Urban or Employment Land in the NCRP and are proposed for intensification of land use require further assessment as part of this Structure Plan. This will ensure that any proposed change in land use does not impact upon the viability of important farmland resources.

This assessment incorporates an Agricultural Impact Assessment under the headings below and a further assessment against Appendix B of the NCRP Important Farmland Interim Variation Criteria as detailed within Table C1. As above, for the purpose of this assessment, only areas proposed for potential intensification of land use outside of the NCRP identified Urban Growth Area have been considered. These areas have been defined as the 'Bushland Drive Site', in the south east of the Planning Investigation Area and the 'Fernbank Creek Site', in the north east of the Planning Investigation Area. These specific areas are identified within Figure C1.

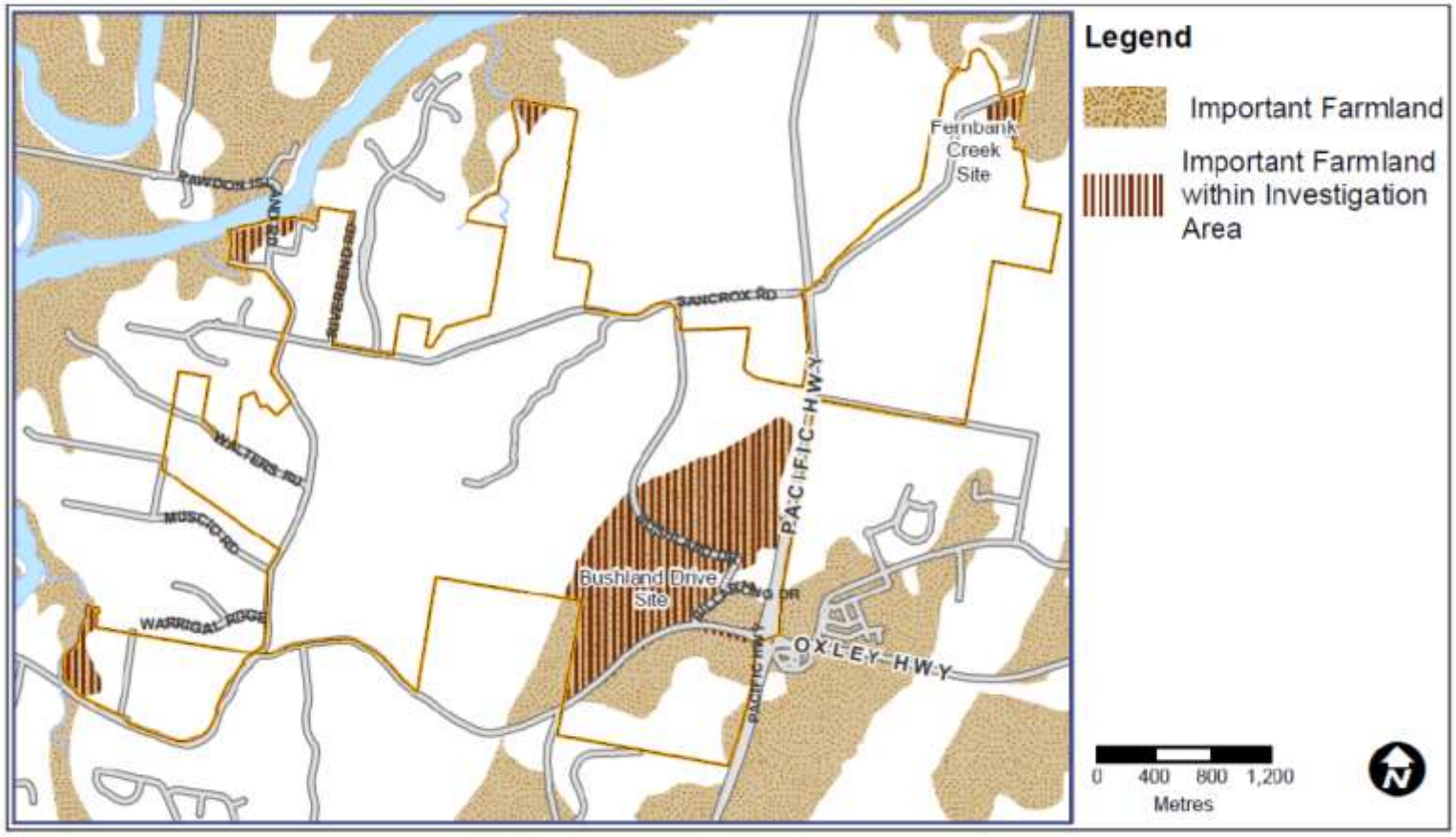

Figure C1 - Mapped Important Farmland within the Planning Investigation Area

Agricultural Impact Assessment

The following section provides an Agricultural Impact Assessment for areas within the Planning Investigation Area identified within the NCRP as Important Farmland which have not been identified as an Investigation Area for Urban or Employment Land in the NCRP and are proposed for intensification. Each of the considerations under the headings below have been developed in consultation with the Department of Primary Industries (Agriculture).

Consideration of available soil type information

The subject area can be defined as being within the 'Thrumster' Soil Landscape. This landscape is characterised by undulating and rolling rises of 30 - 60 m elevation. Local relief <60 m. Broad crests and sideslopes <15%. Tall, open dry sclerophyll forest with rainforest in protected gullies. Extensively cleared and cultivated in the past and now substantially urbanised.

The soil is characterised as deep (>300 cm), well-drained Krasnozems and Euchrozems with some Laterites on crests.

Limitations of this soil include deep regolith, moderately reactive subsoils, low wet bearing strength, high permeability, strong acidity, aluminium toxicity hazard, low subsoil fertility and erosion hazard.

Overall the qualities of this soil landscape have been summarised as deep well-drained soils capable of large scale cut and fill operations. High quality agricultural soils substantially urbanised. Minor localised landslip hazard on steep slopes with moderate to high erosion hazard associated with urban development (NSW Department of Land and Water Conservation 1999).

Both the Bushland Drive and Fernbank Creek sites are identified within the NSW Governments SEED site as Ferrosols soils (shown in red shading). An extract of this mapping is provided within Figure C2 below.



Figure C2 - Soil landscape

Ferrosols are generally red, non texture contrast soils that have a high free iron content in the B horizon (subsoil).

These soils are deep and very well drained due to their strongly developed structure and lack of strong texture contrast between surface and subsoil horizons. Water infiltration rates will be high unless significant compaction has occurred.

Red Ferrosols generally have high organic matter levels, which enhances soil fertility and aggregate stability (State of Victoria (Agriculture Victoria) 1996 - 2020).

These soils are generally considered to be well structured and attractive for agriculture. However, they can also degrade under intensive cropping from erosion and compaction and may also suffer from acidification.

Assessment of the history of the agricultural land use of the site, including consideration of past viticulture enterprises, including potential factors that have contributed to their success or failure as applicable

The Planning Investigation Area, including the subject sites, has been extensively cleared for agriculture and urbanisation. However, no agricultural industries currently operate on the sites and the area supports a rural - residential style subdivision and land use.

In relation to viticulture, Cassegrain family are the primary viticulture operators within the Planning Investigation Area and have been undertaking viticulture in the Port Macquarie region since the 1980s.

The Fernbank Creek Site is predominately made up of a former cluster farming enterprise for viticulture known as Le Clos Francois. Other nearby former cluster farming operations located in Sancrox included Le Clos Sancrox and Le Clos Verdun. Only some of the lots continue to be used for viticulture, being associated with the current Cassegrain viticulture operation.

Initially, the above cluster lots were created to allow people to purchase a home site and, under the same title, a separate farm site which was to be used to grow grape vines.

However, the clos farming concept ultimately proved unprofitable and now the home and separate farm lots have largely been on-sold. The relatively small lot sizes and a memorandum imposed by Council in 2006 on various cluster farming lots (due to the inadequate size of the existing lots to meet current standards for effluent disposal and bushfire protection when constructing a dwelling) has resulted in highly fragmented, but generally undevelopable land under the existing planning framework. One of the subject failed viticulture operations is depicted within Plate C1 below.



Plate C1 - Abandoned viticulture operations at Sancrox

As a result of the subject cluster farming subdivision, the largest extent of mapped important farmland within any one lot is 1.9 hectares of the total 5.5 hectares of mapped important farmland in this location. It is considered that this relatively small and significantly fragmented land would not be viable for large scale viticulture, or other large scale agricultural operation.

The mapped significant farmland referred to as the 'Bushland Drive Site' is approximately 124 hectares in size and is bounded by the Pacific Motorway in the east, the Oxley Highway in the south, dense vegetation to the west and rural - residential land use to the north. The area is comprised of approximately 30 lots ranging in size between 0.10 and 14.7 hectares. Current land use throughout the site is rural residential with little to no current or historical intensive agriculture. The subject mapped important farmland exists as an isolated patch within the locality, surrounded by urban development, rural residential land use and dense vegetation. As such, it is considered that this relatively small and significantly fragmented land would also not be viable for large scale agricultural operations.

Identification of potential land use conflicts, and measures to address such conflicts where they may occur

Current land use throughout and adjacent to both sites is rural residential with little to no agricultural industry as depicted within Plates C2 and C3 below.



Plate C2 - Rural residential style land use at Fernbank Creek



Plate C3 - Rural residential style land use at Bushland Drive

Agricultural activities being undertaken in and around the sites is generally limited to small scale (domestic) livestock grazing (such as horse keeping) associated with rural residential land use. While the land does provide opportunity for small scale food production and rural residential living, given the relatively small lot sizes and isolation from

other mapped important agricultural land it is unlikely that this area will be used for productive agricultural purposes in the future.

Notwithstanding the above, appropriate buffers as detailed within the *NSW DPI Primefact: Buffer Zones to Reduce Land Use Conflict with Agriculture* should be considered in relation to any planning proposal where land use intensification adjoining rural land is proposed. Such locations may include some sections in the west and north of the PIA which adjoin the Hastings River Floodplain. The implementation of such buffers would minimise the potential for land use conflict including associated biosecurity risks.

Assessment of mapped important farmland against Appendix B of the North Coast Regional Plan - Important Farmland Interim Variation Criteria

As detailed within the NCRP, it is recognised that agricultural production may not be suitable on some small pockets of mapped important farmland due to non-biophysical factors that make the land more suited to other uses. Pending completion of a review of the existing farmland mapping projects, interim important farmland variation criteria have been provided within Appendix B of the NCRP to assess the suitability of these pockets of land for non-agricultural land use. An assessment of both the Fernbank Creek and Bushland Drive sites is provided within Table C1 below.

Table C1 - Assessment of mapped important farmland against Appendix B of the North Coast Regional Plan - Important Farmland Interim Variation Criteria

Consideration	Criteria	Response
Agricultural capability	The land is isolated from other important farmland and is not capable of supporting sustainable agricultural production.	The mapped significant farmland referred to as the 'Bushland Drive Site' is approximately 124 hectares in size and is bounded by the Pacific Motorway in the east, the Oxley Highway in the south, dense vegetation to the west and rural - residential land use to the north. The area is comprised of approximately 30 lots ranging in size between 0.10 and 14.7 hectares. Current land use throughout the site is rural residential with little to no agricultural industry. The subject mapped important farmland exists as an isolated patch within the locality, surrounded by urban development, rural residential land use and dense vegetation. Significant extents of important farmland exist within the Hastings River Floodplain, approximately 2.5 kilometres to the north. This land is not proposed to be impacted by a change in land use within the subject site. The mapped significant farmland referred to as the 'Fernbank Creek Site' fringes the north eastern portion of the Planning Investigation Area, adjacent to Fernbank Creek Road. The far north western portion of this area has been excluded from the planning investigation as this site is also below the mapped 1:100 flood extent. The eastern portion is approximately 5.5 hectares in size and is comprised of four lots ranging in size between 0.81 and 4.4 hectares. The site has been previously used for cluster farming and adjoins a vegetated mapped high potential environmental value parcel of land to the east. Current land use throughout the site is rural residential with little to no agricultural industry. Significant extents of important farmland exist within the Hastings River Floodplain to the north. This land is not proposed to be impacted by a change in land use within the subject site. Given the above, it has been determined that the subject mapped important farmland land is isolated from other important farmland and is not capable of supporting sustainable agricultural production.
Land use conflict	The land use does not increase the likelihood of conflict and does not impact on current or future agricultural activities in the locality.	Current land use throughout and adjacent to both sites is rural residential with little to no agricultural industry. Agricultural activities being undertaken in and around the sites is limited to small scale (domestic) livestock grazing (such as horse keeping) associated with rural residential land use. While the land does provide opportunity for small scale food production and rural residential living, given the relatively small lot sizes and isolation from other mapped important agricultural land it is unlikely that this area will be used for productive agricultural purposes in the future. As such, it has been determined that the land use does not increase the likelihood of conflict and does not impact on current adjoining land (given the current absence of agricultural land use), or future (given the current constraints and surrounding land uses) agricultural activities in the locality. Notwithstanding the above, appropriate buffers as detailed within the NSW DPI Primefact: Buffer Zones to Reduce Land Use Conflict with Agriculture should be considered in relation to any planning proposal where land use intensification adjoining rural land is proposed. Such locations may include some sections in the west

		and north of the PIA which adjoin the Hastings River Floodplain. The implementation of such buffers would minimise the potential for land use conflict including associated biosecurity risks.
Infrastructure	The delivery of infrastructure (utilities, transport, open space, communications and stormwater) required to service the land is physically and economically feasible at no cost to State and Local Government.	As detailed within Section 6 of the draft Structure Plan, the delivery of infrastructure (utilities, transport, open space, communications and stormwater) required to service the land is physically and economically feasible at no cost to State and Local Government.
Environment and heritage	The proposed land uses do not have an adverse impact on areas of high environmental value, and Aboriginal or historic heritage significance.	As detailed within Section 6 of the draft Structure Plan, the proposed land uses do not have an adverse impact on areas of high environmental value, and Aboriginal or historic heritage significance.
Avoiding risk	Risks associated with physically constrained land are identified and avoided, including: – flood prone; – bushfire-prone; – highly erodible; – severe slope; and – acid sulfate soils.	As detailed within Section 6 of the draft Structure Plan, risks associated with physically constrained land have been identified and avoided where practical.

Conclusion

The Planning Investigation Area contains two areas of land identified as important farmland within the NCRP that are being investigated for land use intensification and have not been identified as Investigation Areas for Urban or Employment Land in the NCRP.

These areas have been subject to an agricultural impact assessment, including an assessment against Appendix B of the North Coast Regional Plan, as part of this Structure Plan to ensure that any proposed change in land use does not impact upon the viability of important farmland resources.

This assessment has found that soil characteristics are favourable for agriculture. This assessment has also identified that the sites have been subject to past agricultural land use, including viticulture.

However, this assessment has found that the subject mapped important farmland is isolated from other important farmland and is not capable of supporting sustainable agricultural production due to significant land fragmentation. This assessment has also found that the implementation of a more intense land use is not likely to increase land use conflict and will not impact on current adjoining land (given the existing lack of agricultural industry adjacent to the sites), or future agricultural activities in the locality (given the current constraints and surrounding land uses). This assessment has also demonstrated consistency against Appendix B of the North Coast Regional Plan.

Notwithstanding the above, the NCRP recognises that agricultural activities, such as horticulture, are growing rapidly on smaller holdings across the North Coast. The NCRP states that local planning controls can help to support these industries by identifying potentially suitable locations for small-lot primary production. The NCRP also recognises that encouraging greater diversity in the agricultural sector, for example, through agritourism and the processing and packaging of produce and associated retail services, can make the sector more sustainable. The plan also states that boutique commercial, tourist and recreation activities that do not conflict with primary production offer similar opportunities.

In acknowledgement of the above, the strategic location of the Bushland Drive Site to existing urban areas and key transport corridors and both the environmental and agricultural value of portions of the site, application of residential land use for areas of low environmental value and the land use 'Environmental Living' or similar for areas of high environmental value may be used to retain the small scale agricultural and environmental conservation values of the site within constrained areas, while facilitating urban development in less constrained areas.

Given the significant isolation, fragmentation and location of the Fernbank Creek Site in relation to a proposed residential area, along with limited other development constraints, it is proposed to integrate this site with the adjoining proposed residential land.

It has been determined that the proposed change in land use identified within this Structure Plan does not impact upon the viability of important farmland resources. It has also been determined that that the proposed land use zones recommended by this Structure Plan will both compliment and enhance the small scale agricultural viability of the Bushland Drive Site.

Appendix D - Environmental Values Review

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Fernbank Creek and Sancrox Structure Plan
Environmental Values Review

Prepared for Port Macquarie-Hastings Council | 17 August 2020



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Document control

Project number	Client	Project manager	LGA
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Version	Author	Review	Status	Comments	Date
D1	Jodie Danvers	Radika Michniewicz	Draft		24 July 2020
D2	Radika Michniewicz		Draft		31 July 2020
D3	Jodie Danvers/Radika Michniewicz	Amanda Griffith	Draft		13 August 2020
Rev0	Radika Michniewicz		Final draft		17 August 2020
Rev1	Radika Michniewicz		Final		14 September 2020
Rev2	Radika Michniewicz		Final		4 February 2021

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Executive summary

Project outline

Niche Environment and Heritage Pty Ltd (Niche) was commissioned to undertake an Environmental Values Review (EVR) required by Port Macquarie-Hastings Council (Council) to inform the Fernbank Creek and Sancrox Structure Plan (the Project). The EVR is required to advise Council and relevant stakeholders of the presence of areas of high environmental value (HEV) within the Fernbank Creek and Sancrox Planning Investigation Area (Study Area).

The Study Area is located within the suburbs of Sancrox and Fernbank Creek, approximately six kilometres west of the Port Macquarie town centre in the Port Macquarie-Hastings Local government Area (LGA). The Study Area includes a combination of heavily modified lands used for grazing, areas with retained canopy over a maintained groundcover or open paddocks, regenerating areas and more intact woodlands with native groundcover and midstorey vegetation.

Outcomes

A large proportion of the Study Area is highly constrained due to extensive presence of HEV throughout the Study Area, known threatened species habitat and the key role of much of the existing vegetation in regional and sub-regional wildlife corridors.

The Study Area encompasses urban investigation areas A1, B1, B2, B3 and B4, identified in Council's Urban Growth Management Strategy (UGMS). While large areas of constrained lands occur outside these urban investigation areas, urban investigation areas B1 and B4, in particular, are heavily constrained. Outcomes for the urban investigation areas are provided below.

Urban investigation area A1

Urban investigation area A1 is relatively unconstrained, with HEV land edging and protruding into the area in locations and a small area of Coastal Wetlands within the area. The remnant canopy present in the north of the area does provide key habitat features in Koala Food Trees (KFTs) and Hollow-bearing trees (HBTs). Urban investigation area A1 presents opportunity for residential growth in areas of Low constraint and potentially environmental living or environmental management in the Moderate area, whereby the goal would be to improve or maintain the environmental values of the land.

Urban investigation area B1

Urban investigation area B1 is heavily constrained. The area is predominantly intact native vegetation or slightly modified native vegetation offering habitat features, Identified Rainforest (Biodiversity Values Mapping) and importantly, vegetation in the area plays a key role in maintaining the sub-regional corridor, in association with the habitat immediately to the east just outside of this urban investigation area. Limited opportunity exists for environmental living or environmental management within the current modified sections of urban investigation area B1, notably around existing dwellings (Moderate constraint). However opportunity for residential growth exists in the south east of urban investigation area B1, north and south of Bushland Drive within the area of Low constraint.

Urban investigation area B2

Urban investigation area B2 is relatively unconstrained, with HEV land mapped only along riparian corridors. Urban investigation area B2 presents opportunity for residential growth in areas of Low constraint, acknowledging the need to maintain HEV land and the Moderate constraint areas containing remnant canopy that provide habitat features of KFTs and HBTs.

Urban investigation area B3

Urban investigation area B3 is heavily constrained at its periphery and along riparian corridors, with Coastal Wetlands, Endangered Ecological Communities (EEC) and known threatened species habitat, including Koala habitat, occurring within the area. The remnant canopy present in the north of the area does provide key habitat features in KFTs and HBTs and provides linkages between adjacent tracts of vegetation to the north and south. Urban investigation area B3 presents opportunity for residential growth in areas of Low constraint and environmental living or environmental management in the Moderate area, whereby the goal would be to improve or maintain the environmental values of the land.

Urban investigation area B4

Urban investigation area B4 consists of two sections; a south-west block and north-east block. The south-west block is relatively unconstrained, with constraints primarily at its periphery within EEC and riparian areas. The north-east block is heavily constrained, with HEV land present for EECs, known threatened species habitat, including Koala habitat, and riparian areas and Protected Riparian Land. Opportunity for residential growth exists in areas of Low constraint in the south-west block and north-east block, acknowledging the need to maintain HEV lands and the Moderate constraint areas containing remnant canopy that provide habitat features of KFTs and HBTs. Environmental living or environmental management may be suitable for areas within the south-east of the north-east block given the presence of key habitat features in KFTs and HBTs in varying density.

Glossary and list of abbreviations

Term or abbreviation	Definition
AOBV	Areas of Outstanding Biodiversity Values
BAM	Biodiversity Assessment Methodology
BC Act	NSW *Biodiversity Conservation Act 2016*
BCD	NSW Biodiversity and Conservation Division
BOS	NSW Biodiversity Offsets Scheme
BPA	Biodiversity Priority Areas
BV Map	Biodiversity Values Map
CKPOM	Coastal Koala Plan of Management
CPA	Conservation Priority Areas
DAWE	Commonwealth Department of Agriculture, Water and the Environment
DBH	Diameter at Breast height
DCP	Development Control Plan
DoEE	Commonwealth Department of Environment and Energy (now DAWE)
DPI	NSW Department of Primary Industries
DPIE	NSW Department of Planning, Industry and Environment
DP&E	NSW Department of Planning and Environment (now DPIE)
EEC	Endangered Ecological Community
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EVR	Environmental Values Review
GSPA	Greater Sancrox Planning Area
HBT	Hollow-bearing Tree
HEV	High Environmental Value
IAM	Important Area Map
KFT	Koala Food Trees
LEP	Local Environmental Plan
LGA	Local Government Area
MNES	Commonwealth Matters of National Environmental Significance
NCRP	The North Coast Regional Plan 2036
OCL	Over Cleared Landscapes
PMHC	Port Macquarie-Hasting Council
UGMS	Urban Growth Management Strategy
RTA	Roads and Traffic Authority
SAII	Serious and Irreversible Impacts
SEPP	State Environmental Planning Policy

Term or abbreviation	Definition
SP	Sample Point
TEC	Threatened Ecological Community
VA	Verification Areas
VIS	Vegetation Information system

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1. Introduction

1.1 Background

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Port Macquarie-Hastings Council (Council) to undertake an Environmental Values Review (EVR) required to inform the Fernbank Creek and Sancrox Structure Plan (the Project). The EVR is required to advise Council and relevant stakeholders of the presence of areas of high environmental value (HEV) within the Fernbank Creek and Sancrox Planning Investigation Area (Study Area, Figure 1). The Study Area was defined by Figure 20 of the Fernbank Creek and Sancrox Planning Investigation Area Discussion Paper (PMHC 2020).

1.2 Purpose of this report

The Urban Growth Management Strategy (UGMS, PMHC 2018a) maps HEV land, which includes National Parks, State Forests and areas of high biodiversity value, for example, known Koala habitat. All uncleared areas and cleared areas with scattered remnant canopy are included in the HEV lands, representing the majority of the Study Area. The purpose of this EVR was to review available information and refine this HEV mapping by:

- Reviewing and assessing information relevant to the Study Area and areas of HEV
- Undertaking, where required, a site investigation to verify the presence of HEV at a property scale.

The main objective of the EVR was to identify areas of HEV and provide recommendations for land use relating to environmental values within the Study Area.

1.3 Site location and description

The Study Area is located within the suburbs of Sancrox and Fernbank Creek, approximately six kilometres west of the Port Macquarie town centre in the Port Macquarie-Hastings Local government Area (LGA). The Study Area encompasses urban investigation areas A1, B1, B2, B3 and B4, identified in Council's UGMS (Figure 1).

Land use in the Study Area is primarily rural, including rural-residential and agriculture. The Study Area is currently zoned predominately as RU1 Primary Production with R5 Large Lot Residential mainly in the west and industrial, residential, business and environmental land use zonings along the Pacific Highway corridor and in the east of the Study Area.

The Study Area includes a combination of heavily modified lands used for grazing, areas with retained canopy over a maintained groundcover or open paddocks, areas with regenerating native vegetation and more intact woodlands with native groundcover and midstorey vegetation present.

1.4 Relevant legislation and planning controls

The following legislation and planning controls have been considered in this EVR:

- NSW *Environmental Planning and Assessment Act 1979* (EP&A Act)
- NSW *Biodiversity Conservation Act 2016* (BC Act)
- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- State Environmental Planning Policy (Koala Habitat Protection) 2020 (Koala Habitat Protection SEPP 2020)
- Port Macquarie-Hastings Local Environmental Plan 2011 (the LEP)
- Port Macquarie-Hastings Development Control Plan (DCP).

1.4.1 NSW Environmental Planning and Assessment Act 1979

The EP&A Act provides an assessment framework for the consideration of impacts to threatened biodiversity. Future development within the Study Area is likely to be assessed under Part 4 of the EP&A Act.

1.4.2 NSW Biodiversity Conservation Act 2016

Native plants and animals in NSW are protected by the BC Act, with threatened species and ecological communities listed in its Schedules. The BC Act is supported by the *Biodiversity Conservation Regulation 2017* (BC Reg), the Biodiversity Assessment Method (BAM), offsetting rules, sensitive biodiversity mapping, credit pricing spreadsheet and other guidance documents. The BAM is a framework for assessment of biodiversity impacts and determination of offsetting requirements under the NSW Biodiversity Offsets Scheme (BOS). Future development and/or offsetting within the Study Area is required to be undertaken in accordance with the BAM where the BOS is triggered.

1.4.3 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The purpose of the EPBC Act is to ensure that actions likely to cause a significant impact on Matters of National Environmental Significance (MNES) undergo an assessment and approval process. Under the EPBC Act, an action includes a project, undertaking, development or activity. An action that 'has, will have or is likely to have a significant impact on MNES' is deemed to be a controlled action and may not be undertaken without prior approval from the Commonwealth Minister for the Department of Agriculture, Water and the Environment (DAWE). The EPBC Act identifies MNES as:

- World heritage properties
- National heritage places
- Wetlands of international importance (Ramsar wetlands)
- Threatened species and ecological communities
- Migratory species
- Commonwealth marine areas
- Nuclear actions (including uranium mining)
- The Great Barrier Reef Marine Park
- A water resource, in relation to coal seam gas development and large coal mining development.

Future development within the Study Area is required to assess the potential impacts to MNES and may require a Referral to DAWE and offsetting. Where an approval under the EPBC Act is required, the onus is on the landowner/developer/proponent to undertake the necessary studies.

1.4.4 State Environmental Planning Policy (Koala Habitat Protection) 2020

The Koala Habitat Protection SEPP 2020 came into force on 30 November 2020 to replace and repeal the State Environmental Planning Policy (Koala Habitat protection) 2019 (which replaced the State Environmental Planning Policy 44 – Koala Habitat Protection (SEPP44) on 1 March 2020) while a new policy is developed during 2021. The Koala Habitat Protection SEPP 2020 replicates the objectives and provisions of SEPP44, which was in force from 1995 through to 2019. Port Macquarie-Hastings LGA is listed under Schedule 1 of the Koala Habitat Protection SEPP 2020 as an LGA to which the SEPP applies.

The Koala Habitat Protection SEPP 2020 applies to development applications on land over 1 hectare (alone, or together with adjoining land in the same ownership) in the LGAs listed in the SEPP. If there is a strategic Koala plan of management applying to the land, development applications must be consistent with that plan. If there is no strategic plan, the SEPP requires proponents and councils to undertake a two-step process to determine if the land is potential Koala habitat and then core Koala habitat. If the council is

satisfied that the land does not contain potential Koala habitat then the SEPP does not prevent development consent. If it is determined that the land contains potential Koala habitat, it must then be established if the habitat is core Koala habitat. If the council is satisfied that the land does not contain core Koala habitat then the SEPP does not prevent development consent. If it is determined that the land contains core Koala habitat a plan of management must be developed prior to development consent and the council's determination of the development application must not be inconsistent with the plan of management.

Under the Koala Habitat Protection SEPP 2020:

- *Core Koala habitat* means an area of land with a resident population of Koalas, evidenced by attributes such as breeding females, being females with young, and recent sightings of and historical records of a population
- *Potential Koala habitat* means areas of native vegetation where trees of the types listed in Schedule 2 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.

1.4.5 Port Macquarie-Hastings Local Environmental Plan 2011 (LEP)

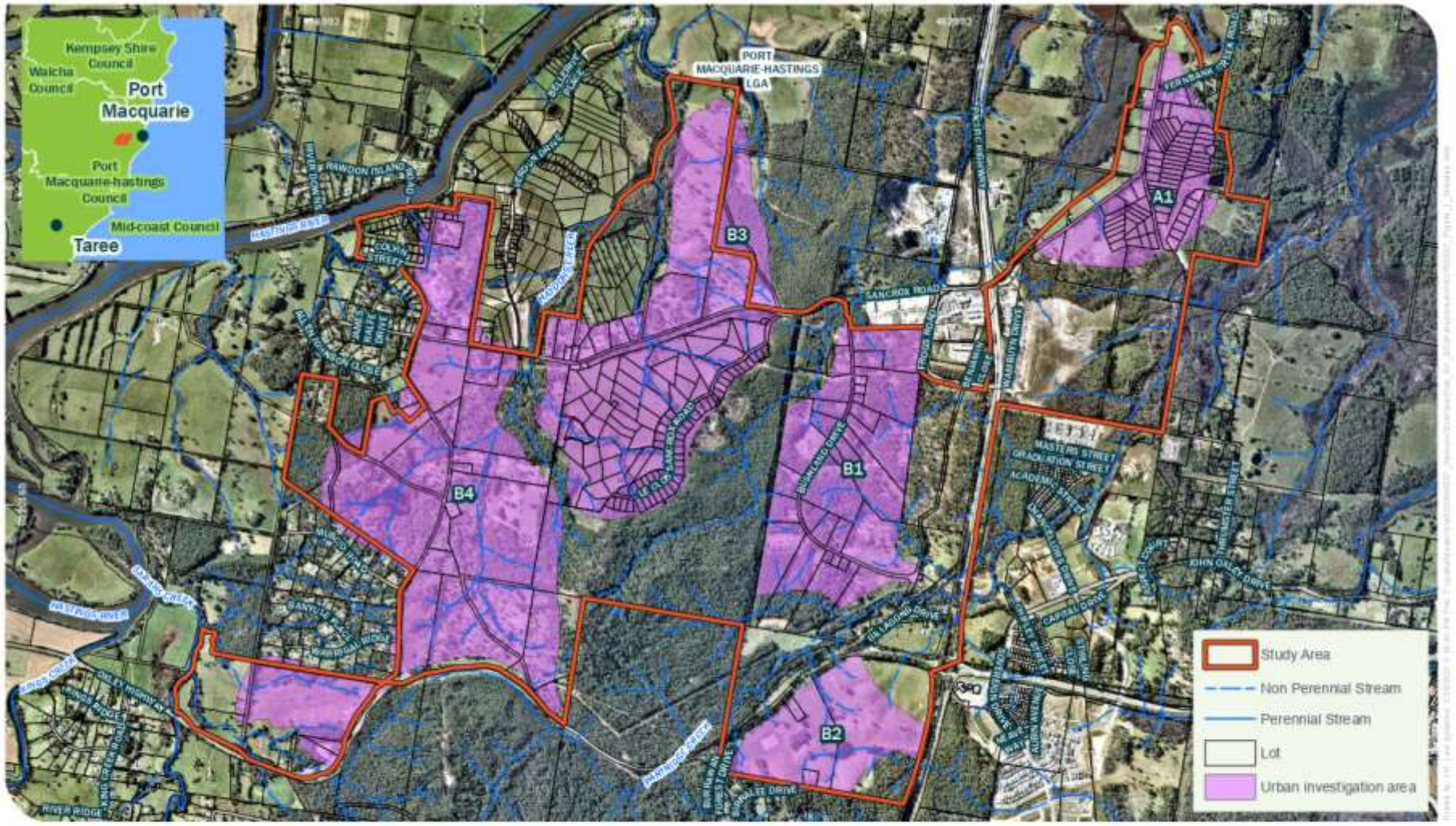
The Port Macquarie Hastings LEP, prepared by Council under the requirements of the EP&A Act, outlines the key planning controls used to manage the way land is used through zoning and development standards.

Under the LEP the Study Area is zoned as predominately "*RU1 Primary Production, with R5 Large Lot Residential existing predominantly to the west of the Sancrox investigation areas and clusters of industrial, residential, business and environmental land use zonings existing along the Pacific Highway corridor*" (PMHC 2020).

Part 7.5 of the Port Macquarie-Hastings LEP incudes local provisions for the protection of Koala habitat. The objective Part 7.5 is to "ensure that development is designed to retain Koala habitat" and applies to land mapped as "Koala Habitat Area" on the Koala Habitat Map, noting that the mapped Koala habitat does not include all Koala habitat areas within the Port Macquarie-Hastings region.

1.4.6 Port Macquarie-Hastings Development Control Plan (DCP)

The DCP supports the LEP providing guidance for development including design, general standards and area-based provisions. The DCP is discussed further in Section 3.1.4.


Kempsey Shire Council
Walcha Council
Port Macquarie
Port Macquarie-hastings Council
Mid-coast Council
Taree
PORT MACQUARIE-HASTINGS LGA
B1
B2
B3
B4
A1
Study Area
Non Perennial Stream
Perennial Stream
Lot
Urban investigation area
0
600
m
GDA 1994 MGA Zone 56
Study Area and regional context
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Figure 1

2. Methods

2.1 Literature review

Relevant reports and documents reviewed for the EVR are included in Section 3.1 and include:

- Council and policy documents
- Project specific documents
- Previous ecology assessments.

2.2 Database and existing mapping review

Relevant database searches and mapping were reviewed to determine the potential for threatened biodiversity to occur in the Study Area and within the locality (a 10 km radius) and inform the desktop assessment including:

- NSW Department of Planning, Industry and Environment (DPIE) BioNet database, including the Atlas of NSW Wildlife and Vegetation Information System (VIS) flora survey (DPIE 2020b, accessed June 2020)
- Commonwealth Protected Matters Search Tool for MNES (DAWE 2020, accessed June 2020)
- A review of the NSW Biodiversity Values Map (BV Map)
- A review of species subject to Serious and Irreversible Impacts (SAII) under the *Biodiversity Conservation Regulation 2017*
- A review of Important Area Mapping (IAM)
- A review of Areas of Outstanding Biodiversity Values (AOBV)
- A review of areas of Coastal Wetlands and Littoral Rainforest mapped under the SEPP (Coastal Management) 2018
- A review of the Mitchell Landscape over-cleared landscapes data
- A review of old growth forest mapping
- A review of streams and stream order
- A review of wildlife corridors.

2.3 Site assessment and constraints evaluation

2.3.1 Review

A preliminary review of the database search results was undertaken to identify areas within the Study Area that were considered likely to contain HEV and eliminate these areas from the site assessment. Verification Areas (VA) were those areas with limited data available, or where environmental values required validation, and were inspected during the site assessment. It should be noted that presence of HEV via desktop assessment was based on the HEV criteria used by the North Coast Regional Plan (NCRP) (DPE 2017) and provided by the Biodiversity Conservation Division (BCD) in response to the Draft PMHC Planning Proposal Policy (HEV Criteria and Verification Methods, Attachment 1 of BCD 2019, provided in Annex 1), and considers the following factors that can be assessed via a desktop analysis:

- Mapped environmental values (as detailed above)
- Threatened biodiversity records and MNES
- Presence of riparian zones
- Potential presence of core Koala habitat based on Council's indicative core Koala habitat mapping and records
- Value of areas for local connectivity and potential corridors for movement.

2.3.2 Site assessment

The site assessment involved a visual inspection of areas identified during the desktop assessment as requiring field verification. Where access was not possible/feasible the inspection was undertaken from the best vantage point. The visual inspection of each of these areas included:

- Rapid assessment of dominant canopy species
- Rapid condition assessment, including:
  - Presence of Hollow-bearing Trees (HBT)
  - Presence of hydrological features
  - Presence of rocky features
  - Presence of fallen logs and woody debris
  - Extent of groundcover and midstorey vegetation
  - Presence of trees with greater than 50 centimetres (cm) diameter at breast height (DBH)
- General habitat condition description.

2.3.3 Constraints evaluation

The level of constraints considered to be present within each of the VAs (not within the entire land parcel) was then determined. A constraint rating was attributed to each VA based on the descriptions provided in in Table 1.

Table 1: Constraint rating

Rating	Description
Low	Native canopy and midstorey mostly absent Dominated by exotic groundcover Native vegetation mostly absent Heavily modified
Moderate	Presence of native canopy Presence of habitat features such as HBTs Presence of Koala Food Trees (KFTs) Corridor value
High (multiple constraints represented)	Presence of native canopy Presence of native midstorey and groundcover Presence of mapped HEV and their buffers Presence of habitat features such substantial old growth and HBTs Presence of known threatened species habitat Presence of Koala habitat and KFTs Corridor value

2.4 Evaluation of HEV

An evaluation of HEV within the Study Area was undertaken using the HEV criteria adapted from HEV Criteria and Verification Methods of the NCRP (DPE 2017) and provided by the BCD in response to the Draft PMHC Planning Proposal Policy (BCD 2019). Information from the literature review, database searches and the site assessment details were combined to inform the evaluation.

2.5 Limitations

This EVR was subject to the following limitations:

- The level of assessment was broad; only select ecological values were assessed as per the HEV criteria. Detailed vegetation plots, habitat assessments or threatened species surveys were beyond the scope of this EVR.
- The assessment of HEV areas was primarily based on desktop analysis reliant on accurate mapping of key ecological values and previous ecological assessments.
- The EVR is not a property-level assessment of HEV.
- Not all VAs could be accessed during the site assessment due to restricted access or at landholder's request. These sites were assessed from a distance where possible.

3. Literature Review

The following literature was reviewed for information relating to biodiversity and ecological constraints relevant to the Study Area.

3.1 Council and policy documents

3.1.1 North Coast Regional Plan 2036

The North Coast Regional Plan 2036 (NCRP, DPE 2017) guides the NSW Government's land use planning priorities and provides a framework for more detailed land use planning. The NCRP comprises four goals, Goal 1, "*The most stunning environment in NSW*", relates directly to biodiversity and environmental values. Goal 1 includes a number of Directions with specific Actions, those of most relevance to this report include Action 1.2: "*Review areas identified as 'under investigation' within urban growth areas to identify and map sites of potentially high environmental value"* and Action 2.1: "*Focus development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value*." The NCRP maps areas of potential high environmental value (Figure 4 of the NCRP). Substantial portions of the Study Area are included in these mapped areas. The NCRP includes a range of criteria that were used to map areas of HEV. These criteria, and the above Actions, were applied to this EVR and determination of constraints. The NCRP maps areas of potential high environmental value

3.1.2 The Port Macquarie-Hastings Urban Growth Management Strategy

The Urban Growth Management Strategy (UGMS, PMHC 2018a) aims to identify opportunities for development and growth whilst maintaining a healthy environment. The UGMS maps HEV land (HEV "*comprise habitat areas with high species diversity, endangered species or supporting species found nowhere else")*, which includes National Parks, State Forests and areas of high biodiversity value, for example, known Koala habitat. The strategy aims to promote growth outside of HEV land, limiting the impact of future development and protecting the environment. All uncleared areas and cleared areas with scattered remnant canopy are included in the HEV lands within the Study Area, representing the majority of the Study Area.

Urban investigation areas, A1, B1-4, included in the Study Area, are identified in the UGMS. Key objectives of the UGMS are to avoid impacts on HEV areas and to protect and manage vegetation promoting landscape connectivity and corridors for biodiversity conservation. These principles are in line with the NCRP and have been applied to this EVR and determination of constraints.

3.1.3 Port Macquarie-Hastings Biodiversity Management Strategy 2019-2030

The Port Macquarie-Hastings Biodiversity Strategy (the Strategy, PMHC 2019) provides a framework to protect the local biodiversity and outlines the biological values of the LGA including flora and fauna, significant areas, wetlands, threatened ecological communities (TECs), high value forest areas and local priority areas. The Strategy outlines the remaining native vegetation at the LGA scale within different landscapes, broad vegetation formations and maps biologically significant areas according to targeted analysis. The Study Area falls within the Coastal Plains landscape, which represents 13% of the LGA. The Coastal Plains landscape has 56% remaining vegetation and is the heaviest cleared landscape in the LGA. The Strategy defines Biodiversity Priority Areas (BPA) that are considered to be of "*paramount importance for biodiversity conservation*" and are "*likely to have values which are irreplaceable and should be protected wherever possible*". These BPA were then considered as occurring inside Protected Areas (such as National Parks or land zones E2) or outside Protected Areas. BPA occurring outside of Protected Areas occur within

the Study Area. The highest 30% ranked BPA occurring outside of Protected Areas were then classified as Conservation Priority Areas (CPA). CPA occur within the Study Area, which have also been identified as Priority Action Lands. Regarding CPA, the Strategy states: "*These areas, if protected, provide the maximum benefit to help ensure the conservation of all species distributions across the LGA (it is assumed that species habitats within Protected Areas are secure)*." The relevance of these areas within the Study Area are discussed in Section 4.4.

The Strategy addresses the importance of connectivity of habitat patches throughout the landscape and illustrates important regional and sub-regional corridors, both of which apply to areas within the Study Area. These are discussed further in Section 4.13.

3.1.4 Port Macquarie-Hastings Development Control Plan (DCP)

Section B2 of the DCP (PMHC 2020) addresses Environmental Management, which aims to balance development with conserving biodiversity. Section B2 comprises 12 objectives, each with development provisions. The relevant objectives may be summarised as follows:

- Environmental management areas and buffers: includes objectives 7-9 of the DCP
- Tree management (including hollow-bearing trees (HBTs)): includes objectives 10-14 of the DCP.

Given the intended broad-level investigation scope, objectives associated with environmental management areas and buffers were considered in this EVR, while also considering the important role of HBTs and KFTs. The environmental management areas and buffers section includes buffer provisions for endangered ecological communities (EEC) and watercourses (applicable to land over one hectare and not currently approved for urban purposes), as well as including a development provision that requires improvement and maintenance of existing habitat and corridors and the consolidation of fragmented bushland.

Buffer provisions include fully vegetated buffers of 35 metres (m) for coastal floodplain EECs and 100 m for Freshwater Wetland on Coastal Floodplain. For all other EECs a fully vegetated buffer of 50 m must be provided. Noting that fully vegetated buffers cannot contain road infrastructure or an asset protection zone and that where different buffers (including riparian buffers) apply to an area, the greater of the buffer widths applies.

For watercourses, buffers include:

- 10 m for 1st order streams that flow intermittently
- 30 m for 1st order streams that flow permanently
- 40 m for 2nd order streams
- 50 m for 3rd order streams
- 65 m for 4th order streams.

3.1.5 The Draft Greater Sancrox Structure Plan

The Draft Greater Sancrox Structure Plan (the Draft Plan, PMHC 2015) was prepared by Council to guide future development in the Greater Sancrox Planning Area (Draft GSPA). The GSPA includes the part of the Study Area that is west of the Pacific Highway (and extends beyond the Study Area boundary), but does not include urban investigation area A1 to the east of the Study Area. An independent ecology assessment was undertaken to inform the Draft Plan (BioLink 2011), which is reviewed in Section 3.3.1.

The Draft Plan sets out a number of environmental principles for rezoning or development in the GSPA, those relevant to this EVR include:

- *"Major north-south regional corridor is to be retained.*
- *Vegetation corridors are to be retained, buffered where necessary in accordance with Council policy and secured in terms of on-going management. Corridors are not to be significantly fragmented and guaranteed ongoing management is required in accordance with a Vegetation Management Plan.*
- *The overall current level of vegetation cover in the study area is to be retained.*
- *Building envelopes are to prioritise development in cleared areas and in areas where it is possible to offset vegetation clearing and minimise the loss of areas containing significant ecological values.*
- *Residue lots are to contain remnant significant vegetation."*

3.1.6 Port Macquarie-Hastings Council Koala Recovery Strategy 2018.

The Port Macquarie-Hastings Council Koala Recovery Strategy (PMHC 2018b) provides an overview of Koalas in the LGA, threats and recommended actions. Threats in the LGA include habitat clearing, fragmentation, dog attack, vehicle strikes, bushfire and stress or disease. Recommended actions in association with habitat loss, modification and fragmentation are included, and Action 7 requires land rezoning to consider Koala habitat as per Council's CKPoM (once approved).

3.1.7 Draft Port Macquarie-Hastings Coastal Koala Plan of Management and Core Koala Habitat Mapping.

Council has prepared a Draft Coastal Koala Plan of Management (Draft CKPoM, PMHC 2018c), which was proposed for adoption under Clause 13 of the repealed SEPP 44 (now the Koala Habitat Protection SEPP 2020). The Draft CKPoM is acknowledged as a draft document that has not been adopted by Council. The draft CKPoM is designed to apply to development within land shown as core Koala habitat on Figure 1 of the Draft CKPoM. Substantial portions of the Study Area are mapped as core Koala habitat under the Draft CKPoM. This is discussed further in Section 4.14.

3.1.8 Policy and Guidelines for Fish Habitat Conservation and Management (2013 Update).

The Policy and Guidelines for Fish Habitat Conservation and Management (DPI 2013) provides a guide for legislative requirements, specific guidelines and policies for development which may affect fish habitat, outlining their protection and management. Key policy requires riparian buffer zones for future development. The width of the riparian buffer zone is based on the habitat Type and waterway Class as follows:

- Type 1, Class 1: 100 metres
- Type 2, Class 2-3: 50 metres
- Type 3, Class 3-4: 10-50 metres.

3.2 Project-specific documents

3.2.1 Report - Fernbank Creek Sancrox Discussion Paper - January 2020 - Consultation Version

The purpose of the Discussion Paper (PMHC 2020) is to discuss opportunities and constraints for the Fernbank Creek and Sancrox Investigation Area. Ecological values are recognised as a substantial constraint for the area requiring assessment. Urban investigation areas included in the Discussion Paper that occur within the Study Area include; A1 and B1-4. Key objectives for the environment include:

- *Protect, maintain and enhance significant vegetation communities and fauna, habitat areas and wildlife corridors.*
- *Protect and maintain water quality in local streams and in downstream receiving waters of the Hastings River.*
- *Ensure environmental and adjoining land use hazards are avoided and/or adequately managed.*

3.2.2 Departmental comment

The BCD have provided comment on the Discussion Paper (BCD 2020) identifying key constraints for each urban investigation area, noting the extensive vegetated areas. Recommendations from the BCD notably highlight the importance of focussing development in areas of least biodiversity sensitivity and applying a precautionary approach when determining biodiversity values. In addition, BCD have reiterated the importance of avoiding areas of biodiversity value in their comment on the PMHC Planning Proposal Policy, including recommendations for the identification of HEV and ensuring that current land uses not be intensified on HEV land and that protection of HEV land is provided through appropriate zoning.

The NSW Department of Primary Industries (DPI, Fisheries NSW) comment on the Discussion Paper highlighted the presence of Type 1 Highly Sensitive Key Fish Habitat within mapped Coastal Wetlands and specific waterways including Fernbank Creek, Partridge Creek and the Hastings River within the Study Area. Recommendations provided by Fisheries NSW include avoiding impacts to key fish habitat, protection of Coastal Wetlands and provision of riparian buffers.

DPIE provided comment on the Discussion Paper and highlighted the importance of addressing the State Government's commitment to the long term goal of increasing Koala populations across NSW, the protection of the remaining Koala population in Port Macquarie after recent bushfires and the relationship between the bushfire requirements for future development and ecology.

3.3 Previous ecological assessments

3.3.1 Greater Sancrox Ecological Assessment

The Greater Sancrox Ecological Assessment (BioLink 2011) presents results of the ecological assessment of the GSPA undertaken to inform the Draft Greater Sancrox Structure Plan. The key findings of this assessment include:

- Constraints associated with the presence of EECs.
- Constraints associated with the presence of keystone predators the Masked Owl (*Tyto novaehollandiae*) and Powerful Owl (*Ninox strenua*), requiring the conservation of essential habitat elements such as appropriately sized HBTs and the retention of sufficient forest cover (to enable viable populations of their preferred prey species to persist (terrestrial rodents and Dasyurids and possums and gliders, respectively).
- Constraints associated with Koala populations known from the north-east and south-east of the GSPA.
- Constraints associated with the presence of Squirrel Glider (*Petaurus norfolcensis*) and Yellow-bellied Glider (*Petaurus australis*) (single group south of GSPA).
- The importance of protecting existing HBT resources and ensuring ongoing recruitment over time.
- The large central and northern forested areas of the GSPA warrant high level protection.

The outcomes of the field investigations were used to define areas as follows:

- Irreplaceable, which contain significant ecological value/features that should be retained
- Value Managed, which contain locally significant ecological values that should be managed
- Directly Offsettable, which contain areas of potential habitat.

The remaining unmapped areas were considered as being unconstrained. In addition, BioLink (2011) propose wildlife corridor options that follow intact vegetation through the north-east of the Study Area and the south-east of the Study Area. These proposed corridors offer an alternative to the sub-regional corridor presented in the Port Macquarie-Hastings Biodiversity Strategy, which passes through the middle of the eastern boundary of the Study Area. Recommendations of the BioLink (2011) study include:

- *"maintain and improve overall vegetation cover and type (presently 40% cover) for significant fauna habitat for the Powerful Owl, Masked Owl, Koala and Squirrel Glider*
- *prioritise development in the cleared and offsetable areas of the site to minimise the loss of areas containing significant ecological values*
- *maintain wildlife corridors and revegetate and buffer EECs and waterways and use this as the principle means for offsetting vegetation loss and improving habitat corridors/linkages*
- *retain all hollow bearing trees (HBTs)*
- *retain all large trees (>750 mm DBH) in the area of squirrel glider occupancy."*

3.3.2 Preliminary ecological Constraints Assessment for Future Development of Le Clos Sancrox

Preliminary ecological constraints assessments (JBEnviro 2018 and 2019) were completed for the Le Clos site, which is located within the predominately cleared areas within urban investigation area B3, bounded by Sancrox Road on the north. The key findings of these assessments include:

- Potential EEC *River-flat Eucalypt Forest on Coastal Floodplains* in the southwest corner of the Les Clos site and confirmed EEC *Swamp Oak Swamp Forest on Coastal floodplains*.
- Confirmed presence of the Glossy Black Cockatoo (*Calyptorhynchus lathami*).
- Potential Koala habitat (not detected in target fauna surveys).
- HBTs present are suitable for small to medium fauna.
- No threatened flora found on site.
- Native vegetation on site has the potential to support threatened fauna.
- The requirement for riparian and EEC buffer zones.

3.3.3 Fernbank Industrial Park and Sancrox Employment Precinct ecological assessments

An ecological constraints assessment was prepared by Keystone Ecological in 2007 (Ashby 2007) for a site in Fernbank Creek that includes the part of the Study Area east of the Pacific Highway, bounded by Fernbank Creek Road to the north. A Vegetation Management Plan (no author) established vegetation offset areas as a result of the constraints assessment in association with the development of this area. These areas are now protected as E2 zoned lands.

3.3.4 Frogs Road and Pacific Highway

A number of tree and habitat assessments (Parker 2018, 2019) focusing on Koala habitat have been undertaken on land bordered by Frogs Road to the north and the Pacific Highway to the east. These assessments and analyses were undertaken in accordance with SEPP44. The Koala Habitat Protection SEPP 2020 replicates the objectives and provisions of SEPP44 and maintains the definitions of potential and core Koala habitat.

Parker (2018) concluded that the subject land did not constitute potential Koala habitat due to trees of the types listed in Schedule 2 constituting less than 15% of the total number of trees in the upper or lower strata of the tree component. It should be noted that the Schedule 2 tree species list is limited (containing only 10 species) and that tree use by Koalas is now acknowledged to be substantially more diverse than at the establishment of this list (OEH 2018).

While, based on these results, the Koala Habitat Protection SEPP 2020 may not be triggered for this subject land for the purposes of development applications, the subject land's local relevance for planning purposes should be noted, as 19% of the randomly sampled canopy trees are listed as locally relevant KFTs under the Draft CKPoM and Koala records occur immediately adjacent to this area along the Pacific Highway, presumably indicating use of the habitat to the east and west.

3.3.5 The Pacific Highway Upgrade - Oxley Highway to Kempsey (OH2K)

Flora and fauna surveys were undertaken in association with the Pacific Highway Upgrade in the vicinity of the Study Area (southern end Section A; RTA 2010). This assessment considered habitat value within sections of the alignment occurring within the Study Area to be medium to high and reported a key sub-regional corridor occurring through the middle of the eastern boundary of the Study Area. Threatened species identified during the surveys within the Study Area included the Grey-headed Flying Fox (*Pteropus poliocephalus*) and Koala immediately west of the Pacific Highway. Either side of Sancrox Road was listed as an area most likely to have Koalas occur.

To increase wildlife connectivity and reduce barrier effects, underpasses were included in the design to facilitate fauna movement. Three underpasses (two dedicated fauna underpasses and one combined drainage culvert/fauna underpass) occur within the eastern section of the Study Area (western side of the Pacific Highway), connecting to the habitat on the eastern side of the Pacific Highway, which falls outside the Study Area. The two dedicated fauna underpasses are monitored as part of the ecological monitoring for the Pacific Highway Upgrade. A number of native fauna have been recorded using these underpasses, including; macropods, bandicoots, possums, Antechinus and reptiles; non-native predators (Foxes and Cats) have also been recorded using the underpasses (Niche 2019).

Three additional underpasses (combined drainage culvert/fauna underpass) occur immediately to the north of the Study Area. One of these corridors is monitored as part of the ecological monitoring for the Pacific Highway Upgrade and has recorded a similar array of species as the dedicated fauna underpasses that fall within the Study Area.

3.3.6 Sancrox Quarry Expansion

A Biodiversity Assessment Report (SLR 2019) was undertaken to support the Environmental Impact Statement (ERM 2019) for the Sancrox Quarry Expansion Project, which occurs immediately to the north of the Study Area. The expansion would involve the removal of over 40 hectares of intact forest, including an area of EEC. A number of threatened bat species were recorded during the assessment and old Koala scats and tree scratches were observed. The area was noted to contain Koala habitat and HBTs. The relevance of the Sancrox Quarry Expansion Project to the current assessment includes the potential loss of habitat and resources in the locality and further reduction/fragmentation of potential wildlife corridors, notably the south/north corridor identified by BioLink (2011).

3.3.7 Le Clos Verdun Rural Residential Estate

A constraints assessment (Ashby 2008) was completed in association with the proposed development of Le Clos Verdun Rural Residential Estate, which primarily occurs outside the Study Area, bounded between the Hastings River to the north, Sancrox Road to the south and Riverbend Road to the west. The south-west corner of this estate extends into the Study Area. Ashby (2008) found that the estate supports environmental values such as EECs, threatened species and a number of mature HBTs. However, according to the results presented within Ashby (2008), environmental values in the south-west portion of the estate that is included in the Study Area are limited to EECs within the densely vegetated areas immediately adjacent to the predominantly cleared land, with HBTs recorded outside the Study Area.

4. Database search results

4.1 NSW BC Act listed species

Threatened species listed under the NSW BC Act that have been recorded within the locality are provided Annex 2. No determination of likelihood of occurrence was undertaken as detailed habitat assessments did not form part of this EVR.

A total of 20 threatened flora species were recorded within the locality with only one species, Grove's Paperbark (*Melaleuca groveana*), being previously recorded within the Study Area (Figure 2, Table 2).

A total of 80 threatened fauna listed under the BC Act have been recorded within the locality, including; 48 birds, 25 mammals, five frogs, and two insects (Figure 3). Nineteen threatened fauna have been previously recorded within the Study Area (Table 2).

Table 2: Threatened species recorded within the Study Area (BioNet Atlas, DPIE 2020b)

Scientific	Common Name	NSW Status	Commonwealth Status
Flora			
Melaleuca groveana	Grove's Paperbark	V	
Fauna			
Anthochaera phrygia	Regent Honeyeater	E	CE
Dasyurus maculatus	Spotted-tailed Quoll	V	E
Ephippiorhynchus asiaticus	Black-necked Stork	E	
Haliaeetus leucogaster	White-bellied Sea-Eagle	V	
Hirundapus caudacutus	White-throated Needletail		V
Ixobrychus flavicollis	Black Bittern	V	
Litoria brevipalmata	Green-thighed Frog	V	
Lophoictinia isura	Square-tailed Kite	V	
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V	
Miniopterus australis	Little Bent-winged Bat	V	
Miniopterus orianae oceanensis	Large Bent-winged Bat	V	
Ninox connivens	Barking Owl	V	
Ninox strenua	Powerful Owl	V	
Petaurus norfolcensis	Squirrel Glider	V	
Phascolarctos cinereus	Koala	V	V
Pteropus poliocephalus	Grey-headed Flying-fox	V	V
Scoteanax rueppellii	Greater Broad-nosed Bat	V	
Tyto novaehollandiae	Masked Owl	V	
Vespadelus troughtoni	Eastern Cave Bat	V	

V = Vulnerable, E = Endangered, CE = Critically Endangered.

4.2 Commonwealth EPBC Act MNES

An EPBC Protected Matters Search was undertaken for the locality (DAWE 2020, Annex 3). Four threatened ecological communities, 77 threatened species and 67 listed migratory species are known or predicted to occur within the locality. Threatened ecological communities likely to occur in the locality include:

- Coastal Swamp Oak (*Casuarina glauca*) Forest of NSW and SE QLD ecological community
- Littoral Rainforest and Coastal Vine Thickets of eastern Australia
- Lowland Rainforest of Subtropical Australia
- Subtropical and Temperate Coastal Saltmarsh.

Threatened species listed under the EPBC Act that have been previously recorded within the Study Area include the Regent Honeyeater (*Anthochaera phrygia*), Spotted-tailed Quoll (*Dasyurus maculatus*), White-throated Needletail (*Hirundapus caudacutus*), Koala and Grey-headed Flying-fox. No additional MNES have been identified as occurring within the Study Area.

4.3 Existing vegetation mapping

Existing vegetation mapping for the Port Macquarie LGA (VIS 4205, DPIE 2015) within the Study Area includes 19 different vegetation communities (Table 3, Figure 4). The vegetation communities with the largest mapped areas in the Study Area are the White Stringybark – Tallowwood – Grey Gum Forest (331.45 ha), and Blackbutt Grassy forest (92.47 ha). Existing EEC mapping for the Port Macquarie LGA (VIS 4206, DPIE 2015) includes one EPBC Act listed EEC (Lowland Rainforest of Subtropical Australia) and six different BC Act listed EEC's occurring within the Study Area (Table 4, Figure 5). Relevant DCP buffer provisions include fully vegetated buffers of 35 m for coastal floodplain EECs and 50 m for all other EECs, which are shown in Figure 5.

The HEV Criteria and Verification Methods (BCD 2019, Annex 1) specify both desktop analyses and fieldwork analyses (including Plant Community Type (PCT) identification). As mentioned, this EVR is guided by the desktop analyses of the HEV Criteria and Verification Methods, however, a preliminary desktop conversion of vegetation communities to PCTs, as per DPIE's Vegetation Information System database (VIS database) was undertaken (Table 3) to provide indicative information regarding the likely PCTs and their extent of clearing. The extent of clearing for each of the PCTs in NSW is provided within the VIS database. The NCRP refers to a number of criteria that were used to define HEV, including "*native vegetation of high conservation value, including vegetation types that have been over-cleared or occur within over-cleared landscapes, old growth forests and rainforests*". The HEV Criteria and Verification Methods defines over-cleared vegetation types as those PCTs with a percent cleared status greater than 70%. Five of the nineteen vegetation communities (Table 3) may be considered as over-cleared vegetation and therefore HEV.

Table 3: Vegetation communities mapped in the Study Area

Vegetation Community (DPIE 2015)	Area (ha)	Indicative PCT	% cleared in NSW (VIS database)	Over-cleared PCT?
Black Booyong Subtropical Rainforest	4.70	Most likely PCT 1534 *Black Booyong - Giant Stinging Tree - Rosewood - Moreton Bay Fig lowland subtropical rainforest of the lower North Coast* Other candidate PCTs include 670, 824, 1201	50%	No
Blackbutt Coastal Dune Satinwood Forest	1.50	Most likely PCT 1074 *Pink Bloodwood open forest of the coastal lowlands of the NSW North Coast Bioregion* Other candidate PCTs include 1646, 1084, 692, 715	25%	No

Vegetation Community (DPIE 2015)	Area (ha)	Indicative PCT	% cleared in NSW (VIS database)	Over-cleared PCT?
Blackbutt Grassy Forest	92.47	Most likely PCT 697 *Blackbutt - Turpentine open forest of the foothills of the NSW North Coast Bioregion* Other candidate PCTs include 690, 1556	30%	No
Blackbutt Shrubby Moist Forest	16.68	Most likely PCT 695 *Blackbutt - Turpentine - Tallowwood shrubby open forest of the coastal foothills of the central NSW North Coast Bioregion* Other candidate PCTs include 686, 692, 699, 1259	5%	No
Broad-leaved Paperbark - Mixed Eucalypt Swamp Forest Complex	15.56	Most likely PCT 1230 *Swamp Mahogany swamp forest on coastal lowlands of the NSW North Coast Bioregion and northern Sydney Basin Bioregion* Other candidate PCTs include 1064, 1235, 1717	75%	**Yes**
Broad-leaved Paperbark - Swamp Mahogany Swamp Forest	0.00	Most likely PCT 1230 *Swamp Mahogany swamp forest on coastal lowlands of the NSW North Coast Bioregion and northern Sydney Basin Bioregion* Other candidate PCTs include 1064, 1235, 1717, 1724	75%	**Yes**
Broad-leaved Paperbark Swamp Woodland/Forest	14.94	Most likely to be either PCT 1717 *Broad-leaved Paperbark - Swamp Mahogany - Swamp Oak - Saw Sedge swamp forest of the Central Coast and Lower North Coast* OR PCT 1724 *Broad-leaved Paperbark - Swamp Oak - Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast*	68% 31%	No No
Flax-leaved Paperbark - Mixed Eucalypt Coastal Floodplain Wetland Forest Complex	40.46	Most likely to be either PCT 1064 *Paperbark swamp forest of the coastal lowlands of the NSW North Coast Bioregion and Sydney Basin Bioregion* Other candidate PCTs include 1722, 1749	75%	**Yes**
Flooded Gum Moist Riparian and Gully Forest	13.12	Most likely PCT 827 *Flooded Gum - Tallowwood - Brush Box moist open forest of the coastal ranges of the North Coast* Other candidate PCTs include 812, 826, 1285	55%	No
Grey Gum - Tallowwood - White Mahogany Grassy Forest	33.35	Most likely 1548 *Tallowwood - Small-fruited Grey Gum - Kangaroo Grass grassy tall open forest on foothills of the lower North Coast* Other candidate PCTs include 1550, 1180	40%	No
Grey Gum - Grey Ironbark Moist Forest	2.84	Most likely PCT 1262 *Tallowwood - Small-fruited Grey Gum dry grassy open forest of the foothills of the NSW North Coast* Other candidate PCTs include 867, 1208	30%	No
Grey Mangrove Woodland/ Forest	0.12	Most likely PCT 916 *Mangrove - Grey Mangrove low closed forest of the NSW Coastal Bioregion*	59%	No
Lowland Floodplain Subtropical Rainforest	0.04	Most likely PCT 1302 *White Booyong - Fig subtropical rainforest of the NSW North Coast Bioregion* Other candidate PCTs include 1068, 670, 1534	75%	**Yes**
Riparian Scrub - Forest (Disturbed)	1.19	Vegetation description limited, unable to allocate to PCT	-	-
She-oak Scrub (Disturbed)	0.55	Vegetation description limited, unable to allocate to PCT	-	-
Swamp Oak - Mixed Eucalypt Coastal Floodplain Wetland Forest Complex	12.61	Most likely PCT 1717 *Broad-leaved Paperbark - Swamp Mahogany - Swamp Oak - Saw Sedge swamp forest of the Central Coast and Lower North Coast* Other candidate PCTs include 1735, 1730	68%	No

Vegetation Community (DPIE 2015)	Area (ha)	Indicative PCT	% cleared in NSW (VIS database)	Over-cleared PCT?
Swamp Oak Coastal Floodplain Wetland Forest	15.87	Most likely PCT 1730 *Swamp paperbark - Baumea juncea swamp shrubland on coastal lowlands of the Central Coast and Lower North Coast*	70%	**Yes**
Wattle Scrub (Disturbed)	1.09	Vegetation description limited, unable to allocate to PCT	-	-
White Stringybark - Tallowwood - Grey Gum Dry Forest	331.45	PCT 1618 *Smooth-barked Apple - White Stringybark - Red Mahogany - Melaleuca sieberi shrubby open forest on lowlands of the* lower North Coast (only PCT in the sub-region with White Stringybark) OR PCT 1215 *Spotted Gum - Grey Ironbark open forest of the Macleay Valley lowlands of the NSW North Coast Bioregion*	56% 35%	No No
TOTAL	598.63			

Table 4: Mapped endangered ecological communities within the Study Area

BC Act listed EEC	EPBC Act listed EEC	Area (ha)
Lowland Rainforest in NSW North Coast	Lowland Rainforest of Subtropical Australia	4.70
Swamp Sclerophyll Forest on Coastal Floodplains		25.87
River-flat Eucalypt Forest on Coastal Floodplain		33.77
Subtropical Coastal Floodplain Forest		4.50
Lowland Rainforest on Floodplain	Lowland Rainforest of Subtropical Australia	1.24
Swamp Oak Floodplain Forest		25.59
TOTAL		95.66

4.4 Biodiversity Management Strategy 2019-2030 Conservation Priority Areas

As discussed in Section 3.1, Conservation Priority Areas (CPA) occur within the Study Area. The majority of the remnant vegetation in the Study Area is mapped as CPA with the exception of the majority of the south east section of urban investigation area B4. These areas were identified via analyses undertaken in association with the Biodiversity Management Strategy (PMHC 2019) and identify areas that "*if protected, provide the maximum benefit to help ensure the conservation of all species distributions across the LGA (it is assumed that species habitats within Protected Areas are secure).*"

4.5 NSW Biodiversity Values Map

The NSW Biodiversity Values Map (BV Map) identifies land with high biodiversity value that is particularly sensitive to impacts from development and clearing. Areas of the Study Area are mapped within the BV Map. Biodiversity Values mapped areas within the Study Area are primarily limited to Protected Riparian Land, Identified Rainforest and Coastal Wetlands protected under SEPP (Coastal Management) 2018 (Figure 6).

4.6 NSW Serious and Irreversible Impacts (SAII)

Species and ecological communities identified as being most at risk of extinction from potential development have been identified as entities that may be subject to Serious and Irreversible Impacts (SAII). "*The concept of serious and irreversible impacts is fundamentally about protecting threatened entities that are most at risk of extinction from potential development. The Biodiversity Offsets Scheme recognises that there are some types of serious and irreversible impacts that the community expects will not occur except*

where the consent authority considers that this type of impact is outweighed by the social and economic benefits that the development will deliver to the State". The current list of species (and their habitat) and threatened ecological communities that are at risk of SAII can be searched in the Threatened Biodiversity Database Collection (TBDC). Each potential SAII has an impact threshold identified, which is provided within the TBDC individual species information. Of those species that have BioNet records within the Study Area, four are subject to SAII. These, and their associated thresholds, are listed below

- Regent Honeyeater: SAII threshold are Important Area Maps (IAM)
- Little Bent-winged Bat (*Miniopterus australis*): SAII threshold is potential breeding habitat and presence of breeding individuals.
- Large Bent-winged Bat (*Miniopterus orianae oceanensis*): SAII threshold is potential breeding habitat and presence of breeding individuals.
- Eastern Cave Bat (*Vespadelus troughtoni*): SAII threshold is potential breeding habitat and presence of breeding individuals.

4.7 NSW Important Area Maps

Important Area Maps (IAM) have been completed for the Regent Honeyeater and Migratory Shorebirds and are available within the Biodiversity Offsets and Agreement Management System (BOAMS). The Regent Honeyeater has been recorded within the Study Area however IAM for this species does not occur within the Study Area. IAM for Migratory Shorebirds forms a section of the Study Area boundary along Haydons Creek in the north of the Study Area, with a small tributary extending into the Study Area from Haydons Creek and from Sarah's Creek in the south-west of the Study Area (Figure 6). Migratory Shorebirds (Sanderling, Curlew Sandpiper, Great Knot, Greater Sand-plover, Lesser Sand-plover, Broad-billed Sandpiper, Black-tailed Godwit, Terek Sandpiper, Eastern Curlew, Red Knot, Bar-tailed Godwit, Beach Stone-curlew, Little Tern, Hooded Plover) are dual credit species (ecosystem and species credit species) under the BC Act for which the IAM represents the species credit component of the habitat. Where IAM is present on a site, the species are considered present and considered as species credit species for the purposes of assessment under the BOS.

4.8 NSW Areas of Outstanding Biodiversity Values

Areas of Outstanding Biodiversity Values (AOBV) have been declared for NSW and are considered to be areas that represent irreplaceable biodiversity values. AOBV can be found in the Register of Declared Areas of Outstanding Biodiversity Value There are no AOBV occurring within the Study Area.

4.9 SEPP (Coastal Management) 2018.

There are no Littoral Rainforest or Proximity Areas for Littoral Rainforest mapped within the Study Area. Coastal Wetlands and Proximity Areas for Coastal Wetlands are mapped in the south-east, south-west and centre-north of the Study Area (Figure 7).

4.10 Mitchell Landscape

Mitchell Landscapes were mapped across NSW in 2002 and are used for a variety of purposes including the determination of over cleared landscapes (OCL) (DPIE 2019). The majority of the central portion of the Study Area is mapped as Wauchope Coastal Foothills, with protrusions of Manning - Macleay Coastal Alluvial Plains (Figure 7). The estimated percent cleared for these landscapes are 44% and 57% respectively (DPIE 2019). Neither fall into the category of OCL (more than 70% cleared category).

4.11 Old Growth Forest

Substantial portions of the Study Area are mapped as *Disturbed Mature Forest* with smaller portions mapped as *Disturbed Old Growth* or *Candidate Old Growth* (Figure 8). Old growth was noted during the site assessment within several of the VAs. Roadside HBT mapping within the Study Area shows the majority of roadside HBTs occur along Walters Road, Rawdon Island Road, Bengal Street and Stanley Street.

4.12 Stream order

'Stream order' is used to describe the hierarchy of streams from the top to the bottom of a catchment. Under the Strahler stream classification system waterways are given an 'order' according to the number of additional tributaries associated with each waterway (Strahler 1952). This system provides a measure of system complexity and therefore the potential for fish habitat to be present. The Study Area contains streams mapped as 1st, 2nd, 3rd and 4th order (Figure 9). Relevant DCP riparian buffers are also shown in Figure 9, with the assumption that, in lieu of more detailed studies, 1st order streams are permanent and require a 30 m buffer.

4.13 Wildlife corridors and connectivity

Regional and sub-regional corridors, as per the Port Macquarie-Hastings Biodiversity Strategy (PMHC 2019), occur within the Study Area. Additional corridors were proposed by BioLink (2011). Figure 10 illustrates these corridors.

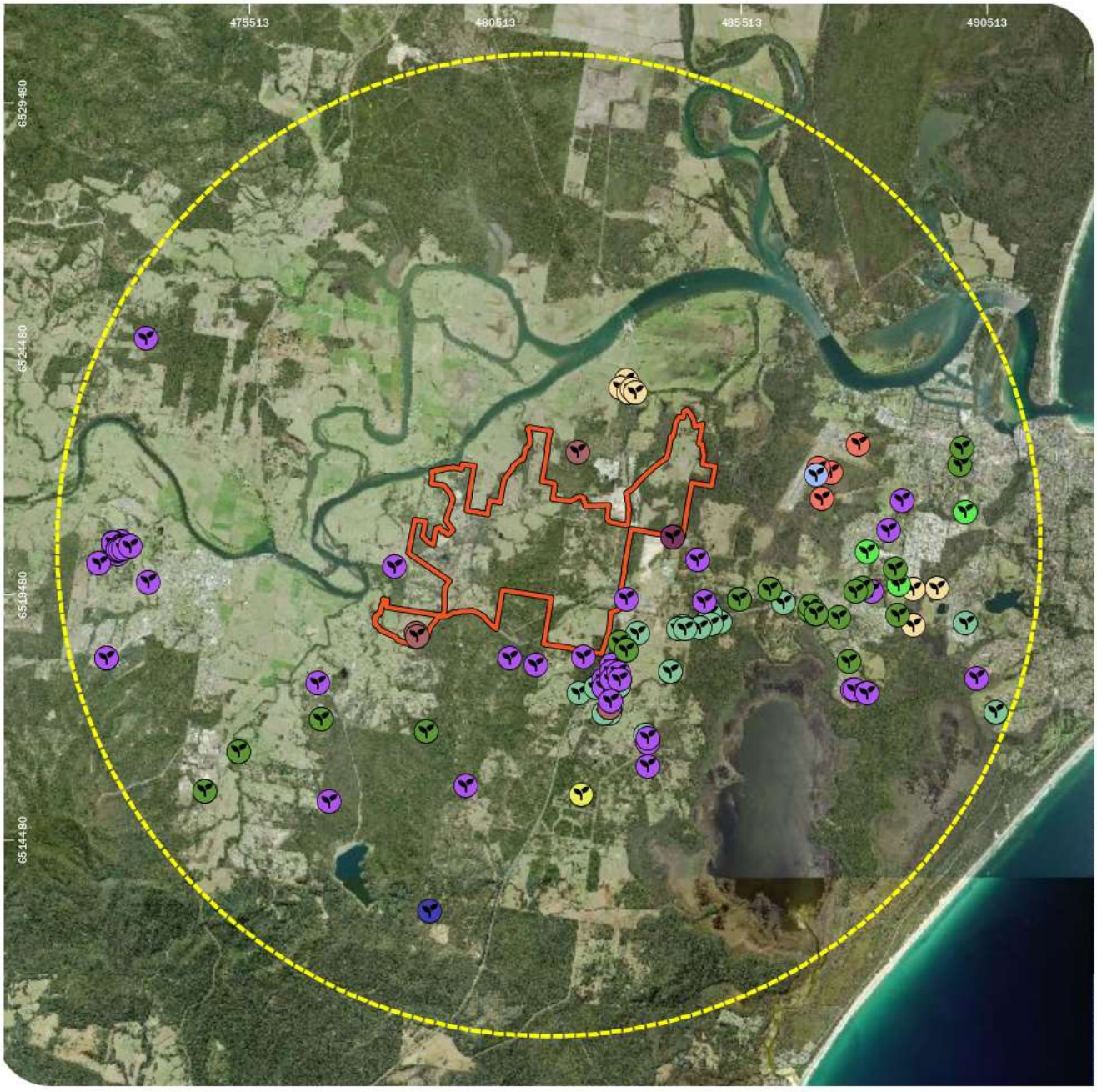
As mentioned, three underpasses (two dedicated fauna underpasses and one combined drainage culvert/fauna underpass) that were constructed in association with the Pacific Highway Upgrade occur within the eastern section of the Study Area (western side of the Pacific Highway), connecting to the habitat on the eastern side of the Pacific Highway, (Figure 10), facilitating terrestrial fauna movement within the sub-regional corridor.

The three additional underpasses (combined drainage culvert/fauna underpass) facilitate movement within with the north-south corridor proposed by BioLink (2011) (Figure 10).

4.14 Koala habitat and records

A substantial proportion of the Study Area has been mapped as core Koala habitat under the draft CKPoM (PMHC 2018c) (Figure 11).

Scattered Koala records occur across the Study Area, with a greater density of records towards the Pacific Highway. By default, records are commonly clustered along road ways as a result of frequency of observation and/or road kill.



Locality (10 km radius)

Study Area

Flora

- *Acronychia littoralis*
- *Allocasuarina defungens*
- *Allocasuarina thalassoscopica*
- *Asperula asthenes*
- *Chamaesyce psammogeton*
- *Cynanchum elegans*
- *Eucalyptus nicholii*
- *Marsdenia longiloba*
- *Maundia triglochinoides*
- *Melaleuca biconvexa*
- *Melaleuca groveana*
- *Rhodamnia rubescens*
- *Rhodomyrtus psidioides*
- *Senna acclinis*
- *Sophora tomentosa*

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0 2 km

GDA 1994 MGA Zone 56

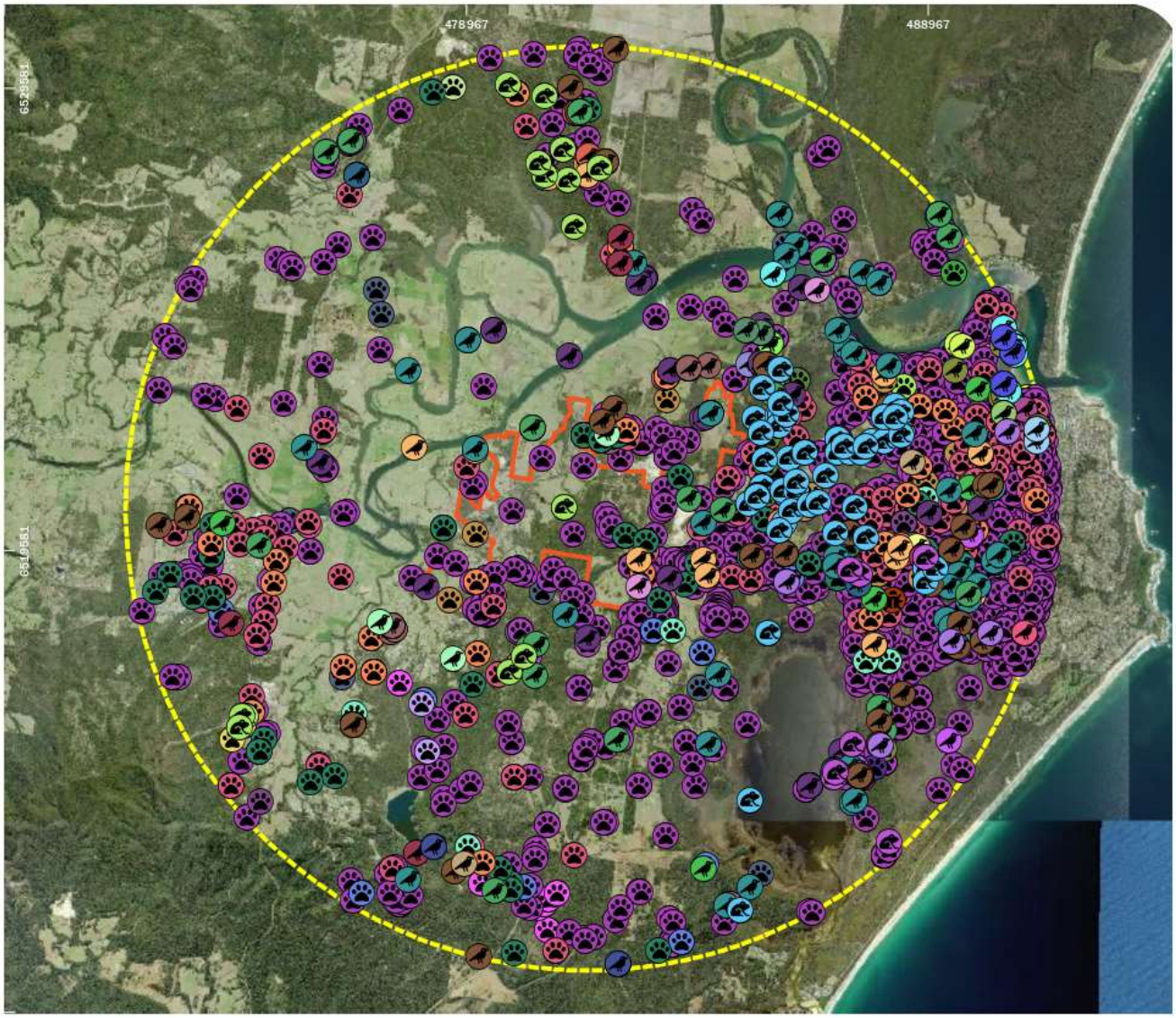
NSW Bionet Atlas Threatened Species 10km Search - Flora

Fernbank Creek and Sancrox Structure Plan Environmental Values Review

Niche PM: Radika Michniewicz
Niche Proj. #: 5897
Client: Port Macquarie-Hastings Council

Figure 2

NSW Office of Environment and Heritage's Bionet Atlas, which holds the data from a number of custodians. Data Obtained DD/MM/YYYY, public NSW_Imagery: © Department of Customer Service 2020



Amphibia
- Green and Golden Bell Frog
- Green-thighed Frog
- Wallum Froglet

Insecta
- Giant Dragonfly

Reptilia
- Green Turtle
- Hawksbill Turtle
- Leatherback Turtle
- Loggerhead Turtle

Aves
- Australasian Bittern
- Barred Cuckoo-shrike
- Beach Stone-curlew
- Black Bittern
- Black-necked Stork
- Blue-billed Duck
- Brolga
- Brown Treecreeper (eastern subspecies)
- Bush Stone-curlew
- Comb-crested Jacana
- Dusky Woodswallow
- Eastern Curlew
- Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area
- Flame Robin
- Freckled Duck
- Little Eagle
- Little Lorikeet
- Little Tern
- Magpie Goose
- Pied Oystercatcher
- Red Knot
- Regent Honeyeater
- Rose-crowned Fruit-Dove
- Scarlet Robin
- Sooty Oystercatcher
- Spotted Harrier
- Terek Sandpiper
- Varied Sittella
- White-bellied Sea-Eagle
- White-throated Needletail
- Wompoo Fruit-Dove

Mammalia
- Brush-tailed Phascogale
- Common Blossom-bat
- Common Planigale
- Dugong
- Eastern Cave Bat
- Eastern Chestnut Mouse
- Eastern Coastal Free-tailed Bat
- Eastern False Pipistrelle
- Eastern Pygmy-possum
- Golden-tipped Bat
- Greater Broad-nosed Bat
- Greater Glider
- Grey-headed Flying-fox
- Hoary Wattled Bat
- Humpback Whale
- Koala
- Large Bent-winged Bat
- Little Bent-winged Bat
- Rufous Bettong
- Southern Myotis
- Southern Right Whale
- Spotted-tailed Quoll
- Squirrel Glider
- Yellow-bellied Glider
- Yellow-bellied Sheathtail-bat
- Locality (10 km radius)
- Study Area

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0 2 km

GDA 1994 MGA Zone 56

NSW Bionet Atlas Threatened Species 10km Search - Fauna
Fernbank Creek and Sancrox Structure Plan Environmental Values Review

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Client: Port Macquarie-Hastings Council

Figure 3

NSW Office of Environment and Heritage's Bionet Atlas, which holds the data from a number of custodians. Data Obtained DD/MM/YYYY, public NSW_Imagery: © Department of Customer Service 2020



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Environment and Heritage

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m
GDA 1994 MGA Zone 56

Existing vegetation mapping for the Study Area (DPIE 2015)
Fernbank Creek and Sancrox Structure Plan Environmental Values Review

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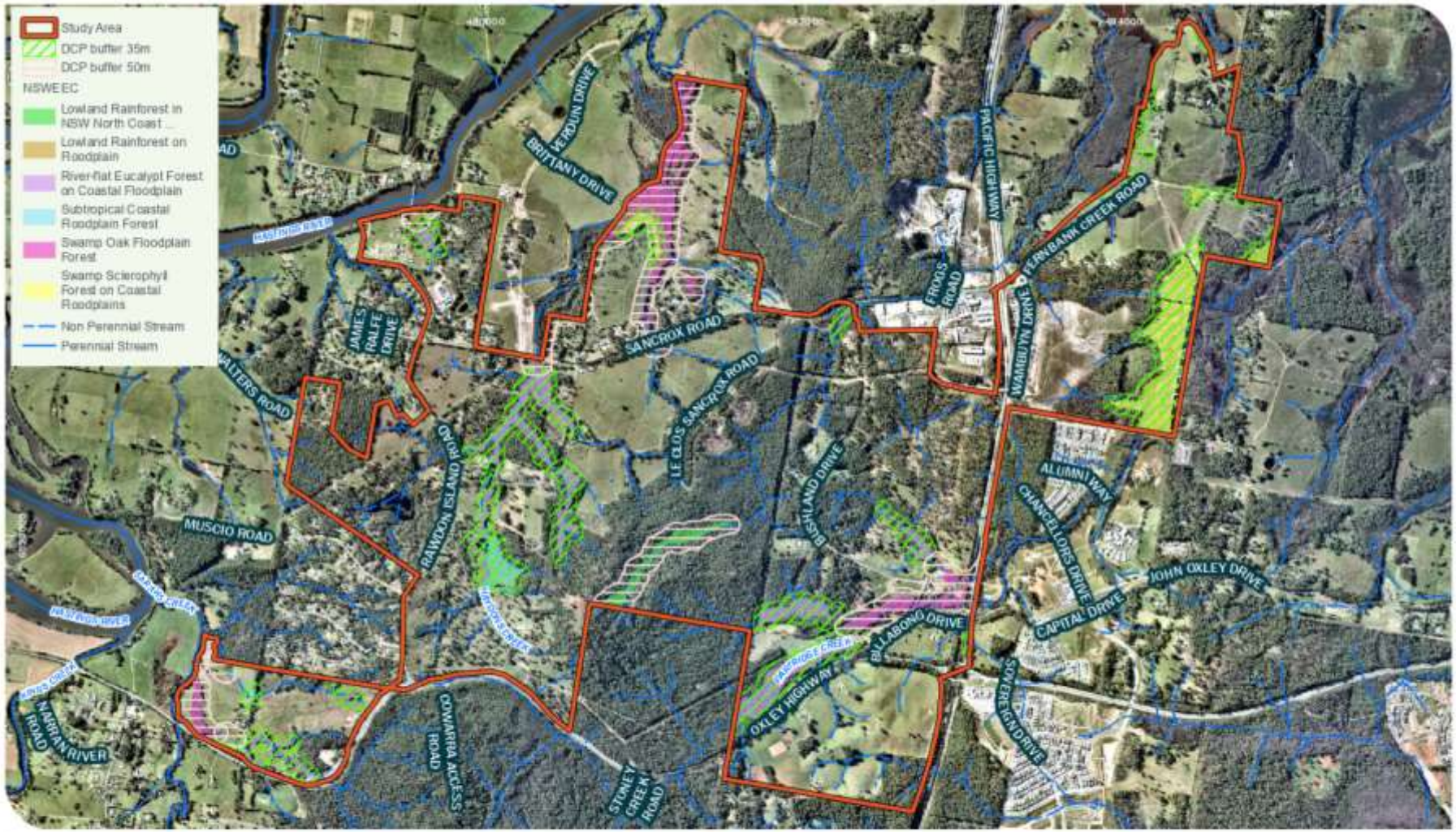
Figure 4


Study Area
DCP buffer 35m
DCP buffer 50m
NSWEEC
Lowland Rainforest in NSW North Coast ...
Lowland Rainforest on Floodplain
River-flat Eucalypt Forest on Coastal Floodplain
Subtropical Coastal Floodplain Forest
Swamp Oak Floodplain Forest
Swamp Sclerophyll Forest on Coastal Floodplains
Non Perennial Stream
Perennial Stream
VERDUN DRIVE
BRITTANY DRIVE
PACIFIC HIGHWAY
FERNBANK CREEK ROAD
FROGS ROAD
WARRIMOO DRIVE
JAMES RALFE DRIVE
SANCROX ROAD
LE CLOS SANCROX ROAD
WALTERS ROAD
RAWDON ISLAND ROAD
MUSCIO ROAD
BRISKLAND DRIVE
ALUMNI WAY
CHANCELLORS DRIVE
JOHN OXLEY DRIVE
CAPITAL DRIVE
BULLABOND DRIVE
OXLEY HIGHWAY
SOVEREIGN DRIVE
COWARRA ACCESS ROAD
STONEY CREEK ROAD
NARRAN RIVER
0
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m
GDA 1994 MGA Zone 56
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Existing EEC mapping for the Study Area and DCP buffers
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
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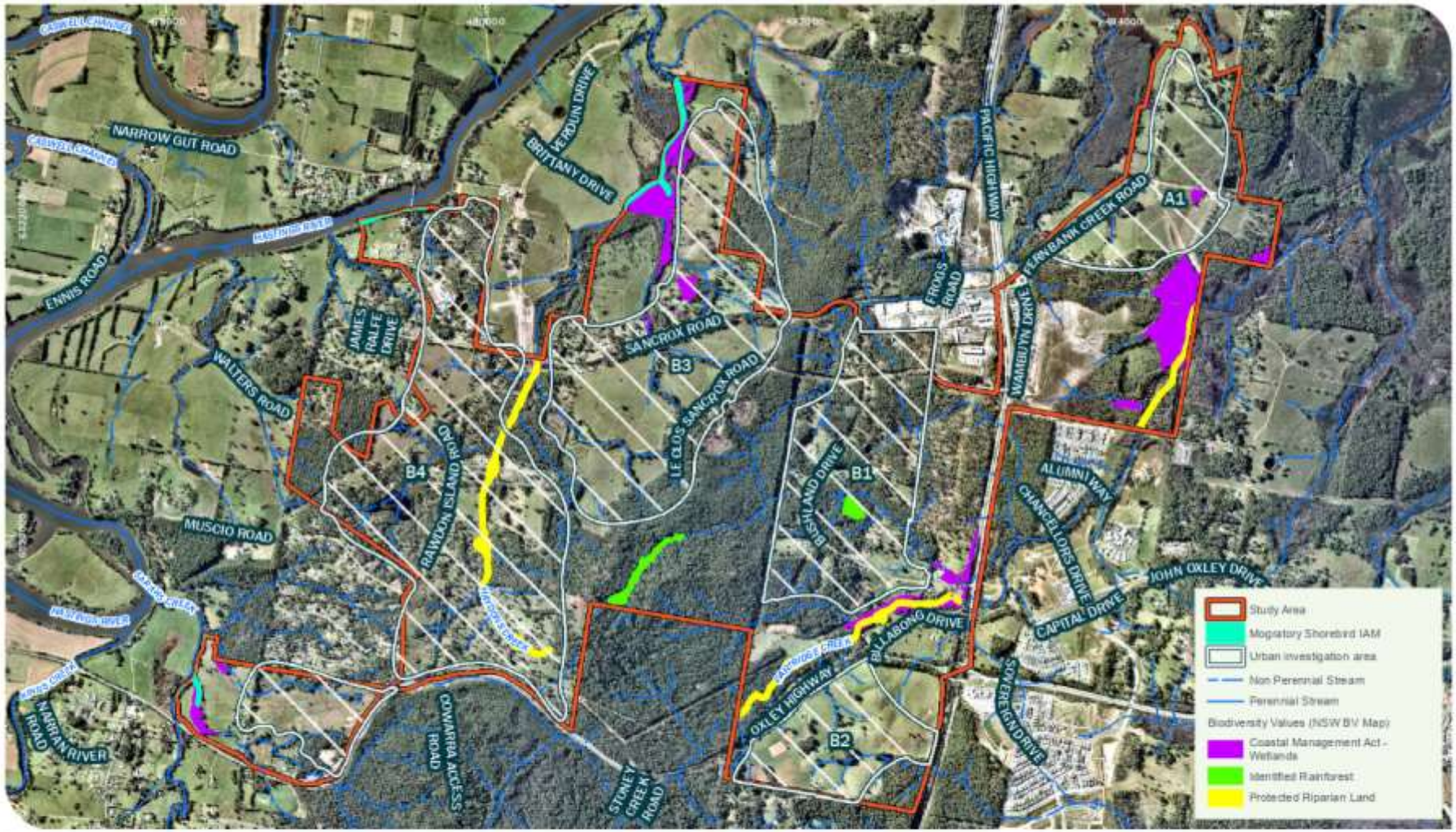
Client: Port Macquarie-Hastings Council
Figure 5



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Environment and Heritage

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GDA 1994 MGA Zone 56

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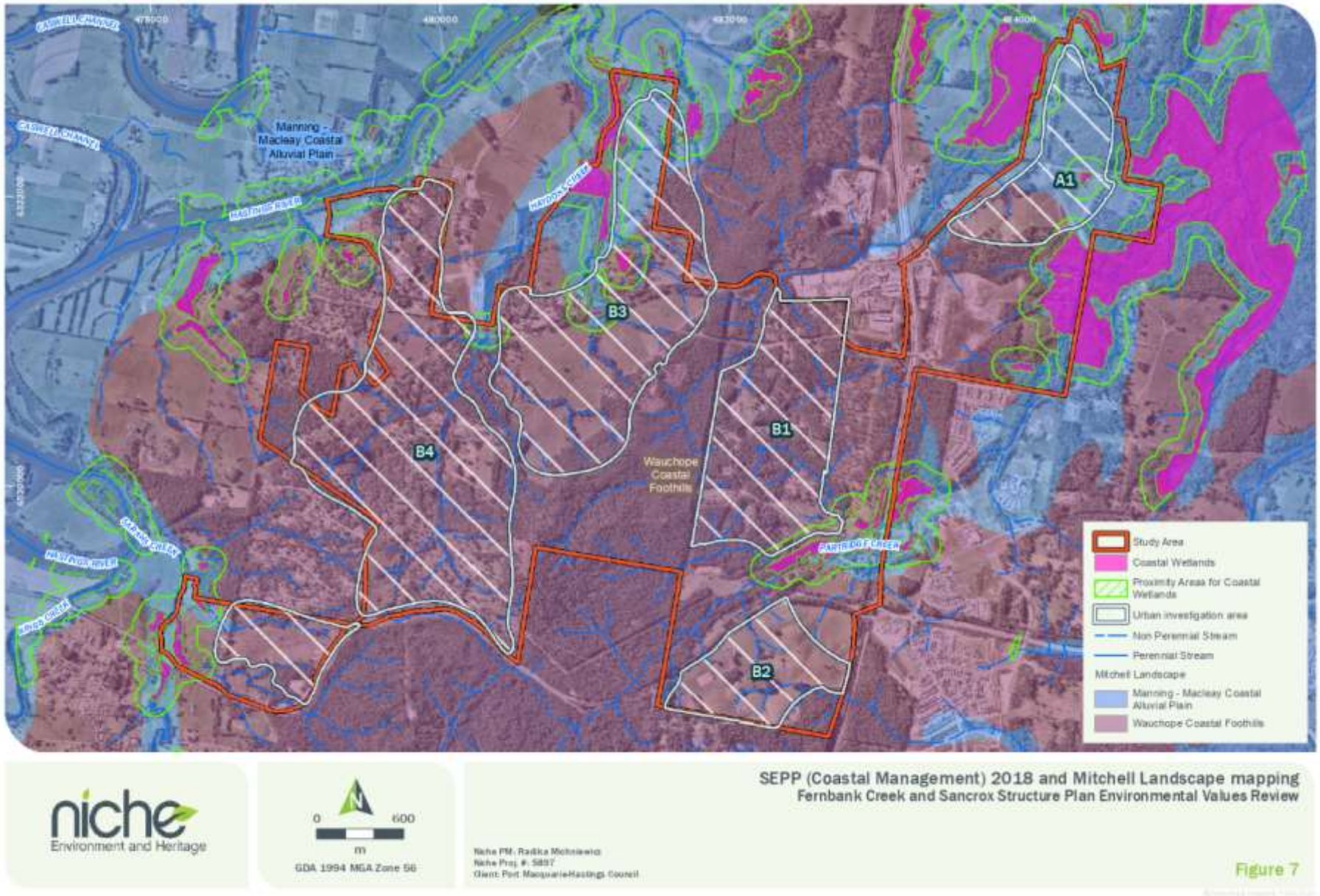
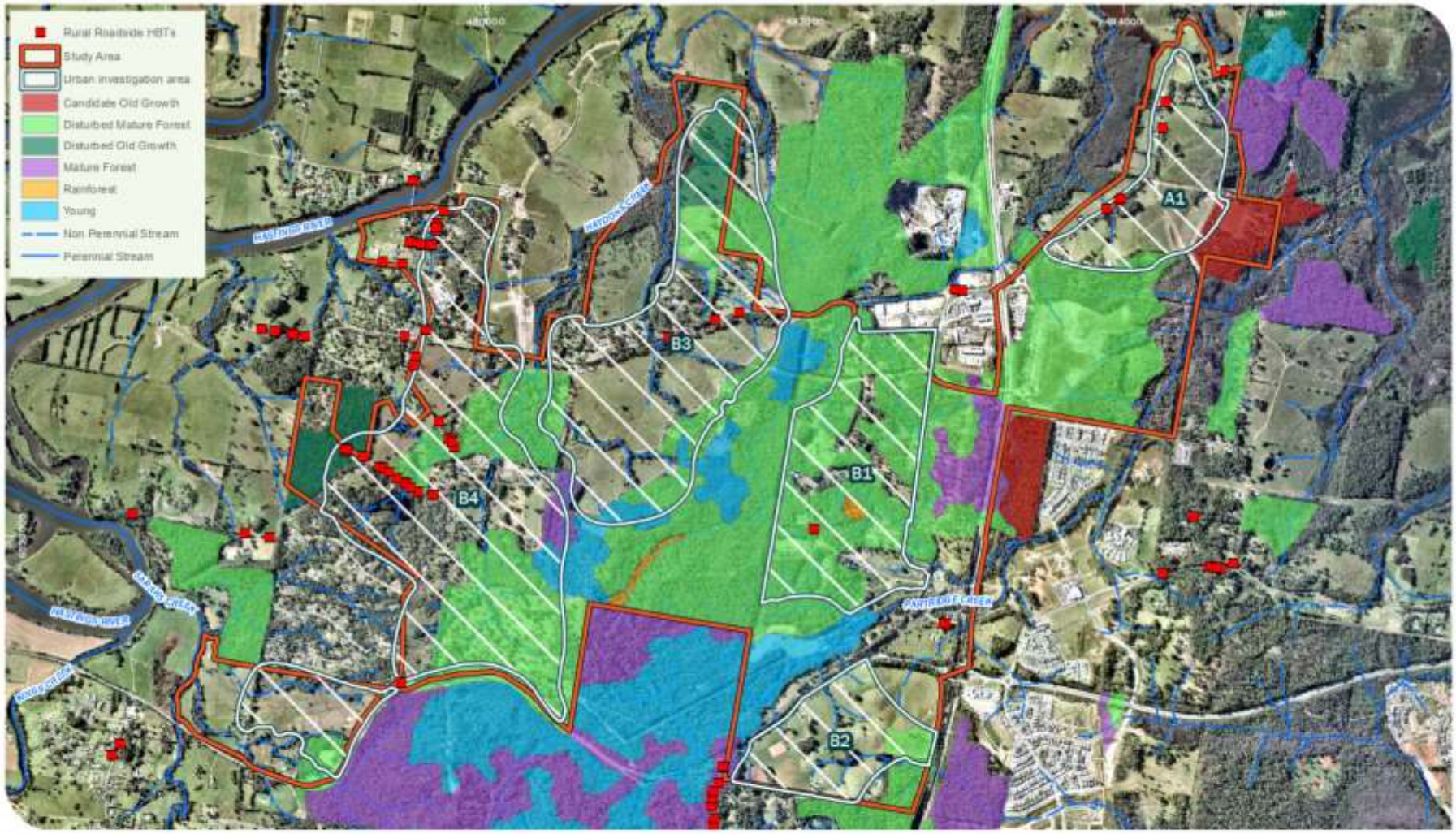
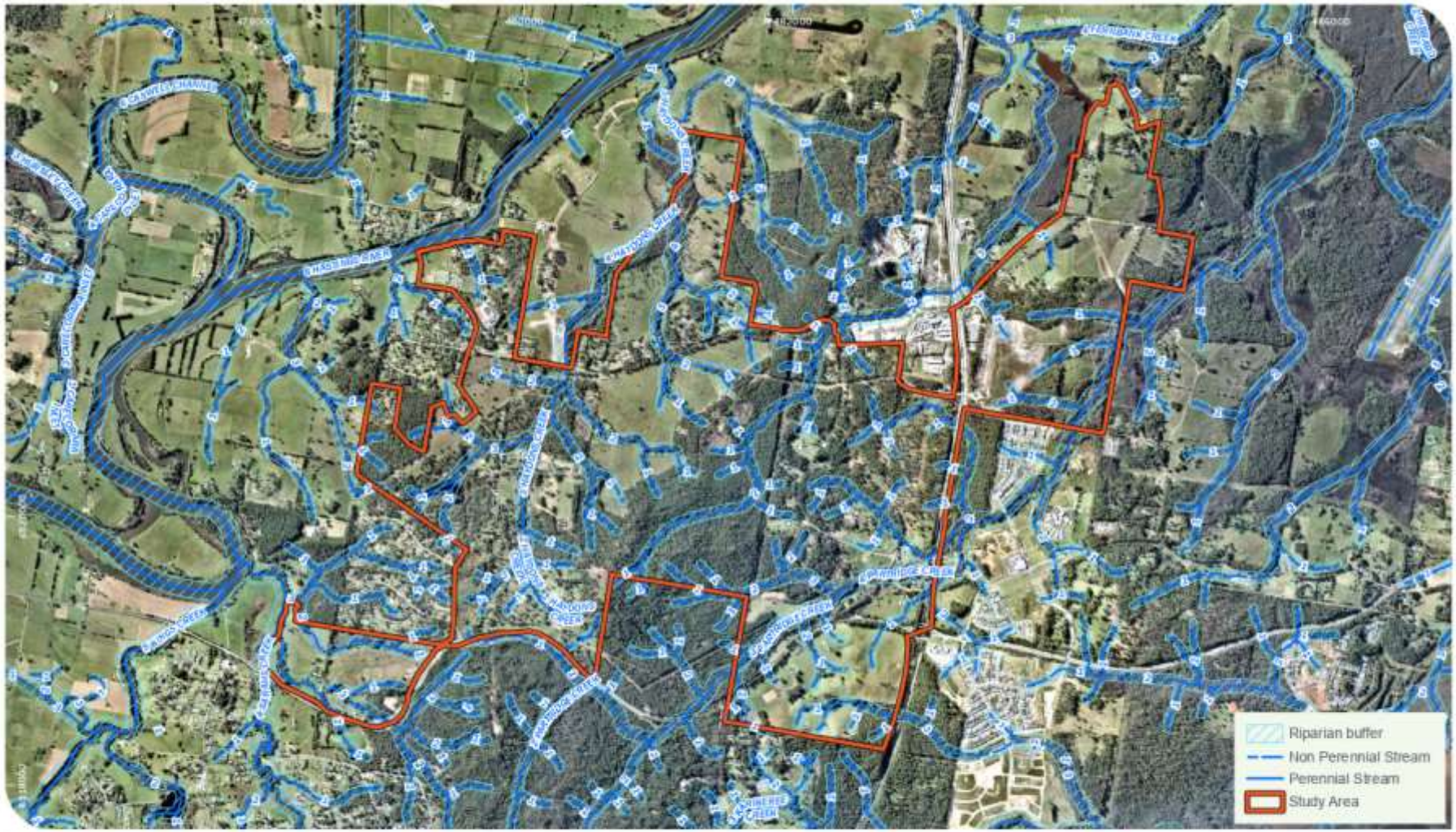
NSW Biodiversity Values and Important Area mapping
Fernbank Creek and Sancrox Structure Plan Environmental Values Review

Figure 6


Manning - Macleay Coastal Alluvial Plain
Wauchope Coastal Foothills
A1
B1
B2
B3
B4
Study Area
Coastal Wetlands
Proximity Areas for Coastal Wetlands
Urban investigation area
Non Perennial Stream
Perennial Stream
Mitchell Landscape
Manning - Macleay Coastal Alluvial Plain
Wauchope Coastal Foothills
0
600
m
GDA 1994 MGA Zone 56
niche
Environment and Heritage
SEPP (Coastal Management) 2018 and Mitchell Landscape mapping
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Niche PM: Radika Michniewicz
Niche Proj. #: 5897
Client: Port Macquarie-Hastings Council
Figure 7


Rural Roadside HBTs
Study Area
Urban investigation area
Candidate Old Growth
Disturbed Mature Forest
Disturbed Old Growth
Mature Forest
Rainforest
Young
Non Perennial Stream
Perennial Stream
A1
B1
B2
B3
B4
HASTINGS RIVER
HAYDONS CREEK
PARTRIDGE CREEK
0
600
m
GDA 1994 MGA Zone 56
Old Growth Forest mapping and Rural Roadside HBTs
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Niche PM: Radika Michniewicz
Niche Proj. #: 5897
Client: Port Macquarie-Hastings Council
Figure 8


Riparian buffer
Non Perennial Stream
Perennial Stream
Study Area
niche
Environment and Heritage
0
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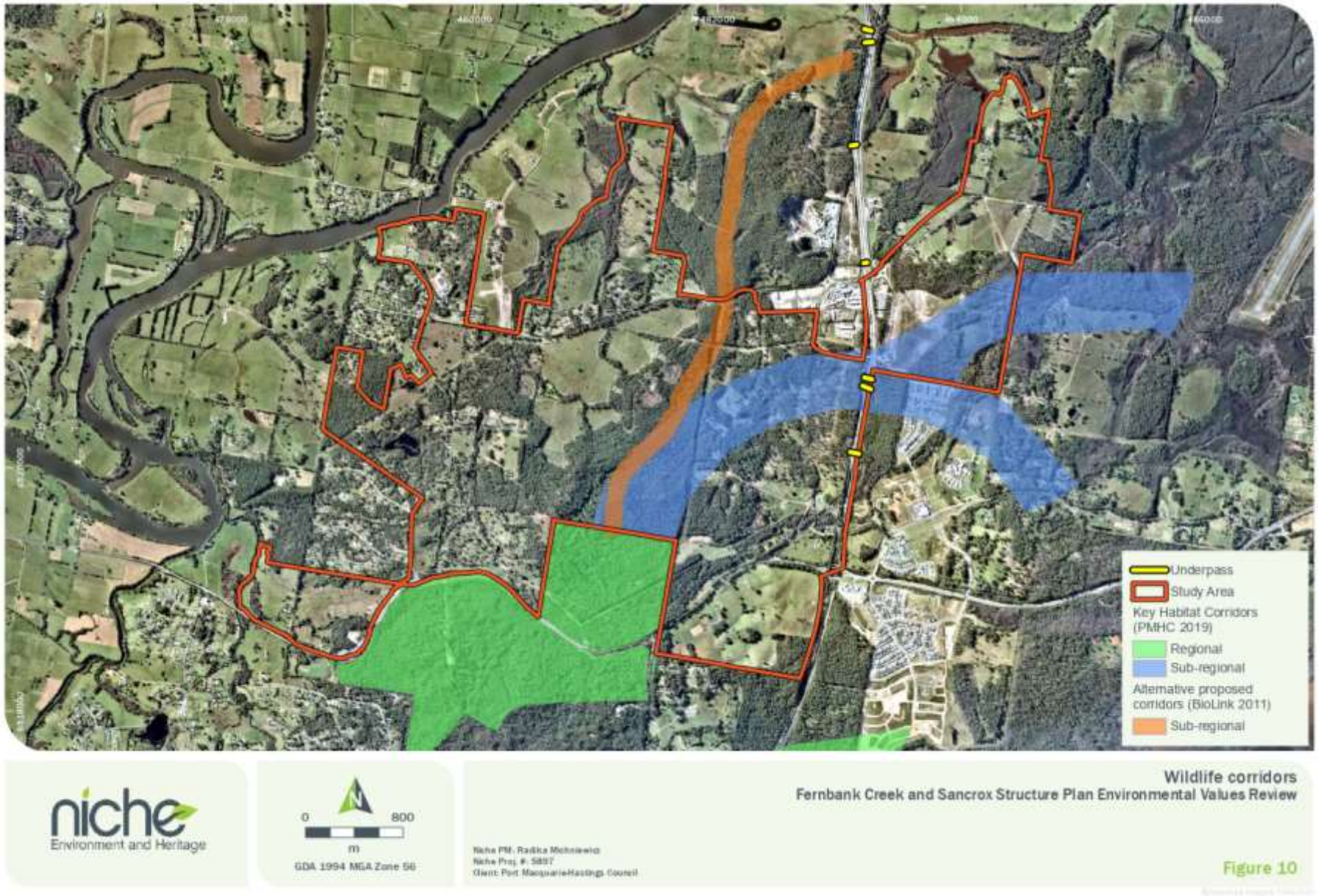
GDA 1994 MGA Zone 56
Stream order and DCP riparian buffers
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Figure 9


Underpass
Study Area
Key Habitat Corridors (PMHC 2019)
Regional
Sub-regional
Alternative proposed corridors (BioLink 2011)
Sub-regional
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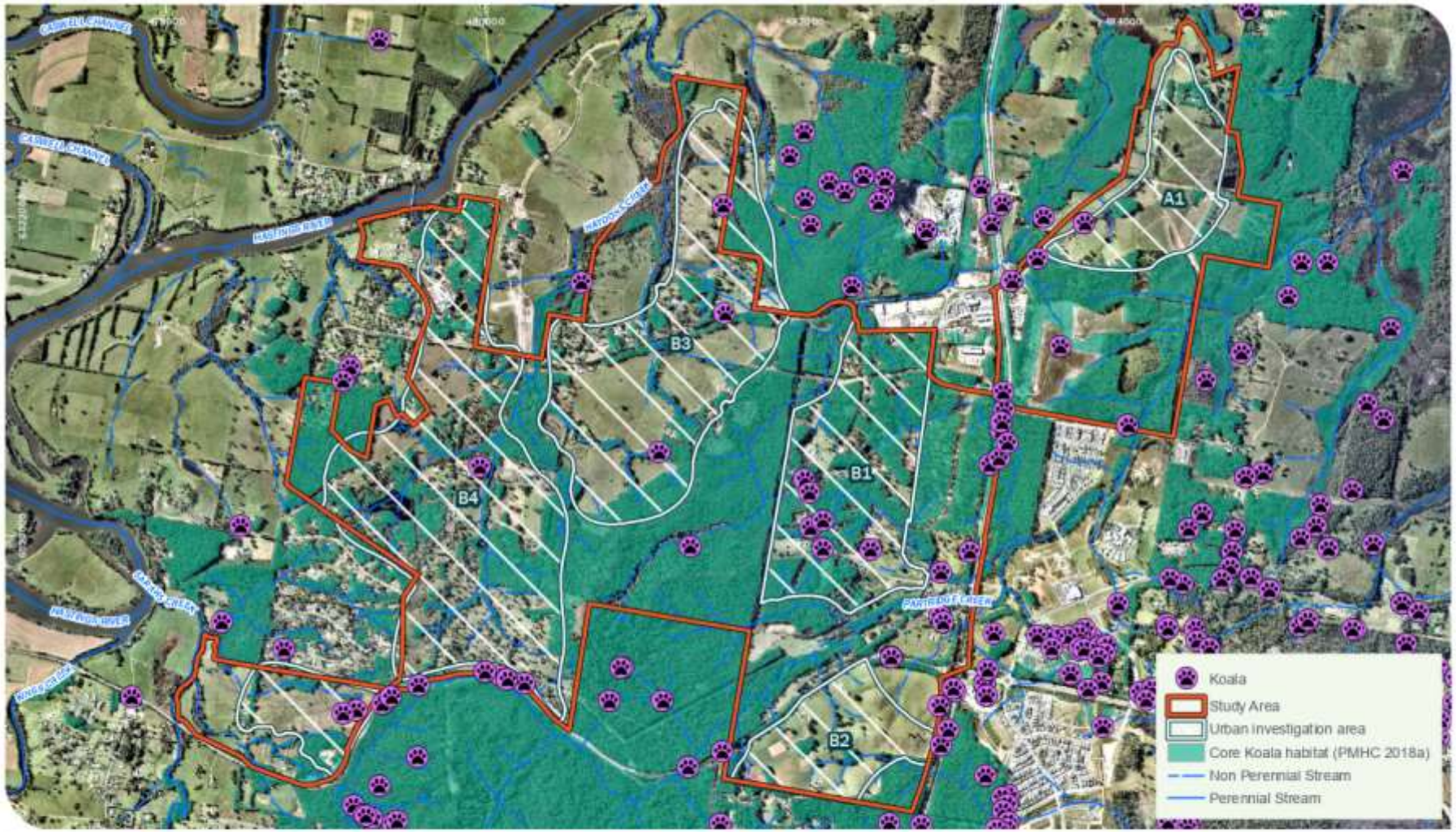
Environment and Heritage
0
800
m
GDA 1994 MGA Zone 56
Wildlife corridors
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Figure 10



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Environment and Heritage

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GDA 1994 MGA Zone 56

Draft CKPoM core Koala habitat and Bionet Atlas Koala records
Fernbank Creek and Sancrox Structure Plan Environmental Values Review

Niche PM: Radika Michniewicz
Niche Proj. #: 5897
Client: Port Macquarie-Hastings Council

Figure 11

5. Site Assessment

5.1 Site assessment

The site assessment was undertaken on 22-23 July 2020 by Niche Ecologists. A total of 28 VAs were identified as requiring field verification following the desktop assessment (Figure 12). A visual assessment of each of the VAs was undertaken as per Section 2.3.2. A summary of the outcomes of the site assessment is provided in Table 5 and field data are provided in Annex 4. In an effort to capture the constraints associated with a VA, a number of VAs required more than a single Sample Point (SP) due to variability of the values within the VA.

The rapid assessment of canopy species present noted the following species:

- Turpentine (*Syncarpia glomulifera*)
- Small-fruited Grey Gum (*Eucalyptus propinqua*)
- Ironbark species
- *Allocasuarina* species
- Tallowwood (*Eucalyptus microcorys*)
- Red Mahogany (*Eucalyptus resinfera*)
- Bloodwood species
- Red Gum spceies
- Flooded Gum (*Eucalyptus grandis*)
- Stringybark species
- Blackbutt (*Eucalyptus pilularis*)
- Sydney Blue Gum (*Eucalyptus saligna*)
- *Melaleuca* species
- *Casuarina* species.

5.2 Constraints evaluation

Based on the observed values of the VAs, a constraint rating was attributed to each VA, as per Section 2.3.3. These ratings are discussed in Table 5 and shown in Figure 13. It should be noted that the ratings relate to the general area within the VA and not the entire land parcel, and are based on consideration of existing mapped HEVs as well as the site assessment.

The majority of VAs were found to contain HEV attributes via the desktop assessment and via the site inspection. Where HEVs were not mapped for a VA, the constraints evaluation considered the general condition and habitat features present within the VA. Only those heavily disturbed areas could be attributed a low constraint rating due to the absence of mapped HEVs, known threatened species habitat and limited high value habitat features.

Table 5: Site assessment summary and constraints evaluation of VAs

VA = Validation Area; HBT = hollow-bearing tree; KFT = Koala food tree; DBH = diameter at breast height

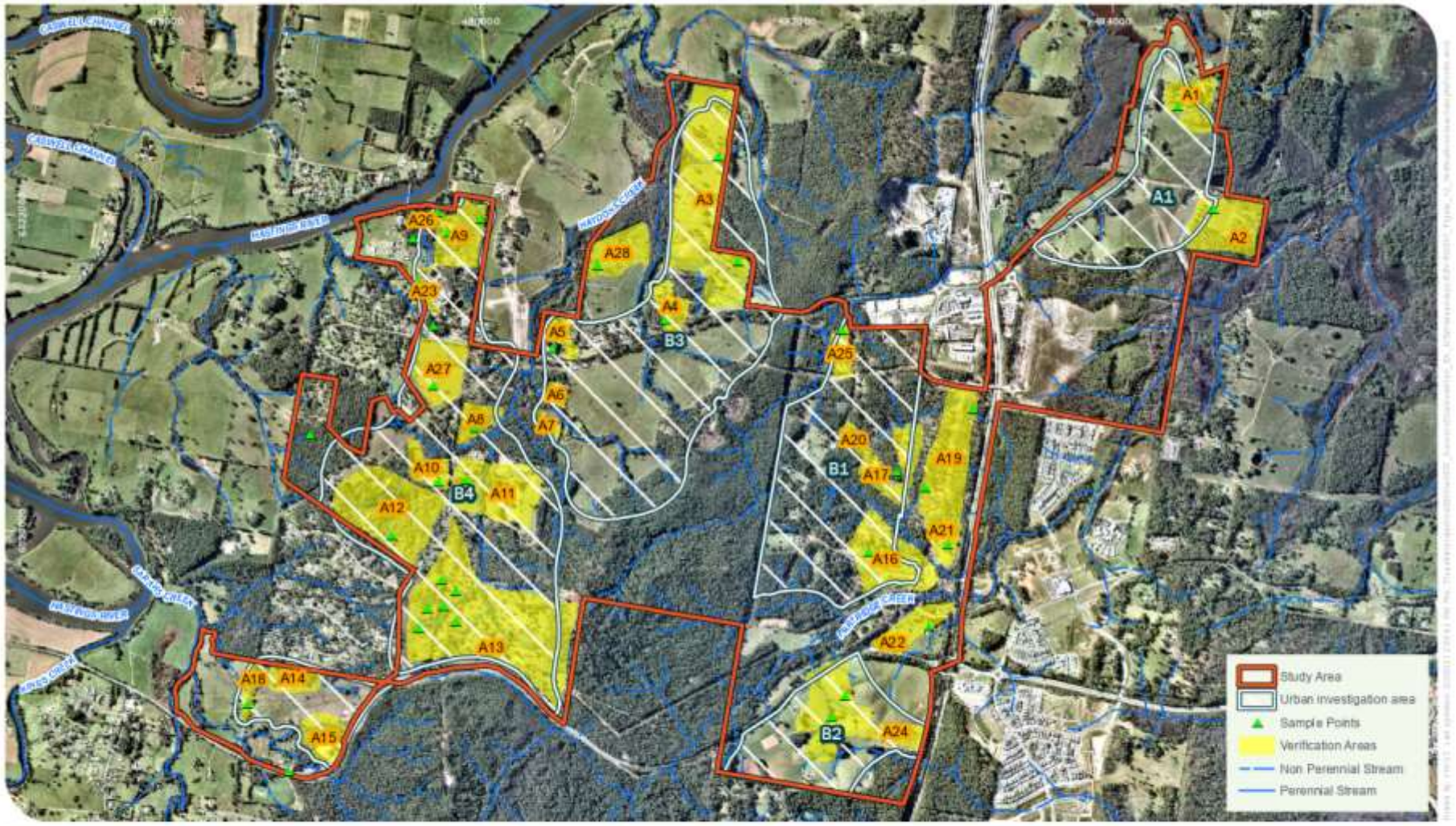
VA	Dominant canopy species	Constraints identified	HBT present	Trees > 50 cm DBH present	General habitat description	Constraints rating	Justification and recommendations
1	Tallowwood Blackbutt Ironbark sp.	• Presence of KFTs • Possible HBTs	Possible	Yes	Primarily retained canopy over paddock and maintained grounds.	Moderate	While the retained canopy is over maintained grounds, the canopy species represent KFTs and include large trees that have the potential to be hollow bearing.
2	Absent	• Surrounding intact vegetation • EEC/Coastal Wetland in SE corner and surrounding VA2.	Unknown	Unknown	Open paddock adjacent to intact vegetation.	Low (open paddock) and High (surrounding vegetation)	Low: the open paddock contains an occasional tree. High: the surrounding vegetation forms part of the east-west corridor and contains known HEVs; Coastal Wetlands and an EEC.
3	Tallowwood Red Gum sp. Small-fruited Grey Gum	• Proximity to riparian zone, Migratory Shorebird IAM, Coastal Wetland, EEC • Presence of KFTs and Koala records • Occasional HBT • Low lying drainage/wet area • Includes Powerful Owl territory (BioLink 2011)	Yes	Yes	Canopy only over highly modified and disturbed paddocks. In some areas canopy is generally absent with some areas of retained trees.	Moderate	While the retained canopy is over maintained grounds, the canopy species represent KFTs and include large trees that are HBTs and others that have the potential to be hollow bearing. Midstorey and intact native vegetation structure is absent. The VA is in proximity to riparian zone, Migratory Shorebird IAM, Coastal Wetland, EEC and contains known threatened species habitat.
4	Tallowwood Stringybark sp.	• Proximity to riparian zone, Coastal Wetland, EEC • Presence of KFTs • Presence of HBTs • Intact native vegetation structure • Includes Powerful Owl and Squirrel Glider territory (BioLink 2011)	Yes	Yes	Retained canopy over maintained property with patches of native midstorey and likely native groundcover.	High	While the retained canopy is mostly over maintained grounds, there are areas of intact native vegetation structure. The canopy species represent KFTs and include large trees that are HBTs and others that have the potential to be hollow bearing. The VA is encompassed by Coastal Wetlands, riparian zone and EEC, thereby limiting the development potential of this VA.. The VA contains known threatened species habitat.
5	Tallowwood Stringybark sp.	• Proximity to riparian zone, EEC • Presence of KFTs • Intact native vegetation structure • Includes Powerful Owl, Masked Owl and Squirrel Glider territory (BioLink 2011)	Possible	Yes	Reasonably dense retained canopy over maintained property lawns.	High	While the retained canopy is over maintained grounds, the canopy species represent KFTs and include large trees that have the potential to be hollow bearing. The VA is in proximity to riparian zone and EEC and contains known threatened species habitat.

VA	Dominant canopy species	Constraints identified	HBT present	Trees > 50 cm DBH present	General habitat description	Constraints rating	Justification and recommendations
6	Stringybark sp. Tallowwood Bloodwood sp.	• Proximity to riparian zone, EEC • Presence of KFTs • Presence of HBTs • Includes Powerful Owl, Masked Owl and Squirrel Glider territory (BioLink 2011)	Yes	Yes	Small clearing with retained canopy over grass. Some native midstorey vegetation.	High	While the retained canopy is mostly over grassy areas, native midstorey is present in areas and some native groundcover is likely. The canopy species represent KFTs and include large trees that are HBTs and others that have the potential to be hollow bearing. The VA is in proximity to riparian zone and EEC and contains known threatened species habitat.
7	Distant observation	• Proximity to riparian zone, EEC • Presence of KFTs • Presence of HBTs • Includes Powerful Owl, Masked Owl and Squirrel Glider territory (BioLink 2011)	Likely	Yes	Small clearing with retained canopy over grass.	High	While the retained canopy is mostly over grassy areas, native midstorey is present in areas and some native groundcover is likely. The canopy species likely include KFTs and HBTs (based on adjacent habitat). The VA is in proximity to riparian zone and EEC and contains known threatened species habitat.
8	Stringybark sp. Small-fruited Grey Gum Tallowwood Ironbark sp.	• Proximity to riparian zone, EEC • Presence of KFTs • Possible HBTs • Includes Powerful Owl, Masked Owl and Squirrel Glider territory (BioLink 2011)	Possible	Yes	Scattered canopy over mostly native groundcover.	High	Native canopy and groundcover present. The canopy species represent KFTs and include large trees that have the potential to be hollow bearing. The VA is in proximity to riparian zone and EEC and contains known threatened species habitat.
9	Small-fruited Grey Gum Red Gum sp. Ironbark sp. Tallowwood	• Proximity to riparian zone, Migratory Shorebird IAM, EEC • Presence of KFTs • Presence of HBTs • Includes Masked Owl and Squirrel Glider territory (BioLink 2011)	Yes	Yes	Retained canopy including both young and mature trees with some native midstorey and groundcover, with more open disturbed areas with exotic groundcover.	High	The canopy species represent KFTs and include large trees that are HBTs and others that have the potential to be hollow bearing. The VA is in proximity to riparian zone, Migratory Shorebird IAM and EEC and contains known threatened species habitat.
10	Stringybark sp. Tallowwood	• Contains riparian zone • Presence of KFTs • Possible HBTs • Includes Masked Owl and Squirrel Glider territory (BioLink 2011)	Possible	Yes	Retained canopy over maintained property.	High	The canopy species represent KFTs and include large trees that have the potential to be hollow bearing. The VA is in proximity to riparian zone and contains known threatened species habitat.
11	Tallowwood	• Contains Protected Riparian Land (BV Map) and EEC • Presence of KFTs and Koala record • Includes Powerful Owl, Masked Owl and Squirrel Glider territory (BioLink 2011)	None seen	Yes	Scattered canopy over maintained paddock. Majority of trees do not appear to be old growth.	High	The canopy species represent KFTs and include some large trees that have the potential to be hollow bearing. The VA contains known HEVs; EEC and known threatened species habitat.

VA	Dominant canopy species	Constraints identified	HBT present	Trees > 50 cm DBH present	General habitat description	Constraints rating	Justification and recommendations
12	Ironbark sp. Small-fruited Grey Gum Tallowwood	• Contains riparian zone • Presence of KFTs • Presence of HBTs • Includes Masked Owl and Squirrel Glider territory (BioLink 2011)	Yes	Yes	Around the dam is predominantly young canopy of regenerating Eucalypts and Allocasuarina with some scattered older Eucalypts. Native midstorey and groundcover likely present. Some Tallowwood in road reserve. Adjacent vegetation is intact woodland.	High	The canopy species include KFTs and include HBTs and some large trees that are HBTs and others that have the potential to be hollow bearing. Substantial roadside HBT. The VA contains known threatened species habitat.
13	Turpentine Small-fruited Grey Gum Ironbark sp. Allocasuarina sp. Tallowwood Red Mahogany Bloodwood sp. Red Gum sp.	• Contains Protected Riparian Land (BV Map) • Proximity to EEC • Presence of KFTs and Koala records • Presence of HBTs • Includes Powerful Owl, Masked Owl and Squirrel Glider territory (BioLink 2011)	Yes	Yes	Drainage/riparian areas contained young native vegetation (groundcover, midstorey and canopy) along sloping drainage line with more mature trees and HBTs within lower-lying riparian areas. Also contains open areas with varying canopy retention over predominantly exotic groundcover and no midstorey vegetation.	Low and High	Low: Areas of open disturbed paddock with limited scattered canopy and area of regenerating Acacia. High: Riparian areas including KFTs and HBTs and known threatened species habitat.
14	Red Gum Turpentine Small-fruited Grey Gum Melaleuca sp.	• Contains riparian zone • Proximity to EEC • Presence of KFTs • Possible HBTs • Includes Squirrel Glider territory (BioLink 2011)	Possible	Yes	Native riparian vegetation with some exotic species. Reasonable condition. Also contain open areas with limited canopy retention over predominantly exotic groundcover.	High	Native canopy and groundcover present. The canopy species represent KFTs and include large trees that have the potential to be hollow bearing. The VA contains known threatened species habitat.
15	Melaleuca sp. Tallowwood Ironbark sp. Red Gum sp.	• Contains riparian zone • Proximity to EEC • Presence of KFTs • Possible HBTs	Likely	Yes	Dense riparian vegetation encompassing cleared area.	High	Intact native vegetation. The canopy species represent KFTs and include large trees that have the potential to be hollow bearing.
16	Tallowwood Ironbark sp. Red Gum sp. Small-fruited Grey Gum	• Contains riparian zone, EEC, Coastal Wetlands • Presence of KFTs and Koala record • Possible HBTs	Possible	Yes	Predominantly cleared with a few scattered trees, increasing in density away from road. Retained riparian vegetation.	Low and High	Low: Areas of open disturbed paddock within limited scattered canopy. High: Riparian areas, EEC and Coastal Wetlands
17	Tallowwood Bloodwood sp. Blackbutt Stringybark sp.	• Contains riparian zone • Presence of KFTs • Presence of HBTs • Sub-regional corridor (PMHC 2019)	Yes	Yes	Retained canopy over native groundcover. Midstorey absent. Good condition without midstorey throughout wooded area of property. Open areas contain little canopy over maintained lawn. Glossy black Cockatoo foraging - chewed cones – at road side.	Moderate	Presence of native vegetation structure, KFTs and HBTs. The VA has value as part of the sub-regional corridor (PMHC 2019)
18	Tallowwood Ironbark sp. Red Gum sp.	• Contains riparian zone, EEC • Presence of KFTs • Presence of HBTs	Yes	Yes	Roadside bushland with some older canopy and open midstorey.	High	Presence of native vegetation structure, KFTs and HBTs. The VA contains EEC.

VA	Dominant canopy species	Constraints identified	HBT present	Trees > 50 cm DBH present	General habitat description	Constraints rating	Justification and recommendations
19	Stringybark sp. Tallowwood Bloodwood sp. Melaleuca sp. Red Gum sp.	• Contains riparian zone • Presence of KFTs and Koala records (along Pacific Highway) • Presence of HBTs • Sub-regional corridor (PMHC 2019)	Yes	Yes	Limited to substantial canopy over maintained grounds. Likely native species in mown groundcover. Canopy consists mostly of young trees with occasional larger older growth trees. Low lying wet area includes native groundcover with a sparse midstorey.	High	The canopy species represent KFTs and include some large trees that are known HBTs and others that have the potential to be hollow bearing. This VA maintains the east west link in the sub-regional corridor (PMHC 2019). This link is of additional importance given the current application for expansion of Sancrox Quarry.
20	Tallowwood Bloodwood sp. Blackbutt Stringybark sp.	• Contains riparian zone • Presence of KFTs • Presence of HBTs • Sub-regional corridor (PMHC 2019) • Threatened species foraging	Yes	Yes	Retained canopy over maintained property grounds. Evidence of Glossy black Cockatoo foraging habitat - chewed cones – at road side.	Moderate	Presence of diversity of remnant canopy species including, KFTs and HBTs. The VA has value as part of the sub-regional corridor (PMHC 2019).
21	Tallowwood	• Proximity to riparian zone, EEC, Coastal Wetland • Presence of KFTs and Koala record • Presence of HBTs • Sub-regional corridor (PMHC 2019)	Yes	Yes	Sparse midstorey with occasional regenerating canopy or shrub. Groundcover is mix of natives and exotics. Generally disturbed. Canopy is sparse with scattered low trees.	High	Although disturbed, the native vegetation has structural diversity as well as supporting KFTs and HBTs. The VA has value as part of the sub-regional corridor (PMHC 2019) and is partly mapped as proximity area for Coastal wetlands.
22	Blackbutt Tallowwood Flooded/Sydney Blue Gum		Yes	Yes	Highly disturbed, dominated by exotic vegetation. KFTs and HBTs occur in adjacent remnant canopy and road reserve.	Low	Highly disturbed, dominated by exotic vegetation.
23	Planted Tallowwood	• Presence of KFTs • Presence of HBTs	Yes	No	Includes planted and remnant vegetation along the property boundary as well as an area of retained canopy over residential property.	Low	Planted property boundary vegetation and remnant canopy over residential property.
24	Blackbutt Red Gum sp. Tallowwood Mahogany sp. Bloodwood sp. Flooded/Sydney Blue Gum	• Contains riparian zone • Presence of KFTs • Presence of HBTs	Yes	Yes	Includes areas of open grazed paddock with stands of remnant canopy over heavily grazed paddock	Low and Moderate	Low: Disturbed, grazed paddock Moderate: Old growth HBTs, KFTs and riparian
25	Tallowwood Small-fruited Grey Gum Blackbutt	• Proximity to riparian zone and EEC • Presence of KFTs • Presence of HBTs	Yes	Yes	Canopy only over maintained property grounds.	Moderate	The canopy species represent KFTs and include some large trees that are HBTs and additional trees that have the potential to be hollow bearing. The VA contains an area at the edge of known threatened species habitat, which would mostly be included in the riparian zone.

VA	Dominant canopy species	Constraints identified	HBT present	Trees > 50 cm DBH present	General habitat description	Constraints rating	Justification and recommendations
26	Small-fruited Grey Gum Flooded/Blue Gum Red Gum	• Proximity to Migratory Shorebird IAM • Contains riparian zone, EEC • Presence of KFTs • Presence of HBTs	Yes	Yes	Intact but disturbed rainforest vegetation with scattered Eucalypts.	High	The canopy species represent KFTs and include some large trees that are HBTs and additional trees that have the potential to be hollow bearing. The VA contains EECs.
27	Ironbark sp. Stringybark Tallowwood	• Contains riparian zone • Presence of KFTs • Possible HBT	Possible	Yes	Few scattered clumps of trees. Trees generally young. Some older/larger trees that may contain hollows closer to road.	Low (excluding riparian buffer)	Native vegetation predominantly absent.
28	Swamp Oak	• Proximity to Migratory Shorebird IAM and EEC • Contains riparian zone and Proximity Areas for Coastal Wetlands • Koala record immediately adjacent • Includes Powerful Owl, Masked Owl and Squirrel Glider territory (BioLink 2011)	No	No	Generally open with dense groundcover of exotic grasses offering limited habitat value. Patches of regenerating Swamp Oak forest species.	Low (excluding Proximity Areas for Coastal Wetlands (High))	Presence of regenerating Swamp Oak forest over exotic grasses and marginal threatened species foraging territory.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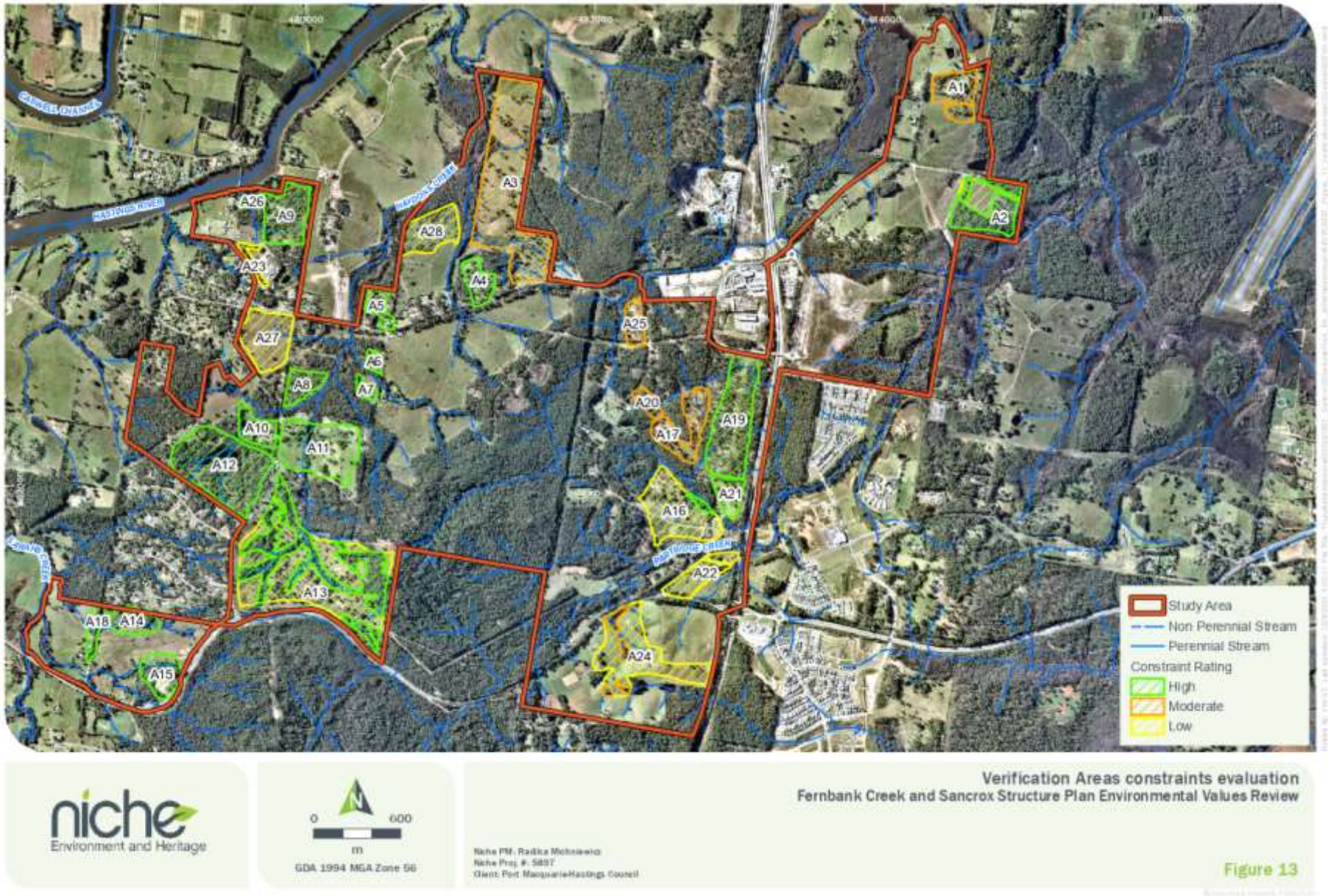
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Figure 12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Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Figure 13

6. Evaluation of land with HEV

6.1 Evaluation of existing HEV areas

The HEV criteria adapted from HEV Criteria and Verification Methods of the North Coast Regional Plan /BCD response (BCD 2019) (Table 6) was used to identify land with HEV in the Study Area. Information from the literature review, database searches and the site assessment were used to inform the evaluation.

6.2 Wildlife corridors

Wildlife corridors have been considered separately as they do not form part of the HEV criteria. As discussed in Section 4.13, regional and sub-regional corridors, as per the Port Macquarie-Hastings Biodiversity Strategy (PMHC 2019), occur within the Study Area. Additional corridors were proposed by BioLink (2011), which are shown in Figure 10.

One of the key objectives of Council's strategy documents, namely the UGMS and the Biodiversity Management Strategy, is to promote landscape connectivity and corridors for biodiversity conservation by focusing on the connectivity of habitat patches throughout the landscape. The role of habitat patches within the Study Area in promoting landscape connectivity at a regional scale has therefore been taken into consideration when evaluating the constraint rating.

Given the east-west sub-regional corridor (PMHC 2019) and the north-south sub-regional corridor (BioLink 2011) are the two predominant linkages between habitat in the west and habitat in the east, north of the Oxley Highway, high importance has been placed on retention of habitat within these areas, thereby conferring a high constraint rating. The proposed (BioLink 2011) north-south sub-regional corridor that follows intact vegetation through the north-east of the Study Area offers an alternative to the sub-regional corridor presented in the Port Macquarie-Hastings Biodiversity Strategy. However, habitat within this corridor is subject to an existing application in association with the expansion of Sancrox Quarry, which would result in further reduction/fragmentation of this corridor. As such, additional importance may be placed on maintaining the habitat linkage of the east-west sub-regional corridor (PMHC 2019).

Table 6: HEV desktop criteria

High Environmental Value Criteria	Verification Method	Evaluation for the Study Area
Littoral Rainforest, Coastal Wetlands and proximity areas for these mapped by the SEPP (Coastal Management)	Check Coastal Management SEPP mapping to identify whether any of these attributes occur within the Study Area.	Littoral Rainforest: There are no Littoral Rainforest or Proximity Areas for Littoral Rainforest mapped within the Study Area Coastal Wetlands: Coastal Wetlands and Proximity Areas for Coastal Wetlands are mapped by the Coastal Management SEPP at a number of locations within the Study Area (Figure 7).
Areas of Outstanding Biodiversity Value declared under the Biodiversity Conservation Act 2016	Check the list of declared Areas of Outstanding Biodiversity Value to identify whether any occur within the Study Area.	At the time of this report, no declared areas of outstanding biodiversity value occur within the Study Area.
Nationally Important Wetlands listed in the Directory of Important Wetlands, including a 50 m wide buffer	Check the map of Nationally Important Wetlands to identify whether any occur on the site and/or whether a 50 m wide buffer to those wetlands intersects the Study Area.	At the time of this report, no Nationally Important Wetlands listed in the Directory of Important Wetlands occur within the Study Area.
Riparian zones of third order streams and above including a buffer consistent with Appendix 3 of the Biodiversity Assessment Method (BAM)	Appendix 3 BAM riparian buffer distances each side: **Water body type** / **Riparian corridor width (each side of waterway)** Unmapped & 1st order streams: 10 2nd order stream: 20 3rd order stream: 30 4th & 5th order streams & above: 40 6th order stream & above: 50 Local wetland: 20 Important wetland: 50 Estuarine area: 50	The Study Area contains streams mapped as 1st, 2nd, 3rd and 4th order (Figure 9). The PMHC DCP includes riparian buffers as follows: • 10 m for 1st order streams that flow intermittently • 30 m for 1st order streams that flow permanently • 40 m for 2nd order streams • 50 m for 3rd order streams • 65 m for 4th order streams. As these buffers are larger than that specified within the BAM, they have been applied to the HEV constraints mapping as a conservative approach. It should also be noted that the Policy and Guidelines for Fish Habitat Conservation and Management (DPI 2013) specifies riparian buffers based on the habitat Type and waterway Class as follows: • Type 1, Class 1: 100 metres • Type 2, Class 2-3: 50 metres • Type 3, Class 3-4: 10-50 metres. These buffers may be applicable to riparian zones within the Study Area.
Native vegetation in over-cleared (Mitchell) landscapes (i.e. more than 70% cleared)	Identify Mitchell Landscapes within Study Area	The majority of the central portion of the Study Area is mapped as Wauchope Coastal Foothills, with protrusions of Manning - Macleay Coastal Alluvial Plains (Figure 7). The estimated percent cleared for these landscapes are 44% and 57% respectively (DPIE 2019). Neither fall into the category of OCL (more than 70% cleared category).

High Environmental Value Criteria	Verification Method	Evaluation for the Study Area
Threatened Ecological Communities (TECs)	Existing mapping	TECs mapped within the Study Area include one EPBC listed EEC and six BC listed EEC's. Buffer provisions with the PMHC DCP include: fully vegetated buffers of 35 m for coastal floodplain EECs and 100 m for Freshwater Wetland on Coastal Floodplain. For all other EECs a fully vegetated buffer of 50 m must be provided. Buffers relevant to the Study Area are included below and shown in Figure 5.
Key Habitats for Threatened species	Conduct Bionet searches	Detailed habitat surveys were not required as part of this EVR. BioNet records that occur within the Study Area are provided in Table 2. Within the Study Area 19 threatened fauna and one threatened flora species have been previously recorded. Evaluation of HEVs for the Study Area has included known threatened species habitat mapping undertaken by BioLink (2011).
Core Koala Habitat	Check existing Core Koala Habitat mapping	A substantial proportion of the Study Area has been mapped as core Koala habitat under the draft CKPoM (PMHC 2018c) (Figure 11). Scattered Koala records occur across the Study Area, with a greater density of records towards the Pacific Highway.
Important habitat of migratory and vagrant species mapped for the Biodiversity Offsets Scheme - from existing mapping	Check Important Area Mapping (1AM) to identify whether any of these mapped areas occur within the Study Area	Of those species that have BioNet records within the Study Area, the Regent Honeyeater has Important Area Mapping completed. IAM for the Regent Honeyeater does not occur within the Study Area. IAM for Migratory Shorebirds forms a section the Study Area boundary along Haydons Creek in the north of the Study Area, with a small tributary extending into the Study Area from Haydons Creek and from Sarah's Creek in the south west of the Study Area (Figure 6).
Breeding, foraging and/or congregation habitats for migratory shorebird species with known occurrence - from existing BioNet records and/or field work.	Undertake BioNet searches	Detailed habitat surveys were not required as part of this EVR. There are no BioNet records for Migratory Shorebirds within the Study Area.
Known habitat for populations of species-credit species (species- credit species are identified in the Threatened Biodiversity Data Collection) - from existing BioNet records and/or field work.	Undertake BioNet searches	Detailed habitat surveys were not required as part of this EVR. Of those species that have BioNet records within the Study Area, four are species-credit species: White-throated Needletail, Squirrel Glider, Eastern Cave bat and Green-thighed Frog. A further 10 species are dual species/ecosystem credit species: Regent Honeyeater, White-bellied Sea-eagle, Square-tailed Kite, Little Bent-winged Bat, Large Bent-winged Bat, Barking Owl, Powerful Owl, Koala, Grey-headed Flying Fox and Masked Owl.

BC Act	EPBC Act	Buffer (m)
Lowland Rainforest in NSW North Coast	Lowland Rainforest of Subtropical Australia	50
Swamp Sclerophyll Forest on Coastal Floodplains		35
River-flat Eucalypt Forest on Coastal Floodplain		35
Subtropical Coastal Floodplain Forest		35
Lowland Rainforest on Floodplain	Lowland Rainforest of Subtropical Australia	50
Swamp Oak Floodplain Forest		50

High Environmental Value Criteria	Verification Method	Evaluation for the Study Area
Old Growth Forest defined in accordance with a code of practice under Part 5 of the (repealed) Native Vegetation Regulation 2013	View Old Growth Mapping at the SEED portal for Upper North East (https ://datasets.seed.nsw.gov.au/dataset/successional- stages-on-freehold-land-for-cra-upper-north-east-nsw-vis_id- 3889202cf) and Lower North East (https://datasets.seed. nsw.gov.au/dataset/successional-stages-on- freehold-land-for-cra-lower-north-east-nsw-vis_id-3888aee14) to identify whether old growth is mapped on site. If the proponent disagrees with the mapping, or the site is not mapped as old growth, then use fieldwork to assess the site for the presence of old growth.	Substantial portions of the Study Area are mapped as *Disturbed Mature Forest* with smaller portions mapped as *Disturbed Old Growth* or *Candidate Old Growth*. Detailed habitat surveys were not required as part of this EVR, as such, the presence of old growth forest was not verified throughout the Study Area However presence of trees with DBH > 50 cm was noted within the different VAs. These descriptions were considered during the constraints analysis.

7. Constraint Mapping and Recommendations

7.1 Environmental constraint mapping

The HEVs evaluation was used to inform constraints mapping for the Study Area. It should be noted that while road side vegetation has generally not been included in this EVR due to being located within the road reserve, the value of road side vegetation is often highly significant as movement corridors and habitat for fauna due to the presence of old growth trees and HBTs retained in these areas. This remnant vegetation, where present, should be regarded as of HEV and highly constrained.

Figure 14 shows the constraint mapping for the Study Area. The constraint ratings are detailed below. Note that areas constrained solely by DCP buffers, i.e. where the desktop assessment did not determine HEV to be present, are also shown on the constraint mapping as a guide to DCP provisions as opposed to potential planning restrictions.

7.1.1 High constraint

Areas that were allocated a High constraint rating were:

- Areas zoned as E2 – Environmental Conservation.
- Riparian buffers in accordance with Council's DCP, where the riparian vegetation offers high habitat value.
- Other riparian vegetation for habitat connectivity and improve/maintain wildlife corridors.
- Mapped EECs and buffers in accordance with Council's DCP, where the riparian vegetation offers high habitat value.
- Coastal Wetlands and Proximity Areas, in accordance with SEPP (Coastal Management) 2018 mapping.
- Over-cleared vegetation (PCTs with >70% extent cleared in NSW)
- Important Areas, for Migratory Shorebirds.
- Biodiversity Values, as per the BV Map.
- Intact native vegetation within threatened species habitat.
- Areas of known threatened species habitat (BioLink 2011).
- Patches of habitat playing a key role in maintaining connectivity via wildlife corridors.

7.1.2 Moderate constraint

Areas that were allocated a Moderate constraint rating were:

- Native vegetation within habitat suitable for threatened species.
- Riparian buffers in accordance with Council's DCP, where the riparian vegetation supports canopy trees with value as HBTs and KFTs
- Areas supporting canopy trees with value as HBTs and KFTs
- Patches of habitat playing a supporting role in maintaining connectivity via wildlife corridors.

7.1.3 Low to No constraint

Areas that were allocated a Low constraint rating were:

- Heavily disturbed/modified with limited native vegetation.
- Predominantly cleared areas with limited scattered native canopy trees of limited habitat value.
- Areas that do not support wildlife corridor connectivity.

7.2 Discussion of constraints

A large proportion of the Study Area is highly constrained due to extensive presence of HEVs throughout the Study Area, known threatened species habitat and the key role of much of the existing vegetation in regional and sub-regional wildlife corridors.

The Study Area encompasses urban investigation areas A1, B1, B2, B3 and B4, identified in Council's UGMS. While large areas of constrained lands occur outside these urban investigation areas, urban investigation areas B1 and B4, in particular, are heavily constrained. The urban investigation areas are discussed below.

7.2.1 Urban investigation area A1

Urban investigation area A1 is relatively unconstrained, with HEV land edging and protruding into the area in a number of locations and a small area of Coastal Wetlands within the area. The remnant canopy present in the north of the area does provide key habitat features in KFTs and HBTs. Urban investigation area A1 presents opportunity for residential growth in areas of Low constraint and potentially environmental living or environmental management in the Moderate area, whereby the goal would be to improve or maintain the environmental values of the land.

7.2.2 Urban investigation area B1

Urban investigation area B1 is heavily constrained. The area supports predominantly intact native vegetation or slightly modified native vegetation offering habitat features, Identified Rainforest and importantly, vegetation in the area plays a key role in maintaining the sub-regional corridor, in association with the habitat immediately to the east just outside of this urban investigation area. Limited opportunity exists for environmental living or environmental management within the current modified sections of urban investigation area B1, notably around existing dwellings (Moderate constraint). However, opportunity for residential growth exists in the south-east of urban investigation area B1, north and south of Bushland Drive within the area of Low constraint.

7.2.3 Urban investigation area B2

Urban investigation area B2 is relatively unconstrained, with HEV land mapped only along the riparian corridors. Urban investigation area B2 presents opportunity for residential growth in areas of Low constraint, acknowledging the need to maintain HEV land and the Moderate constraint areas containing remnant canopy that provide habitat features of KFTs and HBTs.

7.2.4 Urban investigation area B3

Urban investigation area B3 is heavily constrained at its periphery and along riparian corridors, with Coastal Wetlands, EEC and known threatened species habitat, including Koala habitat, occurring within the area. The remnant canopy present in the north of the area does provide key habitat features in KFTs and HBTs and provides linkages between adjacent north south tracts of vegetation. Urban investigation area B3 presents opportunity for residential growth in areas of Low constraint and environmental living or environmental management in the Moderate area, whereby the goal would be to improve or maintain the environmental values of the land.

7.2.5 Urban investigation area B4

Urban investigation area B4 consists of two sections; a south-west block and north-east block. The south-west block is relatively unconstrained, with constraints primarily at its periphery within EEC and riparian areas. The north-east block is heavily constrained, with HEV land supporting EECs, known threatened species habitat, including Koala habitat, and riparian areas and Protected Riparian Land. Opportunity for residential growth exists in areas of Low constraint in the south-west block and north-east block, acknowledging the need to maintain HEV and the Moderate constraint areas containing remnant canopy

that provide habitat features of KFTs and HBTs. Environmental living or environmental management may be suitable for areas within the south-east of the north-east block given the presence of key habitat features in KFTs and HBTs in varying density.

7.3 Recommendations

7.3.1 High constraint - biodiversity conservation

It is recommended that protection via appropriate zoning be investigated within those areas attributed a High constraints rating. Where E2 - Environmental Conservation is not feasible due to current dwellings or modification due to past land use, it is recommended that protection should be investigated via consideration of environmental zoning means that are most consistent with the goals of maintaining environmental values, including vegetation cover. This will provide consistency with Council and policy documents as follows:

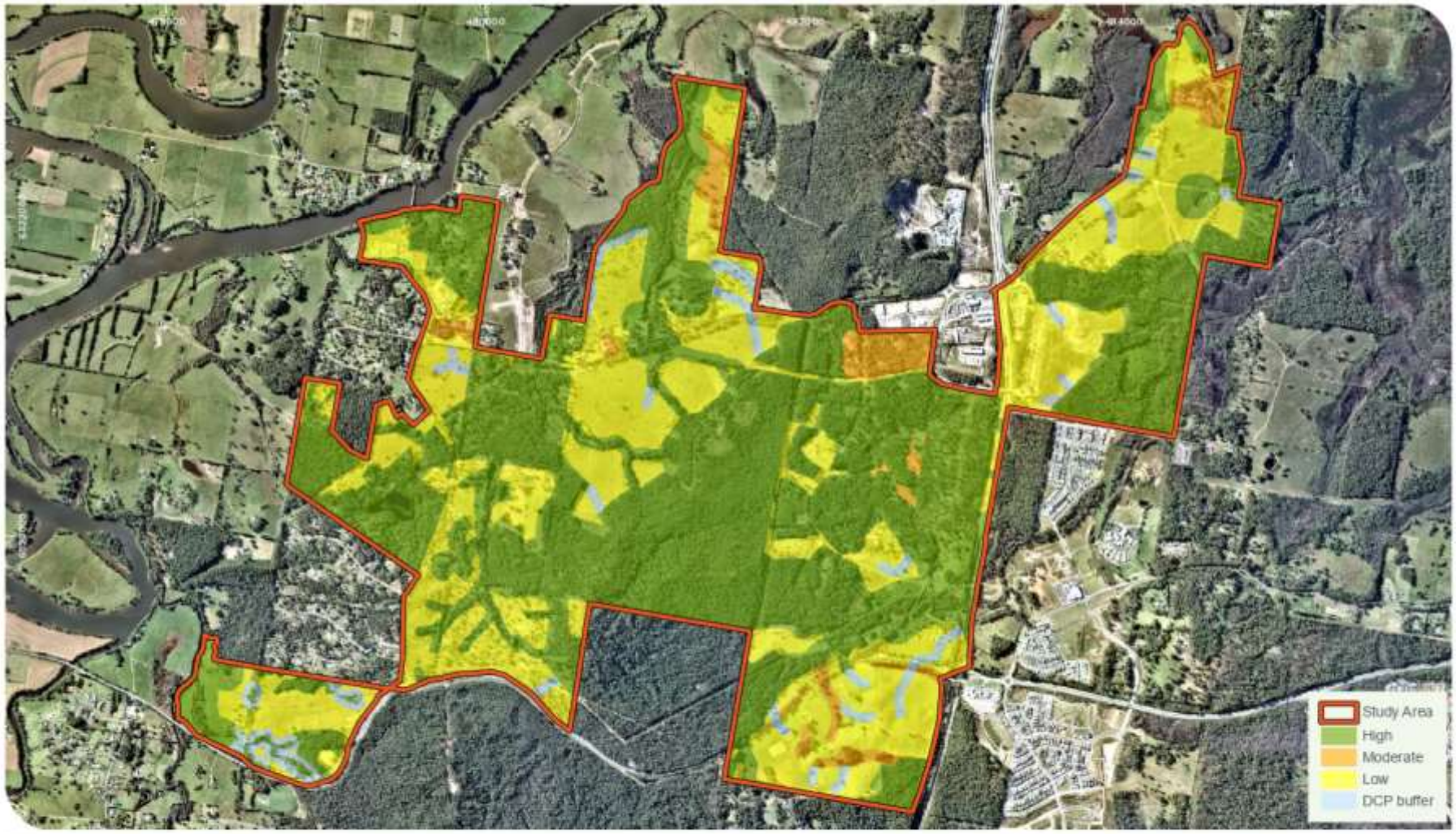
- By focussing *"development to areas of least biodiversity sensitivity in the region and implement the 'avoid, minimise, offset' hierarchy to biodiversity, including areas of high environmental value* (NCRP, DPE 2017).
- To promote growth outside of HEV land, limiting the impact of future development and protecting the environment (UGMS, PMHC 2018a).
- By avoiding impacts on HEV areas and protecting and managing vegetation that promotes landscape connectivity and corridors for biodiversity conservation (UGMS, PMHC 2018a).
- By protecting areas that are of *"paramount importance for biodiversity conservation"* and are *"likely to have values which are irreplaceable and should be protected wherever possible"* (Biodiversity Management Strategy, PMHC 2019).
- By balancing development with conserving biodiversity (DCP, PMHC 2020).
- By acting in accordance within the environmental principles of the Draft Greater Sancrox Structure Plan (PMHC 2015), including retention of current level of vegetation cover.
- By considering Koala habitat in accordance within the Port Macquarie-Hastings Council Koala Recovery Strategy (PMHC 2018b) and "*ensure that development is designed to retain Koala habitat*" (LEP, PMHC 2020).

7.3.2 Moderate constraint – opportunity and biodiversity management

Aeras of opportunity for environmental living/management/recreation are present within the Study Area. Zoning in these areas should maintain the objective to protect, manage and restore these areas and ensure that development does not have an adverse effect on the existing environmental values. Opportunity may exist for environmental living, recreation or environmental management in those areas that have the potential to be restored and enhance both the environmental values of the area as well as the aesthetics and recreation opportunities for inhabitants, such as parks and trails, focusing on the maintenance of HEVs and habitat linkages.

7.3.3 Low constraint - opportunity

Areas of opportunity for urban growth are present within previously cleared areas of the Study Area. It is recommended that, while constraints are low in these areas, any future zoning should take into consideration surrounding land use, the generally high biodiversity values of the surrounding landscape and objectives of the UGMS.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GDA 1994 MGA Zone 56
Environmental constraint mapping
Fernbank Creek and Sancrox Structure Plan Environmental Values Review
Figure 14

References

Ashby (2007) Ecological Constraints, Fernbank Creek Road, Thrumster, Port Macquarie-Hastings LGA. Unpublished report. Prepared by Elizabeth Ashby for Mr Gary Murcott.

Ashby, E. (2008) Flora and Fauna Impact Assessment, Sancrox, Port Macquarie LGA. Unpublished report, Keystone Ecological.

BCD (2019) Advice Port Macquarie Hastings Council Planning Proposal Policy signed DY20191119. NSW Biodiversity and Conservation Division of the Environment, Energy and Science Group of the NSW Department of Planning, Industry and Environment, North East Branch.

BCD (2020) RE: Public Exhibition - Fernbank Creek and Sancrox Planning Investigation. Letter response to PMHC Signed DY 20200317. NSW Biodiversity and Conservation Division of the Environment, Energy and Science Group of the NSW Department of Planning, Industry and Environment, North East Branch.

BioLink (2011) Greater Sancrox Ecological Assessment. Prepared for Port Macquarie-Hastings Council.

DAWE (2020) Commonwealth Protected Matters Search Tool for MNES https://www.environment.gov.au/epbc/protected-matters-search-tool (accessed June 2020).

DPE (2017) North Coast Regional Plan 2036. NSW Department of Planning and Environment, Grafton NSW.

DPI (2013) Policy and Guidelines for Fish Habitat Conservation and Management (2013 Update). Fisheries NSW, NSW Department of Primary Industries, Wollongbar NSW.

DPI (2020) C20 41 DPI Fisheries comments Fernbank Creek and Sancrox Planning Investigation. Fisheries NSW, NSW Department of Primary Industries, North Coast.

DPIE (2015) Port Macquarie-Hastings LGA Vegetation and EEC Maps 2014 VIS 4205 and 4206. State Government of NSW and Department of Planning, Industry and Environment 2015.

DPIE (2019) NSW (Mitchell) Landscapes – Version 3.1. State Government of NSW and Department of Planning, Industry and Environment. Last updated 21.08.2019. https://data.nsw.gov.au/data/dataset/nsw-mitchell-landscapes-version-3-1

DPIE (2020a) Port Macquarie Hastings Council Sancrox and Fernbank Creek Investigation Areas DPIE Planning Response to Discussion Paper, NSW Department of Planning, Industry and Environment, Grafton NSW.

DPIE (2020b) BioNet database, including the Atlas of NSW Wildlife and Vegetation Information System (VIS) flora survey. NSW Department of Planning, Industry and Environment (DPIE) https://www.environment.nsw.gov.au/asmslightprofileapp/account/login?ReturnUrl=%2fAtlasApp%2fDefault.aspx and https://www.environment.nsw.gov.au/NSWVCA20PRapp/LoginPR.aspx?ReturnUrl=%2fNSWVCA20PRapp%2fdefault.aspx (accessed June 2020).

ERM (2019) Sancrox Quarry Expansion Environmental Impact Assessment. Report prepared by Environmental Resources Management Pty Ltd for Hanson Construction Material Pty Ltd.

JBEnviro (2018) Preliminary Ecological Constraints Assessment for Future Development of Le Clos Sancrox. Prepared for Land Dynamics.

JBEnviro (2019) Preliminary BDAR Results for Future Development of Le Clos, Sancrox. Prepared for Land Dynamics.

Niche (2019) Fauna Underpass Monitoring 2018/2019 Report. Oxley Highway to Kempsey, Pacific Highway Upgrade. Report prepared for Roads and Maritime Services.

OEH (2018) A review of Koala tree use across NSW. State of New South Wales and Office of Environment and Heritage 2018.

Parker P (2018) State Environmental Planning Policy No. 44 (Koala Habitat) Assessment. Report prepared for King and Campbell by Peter Parker Environmental Consultants Pty Ltd, Broken Head.

Parker P (2019) State Environmental Planning Policy No. 44 (Koala Habitat) Assessment Submission to Port Macquarie Hastings Council Coastal Koala Plan of Management, Sancrox, Port Macquarie. Peter Parker Environmental Consultants Pty Ltd, Broken Head.

PMHC (2013) Port Macquarie-Hasting Development Control Plan. Port Macquarie-Hastings Council, Port Macquarie NSW.

PMHC (2015) Draft Greater Sancrox Structure Plan 2014 – 2034. Port Macquarie-Hastings Council, Port Macquarie NSW.

PMHC (2018a) Port Macquarie-Hastings Urban Growth Management Strategy 2017-2036. Port Macquarie-Hastings Council, Port Macquarie NSW.

PMHC (2018b) Port Macquarie-Hastings Council Koala Recovery Strategy 2018. Port Macquarie-Hastings Council, Port Macquarie NSW.

PMHC (2018c) Draft Comprehensive Koala Plan of Management and Core Koala Habitat Mapping. Port Macquarie-Hastings Council, Port Macquarie NSW.

PMHC (2019) Port Macquarie-Hastings Biodiversity Strategy 2019-2030. Port Macquarie-Hastings Council, Port Macquarie NSW.

PMHC (2020) Discussion Paper: Fernbank Creek and Sancrox Investigation Areas January 2020 - Consultation Version. Port Macquarie-Hastings Council, Port Macquarie NSW.

RTA (2010) Pacific Highway Upgrade - Oxley Highway to Kempsey Flora and Fauna Working Paper. Report prepared by GHD Pty Ltd.

SLR (2019) Sancrox Quarry Extension Project. Report prepared by SLR Consulting Pty Ltd for Hanson Heidelberg Cement Group.

Strahler A. N. (1952) Dynamic basis of geomorphology. *Geological Society of America Bulletin* 63: 923–938.

Annex 1 – Attachment 1: HEV Criteria and Verification Methods – North Coast Regional Plan (BCD 2019)

Attachment 1: HEV Criteria and Verification Methods – North Coast Regional Plan

Verification Approach	High Environmental Value Criterion	Verification Method
A. Desktop Analysis	1. Littoral Rainforest, Coastal Wetlands and proximity areas for these mapped by the SEPP (Coastal Management)	Check the maps of coastal wetlands, littoral rainforests and their proximity areas in the SEPP: (Coastal Management) to identify whether any of these attributes occur on the site. The maps are available at http://webmap.environment.nsw.gov.au/PlanningHtml5Viewer/?viewer=SEPP_CoastalManagement.
	2. Areas of Outstanding Biodiversity Value declared under the Biodiversity Conservation Act 2016	Check the list of declared Areas of Outstanding Biodiversity Value to identify whether any occur on the site. The list is available at https://www.environment.nsw.gov.au/criticalhabitat/CriticalHabitatProtectionByDoctype.htm. As at November 2019, for the NE region the only declared areas of outstanding biodiversity value are for the Mitchell's Rainforest Snail in the Stotts Island Nature Reserve.
	3. Nationally Important Wetlands listed in the Directory of Important Wetlands, including a 50 m wide buffer	Check the map of Nationally Important Wetlands to identify whether any occur on the site and/or whether a 50m wide buffer to those wetlands intersects the site. The map is available at http://www.environment.gov.au/webgis-framework/apps/pmst/pmst.jsf and the map data can be downloaded from the SEED portal at https://datasets.seed.nsw.gov.au/dataset/directory-of-important-wetlands-in-australia.
	4. Riparian zones of third order streams and above including a buffer consistent with Appendix 3 of the Biodiversity Assessment Method	Refer to Appendix 3 of the Biodiversity Assessment Method available at https://www.environment.nsw.gov.au/biodiversity/assessmentmethod.htm and use this information to analyse the site for the presence of such riparian zones and their buffers.
	5. Native vegetation in over-cleared (Mitchell) landscapes (i.e. more than 70% cleared)	a. Identify the Mitchell Landscape in which the site occurs from the SEED portal at https://datasets.seed.nsw.gov.au/dataset/nsw-mitchell-landscapes-version-3-1. b. Register and visit the VIS database at vis@environment.nsw.gov.au. c. Use the VIS to determine whether the % cleared status of the Mitchell Landscape in which the site occurs is above 70%.
B. Fieldwork and analysis	1. Over-cleared vegetation types identified in the OEH Vegetation Information System Database as more than 70% cleared	a. Identify Plant Community Types (PCTs) on the site through fieldwork. b. Register and visit the VIS database at vis@environment.nsw.gov.au. c. Use the VIS to determine whether the % cleared status of the PCTs identified through fieldwork on the site is above 70%.

Verification Approach	High Environmental Value Criterion	Verification Method
	2. Threatened Ecological Communities (TECs) identified in the DPIE Vegetation Information System database or by comparison with the NSW Threatened Species Scientific Committee's Final Determinations	a. Identify Plant Community Types (PCTs) on the site through fieldwork. b. Register and visit the VIS database at vis@environment.nsw.gov.au. c. Use the VIS to determine whether the PCTs have TEC Status d. If not identified as a TEC from steps a – c above, then refer to the NSW Threatened Species Scientific Committee determinations to consider whether the PCT accords with the determinations.
	3. Key habitats for threatened species including: a. Breeding habitats of both species credit species and ecosystem credit species with known breeding occurrence – from existing BioNET records and/or field work	Refer to BioNET records and undertake field work
	b. Core Koala Habitat - from existing mapping and/or field work	a. Check existing Core Koala Habitat mapping in DPE approved Koala Plans of Management and, where necessary, follow any processes set out in these plans for identifying Core Koala Habitat. b. If the site is not in the area covered by a DPE approved Koala Plan of Management, then undertake fieldwork in accordance with SEPP 44 to determine whether Core Koala Habitat is present on the site.
	c. Important habitat of migratory and vagrant species mapped for the Biodiversity Offsets Scheme – from existing mapping	Check Important Area Mapping (IAM) to identify whether any of these mapped areas occur on the site. IAM is being developed by DPIE and expected to be made available on an online portal when completed. DPIE will provide links when available.
	d. Breeding, foraging and/or congregation habitats for migratory shorebird species with known occurrence – from existing BioNET records and/or field work.	Refer to BioNET records and undertake fieldwork.

Verification Approach	High Environmental Value Criterion	Verification Method
	e. Known habitat for populations of species-credit species (species-credit species are identified in the Threatened Biodiversity Data Collection) – from existing BioNET records and/or field work.	Refer to BioNET records and undertake fieldwork.
	4. Old Growth Forest defined in accordance with a code of practice under Part 5 of the (repealed) Native Vegetation Regulation 2013	View Old Growth Mapping at the SEED portal for Upper North East (https://datasets.seed.nsw.gov.au/dataset/successional-stages-on-freehold-land-for-cra-upper-north-east-nsw-vis_id-3889202cf) and Lower North East (https://datasets.seed.nsw.gov.au/dataset/successional-stages-on-freehold-land-for-cra-lower-north-east-nsw-vis_id-3888aee14) to identify whether old growth is mapped on site. If the proponent disagrees with the mapping, or the site is not mapped as old growth, then use fieldwork to assess the site for the presence of old growth.

Annex 2 – BioNet Atlas records

BioNet Atlas results are from within the 10 km radius of the Study Area.

Scientific name	Common name	BC Act	EPBC Act	# records
Amphibian				
Crinia tinnula	Wallum Froglet	V		68
Litoria aurea	Green and Golden Bell Frog	E	V	12
Litoria brevipalmata	Green-thighed Frog	V		20
Mixophyes balbus	Stuttering Frog	E	V	1
Mixophyes iteratus	Giant Barred Frog	E	E	6
Birds				
Anseranas semipalmata	Magpie Goose	V		13
Anthochaera phrygia	Regent Honeyeater	E	CE	12
Ardenna carneipes	Flesh-footed Shearwater	V		2
Artamus cyanopterus cyanopterus	Dusky Woodswallow	V		8
Botaurus poiciloptilus	Australasian Bittern	E	E	5
Burhinus grallarius	Bush Stone-curlew	E		2
Calidris canutus	Red Knot	P	E	14
Calidris ferruginea	Curlew Sandpiper	E	CE	15
Calidris tenuirostris	Great Knot	V	CE	3
Calyptorhynchus lathami	Glossy Black-Cockatoo	V		150
Charadrius mongolus	Lesser Sand-plover	V	E	56
Circus assimilis	Spotted Harrier	V		16
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	V		3
Coracina lineata	Barred Cuckoo-shrike	V		38
Daphoenositta chrysoptera	Varied Sittella	V		54
Dromaius novaehollandiae	Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area	E		1
Ephippiorhynchus asiaticus	Black-necked Stork	E		85
Esacus magnirostris	Beach Stone-curlew	E		5
Glossopsitta pusilla	Little Lorikeet	V		67
Grus rubicunda	Brolga	V		6
Haematopus fuliginosus	Sooty Oystercatcher	V		50
Haematopus longirostris	Pied Oystercatcher	E		44
Haliaeetus leucogaster	White-bellied Sea-Eagle	V		127
Hieraaetus morphnoides	Little Eagle	V		11
Hirundapus caudacutus	White-throated Needletail	P	V	61
Irediparra gallinacea	Comb-crested Jacana	V		13
Ixobrychus flavicollis	Black Bittern	V		4
Lathamus discolor	Swift Parrot	E	CE	82
Limosa limosa	Black-tailed Godwit	V		1
Lophoictinia isura	Square-tailed Kite	V		88

Ninox connivens	Barking Owl	V		9
Ninox strenua	Powerful Owl	V		47
Numenius madagascariensis	Eastern Curlew		CE	37
Onychoprion fuscata	Sooty Tern	V		1
Oxyura australis	Blue-billed Duck	V		2
Pandion cristatus	Eastern Osprey	V		124
Petroica boodang	Scarlet Robin	V		4
Petroica phoenicea	Flame Robin	V		2
Pezoporus wallicus wallicus	Eastern Ground Parrot	V		4
Ptilinopus magnificus	Wompoo Fruit-Dove	V		33
Ptilinopus regina	Rose-crowned Fruit-Dove	V		26
Sternula albifrons	Little Tern	E		23
Stictonetta naevosa	Freckled Duck	V		13
Thalassarche cauta	Shy Albatross	V	V	1
Tyto longimembris	Eastern Grass Owl	V		33
Tyto novaehollandiae	Masked Owl	V		34
Tyto tenebricosa	Sooty Owl	V		10
Xenus cinereus	Terek Sandpiper	V		4
Insects				
Argynnis hyperbius	Laced Fritillary	E	CE	2
Petalura gigantea	Giant Dragonfly	E		4
Mammals				
Aepyprymnus rufescens	Rufous Bettong	V		1
Cercartetus nanus	Eastern Pygmy-possum	V		4
Chalinolobus nigrogriseus	Hoary Wattled Bat	V		1
Dasyurus maculatus	Spotted-tailed Quoll	V	E	48
Dugong dugon	Dugong	E		3
Eubalaena australis	Southern Right Whale	E	E	1
Falsistrellus tasmaniensis	Eastern False Pipistrelle	V		6
Megaptera novaeangliae	Humpback Whale	V	V	6
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V		30
Miniopterus australis	Little Bent-winged Bat	V		111
Miniopterus orianae oceanensis	Large Bent-winged Bat	V		54
Myotis macropus	Southern Myotis	V		27
Petauroides volans	Greater Glider		V	9
Petaurus australis	Yellow-bellied Glider	V		43
Petaurus norfolcensis	Squirrel Glider	V		43
Phascogale tapoatafa	Brush-tailed Phascogale	V		16
Phascolarctos cinereus	Koala	V	V	10117
Phoniscus papuensis	Golden-tipped Bat	V		6
Planigale maculata	Common Planigale	V		4
Pseudomys gracilicaudatus	Eastern Chestnut Mouse	V		16
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	363
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	V		5
Scoteanax rueppellii	Greater Broad-nosed Bat	V		27
Syconycteris australis	Common Blossom-bat	V		2

Vespadelus troughtoni	Eastern Cave Bat	V		14
Reptiles				
Caretta caretta	Loggerhead Turtle	E	E	11
Chelonia mydas	Green Turtle	V	V	1
Dermochelys coriacea	Leatherback Turtle	E	E	1
Eretmochelys imbricata	Hawksbill Turtle		V	8
Flora				
Acronychia littoralis	Scented Acronychia	E	E	7
Allocasuarina defungens	Dwarf Heath Casuarina	E	E	9
Allocasuarina thalassoscopica			E	1
Asperula asthenes	Trailing Woodruff	V	V	2
Chamaesyce psammogeton	Sand Spurge	E		4
Cynanchum elegans	White-flowered Wax Plant	E	E	2
Dendrobium melaleucaphilum	Spider orchid	E		6
Diuris byronensis	Byron Bay Diuris	E		1
Eucalyptus nicholii	Narrow-leaved Black Peppermint	V	V	3
Marsdenia longiloba	Slender Marsdenia	E	V	2
Maundia triglochinoides		V		11
Melaleuca biconvexa	Biconvex Paperbark	V	V	50
Melaleuca groveana	Grove's Paperbark	V		4
Oberonia titania	Red-flowered King of the Fairies	V		1
Peristeranthus hillii	Brown Fairy-chain Orchid	V		1
Phaius australis	Southern Swamp Orchid	E	E	1
Rhodamnia rubescens	Scrub Turpentine	E		79
Rhodomyrtus psidioides	Native Guava	E		35
Senna acclinis	Rainforest Cassia	E		2
Sophora tomentosa	Silverbush	E		7

V - Vulnerable, E – Endangered, CE – Critically Endangered.

Annex 3 – Protected Matters Search Tool report

Australian Government
Department of the Environment and Energy

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

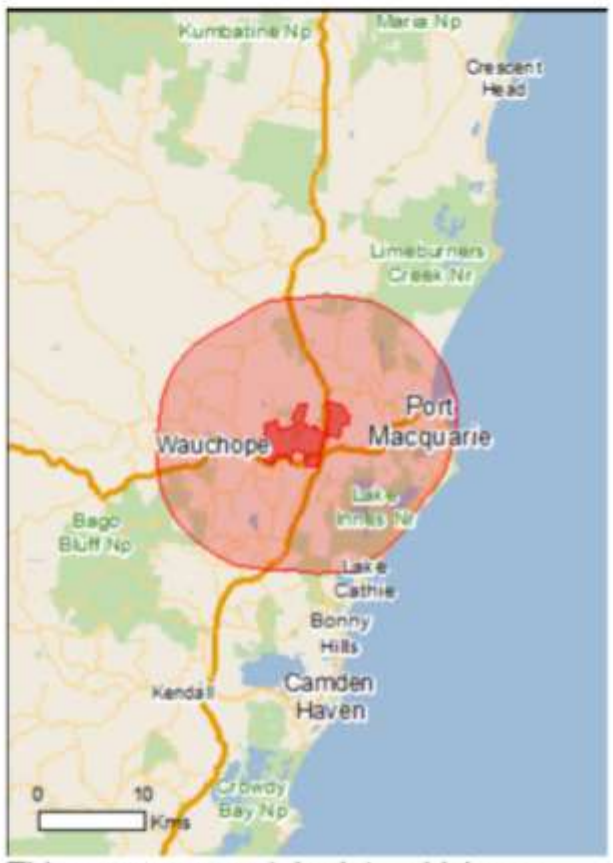
Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 05/06/20 08:49:29

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

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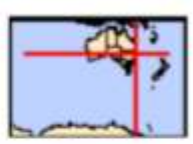

Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	77
Listed Migratory Species:	67

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	6
Commonwealth Heritage Places:	None
Listed Marine Species:	90
Whales and Other Cetaceans:	12
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	10
Regional Forest Agreements:	1
Invasive Species:	37
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities		[Resource Information]
For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.		
Name	Status	Type of Presence
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area
Littoral Rainforest and Coastal Vine Thickets of Eastern Australia	Critically Endangered	Community likely to occur within area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community likely to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Status	Type of Presence
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta cauta Shy Albatross [82345]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta steadi White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Fish		
Epinephelus daemelii Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area
Frogs		
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat known to occur within area
Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat likely to occur within area
Mixophyes iteratus Giant Barred Frog, Southern Barred Frog [1944]	Endangered	Species or species habitat known to occur within area
Insects		
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat likely to occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area

Name	Status	Type of Presence
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat likely to occur within area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Plants		
Acronychia littoralis Scented Acronychia [8582]	Endangered	Species or species habitat known to occur within area
Allocasuarina defungens Dwarf Heath Casuarina [21924]	Endangered	Species or species habitat known to occur within area
Allocasuarina thalassoscopica [21927]	Endangered	Species or species habitat known to occur within area
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area
Asperula asthenes Trailing Woodruff [14004]	Vulnerable	Species or species habitat known to occur within area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area
Cynanchum elegans White-flowered Wax Plant [12533]	Endangered	Species or species habitat known to occur within area
Euphrasia arguta [4325]	Critically Endangered	Species or species habitat may occur within area
Hakea archaeoides [66702]	Vulnerable	Species or species habitat likely to occur within area
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Melaleuca biconvexa Biconvex Paperbark [5583]	Vulnerable	Species or species habitat known to occur within area
Parsonsia dorrigoensis Milky Silkpod [64684]	Endangered	Species or species habitat likely to occur within area
Persicaria elatior Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat may occur within area
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat may occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Saiphos reticulatus Three-toed Snake-tooth Skink [88328]	Vulnerable	Species or species habitat may occur within area
Sharks		
Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species

Name	Threatened	Type of Presence
		habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting may occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area

Name	Threatened	Type of Presence
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land - Australian Postal Commission
Commonwealth Land - Australian Postal Corporation
Commonwealth Land - Australian Telecommunications Commission
Commonwealth Land - Commonwealth Bank of Australia
Commonwealth Land - Defence Service Homes Corporation
Commonwealth Land - Telstra Corporation Limited

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat may occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting may occur

Name	Threatened	Type of Presence within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur

Name	Threatened	Type of Presence
		within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Puffinus griseus Sooty Shearwater [1024]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat known to occur within area
Sterna albifrons Little Tern [813]		Species or species habitat may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche sp. nov. Pacific Albatross [66511]	Vulnerable*	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area
Fish		
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]		Species or species habitat likely to occur within area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Solegnathus dunckeri Duncker's Pipehorse [66271]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Mammals		

Name	Threatened	Type of Presence
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Hydrophis elegans Elegant Seasnake [1104]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves [Resource Information]

Name	State
Forestry Management Areas in Wauchope (FMZ2)	NSW
LNE Special Management Zone No1	NSW
Lake Innes	NSW
Lake Innes	NSW
Limeburners Creek	NSW
Macquarie	NSW
Queens Lake	NSW
Rawdon Creek	NSW
Sea Acres	NSW
Woregore	NSW

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
North East NSW RFA	New South Wales

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Pycnonotus jocosus Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine,		Species or species

Name	Status	Type of Presence
Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643] Asparagus aethiopicus		habitat likely to occur within area
Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425] Asparagus plumosus		Species or species habitat likely to occur within area
Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana		
Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171] Chrysanthemoides monilifera		Species or species habitat likely to occur within area
Bitou Bush, Boneseed [18983]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. rotundata		
Bitou Bush [16332]		Species or species habitat likely to occur within area
Eichhornia crassipes		
Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana		
Broom [67538]		Species or species habitat may occur within area
Lantana camara		
Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892] Opuntia spp.		Species or species habitat likely to occur within area
Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata		
Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Sagittaria platyphylla		
Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salvinia molesta		
Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis		
Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area

Nationally Important Wetlands	[Resource Information]
Name	State
Limeburners Creek Nature Reserve	NSW

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-31.460422 152.77088,-31.462252 152.770708,-31.460202 152.770708,-31.439407 152.772596,-31.436917 152.782553,-31.443362 152.783411,-31.440725 152.796457,-31.438968 152.797487,-31.43516 152.795942,-31.42476 152.801607,-31.425492 152.807958,-31.438528 152.804354,-31.439847 152.807272,-31.442922 152.810705,-31.441311 152.814653,-31.443362 152.814825,-31.442922 152.818773,-31.444826 152.818945,-31.445998 152.823408,-31.433549 152.826326,-31.423149 152.824781,-31.42476 152.836454,-31.434427 152.844866,-31.440286 152.843149,-31.439114 152.837484,-31.449073 152.834738,-31.44651 152.82358,-31.470598 152.817314,-31.469354 152.805813,-31.459836 152.806671,-31.458152 152.795856,-31.465254 152.794826,-31.464302 152.793711,-31.462399 152.790363,-31.462472 152.787102,-31.463277 152.782638,-31.464302 152.781608,-31.466572 152.780407,-31.468255 152.778518,-31.467597 152.774742,-31.464888 152.77088,-31.460422 152.77088

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Annex 4 – Site assessment data

HBT= hollow-bearing trees, RF = rocky features, FL/ WD = fallen logs/woody debris, GC/MS -Groundcover/Midstorey, DBH = diametre at breast height, TEC = Threatened Ecological Community, KFTs = Koala food trees.

Area	Sample Point	Latitude	Longitude	HBT present	HBT details	Hydrology present	Hydrology details	RF present	RF details	FL/WD present	FL/WD details	GC/MS present	GC/MS details	Trees > 50 cm DBH present	% trees > 50 cm DBH	Dominant canopy species	General habitat description
1	1	-31.43035789	152.835899	Possible		No		No		No		No		Yes	20	Tallowwood Blackbutt Ironbark	Primarily retained canopy over paddock and maintained grounds.
2	1	-31.43623756	152.8382983	Unknown		No		No		No		No		Unknown		Absent	Open paddock.
3	1	-31.43321609	152.8053483	No		No		No		No		No		Yes	20	Tallowwood Red Gum	Canopy only over highly modified and disturbed paddocks. Canopy is generally absent with some areas of retained trees.
3	2	-31.4392318	152.8066894	Yes	Occasional	No		No		No		No		Yes	30	Tallowwood Small-fruited Grey Gum	Canopy only over highly modified paddock.
4	1	-31.44250531	152.8017163	Yes	Likely	Yes	Possible drainage line/wet area.	No		Yes	Limited	Yes	Patches of native midstorey and likely native groundcover.	Yes	20	Tallowwood Stringybark	Retained canopy over maintained property with patches of native midstorey and likely native groundcover.
5	1	-31.44417208	152.7942966	Possible		No		No		No		No		Yes	10	Tallowwood Stringybark	Retained canopy over maintained property lawns.
6	1	-31.44664287	152.7944425	Yes		No		No		No		Yes	Some native midstorey.	Yes	20	Stringybark Tallowwood Bloodwood	Small clearing with retained canopy over grass.
7	1	-31.4482229	152.794069	Likely		No		No		No		No		Yes		Distant observation	Small clearing with retained canopy over grass.

Area	Sample Point	Latitude	Longitude	HBT present	HBT details	Hydrology present	Hydrology details	RF present	RF details	FL/WD present	FL/WD details	GC/MS present	GC/MS details	Trees > 50 cm DBH present	% trees > 50 cm DBH	Dominant canopy species	General habitat description
8	1	-31.44863735	152.789132	Possible		No		No		No		No		Yes	10	Stringybark Small-fruited Grey Gum Tallowwood Ironbark	Scattered canopy over mostly native groundcover.
9	1	-31.43631451	152.7865903	Yes		No		No		No		No		Yes	40	Red Gum	Retained canopy over highly disturbed exotics.
9	2	-31.43751998	152.7873336	No		No		No		No		No		No		Small-fruited Grey Gum Red Gum Ironbark	Retained canopy of younger trees with some native mid and groundcover.
9	3	-31.4367622	152.7895246	Likely		Yes	Apparent wet area with possible TEC.	No		No		Yes	Mostly open with some clumps if native midstorey with likely native groundcover	Yes	Occasional	Red Gum Tallowwood Mixed	Retained canopy over previously cleared areas with some native midstorey regenerating over likely native groundcover.
10	1	-31.45174985	152.786705	Possible	Limited if present.	No		No		No		No		Yes	10	Stringybark Tallowwood	Retained canopy over maintained property. Some larger trees with HBT potential.
11	1	-31.45166776	152.7884947	None seen		No		No		No		No		Yes	40	Tallowwood	Scattered canopy over maintained paddock. Trees not old growth. Appears similar in back hill of paddock.
12	1	-31.45478215	152.7835698	Yes	Occasional in the few older trees. Mostly road	Yes	Dam	No		Yes	Limited	Yes	Regenerating Eucalypts and Allocasuarina.	Yes	1	Ironbark Small-fruited Grey Gum	Predominantly young canopy of regenerating Eucalypts and Allocasuarina with some scattered older Eucalypts. Some Tallowwood in

Area	Sample Point	Latitude	Longitude	HBT present	HBT details	Hydrology present	Hydrology details	RF present	RF details	FL/WD present	FL/WD details	GC/MS present	GC/MS details	Trees > 50 cm DBH present	% trees > 50 cm DBH	Dominant canopy species	General habitat description
					side.												road reserve.
12	2	-31.4490438	152.7781313	Likely	Likely	Yes	Drainage	No		Yes	Likely	Yes	Regenerating Eucalypts and Allocasuarina.	Yes	Unknown	Tallowwood	Intact woodland.
13	1	-31.46008259	152.7853393	No		Yes	Sloping drainage.	No		Yes	Limited within remnant vegetation.	Yes	Limited and open.	No		Turpentine Small-fruited Grey Gum Ironbark Allocasuarina	Young native vegetation along drainage/creek. Open, with substantial exotic species.
13	2	-31.45896455	152.7858642	No		No		No		No		Yes	Dense grass - Setaria.	No		Acacia	Stand of young Acacia and Lantana.
13	3	-31.45887447	152.7870138	Yes	Along creekline	Yes	Creekline	No		No		Yes	Limited within riparian vegetation.	Yes	40	Tallowwood Red Mahogany Bloodwood Red Gum	Riparian - native vegetation along drainage/creek. Open, with substantial exotic species. Mature canopy.
13	4	-31.45732889	152.7868744	No		No		No		No		No		No		Small-fruited Grey Gum Ironbark	Young canopy along boundary fence with limited value.
13	5	-31.45799769	152.7878308	Yes	Occasional only	No		No		No		No		Yes	20	Ironbark Tallowwood	Scattered paddock trees over maintained paddock. Occasional hollow only.
13	6	-31.45973935	152.7877879	Yes	Occasional	No		No		No		No		Yes	50	Ironbark Small-fruited Grey Gum	Scattered paddock trees over maintained paddock. Hollows are Limited.
14	1	-31.46302225	152.7761706	Possible		Yes	Creek line. Riparian vegetation presen	No		No		No		Yes	10	Red Gum Turpentine Small-fruited Grey Gum Melaleuca	Native riparian vegetation with some exotic species. Reasonable condition.

Area	Sample Point	Latitude	Longitude	HBT present	HBT details	Hydrology present	Hydrology details	RF present	RF details	FL/WD present	FL/WD details	GC/MS present	GC/MS details	Trees > 50 cm DBH present	% trees > 50 cm DBH	Dominant canopy species	General habitat description
							t in locations.										
15	1	-31.46831757	152.7766784	Likely		Yes	Riparian zone.	No		Unknown		Yes	Dense riparian.	Yes	Unknown	Melaleuca Tallowwood Ironbark Red Gum	Dense riparian vegetation.
16	1	-31.4558052	152.815293	Possible		No		No		No		No		Yes	20	Tallowwood Ironbark Red Gum Small-fruited Grey Gum	Predominantly cleared with few scattered trees, increasing in density away from road.
17	1	-31.45123501	152.8171293	Yes		No		No		No		No		Yes	40	Tallowwood Bloodwood Blackbutt Stringybark	Retained canopy over native groundcover. Midstorey absent. Good condition without midstorey throughout wooded area of property. Rear of property is open with little canopy and maintained lawn. Different value to remainder of property.
18	1	-31.46442635	152.7738985	Yes	Limited to a few old trees	Yes	Creek and riparian vegetation - possible TEC.	No		Yes	General woodland woody debris limited to roadside bushland.	Yes	Limited - open bushland in roadside.	Yes	10	Tallowwood Some Ironbark and Red Gum	Roadside bushland with some older canopy with open midstorey.
19	1	-31.45209364	152.8191265	Yes	Occasional in limited older/larger trees.	Yes	Drainage	No		No		No		Yes	5	Stringybark Tallowwood high proportion Bloodwood	Limited to substantial canopy over maintained grounds. Possibly native cover in mown groundcover. Canopy consists mostly

Area	Sample Point	Latitude	Longitude	HBT present	HBT details	Hydrology present	Hydrology details	RF present	RF details	FL/WD present	FL/WD details	GC/MS present	GC/MS details	Trees > 50 cm DBH present	% trees > 50 cm DBH	Dominant canopy species	General habitat description
																	of young trees with occasional larger older growth. Note underpasses and Koala poles.
19	2	-31.44768259	152.8223136	Yes	Limited	Yes	Low lying wet area, stream.	No		No		Yes	Native groundcover. Sparse midstorey of Melaleuca.	Yes	1	Melaleuca Tallowwood Red Gum	Native groundcover. Sparse midstorey.
20	1	-31.44915992	152.8140545	Yes		No		No		No		No		Yes	20	Tallowwood Bloodwood Blackbutt Stringybark	Retained canopy over maintained property grounds and open paddocks.
21	1	-31.45535417	152.8205876	Yes	Limited	No		No		No		Yes	Sparse midstorey with occasional regenerating Eucalypt or shrub. Groundcover is mix of natives and exotics. Generally disturbed.	Yes	40	Tallowwood	Sparse midstorey with occasional regenerating or shrub. Groundcover is mix of natives and exotics. Generally disturbed. Canopy is sparse with scattered low trees.
22	1	-31.4600352	152.8193188	Yes	Remnant canopy acting as boundary contains HBTs and	Yes	Stream mapped. Riparian zone absent. Limited Casuarina scatter	No		No		Yes	Limited value. Exotic grass only.	Yes	Only present in remnant boundary canopy.	Blackbutt Tallowwood Flooded/Sydney Blue Gum	Highly disturbed, dominated by exotic vegetation.

Area	Sample Point	Latitude	Longitude	HBT present	HBT details	Hydrology present	Hydrology details	RF present	RF details	FL/WD present	FL/WD details	GC/MS present	GC/MS details	Trees > 50 cm DBH present	% trees > 50 cm DBH	Dominant canopy species	General habitat description
					stage.		ed										
23	1	-31.44024438	152.7853625	No		No		No		No		No		No		Planted	Property boundary vegetation. Planted and remnant.
23	2	-31.442852	152.7863469	Yes		No		No		No		No		Yes	20	Tallowwood	Retained canopy over residential property.
24	1	-31.46401085	152.8136944	Yes	Immature Blackbutts	No		No		No		No		Yes	60	Blackbutt With Tallowwood and Red Gum	Sparse remnant canopy over grazed paddock.
24	2	-31.46521607	152.8128598	Yes	Limited. Seen in Blackbutt - possible nesting rainbow lorikeet.	Yes	Possible drainage line/low lying wet area.	No		No		No		Yes	30	Tallowwood Mahogany Bloodwood Flooded/Sydney Blue Gum adjacent to road	Remnant canopy over heavily grazed paddock.
24	3	-31.4664823	152.8134552	Possible		Yes	Low lying wet area. No running or standing water present.	No		No		No		Yes	40	Blackbutt Few Tallowwood	Remnant canopy stand over heavily grazed paddock.
25	1	-31.44312116	152.8135616	Yes	Occasional	No		No		No		No		Yes	20	Tallowwood Small-fruited Grey Gum Blackbutt	Canopy only over maintained property grounds.

Area	Sample Point	Latitude	Longitude	HBT present	HBT details	Hydrology present	Hydrology details	RF present	RF details	FL/WD present	FL/WD details	GC/MS present	GC/MS details	Trees > 50 cm DBH present	% trees > 50 cm DBH	Dominant canopy species	General habitat description
26	1	-31.43646984	152.7849776	No		Yes	River	No		Yes	Dense groundcover.	Yes	Dense vegetation.	Yes	20	Small-fruited Grey Gum Rainforest	Intact but disturbed rainforest vegetation with scattered Eucalypts.
26	2	-31.43786783	152.7850443	Yes		Yes	Wet area.	No		Yes	Dense groundcover.	Yes	Dense vegetation.	Yes	15	Flooded/Blue Gum Red Gum	Intact but disturbed with exotics present.
27	1	-31.44622097	152.7863539	Possible		Yes	Dam	No		No		No		Yes	1	Ironbark Stringybark Tallowwood	Few scattered tree clumps. Trees generally young. Some older/larger trees that may contain hollows closer to road.
28	1	-31.439436	152.797313	No		No		No		No		Yes	Dense exotic grass. Midstory absent or patches of regenerating natives.	No		Swamp Oak	Generally open with dense groundcover of exotic grasses offering limited habitat value. Patches of regenerating Swamp Oak forest species.

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Biodiversity Stewardship Site Agreements (NSW)
Offset site establishment and management
Offset brokerage
Advanced Offset establishment (QLD)

Appendix E - Employment Lands Review



Port Macquarie-Hastings Council

Employment Land Use Review

February 2021

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

Executive summary

This land use review aims to update Port Macquarie Hastings Council's (Council) strategic planning information relating to industrial and retail development via assessments by HillPDA in 2015 and reviewing the NSW Department of Planning, Industry and Environment projections for population growth and accounting for the demand and supply of both industrial and business land across the local government area (LGA).

Consideration has been given to mega trends and influences including changing consumer demands, digital disruption, changing communities and demographics, increased resource consumption, shared economy, and lifestyle changes which all influence how and where employment land will be developed into the future.

The analysis into the demand for industrial land found that the Port Macquarie-Hastings LGA will need between 257 ha and 341 ha of industrial zoned land to 2041 to meet the projected resident workforce. Given the current supply of 458 ha of industrial zoned land within the B5, B7, IN1, IN2, IN3 and IN4 zones, it is estimated that there is up to 95 ha more zoned industrial land than is required to 2041. By comparison, HillPDA estimated in 2015 that the LGA required 287ha to 344ha of industrial land to 2036.

Notwithstanding the oversupply, the geographical distribution of the vacant land across each zone may not always match demand as some areas may be more attractive for industrial development than others. Similarly, land already zoned may be constrained by other environmental factors such as biodiversity, flooding, access etc. The analysis therefore reviewed each locality to determine industrial land requirements at a local level.

The analysis found that limited B5 land is currently available for greenfield development with much of this land particularly at Hastings River Drive and John Oxley Drive already developed. The analysis also found that insufficient land is available at Lake Cathie/ Bonny Hills to service the local community.

The analysis into the demand for business land found that up to 296,164 m^2 of retail floor space will be required to satisfy demand across the LGA. To date approximately 164,000 m^2 of business floor space has been developed across the LGA over a total zoned area of 125 ha under Port Macquarie LEP in either the B1, B2, B3 and B4 zones.

The analysis into business land found that about 75% of the existing floor space is made up of retail uses whilst the remaining 25% comprises non-retail uses. Much of this development, with the exception of the Port Macquarie CBD and Settlement City, has generally been developed at low densities, in many cases well below the nominated floor space ratio. With the finalisation of the Health and Education Precinct Master Plan, an opportunity to realise up to a projected 212,489 m^2 non-residential gross floor area together with the opportunities to intensify and develop existing zoned business lands will more than satisfy demand to 2041.

This land use review also involves a critique of a number of site-specific proposals, relating to industrial and business land, that are currently before Council and provides recommendations for Council's consideration based on the findings of the land use review.

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Appendices

Appendix A – Detailed maps of employment precincts

1. Introduction

This land use review aims to review Port Macquarie Hastings Council's (Council) strategic planning information relating to industrial and retail development via assessments by HillPDA in 2015, in particular the Port Macquarie Hastings Industrial Land Strategy Review (ILSR) and Port Macquarie Hastings Retail Strategy Review (RSR) (HillPDA 2015), updating the areas of vacant and developed land within each industrial and retail zone, updating projections for population growth, and demand and supply of both industrial and retail land.

1.1 Purpose of this report

The purpose of this report is to:

- Review and consider information previously prepared by HillPDA to inform Council's Urban Growth Management Strategy.
- Review and consider take-up rates and changes in land use trends since the abovementioned HillPDA reports were prepared, using current best available information.
- Consider current and potential future commercial and industrial land use trends, using current best available information.
- Consider future potential urban growth areas such as the Port Macquarie Health and Education Precinct, Fernbank Creek and Sancrox Planning Investigation Ares and determination of subsequent commercial and industrial potential impacts and demands.
- The anticipated project outcomes include a strategy framework that achieves recommendations in relation to future commercial and industrial land use and development within the Port Macquarie-Hastings Local Government Area based on demand projections.
- Review site specific proposals to determine new land use planning opportunities for new business and industrial development.

1.2 Scope and limitations

This report has been prepared by GHD for Port Macquarie-Hastings Council and may only be used and relied on by Port Macquarie-Hastings Council for the purpose agreed between GHD and the Port Macquarie-Hastings Council as set out in section 1.3 of this report.

GHD otherwise disclaims responsibility to any person other than Port Macquarie-Hastings Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this Report are based on conditions encountered and information reviewed at the date of preparation of the Report. GHD has no responsibility or obligation to update this Report to account for events or changes occurring subsequent to the date that the Report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer Section 1.3 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Port Macquarie-Hastings Council and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.3 Methodology

This report assesses the employment land in the Port Macquarie-Hastings LGA, which is defined as land with an I-zoning or B-zoning under *Port Macquarie Hastings Local Environmental Plan 2011*. These zones are divided into industrial zones and business zones.

Industrial zones

The industrial zones are:

- B5 Business Development
- B7 Business Park
- IN1 General Industrial
- IN2 Light Industrial
- IN3 Heavy Industrial
- IN4 Working Waterfront

The B5 and B7 zones are classified as industrial land as the objectives, location and use of these zones are similar objectives to those of industrial land.

B5 Business Development:

- Enable a mix of business and warehouse uses, and specialised retail premises that require a large floor area, in locations that are close to, and that support the viability of, centres
- Minimise conflict between land uses within the zone and with adjoining zones
- Ensure that new developments make a positive contribution to the public domain and streetscape

The B5 zone is typically located away from commercial centres, being located along arterial roads or in bulky goods precincts. Large areas of land with this zoning are found along Hastings River Drive and Lake Road. The B5 zone typically contains a mix of business and warehouse uses in addition to bulky goods retail.

B7 Business Park:

- Provide a range of office and light industrial uses
- Enable other land uses that provide facilities or services to meet the day to day needs of workers in the area
- Ensure that development does not conflict with the hierarchy of business and retail centres in the Port Macquarie-Hastings region and the role of the Greater Port Macquarie Central Business District as the focal point for subregional functions and service delivery
- Create employment environments within large scale developments that are of high visual quality and relate favourably in architectural and landscape treatment to the large scale development

The B7 zone is typically located in business parks. The only land with a B7 zoning in the LGA is located near the airport.

This review is consistent with the 2015 ILSR where the B5 and B7 zones have been classified as industrial land due to their objectives and use.

Business precincts

The business precincts identified in this report consist of land zoned:

- B1 Neighbourhood Centre
- B2 Local Centre
- B3 Commercial Core
- B4 Mixed Use

Business zones (B1, B2, B3 & B4) are typically located in commercial centres and in close proximity to residences. These zones are dominated by retail uses in addition to residential and office uses.

Other zones

This report does not consider land zoned for other purposes that may be used for commerce or industry, such as land zoned SP2 Infrastructure. For example, there is a large area of land zoned SP2 Infrastructure at the airport. It contains several aviation-related commercial uses, such as helicopter hire, car rental businesses and a skydive business.

Classifying developed and vacant land

In this report, each industrial and business precinct is divided into developed and vacant land. This was calculated using aerial photographs of the LGA taken on 8 August 2020. A cadastral layer was laid over the photographs and each lot was either classified as 'developed' or 'vacant'. Lots with buildings on them were classified as 'developed' and all others were classified as 'vacant.' Issues with this approach include:

- Lots with space for further development are classified as "developed". One example of this is the section of Birdon Marine located west of the Pacific Highway (Lot 17 DP1191370). The lot is approximately 3.9 ha in size and contains 1 building. The lot is large enough to be subdivided and developed further, however as it contains a building it was classified as 'developed.' The classification of this lot has been amended to only cover the section of the site with a building on it. However, other lots in the LGA that have been classified as 'developed' may have further development and/or subdivision potential.
- Lots with dwellings on them are classified as 'developed.' One example is Lot 1 DP177586 which is zoned IN2 Light Industrial. The lot contains a dwelling and has been classified as 'developed.' The classification of this lot has been amended to 'vacant.' However, other lots with a dwelling on them may have been classified as 'developed.'

1.4 Mapping

The mapping contained in Appendix A has been prepared based on data provided by Council and GHD and has been included in the calculations as described by the tables contained in this report.

Vacant industrial and commercial lands are indicated within each of the localities as shown in the Figures contained in Appendix A. The full extent of the land parcel is identified on the mapping and intersection of the lots with the existing zoning.

The mapping endeavours to capture a majority of the sites that have future development potential. It should be noted, although the location of a number of sites may be not highlighted in detail, they have been considered during the preparation of this report and included in all calculations and projections.

1.5 Assumptions

Assumptions made by GHD when undertaking services and preparing this Employment Lands Review include (but are not limited to):

- The report has been prepared based on information obtained from:
  - Port Macquarie Hastings Industrial Land Strategy Review (HillPDA 2015)
  - Port Macquarie Hastings Retail Strategy Review (HillPDA 2015)
  - GIS data and information supplied by Port Macquarie-Hastings Council
- The proposed business and industrial take up rates identified in the HillPDA 2015 ILSR and RSR may have changed, or not occurred over the last 5 years. Estimates have been made in this review to determine take up rates.
- Principles for economic growth and initiatives for employment lands identified by the UGMS have not changed and are currently supported and driven by Council.
- Global, regional and local influences and trends have impacted upon employment lands, labour and consumer spending over the last 5 years since the preparation of the HillPDA ILSR and RSR reports.
- This review is a desktop analysis only and the results have not been verified on site. Development may have occurred since the aerial photograph was taken on 8 August 2020.

2. Strategic context

2.1 Regional strategies

2.1.1 North Coast Regional Plan 2036

The North Coast Regional Plan provides an overarching framework that will guide the NSW Government's land use planning priorities and decisions to 2036. The Directions and Actions of the Plan relating to employment lands have influenced the development of Council's strategic planning, in particular:



6.1 Facilitate economic activity around industry anchors such as health, education and airport facilities by considering new infrastructure needs and introducing planning controls that encourage clusters of related activity.

6.2 Promote knowledge industries by applying flexible planning controls, providing business park development opportunities and identifying opportunities for start-up industries.

6.3 Reinforce centres through local growth management strategies and local environmental plans as primary mixed-use locations for commerce, housing, tourism, social activity and regional services.

6.4 Focus retail and commercial activities in existing centres and develop place-making focused planning strategies for centres.

6.5 Promote and enable an appropriate mix of land uses and prevent the encroachment of sensitive uses on employment land through local planning controls.

6.6 Deliver an adequate supply of employment land through local growth management strategies and local environmental plans to support jobs growth.

21.1 Undertake detailed infrastructure service planning to support proposals for new major release areas.

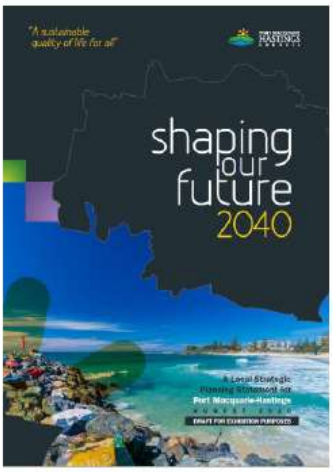
21.2 Maximise the cost-effective and efficient use of infrastructure by directing development towards existing infrastructure or promoting the co-location of new infrastructure.

Priorities for Council are set out in a Local Government Narrative, which contains the following priorities relating to employment lands:

- Manage and support growth in Port Macquarie.
- Deliver housing and job opportunities in Port Macquarie, Wauchope, Lake Cathie, Bonny Hills and Camden Haven
- Develop health, education and aviation precincts at Port Macquarie, and new employment land at Sancrox and Wauchope, which will drive opportunities for new investment in a range of sectors

2.2 Council strategies

2.2.1 Shaping Our Future 2040 Local Strategic Planning Statement



The draft Port Macquarie-Hasting's Local Strategic Planning Statement (LSPS) describes how Council intend to achieve the City's vision and values by guiding the growth of the City over the next 20 years. The plan, titled Shaping Our Future 2040, contains:

- The *Community's vision for future land use in the City*
- *19 Planning Priorities that articulate the special characteristics of the City*
- *Actions that summarise how Council will deliver on the Planning Priorities*
- *Key change* and growth areas

Planning Priorities relating to employment lands are:

- *Planning Priority 6: Use a place-based approach to shape the development of our sites, streetscapes, precincts, villages, towns and centres*
- *Planning Priority 11: Provide a multi-modal, integrated land-use and transport network across Port Macquarie-Hastings*
- *Planning Priority 12: Develop a network of safe, accessible and sustainable local transport options linking key destinations*
- *Planning Priority 13: Build the capacity of Port Macquarie as a regional city and develop the vitality of other economic centres and employment lands*
- *Planning Priority 14: Develop a thriving and sustainable visitor economy*
- *Planning Priority 16: Plan for a future economy which is diverse, resilient and inclusive*

The draft strategy defines the LGA's employment lands into a hierarchy, ranging from the Port Macquarie Central Business District and Settlement City at the top of the hierarchy, to local neighbourhood retail centres at the bottom (refer Figure 2-1).

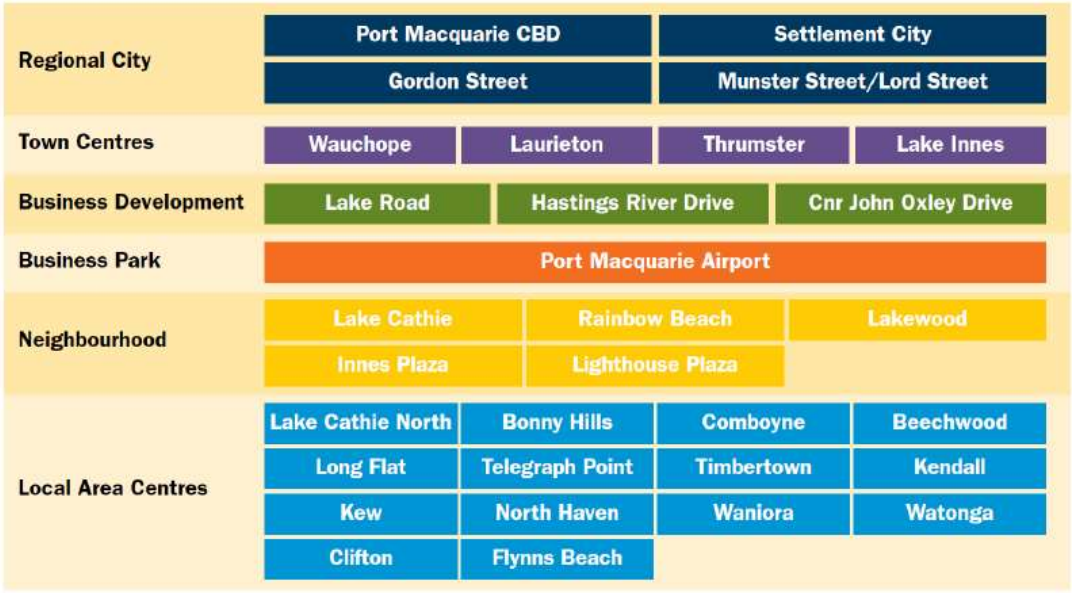


Figure 2-1 Port Macquarie-Hastings hierarchy of centres

Source: Draft Port Macquarie-Hasting's Local Strategic Planning Statement

Planning Priority 13 is most relevant to the LGA's employment lands. Actions under this Priority are:

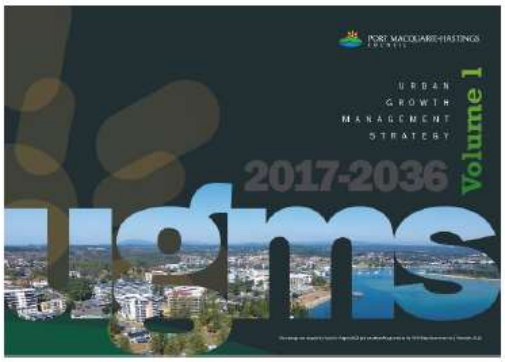
- *Implement the Health & Education Precinct Master Plan with associated Development Contributions Plan and funding model*
- *Review and update Council's Economic Development Strategy to stimulate sustainable industry, business and investment growth*
- *Develop an Investment Prospectus to promote business and investment opportunities to ensure activation of our business precincts and employment lands*
- *Finalise and implement the Port Macquarie Regional City Action Plan in collaboration with the Department of Planning, Industry & Environment*
- *Review LEP and DCP provisions for the Port Macquarie CBD to ensure that the CBD continues to be the primary retail and business centre in the Port Macquarie-Hastings*

2.2.2 Urban Growth Management Strategy (2017 - 2036)

The Urban Growth Management Strategy (UGMS) was endorsed by DPIE in 2018 and sets out Council's actions for employment land and economic development generally. The goal of the strategy is to identify opportunities for new economic development and housing that will meet the future needs of the population.

Key actions of the strategy in relation to industrial land are:

- Action 15: Council will undertake planning for an expansion of the Airport Business Park to build on the key role of the Airport as a regional hub and transport gateway. The aim is to create opportunity for a technology and campus style business park, aviation related uses and service industry.



- Action 17: Investigate the capacity of land at the intersections of Ocean Drive with Houston Mitchell Drive for light industrial use and at the intersection of Ocean Drive with Bonny View Drive for light industrial development or for use as a school.
- Action 18: Investigate options for future service industrial land in the Camden Haven.

Key actions of the strategy in relation to retail land are:

- Action 12: It is proposed that Council review the planning for the Port Macquarie CBD to ensure that it is recognised as the primary retail and business centre in the Port Macquarie-Hastings and as a centre of regional significance on the NSW North Coast.
- Action 13: Council will coordinate the development of a Precinct Plan for the area surrounding the Base Hospital and CSU campus. The Precinct Plan will be developed with input from key stakeholders and the community.

2.2.3 Industrial strategies

The Port Macquarie-Hastings Industrial Land Strategy (2007 ILSR) provided a strategic planning framework for industrial precincts and identified appropriate locations for future industry to support and enhance the economic competitiveness of the Port Macquarie-Hastings Region.

HillPDA reviewed the Strategy in 2010 and the findings were fed into the UGMS prepared by Council. The UGMS deals with resident and employment growth in the Region as a response to the recommendations in the NSW Government's Mid North Coast Regional Strategy (2006-2031).

HillPDA reviewed the Strategy again in 2015 and the findings were incorporated into the UGMS, which was updated in 2017.

Industrial Strategy Review (2015)

The 2015 Industrial Strategy Review (ISR) indicated that there was around 531 ha of zoned industrial land of which 245 ha was developed and 286 ha was vacant. When the 74.7 ha of constrained land in Herons Creek was removed, there was around 211 ha of vacant suitable industrial land available for the market.

In addition to this land, there were three sites in the planning stages of investigation and possible future rezoning. These were:

- The Airport, which currently has 27.64 ha of employment zoned land.
- Area 14 (Lake Cathie), which would add around 4 hectares of developable land. Since 2015 no industrial land has been rezoned in this area.

- John Oxley Drive and Oxley Highway area that would potentially add a further 8 hectares – on 19 June 2015 4.79 ha of land on the Oxley Highway was rezoned from RU1 Primary Production to B5 Business Development. A Bunnings store has been developed on this site. In addition to this, on 21 December 2018 Lot 2 DP1177586 was rezoned from RU1 to IN2 Light Industrial. This lot is adjacent to the Oxley Highway on the south side, in the area referred to in this report as Lindfield Park. The lot is approximately 1.9 ha in area.

The 2015 report contains projections of industrial land demand based on workforce participation rates and projected population. The population projections are based on those made by ID Consulting, which includes small area projections for localities within the LGA.

The projections used the same workforce participation rates as those used in the 2007 ILSR, which were 34% (low participation), 39% (high participation) and 45% (full participation) to reflect scenarios of growth and change. When the 2015 review was written the latest data on workforce participation rates in the LGA came from the 2011 Census, where workplace participation was at 38%.

In addition to participation rates, the review adopted the same ratios of workers per hectare by industry type as per the 2007 ILSR.

Looking forward, the 2015 ILSR projected that the Port Macquarie-Hastings LGA will demand an additional 78ha to 135ha of industrial land to 2036 indicating there is sufficient current supply to meet demand to 2036.

2.2.4 Retail strategies

The first major study on retailing in Port Macquarie-Hastings was undertaken in 1985. The study was updated in 1990, with reviews undertaken in 1999, 2004, 2010 and 2015. The most recent update to the Retail Strategy was undertaken by HillPDA in 2015 and the findings were fed into the Urban Growth Management Strategy (UGMS) prepared by Council. The UGMS deals with resident and employment growth in the Region as a response to the recommendations in the NSW Government's Mid North Coast Regional Strategy (2006-2031).

Retail Strategy Review (2015)

The 2015 Retail Strategy Review (RSR) indicated that the LGA contained around 800 shop front premises totalling some 142,000 sqm of lettable floor space. Of the 142,000 sqm of shop front space around 117,000 sqm was occupied retail space (excluding retail space outside the centres). The balance was made up of vacant space and non-retail commercial uses.

The projected population growth for the LGA, in addition to real growth in retail spend per capita, was used to forecast a total of $1.6 billion in expenditure in 2036. Added to this expenditure would be a further $136m to $146m per annum in expenditure from residents outside the LGA.

The review projected that 274,000 m^2 of retail space would be required in the LGA in 2036, an increase of 77,000 from the projected demand in 2016. One quarter of this is expected to be in "out-of-centre" or bulky goods locations, which typically use the B5 Business Development or B7 Business Park zonings.

The review expected that a former supermarket site on the corner of Short Street and William Street in Port Macquarie would be redeveloped for retail uses, which provide up to 5,000 m^2 of retail space. In September 2020 a DA was lodged for the development of residential apartments on the site. However, it can be noted that no development has yet occurred on this site.

2.2.5 Health and Education Precinct Master Plan

Council has developed a Master Plan for the Port Macquarie Health and Education Precinct as a key element of planning for Port Macquarie's future growth. The aim is to transform the precinct into a centre of excellence for education, training and health.

The Health and Education Precinct currently contains 4.79 ha of land zoned B5 Business Development, which is used for a Bunnings store. The Master Plan proposes an area zoned B2 Local Centre and an area zoned B4 Mixed Use. The plan also contains areas to be investigated for IN1 General Industrial or B7 Business Park zoning.

Following the adoption of the Master Plan by Council at its September 2019 meeting, Council has now commenced working with key project stakeholders to undertake detailed project planning, including ongoing community and stakeholder consultation, which is required to achieve the vision for this area and deliver the best outcome for the community.

2.2.6 Fernbank Creek and Sancrox Planning Investigation Area

Port Macquarie-Hastings Council published a discussion paper for the Fernbank Creek and Sancrox Planning Investigation Area in January 2020. The purpose of the discussion paper was to undertake a preliminary review of the opportunities and limitations of the area and to seek community feedback. This feedback will be used to develop a Structure Plan, which will provide a framework for development and conservation.

Initial investigations have identified that the area is constrained with flooding, bushfire, ecology, regionally significant farmland and mineral resources that are required to be appropriately assessed. In addition to this, existing potential inadequacies exist in infrastructure and services such as roads, water and sewer, schools, regional parks and playing fields, employment opportunities, social services and community facilities to cater for the projected long term urban growth within the Investigation Area. Furthermore, efficient coordination and assessment of required planning investigations is likely to be complex, resource and time intensive due to the highly fragmented nature of land ownership within the site. It is likely that the above assessments will also result in areas of the site being deemed inappropriate for urban development.

Despite the above constraints, the Planning Investigation Area also contains large areas of relatively unconstrained land that has been identified within the UGMS as having the potential to accommodate the future urban growth of Port Macquarie over the long term. As such, the area is also likely to contain land that will be important in the strategic development of the LGA.

Council is currently undertaking dwelling yield calculations for the proposed zonings in the Planning Investigation Area, based on a draft structure plan.

3. LGA snapshot

3.1 Economic profile

The Port Macquarie-Hastings LGA supports 29,368 jobs and has a Gross Regional Product (GRP) of $5 billion (REMPLAN Economy, 2020).

Health Care & Social Assistance is the largest employment sector, supporting an estimated 5,443 jobs. Retail trade is the second largest employment sector, employing 3,622 people. Other major generators of employment include construction, education & training, accommodation & food services and public administration & safety (REMPLAN Economy, 2020).

The annual economic output of the LGA is $9.521 billion. Construction is the largest sector in terms of output, supporting an estimated annual output of $1.582 billion (REMPLAN Economy, 2020). Other major industry sectors include Electricity, Gas, Water & Waste Services, Rental, Hiring & Real Estate Services and Health Care & Social Assistance.

3.2 DPIE Population projections 2016-2041

The NSW Department of Planning, Infrastructure & Environment (DPIE) produces population projections, the latest being produced in 2019 and projecting to 2041. The projections estimate the future NSW population based on assumptions for fertility, life expectancy and migration. They represent possible demographic futures based on the best assessment of how the NSW population may change over time, including population size, age profile and residential location.

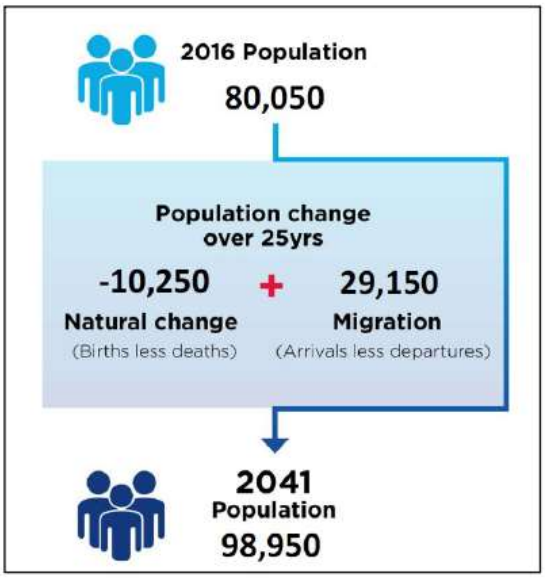
It should be noted that the projections do not take into account any effects of COVID-19 international border closures, which may lower the rate of migration in the short term. Port Macquarie-Hastings LGA is projected to have a net increase of 29,150 migrants between 2016-2041, with NSW as a whole expected to have a net increase of 1.5 million migrants.

Over the next 25 years (2016-2041) New South Wales' population will grow by 2,839,850 (37%) – or around 1% a year. Port Macquarie-Hastings LGA will grow by 18,868 (24%) – or around 0.9% a year.

The continued movement of people to Port Macquarie-Hastings will more than offset future population losses estimated from natural change.

The working age population (aged 15-64) is estimated to increase by 44,850 in 2016 to 49,300 in 2041 – a change of 4,450.

The number of children aged 14 and under is estimated to change by 100 children, from 13,800 in 2016 to 13,900 in 2041.



The number of people aged 65 and over is estimated to increase from 21,450 in 2016 to 35,750 by 2041 – a change of 14,300.

The number of households in the LGA is projected to increase by 32% between 2016 to 2041, increasing from 34,030 in 2016 to a total of 44,799 in 2041. This represents an increase of 10,769 households, an average of 1.1% per year. As the number of households will increase at a greater rate than the increase in population, household size will decrease from 2.32 people in 2016 to 2.15 people in 2041. This change is driven by the ageing of the population, resulting in less family households and more couple-only and lone person households.

The number of dwellings in the LGA is projected to increase by 32% between 2016-2041, from 37,707 to 49,639. An additional 11,932 dwellings will be required in the LGA in 2041.

Note that the projections do not take into account impacts from the COVID-19 pandemic.

3.3 I.D. Consulting population projections

I.D. Consulting produces population forecasts to 2041 based on 2016 ABS data. The projections break the LGA down into 16 smaller areas, which are based on ABS SA1 areas. The population forecasts for the small areas of Port Macquarie-Hastings LGA are shown in Table 3-1. Note that the projections do not take into account impacts from the COVID-19 pandemic.

Table 3-1 Small area population forecasts

Small area	2016	2021	2026	2031	2036	2041
Camden Haven East	6,045	6,210	6,300	6,347	6,466	6,606
Camden Haven West	3,440	3,849	4,091	4,405	4,740	4,742
Flynn's Beach	2,207	2,203	2,195	2,190	2,228	2,279
Gordon Street	2,391	2,531	2,690	2,910	3,146	3,390
Hastings River Canals	2,746	2,725	2,638	2,585	2,575	2,596
Innes Peninsula	4,501	5,552	6,601	7,363	7,765	7,762
Lake Cathie – Bonny Hills	6,369	6,784	7,435	8,078	8,888	9,440
Lighthouse Beach – Greenmeadows	12,207	12,880	13,316	13,400	13,481	13,854
Lord Street	1,764	1,904	2,081	2,339	2,591	2,838
Port Macquarie Rural Fringe	3,708	4,097	4,527	5,099	5,693	5,884
Rural	6,808	6,859	6,993	7,225	7,442	7,602
Shelly Beach - Bellevue Hill	11,447	11,823	11,816	11,829	11,996	12,215
Thrumster	506	2,639	5,199	7,934	10,606	12,868
Town Beach - CBD	1,100	1,237	1,383	1,481	1,611	1,741
Wauchope	7,421	8,579	8,971	9,320	9,844	10,326
Westport	7,412	7,814	8,073	8,168	8,291	8,341
Total	**80,073**	**87,686**	**94,310**	**100,673**	**107,364**	**112,484**

Source: (I.D. Consulting, 2020)

3.4 Comparison of population projections

The DPIE projects that the Port Macquarie-Hastings LGA will have a population of 98,950 in 2041, while I.D. Consulting projects a population of 112,484. The difference of 13,534 people is due to the different projection methodologies.

DPIE projections

The DPIE uses the Cohort-Component Method being the international standard for population projections, and utilised by a range of other NSW government agencies. The North Coast Regional Plan 2036 and the Port Macquarie LSPS refers to the DPIE population projections for future land use decisions including business and industrial development.

The LSPS has taken the DPIE projections into account to establish planning priorities and actions to improve economic productivity and prosperity over the next 20 years. The priorities focus on enhancing existing industry clusters and encourage new clusters, nurturing entrepreneurialism through support for new and potential industries and businesses and supporting and facilitating business networks.

The DPIE data is applied throughout this review as it provides a consistent approach to population projections and future growth. It offers up to date information based on the 2016 ABS census data.

I.D. Consulting projections

I.D. Consulting uses a forecasting method whereby demographic changes, such as birth, death and migration rates are applied to the base population .I.D. Consulting produces population forecasts both at the LGA level and for smaller areas (refer Table 3-1). The modelling process used for producing the small-area forecasts is based on a 'bottom-up' approach, with all assumptions being derived from a local perspective.

The ID Consulting data has been utilised in this review to provide a breakdown of the population in each of the localities and potential growth to assist with the strategic planning of business and industrial development within these areas to support economic growth and to support local communities.

The DPIE's projections are LGA-wide and do not include smaller areas. For this reason I.D. Consulting projections have been used in Section 5.3 to calculate local service employment demand generally.

3.5 Mega trends and influences

The commercial and industrial sectors have navigated a range of local, national and global trends and influences over the years that has shaped the current commercial and industrial activities and operations. The recent global COVID 19 pandemic has impacted upon these sectors in the short term, however innovation and adaptation is required in response to this situation and other evolving mega trends.

DPIE Employment Zones Reform

The DPIE is currently undertaking a reform program which includes the delivery of a simplified employment zone framework. A key outcome of the project will be to ensure employment zones provide clear strategic intent, include clarity around their application and increase flexibility around land uses. The project will ensure that the employment zones used in the PMHC LGA reflect the current nature of business. For example, the B7 Business Park zone has waned in popularity due to the impact of online retailing. DPIE has found that the types of businesses intended for the zone now prefer to be located in highly urban locations, integrated with other industries.

Impacts of COVID-19

The COVID-19 pandemic is predicted to impact the Port Macquarie-Hastings LGA by decreasing international migration, increasing domestic migration, increasing the popularity of online shopping and reducing discretionary spending.

The long term social, economic and health impacts from COVID 19 are largely unknown, however several trends have emerged over the course of 2020. These are detailed below.

Decrease in international migration

DPIE projects a natural decrease in Port Macquarie-Hasting's population over the next 25 years, with 10,226 more deaths than births between 2016 and 2041. An influx of 29,094 migrants is projected during this period, leading to a population increase of 28,868 by 2041 (DPIE, 2019). International border closures due to the pandemic may reduce the number of people migrating to the LGA from overseas.

Increase in domestic migration

The pandemic has seen an increase in remote working arrangements in Australia, with many businesses expected to maintain remote working arrangements. This has led to an increase in migration from capital cities to regional areas as workers seek locations with lower housing costs, less traffic and proximity to natural environments. Port Macquarie-Hastings LGA is well placed to attract remote workers seeking a sea-change, with a range of housing options including multi-storey apartments, village living, rural residential living and large rural properties. An influx of remote workers to the LGA would increase the proportion of workers in the "Professional, Scientific and Technical Services" industry, which made up 0.04% of all workers living in the LGA at the 2016 Census. It would also increase the number of workers in the occupation class of "Professionals", which made up 19% of the working population at the 2016 Census (ABS, 2016).

Increase in online shopping

The pandemic has promoted the ever increasing popularity of online shopping as people seek to reduce their risk of infection and comply with lockdown laws. Between 2019 and 2020 the number of Australian households shopping online increased by 13.7%, with over 8.5 million households shopping online in 2020 (Australia Post, 2020). Between March and October 2020 over a million Australian households shopped online for the first time. As the risk of infection reduces it is likely that many shoppers will continue to shop online for essentials such as groceries ("chore" shopping) to save time, and to shop in person as a social and leisure activity.

The impacts of this trend on the retail centres of the LGA are still unknown. It is possible that larger shopping centres such as Port Central and Settlement City remain popular as they offer a range of entertainment and food options in addition to shopping, while smaller centres may see a reduction in patronage as shoppers opt to buy online. Traders of discretionary items may see a downturn as they face increasing competition from online retailers.

Increased financial stress

The Household Impacts of COVID-19 survey produced by the ABS found that Australians are experiencing increased financial stress. Comparing October and June 2020, Australians reported one or more people in their household experiencing:

- Problems getting a job (10% in October, up from 6% in June)
- Involuntary job loss (3% in both October and June)
- Problems paying the mortgage for their home or an investment property (5% in October compared with 2% in June)
- Difficulty paying the rent, or a fear of eviction (4% in both October and June)

For those who live in a home owned with a mortgage, those reporting that someone in the household experienced problems paying the mortgage for their home or investment property was higher (11% in October compared with 5% in June).

In addition, the unemployment rate in Australia was 6.6% in December 2020, up from 5.3% in September 2019.

This increase in financial stress may result in a reduction in discretionary spending, with resultant effects on the industrial and retail businesses in the Port Macquarie-Hastings LGA (ABS, 2020).

Local and emerging industries

The Hastings Macleay Regional Economic Development Strategy 2018-2022 lists the growth industries and potential emerging industries in the region. Specialised growth industries are:

- Health Care and Social Assistance
- Agriculture, Forestry and Fishing
- Accommodation and Food Services

The potential emerging industries are:

- Construction
- Transport, Postal and Warehousing
- Education and Training
- Manufacturing

The provision of business zoned land (B1, B2 B3 & B4) supports the development of the Health Care and Social Assistance industry and Accommodation and Food Services Industry.

The Transport, Postal and Warehousing industry is suited to the B5 Business Development , B7 Business Park, IN1 General Industrial and IN2 Light Industrial zones.

The manufacturing industry is best located in industrial zones where the potential for noise and air quality impacts can be isolated away from residential areas.

Digital disruption

Despite the pace of growth in e-commence, physical stores are not necessarily redundant, however are increasingly becoming just one of the many alternatives to market goods and services. Empowered to buy what and when they want concept, consumers are expecting to access products rapidly and conveniently, anytime anywhere, other than in traditional shops.

E-commerce and other digital technologies have provided consumers with a multitude of ways to select, buy and receive goods. Offering the convenience and service that is now taken for granted has become an increasingly complex process for retailers. This has elevated the importance of distribution networks. The impact on real estate to create these networks is significant with retailers having to consider location and size of operational warehouses to accommodate more labour-intensive processes.

Certain local traders are particularly vulnerable to digital disruption such as newsagents (due to 24/7 news cycle). Traders of discretionary items may see a downturn as shoppers choose to buy online, where prices may be cheaper. The uptake of virtual reality, augmented reality, robotics, autonomous vehicles and smart technologies has also been rapid. Along with the prospect of imminent transition to solar electric cars, this is a huge area of innovation to which a thriving economy will need to respond.

To succeed and remain competitive within this climate, it is important that businesses and industries embrace these new platforms, building design responds, and that governance frameworks are prepared for these changes. In Port Macquarie-Hastings LGA businesses can be supported by:

- Provision of adequate land for warehousing and logistics to support an increase in online shopping, which could be accommodated in the B5 Business Development, B7 Business Park, IN1 General Industrial or IN2 Light Industrial zones.
- Ensuring that primary producers and other rural industries have adequate telecommunications access to enable them to market their products online.
- Promotion of farmer's markets, craft fairs and other events that add an experiential element to shopping in addition to acting as a tourist attraction.
- Industrial employment is becoming increasingly automated, meaning that the number of workers per square metre of floorspace is likely to be lower in the future. Supply chain optimisation and the increase in online retail is likely to mean that more small industrial distribution facilities may be required in the LGA.

Office space versus working from home

Prior to the global COVID 19 pandemic, the utilisation of office space was changing and evolving with business models and practices supporting a work/lifestyle balance to attract and engage and retain employees. During COVID 19, the nation saw a closing of office operations and centralising working from home. It has been demonstrated that a considerable amount of work can be undertaken outside of the workspace, however there are limitations as organisations still require face-to-face interaction and staff collaboration for continued success. It also provides an environment where younger employees need to learn and be mentored.

Although organisations may be shrinking office footprints due to associated operating costs, tenants may also be considering accelerating the trend and focusing on increasing space to accommodate employees in a larger environments to ensure there is more space per employee to reduce health and safety risks. For offices to accommodate a full complement of staff, maintain physical distancing, and be compliant with health and safety regulations, floor space ratios will need to be increased.

Changes relating to remote working arrangements have the potential to have positive and negative impacts on the take up of employment land for offices, however no data is yet available to support this trend. This would primarily affect lands zoned B3 Commercial Core, B4 Mixed Use, B5 Business Development and B7 Business Park.

Changing consumer demands

Rising global income levels is resulting in significant shifts in consumer preferences and a desire for transparency around issues such as food safety, environmental sustainability and health and wellness. It is expected that in the coming years that over 40% of the world's population will be classified as middle class and this presents an opportunity for Australian agribusiness exports and including further value adding.

Consumers are willing to pay more for these goods and are seeking convenience and status in consumption and these factors are combining to create a consumer market that is not only demanding more products but also want more information about where the origination of their products.

To remain relevant, retailers and industries need to do more than just provide a personalised or memorable experience, they alternatively need to become allies to the modern consumer by giving them options that align with their personal values. This includes providing good working conditions for employees, respecting human rights and donating to charities. Consumers need to feel that it's important for industries and retailers to employ social responsibility initiatives.

Current trade relations with China and the impact of COVID 19 are also influencing the ability to source products from overseas. This situation may result in a greater emphasis on producing

goods locally which in turn may see more manufacturing and the need for industrial land for this purpose. The Port Macquarie LGA would be well placed to accommodate such uses with large tracts of zoned land suited for this purpose at relative cheaper price points than many metropolitan centres.

Changing communities

While population growth remains steady, medical advancements and lifestyle changes mean that people are living longer and having fewer children. This is resulting in an ageing population profile and more people living alone. DPIE projects 49,304 people aged between 15-65 in the Port Macquarie-Hastings LGA in 2041, compared to 44,836 in 2016 (refer Table 3-2). This represents an increase of 9.9%, while the overall population is projected to increase by 24% in the same time period.

Table 3-2 DPIE projected working age populations to 2041

Age group	2016	2021	2026	2031	2036	2041	2016-2041 % Increase	2041 % of total population in each age group
Under 15	13,778	13,929	13,692	13,728	13,957	13,907	0.94%	0.14
15-64	44,836	46,632	47,498	48,732	48,931	49,304	9.97%	0.50
65+	21,459	24,309	27,669	30,938	33,557	35,727	66.49%	0.36
Total	80,073	84,870	88,859	93,398	96,445	98,938	23.56%	

This ageing of the population will impact on demand for goods and services, with the Health Care and Social Assistance industry expected to continue growing in the LGA. Demand for units, apartments and retirement villages is expected to increase, with people wanting to live within walking distance of shops and services.

The DPIE projects a decrease in the proportion of the population aged between 15-65, which is referred to as the working age population. However, the retirement age is likely to increase and in future the working age population may consist of people aged 15-70 or older.

Clustering and agglomeration

HillPDA recognised in 2015 ILSR the concept of agglomeration or clustering is the phenomenon whereby firms from the same industry gather in close proximity. It is particularly evident in industries like health care but also banking, research and development, the automotive industry, home building and manufacturing. By clustering, businesses are able to benefit from such things as:

- A pool of expertise and skilled workers
- Ready access to component suppliers
- Information channels both formal (e.g. recognised industry associations) and informal (e.g. social networking with colleagues)
- Increased innovation and service sophistication
- The ability to specialise and use other services to complement business activity
- A larger available customer and supplier market

The consumer also benefits from the economic effect of agglomeration through increased choice and lower prices as a result of price competition. The NSW State Government

recognises the economic importance of agglomeration and the need to cluster businesses in "strategic centres".

Modern high-tech clusters often gather around universities where access to research and academic specialists is easier. Silicon Valley is near Stanford University (United States of America) for example and similar local high-tech clusters are gathered around Macquarie University at North Ryde.

Agglomeration has seen the creation of new business park developments and industrial zones along new transport corridors. Many businesses have relocated to these complexes so they can 'colocate' their administration and warehouse needs. A mix of industrial/commercial uses is seen as a legitimate need that would not be practical or economical in an established commercial centre with its higher land values and smaller land parcels.

Apart from universities other major catalysts are airports and hospitals. Agglomeration in hospital and health services is more evident than in many other industries. A primary reason for this is that face-to-face encounters are imperative for medical care and procedures. Health is an industry where information flows cannot easily be performed remotely due to the need for specialist consultants/surgeons and complex/expensive equipment. Whilst there has been considerable growth in remote information exchange, due largely to advances in information technology, this has complemented rather than substituted face-to-face encounters.

A key driver in urban development is aviation related activity. In addition to rapid growth of passenger travel in recent decades, air logistics has grown considerably and is seen as a major economic development driver. Air logistics comprises air cargo, air express and their supporting services. The types of businesses that locate near airports comprise those with time-critical manufacturing and distribution, entertainment, tourism, corporate offices and businesses that require long-distance connectivity.

There are short to long term opportunities in Port Macquarie brought about by several benefits in infrastructure including:

- Port Macquarie Airport and growth in aviation traffic
- Health and Education Precinct
- The continued widening and upgrade of the Pacific Highway

Suitable locations for new employment uses in Port Macquarie include the Airport, Sancrox/ Fernbank Creek employment area and the Health and Education Precinct.

Increased resource consumption

As lifestyles and consumption patterns have changed, the demand for energy, food, water and other resources will increase. Within Australia, we have become a 'consumer driven' society, which is placing unsustainable pressure on natural resources and our primary industries, particularly food production. Innovative ways to avoid waste generation in the first instance, and better utilise renewable resources, re-use and recycle products and materials, will be important for resource security in the coming years. This particularly applies to demand, or more precisely the cost of energy and people's ability to be able to afford to keep warm in winter, cool in summer and still have disposable income available to meet other needs. Port Macquarie is well-placed to continue to be a leader in the transition to solar energy for all built form, although this needs to be complemented by energy efficient design to minimise energy demand in the first instance.

Shared economy

In recent times, peer-to-peer (P2P) platforms have started to flood the market, such as Uber and Air B'n'B. The 'shared' economy is allowing individuals to buy and sell goods and services directly without an intermediary business or third party. While these models are affecting traditional businesses and infrastructure systems, it is also creating other impacts within various markets, particularly transportation. To some extent, this trend has been beneficial, enabling people to create more flexible means of earning an income while providing greater market choice. However, as we have seen internationally, other impacts have not been quite so beneficial, both socially and economically for traditional businesses and governments. By and large, policy and governance around these new models has not kept pace with new and emerging platforms. Understanding and planning for these changes will be important.

Lifestyle changes

Australians are more attuned than ever to the fact that our lifestyles affect our health and wellbeing. High levels of car dependence and limited access to healthy food costs money in the longer term and contributes to the three "lifestyle" illnesses of heart diseases, diabetes and obesity. It also plays a significant role in determining the "need" for car parking and associated infrastructure. Lifestyle changes are driving behaviours and expectations in terms of the sorts of activities, facilities and amenities that local residents expect to find in their community. The ability to work from home, applications to track and monitor sleep and exercise, a focus on mindfulness and relaxation, the need to access green space for leisure activities and connect with the natural environment are all changing the way people live, work and move day to day.

4. Industrial land supply

4.1 Existing industrial lands

The LGA has a number of established industrial precincts that currently cater for the existing population. These include:

- Hastings River Drive, Port Macquarie
- Lake Road, Port Macquarie
- Bellbowrie Road, Port Macquarie
- Port Macquarie Airport

A number of emerging precincts are also developing at:

- Sancrox, Port Macquarie
- Fernbank Creek, Port Macquarie
- Bago Road, Wauchope
- Herons Creek, Kendall
- Thrumster, Port Macquarie

Table 4-1 shows the land zoned for industrial use across the LGA, and includes land zoned:

- B5 Business Development
- B7 Business Park
- IN1 General Industrial
- IN2 Light Industrial
- IN3 Heavy Industrial
- IN4 Working Waterfront

Table 4-1 lists the developed and vacant land in each precinct, with some precincts containing more than one industry zoning. The location of these precincts is shown in Figure 4-1, with detailed maps in Appendix A. The type of industry in each precinct is shown on an extract of the 2018 UGMS (refer Figure 4-2).

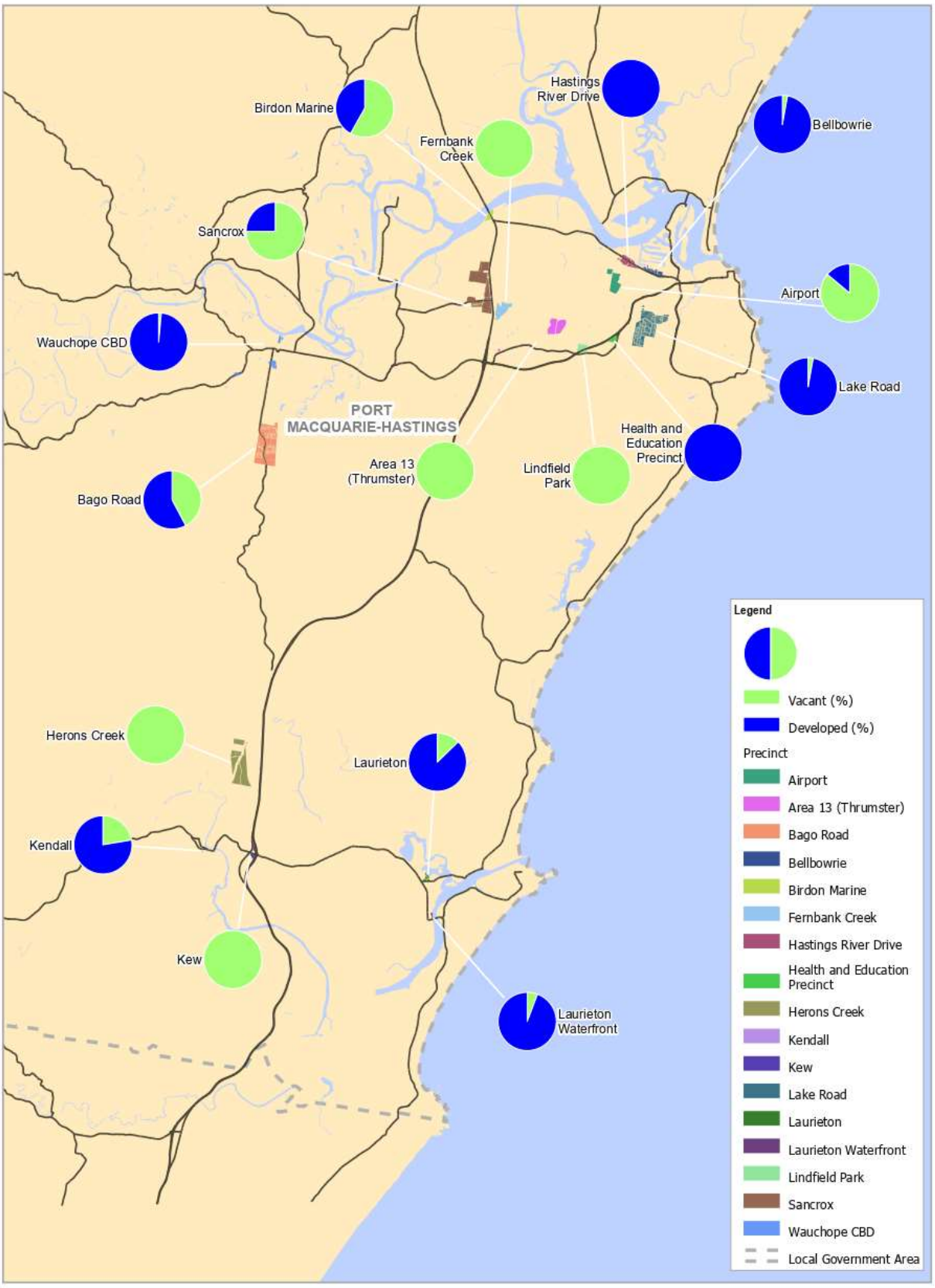
Table 4-1 Supply of industrial land in Port Macquarie-Hastings LGA

Precinct	Grand Total (ha)	Developed (ha)	Vacant (ha)	Zoning	Types of businesses
Airport	27.64	3.84	23.80	B7	Aircraft related industries - scenic flights, learn to fly, car hire, general aviation hangers etc. Senior Technical College
Area 13 (Thrumster)	32.17	0.00	32.17	B5 vacant: 1.11 IN2 vacant: 31.05	Mixed use and light industry
Bago Road	103.19	59.62	43.57	IN1	Light industry, building materials and agricultural businesses.
Bellbowrie	10.23	9.94	0.29	B5	Small scale light industrial.
Birdon Marine	5.83	2.44	3.39	IN4	Boat building, slipway and commercial wharf activities.
Fernbank Creek	23.28	0.00	23.28	IN1 vacant: 10.90 ha IN2 vacant: 12.37 ha	General & light industrial.
Hastings River Drive	15.83	15.72	0.10	B5	Light industrial and bulky goods.
Health and Education Precinct	4.79	4.79	0.00	B5	Bulky goods.
Herons Creek	72.11	0.00	72.11	IN3	Heavy industry.
Kendall	0.30	0.23	0.07	IN1	General industrial.
Kew	2.83	0.00	2.83	IN2	Light industrial and mixed use
Lake Road	81.92	79.59	2.33	B5 developed: 26.66 B5 vacant: 0.12 ha IN1 developed: 52.93 IN1 vacant: 2.2	Light industrial & bulky goods.
Laurieton	3.48	3.04	0.44	IN2	Light industry.
Laurieton Waterfront	1.00	0.94	0.06	IN4	Servicing role supporting the local fishing industry.
Lindfield Park	8.82	0.00	8.82	IN2	Light industrial.
Sancrox	83.48	20.9	62.58	IN1 developed: 17.21 ha IN1 vacant: 54.18 ha IN2 developed: 3.69 ha IN2 vacant: 8.39 ha	General industrial.

Precinct	Grand Total (ha)	Developed (ha)	Vacant (ha)	Zoning	Types of businesses
Wauchope CBD	12.78	12.59	0.19	IN1 developed: 3.06 IN1 vacant: 0.00 ha IN2 developed: 9.53 IN2 vacant: 0.19	Mixed use and industrial.
Grand Total (ha)	**489.68**	**213.65**	**276.03**		

Table 4-1 indicates there is a large supply of industrial zoned land in the following locations:

- Airport – There is significant opportunity for the Airport Precinct with a supply of 23.80ha of B7 zoned vacant land that could support uses including technology, freight, logistics and aviation related industries. This would reinforce the Airports use and continued operation.
- Area 13 (Thrumster) – This area will support light industrial uses to service Thrumster's future residential growth. There is currently 1.11ha of B5 zoned vacant land and 31.05ha of IN2 zoned vacant land.
- Bago Road, Wauchope – This is an existing IN1 industrial precinct with 43.57 ha supply of IN1 zoned vacant land to develop additional industrial uses permissible within the zone. Although take up in this area has been historically slow, there is sufficient supply of undeveloped land that provides for medium to long-term supply of serviced industrial land.
- Fernbank Creek – This is a greenfield site having an area of 23.09 ha with IN1 and IN2 zoned vacant land to support a future industrial estate. Its proximity to Pacific Highway will provide excellent accessibility and connectivity to infrastructure and markets. It is suited to export-oriented development, including transport, logistics, warehousing.
- Herons Creek – Currently there is 72.11ha of IN3 zoned vacant land to accommodate heavy industrial uses. Likely that up to half of this land is constrained as a result of biodiversity and topography and is unlikely to ever be fully developed.
- Sancrox – This area supports a range of existing industrial development. There is 62.57ha of both IN1 and IN2 zoned vacant land to support future general and light industrial uses. Industrial development within the Sancrox area is well located adjacent to the Pacific Highway and will support surrounding residential growth.



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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Port Macquarie Hastings Council
Port Macquarie Hastings Commercial and Industrial Land Use Review

Vacant and developed industrial land

Project No. 12539520
Revision No. 0
Date 15/02/2021

FIGURE 4-1

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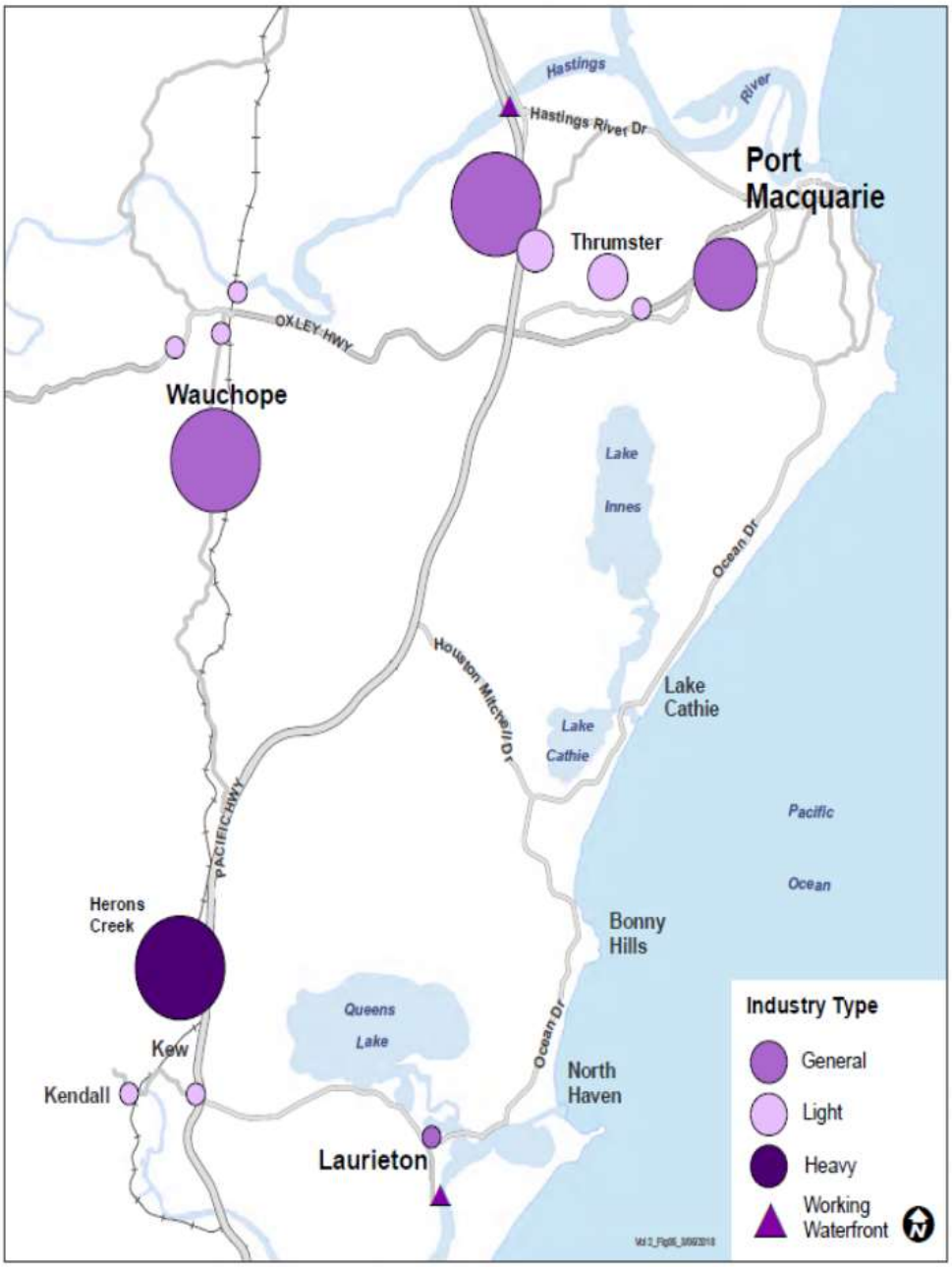


Port Macquarie-Hastings Industrial areas

Figure 4-2 2018 UGMS – Industrial land in Port Macquarie-Hastings LGA

Source: Port Macquarie UGMS 2018

4.2 Existing business precincts

There is an established hierarchy of retail centres in the Port Macquarie-Hastings LGA, with centres ranging from the Port Macquarie Central Business District (CBD) at the top to small, neighbourhood shops at the bottom of the hierarchy. These centres all have important functions for residents (refer Figure 2-1).

Table 4-2 lists the developed and vacant land in each business precinct, with some precincts containing more than one business zoning. The location of these precincts is shown in Figure 4-3, with detailed maps in Appendix A. The type of business land in each precinct is shown on an extract of the 2018 UGMS (refer Figure 4-4).

Three of the LGA's business precincts are discussed below. The largest business precinct is the CBD, followed by Thrumster. A future precinct planned for the LGA is the Health and Education Precinct, which currently contains 1.74 ha of land zoned B2 Local Centre.

Central Business District

Of the 125 ha of business land in the LGA, 28 ha is found in the CBD, which consists of a large area zoned B3 Commercial Core and 3 areas zoned B4 Mixed Use. To the west of this is a large area zoned B2 Local Centre which runs either side of Gordon Street.

It is critical that the viability and vibrancy of the Port Macquarie town centre is maintained. Any proposed new retail development outside of the CBD should consider the impacts on this valuable commercial precinct and ensure there isn't an oversupply of retail, services and facilities that would be detrimental to the functioning of this commercial core.

Although there are limited land opportunities within the CBD, growth of the retail sector should be encouraged and supported in the form of existing uses, infill and new development that services the particular needs of the population.

Thrumster

The second largest business area is located at Thrumster, which contains 20.97 ha of land, of which 13.68 ha is zoned B4, 4.67 is zoned B2 and 2.13 ha is zoned B1. Thrumster's B4 area is larger than the total area of B4 land in the CBD, with the CBD containing just 11.36 ha.

The B4 land at Thrumster is located within one area along with a B2 Local Centre zone. Other zones include B5 Business Development, RE1 Public Recreation, SP3 Tourist and R3 Medium Density Residential. The zoning in this area is intended to support the development of a commercial centre offering medium density living, surrounded by land used for residential purposes.

The majority of the business zoned land at Thrumster is undeveloped. An analysis of the existing business zones suitable for retail development has been undertaken and is provided in Table 4-2. Figure 4-3 identifies the existing retail precincts and an estimate of the floor area across the LGA.

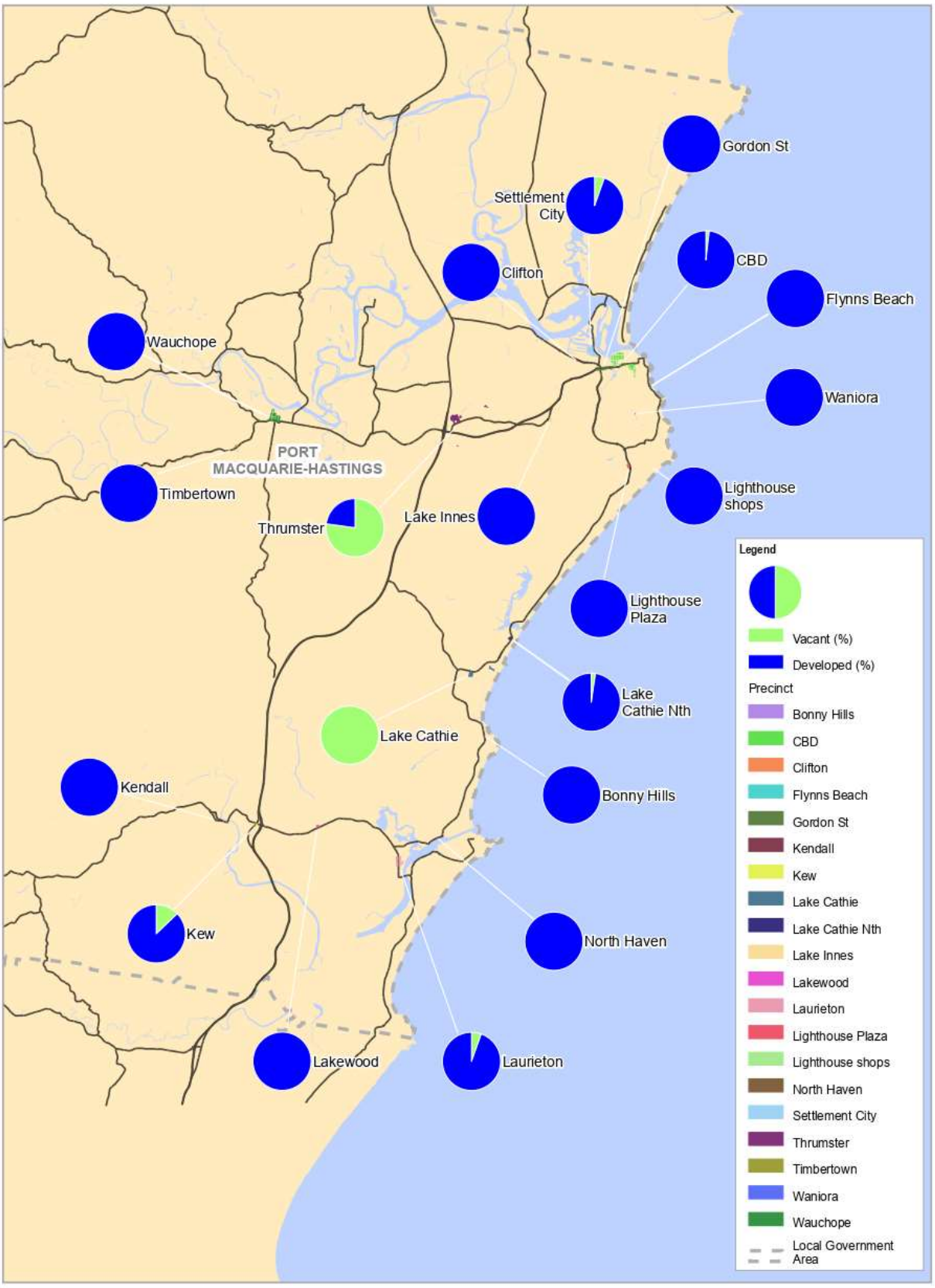
Although the Thrumster business area is larger than the business lands within the CBD precinct, there is limited availability of land for future business development within the Port Macquarie commercial core. The projected increase in population and housing growth over the next 20 years including the establishment of the HEP will create demand for a range of business uses including retail, office premises and a range of mixed uses. The current supply of business zoned land at Thrumster is considered to be appropriate given the future growth expected at both Thrumster and potential long term growth within the Fernbank Creek and Sancrox areas.

Health and Education Precinct

The Health and Education Precinct (HEP) aims to create a competitive destination for university students and health care professionals and broader community. It will require a range of accessible services and facilities to support the precinct and surrounding area. The HEP Masterplan encourages a range of mixed uses including retail and residential development in the form of shop top housing. A shopping centre is currently located and operating in the B2 zone. A plaza is proposed for the centre of the HEP precinct to support a mix of commercial activities including professional offices, shops and food and drink premises. The HEP is in Lake Innes and is labelled as such in Table 4-2.

Table 4-2 Existing business precincts (ha)

Precinct	Total (ha)	B1			B2			B3			B4		
		Developed	Vacant	B1 Total	Developed	Vacant	B2 Total	Developed	Vacant	B3 Total	Developed	Vacant	B4 Total
Bonny Hills	0.46				0.46		0.46						
CBD	28.75							17.08	0.31	17.39	11.13	0.22	11.36
Clifton	0.26	0.26		0.26									
Flynn's Beach	0.20	0.20		0.20									
Gordon St	9.47				9.39	0.08	9.47						
Kendall	0.78	0.78		0.78									
Kew	2.68	0.27		0.27							2.07	0.34	2.42
Lake Cathie	8.14					2.94	2.94					5.21	5.21
Lake Cathie Nth	2.54	0.17	0.06	0.23	2.31		2.31						
Lake Innes	2.41				2.41		2.41						
Lakewood	1.74				1.74		1.74						
Laurieton	10.30				9.39	0.56	9.96				0.34		0.34
Lighthouse Plaza	1.99				1.99		1.99						
Lighthouse shops	0.24	0.24		0.24									
North Haven	0.80	0.80		0.80									
Settlement City	13.93							13.17	0.75	13.92			
Thrumster	20.97		2.51	2.51	2.38	2.29	4.67					13.79	13.79
Timbertown	1.88	1.88		1.88									
Wauiora	0.35	0.35		0.35									
Wauchope	18.02				7.43	0.14	7.57				10.46		10.46
Grand Total	125.91	5.26	2.57	7.51	37.50	6.01	43.51	30.25	1.07	31.32	26.11	19.56	43.57



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Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 56

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Port Macquarie Hastings Council
Port Macquarie Hastings Commercial and Industrial Land Use Review

Vacant and developed business precincts

Project No. **12539520**
Revision No. **0**
Date **15/02/2021**

FIGURE 4-3

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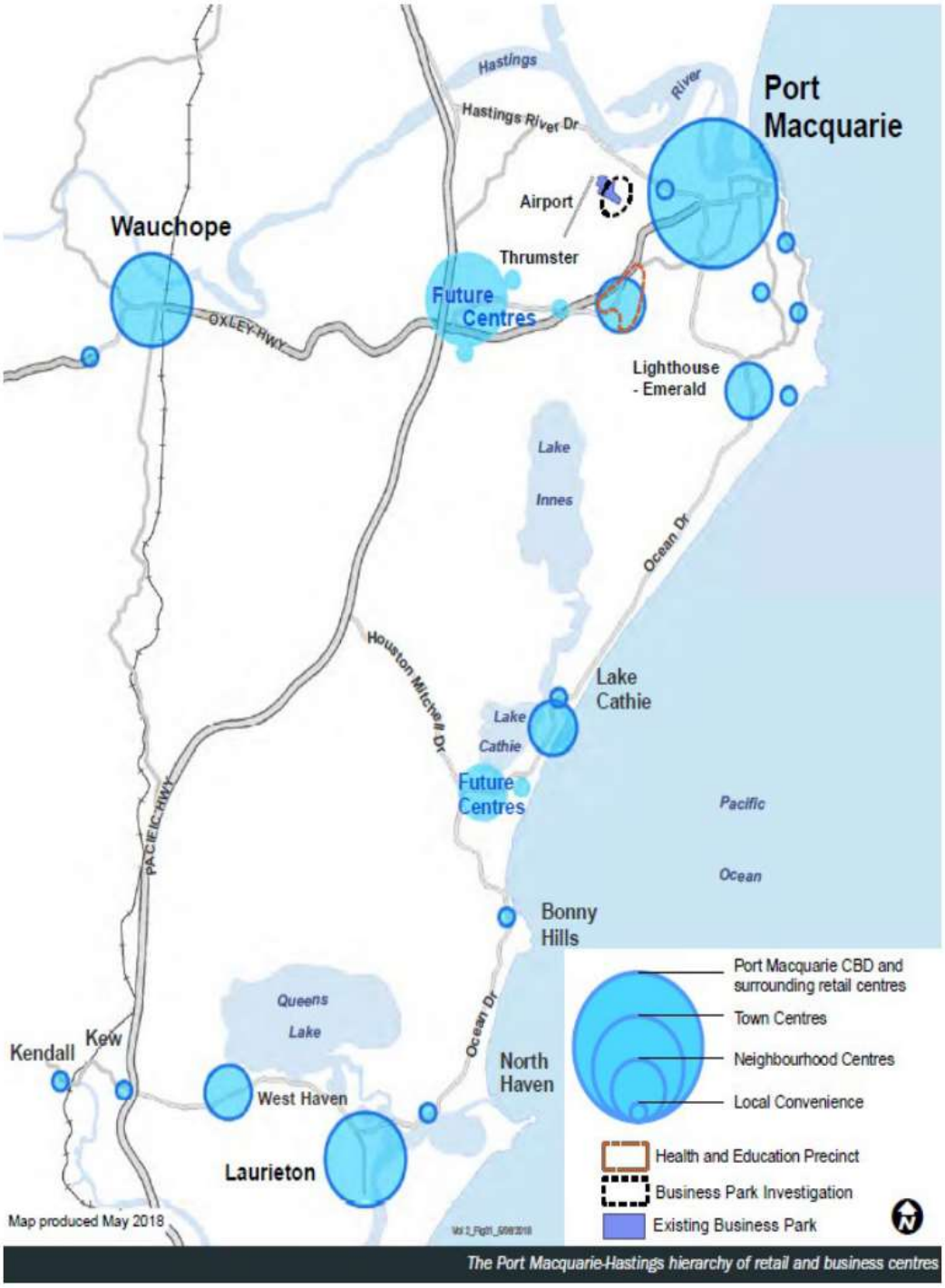


Figure 4-4 2018 UGMS – Retail and business centres in LGA

Source: Port Macquarie UGMS 2018

Table 4-3 Retail and business precincts in Port Macquarie-Hastings LGA

Precinct	Types of businesses	Supermarkets & Grocery Stores (m²)	Other Retail (m²)	Total Retail (m²)	Non-Retail Shop Front (m²)	Total Shop Front Space (m²)
Bonny Hills	Shop front premises.	928	0	928	970	1,898
Port Macquarie Greater CBD (including Settlement City)	Two indoor shopping centres, shop front premises.	17,200	64,100	81,300	24,380	105,680
Clifton	Small village or neighbourhood centre of less than 1,500 sqm.	200	1,000	1,200	0	1,200
Flynns Beach	Small village or neighbourhood centre of less than 1,500 sqm.	100	800	900	0	900
Kendall	Small village or neighbourhood centre of less than 1,500 sqm.	200	700	900	200	1,100
Kew	Small village or neighbourhood centre of less than 1,500 sqm.	200	100	300	200	500
Lake Cathie	Indoor shopping centre, shop front premises.	2,800	950	3,750	500	7,950
Lake Cathie Nth	Shop front premises.			500		500
Lake Innes	Village centre with indoor shopping centre.	3,000	900	3,900	500	4,400
Lakewood	Indoor shopping centre.	3,250	600	3,850	1,720	7,950
Laurieton	Shop front premises.	2,400	5,450	7,850	2,800	10,650
Lighthouse Beach	Village centre with indoor shopping centre of less than 1,500 sqm.	100	650	750	150	900
Lighthouse Plaza	Village centre with shop front premises.	3,000	1,000	4,000	0	4,000
North Haven	Small village or neighbourhood centre of less than 1,500 sqm.	200	1,900	2,100	100	2,200
Timbertown	Shop front premises.	0	974	974	0	974
Waniora	Small village with shop front premises.	300	700	1,000	0	1,000
Wauchope	Shop front premises.	1,600	7,650	9,250	3,000	12,250
TOTAL		**35,478**	**87,474**	**123,452**	**34,520**	**164,052**

Source: 2015 ILSR and recent development applications. Note: Estimated floor areas based on available information

Table 4-3 indicates there is a large supply of retail floor space including non-retail shop fronts in the Port Macquarie Greater CBD (including Settlement City) supporting approximately 81,200 m² of retail space and about 105,680 total shop front space. As this commercial centre is positioned at the top of the retail hierarchy, protection of this core precinct is critical when determining future business development opportunities in surrounding areas.

Wauchope town centre is the second largest centre in the retail hierarchy containing a large business precinct with approximately 9,250 m² of total retail space and about 12,250 m² of total shop front space. The Wauchope business area that has potential to growth through the redevelopment of sites in mixed use areas.

Laurieton is the largest retail centre in the south of the LGA and draws from North Haven, Dunbogan and Kew. There is further capacity for growth within the existing business core. For higher level services and facilities, residents travel to the large centre of Port Macquarie to meet their consumer needs.

Lake Cathie and Lakewood are smaller service centres catering for basic residential consumer demands. Trending with the retail practices of the Laurieton and Wauchope population, residents from Lake Cathie and Lakewood would travel to Port Macquarie for higher levels of services and facilities.

5. Employment land demand

5.1 Resident workforce projections

Previous projections

To forecast resident workforce growth the 2007 ILSR assumed that the total available resident workforce is generally around 45% of the total population. However, this proportion assumes full employment and no leakage of employees to outside the LGA.

In 2015 Hill PDA updated demand forecasting for industrial land across Port Macquarie-Hastings LGA from population and job participation forecasts. In 2011 the LGA had around 75,000 residents and this was expected to increase to 103,000 by 2036.

Projections based on DPIE 2019 projections

DPIE projections have been used to forecast resident worker projections using participation rates outlined in the 2015 ILSR and are shown in Table 5-1. To reflect different rates of growth and change, the 2015 ILSR applied three participation rates. Analysis of participation rates determines the proportion of the population in the workforce and the potential for output. Higher workforce participation would result in a higher demand for industrial land.

Table 5-1 Resident workforce projections to 2041 (2019)

Scenario	2016	2021	2026	2031	2036	2041
DPIE projected population	80,073	84,871	88,859	93,397	96,446	98,941
Low participation (34%)	27,225	28,856	30,212	31,755	32,792	33,640
High participation (39%)	31,228	33,100	34,655	36,425	37,614	38,587
Full participation (45%)	36,033	38,192	39,987	42,029	43,401	44,523

The 2015 ILSR projected resident workforce up to 2036. The table above projects there will be slightly less workers in 2036 compared to the projections in the 2015 ILSR for the same year for the low, high and full participation scenarios.

5.2 Industrial land demand

Resident workforce by sector can be estimated from 2017 ABS data:

- Between 1.5% to 1.9% work in heavy industry (the following tables assume 1.7%)
- 4.4% work in modern general industry
- 3.4% work in transport, warehousing and storage
- 4.4% work in supporting industry

Using these same assumptions, resident workforce by industry is forecast in Table 5-2 below.

Table 5-2 Resident workforce projections by industry to 2041

Low participation (34%)	2016	2021	2026	2031	2036	2041
Heavy Industry	463	491	514	540	557	572
Modern General Industry	1,198	1,270	1,329	1,397	1,443	1,480
Transport, Warehousing and Storage	926	981	1,027	1,080	1,115	1,144
Supporting Industry	1,198	1,270	1,329	1,397	1,443	1,480
Total	**3,784**	**4,011**	**4,199**	**4,414**	**4,558**	**4,676**
High participation (39%)	2016	2021	2026	2031	2036	2041
Heavy Industry	531	563	589	619	639	656
Modern General Industry	1,374	1,456	1,525	1,603	1,655	1,698
Transport, Warehousing and Storage	1,062	1,125	1,178	1,238	1,279	1,312
Supporting Industry	1,374	1,456	1,525	1,603	1,655	1,698
Total	**4,341**	**4,601**	**4,817**	**5,063**	**5,228**	**5,364**
Full participation (45%)	2016	2021	2026	2031	2036	2041
Heavy Industry	613	649	680	714	738	757
Modern General Industry	1,585	1,680	1,759	1,849	1,910	1,959
Transport, Warehousing and Storage	1,225	1,299	1,360	1,429	1,476	1,514
Supporting Industry	1,585	1,680	1,759	1,849	1,910	1,959
Total	**5,009**	**5,309**	**5,558**	**5,842**	**6,033**	**6,189**

In calculating employment land demand, the 2015 ILSR assumed the following rates of employees per hectare:

- Heavy industry – 18 employees per hectare
- Modern general industry – 30 employees per hectare
- Transport, warehousing and storage – 20 employees per hectare
- Supporting land uses – 30 employees per hectare

The area required for services was calculated at 7.5% of the total land area used by the 4 types of industry listed above, and the area for open space/ landscaping was calculated at 30%.

The worker per hectare ratio is considered reasonable and generally accords with the non-metropolitan average.

Table 5-3 below applies the above ratios of employees per hectare to the amended resident worker forecasts to determine forecast demand for employment land (industrial) floorspace.

Table 5-3 Employment land demand to 2041 (hectares)

Participation	2016	2021	2026	2031	2036	2041
Low Participation (34%)						
Heavy Industry	26	27	29	30	31	32
Modern General Industry	40	42	44	47	48	49
Transport and Warehousing	46	49	51	54	56	57
Supporting Industry	40	42	44	47	48	49
Services (roads, utilities etc)	11	12	13	13	14	14
Open Space (buffers)	46	48	51	53	55	56
Total	**209**	**221**	**232**	**244**	**251**	**257**

Participation	2016	2021	2026	2031	2036	2041
High Participation (39%)						
Heavy Industry	29	31	33	34	36	36
Modern General Industry	46	49	51	53	55	57
Transport and Warehousing	53	56	59	62	64	66
Supporting Industry	46	49	51	53	55	57
Services (roads, utilities etc)	13	14	14	15	16	16
Open Space (buffers)	52	55	58	61	63	65
Total	**240**	**254**	**266**	**279**	**288**	**296**
Full Participation (45%)						
Heavy Industry	34	36	38	40	41	42
Modern General Industry	53	56	59	62	64	65
Transport and Warehousing	61	65	68	71	74	76
Supporting Industry	53	56	59	62	64	65
Services (roads, utilities etc)	15	16	17	18	18	19
Open Space (buffers)	60	64	67	70	73	75
Total	**276**	**293**	**307**	**322**	**333**	**341**

The above results indicate that Port Macquarie-Hastings LGA will need between 257 ha and 341 ha of employment zoned land to 2041.

The 2041 forecasts per industry type is outlined in Table 5-4 below.

Table 5-4 Employment land demand by land use to 2041 (hectares)

Industrial Land Demand in 2041:	Low Participation	High Participation	Full Participation
Heavy Industry	32	36	42
Modern General Industry	49	57	65
Transport, Warehousing and Storage	57	66	76
Supporting Industry	49	57	65
Services (roads, utilities etc)	14	16	19
Open Space (buffers)	56	65	75
Total	**257**	**296**	**341**

Given there is currently 213ha of land developed for industrial purposes, the additional forecasted demand between 2016 and 2041 of between 45ha (low participation) and 128ha, can easily be serviced by the existing 275ha of vacant industrial land (an oversupply of between 147ha and 230ha).

5.3 Local service employment demand

To determine local and district industrial land supply, the 2015 ILSR assumed 50% of demand should be met by local business and industry. The 2015 ILSR calculated total local service industrial/ business demand based on population forecasts. Small area forecasts are not part of the DPIE population projections, so small area projections from ID Consulting have been used (refer Table 5-5 below).

Table 5-5 Local service employment land demand by location to 2041 (hectares)

Small area	Low Participation	High Participation	Full Participation
Camden Haven East	1.5	1.8	2.0
Camden Haven West	1.1	1.3	1.5

Small area	Low Participation	High Participation	Full Participation
Flynn's Beach	0.5	0.6	0.7
Gordon Street	0.8	0.9	1.0
Hastings River Canals	0.6	0.7	0.8
Innes Peninsula	1.8	2.1	2.4
Lake Cathie – Bonny Hills	2.2	2.5	2.9
Lighthouse Beach – Greenmeadows	3.2	3.7	4.2
Lord Street	0.7	0.8	0.9
Port Macquarie Rural Fringe	1.4	1.6	1.8
Rural	1.8	2.0	2.3
Shelly Beach - Bellevue Hill	2.8	3.3	3.7
Thrumster	3.0	3.4	3.9
Town Beach - CBD	0.4	0.5	0.5
Wauchope	2.4	2.8	3.2
Westport	1.9	2.2	2.6
Total	**26**	**30.0**	**34.5**

Source: (I.D. Consulting, 2020)

5.3.1 Summary

Notwithstanding the oversupply, the geographical distribution of the vacant land may not always match demand as some areas may be more attractive for industrial land than others. Similarly land already zoned may be constrained by other environmental factors such as biodiversity, flooding, access etc, will limit the ability to realise the full development potential of existing zoned land.

In reviewing each centre to determine industrial land requirements at a local level, it was found that limited B5 land is available for greenfield development across the LGA with much of this land particularly at Hastings River Drive and John Oxley Drive already developed. Only a small area (1.11 ha) is available at Thrumster to cater for local greenfield development.

Further investigation may be required in relation to provision of future supply (up to 5ha) adjacent to locations already zoned B5 in light of the latest mega trends and the recent COVID 19 situation where demand may arise for warehousing and bulky goods premises to support a change in consumer spending and online shopping. In this regard,

Much of the existing industrial land in Port Macquarie has been developed (particularly around Lake Road), and as such undeveloped industrial zoned land at Lindfield Park, Thrumster, Fernbank Creek and Sancrox are all considered to be important in ensuring the future provision of light and general industrial land to 2041 and beyond for not only local service employment demand but the wider LGA.

Further investigations will be required to determine the extent/ need for additional industrial land in the Sancrox Planning Investigation Area but the existing IN1 and IN2 land zoned adjacent to the existing developed land at Sancrox offers an excellent opportunity for agglomeration in a location with superior accessibility to the Pacific Highway. Similarly land at Herons Creek and Bago Road will allow for the provision of future heavy industry or manufacturing operations should the need arise.

No land has been zoned for industrial purposes in Lake Cathie/ Bonny Hills to cater for local demand and limited opportunity exists for additional industrial development at Laurieton. A small amount of land is however available at Kew which could meet any demand in the Camden

Haven. Consideration should be given to future provision of industrial land in this location to cater for local service employment demand.

5.4 Business land demand

5.4.1 Retail expenditure forecasts

Total retail expenditure is forecast using estimates of the profile of resident/ household spending. The primary source of this is the MarketInfo estimates of expenditure per capita for different commodity types across all of Australia. This information is derived by MarketInfo from the ABS Household Expenditure Survey, which provides information on the market activities of households, and is based on demographic characteristics. The retail spending profiles prepared by MarketInfo are provided in a per capita format, by a number of different commodity categories.

MarketInfo is regarded as an industry standard. It is reported at the Statistical Area 1 (SA1) level to enable fine-grained estimates for retail expenditure forecasting. These small area expenditure estimates are projected forward to 2041 using data from the ABS Retail Trade series for NSW. The Retail Trade series provides data on historical growth of real consumption by commodity category. These rates of growth are used to forecast change in real expenditure (i.e. excluding inflation). These per capita forecasts are then used to calculate forecasts of total residential retail expenditure using small area population, employment, and enrolment forecasts.

The following issues are accounted for and steps are taken to derive a forecasted retail expenditure for the local retail system:

- An adjustment for online expenditure is applied by each commodity category to account for online retail purchases
- Adjustments are made to account for workers within the retail trade area
- Adjustments are made to account for tertiary students within the retail trade area

The above adjustments have been based on market parameters including online shopping, product cost, product demand, availability of time. Further adjustments may be required to household expenditure once the long term impacts from the COVID 19 pandemic have subsided and there is a clear indication of new trends that characterise these recent cycles and fluctuations in consumer spending. Adjustments have been applied to baseline expenditure amount of each year.

Table 5-6 below illustrates forecast retail expenditure generated by residents of the Port Macquarie LGA between 2014-2041. The projected growth in retail expenditure is driven by both population growth and increase per capita spending in real terms.

The average per annum growth rate in retail spend per capita since 1986 has been around 1.0% and the long term trend has been around 1.3%. For the purpose of forecasting we have adopted a rate of 1.0% similar to that used by HillPDA in 2015.

Table 5-6 Forecast household expenditure $M generated by Port Macquarie-Hastings LGA

YEAR	2014	2019	2024	2031	2036	2041
Food & Groceries	312.9	351.5	396.4	464.6	517.8	543.7
Liquor Take-Away	99.7	112.0	126.3	148.0	164.9	173.1
Take-Away Food	33.4	37.5	42.3	49.6	55.3	58.1
Apparel	70.5	79.2	89.3	104.6	116.6	122.4
Homewares & Manchester	34.0	38.2	43.1	50.6	56.3	59.1

YEAR	2014	2019	2024	2031	2036	2041
Bulky Goods	119.1	133.8	150.9	176.9	197.1	206.9
Other Goods	190.0	213.4	240.7	282.1	314.4	330.1
Selected Personal Services	31.7	35.6	40.1	47.1	52.4	55.0
Liquor Consumed on Premises	25.6	28.8	32.5	38.0	42.4	44.5
Meals in Pubs, Clubs and Restaurants	54.9	61.7	69.6	81.6	90.9	95.4
Total $ Million	**971.9**	**1,091.8**	**1,231.3**	**1,443.0**	**1,608.2**	**1,688.6**

Note: Allows for 1.0% real growth in expenditure per annum per capita in line with historic trends.

Source: MarketInfo

5.5 Tourism and regional spending

Port Macquarie is known to capture some expenditure from the neighbouring LGAs of Greater Taree and Kempsey.

Estimating the level of expenditure from Taree and Kempsey into Port Macquarie is difficult as there is the potential to overestimate given day trippers are also included in tourism statistics.

The National Visitor Survey is the major source of information on the characteristics and travel patterns of international, domestic overnight and day tourists.

The 2015 Retail Strategy Review (RSR) assumed that between 5% and 10% of resident expenditure escapes Port Macquarie mostly in the form of "tourism out" expenditure. Based on the assumption that this rate is maintained and tourism expenditure increases at half the rate of resident expenditure then total retail spend captured in the LGA is forecasted as per Table 5-7. These assumptions have been carried over from the 2015 RSR and extrapolated for 2041 and account for nondiscretionary spending by residents. To further define tourism expenditure, more recent data would be required to determine expenditure loss from the LGA for this sector.

Table 5-7 Forecast total expenditure in Port Macquarie-Hastings LGA

YEAR	2014	2019	2024	2031	2036	2041
Resident spend	1,009.8	1,134.40	1,279.30	1,499.30	1,671.00	1,913.63
Less escape expenditure	-75.7	-85.1	-95.9	-112.40	-125.30	-139.67
Tourism and regional spend	140	148.60	158.10	171.70	181.60	191.9
Total	1,074.10	1,197.90	1,341.50	1558.60	1727.20	1,965.86

Expenditure by retail store type is forecast as per the 2015 RSR and extrapolated for 2041 as per Table 5-8:

Table 5-8 Expenditure by retail store type

YEAR	2014	2019	2024	2031	2036	2041
Supermarkets & Grocery Stores	365.3	408.1	463.8	507.4	562.4	129.6
Take-away Liquor Stores	78.3	87.5	99.4	108.8	120.5	68.7
Specialty Food Stores	40.8	45.6	51.9	56.7	62.9	86.4
Fast-Food Stores	51.8	57.9	65.8	72.0	79.8	149.6
Restaurants, Hotels and Clubs*	89.5	100.0	113.6	124.3	137.8	119.7
Department Stores	71.6	80.0	90.9	99.5	110.3	119.6

YEAR	2014	2019	2024	2031	2036	2041
Apparel Stores	72.0	80.4	91.4	100.0	110.8	261.5
Bulky Goods Stores	157.3	175.7	199.7	218.5	242.1	267.1
Other Personal & Household Goods	160.1	178.9	203.3	222.4	246.5	58.7
Selected Personal Services**	35.2	39.3	44.7	48.9	54.2	129.6
Total Retailing	**1,121.9**	**1,253.4**	**1,424.5**	**1,558.5**	**1,727.3**	**1,390.5**

Notes: * Turnover relating only to consumption of food and liquor (excludes all other types of revenue such as accommodation, gaming and gambling)

** Selected Personal Services includes hair and beauty, laundry, clothing hire and alterations, shoe repair, optical dispensing, photo processing and hire of videos

The 2015 RSR estimated required floor space by dividing turnover by industry benchmark levels. The benchmark turnover levels adopted were:

- Supermarkets and grocery stores $10,000/sqm
- Take-away Liquor Stores $11,000/sqm
- Specialty Food Stores $10,000/sqm
- Fast Food Stores $8,000/sqm
- Restaurants, Hotels and Clubs $5,000/sqm
- Department Stores $3,500/sqm
- Clothing Stores $6,000/sqm
- Bulky Goods Stores $3,400/sqm
- Other Personal & Household Goods $4,500/sqm
- Selected Personal Services $3,000/sqm

For the forecast, the review also used a target turnover rate of 0.5% per annum in line with historic trend. Based on these turnover levels the following forecast of demand for retail floor space to 2041 has been estimated as per Table 5-9:

Table 5-9 Demand for retail floor space in Port Macquarie-Hastings LGA (sqm GLA)

YEAR	2016	2021	2026	2031	2036	2041
Supermarkets & Grocery Stores	35,851	39,063	43,300	46,211	49,950	53,990
Take-away Liquor Stores	6,986	7,612	8,438	9,005	9,734	10,521
Specialty Food Stores	4,008	4,367	4,841	5,167	5,585	6,036
Fast-Food Stores	6,355	6,925	7,676	8,192	8,855	9,571
Restaurants, Hotels and Clubs*	17,567	19,141	21,218	22,644	24,476	26,456
Department Stores	18,748	20,428	22,644	24,166	26,121	28,234
Apparel Stores	12,286	13,387	14,839	15,837	17,118	18,502
Bulky Goods Stores	50,063	54,549	60,465	64,530	69,751	75,393
Other Personal & Household Goods Retailing	34,921	38,050	42,177	45,013	48,654	52,590

YEAR	2016	2021	2026	2031	2036	2041
Selected Personal Services**	9,874	10,758	11,925	12,727	13,756	14,868
Total Retailing	**196,659**	**214,281**	**237,524**	**253,491**	**273,998**	**296,164**

Note: *Excluding hotels, pubs, clubs and bulky goods retailing outside the commercial centres.

** Selected Personal Services includes hair and beauty, laundry, clothing hire and alterations, shoe repair, optical dispensing, photo processing and hire of videos

Table 5-9 shows that up to 296,164 m^2 of retail floor space will be required to 2041 to satisfy demand across the LGA. At present approximately 164,053 m^2 of retail floor space has been developed across a total area currently zoned under Port Macquarie LEP either B1, B2, B3 and B4 of 1,249,500 m^2.

The existing business floor space provision is currently less than the demand for 2016 and 2021 in Table 5-9. This variation may be the result of a reduced turnover than supplied benchmark levels, regional and global mega trends in recent years including the increase in online consumer spending, restructure of main street shopping to larger outlet/ bulky goods format suppliers, improvements to the Pacific Highway improving accessibility to metropolitan centres, and higher cost of living and a subsequent reduction in discretionary spending and demand for retail floor space.

5.6 Summary

The analysis into business land found that about 75% of the existing floor space is made up of retail uses whilst the remaining 25% comprises non-retail uses. Much of this development, with the exception of the Port Macquarie CBD and Settlement City, has generally been developed at low densities, in many cases well below the nominated floor space ratio.

The Health and Education Precinct Master Plan provides an opportunity to realise up to a projected 212,489m^2 non-residential gross floor area to support the precinct for health, education and other related purposes. Together with the opportunities to intensify and develop existing zoned business lands, the existing supply of business zoned land will more than satisfy demand to 2041.

It will be important to ensure that the existing retail hierarchy is maintained and to ensure the dominance and success of the Port Macquarie CBD in any future strategic planning.

6. Site specific proposals

Council is currently assessing several proposals relating to employment land use. An analysis of these proposals has been undertaken in light of the findings from the land use review and is detailed in Table 6-1 below. It should be noted that the below recommendations relate to the suitability of the proposals as determined within the scope of this review with information available at the time of preparation. Additional detailed analysis of environmental impacts such as ecology, infrastructure and urban design as relevant should inform any subsequent proposed change in land use.

Table 6-1 Proposed employment precincts

Name of area and address	Details	Discussion	Recommendation
Le Clos Sancrox Within the Fernbank Creek and Sancrox Structure Plan area Lots 1, 3-12, 14-48 and 50- 52 in DP 776681 Le Clos Sancrox Road, Sancrox	This proposal incorporates a small amount of B2 Local Centre zoned land within the Le Clos Sancrox residential development. This land is intended to service the proposed residential development and should be considered in relation to the wider Fernbank Creek and Sancrox Planning Investigation Area, as opposed to the demand generated by this planning proposal alone. Additional 1 ha of B2 Local Centre zoned land.	The proposed B2 zone is to provide for neighbourhood shops to service future residential development. This business zone has the potential to support residential and business demands resulting from the growth stimulated by the Sancrox residential development.	The rezoning of this land for B2 is premature given the Structure Plan remains unresolved and is neither endorsed by Council or State Government. Consideration could be given to increasing the proposed 1ha area to 2ha to be consistent with other neighbourhood centres within the LGA. Alternatively, multiple neighbourhood sites in the order of 1ha within the structure plan area could be considered to facilitate the establishment several smaller business zones to service surrounding residential development.
Highfields Lot 180 DP1197447, 8 Highfields Circuit and 10A Highfields Circuit Port Macquarie Lot 7 DP 262597, 3 Kulai Place Port Macquarie Lot 8 DP 262497, 5 and 5A Kulai Place Port Macquarie Lot 2 DP 262597, 9 Kingfisher Road Port Macquarie Lot 1 DP 262597, 11 Kingfisher Road Port Macquarie	The proposal is to rezone a number of contiguous properties from their current residential zoning to B4 Mixed Use 20,771m2 (GFA = 57,743.38) @ FSR 2.78:1 The properties are located within the proposed Health and Education Precinct, which is the subject of a larger planning proposal. In terms of land area, the proposal is to rezone 2.07 ha to B4 Mixed Use with a FSR of 2.78:1. The proposal would allow up to 57,743.38 m^2 GFA across	The Health and Education Precinct is incrementally changing from single detached dwellings to a greater mix and density of uses including student accommodation, aged care facilities, health services and shared education facilities like SHREC (Shared Health Research and Education Campus). This rezoning aligns with the zoning indicated in the Post Exhibition Master Plan for the Health & Education Precinct, which indicates the area covered by the lots is to be zoned B4 Mixed Use.	The proposal aligns with the zoning indicated in the Post Exhibition Master Plan for the Port Macquarie Health & Education Precinct and should be supported.

Name of area and address	Details	Discussion	Recommendation
	6 x 7 storey buildings and would include 2,690 m² GLA of commercial uses.		
Health and Education Precinct	The Health and Education Precinct proposal involves the rezoning of land near Port Macquarie Hospital. The proposal involves the use of the B2 and B4 zones in addition to residential zones. An area west of John Oxley Drive has been rezoned to B5 and a Bunnings store is located on it. The Highfields proposal discussed above is located in the Precinct. The proposed business zones in the Precinct are: • HEP Core land size without Highfields (mixed use) = 152,640.15 m² (GFA 274,752.27 m²) @ FSR 1.8:1 • Highfields land size (mixed use) = 20,771 m² (GFA = 57,743.38) @ FSR 2.78:1 • Shopping centre land size (inc church) (retail) = 29,721 m² (GFA = 29,721 m²) @ FSR 1:1 • 'Service station land size (mixed use (B4) or local centre (B2)) = 4,635.02 m²	The Health and Education Precinct is incrementally changing from single detached dwellings to a greater mix and density of uses including student accommodation, aged care facilities, health services and shared education facilities like SHREC (Shared Health Research and Education Campus).	Given the proposal will facilitate predominantly health and education related uses in an area being promoted as an economic hub for Port Macquarie, it should be supported.

Name of area and address	Details	Discussion	Recommendation
	(GFA 3,012.76 m²) @ FSR 0.65:1'.		
11 Mumford Street Port Macquarie Lot 2 DP601094 and Lot 4 DP825704	The proposal is to rezone up to 3 ha to B5 Business Development, including an existing school.	The site is adjacent to the Hastings River Drive employment area, which contains 15.83 ha of land zoned B5 Business Development. Only 0.89 ha of this land remains vacant. The site is currently zoned R1 and E2. It is understood Council has not defined or agreed upon a final layout at this stage.	Rezoning of this site is supported, subject to resolution of a defined layout, as it lies adjacent to existing B5 zoned land and is well serviced. The rezoning, will at least in part, address the current shortage of B5 zoned land within the Hastings River Drive Precinct due to the take up of business development land along Hastings River Drive.
Frogs Road Sancrox Part Lot 121 DP1252569 and Lot 37 DP1252569, Frogs Road and Benjamin Close, Sancrox	The proposal is to rezone 2.98ha of RU1 zoned land to IN1, which adjoins an existing area of industrial zoned land.	The site is located to the south of the Sancrox employment area, which contains 51.6 ha of IN1 and IN2 zoned land. Approximately half of this land is currently vacant. The site is also in close proximity to the Fernbank Creek employment area, which contains 23.28 ha of industrial zoned land, all of which is vacant. The site is currently zoned RU1 Primary Production and consists of 2 parcels of land separated by Benjamin Close, of approximately 2.2 ha and 0.7 ha in size. The size and location of the site makes it unlikely that it will be used for long term agricultural purposes. The site contains native vegetation that has been impacted by the Pacific Highway upgrade.	Rezoning of this site to IN1 is supported due to it being contiguous within an already established and serviceable industrial area with good road access to the Pacific Highway.
19 Houston Mitchell Drive Bonny Hills (Lot 10 DP 615775 and Lot 1 DP 1117908):	RU1 to part IN2 (approx. 3.7ha) and Environmental zones. Approx 3.7 ha additional IN2 Light Industry zoned land.	The site is located near the Lake Cathie employment area, which contains 2 areas of land zoned B4 Mixed Use. There is no industrial land in the Lake Cathie or Bonny Hills area,	Rezoning of this site is supported on the basis that Lake Cathie/ Bonny Hills has limited opportunities to provide local service industrial land without the potential for land use conflict.

Name of area and address	Details	Discussion	Recommendation
		with the nearest industrial land being in Laurieton. The site is adjacent to a residential area; however the proposal includes a buffer of land zoned E2 Environmental Conservation between the residential land and the proposed IN2 land. The minimum distance between the residential and industrial land would be approximately 50 metres, with Ocean Drive separating the two land uses. This buffer is considered adequate. The local service employment demand projections in Section 5.3 found that the Lake Cathie – Bonny Hills area will require an additional 2.2-2.9 ha of employment land in 2041. The rezoning is supported to address the lack of industrial land in the area. Controls for landscaping and visual screening of industrial land are contained within Council's Development Control Plan 2013.	
Fernbank Industrial Park Thrumster Within the Fernbank Creek and Sancrox Structure Plan Lot 100 DP1228060	The proposal is to rezone existing IN1 and IN2 zoned land for residential use. The land proposed to be rezoned is undeveloped and has an area of 10.8ha zoned IN1 and 12.3ha zoned IN2. This proposal should be considered as part of the Fernbank Creek and Sancrox Structure Plan investigations due to the proximity to existing residential land.	The site is adjacent to the Sancrox employment area, which contains 25.82 ha of vacant industrial land with zonings of IN1 and IN2.	Whilst there is sufficient land available for industrial purposes to 2041, the Fernbank Creek employment area is considered to be strategically important for long term employment generating land as it possesses the requisite characteristics required for large format industrial land (i.e.. has good access to an arterial road network, relatively isolated from sensitive land uses). It is also advantageous to encourage agglomeration or clustering particularly

Name of area and address	Details	Discussion	Recommendation
			given the proximity of the Sancrox employment area. Residential development is not considered an appropriate use as the supply of residential development is occurring in adjacent locations suited to support intensive lifestyle settlements with amenity. This location provides a unique opportunity for an industrial estate with proximity to the Pacific Highway.
Seawide Estate Lake Cathie Lot 11 DP1226839, 1350 Ocean Drive	Proposed rezoning from B4 Mixed Use to R1 General Residential. The proponent argues that there is an oversupply of B4 zoned land in the area. Decrease of 4,900 sqm of B4 Mixed Use zoned land.	The Lake Cathie Commercial Floor Space Demand Assessment prepared by HillPDA in July 2020 found that Lake Cathie currently has an oversupply of B4 zoned land to 2041. Whilst the subject site sits within a central location of the Seawide Estate allowing for a nucleus for a town centre/activity node to be developed, sufficient vacant land still remains to achieve this purpose. The remaining B4 zoned land would still have reasonable frontage to Seaside Drive to ensure a viable facility into the future. Rezoning of the site for residential use is supported due to an oversupply of B4 zoned land in the area.	The rezoning of 4,900 sqm of B4 land to R1 is supported on the basis that it will not have a detrimental impact on the ability to provide adequate retail/ business land to service the Lake Cathie community. Ample land would remain for future development.
Partridge Creek Thrumster Lot 1 DP 1087368	The proposal to amend the size and location of the existing B1 Neighbourhood Centre zone (14,879 m^2) to correspond with the recommended size for local centres outlined in Port	The original B1 zoning for the precinct in Thrumster was 3,767 m^2 (in 2008) and then the relocation and resizing took place by way of an administrative amendment in 2015. The current proposal is to relocate it again and	The proposal is supported as it aligns with the recommended size for local centres outlined in Port Macquarie-Hastings Urban Growth Management Strategy 2017-2036.

Name of area and address	Details	Discussion	Recommendation
	Macquarie-Hastings Urban Growth Management Strategy 2017-2036.	reduce the size to match the size and location of the 2008 rezoning. Decrease of 11,112 sqm of B1 Neighbourhood Centre zoned land.	

All of the above site-specific proposals, if supported would result in the overall reduction of 7.82ha of IN1 General Industrial zoned land, 8.6ha of IN2 Light Industrial zoned land, 1.11ha of B1 Neighbourhood Centre zoned land and an increase of 1.58ha of B4 Mixed Use zoned land and 3ha of B5 Business Development zoned land. These minor changes to the overall supply of employment land is not considered to have a detrimental impact on the ability to service the future Port Macquarie population to 2041.

7. Strategy

7.1 Findings for industrial land

The strategic direction of Council's current UGMS and draft LSPS which promote the Port Macquarie Airport, and the Sancrox and Fernbank Creek employment areas have been based on the findings of the HillPDA Industrial Land Strategy Review 2015 and earlier iterations.

This land use review into the demand for industrial land found that the LGA will need between 257 ha and 341 ha of industrial zoned land to 2041 to meet the projected resident workforce. Given the current supply of 458 ha of industrial zoned land within the B5, B7, IN1, IN2, IN3 and IN4 zones, it is estimated that there is up to 95 ha more zoned industrial land than is required to 2041.

Notwithstanding the oversupply, the geographical distribution of the vacant land may not always match demand as some areas may be more attractive for industrial land than others. Similarly land already zoned may be constrained by other environmental factors such as biodiversity, flooding, access etc. To address this issue the analysis reviewed each centre to determine industrial land requirements at a local level. It found that limited B5 land is available for greenfield development, with much of the zoned land having been developed. In particular, the B5 zoned land at Hastings River Drive and John Oxley Drive has been developed. The analysis also found that insufficient land is available at Lake Cathie/ Bonny Hills to service the local community.

7.2 Findings for business land

The analysis into the demand for business land found that up to 296,164 m^2 of retail floor space will be required to satisfy demand across the LGA. To date approximately 164,000 m^2 of business floor space has been developed across the LGA over a total zoned area of 125 ha under Port Macquarie LEP in either the B1, B2, B3 and B4 zones.

The analysis into business land found that about 75% of the existing floor space is made up of retail uses whilst the remaining 25% comprises non-retail uses. Much of this development, with the exception of the Port Macquarie CBD and Settlement City, has generally been developed at low densities, in many cases well below the nominated floor space ratio. With the finalisation of the Health and Education Precinct Master Plan, an opportunity to realise up to a projected 212,489m^2 non-residential gross floor area together with the opportunities to intensify and develop existing zoned business lands will more than satisfy demand to 2041.

7.3 Strategic priorities

7.3.1 Port Macquarie Airport

The proposed Airport Business Park Port Macquarie Airport provides access to local, national and international markets, tourism opportunities and is a key area for employment and economic activity. The airport's location close to Port Macquarie's CBD and the emerging Health and Education Precinct, places it near growing labour markets.

Vibrant and supportive ancillary uses are essential to the airport's long-term growth. This is recognised in Council's *Economic Development Strategy* and *Urban Growth Management Strategy* with a priority to develop an expanded Business Park at the Port Macquarie Airport.

The vision for the Business Park is for it to evolve into an attractive employment precinct that will provide a range of job opportunities to support the local economy. Strategically located, the

Business Park will operate as an important centre of employment that builds on the role of the Airport as a regional hub and significant gateway to Port Macquarie.

The Airport Business Park provides the following advantages over existing employment lands:

- Purpose-built designed facilities
- Opportunity to build new 6-star offices
- Proximity to the Airport with proposed direct linkages to the Health & Education Precinct

In line with Action 11.1 of the LSPS, the development of a Hub and Spoke model for the LGA by understanding catchment areas for key centres such as the airport is considered an immediate priority.

7.3.2 Bonny Hills industrial area

The local service employment demand projections in Section 5.3 found that the Lake Cathie – Bonny Hills area will require at least 2.2-2.9 ha of employment land by 2041.

The proposed rezoning of approximately 3.7ha at 19 Houston Mitchell Drive Bonny Hills (Lot 10 DP 615775 and Lot 1 DP 1117908) from RU1 to part IN2 Light Industrial and part E2 is recommended as there is no industrial land in the Lake Cathie or Bonny Hills area, with the nearest industrial land being at Laurieton. This rezoning is considered an immediate priority.

The site is adjacent to a residential area; however the proposal includes a buffer of land zoned E2 Environmental Conservation between the residential land and the proposed IN2 land. The minimum distance between the residential and industrial land would be approximately 50 metres, with Ocean Drive separating the two land uses. This buffer is considered adequate.

7.3.3 Health & Education Precinct

The Health & Education Precinct at Lake Innes is identified as a key centre of employment for our LGA. Council has developed a *Health and Education Precinct Master Plan* for the centre to create an active community hub that is a centre of excellence for knowledge and health.

The Precinct will support a mix of uses that will increase job opportunities and attract younger workers. This will create an anchor for trade and investment that stimulates research and innovation, creates employment and supports the emerging knowledge economy.

Maximising the opportunities associated with Port Macquarie's Health & Education Precinct will require the co-ordinated delivery of better connections, student and professional housing, future expansion opportunities, local infrastructure, walking and cycling paths, and improvements to public areas to attract businesses and workers.

Increased opportunities for ancillary health and education services, retail, commercial and accommodation uses will result in colocation of facilities that make better use of infrastructure and support the growth of associated businesses and industries.

7.4 Guiding principles framework

Future rezonings or planning proposals should generally comply with the following principles:

1. Centres are distinctive and productive - The location and mix of offices, business and retail, entertainment and creative uses combined with improved public space and cultural infrastructure support the centres hierarchy and long term economic productivity.
2. Industrial and urban services lands are protected and managed - Employment lands should be retained and managed so that businesses have confidence to locate and

expand there. A diversity of industrial parcel sizes and versatile spaces ensures that growth of industry clusters can be supported.

3. Spaces for business are suitable and available - Loss of industrial and urban services land in the wider LGA means the protection of urban service corridors is more important than ever. Prioritising employment outcomes in out-of-centre mixed-use development can deliver a pipeline of well-located and suitably configured employment floor space. Successful implementation can be achieved through considered stakeholder involvement.
4. The planning framework is clear - The planning framework will give clarity for business on where to locate and invest and what to expect when locating close to sensitive uses such as residential. Appropriate zoning of employment precincts will reduce speculation, support longer tenures and increase certainty for tenants.

8. References

ABS. (2016). 2016 Census. Retrieved from https://www.abs.gov.au/websitedbs/censushome.nsf/home/2016

ABS. (2020, October). Household Impacts of COVID-19 Survey. Retrieved from https://www.abs.gov.au/statistics/people/people-and-communities/household-impacts-covid-19-survey/latest-release

ABS. (2020). *Regional Population, Australia* . Retrieved from https://www.abs.gov.au/statistics/people/population/regional-population/2018-19

Australia Post. (2020). *Inside Australian Online Shopping - 2020 e-Commerce Industry Report*.

DPIE. (2019). *Population Projections*. Retrieved from https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections

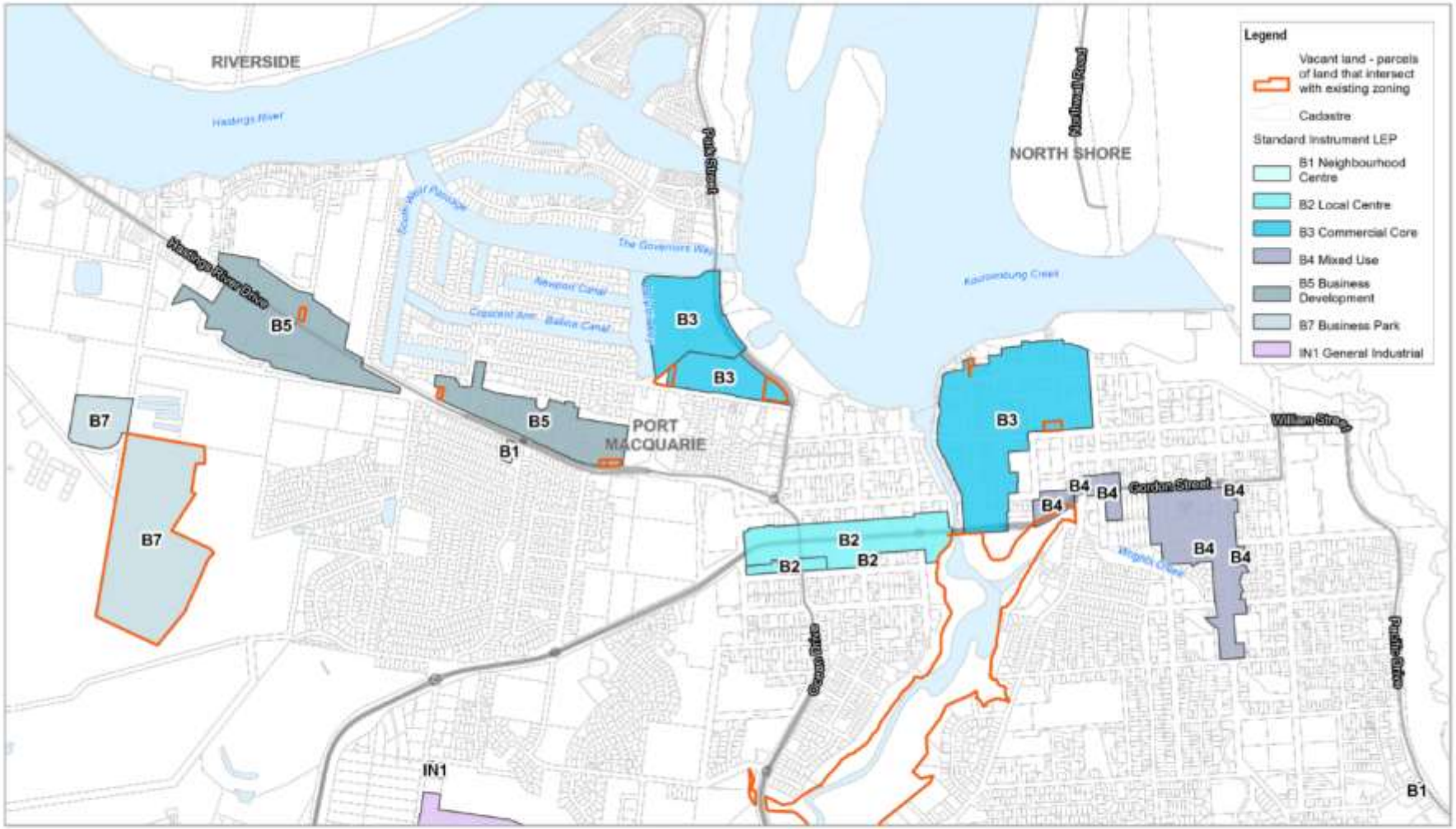
I.D. Consulting. (2020). *Port Macquarie-Hastings Council Population Forecast*. Retrieved from https://forecast.id.com.au/port-macquarie-hastings

REMPLAN Economy. (2020). *Port Macquarie-Hastings Council*.

Tourism Research Australia. (2016). *Local Government Area Profiles, 2016 Port Macquarie-Hastings (A), New South Wales*. Retrieved from https://www.destinationnsw.com.au/wp-content/uploads/2012/03/Port-Macquarie-Hastings-LGA-profile.pdf

Appendices

Appendix A – Detailed maps of employment precincts



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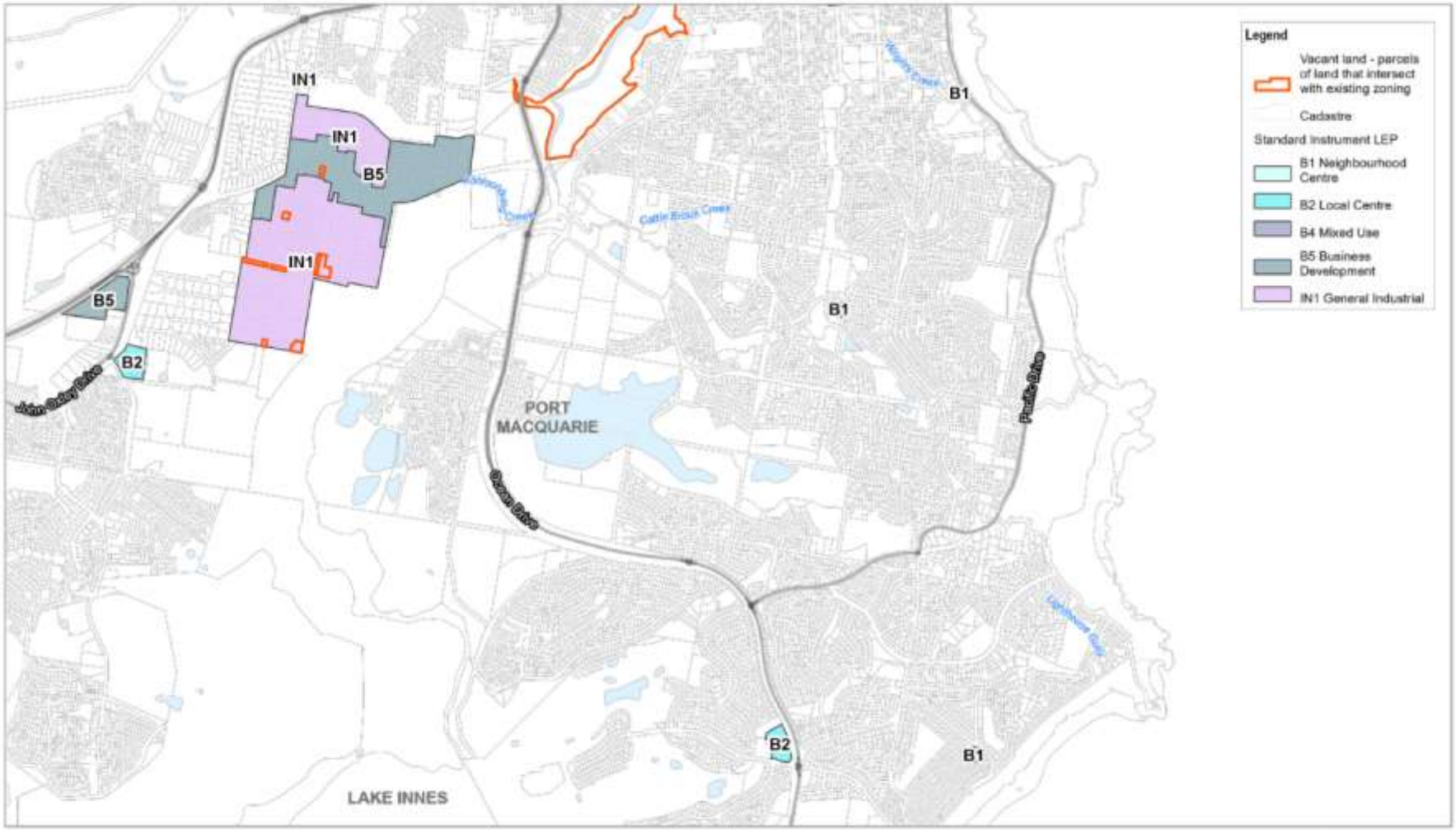
Port Macquarie Hastings Commercial and Industrial Land Use Review

Project No. 12539520
Revision No. 0
Date 15/02/2021

Commercial and Industrial vacant lands

APPENDIX A-1



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Port Macquarie Hastings Commercial and Industrial Land Use Review

Commercial and Industrial vacant lands

Project No. 12539520
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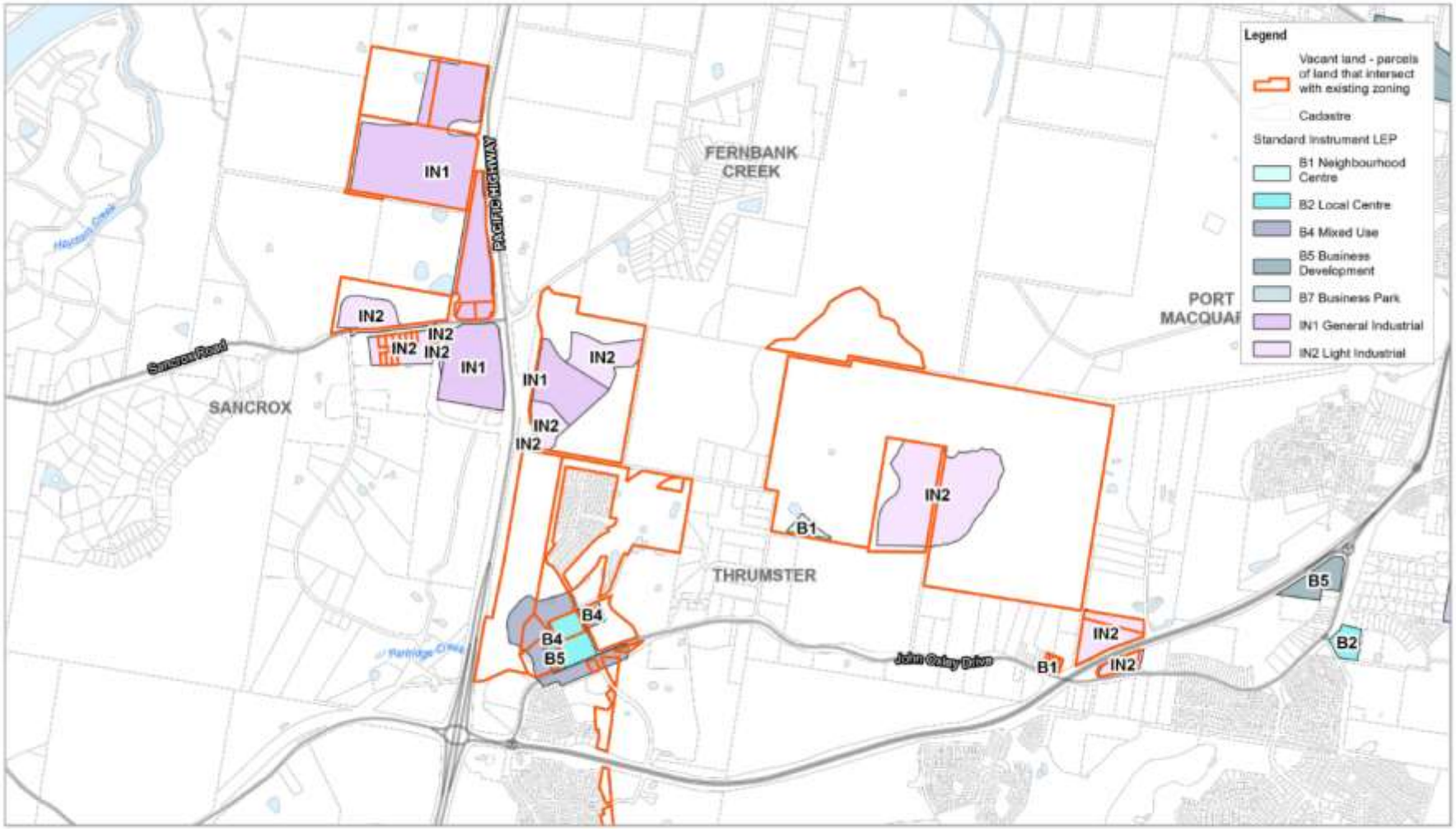
APPENDIX A-2


Legend
Vacant land - parcels of land that intersect with existing zoning
Cadastre
Standard Instrument LEP
B1 Neighbourhood Centre
B2 Local Centre
B4 Mixed Use
B5 Business Development
B7 Business Park
IN1 General Industrial
IN2 Light Industrial
FERNBANK CREEK
PACIFIC HIGHWAY
SANCROX
Sancrox Road
THRUMSTER
John Oxley Drive
PORT MACQUA
IN1
IN2
B1
B2
B4
B5
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APPENDIX A-3


Legend
Vacant land - parcels of land that intersect with existing zoning
Cadastre
Standard Instrument LEP
IN4 Working Waterfront
BLACKMANS POINT
PEMBROOKE
IN4
IN4
FERNBANK CREEK
Hastings River Drive
SANCROX
RAWDON ISLAND
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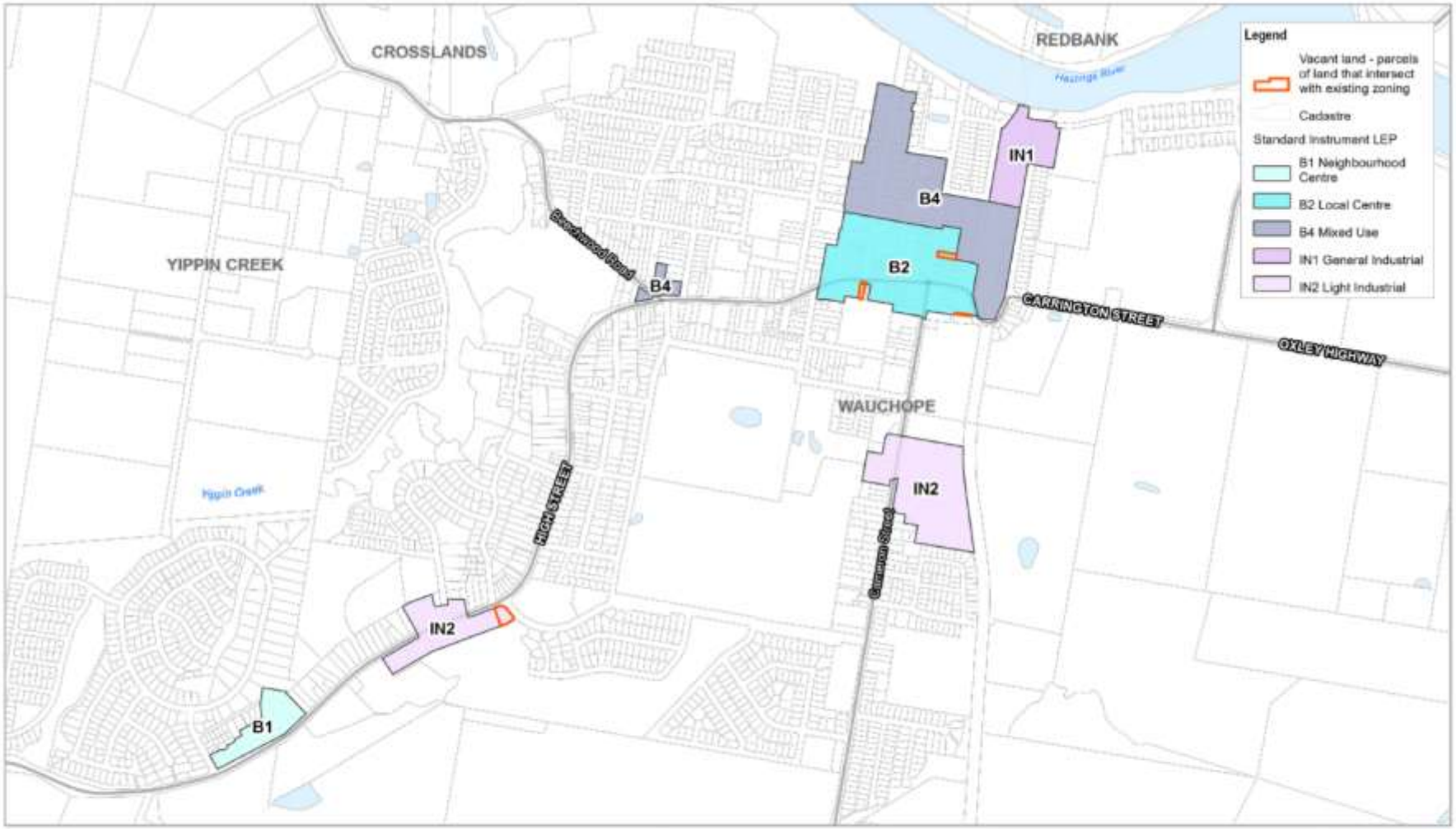
Port Macquarie Hastings Council
Port Macquarie Hastings Commercial and Industrial Land Use Review
Project No. 12539520
Revision No. 0
Date 15/02/2021
Commercial and Industrial vacant lands
APPENDIX A-4


CROSSLANDS
REDBANK
Hastings River
YIPPIN CREEK
Beechwood Road
B4
IN1
B4
B2
CARRINGTON STREET
OXLEY HIGHWAY
WAUCHOPE
Yippin Creek
HIGH STREET
IN2
Carrington Street
IN2
B1
Legend
Vacant land - parcels of land that intersect with existing zoning
Cadastre
Standard Instrument LEP
B1 Neighbourhood Centre
B2 Local Centre
B4 Mixed Use
IN1 General Industrial
IN2 Light Industrial
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Port Macquarie Hastings Council
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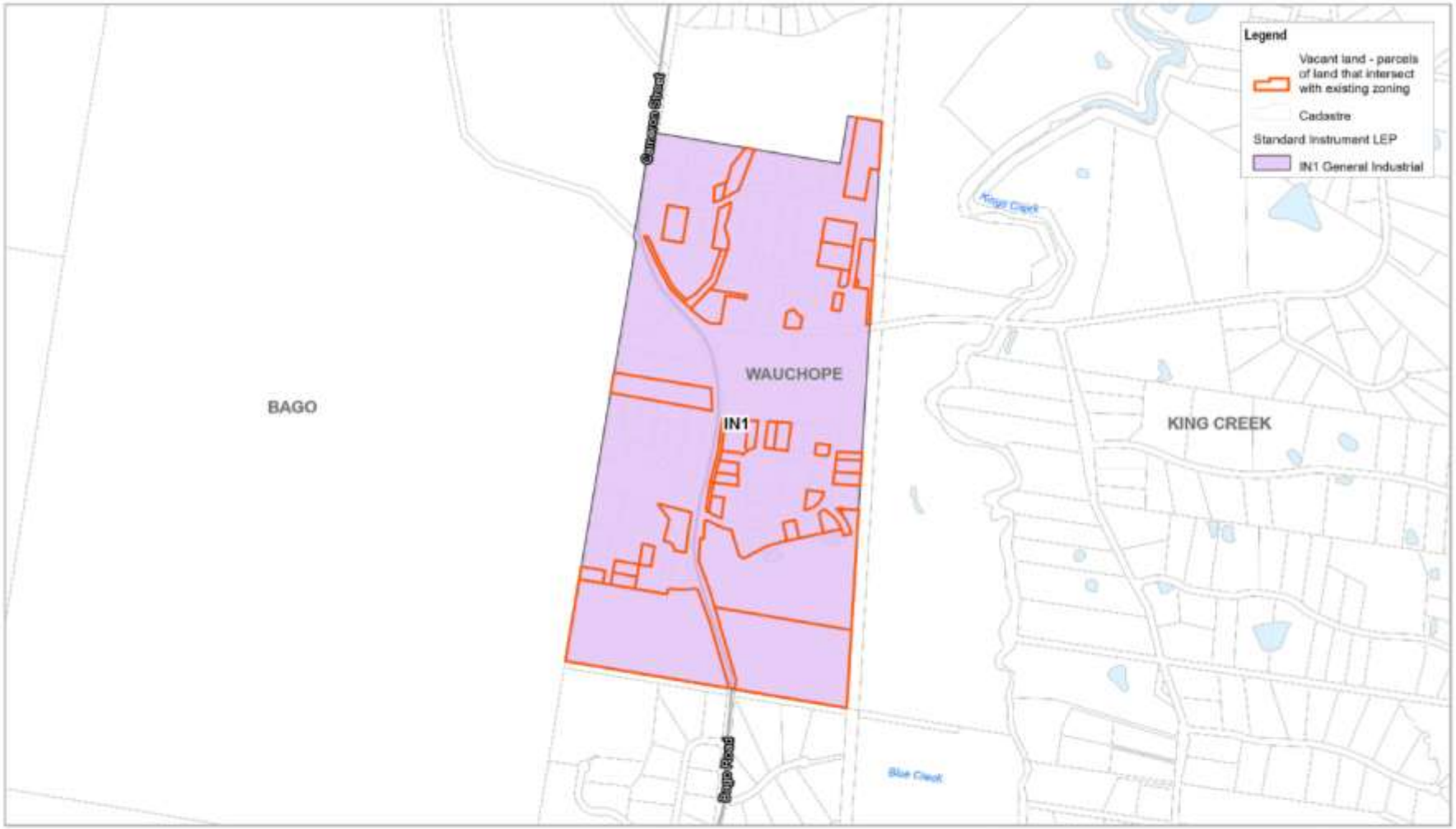
Project No. 12539520
Revision No. 0
Date 15/02/2021
Commercial and Industrial vacant lands
APPENDIX A-5


Legend
Vacant land - parcels of land that intersect with existing zoning
Cadastre
Standard Instrument LEP
IN1 General Industrial
Cameron Street
Kings Creek
WAUCHOPE
BAGO
IN1
KING CREEK
Bago Road
Blue Creek
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APPENDIX A-6


LAKE INNES
LAKE CATHIE
JOLLY NOSE
BONNY HILLS
Hastings River Drive
Ocean Drive
Legend
Vacant land - parcels of land that intersect with existing zoning
Cadastre
Standard Instrument LEP
B1 Neighbourhood Centre
B2 Local Centre
B4 Mixed Use
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Meters
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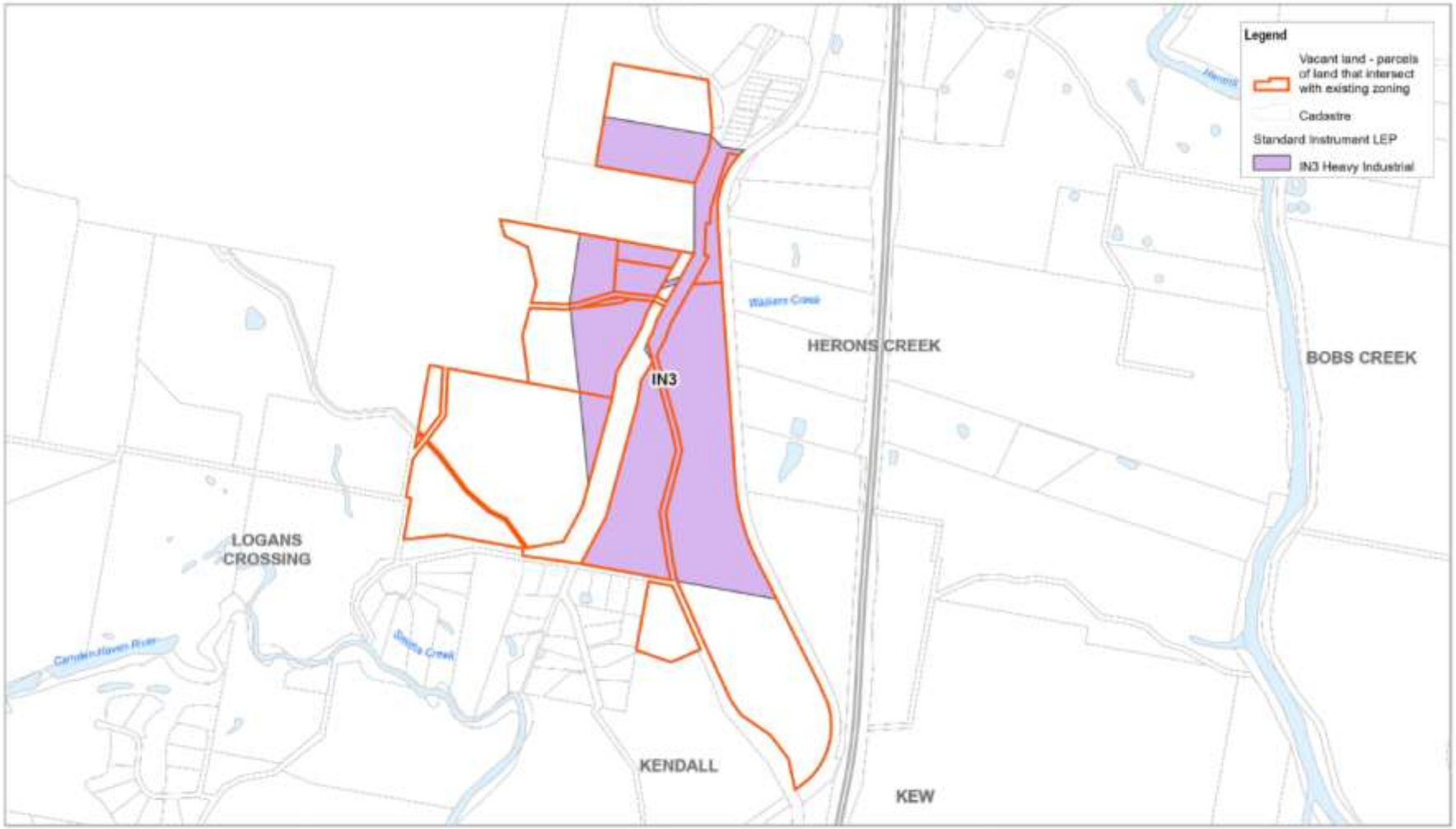
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Vacant land - parcels of land that intersect with existing zoning
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Standard Instrument LEP
IN3 Heavy Industrial
IN3
HERONS CREEK
BOBS CREEK
LOGANS CROSSING
KENDALL
KEW
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Project No. 12539520
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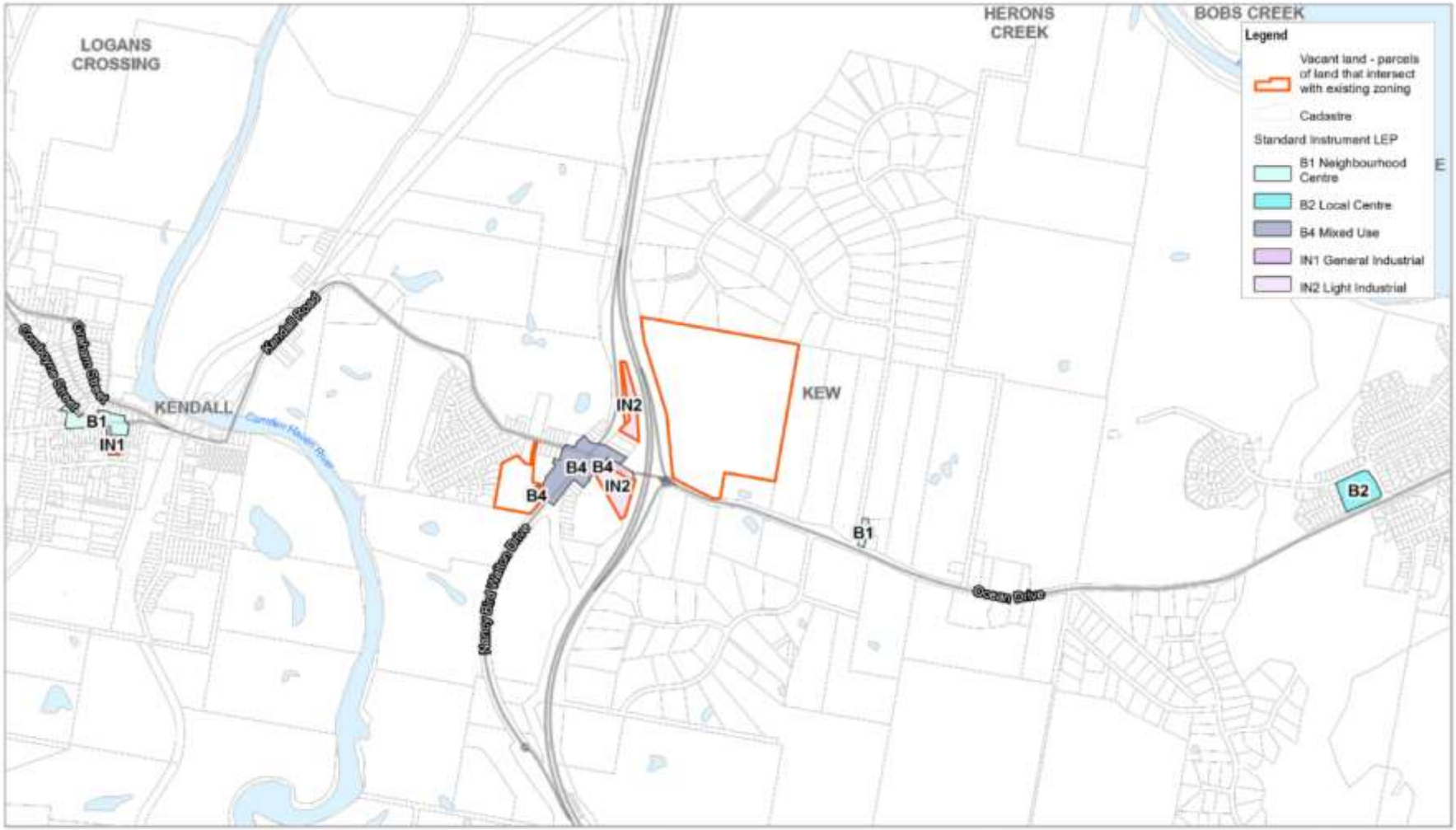
Date 15/02/2021
Commercial and Industrial vacant lands
APPENDIX A-8


LOGANS CROSSING
HERONS CREEK
BOBS CREEK
KENDALL
KEW
Kendall Road
Ocean Drive
Legend
Vacant land - parcels of land that intersect with existing zoning
Cadastre
Standard Instrument LEP
B1 Neighbourhood Centre
B2 Local Centre
B4 Mixed Use
IN1 General Industrial
IN2 Light Industrial
B1
IN1
B4
IN2
B2
Paper Size ISO A4
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Port Macquarie Hastings Council
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Project No. 12539520
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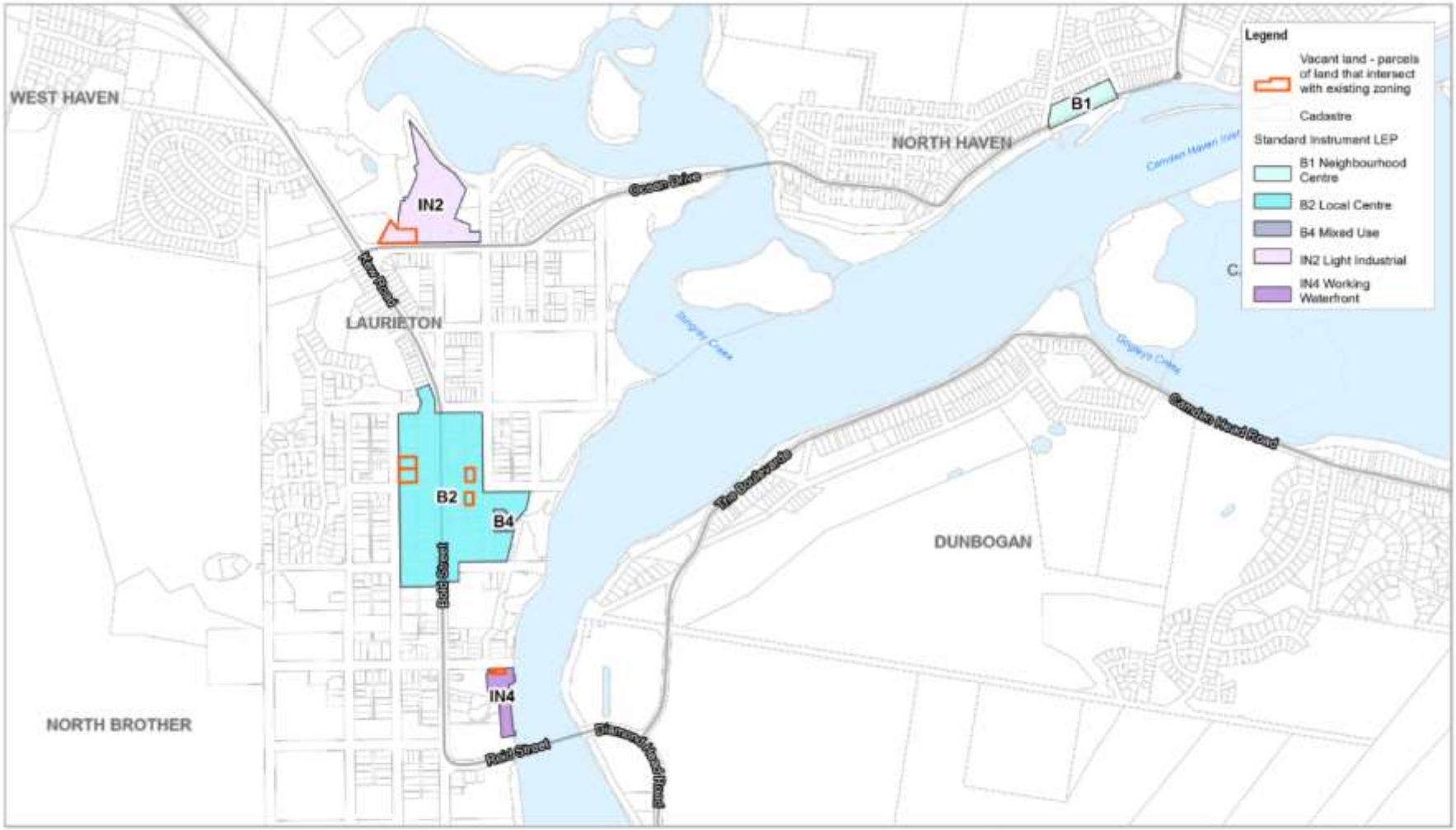
APPENDIX A-9



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Port Macquarie Hastings Commercial and Industrial Land Use Review

Commercial and Industrial vacant lands

Project No. 12539520
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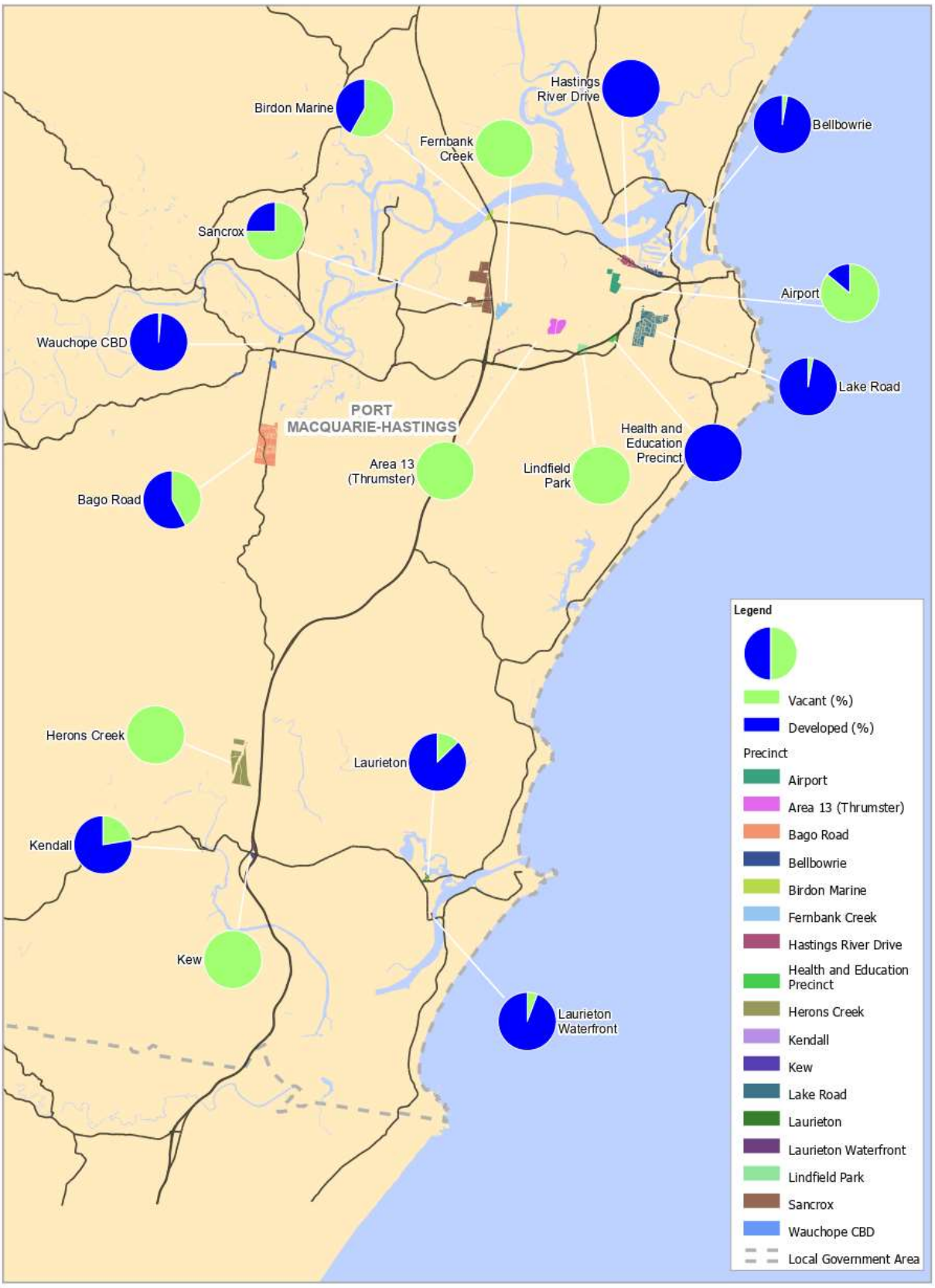
APPENDIX A-10



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Port Macquarie Hastings Council
Port Macquarie Hastings Commercial and Industrial Land Use Review

Vacant and developed industrial land

Project No. 12539520
Revision No. 0
Date 15/02/2021

FIGURE 4-1

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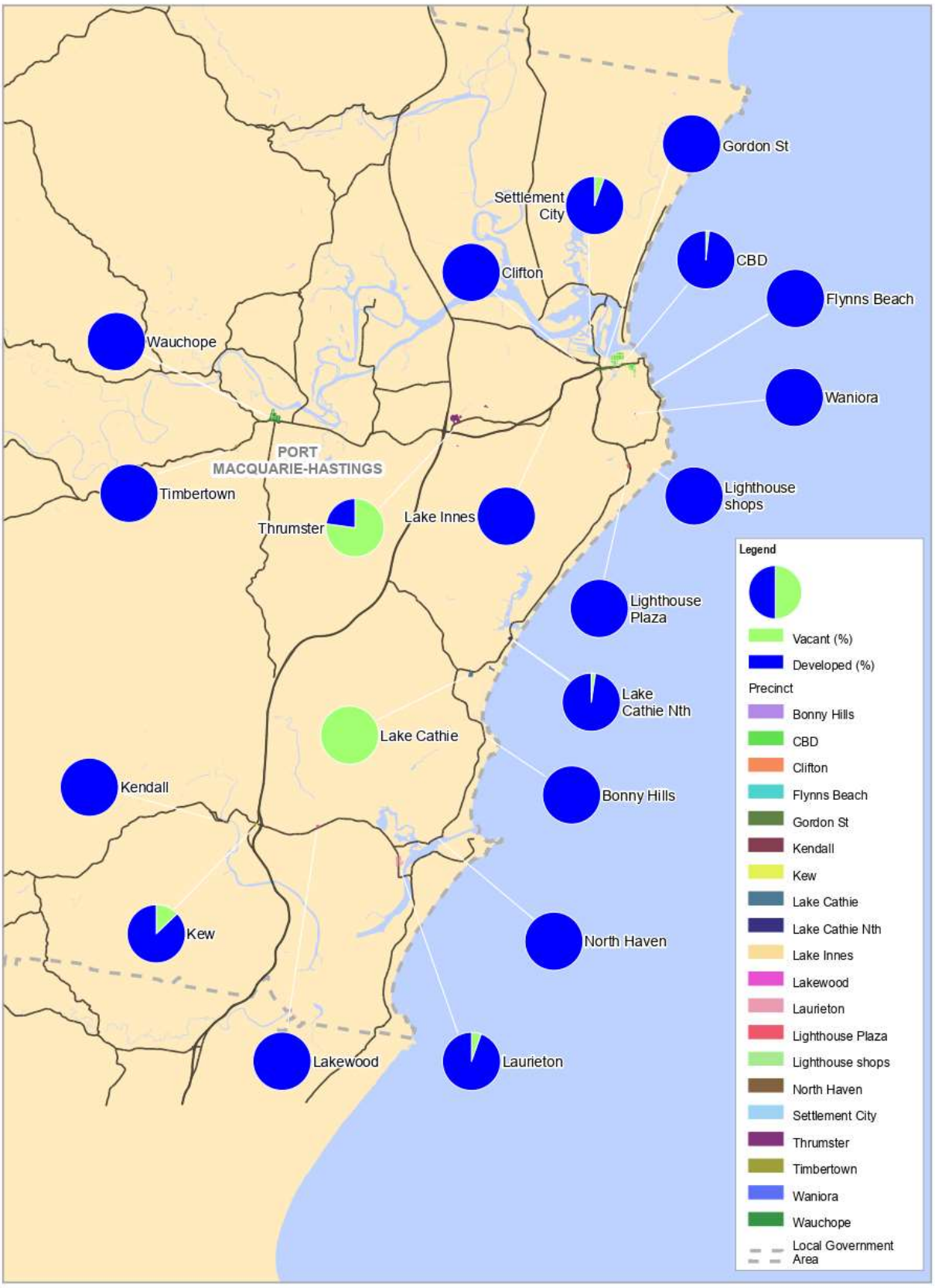

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Port Macquarie Hastings Commercial and Industrial Land Use Review

Vacant and developed business precincts

Project No. 12539520
Revision No. 0
Date 15/02/2021

FIGURE 4-2

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12539520-90616-1/https://projectsportal.ghd.com/sites/pp01_01/portmacquariehasting/ProjectDocs/12539520-REP_Employment Lands Review.docx

Document Status

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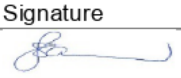
		Name	Signature	Name	Signature	Date
0	C Harris	S Lawer		S Lawer		01/03/2021

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(FUTURE) PUBLIC EXHIBITION DATES
(Start) to (Finish)

Planning Proposal under section 3.33 of the *Environmental Planning and Assessment Act* 1979

Port Macquarie-Hastings Local Environmental Plan 2011 (Amendment No **)

Le Clos Sancrox

CcI ref: PP2019-2.1
DP&E ref:
Date: 2/3/2021

PORT MACQUARIE HASTINGS COUNCIL

Planning Proposal Status

Stage	Version Date
Draft	2/03/2021
Reported to Council (section 3.33)	17/03/2021
Adopted by Council & referred to DP&E (sec 3.34 (1))	
Gateway Panel determination (sec 3.34 (2))	
Revisions required: Yes / No	
Public Exhibition (where applicable) (Schedule 1 clause 4)	
For Council review (section 3.35 (1))	
Adopted by Council for submission to Minister's delegate (section 3.36 (2))	

Council Address	Contact Officer
Port Macquarie-Hastings Council PO Box 84 PORT MACQUARIE NSW 2444	Kieran Metcalfe Senior Strategic Planner Email kieran.metcalfe@pmhc.nsw.gov.au Phone (02) 6581 8529

Adoption of the Planning Proposal

1. For initial Gateway determination

This Planning Proposal was endorsed on ..... by *Port Macquarie-Hastings Council*, or *the undersigned Council delegate* (delete one):

Signed .....

Name .....

Position .....

2. For section 3.35 finalisation

This Planning Proposal was endorsed on ..... by *Port Macquarie-Hastings Council*, or *the undersigned Council delegate* (delete one):

Signed .....

Name .....

Position .....

Exhibition Information

Content
Proposed amendments to Local Environmental Plans are exhibited in a descriptive form within a 'Planning Proposal'.

Details of the amendments contained in this **Planning Proposal PP2019-2.1** are contained in **Part 4**. They cover:

- Land Zoning,
- Lot Size,
- Floor Space Ratio; and
- Height of Buildings.

The specifics of how the LEP would be amended is described in **Part 2**.

Exhibition
The exhibition period is from start to finish, with the Planning Proposal available for inspection by any person at Council's offices at Port Macquarie, Laurieton and Wauchope, and on haveyoursay.pmhc.nsw.gov.au.

Submissions
Any person may make a written submission to Council up until the end of the exhibition period. The submission should quote Council's reference 'PP2019-2.1', and be emailed to council@pmhc.nsw.gov.au, lodged through haveyoursay.pmhc.nsw.gov.au, or posted to:

The Chief Executive Officer
Port Macquarie-Hastings Council
PO Box 84
PORT MACQUARIE NSW 2444

Note that any submission may be made public. Also note:

Section 10.4 (5) of the *Environmental Planning and Assessment Act* 1979 states:

> *'A person who makes a relevant public submission to a council in relation to a relevant planning application made to the council is required to disclose the following reportable political donations and gifts (if any) made by the person making the submission or any associate of that person within the period commencing 2 years before the submission is made and ending when the application is determined—*
>
> *(a) all reportable political donations made to any local councillor of that council,*
>
> *(b) all gifts made to any local councillor or employee of that council.*
>
> *A reference in this subsection to a reportable political donation made to a local councillor includes a reference to a donation made at the time the person was a candidate for election to the council.'*

Further information

For further information please contact Kieran Metcalfe on (02) 6581 8529.

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Executive Summary

This is a Planning Proposal prepared under section 3.33 of the *Environmental Planning and Assessment Act* 1979, in relation to a proposed amendment to *Port Macquarie-Hastings* (PMH) *Local Environmental Plan* (LEP) *2011*. It will be assessed by Port Macquarie-Hastings Council, the NSW Department of Planning, Industry and Environment, and (depending on the Gateway determination) used for public participation on the proposed LEP amendment.

Background

Proposal	Le Clos Sancrox
Property Details	Le Clos Sancrox Lots 1-52 DP0776681 & part of Lot 1 DP1009991
Principal Applicant	LCS Estates Pty Ltd C/- Land Dynamics Australia
Land owner	Various
Description of Proposal	This Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 (LEP 2011) to modify land zoning, minimum lot size, floor space ratio and height of buildings provisions in relation to land comprising a number of holdings collectively known as Le Clos Sancrox. The proposal also incorporates amendments to adjoining land on part of Lot 1 DP1009991, given the location of this land within or immediate adjacent to the Le Clos Sancrox site. For the purposes of this report, all land described above is referred to as Le Clos Sancrox. The intended effect of the Planning Proposal request is to facilitate a change in land use from rural to urban and environmental uses including medium density and general residential, public open space, business, environmental conservation, environmental management and environmental living. This change is intended to facilitate the development of a variety of residential and supporting uses and to conserve areas of high environmental value within the site. The site is also within the Fernbank Creek and Sancrox Planning Investigation Area. This planning investigation is being undertaken concurrently with the progression of this Planning Proposal.
Location	A location map is included in Part 4 - Mapping.

Planning Proposal

Part 1 - Objectives or Intended Outcomes

This Planning Proposal seeks to amend PMH LEP 2011 to modify land zoning, minimum lot size, floor space ratio and height of buildings provisions in relation to land comprising a number of holdings collectively known as Le Clos Sancrox.

The intended effect of the Planning Proposal request is to facilitate a change in land use from rural to urban and environmental uses including medium density and general residential, public open space, business, environmental conservation, environmental management and environmental living. This change is intended to facilitate the development of a variety of residential and supporting uses and to conserve areas of high environmental value within the site.

Part 2 - Explanation of Provisions

As detailed within Part 1, this Planning Proposal seeks to modify land zoning, minimum lot size, floor space ratio and height of buildings provisions. The proposed amendments are further detailed within Part 4 of this document.

Part 3 – Justification

A - Need for the planning proposal.

1. Is the planning proposal a result of any strategic study or report?

The Port Macquarie - Hastings Urban Growth Management Strategy (UGMS) 2011-2031 identified rural residential investigation of Le Clos Sancrox as an immediate action. Initial planning investigations of the area were followed by the development of an Issues Paper and formation of a Reference Group in 2011. A Structure Plan was developed, exhibited and finalised in 2015, but not adopted by Council due to identification of the area for further investigation to facilitate the potential long term growth of Port Macquarie as part of UGMS 2017-2036. Le Clos Sancrox was subsequently identified within UGMS 2017-2036 as a potential long term growth area.

This Planning Proposal and the wider Fernbank Creek and Sancrox Planning Investigation is a subsequent outcome of a Resolution of Council when adopting UGMS 2017-2036, which identified the area as a *'Preliminary Investigation Area'*. At its Ordinary Meeting of 20 February 2019, Council Resolved to invite the Le Clos Sancrox landowners to submit a Planning Proposal in parallel with Stage 1 planning (the Fernbank Creek and Sancrox Planning Investigation) in order to assist in informing the planning process.

Given the above, it has been determined that this Planning Proposal is a result of both strategic studies and reports, being the UGMS and the Fernbank Creek and Sancrox Planning Investigation with the development of the subsequent draft Fernbank Creek and Sancrox Villages Structure Plan.

2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

This Planning Proposal is the only means of amending PMH LEP 2011 to permit the objectives and intended outcomes as outlined within this document, as the current PMH LEP provisions applying to the land (including land zoning, minimum lot size, floor space

ratio and height of buildings) do not permit the proposed urban and environmental land use objectives and outcomes sought through this proposal.

B - Relationship to strategic planning framework.

3. Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

The North Coast Regional Plan 2036 (NCRP) identifies that the greatest population growth on the North Coast will be experienced around regional cities like Tweed Heads, Coffs Harbour and Port Macquarie. As such, bringing opportunities for greater housing choice to meet the growing and changing population. The NCRP also encourages accommodation of coastal growth whilst protecting coastal values. In this regard, the site is considered suitable for the proposed uses as:

- It would provide a range of residential and ancillary business development outcomes to cater for future population growth between the existing townships of Port Macquarie and Wauchope,
- Areas of high environmental value within the site have been sought for conservation through the application of the 'avoid, minimise, offset' principals,
- Notwithstanding the existing rural zoning of the site, there will be no loss of important farmland and the change in land use will not impact upon any existing agricultural land use within or adjoining the site,
- The site is not subject to direct flooding or acid sulfate soil constraints; and
- The site is able to be serviced by extension and upgrading of existing infrastructure. This infrastructure may also be utilised by future development within the area.

In addition to the NCRP, the North Coast Settlement Planning Guidelines 2019 (NCSPG) have been produced to provide councils with guidance when considering the most appropriate location for future residential and employment land when preparing or reviewing land use planning strategies. The objectives of the NCSPG are:

- To ensure that residential and employment land uses are located on the most appropriate land and;
- To focus demand for additional housing in established centres and only consider new greenfield release areas where sufficient demand and the need for additional capacity can be demonstrated.

Constraints planning has been undertaken in relation to the proposal and areas of high environmental value have been excluded from areas proposed for land use intensification. The NCSPG indicates that *'Future settlement, where permitted by the regional strategies and outside the agreed growth areas, must be located to minimise environmental impacts and be sustainable. Such settlement must satisfy the sustainability criteria contained in Appendix 1 of the Regional Strategies.'* The site is located outside of the urban investigation area boundaries identified in the NCRP. However, this is addressed below, and the assessment criteria has been considered to demonstrate the merit of this Planning Proposal.

In response to the need for additional housing stock identified in the NCRP, this proposal provides an opportunity to accommodate additional housing without significant adverse environmental impacts or loss of important farmland.

The proposal is consistent with the NCRP goals as follows:

- Proposed development has been focused to areas of least biodiversity sensitivity, with consideration of the 'avoid, minimise, offset' principles.
- In relation to natural hazards, the site is not flood prone and bush fire constraints have been considered to ensure compliance with Planning for Bush fire Protection 2019.
- The proposal will facilitate the creation of new housing and a local commercial centre.
- The proposal fits within the wider Fernbank Creek and Sancrox Planning Investigation Area, which facilitates coordinated development and infrastructure planning, consideration of local character and areas of high environmental value.
- A safe and efficient transport network is identified, which may service the development of the subject site and connect into the wider Fernbank Creek and Sancrox Planning Investigation Area, including through the provision of a collector road through the site and connection to the Pacific Highway.
- The proposal will not impact upon mapped important farmland.
- The proposal provides housing, services and facilities that are within walking distance of each other, including housing of varying densities and forms, as well as an opportunity for a school and child care centre, all connected via a series of pathways which facilitates walking and cycling. The housing diversity may also include seniors living housing to assist with the aging population.
- Engagement with the Birpai Local Aboriginal Land Council has occurred during the planning process and no areas of known Aboriginal Heritage Significance are proposed to be impacted upon.
- The distinct character of the site and the North Coast has been considered in the concept subdivision plan, which respects the landform, ecological features and views from the site.
- The site and the concept layout takes advantage of both existing and proposed road, water, sewer and stormwater infrastructure and does not rely upon adjoining landowners for connections or extensions.
- The housing facilitated through the proposal will assist to achieve minimum housing targets for the local government area.

In relation to housing supply, the NCRP states:

"Figure 10 shows the minimum housing supply each local government area should plan to deliver over the next 20 years to meet population growth. Certain councils may not have sufficient capacity in their urban growth areas to satisfy demand. As a priority, councils should work with their local communities to identify appropriate locations to provide an adequate supply of residential land. The delivery of housing in significant release areas can be accelerated by identifying where upfront investment in local infrastructure can assist land release. The NSW Government's Housing Acceleration Fund offers funding for new infrastructure projects that support housing supply."

It is considered that the Planning Proposal is consistent with the NCRP as it satisfies the Variation Criteria required for development outside the Urban Growth Area and has merit.

The consistency of the proposal with the Urban Growth Area Variation Principles as detailed within Appendix A of the NCRP is detailed below.

Table 1 - Consistency with Urban Growth Area Variation Principles

Urban Growth Area Variation Principles		Comment
Policy	The variation needs to be consistent with the objectives and outcomes in the North Coast Regional Plan 2036 and any relevant Section 117 Directions and State Environmental Planning Policies, and should consider the intent of any applicable local growth management strategy.	The subject proposal is consistent with the objectives and outcomes in the North Coast Regional Plan 2036, relevant Section 117 Directions, applicable State Environmental Planning Policies and Council's Urban Growth Management Strategy (refer to Part 3 and Appendices C and D of this report).
Infrastructure	The variation needs to consider the use of committed and planned major transport, water and sewerage infrastructure, and have no cost to government. The variation should only be permitted if adequate and cost-effective infrastructure can be provided to match the expected population.	The road network, transport and servicing of the site and the wider area has been considered in the specialist reports and plans which accompany this report. Upgrades can be provided without relying upon adjoining private landowners and can service the wider area.
Environmental and farmland protection	The variation should avoid areas: • of high environmental or heritage value; and • mapped as important farmland, unless consistent with the interim variation criteria prior to finalising the farmland mapping review.	Ecological assessment of the site has informed the proposed LEP provisions and has considered the 'avoid, minimise and offset' hierarchy. In doing so, large areas of ecological value will be protected and enhanced and corridors created to provide good connection to large areas of ecological significance on adjoining land. The maps accompanying the current LEP do not identify the site as being affected by heritage. An Aboriginal Cultural Heritage Assessment has also been undertaken. This assessment has concluded that *'based on the Site Inspection and other investigation, there is no reason from*

Urban Growth Area Variation Principles		Comment
		an Aboriginal Cultural and Heritage perspective that this rezoning cannot proceed, subject to the following: 1. *An Aboriginal Sites officer be present when excavation or clearing commences.* 2. *At such time as development site works start, should any artefacts be turned up or located, Birpai LALC Aboriginal Sites Officers are to be contacted immediately and work on the site stopped pending further assessment.'* *The site does not contain mapped important farmland.*
Land use conflict	The variation must be appropriately separated from incompatible land uses, including agricultural activities, sewage treatment plants, waste facilities and productive resource lands.	There are no active intensive commercial agricultural activities, sewerage treatment plants or waste facilities within the vicinity of the proposal. However, a quarry, which may be considered an incompatible land use, is located to the north-east of the site. A State Significant Development Application has recently been exhibited for an expansion of the quarry to the west of the existing quarry site. In relation to the potential impact of this resource and land use on potential future development within the area, the Department of Regional NSW – Mining, Exploration and Geoscience, Geological Survey NSW (GSNSW) was consulted in March 2020 in relation to the wider Fernbank Creek and Sancrox planning investigation. In its response dated 23 September 2020, the Department advised *'Any determination of the Sancrox Quarry Expansion Project (SSD 7293) would likely see GSNSW place a 1km transition area (buffer) around any approved expansion disturbance area (as the quarry uses blasting techniques). Accordingly, GSNSW advise that the associated transition area would slightly encroach further into Areas B3* (which includes the proposal site), *B1 and A1. Transition areas are an indicative area surrounding an identified resource (or operating mine or quarry). They indicate an area*

Urban Growth Area Variation Principles		Comment
		that may possibly be impacted by potential activities associated with mining or quarrying operations such as noise, vibration, dust, traffic etc. Transition areas 'flag' the possibility of not only potential impacts from active extractive operations, but conversely potential impacts from proposed development close to (and possibly encroaching on) identified resource areas. In relation to potential land use conflicts between the proposed Sancrox Quarry, the Sancrox Quarry Expansion Project and adjoining areas within the site, the Sancrox Quarry Expansion Project Environmental Impact Statement (EIS) (ERM 2019) has been considered in the development of this Planning Proposal. Whilst it is understood that the quarry expansion proposal may be refined in response to submissions received in relation to the public exhibition of the EIS, the EIS has been referenced as the best available source of information at the time that this Planning Proposal was developed. It is anticipated that any existing quarry impacts, or any impacts as a result of the refinement of the proposal are likely to be less than those associated with the current Sancrox Quarry Expansion proposal as detailed within the EIS. It is also anticipated that potential impacts to existing receivers assessed within the EIS can provide an indication of what impacts may occur to future potential receivers within the area, given that the most potentially impacted existing receivers are generally closer to the quarry than potential future receivers. In relation to the potential impacts of the quarry expansion, the EIS identified that both construction and operational noise levels have the potential to exceed the applicable criteria, limits and thresholds if they are not suitably mitigated. The assessment also identified that blasting overpressure and vibration levels have a limited potential to exceed the applicable criteria. In addition to noise and vibration, the EIS assesses

Urban Growth Area Variation Principles		Comment
		other potential impacts including air quality, hydrology, soil and water, traffic, social and amenity impacts which may occur as a result of the construction and operation of the quarry. In relation to potential impacts, the EIS recommends a number of mitigation, management and monitoring options to reduce these potential impacts. In relation to potential exceedances of the Approved Methods Criterion for air quality, the EIS found that the level of impact to surrounding sensitive receptors is considered to be acceptable under the Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industries Developments (NSW Government 2018). Overall, the EIS concluded that there were no significant environmental impacts identified during the preparation of the EIS that cannot be mitigated by appropriate mitigation and management strategies. Notwithstanding the above, this Planning Proposal incorporates land use intensification within the vicinity of the quarry. As such, the potential impacts of quarry operations in relation to this proposed change in land use have been considered as part of this Planning Proposal. In consideration of potential impacts, the proposed Le Clos Sancrox zoning and concept layout provides a vegetated buffer to the existing quarry and any future expansion to assist in mitigating potential impacts. The wider area of Sancrox surrounding the site is currently zoned rural, as is the subject site currently. Given the progression of the wider Fernbank Creek and Sancrox Planning Investigation, it is reasonable to expect that the adjoining land to the north and west will be pursued for similar development in the future under the framework of the draft Fernbank Creek and Sancrox Villages Structure Plan. The land to the

Urban Growth Area Variation Principles		Comment
		south and east is of high environmental value. As such, it would be reasonable to expect that land use in these locations will not change significantly in the future. Furthermore, the proposed zonings and concept layout provides for a vegetated corridor along much of these two boundaries which will provide a buffer to the environmentally significant land to the south and east, assisting with reducing any potential land use conflict.
Avoiding risk	The variation must avoid physically constrained land identified as: • flood prone; • bushfire-prone; • highly erodible; • having a severe slope; and • having acid sulfate soils.	The site is bush fire prone land and bush fire constraints, along with associated mitigation measures, have been identified through a Strategic Bush Fire Study to comply with Planning for Bushfire Protection 2019 (PBP 2019). This has included the zoning layout being developed having regard to the necessary Asset Protection Zones (APZs). The Strategic Bush Fire Study and associated APZ plans are included within Attachment D to this report. No other hazards have been identified in relation to this proposal.
Heritage	The variation must protect and manage Aboriginal and non-Aboriginal heritage.	The Planning Proposal is supported by an Aboriginal Cultural Heritage Assessment prepared by the Birpai Local Aboriginal Land Council. The assessment advised that there is no reason that the rezoning cannot proceed in respect to Aboriginal Cultural Heritage issues. The recommendations of the report state: *'Based on the Site Inspection and other investigations, there is no reason for an Aboriginal Cultural and Heritage perspective that this rezoning cannot proceed, subject to the following:* *1. An Aboriginal Sites office be present when excavation or clearing commences.* *2. At such time as development site works start, should any artefacts be turned up or located, Birpai LALC Aboriginal Site Officers are to be*

Urban Growth Area Variation Principles		Comment
		contacted immediately and work on site stopped pending further assessment.' As such, it has been determined that the rezoning can continue, subject to monitoring of any future clearing or earthworks during development of the site. In addition to the above, the maps accompanying the current LEP do not identify the site as being affected by heritage, nor the surrounding land. No State listed items are located within the vicinity of the site.
Coastal area	Only minor and contiguous variations to urban growth areas in the coastal area will be considered due to its environmental sensitivity and the range of land uses competing for this limited area.	The site is located west of the Pacific Highway, therefore this principal is not applicable.

Given the above, the Planning Proposal is considered to have planning merit for the following reasons:

- It gives effect to the North Coast Regional Plan 2036.
- It gives effect to the local Urban Growth Management Strategy.
- It responds to a change in circumstances with respect to the 2015 Structure Plan created for Sancrox and now reflects a desire for residential rather than rural-residential land use.
- It has site-specific merit, having regard to:
  - The substantially unconstrained nature of the site,
  - The implementation of the 'avoid, minimise, offset' principals in relation to the environmental values that are present on the site; and
  - The ability to connect the site to existing services and infrastructure, subject to extension and upgrading as applicable.

4. Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

The Le Clos Sancrox site is identified as a *'potential long term growth area'* on page 61 of Council's UGMS.

Key Action 6 of the UGMS incorporates *'preliminary stage 1 planning for potential future growth at Fernbank Creek and Sancrox'*. This planning has included the preparation of a discussion paper in relation to the Fernbank Creek and Sancrox Planning Investigation Area. This discussion paper was used to inform the development of the draft Fernbank Creek and Sancrox Villages Structure Plan, which includes the Le Clos Sancrox site.

Given the above, this proposal is considered to give effect to Council's endorsed UGMS and the draft Fernbank Creek and Sancrox Villages Structure Plan.

5. Is the planning proposal consistent with applicable State Environmental Planning Policies?

The proposal is consistent with applicable State Environmental Planning Policies. Detailed assessment of consistency is contained in **Appendix B**.

6. Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)?

The proposal is consistent with applicable Ministerial Directions under section 9.1 of the *Environmental Planning and Assessment Act* 1979. Detailed assessment of consistency is contained in **Appendix C**.

C - Environmental, social and economic impact.

7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

An ecological assessment has been undertaken in relation to this proposal and is included within Appendix D to this report. This assessment has found that the site contains threatened species and their habitats along with a confirmed and a mapped endangered ecological community (EEC). In order to avoid impacts to these species and

these areas, the principles of *'avoid, minimise, offset'* as detailed within the *Biodiversity Conservation Act* 2016 have been implemented in relation to the proposal through:

- Designating areas of high environmental value and/or significance as E2 or E3 zones where practicable, this includes designation of two areas of identified endangered ecological communities within the site as E2,
- Minimising vegetation removal and the subsequent requirement for offsets; and
- Pursuing on-site offset of vegetation removal where practical, where vegetation is proposed to be removed.

Along the eastern boundary of the site, in an area which includes existing dwellings, vegetation has been proposed to be retained and an E4 zoning has been proposed to reflect the existing dwellings while facilitating vegetation retention.

It can be noted that the original development footprint was larger in size and extended into the cleared southern area and along the eastern boundary where the current arrangement allows for dwelling sites. During the ecological review and discussions between Council and the Principal Applicant, these two key areas along the southern and eastern boundaries were substantially excluded from future development and an environmental zoning proposed through much of this area in order to create a corridor and buffer to adjacent vegetated areas. The existing Le Clos Sancrox Road will form the buffer between the new development and the corridor being created. This corridor will enhance the regional corridor on the adjoining land, which continues in a northward direction from the site.

To further ensure minimisation of vegetation removal, a vegetated corridor has now also been proposed along Sancrox Road. This will also assist to act as a visual and acoustic buffer to the nearby Sancrox Quarry, in addition to its ecological function.

Figure 1 below indicates the vegetation that is proposed to be removed based on the development concept plan, and the area of the site that is available for offset planting. This offset planting is in addition to existing vegetation being retained.

A draft Vegetation Management Plan has also been prepared for the overall development, which is illustrated within Figure 2 below.

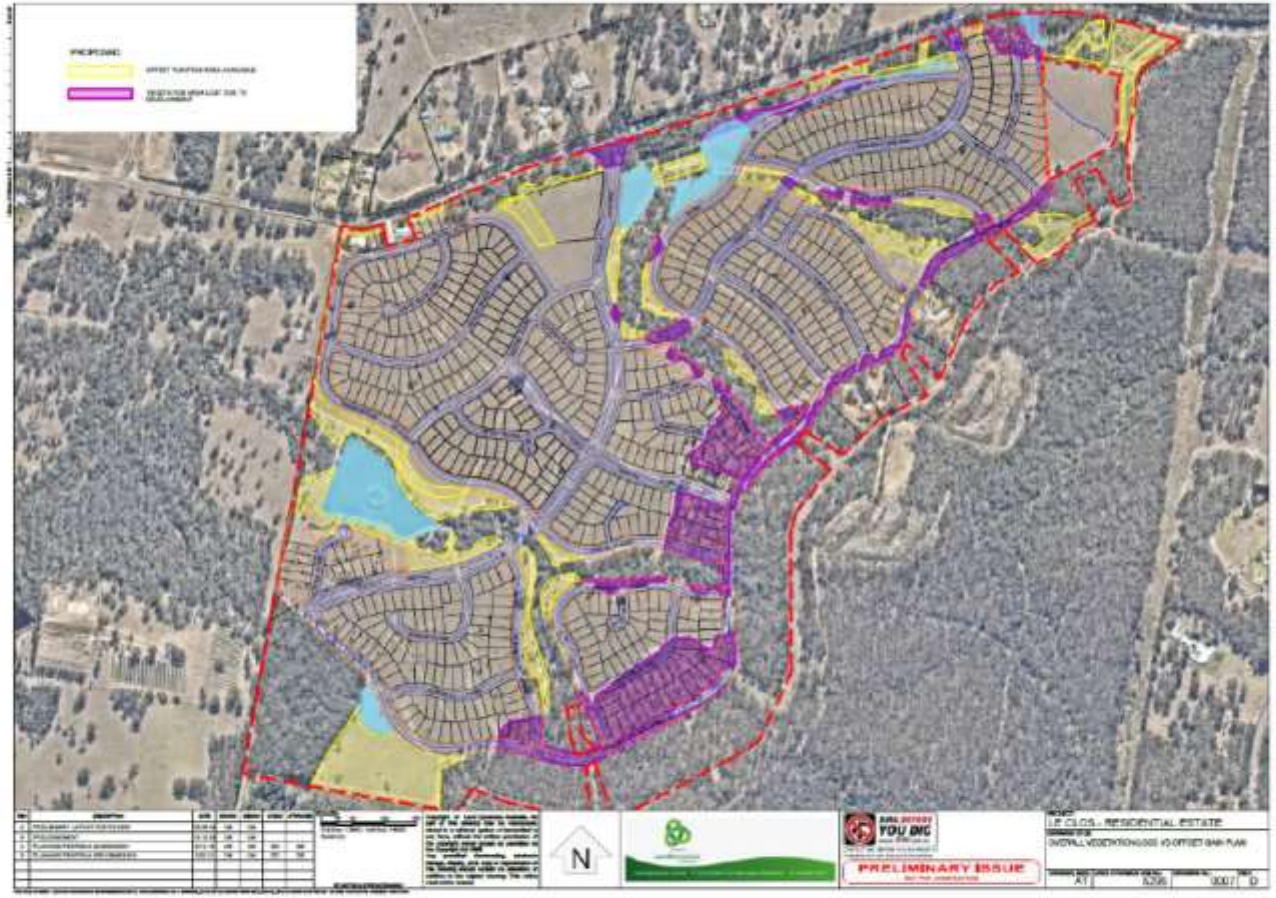


Figure 1 - Amount of Vegetation Removed and Offset Planting Area Available

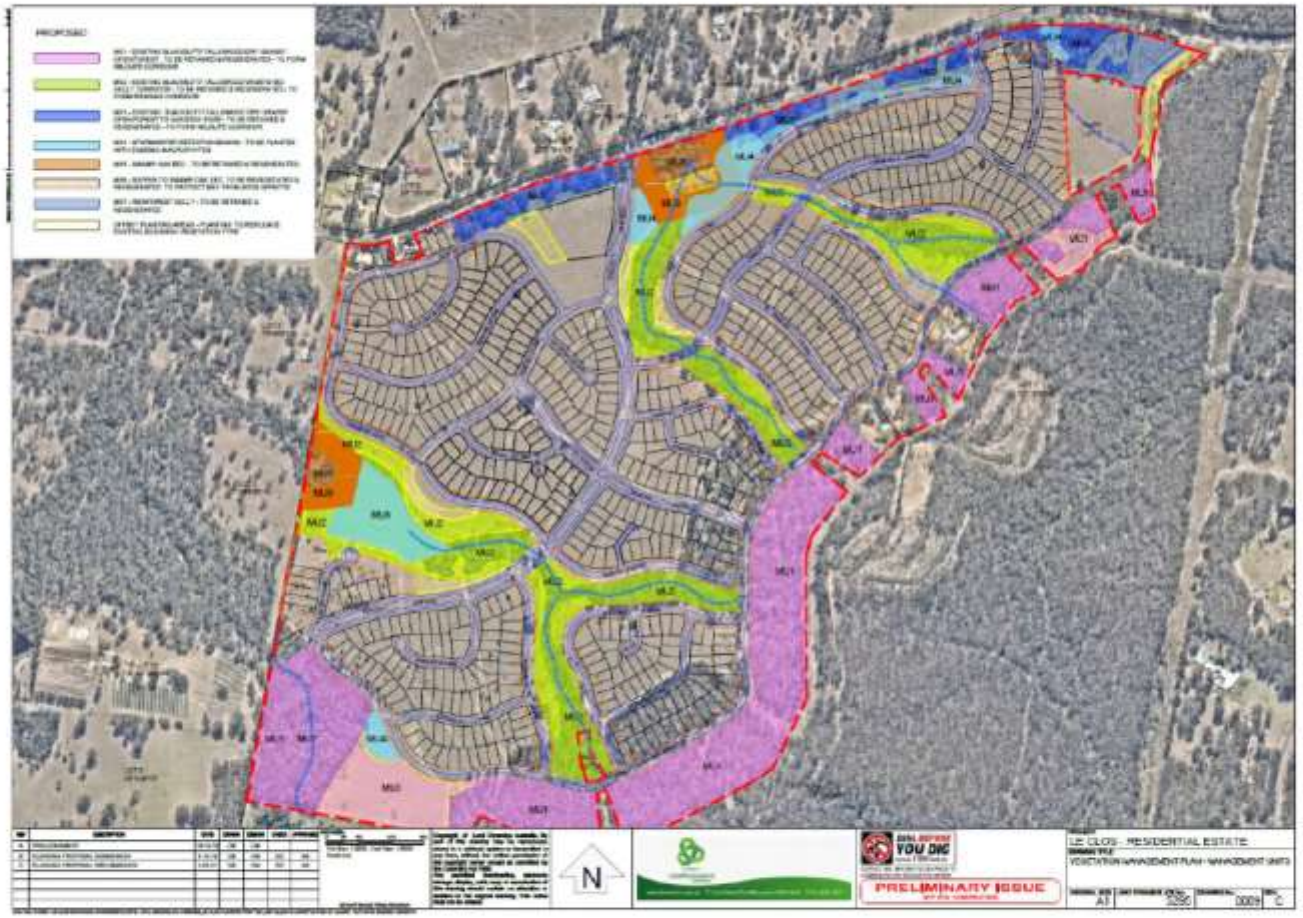


Figure 2 - Draft Vegetation Management Plan

The concept subdivision design provided by the Principal Applicant has also allowed for wider road reserves within the R1 land in order to accommodate drainage swales throughout the site. However, this will have a dual purpose from an ecological perspective to provide an increased buffer to the areas of higher environmental value.

The Principal Applicant has indicated that Biodiversity Certification will be pursued in relation to the proposal.

8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

Other likely environmental effects of the Planning Proposal are discussed under the headings below.

Bush Fire

The site is identified as being bush fire prone land. As such, a strategic bush fire study has been prepared to ensure consideration of potential bush fire impacts and the implementation of appropriate mitigation measures in accordance with the NSW Governments guideline *'Planning for Bushfire Protection 2019'*. This study is included within Appendix D to this report.

The Principal Applicant has advised that appropriate asset protection zones (APZs) can be accommodated on site and this has informed the environmental zoned land boundaries. The required APZs will be contained in residentially zoned land. An indicative subdivision layout, including APZs, has been provided with the documentation included within Appendix D to this report.

The Rural Fire Service has been consulted in relation to the Fernbank Creek and Sancrox Planning Investigation, which incorporates Le Clos Sancrox proposal. As a result of this consultation, advice has been provided to Council in relation to matters that should be taken into consideration in the preparation of the strategic bush fire study for the area. These matters have been considered in relation to the preparation of the Le Clos Sancrox strategic bush fire study included as Appendix D to this report.

Quarry Operations

The existing Sancrox Quarry is located to the immediate north of the proposal. It is an identified mineral resource which supplies the construction industry with a range of products. The operator of the quarry has also recently lodged a State Significant Development Application with the NSW Government to expand this quarry operation. The proposed quarry expansion footprint is illustrated within Figure 3 below.

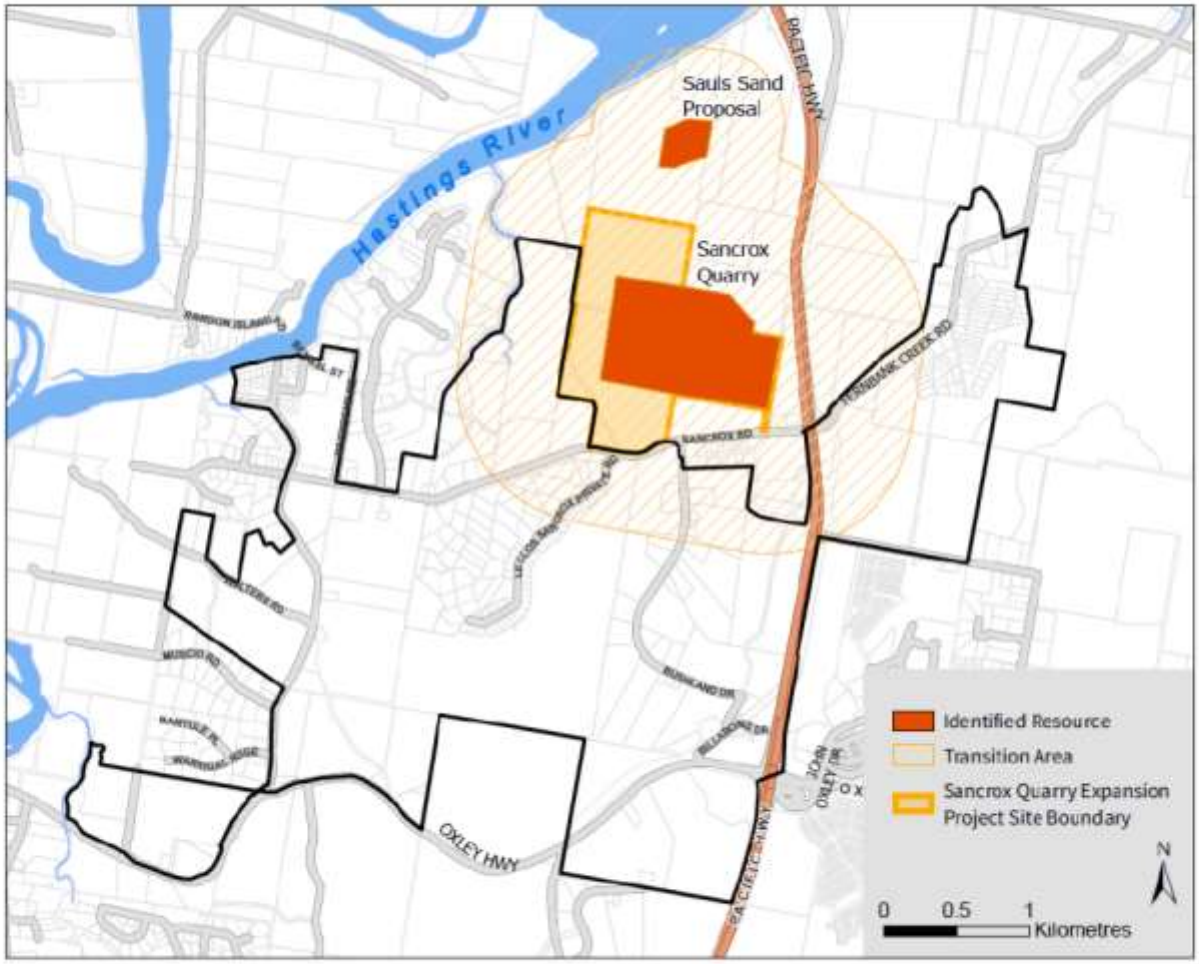


Figure 3 - Mineral Resources

In relation to potential land use conflicts between the proposed Sancrox Quarry, the Sancrox Quarry Expansion Project and adjoining areas within the site, the Sancrox Quarry Expansion Project Environmental Impact Statement (EIS) (ERM 2019) has been considered in the development of this Planning Proposal. Whilst it is understood that the quarry expansion proposal may be refined in response to submissions received in relation to the public exhibition of the EIS, the EIS has been referenced as the best available source of information at the time that this Planning Proposal was developed. It is anticipated that any existing quarry impacts, or any impacts as a result of the refinement of the proposal are likely to be less than those associated with the current Sancrox Quarry Expansion proposal as detailed within the EIS. It is also anticipated that potential impacts to existing receivers assessed within the EIS can provide an indication of what impacts may occur to future potential receivers within the area, given that the most potentially impacted existing receivers are generally closer to the quarry than potential future receivers.

In relation to the potential impacts of the quarry expansion, the EIS identified that both construction and operational noise levels have the potential to exceed the applicable criteria, limits and thresholds if they are not suitably mitigated. The assessment also identified that blasting overpressure and vibration levels have a limited potential to exceed the applicable criteria. In addition to noise and vibration, the EIS assesses other potential impacts including air quality, hydrology, soil and water, traffic, social and amenity impacts which may occur as a result of the construction and operation of the quarry.

In relation to potential impacts, the EIS recommends a number of mitigation, management and monitoring options to reduce these potential impacts. In relation to potential exceedances of the Approved Methods Criterion for air quality, the EIS found that the level of impact to surrounding sensitive receptors is considered to be acceptable under the Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industries Developments (NSW Government 2018).

Overall, the EIS concluded that there were no significant environmental impacts identified during the preparation of the EIS that cannot be mitigated by appropriate mitigation and management strategies.

Notwithstanding the above, this Planning Proposal incorporates land use intensification within the vicinity of the quarry. As such, the potential impacts of quarry operations in relation to this proposed change in land use have been considered as part of this Planning Proposal. In consideration of potential impacts, the proposed Le Clos Sancrox zoning and concept layout provides a vegetated buffer to the existing quarry and any future expansion to assist in mitigating potential impacts.

Potential Noise Impacts

An acoustic review has been undertaken to assess potential noise impacts associated with the proposal. This review is included within Appendix D of this report. The review has considered the adjoining land uses and traffic noise. These include Sancrox Road, the Sancrox Quarry, a nearby animal boarding and breeding establishment, potential high speed rail to the east and existing adjoining land uses. The acoustic review concludes:

Concerning traffic noise:

- Noise from existing significant roads will comply at the development due to the large separation distance. The site is approximately 1500 metres from the Pacific Highway.
- Traffic noise generated by the development on Sancrox Road is expected to comply at existing receptors. Those existing residences are generally setback 40 metres from the road.
- Traffic noise generated by the development is expected to comply at future receptors within the development itself.
- If a school is located on site, traffic noise into the school should be assessed. Depending on the location of the school, minor noise mitigation may be required.

Concerning noise from industrial facilities external to the site:

- Noise from the existing kennel north of the site may be audible at some lots. It is recommended that noise from the kennel be assessed and if mitigation is necessary, agreement be reached with the operator of the kennel.

Concerning noise from the proposed High Speed Rail (HSR):

- Given the distance from the alignment to the nearest proposed lots, and that the railway line may be in cut at this location, it is probable that noise from the railway will comply with guidelines at residential lots.
- HSR noise to a school, particularly if the school is located in the north-east corner of the site, may need to be considered. While noise to playgrounds will generally be satisfactory, noise to classrooms may require closed windows and therefore consideration of ventilation.

In addition to the above, in relation to the potential noise and vibration impacts of the Sancrox Quarry, as detailed previously within this document, the EIS identified that both construction and operational noise levels have the potential to exceed the applicable criteria, limits and thresholds if they are not suitably mitigated. The assessment also identified that blasting overpressure and vibration levels have a limited potential to exceed the applicable criteria. Notwithstanding the above, the EIS concluded that there were no significant environmental impacts identified during the preparation of the EIS that cannot be mitigated by appropriate mitigation and management strategies.

It can be noted that in order to retain trees along Sancrox Road, there is a considerable setback to Sancrox Road. This area could also be embellished with mounding or landscaping to assist further with acoustic mitigation.

If further potential acoustic impacts are identified at the development application stage, individual ameliorative measures can be investigated and implemented.

Visual Impacts

The site has frontage to Sancrox Road and will be visible to passers-by, as well as some nearby properties.

In order to mitigate potential visual impacts, a vegetated corridor has been proposed between Sancrox Road and much of the proposed development within the site. In addition, the provisions of Council's Development Control Plan would apply to future development within the site, which would act to guide urban design outcomes.

9. How has the planning proposal adequately addressed any social and economic effects?

The potential social and economic effects of the proposal are considered under the headings below.

Social

A Social Impact Assessment has been prepared in relation to this proposal. This assessment is included within Appendix D of this report.

In relation to liveability considerations, the concept design for the site provides opportunities for pedestrian and cyclist connectivity throughout the development. This network also connects through to existing employment land and the Thrumster Town Centre to the east and to other residential areas of the Fernbank Creek and Sancrox Planning Investigation Area to the north and west.

A location has been identified by the Principal Applicant for a potential school and child care centre in the western portion of the site in the vicinity of the local business centre. The portion of R3 zoned land also allows for increased densities and variety of housing form, within walking distance of the local centre and proposed bus stops.

The proposal includes potentially positive social and economic benefits through employment generation within the small business zone, as well as through the construction phase for all zones. It is not considered that the business component of the proposal would be a major attractor in its own right due to its small size and would complement the developing residential areas, as well as the existing population of Sancrox.

It has been concluded within the Social Impact Assessment that negative impacts associated with the proposal to allow for the subdivision can be mitigated as part of the development application design and assessment process, as well as through appropriate ongoing site management and as part of a refinement of certain aspects of the site design. In addition, the Principal Applicant has concluded that none of the issues identified in the consultation undertaken as part of the Social Impact Assessment would prevent the rezoning from occurring.

Economic

Based on the concept subdivision plan for the proposal as detailed within Appendix D of this report, the proposal will yield residential, business and open space urban development. It is expected that this development will contribute to increased economic activity within the local area, including within the existing townships of Wauchope and Thrumster.

During the social impact assessment survey undertaken by the Principal Applicant, a response was received from Hanson who operate the quarry to the north-east of the site. Beyond the amenity impacts discussed previously within this report, the Principal Applicant has determined that there could be an economic impact upon the quarry with the addition of new residents into the area, with subsequent potential implications on quarry operations. However, the Principal Applicant has outlined that the proposed zoning and concept subdivision layout has sought to minimise land use conflict between the proposal site and the quarry. It has been advised that this will be achieved through incorporation of a vegetated buffer and upgrades to Sancrox Road in addition to

mitigation measures proposed to be implemented by the quarry as a result of the proposed expansion of the quarrying operation.

In most instances, the demand for business zoned land within a new growth area would be generated over time by incremental population growth. However, in this instance, there is already some existing demand from existing residential and industrial development within Sancrox. Development of Le Clos Sancrox and the wider Sancrox area, along with the identified continued population growth, further strengthens the need for business land and a neighbourhood centre within the site.

Below is a summary of the key findings from the Economic Impact Assessment included as Appendix D to this report:

- There is unlikely to be an adverse impact upon the retail hierarchy of Port Macquarie given the small scale proposed.
- There is a strong need for a neighbourhood or local centre between Thrumster and Wauchope and the proposed zoning addresses a shortfall at the lower end of the hierarchy following the closure of the former Sancrox corner store.
- The local or neighbourhood centre will service existing residents, as well as the new population from Le Clos Sancrox and the remainder of the Sancrox area once developed.
- The potential economic impact will not threaten the viability or level of service presently enjoyed by residents and visitors, but will enhance the overall level of service by providing a facility not presently available in this location. Any potential impacts are likely to be in the short term and would be made good through the provision of a new business centre.
- The proposal (neighbourhood centre) will reduce car dependency due to its planned integration into the development of the new Le Clos Sancrox estate with good connectivity for walking and cycling and public transport.
- The net benefit to the community in providing a local or neighbourhood centre within Le Clos Sancrox residential development is the key contribution to provision of a liveable community.
- There will be an economic injection experienced by the businesses who operate from the proposed business land and the location and connections ensure easy access.

In relation to the potential economic impacts of the proposal to the wider community through infrastructure and service provision, initial work has been undertaken by Council to assess community income in relation to housing types. This initial assessment identified that high density residential development within existing town centres can generate more than 7 times more income per hectare for the community compared with duplexes, more than 8 times more income per hectare than detached standard residential houses and more than 190 times more income per hectare when compared with rural residential development.

In relation to expenditure to service these development types, lower density development further from town centres such as Port Macquarie and Wauchope require more infrastructure such as roads, drainage, water, sewer and services such as waste collection (as applicable) over greater distances to service fewer residents. This discrepancy between income and expenditure results in fewer resources being available to the community for other services and may ultimately result in an income deficit to service economically inefficient development types.

This proposal has sought to increase the efficiency of land use and housing supply in comparison with earlier work undertaken by Council to inform the Greater Sancrox Structure Plan 2014 - 2034. However, the most efficient and high value development type for the community will continue to be infill development, including high density development within existing town centres. Promotion of this development type is a key focus of the LSPS and the NCRP.

D - State and Commonwealth interests.

10. Is there adequate public infrastructure for the planning proposal?

Infrastructure would be adequate to meet the needs of the proposal with additional upgrades required by way of road works, new intersections, new sewerage and water infrastructure and extension of services. The Principal Applicant has indicated that the required upgrades and additional infrastructure would be funded by the developer and there is no expected shortfall in service provision. In addition, the scale of the Planning Proposal is not expected to place additional unreasonable demand on open space or waste facilities, with wider impacts associated with these facilities and services also being considered as part of the wider Fernbank Creek and Sancrox Planning Investigation. In relation to service provision by local emergency and community services, consultation is required to be undertaken as part of the progression of this proposal and the wider Fernbank Creek and Sancrox Planning Investigation to identify any additional service requirements and associated mechanisms to facilitate such services.

Essential infrastructure currently available to the site includes water, electricity and telecommunications. A number of the services would need to be upgraded to ensure capacity is met and this will require further detailed investigation. Plans included within Appendix D of this report show preliminary future servicing concepts for the site.

Any additional future infrastructure requirements associated with the proposal identified through the wider Fernbank Creek and Sancrox Planning Investigation or any other Council, State or Federal Government investigation, plan or strategy would be required to be addressed at the developers expense. Servicing and infrastructure is discussed in further detail under the headings below.

Vehicle, Pedestrian and Cyclist Network

From an accessibility perspective, the site is well located with respect to major roads and the traffic network. The site has frontage to Sancrox Road, which has access to the east to the Pacific Highway and Oxley Highway to the south via Rawdon Island Road. The traffic assessment accompanying this Planning Proposal identifies the need for road upgrades to Sancrox Road and addition of round-a-bouts at the two new roads. There is no identified need for intersection upgrades at existing intersections with Sancrox Road. However, the traffic assessment has recommended minor intersection works as the development progresses, in order to improve road safety, but not directly related to the Le Clos Sancrox development. This provides a wider public benefit for the area.

The upgrade works to Sancrox Road would allow for bus stops, pedestrian pathways and Cycleway, which all assist with connections into the future subdivision and connection from Le Clos Sancrox to the wider community.

Railway

Wauchope railway station is located approximately six kilometres to the west of the site and provides access to Sydney to the south and Brisbane to the north.

In addition, a potential high speed rail corridor and station has been identified for land immediately east of the site. Whilst there is currently no certainty that the high speed rail proposal will proceed, this Planning Proposal has had regard to the corridor and there is the ability to extend the pedestrian connectivity from the site to the station in the future should this proposal eventuate.

Stormwater and Water Quality

The site naturally drains towards Sancrox Road and the western boundary with a number of first and second order streams dissecting the site. A large dam is located to the central western boundary capturing a large portion of the runoff from the property and the adjoining property to the south and west. In relation to maintaining water quality, the intent would be to provide bioretention in the gullies, utilising the natural topography of the site.

Water quality measures are included in the stormwater design to treat the water as it traverses the site via a series of swales, to avoid the need for large basins.

The design has allowed for wider road reserves within the proposed R1 land in order to accommodate the drainage swales throughout the site. The wider road reserve will have many additional benefits in addition to accommodating the drainage infrastructure, but will also increase the openness of the overall development, provide further buffer to areas of high environmental value and allow for asset protection zones.

Sewer

Sewer is not currently available to the site but is located to the eastern end of Sancrox Road, adjoining Expressway Spares.

New sewer infrastructure would be required to service the site. The Principal Applicant has identified that the preferred option would be to provide a 'centralised' sewer pump station to the north of the site allowing greater flexibility to service a larger surrounding area. This option incorporates a rising main along Sancrox Road feeding back into the existing sewer pump station located at the intersection of Sancrox Road and the Pacific Highway. This would then discharge into the existing gravity fed network. The Principal Applicant has further advised that sewer servicing of the site can alternatively be managed by way of a 'self-servicing' sewer pump station upon the site itself with a sewer rising main leading back to the existing sewer pump station at the intersection of Sancrox Road and Pacific Highway. Although not the preferred option, it could be considered if time and landowner consent issues delayed or prevented the 'centralised' option from occurring within a reasonable timeframe.

Preliminary calculations have been prepared by the Principal Applicant to ensure the provision of a gravity sewer system within the site and leading to a 'self-servicing' pump station is feasible. These calculations have also been extended to include a 'centralised' pump station option including a larger surrounding catchment area.

Preliminary calculations undertaken by Council have indicated that sewer infrastructure will be required to be extended and updated to service the proposal. Further investigation will be required to determine detailed requirements and the cost of such infrastructure provision will be required to be funded by the developer.

Water

Although the UGMS mentions a very limited water supply from the existing Sancrox Reservoir to the Sancrox area for domestic and firefighting purposes (UGMS, p.111), a

new 20 mega litre reservoir has been constructed. This reservoir caters for the current and future demands of urban development and urban growth areas including the Sancrox area.

The current water supply network includes existing 100mm diameter and 150mm diameter watermains located along Sancrox Road and within the development site. It is envisaged however that the 300mm water main near to Expressway Spares to the east would need to be upgraded in the future along Sancrox Road to the subject site. Further investigation will be required to determine detailed requirements and the cost of such infrastructure provision will be required to be funded by the developer.

Telecommunications

A Dial Before You Dig search shows that telecommunications already exist to the site, servicing the smaller existing lots along the Le Clos Sancrox Road. This network will be required to be upgraded to service any future lots and development sites.

Confirmation has been received by the Principal Applicant from NBN Co in 2018 that NBN can be made available to the site.

Electricity

The Principal Applicant has advised that a *'Dial Before You'* Dig search shows that an electrical network already exists to the site servicing the smaller existing lots along the Le Clos Sancrox Road. This network will be required to be upgraded to service any future lots and developments sites. An email was received by the Principal Applicant from Essential Energy in 2018 confirming that the site can be serviced, subject to staging. Essential Energy will also be consulted in relation to electrical servicing for the wider Fernbank Creek and Sancrox area as part of the Fernbank Creek and Sancrox Planning Investigation. This will ensure holistic consideration of electrical provision to cater for future potential growth within the Fernbank Creek and Sancrox area.

11. What are the views of State and Commonwealth public authorities consulted in accordance with the gateway determination?

Consultation in relation to this proposal will be undertaken in accordance with relevant statutory requirements as part of the planning process, which occurs post-Gateway determination.

Notwithstanding the above, proactive consultation in relation to this proposal has been undertaken by the Principal Applicant with representatives of the Department of Planning, Industry and Environment's Planning Division, as well as the Biodiversity and Conservation Division. Below is a summary of the key discussions with both divisions as advised by the Principal Applicant.

Department of Planning, Industry and Environment's Planning Division

- Review the need for land, land supply may be zoned but not necessarily developable.
- Address the UGMS, variation principles and section 9.1 Ministerial Directions.
- The Department has identified this area for investigation.
- Explain the merits and how it fits within with the wider planning.
- Address inconsistency regarding the quarry.

Department of Planning, Industry and Environment's Biodiversity Conservation Division

- Address the NCRP and avoid areas of High Environmental Value (HEV).
- Explain how the proposal maximises avoidance and how the layout has evolved with respect to ecology. Look at constraints and opportunities, avoid HEV and form an argument which supports the proposed land uses.
- Consider Bio-certification at Planning Proposal stage.
- Consider Aboriginal Heritage.
- Consider impacts from basins, pathways and road edges in the ecological assessment.
- Identify recreational open space, not just conservation.

A letter was received by the Principal Applicant after a site visit with the Department of Planning, Industry and Environment's Biodiversity Conservation Division which provided further information regarding biodiversity conservation, including application and determination processes, as well as discussing consistency with the NCRP. These comments have been considered and incorporated into this document in accordance with information provided by the Principal Applicant.

Discussions have also been held between the Principal Applicant and the Department of Education to ascertain whether a public school would be appropriate in this location. The Department of Education advised that they did not feel there was a need. Discussions have also occurred between the Principal Applicant and a private school provider who has expressed interest and the north-west corner of the site as a possible future school location.

It can be noted that much of the above information in relation proactive consultation has been provided by the Principal Applicant in support of this proposal, and has generally not been verified by Council. However, any future statutory consultation would be verified by Council and managed in accordance with applicable Council policies and statutory requirements.

Part 4 – Mapping

A - Affected land

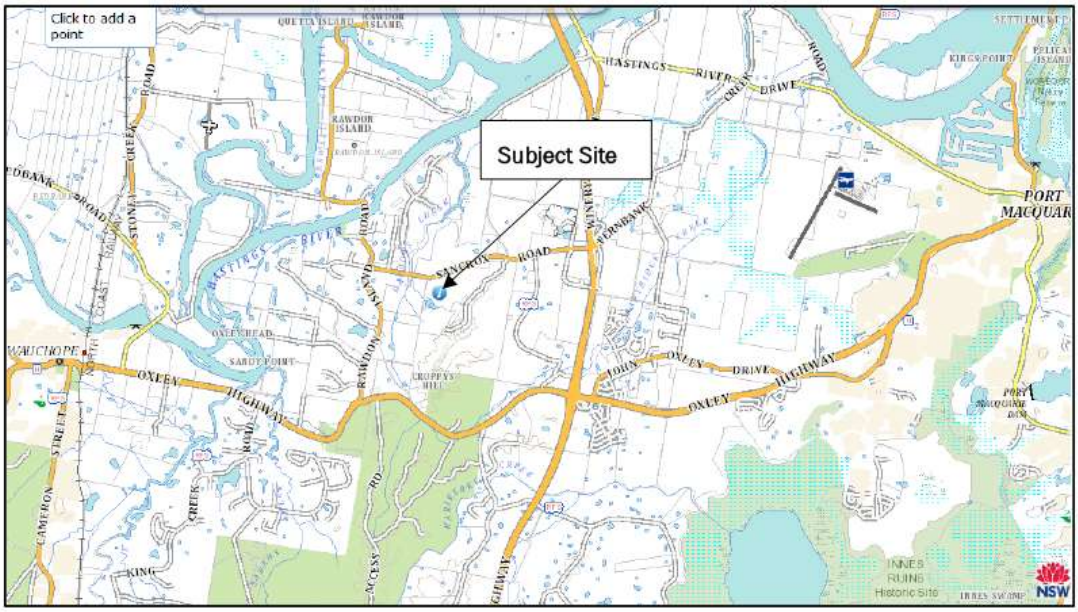


Figure 4 - Contextual Location of the subject land (source: www.sixmaps.nsw.gov.au)



Figure 5 – Location of Extent of Le Clos Sancrox Highlighted Yellow

B - Comparison of before and after

Below are map extracts showing the current mapping and proposed changes.

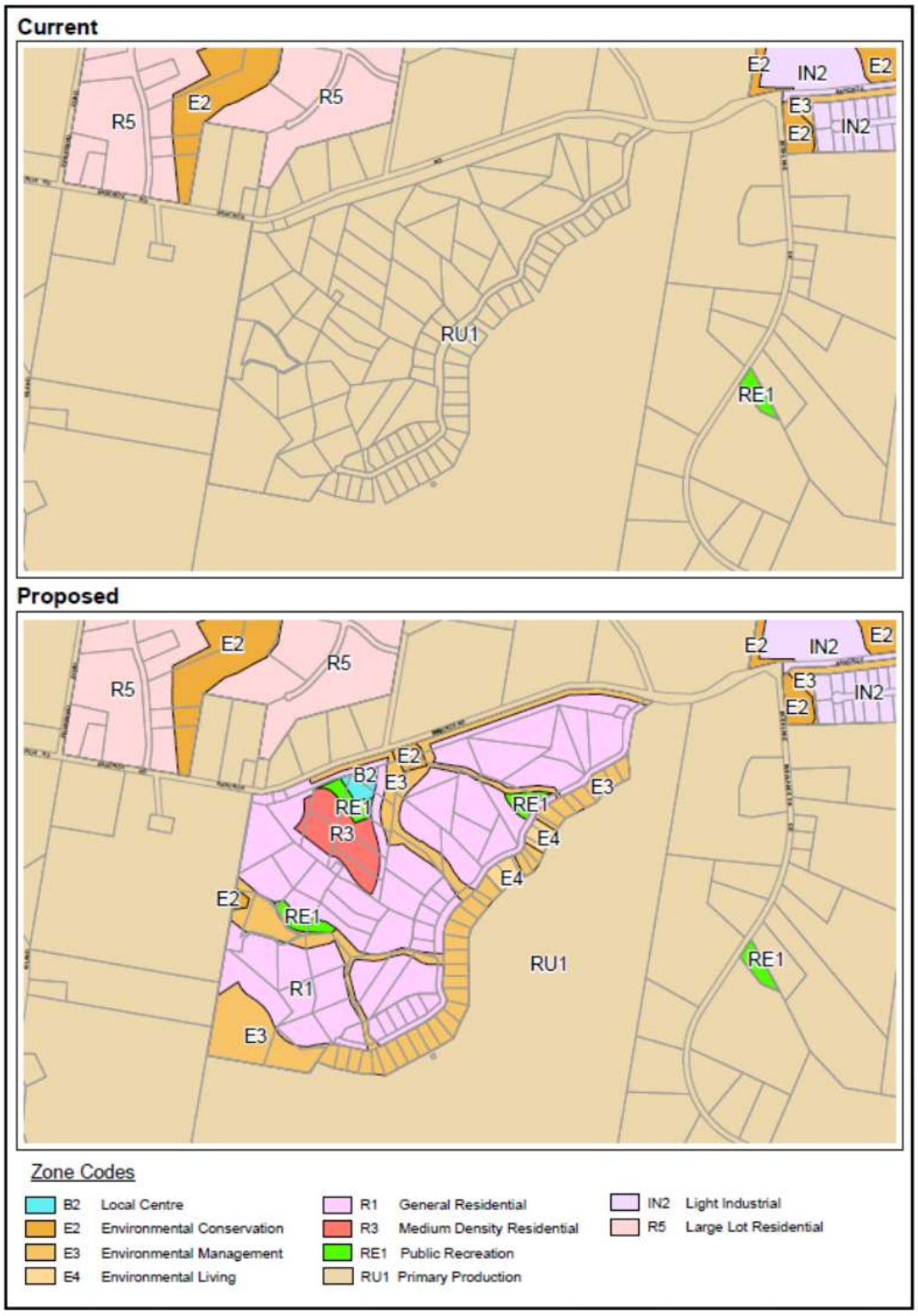


Figure 6 - Land Zoning Map

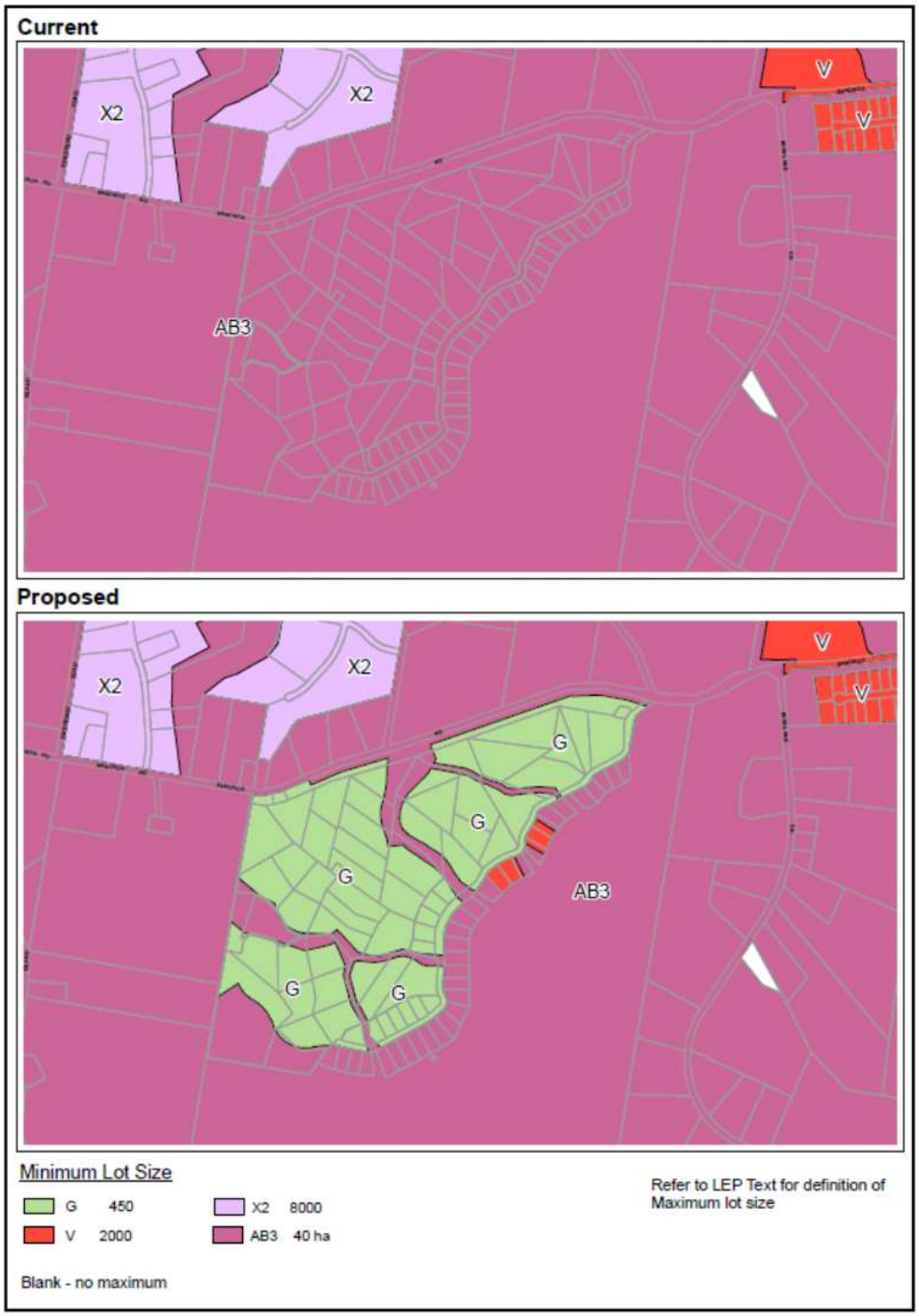


Figure 7 - Lot Size Map



Figure 8 - Floor Space Ratio Map



Figure 9 - Height of Buildings Map

C - Draft LEP maps

If the Planning Proposal is approved, then the current relevant LEP map sheets will be replaced by the above map sheets.

Note that while these maps may appear like the legal LEP maps, the only LEP maps that have any legal status are those listed and viewable on the NSW Legislation website. The map name (at the bottom of the map legend), including the date ("YYYYMMDD") at the end, is important. The date represents the date that version of the map was prepared, and not the date that it took effect (if at all).

If the Planning Proposal is approved, then the final maps may be updated from the maps forming part of this Planning Proposal to include:

- Any changes made by Council,
- Formatting changes, and
- Any applicable updates arising from other concurrent LEP amendments.

Part 5 – Community Consultation

Community consultation associated with this proposal would be undertaken in accordance with relevant statutory requirements as part of the planning process, which occurs post-Gateway determination.

Proactive community consultation undertaken to date by the Principal Applicant has occurred as part of the development of a Social Impact Assessment, included within Appendix D to this report. Feedback received as a result of this consultation has been reported to be generally positive, with amenity impacts such as noise from the nearby animal boarding establishment and quarry having been considered in the design of the zoning layout and concept subdivision plan.

In addition to the above, significant stakeholder consultation has also been undertaken as part of the development of the draft Fernbank Creek and Sancrox Villages Structure Plan, which includes the subject site. This has included internal Council consultation in relation to the Structure Plan undertaken as part of an internal working group on 17 September 2019. Feedback from this working group has been used to inform the development of a subsequent Discussion Paper and Fact Sheet. These documents were formally placed on public exhibition for a period of 28 days from 22 January 2020 until 19 February 2020. During this period, feedback from the community was sought through:

- Addressed letters and fact sheets posted to landholders within and adjoining the Planning Investigation Area,
- A landholder workshop / presentation at Council's Port Macquarie Customer Service Centre on 6 February 2020,
- Provision of information on Council's website,
- Advertisement in local print media on 22 and 29 January and 5 and 12 February 2020; and
- A 'pop up' session held at Sovereign Place Town Centre, Thrumster on 12 February 2020.

45 submissions were received as a result of this public exhibition, including submissions from six government agencies, being Transport for New South Wales, the Department of

Planning, Industry and Environment (Planning Division), Essential Energy, the Department of Primary Industries (Agriculture), the Department of Primary Industries (Fisheries) and the Department of Planning, Industry and Environment (Biodiversity Conservation Division).

Matters raised within the submissions received have been considered during the preparation of the draft Fernbank Creek and Sancrox Villages Structure Plan.

Stakeholder consultation during the preparation of the draft Fernbank Creek and Sancrox Villages Structure Plan has also been undertaken with various project stakeholders including landholders, community members and Government Agencies. This consultation has included a community information session on 24 September 2020 and a Government Agency reference group meeting on 30 November 2020.

Once finalised, the draft Fernbank Creek and Sancrox Villages Structure Plan is intended to be placed on public exhibition for a period of 28 days to seek further feedback from the community and other stakeholders in the finalisation of the draft Structure Plan.

Part 6 – Project Timeline

The project timeline below is based on anticipated dates and timeframes, though there can be unexpected delays. It is assumed that Council has delegation to carry out certain plan-making functions. Delegation would be exercised by Council's Chief Executive Officer or the Director of Strategy and Growth.

Table 2 - Project Timeline

	2021									2022				
Anticipated dates	A	M	J	J	A	S	O	N	D	J	F	M	A	M
Commencement (date of Gateway determination)														
Timeframe for the completion of required technical information														
Timeframe for government agency consultation (pre and post exhibition as required by Gateway determination)														
Commencement and completion dates for public exhibition period														
Timeframe for consideration of submissions														
Timeframe for the consideration of the proposal post exhibition														
Date of submission to the department to finalise the LEP														
Date Council will make the plan (if delegated)														
Date Council will forward to the department for notification.														

Appendix A – Report to Council and Meeting Minutes 20 February 2019

PORT MACQUARIE HASTINGS COUNCIL

MINUTES
Ordinary Council Meeting
20/02/2019

PRESENT

Members:

Councillor Lisa Intemann (Deputy Mayor)
Councillor Rob Turner
Councillor Michael Cusato
Councillor Peter Alley
Councillor Justin Levido
Councillor Geoff Hawkins
Councillor Lee Dixon

Other Attendees:

General Manager (Craig Swift-McNair)
Director Corporate Performance (Rebecca Olsen)
Director Development and Environment (Melissa Watkins)
Acting Director Infrastructure (Jeffery Sharp)
Acting Director Strategy and Growth (Holly McBride)
Group Manager Governance and Procurement (Blair Hancock)
Governance Support Officer (Bronwyn Lyon)
Communications Manager (Andy Roberts)

The meeting opened at 5:30pm.

01 ACKNOWLEDGEMENT OF COUNTRY

The Deputy Mayor opened the Meeting with an Acknowledgement of Country and welcomed all in attendance in the Chamber.

02 LOCAL GOVERNMENT PRAYER

Pastor Mark Minturn from the Coastside Church delivered the Local Government Prayer.

03 APOLOGIES

RESOLVED: Dixon/Alley

That the apologies received from Mayor Pinson and Councillor Griffiths be accepted.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

04 CONFIRMATION OF MINUTES

RESOLVED: Cusato/Hawkins

That the Minutes of the Ordinary Council Meeting held on 12 December 2018 be confirmed.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

05 DISCLOSURES OF INTEREST

Councillor Cusato declared a Non-Pecuniary, Significant Interest in Item 11.01 - Notice of Motion - Exception Under General Provisions of the Markets Policy, the reason being that Councillor Cusato Has business interests selling the same products.

Councillor Cusato declared a Pecuniary Interest in Item 12.15 - Airport Business Park Planning Proposal - status update, the reason being that Councillor Cusato is the owner of a hanger in the precinct.

Councillor Levido declared a Non-Pecuniary, Significant Interest in Item 12.10 - Strategic Land Use Planning - Fernbank Creek and Sancrox, the reason being that Councillor Levido is the principle of Levido Law and Property. The Firm acts for the owners of property within the West Lindfield precinct dealt with as part of the report before Council.

Councillor Levido declared a Non-Pecuniary, Significant Interest in Item 12.11 - Planning Proposal - 2019 Administrative Review of Port Macquarie - Hastings LEP 2011, the reason being that Councillor Levido is the principle of Levido Law and Property. The Firm acts for the owner of a property the subject of the report before Council.

Councillor Levido declared a Non-Pecuniary, Significant Interest in Item 12.12 - Homedale Road, Kew - Planning Proposal and Draft Development Control Plan Provisions - consideration of submissions, the reason being that Councillor Levido is the principle of Levido Law and Property. The Firm acts for the owner of the property the subject of the report before Council.

Councillor Levido declared a Non-Pecuniary, Significant Interest in Item 14.05 - T-18-53 Design and Construction of Underbores - Beechwood and Bonny Hills, the reason being that Councillor Levido is the principle of Levido Law and Property. The Firm acts for the principals of one of the tenderers as to the matter the subject of the report before Council.

Councillor Intemann declared a Non-Pecuniary, Less Than Significant Interest in Item 12.14 - DA2018 - 562.1 Demolition of Existing Buildings, Consolidation and Boundary Adjustment, and Construction of Seniors Housing at Lots 10 - 13 DP 861177, Lot 1 DP 782560, Lot 1 DP 393967, Lot 1 DP 390610, Lot 1 DP 1053812, Lot 1 DP 121189, Lot 1 DP 795534, Lot 1 DP 151300, Lot 3 and 4 DP 347796, No. 15 - 21 Cameron Street and 3 Young Street, Wauchope, the reason being that Councillor Intemann is a Director of Hastings Co-operative, which is located nearby to the Wauchope RSL proposal. After consultation with the Hastings Co-operative Executive, Councillor Intemann declared a non-pecuniary less than significant interest arising from the possibility of no more than an “insignificant” benefit to the Hastings Co-operative business from potential patronage from the future residents of the proposed development.

06.01 MAYORAL DISCRETIONARY FUND ALLOCATIONS

RESOLVED: Intemann

That the Mayoral Discretionary Fund allocations for the period 29 November 2018 to 6 February 2019 inclusive be noted.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

07 CONFIDENTIAL CORRESPONDENCE TO ORDINARY COUNCIL MEETING

RESOLVED: Levido/Dixon

That Council determine that the attachments to Item Numbers 09.09 and 09.12 be considered as confidential, in accordance with section 11(3) of the Local Government Act.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

08 PUBLIC FORUM

The Deputy Mayor advised of applications to address Council in the Public Forum from:

1. Mr Grant Mitchell regarding Impact of Proposed Flood Free Airport Access Route on Oxley Highway / Fernhill Road Residents and Wildlife.
2. Ms Peta Watters regarding Orbital Road Opposition.
3. Mr James Munro regarding Orbital Road Proposal.
4. Mr Stuart Redman regarding The Hatch Road – Air Monitoring.

RESOLVED: Turner/Alley

That the above requests to speak in the Public Forum be acceded to.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

08.01 IMPACT OF PROPOSED FLOOD FREE AIRPORT ACCESS ROUTE ON OXLEY HIGHWAY / FERNHILL ROAD RESIDENTS AND WILDLIFE

Mr Grant Mitchell, representing the Fernhill Road and Oxley Highway Sustainable Progress Group, addressed Council in regard to the Impact of the Proposed Flood Free Airport Access Route on Oxley Highway / Fernhill Road Residents and Wildlife.

08.02 ORBITAL ROAD OPPOSITION

Ms Peta Watters addressed Council in regard to opposition of the Orbital Road.

08.03 ORBITAL ROAD PROPOSAL

Mr James Munro addressed Council in regard to an Orbital Road Proposal.

08.04 THE HATCH ROAD - AIR MONITORING

Mr Stuart Redman addressed Council in regard to air monitoring of The Hatch Road.

REQUEST TO SPEAK ON AN AGENDA ITEM

The Deputy Mayor advised of requests to speak on an agenda item, as follows:

Item 12.07 – Mr Garry Krestensen in opposition of the recommendation.
Item 12.08 – Mr Philip Lloyd in opposition of the recommendation.
Item 12.09 – Rev. Dr. John Barrett OAM in opposition of the recommendation.
Item 12.09 – Mr Tony Thorne in support of the recommendation.
Item 12.09 – Mr Grant Mitchell in opposition of the recommendation.
Item 11.01 – Mr Ian McKittrick in support of the recommendation.
Item 11.01 – Mr Desley Bailey in support of the recommendation.
Item 12.02 – Dr John Lusk in support of the recommendation.
Item 12.10 – Mr Maurice Driscoll in opposition of the recommendation.
Item 12.10 – Mr Graham Burns in opposition of the recommendation.
Item 12.12 – Ms Julie Edgecombe in opposition of the recommendation.
Item 12.13 – Ms Elizabeth Williams in opposition of the recommendation.
Item 12.13 – Mr Wayne Evans in support of the recommendation.
Item 12.14 – Ms Geraldine Haigh in support of the recommendation.
Item 12.17 – Mr David Pensini in support of the recommendation.

RESOLVED: Hawkins/Dixon

That the requests to speak on an agenda item be acceded to.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

SUSPENSION OF STANDING ORDERS

RESOLVED: Alley/Turner

That Standing Orders be suspended to allow Items 12.06, 12.07, 12.08, 12.09, 11.01, 12.02, 12.10, 12.12, 12.13, 12.14 and 12.17 to be brought forward and considered next.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.06 QUESTION FROM PREVIOUS MEETING - ORBITAL ROAD - DEVELOPMENT IN INVESTIGATION AREA

RESOLVED: Levido/Alley

That Council note the information provided in this report regarding development of the Orbital Road route options and investigation area.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.07 QUESTION FROM PREVIOUS MEETING - ORBITAL ROAD - CURRENT INVESTIGATION AREA

Mr Garry Krestensen addressed Council in opposition of the recommendation and answered questions from Councillors.

RESOLVED: Levido/Cusato

That Council note the information contained in this report regarding the determination of the current investigation zone for the Orbital Road.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.08 PORT MACQUARIE-HASTINGS LOCAL GOVERNMENT AREA TRAFFIC STUDY

Mr Philip Lloyd addressed Council in opposition of the recommendation and answered questions from Councillors.

RESOLVED: Alley/Levido

That Council note:
1. The information contained in this report and attached Port Macquarie-Hastings Local Government Area Traffic Study reports.
2. That the Port Macquarie-Hastings Local Government Area Traffic Study will be used for strategic future road network and land use planning.
3. That any future road upgrades identified within this study will be the subject of separate Council resolutions prior to work being undertaken.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.09 ORBITAL ROAD - FEASIBILITY STUDY

Rev. Dr. John Barrett OAM, representing the St Columba Anglican School, addressed Council in opposition of the recommendation.

Mr Tony Thorne, King and Campbell Pty Ltd, representing Jim and Gail Newton, addressed Council and spoke on the information in the report and raised concerns with respect to some of the information provided and answered questions from Councillors.

Mr Grant Mitchell representing Save Fernhill Community Action Group addressed Council in opposition of the recommendation and answered questions from Councillors.

RESOLVED: Alley/Turner

That Council:
1. Note the information contained in this report and the attached Engineering Feasibility Study for the proposed Orbital Road.
2. Further that in noting the Engineering Feasibility Study (which is the subject of this report), does not infer that Council has made any decisions on a preferred route or routes for the proposed Orbital Road.
3. Note that any future decisions on preferred routes relating to the proposed Orbital Road, will be the subject of future reports to Council for consideration.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

11.01 NOTICE OF MOTION - EXCEPTION UNDER GENERAL PROVISIONS OF THE MARKETS POLICY

Councillor Cusato declared a Non-Pecuniary, Significant Interest in this matter and left the room and was out of sight during the Council's consideration, the time being 7:37pm.

Mr Ian McKittrick, Ewetopia Farm, address Council in support of the recommendation and answered questions from Councillors.

Ms Desley Bailey, The Eastward Garden, addressed Council in support of the recommendation.

RESOLVED: Intemann/Hawkins

That Council:
1. Subject to a successful application under Council's Markets Policy, admit the Tuesday Real Food Market in the Hay Street Forecourt as a trial exception

under the general provisions of the Markets Policy relating to timing in the CBD, with a set-up time from 11am and start time of noon, and the trial to end 31 December 2019.

2. Request the General Manager to:
   a) Report to Council any future application for exception under the Markets Policy, for Council's determination.
   b) Advise the approved operator of the Hay Street Forecourt Tuesday Real Food Market of the terms of the policy exception for those markets, namely that only fresh local food products be offered, and the approved operator is required to manage the stalls in accordance with the approved exception and provide a compliance report by 30 November 2019.
   c) Table the compliance report referred to in 2(b) to Council in conjunction with the review of Markets Policy at the December 2019 Ordinary Council Meeting.

CARRIED: 6/0
FOR: Alley, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

Councillor Cusato returned to the meeting, the time being 07:56pm.

Councillor Hawkins left the meeting, the time being 7:57pm.
Councillor Hawkins returned to the meeting, the time being 7:58pm.

12.02 LEGAL ADVICE ON WATER FLUORIDATION

Dr John Lusk addressed Council in support of the recommendation.

RESOLVED: Turner/Alley

That Council note the information included in this Legal Advice on Water Fluoridation report.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.10 STRATEGIC LAND USE PLANNING - FERNBANK CREEK AND SANCROX

Councillor Levido declared a Non-Pecuniary, Significant Interest in this matter and left the room and was out of sight during the Council's consideration, the time being 8:00pm.

Mr Maurice Driscoll, Maurice Driscoll Consulting, representing the Le Clos Sancrox Landowners, addressed Council in opposition of the recommendation and answered questions from Councillors.

Mr Graham Burns, Land Dynamics, representing the landowners, addressed Council in opposition of the recommendation and answered questions from Councillors.

RESOLVED: Turner/Hawkins

That Council:
1. Note the information in the February 2019 Strategic Land Use Planning - Fernbank Creek and Sancrox Report.
2. Note that a Greater Sancrox Area Structure Plan was tabled at the Council Meeting in February 2015 and deferred pending adoption of the UGMS.
3. Note that according to landowner representatives, the Le Clos Sancrox owners have all now committed to acting as a single entity to achieve a co-ordinated planning outcome.
4. Immediately commence Stage 1 planning to prepare an Outline Plan for Sancrox-Fernbank Creek as detailed in the UGMS.
5. Invite the Le Clos Sancrox landowners to submit a planning proposal in parallel with Stage 1 planning in order to assist in informing the planning process.
6. Allow the General Manager to adequately resource this program.
7. Include regular updates on this matter in the biannual Site Specific LEP Amendments Update Report in March and September of each year.

CARRIED: 6/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann and Turner
AGAINST: Nil

12.12 HOMEDALE ROAD, KEW - PLANNING PROPOSAL AND DRAFT DEVELOPMENT CONTROL PLAN PROVISIONS - CONSIDERATION OF SUBMISSIONS

Councillor Levido declared a Non-Pecuniary, Significant Interest in this matter and remained out of the room and was out of sight during the Council's consideration.

Ms Julie Edgecombe addressed Council in opposition of the recommendation and answered questions from Councillors.

RESOLVED: Cusato/Turner

That this item be deferred pending consideration of potential unauthorised works on the site and the matter be reported back to Council with advice on these matters as soon as practicable.

CARRIED: 6/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann and Turner
AGAINST: Nil

Councillor Levido returned to the meeting, the time being 8:31pm.

Councillor Dixon left the meeting, the time being 8:31pm.
Councillor Dixon returned to the meeting, the time being 8:33pm.

12.13 DA2017 - 667.1 DEMOLITION OF EXISTING BUILDING AND CONSTRUCTION OF BOAT STORAGE FACILITY AND PUBLIC AMENITIES, TREE REMOVAL AND ROAD WORKS AT LOT 2 DP 535212, NO. 9 MCINHERNEY PARK, PORT MACQUARIE

Ms Elizabeth Williams addressed Council in opposition of the recommendation.

Mr Wayne Evans, representing Sailability, addressed Council in support of the recommendation and answered questions from Councillors.

RESOLVED: Intemann/Hawkins

1. That DA2017 – 667 for demolition of existing building and construction of boat storage facility and public amenities, tree removal and road works at Lot 2, DP 535212, McInherney Close, Port Macquarie, be determined by granting consent subject to the recommended conditions.
2. That the facility and land tenure arrangements be confirmed and reported back to Council.

CARRIED: 6/1
FOR: Alley, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Cusato

12.14 DA2018 - 562.1 DEMOLITION OF EXISTING BUILDINGS, CONSOLIDATION AND BOUNDARY ADJUSTMENT, AND CONSTRUCTION OF SENIORS HOUSING AT LOTS 10 - 13 DP 861177, LOT 1 DP 782560, LOT 1 DP 393967, LOT 1 DP 390610, LOT 1 DP 1053812, LOT 1 DP 121189, LOT 1 DP 795534, LOT 1 DP 151300, LOT 3 AND 4 DP 347796, NO. 15 - 21 CAMERON STREET AND 3 YOUNG STREET, WAUCHOPE

Councillor Intemann declared a Non-Pecuniary, Less Than Significant Interest in this matter and remained in the room during the Council's consideration.

Ms Geraldine Haigh, GEM Planning Projects, representing the applicant, addressed Council in support of the recommendation and answered questions from Councillors.

RESOLVED: Levido/Cusato

That this matter be deferred to enable a briefing to Councillors on car parking specific to this application and generally and the historical agreement of 1967 involving the Wauchope RSL Club and Council and a report be brought back to the April 2019 Council Meeting.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.17 DA2018 - 353.1 COMMERCIAL PREMISES AND TOURIST AND VISITOR ACCOMMODATION WITH CLAUSE 4.6 VARIATION TO CLAUSE 4.3 (HEIGHT OF BUILDINGS) AND CLAUSE 4.4 (FLOOR SPACE RATIO) OF THE PORT MACQUARIE-HASTINGS LOCAL ENVIRONMENTAL PLAN 2011 AT LOT 123 DP 1219042, NO. 17 CLARENCE STREET, PORT MACQUARIE

Mr David Pensini, representing the applicant, addressed Council in support of the recommendation and answered questions from Councillors.

MOVED: Levido/Intemann

That DA2018 – 353 be refused on the grounds that:
1. Insufficient on-site car parking has been provided (deficit of 21 spaces) as required by the Port Macquarie-Hastings Development Control Plan 2013. In the context of this proposed tourist development located within an area with time limited parking the public interest would not be well served by allowing such a significant shortfall in parking spaces on site, or offsetting this number of spaces via the contribution plan.
2. The proposed turning movements at the reception area are unreasonably compromised and should be redesigned to avoid regular interruption to the in-out vehicular movements by the 3-point turn.

FORESHADOWED MOTION

MOVED: Intemann

That DA2018 – 353 be deferred to allow the applicant to readdress non-compliance with development standards and provide further car parking provision on site so as to avoid dependence on parking offsets.

THE MOTION WAS PUT

MOVED: Levido/Intemann

That DA2018 – 353 be refused on the grounds that:
1. Insufficient on-site car parking has been provided (deficit of 21 spaces) as required by the Port Macquarie-Hastings Development Control Plan 2013. In the context of this proposed tourist development located within an area with time limited parking the public interest would not be well served by allowing such a significant shortfall in parking spaces on site, or offsetting this number of spaces via the contribution plan.
2. The proposed turning movements at the reception area are unreasonably compromised and should be redesigned to avoid regular interruption to the in-out vehicular movements by the 3-point turn.

LOST: 3/4
FOR: Cusato, Dixon and Levido
AGAINST: Alley, Hawkins, Intemann and Turner

FORESHADOWED MOTION WAS PUT

RESOLVED: Intemann/Alley

That DA2018 – 353 be deferred to allow the applicant to readdress non-compliance with development standards and provide further car parking provision on site so as to avoid dependence on parking offsets.

CARRIED: 6/1
FOR: Alley, Cusato, Dixon, Hawkins, Intemann and Turner
AGAINST: Levido

09.01 QUESTION FROM PREVIOUS MEETING - MAYOR - DELEGATED AUTHORITY

RESOLVED: Turner/Levido

That Council note the information contained in this response to the Question from Previous Meeting relating to the Mayors Delegated Authority.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.02 MID NORTH COAST JOINT ORGANISATION FINANCIAL STATEMENT

RESOLVED: Alley/Levido

That Council note the information contained in this Mid North Coast Joint Organisation financial statement report.

CARRIED: 5/2
FOR: Alley, Dixon, Intemann, Levido and Turner
AGAINST: Cusato and Hawkins

09.03 STATUS OF REPORTS FROM COUNCIL RESOLUTIONS

RESOLVED: Cusato/Turner

That Council note the information contained in the Status of Reports from Council Resolutions report.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.04 DESIGNATED PERSONS

RESOLVED: Levido/Hawkins

That Council determine that the following position become a Designated Person pursuant to the provisions of section 441 of the Local Government Act 1993:

1. Project Manager Infrastructure Delivery.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.05 DISCLOSURE OF INTEREST RETURN

RESOLVED: Levido/Hawkins

That Council note the Disclosure of Interest returns for the following positions:

1. Building Surveyor Team Leader Building Regulation – Fire Safety
2. Contracts Administrator
3. Design Engineer
4. Development Compliance Co-ordinator
5. Development Compliance Officer
6. Engineering Planning Manager
7. Environmental Projects Officer
8. Group Manager Digital Technology
9. Group Manager Organisational Performance
10. Group Manager Regulatory Services (title change from Group Manager Compliance)
11. Land Use Planning Manager
12. Operations Engineer
13. Senior Works Engineer
14. Stormwater Engineer
15. Water and Sewer Operations Manager
16. Water and Sewer Planning Manager
17. Water and Sewer Process Manager
18. Water and Sewer Process Engineer
19. Water and Sewer Headworks Engineer
20. Water and Sewer Operations Engineer
21. Water and Sewer Planning Engineer
22. Works Engineer

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.06 DELEGATED AUTHORITIES - CERTIFICATE OF IDENTIFICATION ISSUED UNDER THE SWIMMING POOLS ACT 1992

RESOLVED: Cusato/Alley

That the seal of Council be affixed to the certificates of identification issued under the Swimming Pools Act 1992, for the following Council staff:

1. Anna Stricker – Building Surveyor

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.07 2020 ORDINARY LOCAL GOVERNMENT ELECTION

RESOLVED: Alley/Hawkins

That Council note:

1. The Office of Local Government circular informing of an Independent Pricing and Regulatory Tribunal review relating to the costs of conducting local government elections in New South Wales.
2. That a further report will be presented to Council when the Electoral Commission estimates to administer the 2020 local government election and constitutional referendum are released.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.08 POLICY REVIEW - RISK MANAGEMENT POLICY- POST PUBLIC EXHIBITION

RESOLVED: Hawkins/Alley

That Council:

1. Adopt the Risk Management Policy.
2. Rescind the Risk Management Framework Policy and reclassify the document as an internal procedure.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.09 LEGAL FEES

RESOLVED: Alley/Cusato

That Council note the information in the Legal Fees report.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.10 FINANCIAL IMPACT OF COST SHIFTING FROM OTHER LEVELS OF GOVERNMENT

RESOLVED: Hawkins/Levido

That Council note the information contained in the Financial Impact of Cost Shifting From Other Levels of Government report.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.11 INVESTMENT POLICY REVIEW - POST EXHIBITION

RESOLVED: Cusato/Hawkins

That Council adopt the amended Investment Policy.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.12 QUARTERLY BUDGET REVIEW STATEMENT - DECEMBER 2018

RESOLVED: Hawkins/Turner

That Council note the Quarterly Budget Review Statement for the December 2018 Quarter.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.13 MONTHLY BUDGET REVIEW - JANUARY 2019

RESOLVED: Hawkins/Intemann

That Council:
1. Adopt the adjustments in the "Budget Variations – January 2019" section of the Monthly Budget Review – January 2019.
2. Amend the 2018-2019 Operational Plan to include all budget adjustments approved in this report.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.14 INVESTMENTS - DECEMBER 2018

RESOLVED: Hawkins/Turner

That Council note the Investment Report for the month of December 2018.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.15 INVESTMENTS - JANUARY 2019

RESOLVED: Alley/Hawkins

That Council note the Investment Report for the month of January 2019.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.16 2018-2019 OPERATIONAL PLAN - QUARTERLY PROGRESS REPORT AS AT 31 DECEMBER 2018

RESOLVED: Dixon/Cusato

That Council note the 2018-2019 Operational Plan - Quarterly Progress Report as at 31 December 2018.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.17 GLASSHOUSE BIANNUAL REPORT AND UPDATE ON STRATEGIC PLAN RECOMMENDATIONS

RESOLVED: Turner/Hawkins

That Council note the information provided in the Glasshouse Biannual Report and Update on Strategic Plan Recommendations report.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.18 DIGITAL TECHNOLOGY PROJECT STATUS

RESOLVED: Hawkins/Dixon

That Council note the information in the Digital Technology Project Status report and the progress made to date.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.19 COMMUNICATIONS STRATEGY - OXLEY HIGHWAY TRAFFIC CONGESTION AND ROADS AUTHORITIES

RESOLVED: Turner/Hawkins

That Council note the action taken and communications planning in place regarding the Oxley Highway traffic congestion and Council versus State Government road responsibilities.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

09.20 DEVELOPMENT ACTIVITY AND ASSESSMENT SYSTEM PERFORMANCE

RESOLVED: Cusato/Dixon

That Council note:
1. The Development Activity and Assessment System Performance report for the second quarter of 2018-2019; and
2. The four (4) clause 4.6 - Port Macquarie-Hastings Local Environmental Plan 2011 determinations that have been made under staff delegation.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

10.01 RECOMMENDED ITEMS FROM THE MAYOR'S SPORTING FUND SUB-COMMITTEE - DECEMBER 2018

RESOLVED: Intemann/Turner

That Council, pursuant to the provisions of Section 356 of the Local Government Act 1993, grant financial assistance from the Mayor's Sporting Fund as follows:
1. Kayle Enfield the amount of $350.00 to assist with the expenses he would have incurred travelling to and competing at the Australian All Schools National Surfing Titles held in South Australia from 1 – 8 December 2018 inclusive.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

10.02 FINAL REPORT: ABORIGINAL AWARENESS AND UNDERSTANDING STRATEGY 2013 - 2017

RESOLVED: Turner/Hawkins

That Council:
1. Note the end of term report of the Aboriginal Awareness and Understanding Strategy 2013 – 2017.
2. Request the General Manager report this matter to the next Cultural Steering Group.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

10.03 GRANT APPLICATIONS QUARTERLY REPORT

RESOLVED: Cusato/Hawkins

That Council note the first quarterly Grant Application Report, providing an overview of grants applied for or obtained in the 2018-19 financial year.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

10.04 TOWN CENTRE MASTER PLAN PRIORITY PROJECT - DRAFT OPERATIONAL PLAN 2019/20

RESOLVED: Hawkins/Dixon

That Council:
1. Approve the deferral of the following Town Centre Master Plan projects from the 2018/19 Operational Plan listed in the financial section of this report to allow for focus on the Port Macquarie Foreshore Walkway Project.
2. Include in the draft 2019/2020 operational plan a budget of $985,000 for the Port Macquarie Foreshore Walk Project from the Town Centre Master Plan Reserve.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

Item - 11.01 Notice of Motion - Exception Under General Provisions of the Markets Policy - has been moved to another part of the document.

12.01 NOTICE OF MOTION - CLASSIFICATION OF OCEAN DRIVE AND HASTINGS RIVER DRIVE TO STATE ROAD

RESOLVED: Alley/Cusato

That Council:
1. Note that Ocean Drive and Hastings River Drive are currently classified by the Roads and Maritime Services as a Regional Road.
2. Request the General Manager write to the Hon. Melinda Pavey MP, Minister for Roads, Maritime and Freight, requesting that Gazetted Road Number 600 be reclassified as a State Road under the Roads Act 1993.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

Item - 12.02 Legal Advice on Water Fluoridation - has been moved to another part of the document.

12.03 BOUNDARY ADJUSTMENT BETWEEN PART COUNCIL'S PORT MACQUARIE WATER SUPPLY DAM LAND AND 1 ORR STREET

RESOLVED: Hawkins/Turner

That Council note that the application for the boundary adjustment between part Council's Port Macquarie Water Supply Dam Land and 1 Orr Street has been withdrawn by the applicant.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.04 CLASSIFICATION OF LAND REQUIRED FOR SEWER PURPOSES AT COMBOYNE AND LONG FLAT

RESOLVED: Levido/Dixon

That Council:

1. Pursuant to Section 34 of the Local Government Act 1993, commence the process to classify the following lots as "operational" land by placing on public exhibition from 27 February 2019 for a minimum period of 28 days, the proposed resolutions:
   a) "It is intended to classify Lot 1 DP1240385 (land situated at Main Street, Comboyne) as operational land";
   b) "It is intended to classify Lot 2 DP1244793 (land situated off Henry Street, Long Flat) as operational land";
   c) "It is intended to classify Lot 2 DP1244795 (land situated off Henry Street, Long Flat) as operational land".
2. Note that a further report will be tabled to Council at the April 2019 Ordinary Council meeting, detailing any submissions received from the public during the exhibition period.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

12.05 TRANSFER OF LAND TO COUNCIL FOR SEWER PURPOSES - PACIFIC HIGHWAY, SANCROX

Councillor Alley left the meeting, the time being 10:11pm.

RESOLVED: Levido/Hawkins

That Council:
1. Accept the transfer of Lot 3 Deposited Plan 1241253, Pacific Highway, Sancrox;
2. Delegate authority to the General Manager to execute, electronically or otherwise, all documents including, but not limited to, any authorisation form as required associated with the transfer in accordance with the Electronic Transactions Act 2000;
3. Pursuant to Section 34 of the Local Government Act 1993 commence the process to classify Lot 3 Deposited Plan 1241253 as "operational land" by placing on public exhibition the proposed resolution "It is intended to classify Lot 3 Deposited Plan 1241253 (land situated at Pacific Highway, Sancrox) as operational land" from 27 February 2019 for a minimum period of 28 days;
4. Note that a further report will be tabled at the April 2019 Ordinary Council meeting detailing any submissions received during the exhibition period.

CARRIED: 6/0
FOR: Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

Item - 12.06 Question From Previous Meeting - Orbital Road - Development in Investigation Area - has been moved to another part of the document.

Item - 12.07 Question From Previous Meeting - Orbital Road - Current Investigation Area - has been moved to another part of the document.

Item - 12.08 Port Macquarie-Hastings Local Government Area Traffic Study - has been moved to another part of the document.

Item - 12.09 Orbital Road - Feasibility Study - has been moved to another part of the document.

Item - 12.10 Strategic Land Use Planning - Fernbank Creek and Sancrox - has been moved to another part of the document.

12.11 PLANNING PROPOSAL - 2019 ADMINISTRATIVE REVIEW OF PORT MACQUARIE - HASTINGS LEP 2011

Councillor Levido declared a Non-Pecuniary, Significant Interest in this matter and left the room and was out of sight during the Council's consideration, the time being 10:12pm.

RESOLVED: Turner/Cusato

That Council:
1. Prepare a draft Planning Proposal as described in this report, pursuant to section 3.33 of the Environmental Planning and Assessment Act 1979, for the amendment of the provisions of Port Macquarie-Hastings Local Environmental Plan 2011, in relation to the seven issues as generally described in this report.
2. Forward the draft Planning Proposal to the Department of Planning and Environment for a Gateway Determination pursuant to section 3.34 of the Act, and request that the Gateway Determination authorise Council to be the local plan-making authority.
3. Upon receipt of the Gateway Determination, complete the relevant procedures under section 3.34 and clause 4 of Schedule 1 of the Act, including public exhibition of the Planning Proposal.

CARRIED: 5/0
FOR: Cusato, Dixon, Hawkins, Intemann and Turner
AGAINST: Nil

Councillor Levido returned to the meeting, the time being 10:13pm.

Councillor Alley returned to the meeting, the time being 10:13pm.

Item - 12.12 Homedale Road, Kew - Planning Proposal and Draft Development Control Plan Provisions - consideration of submissions - has been moved to another part of the document.

Item - 12.13 DA2017 - 667.1 Demolition Of Existing Building And Construction Of Boat Storage Facility And Public Amenities, Tree Removal And Road Works At Lot 2 DP 535212, No. 9 McInherney Park, Port Macquarie - has been moved to another part of the document.

Item - 12.14 DA2018 - 562.1 Demolition of Existing Buildings, Consolidation and Boundary Adjustment, and Construction of Seniors Housing at Lots 10 - 13 DP 861177, Lot 1 DP 782560, Lot 1 DP 393967, Lot 1 DP 390610, Lot 1 DP 1053812, Lot 1 DP 121189, Lot 1 DP 795 - has been moved to another part of the document.

12.15 AIRPORT BUSINESS PARK PLANNING PROPOSAL - STATUS UPDATE

Councillor Cusato declared a Pecuniary Interest in this matter and left the room and was out of sight during the Council's consideration, the time being 10:13pm.

RESOLVED: Levido/Dixon

That Council note the information contained in the Airport Business Park Planning Proposal – Status Update report.

CARRIED: 6/0
FOR: Alley, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

Councillor Cusato returned to the meeting, the time being 10:16pm.

Councillor Hawkins left the meeting, the time being 10:16pm.

12.16 WITHDRAWAL OF CAVEATS - LOT 16 DP 1221921 AND LOT 234 DP 1224670, BRENCHLEY CIRCUIT (RIVERBREEZE ESTATE), WAUCHOPE

RESOLVED: Levido/Turner

That Council:
1. Approve the execution of the Withdrawal of Caveats AK978502 and AM225925 relating to Lot 16 DP 1221921 and Lot 234 DP 1224670, Brenchley Circuit, Wauchope; and
2. Authorise the General Manager to execute any necessary dealings in respect of this matter.

CARRIED: 6/0
FOR: Alley, Cusato, Dixon, Intemann, Levido and Turner
AGAINST: Nil

Item - 12.17 DA2018 - 353.1 Commercial Premises and Tourist and Visitor Accommodation with Clause 4.6 variation to Clause 4.3 (Height of Buildings) and Clause 4.4 (Floor Space Ratio) of the Port Macquarie-Hastings Local Environmental Plan 2011 at Lot 123 DP 1219 - has been moved to another part of the document.

13 QUESTIONS FOR NEXT MEETING

13.01 PARKING STRATEGY AND PARKING CONTRIBUTIONS RESERVE

Question from Councillor Intemann:

Could the General Manager please update Councillors on the status of the review of the Parking Strategy and the parking contributions reserve?

Comments by Councillor (if provided)**:**

Nil.

13.02 WAUCHOPE HERITAGE DEVELOPMENT CONTROL PLAN

Question from Councillor Intemann:

Could the General Manager please update Councillors on the status of a heritage DCP, or similar, for Wauchope, in view of comments by Council's Heritage Advisor on page 235 of the agenda identifying an "urgent need" for such instruments.

Comments by Councillor (if provided)**:**

Nil.

13.03 AIRPORT PLANNING PROPOSAL - REGULAR REPORTING SCHEDULE

Question from Councillor Turner:

Could the General Manager advise if there is a regular reporting schedule planned for the airport planning proposal?

Comments by Councillor (if provided)**:**

Nil.

Councillor Hawkins returned to the meeting, the time being 10:18pm.

CONFIDENTIAL COMMITTEE OF THE WHOLE

RESOLVED: Turner/Alley

1. That pursuant to section 10A subsections 2 & 3 and 10B of the Local Government Act 1993 (as amended), the press and public be excluded from the proceedings of the Council in Confidential Committee of the Whole (Closed Session) on the basis that items to be considered are of a confidential nature.
2. That Council move into Confidential Committee of the Whole (Closed Session) to receive and consider the following items:

Item 14.01	Council Owned Land in William Street Port Macquarie (PIN 34119) This item is considered confidential under Section 10A(2)(c) of the Local Government Act 1993, as it contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.
Item 14.02	EOI-18-04 Independent Member of the Audit, Risk and Improvement Committee This item is considered confidential under Section 10A(2)(c) of the Local Government Act 1993, as it contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.
Item 14.03	Supply of Electricity This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.
Item 14.04	Update on T-18-26 Supply of a Fully Automated, Self Cleaning Toilet Facility This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.
Item 14.05	T-18-53 Design and Construction of Underbores - Beechwood and Bonny Hills This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.
Item 14.06	T-18-59 Hastings River Drive Upgrade - Pre-construction This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial

information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.

Item 14.07 Hastings River Drive Property Purchase
This item is considered confidential under Section 10A(2)(c) of the Local Government Act 1993, as it contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

3. That the resolutions made by the Council in Confidential Committee of the Whole (Closed Session) be made public as soon as practicable after the conclusion of the Closed Session and such resolutions be recorded in the Minutes of the Council Meeting.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

ADJOURN MEETING

The Ordinary Council Meeting adjourned at 10:19pm.

RESUME MEETING

The Ordinary Council Meeting resumed at 10:30pm.

ADOPTION OF RECOMMENDATIONS FROM THE CONFIDENTIAL COMMITTEE OF THE WHOLE

RESOLVED: Turner/Alley

That the undermentioned recommendations from Confidential Committee of the Whole (Closed Session) be adopted:

Item 14.01 Council Owned Land in William Street Port Macquarie (PIN 34119)

This item is considered confidential under Section 10A(2)(c) of the Local Government Act 1993, as it contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

RECOMMENDATION
That Council:
1. Note the information contained in the Council Owned Land in William Street Port Macquarie (PIN 34119) report.
2. Delegate authority to the General Manager to enter into a Second Deed of Extension with Gowing Bros Limited, to extend the date for exercise of the Call Option Deed with Gowing Bros Limited for the option to purchase the property by a further six (6) months to 4 October 2019.

Item 14.02 EOI-18-04 Independent Member of the Audit, Risk and Improvement Committee

This item is considered confidential under Section 10A(2)(c) of the Local Government Act 1993, as it contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

RECOMMENDATION
That Council:
1. Appoint Mr Michael Parkinson as an independent member of the Audit, Risk and Improvement Committee for a four (4) year term.
2. Maintain the confidentiality of the documents and considerations in respect of Expression of Interest EOI-18-04.

Item 14.03 Supply of Electricity

This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.

RECOMMENDATION
That Council:
1. Note the rates accepted by Local Government Procurement for the contract extension to the Supply of Electricity contracts.
2. Maintain the confidentiality of the documents and considerations

in respect of the Supply of Electricity contracts.

Item 14.04 Update on T-18-26 Supply of a Fully Automated, Self Cleaning Toilet Facility

This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.

RECOMMENDATION
That Council note the information contained in the Update on T-18-26 Supply of a Fully Automated, Self Cleaning Toilet Facility Report.

Item 14.05 T-18-53 Design and Construction of Underbores - Beechwood and Bonny Hills

This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.

RECOMMENDATION
That Council:
1. Accept the quotation from Ledonne Constructions Pty Ltd for $555,643 (exclusive of GST) for the Design and Construction of Underbores – Beechwood and Bonny Hills.
2. Affix the seal of Council to the necessary documents.
3. Maintain the confidentiality of the documents and considerations in respect of Tender T-18-53.

Item 14.06 T-18-59 Hastings River Drive Upgrade - Pre-construction

This item is considered confidential under Section 10A(2)(d(i)) of the Local Government Act 1993, as it contains commercial information of a confidential nature that would, if disclosed, prejudice the commercial position of the person who supplied it.

RECOMMENDATION
That Council:
1. Defer consideration of Tender T-18-59 Hastings River Drive Upgrade – preconstruction project until the 20 March 2019 Ordinary Council meeting.
2. Maintain the confidentiality of the documents and consideration in respect of request for quotation T-18-59.

Item 14.07 Hastings River Drive Property Purchase

This item is considered confidential under Section 10A(2)(c) of the Local Government Act 1993, as it contains information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

RECOMMENDATION
That Council:

1. Undertake an acquisition for the purchase of Lot 2 DP39064 (210 Hastings River Dr, Port Macquarie).
2. Submit an offer and commence acquisition, once the impact of flood mapping is determined, within the adopted value range nominated by Council's Consulting Valuer for the purchase of Lot 1 DP39064 (212A Hastings River Dr, Port Macquarie).
3. Subject to the outcome of resolutions 1 and 2 above, delegate to the General Manager authority to:
   a) Sign the Contracts for Sale.
   b) Sign the letters to Revenue NSW seeking an exemption from the payment of Stamp Duty.
   c) Sign the Revenue NSW Purchaser Declaration Forms.
   d) Sign the Land Registry Services Transfer Forms.
   e) Sign any of the above or additional forms, either by hand or electronically, that may be required with the recent introduction of e-conveyancing.
4. Utilise Council's Hastings River Drive Contributions Plan and an internal loan from Council's Major Roads Contribution Plan to complete these acquisitions.
5. Combine the Hastings River Drive and Major Roads Contributions Plans at the time of updating the Major Roads Contribution Plan.
6. Reimburse the relevant Contribution Plan should any future sales of the land occur.
7. On completion of the purchase of each of Lot 2 DP39064 (210 Hastings River Dr, Port Macquarie) and Lot 1 DP39064 (212A Hastings River Dr, Port Macquarie), pursuant to Section 34 of the Local Government Act 1993, commence the process to classify each of the lots as "operational" land by placing on exhibition for minimum period of 28 days the proposed resolution "it is intended to classify Lot 2 DP39064 (210 Hastings River Dr, Port Macquarie) and Lot 1 DP39064 (212A Hastings River Dr, Port Macquarie) as operational land."
8. Note that a further report will be tabled to Council detailing any submissions received from the public during the exhibition period.

CARRIED: 7/0
FOR: Alley, Cusato, Dixon, Hawkins, Intemann, Levido and Turner
AGAINST: Nil

The meeting closed at 10:31pm.

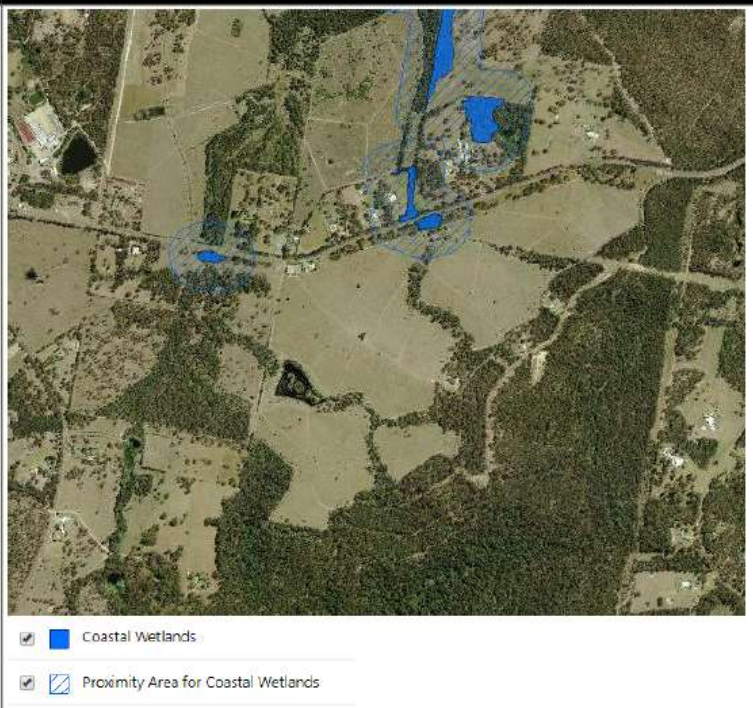
.....
Peta Pinson
Mayor

Appendix B – Consistency with applicable State Environmental Planning Policies

Listed below are the SEPPs that are relevant to the subject proposal.

State Environmental Planning Policies	Consistency
State Environmental Planning Policy (Koala Habitat Protection) 2020	This SEPP: • Provides a framework for councils to prepare a strategic koala plan of management that would apply to the whole or part of a local government area. • Applies to development applications on land over one hectare in a relevant LGA. • Requires development applications to be consistent with a council strategic koala plan of management that applies to the land, or, if there is no strategic plan, sets out a two-step process to determine if the land is core koala habitat and if it is, produce an Individual Koala Plan of Management before council can grant consent to a development application. • Exempts clearing of vegetation from the application of the SEPP if the purpose of the clearing is to maintain an Asset Protection Zone as part of rebuilding a dwelling destroyed or damaged by bush fire and allows the dwelling to be sited anywhere on the lot. • Saves all Koala Plans of Management approved under SEPP 44 and 2019 Koala SEPP. The site contains Potential Koala Habitat, but a combination of a grid-based Spot Assessment Technique (SAT) survey, spotlighting and call playback failed to detect any Koalas. This is confirmed by the ecological assessment undertaken and included within Appendix D to this report. There are no other statutory considerations required under SEPP 44 for Potential Koala Habitat (PKH). Majority of PKH retained and PKH losses are offset via planting with Tallowwood-dominated vegetation. Connectivity for koalas around and through the site is maintained and enhanced through proposed environmental corridors. The Ecological Assessment indicates: • The site contains Potential Koala Habitat (e.g. Lot 48), but a combination of a SAT survey, spotlighting and call playback in the breeding seasons failed to detect any Koalas, despite adjacent land to the south and east being identified as Core Koala Habitat (low density Koala population). A Koala Plan of Management (KPoM) is therefore not required. • Notwithstanding the above, the proposed development concept considers the potential for long term recovery of the local Koala population via: – Converting the majority of the currently heavily forested parts of the site to an Environmental zoning to protect it in perpetuity. – Infill planting with native forest dominated by Koala food trees in the existing cleared area in the southwest to reinforce local and regional linkage values. – Retaining and augmenting riparian zones to maintain local corridor values. – Utilising best practice for road crossings of riparian zones to provide for Koalas to pass under the roads.

State Environmental Planning Policies	Consistency
	In addition to the above, extensive ecological investigations were undertaken by Biolink as part of the Sancrox Structure Plan in 2015. Those investigations identified a sub-regional connection in a north-south direction to the east of the site and a local connection through the centre of the site. The indicative concept plan prepared to inform this Planning Proposal has been more conservative and avoided larger areas than indicated in the Structure Planning, with the creation of more corridors and linkages than originally envisaged. Following ecological investigations and discussions between the Principal Applicant and Council, the footprint of the future residential subdivision and associated proposed zonings has also been reduced to allow for increased koala food tree retention and creation of corridor links.
State Environmental Planning Policy No 55—Remediation of Land	This SEPP introduces state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. A Stage 1 Site Contamination Assessment has been undertaken in relation to this Planning Proposal and is included as Appendix D to this document. This assessment has found the site to be appropriate for proposed residential development from a site contamination perspective provided the recommendations and advice of the report are adopted.
State Environmental Planning Policy (Affordable Rental Housing) 2009	This SEPP may apply to future development within the proposal area, in seeking to achieve the affordable rental housing aims of the Policy.
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	This SEPP will apply to residential development within the site. Such development will be required to demonstrate consistency with the provisions of this SEPP.
State Environmental Planning Policy (Coastal Management) 2018	The aim of this Policy is to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the *Coastal Management Act* 2016, including the management objectives for each coastal management area, by: (a) managing development in the coastal zone and protecting the environmental assets of the coast, and (b) establishing a framework for land use planning to guide decision-making in the coastal zone, and (c) mapping the 4 coastal management areas that comprise the NSW coastal zone for the purpose of the definitions in the *Coastal Management Act* 2016. Below is an extract of the SEPP mapping which identifies a small portion of land along the northern boundary of the site as being affected by coastal wetlands and wetlands proximity area mapping. Development is not precluded from the mapped area but rather is Designated Development at the Development Application stage. Given the location on Sancrox Road, opposite an unformed road and as it is a low point on the site and will exceptional sight distance, the full extent of this area cannot be avoided by development. However, the environmental qualities in this area have been considered in the zoning layout, with application of a proposed E2 - Environmental Conservation zoning within the coastal wetlands area.

State Environmental Planning Policies	Consistency
	 *Above Figure – Coastal Management SEPP Extract*
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017	The aim of this Policy is to facilitate the effective delivery of educational establishments and early education and care facilities across the State. It is not known at this stage if education facilities, whilst permissible within the proposed residential zones, will be established within the site. However, the proposed residential zoning would support an educational establishment or child care facility (if sought), in accordance with the SEPP.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	This Policy aims to provide streamlined assessment processes for development that complies with specified development standards This SEPP contains a range of exempt and complying provisions that are likely to apply to future development within the proposal area.
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004	This Policy aims to encourage the provision of housing (including residential care facilities). It is not known at this stage if seniors housing or aged care facilities, whilst permissible within the proposed residential zones, will be established within the site. However, the proposed residential zoning allows for seniors living and the provision of a small business zone would assist with proximity to facilities and services.
State Environmental Planning Policy (Infrastructure) 2007	The aim of this Policy is to facilitate the effective delivery of infrastructure across the State. The site has frontage to Sancrox Road, which has access to the east to the

State Environmental Planning Policies	Consistency
	Pacific Highway and Oxley Highway to the south via Rawdon Island Road. The traffic assessment accompanying this Planning Proposal does not identify the need for intersection upgrades at these major roads. Notwithstanding, this Planning Proposal will be required to be referred to Transport for New South Wales in accordance with Clause 104 of this Policy. The development of sewer, water and stormwater infrastructure to service the proposal area is able to be carried out by or on behalf of Council in any zone under this SEPP.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007	The aims of this Policy are, in recognition of the importance to New South Wales of mining, petroleum production and extractive industries: a) to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and (b) to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and (b1) to promote the development of significant mineral resources, and (c) to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources, and (d) to establish a gateway assessment process for certain mining and petroleum (oil and gas) development— (i) to recognise the importance of agricultural resources, and (ii) to ensure protection of strategic agricultural land and water resources, and (iii) to ensure a balanced use of land by potentially competing industries, and (iv) to provide for the sustainable growth of mining, petroleum and agricultural industries. Mineral resources have been considered in the development of this Planning Proposal and the draft Fernbank Creek and Sancrox Villages Structure Plan. In addition, the Mining, Exploration and Geoscience Division of the Department of Regional NSW has been consulted in the development of the draft Fernbank Creek and Sancrox Villages Structure Plan. Through this consideration and consultation, no development constraints that would inhibit the suitability of the proposed land uses have been identified.
Primary Production and Rural Development 2019	The aims of the Policy are to facilitate orderly economic use and development of lands for primary production. Notwithstanding the existing rural zoning of the site, there will be no loss of important farmland and the change in land use will not impact upon any existing agricultural land use within or adjoining the site.

State Environmental Planning Policies	Consistency
	As such, notwithstanding the existing rural zoning of the site, there will be no loss of important farmland and the change in land use will not impact upon any existing agricultural land use within or adjoining the site.
State Environmental Planning Policy (State and Regional Development) 2011	The aims of this Policy are to identify development that is State significant development, State significant infrastructure and critical State significant infrastructure, and that is regionally significant development. Development with a capital investment value of more than $30 million is declared as regionally significant development and is required to be determined by the relevant Regional Planning Panel. Should this be the case for any future Development Application in relation to the subject land, the proposal will be regionally significant development and will be referred to the Regional Planning Panel for determination.

Appendix C – Consistency with applicable Section 9.1 Ministerial Directions

Listed below are the relevant section 9.1 (2) Directions (including Objectives) that apply to the proposal.

Copies of the full Directions are available on the Department of Planning, Industry and Environment's website.

Section 9.1 (2) Directions and Objectives	Consistency
1 Employment and Resources	
1.1 Business and Industrial Zones The objectives of this direction are to: (a) encourage employment growth in suitable locations, (b) protect employment land in business and industrial zones, and (c) support the viability of identified strategic centres.	This proposal includes a small parcel of business zoned land to facilitate the provision of a small component of retail/commercial development and a community facility. These land uses will be primarily for the surrounding residents or any other complimentary uses in the residential areas and is appropriately located towards the geographical centre of Sancrox. The addition of this small pocket of business land will not alter the hierarchy of commercial land within the Port Macquarie area, will not impact upon existing employment land and does not alter the viability of the identified strategic centres. This facility is smaller than a Neighbourhood Centre and the total potential floor space area for employment lands in the area is not expected to be reduced by this proposal. This proposed business zone would increase the liveability of the development and surrounding residential areas within Sancrox, whilst still allowing for the nearby town centres of Thrumster (Sovereign Place) and Wauchope to be the main nearby commercial centres. This inconsistency is justified by the economic assessment included within Appendix D of this report and the proposal is considered consistent with this Direction.
1.2 Rural Zones The objective of this direction is to protect the agricultural production value of rural land.	The proposal is inconsistent with this Direction as it rezones land from rural to residential and business zones. This inconsistency is permitted by the Direction given that it is 'justified by a study prepared in support of the Planning Proposal which gives consideration to the objectives of this direction', being the draft Fernbank Creek and Sancrox Villages Structure Plan.
1.3 Mining, Petroleum Production and Extractive Industries The objective of this direction is to ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development.	The Sancrox Quarry is located to the immediate north of the proposal. It is an identified mineral resource which supplies the construction industry with a range of products. Mineral resources have been considered in the development of this Planning Proposal and the

Section 9.1 (2) Directions and Objectives	Consistency
	draft Fernbank Creek and Sancrox Villages Structure Plan. In addition, the Mining, Exploration and Geoscience Division of the Department of Regional NSW has been consulted in the development of the draft Fernbank Creek and Sancrox Villages Structure Plan. Through this consideration and consultation, no development constraints that would inhibit the suitability of the proposed land uses have been identified.
1.5 Rural Lands The objectives of this direction are to: (a) protect the agricultural production value of rural land, (b) facilitate the orderly and economic development of rural lands for rural and related purposes.	The subject proposal would effect land within existing rural zones and proposes the facilitation of change to existing rural land uses. Notwithstanding, the draft Fernbank Creek and Sancrox Villages Structure Plan (which includes the proposal site) has: (a) considered and can be consistent with the applicable regional plan and Local Strategic Planning Statement (upon amendment to this plan and statement if required to incorporate the relevant provisions of the draft Fernbank Creek and Sancrox Villages Structure Plan). (b) considered the significance of agriculture and primary production to the State and rural communities. (c) identified and protected environmental values, including but not limited to, maintaining biodiversity, the protection of native vegetation, cultural heritage, and the importance of water resources. (d) considered the natural and physical constraints of the land, including but not limited to, topography, size, location, water availability and ground and soil conditions. (e) promoted opportunities for investment in productive, diversified, innovative and sustainable rural economic activities. (f) considered support of farmers in exercising their right to farm. (g) prioritised efforts and considered measures to minimise the fragmentation of rural land (where applicable) and reduce the risk of land use conflict, particularly between residential land uses and other rural land uses. (h) considered State significant agricultural land identified in State Environmental Planning Policy (Primary Production and Rural Development) 2019 for the purpose of ensuring the ongoing viability of this land. (i) Considered the social, economic and environmental interests of the community.

Section 9.1 (2) Directions and Objectives	Consistency
	In consideration of the above, as required by this direction, it has been demonstrated that the proposal: a) is consistent with the priority of minimising rural land fragmentation and land use conflict, particularly between residential and other rural land uses. b) will not adversely affect the operation and viability of existing and future rural land uses and related enterprises, including supporting infrastructure and facilities that are essential to rural industries or supply chains. c) is appropriately located taking account of the availability of human services, utility infrastructure, transport and proximity to existing centres as detailed within the draft Fernbank Creek and Sancrox Villages Structure Plan. The proposal has also been determined necessary taking account of existing and future demand and supply of rural residential land as detailed within the draft Fernbank Creek and Sancrox Villages Structure Plan. In addition to the above, proposed minimum lot sizes within environment protection zones are being sought in accordance with the Rural Subdivision Principles in clause 5.16 of the Port Macquarie - Hastings Local Environmental Plan. Proposal is considered consistent with this direction.
2 Environment and Heritage	
2.1 Environmental Protection Zones The objective of this direction is to protect and conserve environmentally sensitive areas.	This Planning Proposal includes approximately 1 ha of E2 land, 24.5 ha of E3 land and 1.5 ha of E4 zoned land. The principles of "avoid, minimise and offset" have been adopted in determining the environmental zones and developable area, minimising impacts upon areas of high environmental value. Proposal is considered consistent with this direction.
2.2 Coastal Management The objective of this direction is to protect and manage coastal areas of NSW.	The Planning Proposal does not affect the natural attributes of the NSW coast. Whilst the site is largely cleared, a small portion of land along the northern boundary of the site is identified as being affected by coastal wetlands and wetlands proximity area mapping. Development is not precluded from the mapped area, but rather is Designated Development at the Development Application stage. Given the location on Sancrox Road, opposite an unformed

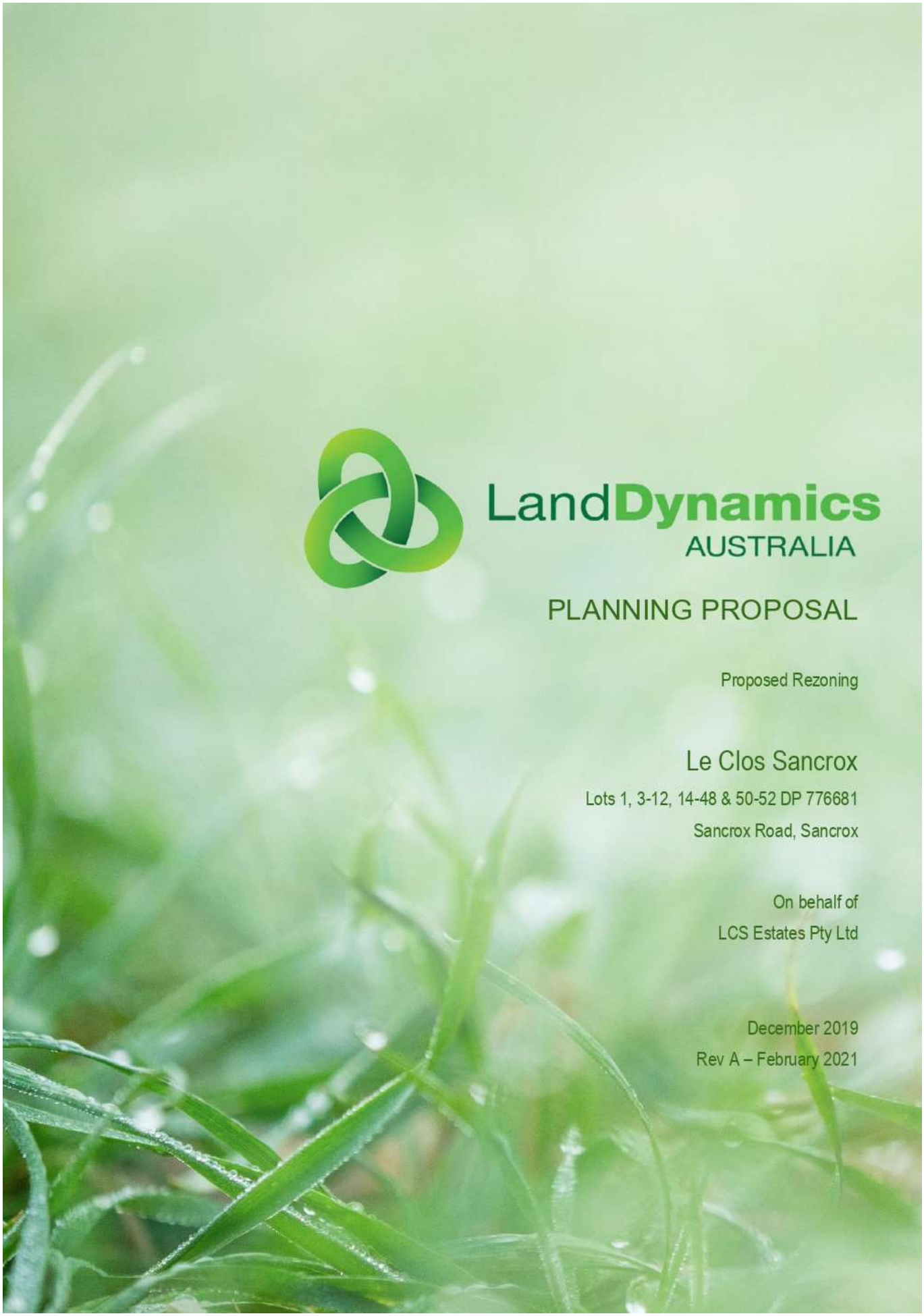
Section 9.1 (2) Directions and Objectives	Consistency
	road and as it is a low point on the site and will exceptional sight distance, the full extent of this area cannot be avoided by development. However, the environmental qualities in this area have been considered in the zoning layout, with application of a proposed E2 - Environmental Conservation zoning within the coastal wetlands area. The proposal is inconsistent with this Direction. However, the consistency criteria within the Direction can be met.
2.3 Heritage Conservation The objective of this direction is to conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance.	The Planning Proposal is supported by an Aboriginal Cultural Heritage Assessment prepared by the Birpai Local Aboriginal Land Council. The assessment advised that there is no reason that the rezoning cannot proceed in respect to Aboriginal Cultural Heritage issues. The recommendations of the report state: *'Based on the Site Inspection and other investigations, there is no reason for an Aboriginal Cultural and Heritage perspective that this rezoning cannot proceed, subject to the following:* *1. An Aboriginal Sites office be present when excavation or clearing commences.* *2. At such time as development site works start, should any artefacts be turned up or located, Birpai LALC Aboriginal Site Officers are to be contacted immediately and work on site stopped pending further assessment.'* As such, it has been determined that the rezoning can continue, subject to monitoring of any future clearing or earthworks during development of the site. In addition to the above, the maps accompanying the current LEP do not identify the site as being affected by heritage, nor the surrounding land. No State listed items are located within the vicinity of the site. The proposal is consistent with the Direction.
3 Housing, Infrastructure and Urban Development	
3.1 Residential Zones The objectives of this direction are: (a) to encourage a variety and choice of housing types to provide for existing and future housing needs, (b) to make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services, and	The proposal to rezone the subject land to allow residential development is considered to be efficient use of existing land and services and given that the site is largely cleared and not significant farmland, it does not result in substantial environmental impacts such as large scale loss of trees or impacts upon threatened species. The services provided to the site can be

Section 9.1 (2) Directions and Objectives	Consistency
(c) to minimise the impact of residential development on the environment and resource lands.	extended to the proposed residential zoned land. A variety of housing forms may result given the proposed R1 and R3 zones, in accordance with the Direction. The proposal does not contain any provisions which will reduce the permissible residential density of the land. The proposal is consistent with the Direction.
3.4 Integrating Land Use and Transport The objective of this direction is to ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts achieve the following planning objectives: (a) improving access to housing, jobs and services by walking, cycling and public transport, and (b) increasing the choice of available transport and reducing dependence on cars, and (c) reducing travel demand including the number of trips generated by development and the distances travelled, especially by car, and (d) supporting the efficient and viable operation of public transport services, and (e) providing for the efficient movement of freight.	As this proposal creates urban land, this Direction applies. The Sancrox area is serviced by Busways Route 335W, which provides access into the centre of Port Macquarie and Wauchope. Provision has been made within the Concept Subdivision Plan for upgrade of Sancrox Road to include cycleway and pathways and a collector road through the site, with a roundabout on the western boundary which allows for bus turn arounds until such time as the adjoining land is developed and a through connection established. It is expected that as the wider Sancrox area develops, Busways will provide services via the local road network. In determining the appropriate zonings for the site, the constraints were determined and a concept layout developed, which includes an upgrade of Sancrox Road, collectors roads through the site and creation of on-road and off-road alternate transport such as walking or cycling both within and between the adjoining sites. Ultimately, pedestrian and cycling connections would be established between the site and employment land and Thrumster Town Centre to the east and nearby proposed residential areas as detailed within the draft Fernbank Creek and Sancrox Villages Structure Plan. Further, the traffic assessment indicates that two round-a-bouts are required on Sancrox Road at Road 1 and 2 and that the provision of bus bays at these intersections is necessary. Bus stops will also be incorporated into the future collector roads through the site to allow for future connections. The proposal is considered consistent with the Direction.
4 Hazard and Risk	
4.4 Planning for Bushfire Protection The objectives of this direction are: (a) to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas, and	As the site is mapped as bush fire prone land, a strategic bush fire study has been prepared and accompanies this Planning Proposal with respect to potential bush fire impacts.

Section 9.1 (2) Directions and Objectives	Consistency
(b) to encourage sound management of bush fire prone areas.	Appropriate asset protection zones (APZs) can be accommodated on site and this has informed the environmental zoned land boundaries. The required APZs will be contained in residentially zoned land. An indicative subdivision layout, with APZs clearly demonstrated, has been provided with the Planning Proposal documentation. The Rural Fire Service have been consulted in relation to the Fernbank Creek and Sancrox Planning Investigation, which incorporates Le Clos Sancrox proposal. Further consultation with the Rural Fire Service is also proposed to be undertaken following Gateway Determination. The proposal is considered consistent with the Direction.
5 Regional Planning	
5.10 Implementation of Regional Plans The objective of this direction is to give legal effect to the vision, land use strategy, goals, directions and actions contained in Regional Plans.	In accordance with North Coast Regional Plan 2036, this proposal provides an opportunity to accommodate additional housing without significant adverse environmental impacts or loss of important agricultural land. The small commercial component of this proposal does not undermine upon the local commercial hierarchy. Consistency of this Planning Proposal with the North Coast Regional Plan 2036 is detailed within Part 3 of this report. The proposal is considered consistent with the Direction.
6 Local Plan Making	
6.1 Approval and Referral Requirements The objective of this direction is to ensure that LEP provisions encourage the efficient and appropriate assessment of development.	This Planning Proposal will not introduce any additional requirements for concurrence with other Government agencies. The proposal is considered consistent with the Direction.
6.2 Reserving Land for Public Purposes The objectives of this direction are: (a) to facilitate the provision of public services and facilities by reserving land for public purposes, and (b) to facilitate the removal of reservations of land for public purposes where the land is no longer required for acquisition.	The proposal includes changes to land uses to facilitate land for future public purposes such as public open space and environmental conservation. Further information including the nature and timing of provision of such land for these purposes would be detailed within documentation in relation to associated planning agreements and/or contributions plans as applicable. The proposal is considered consistent with the Direction.
6.3 Site Specific Provisions The objective of this direction is to discourage unnecessarily restrictive site specific planning controls.	The implementation of the subject Planning Proposal is intended to facilitate a higher order use for the site in accordance with the provisions of the North Coast Regional Plan 2036, the

Section 9.1 (2) Directions and Objectives	Consistency
	relevant Community Strategic Plan and Port Macquarie - Hastings Council Urban Growth Management Strategy. The proposal will utilise existing land use zones as detailed within the current standard planning instrument and will not introduce new planning provisions to this instrument in accordance with this direction. The proposal is considered consistent with the Direction.

Appendix D – Principal Applicants Planning Proposal Documentation


LandDynamics
AUSTRALIA
PLANNING PROPOSAL
Proposed Rezoning
Le Clos Sancrox
Lots 1, 3-12, 14-48 & 50-52 DP 776681
Sancrox Road, Sancrox
On behalf of
LCS Estates Pty Ltd
December 2019
Rev A – February 2021

Prepared for:

LCS Estates Pty Ltd

Prepared By:

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	Name	Date
Prepared By	Donna Clarke	10/12/19
Checked By	Graham Burns	10/12/19
Rev A Prepared By	Donna Clarke	18/02/21
Rev A Checked By	Graham Burns	18/02/21



Disclaimer

This report was prepared in accordance with the scope of works set out in correspondence between the client and Land Dynamics Australia. To the best of Land Dynamics Australia's knowledge, the report presented herein accurately reflects the Client's intentions when the report was printed. However, it is recognised that conditions of approval at time of consent, post development application modification of the proposals design, and the influence of unanticipated future events may modify the outcomes described in this report.

Land Dynamics Australia used information and documentation provided by external persons, companies and authority. Whilst checks were completed by Land Dynamics Australia to ensure that this information and/or documentation was accurate, it has been taken on good faith and has not been independently verified. It is therefore advised that all information and conclusions presented in this report apply to the subject land at the time of assessment, and the subject proposal only.

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PRELIMINARY

This Planning Proposal has been drafted in accordance with Section 3.33 of the Environmental Planning and Assessment Act 1979 and the Department of Planning and Environment's "*A guide to preparing planning proposals*" dated December 2018.

This Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 (LEP 2011) to rezone land comprising a number of landholdings collectively known as Le Clos Sancrox from RU1 Primary Production to a range of urban uses including R1 General Residential, R3 Medium Density, B2 Local Centre and environmental zones including E2 Environmental Conservation, E3 Environmental Management and E4 Environmental Living. The request is to develop a variety of residential and supporting uses and to conserve areas of environmental value.

The intended effect of the Planning Proposal request is to amend planning controls including zone, lot size and height of building controls, on the subject land. This will allow for an on-going issue of a Moratorium of development on the site being resolved, which has been identified as being a priority to be rectified.

The site has been identified as areas subject to Outline Planning in Council's Urban Growth Management Strategy (UGMS). Further, the UGMS allows for site specific planning proposals as part of the overall strategic planning program. This Planning Proposal is not considered to be premature before the Structure Planning for the wider area given the history of the site with respect to a consent for dwellings in place on the site and that the site is located west of the Pacific Highway, outside of the coastal strip, as well as being identified for investigation.

As part of this Planning Proposal, specialist review has been taken with respect to ecology, bushfire, traffic, servicing, demand, social, economic, aboriginal, acoustic, land contamination, servicing and urban design.

The subject site is likely to yield approximately 75.5 ha of residential land (R1 and R3) or approx. 680 lots, which is important for the future growth as identified in the UGMS in this locality. This is strategically important as the Regional Plan encourages a supply of land in the local government area, whilst ensuring that environmentally sensitive areas are avoided and acknowledging that some Councils may not have sufficient capacity in their urban growth areas to satisfy the demand. Given the length of time for a rezoning to occur, it is important to commence area wide planning, as well as site specific planning when an opportunity arises such as Le Clos Sancrox.

Proactive consultation in relation to this proposal has been undertaken with representatives of the Department of Planning, Industry and Environment's Planning Division, as well as the Biodiversity and Conservation Division. As a result of this consultation, biodiversity certification is being investigated to achieve certainty with respect to the ecological outcome.

This Planning Proposal document must be read in conjunction with the following accompanying Appendices:

A. Proposed Local Environmental Plan Map Set
B. Ecological Assessment
C. Vegetation Offsets Plan
D. Bushfire Assessment
E. Bushfire APZ Plan
F. Traffic Assessment
G. Overall Sewer Strategy
H. Development Lots Servicing Strategy
I. Stormwater Quality Assessment, Onsite Detention Modelling & Flooding Review
J. Contamination Report
K. Aboriginal Cultural Heritage Assessment
L. Land Supply and Demand Assessment
M. Social Impact Assessment
N. Economic Impact Assessment

O. Acoustic Review
P. Subdivision Concept Layout Overall
Q. Subdivision Concept Layout Detailed
R. Urban Design Guidelines
S. Vegetation Management Plan
T. Voluntary Planning Agreement Request Letter
U. Landowners Report & Deed

The Planning Proposal provides a balanced outcome for the subject land in that it provides future residential opportunities on predominantly cleared land, protection and embellishment of land with environmental value and addresses the on-going issue of a Moratorium imposed on the landowners, restricting legal development of their land.

The Planning Proposal has both strategic and site specific merit and is consistent with the Regional Plan and local UGMS, as demonstrated in this document and the assessment against the Urban Growth Area Variation Principles and S9.1 Ministerial Directions.

SUBJECT SITE

The subject site is located on the Mid North Coast within the Port Macquarie-Hastings local government area, and forms part of the Greater Sancrox Area, as identified by Council. The subject land comprises a number of landholdings and is collectively known as Le Clos Sancrox (Lots 1, 3-12, 14-48 & 50-52 DP 776681) and has an area of approx. 104ha. The plan below in Figure 1 details the extent of the boundaries of the properties included and Figures 2 to 4 provide the context of Le Clos Sancrox with respect to the greater Sancrox Area, Wauchope and Port Macquarie.

Le Clos Sancrox is part of the previous wider Cassegrain vineyards. To the north of the site is Verdun Estate which was also part of the previous vineyard land and has recently been rezoned by Council to large lot residential. To the north is a range of rural-residential dwellings and an animal boarding and breeding establishment. To the north-east of the site is Sancrox Quarry and further along Sancrox Road is Expressway Spares, which is part of a future industrial land investigations area. The site is generally surrounded by rural land, noting that extensive clearing has occurred on the land to the east recently.

The site is located on the southern side of Sancrox Road, approximately 1.3km from the Pacific Highway to the east, which links with Brisbane to the north and Sydney to the south. Sancrox Road also links to Port Macquarie to the east and Wauchope to the west. The site is relatively cleared, with vegetation in fingers through the site and around the edges. A number of drainage lines dissect the site falling towards Sancrox Rd.

The Greater Sancrox Area is located approximately 6.4km north east of the Wauchope town centre and 13km west of the Port Macquarie town centre and contains a land area of approximately 1,400 hectares. The region is bound by the Oxley Highway to the south, the Pacific Highway to east and rural lands to the west and the Hastings River to the north. The predominate land use is rural, including agriculture and rural-residential. In general, lot sizes range between 1 to 10ha, with only four lots greater than 50 ha. The majority of small land parcels are located in the areas off Rawdon Island Road and Sancrox Road.

The subject site is subject of a Moratorium of development on the site, which will be resolved by way of this Planning Proposal. Council has resolved to proceed with a site specific Planning Proposal for the subject site in parallel with the wider Outline Planning for the Fernbank Creek – Sancrox area. The planning undertaken as part of this Planning proposal will inform the greater area planning, whilst allowing the development of the site to occur earlier to resolve the Moratorium issue.

The site and surrounding area has been subject of extensive Structure Planning in 2015, which was delayed pending Council's Urban Growth Management Strategy and the change in strategy from rural-residential to residential zoning of the area. The site has been identified as areas subject to Outline Planning in Council's Urban

Growth Management Strategy. Rezoning the land is considered the most suitable and transparent way of achieving the objectives of this proposal. The area of Sancrox is the logical next area for development, with Area 13 planning ceasing at the highway. This area of Thrumster is developing at a steady rate, with a good take up of land by purchasers. The site is well located with easy access to the existing universities, schools, hospitals, shopping and other services and facilities within Port Macquarie and Wauchope.

An aerial photograph of the site and surrounds is shown below, with the subject site outlined in blue.



Figure 1 – Location of Extent of Le Clos Sancrox Highlighted Yellow

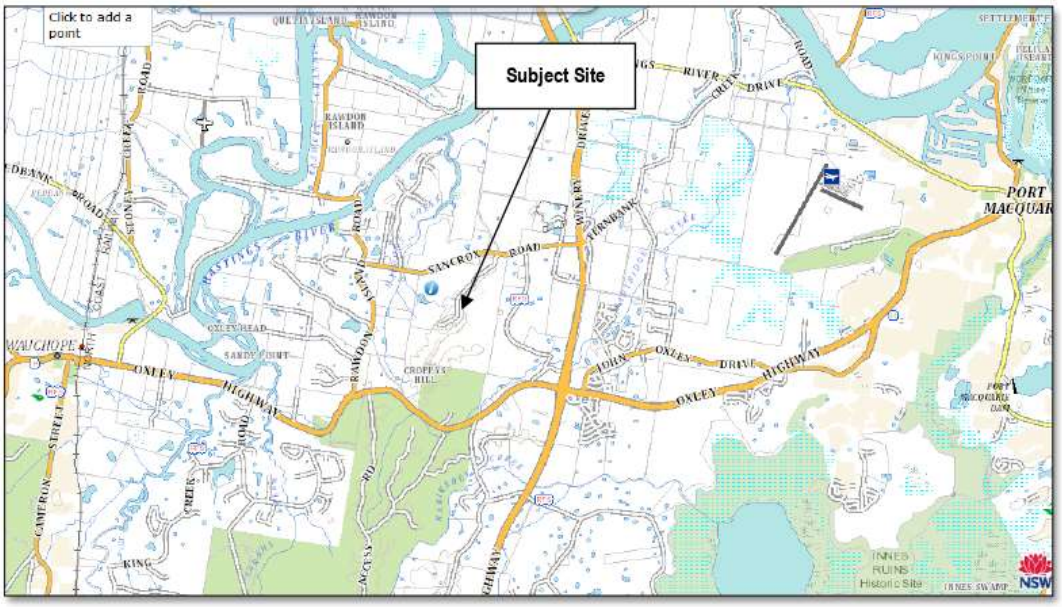


Figure 2 - Contextual Location of the subject land (source: www.sixmaps.nsw.gov.au)



Figure 3 - Close Up Aerial Map of the subject land (source: www.nearmap.com)

The site is currently zoned RU1 Primary Production under the LEP 2011, as too is immediately surrounding land. The site includes the following features:

- Storage building in north-west corner.
- Le Clos Sancrox Road along the eastern boundary.
- 46 residential building blocks with frontage to Le Clos Sancrox Road.
- 46 bush blocks, each connected to a residential building block.
- 3 dwellings on residential building blocks.
- Previous viticulture infrastructure and small outbuildings associated with the rural use of the land.
- The remainder of the site not containing dwellings is primarily cleared and currently utilised for grazing of cattle.
- EEC in three areas of the site, one being along the northern boundary in the central area of the site and the other two along the western boundary in the vicinity of the existing dam.
- A number of watercourses traverse the site from the upper areas down towards the dam and northern boundary in the central area of the site.
- Rights of way on title for access to Le Clos Sancrox Road for the adjoining land to the east and south being Lot 1 DP 1009991.

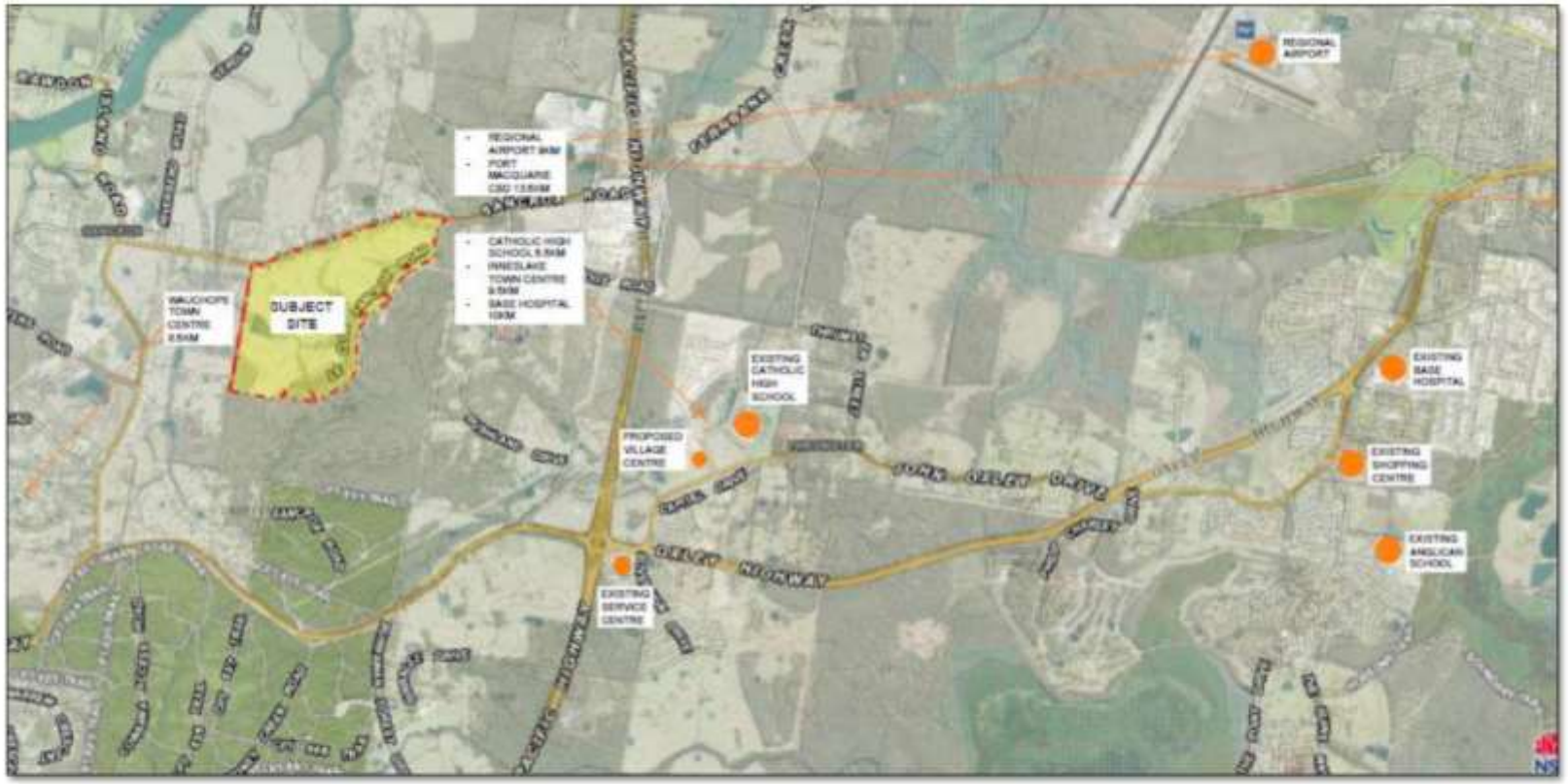


Figure 4 - Broadscale Analysis Extract

Below are photographs of the site:







Figure 5 – Photographs of the Site

BACKGROUND

For many years, Claude Cassegrain (the then landowner) championed for an area wide development to control urban sprawl westwards from Port Macquarie. The area extended from the Airport westwards to Rawdon Island. Notably, Hastings 2000 Project was developed, which had the support of landowners in the area, Council and the State Government.

Le Clos Sancrox specifically has a long history with Council in being identified for rezoning from rural to rural-residential in the since 2006. Council support has been provided and then dismissed, and development opportunities limited by way of a Moratorium being imposed 13 years ago, and then investigations shelved. This has been a constant source of frustration for the numerous landowners and no opportunity provided to legally develop their land, contrary to the development approval in place in 1987. Currently, the site is subject of a Moratorium imposed by Council on 9 October 2006 until the site is rezoned from rural.

Council has acknowledged in the Structure Planning for Sancrox and by way of recent resolutions dated 19 September 2018 and 20 February 2019 that this situation needs to be resolved as a priority and remove the Moratorium for Le Clos Sancrox by way of rezoning of the site and invited a Planning Proposal submission.

Below is a summary of the key approvals and resolutions, and regular liaison with Council in the preparation of the Planning Proposal.

1991 – Hastings 2000 Project

The figure below is an extract from a submission to the State Government in June 1991 regarding Hastings 2000 Project which details the initial background of Le Clos Sancrox and surrounds, as well as acknowledging an award for Le Clos Sancrox. Hastings 2000 Project had a broader focus and included technology and jobs to support the

increasing residential area and supported growth away from the coast and in the logical area between Port Macquarie and Wauchope. It also included health and education, including a university.

1.3 Planning Basis

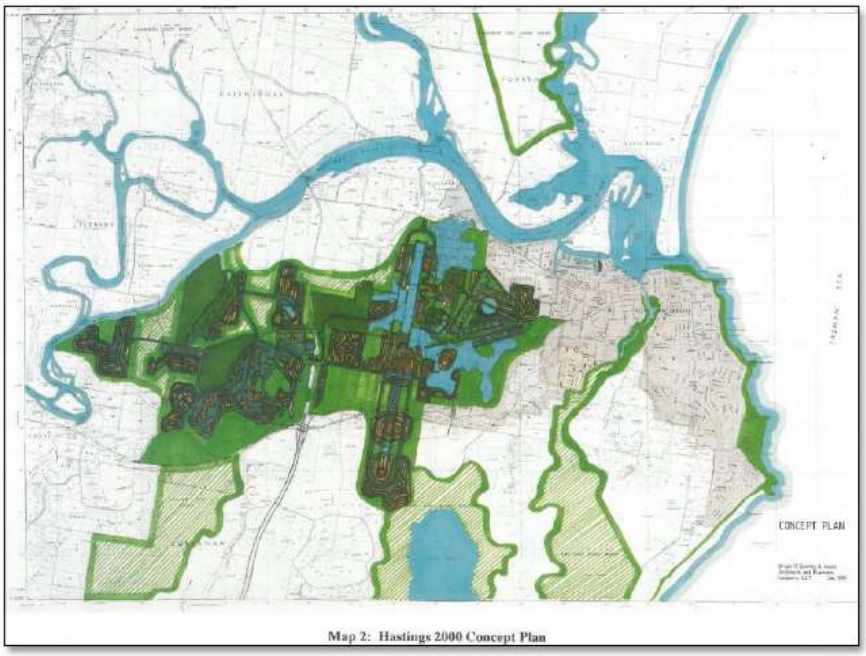
Hastings 2000 is, in part, a Regional Development Plan for the Port Macquarie area. The existing Port Macquarie area has a population of approximately 27,000 people on a land area of 2,100 hectares. The Hastings 2000 Project proposes to utilise an additional 1,750 hectare of land immediately to the west of the existing township for an additional 70,000 persons over the next 15 to 20 year period. It will, in that time frame, create approximately 16,500 permanent wealth creating jobs and an additional 18,800 permanent support jobs in the Hastings region. It will establish in the region an economically sustainable total population of 100,000 persons.

4.1 Background

In 1975, Gerard Cassegrain & Co Pty Ltd (G.C. & Co) were offered assistance by the then Department of Decentralisation and Development to expand their manufacturing activities. During the course of investigating methods of assistance, it became clear to Claude Cassegrain that the Hastings Valley had fundamental economic problems which were not being effectively addressed. The problems were subsequently to be aggravated due to the polarisation of sectional interest. Developers versus conservationists, burcaucracy versus private enterprise, and the growth of conflicting industries.

In 1979 the Port Macquarie Council was informed of the need to encourage the re–direction of the economic base of the Hastings. In 1980 the Cassegrains convened an informal private group consisting of local professional leaders to prepare a sustainable land use plan, limited to the Cassegrain land holding. The group received input from national and international town planning organisations. The result of this work identified the need to aggregate a larger land holding and the requirements of substantial funds to carry out the detailed studies. 1987 saw the first stage and practical application of the H2000 ideology, the building of Le Clos Sancrox – a clos is a system of sub–division of rural land into small individual farms which presents a contiguous area, allowing them to be developed and managed effectively as one farm. Le Clos Sancrox received a National 1988 Bi–Centennial Heritage Award.

Figure 6 – Extracts from Hastings 2000 Project



Map 2: Hastings 2000 Concept Plan

Figure 7 – Concept Plan Extract from Hastings 2000 Project

1987 - Development Consent DA 50/87 Overall Estate

Council granted consent to DA 50/87 on 8 April 1987 subject to conditions, for the creation of 46 rural home site and viticulture allotments and support allotments. The restrictions on the titles of the allotments has occurred in accordance with this consent and a separate development application is required for a dwelling on any allotment.

2006 - DA 2006/0312 relating to Lot 9 & Moratorium

In 2006, Council granted consent for a dwelling house on Lot 9. As part of the approval of DA 2006/0312 relating to Lot 9, Council also resolved to impose a Moratorium on all development in Le Clos Sancrox and Le Clos Verdun Estate, with the rezoning to Rural-Residential of the latter being gazetted 3 months later. There is a Moratorium on development "*because the inadequate size of the existing lots to meet current standards for effluent disposal and bushfire protection when constructing a dwelling. It is proposed that Council resolve this situation as a priority, if possible, having regard to other co-ordination issues in the GSA.*" (source: Greater Sancrox Structure Plan, p41). The site is considered unconstrained as discussed above in relation to the outlined key issues in the Structure Plan and Le Clos Verdun has been rezoned.

The report to Council on 9 October 2006 indicated that "*the only viable option for appropriate development of the Le Clos farms is re-configuration to combine the vineyard lot and the house lot into one larger house lot. Given the non-viability of the Estate for its intended purpose and the fact that Council's Rural Residential Strategy 2004 identifies this area as an investigation area, redevelopment is supported*". The report also states that "*Council could justify accepting a rezoning proposal for Le Clos Sancrox prior to the completion of the new LEP.... However, the environmental investigations and necessary studies would need to be financed by the existing landowners*".

Further, Council has also resolved at the time of imposing the Moratorium, to review it in November 2008 or if not before if rezoning or reconfiguration occurs. This did not occur and there is a record of various letters from landowners to Council around this time, with particular reference to a letter dated 14 April 2008 from Le Clos Pty Ltd writing on behalf of the land owners on Le Clos Sancrox to express concern regarding the status of Le Clos Sancrox in the Sancrox Structure Plan and requesting an urgent rezoning and indicating they would facilitate the studies or to reverse the Moratorium it placed on development so the owners can build on their present blocks, and allow appropriate bush fire hazard reduction measures to take place. Neither of these options occurred.

2011 – UGMS 2011-2031

Below is an extract from the previous UGMS 2011-2031 which identified Le Clos Sancrox as an immediate action to commence in 2010/11. The Structure Planning followed by development of an Issues Paper and formation of a Reference Group.

Key Housing Strategies	Implementation Actions	Timing	Notes / Map References
• Rural residential development will be planned as part of total dwelling targets.	• Prepare a Structure Plan for the Sancrox area, including Gateway sites adjacent to the Pacific and Oxley Highways at Sancrox to establish a long term planning framework for staged development in the Sancrox area.	Immediate	• Council will concurrently consult with landowners in the Le Clos Sancrox subdivision regarding possible future reconfiguration of that subdivision. See Strategy Summary Map for Structure Plan boundary (Reference 24), which includes Gateway sites (References 10 & 11), urban investigation areas (References 25 & 26) and Reference 29. Reference 25 requires investigation, and Council to seek a revision to the Mid North Coast Regional Strategy, prior to any rezoning. • Council will also review funding options for infrastructure provision in the Sancrox area, including development contributions plans and planning agreements.
	• Planning investigations for the rural residential investigation area to the east of Logans Crossing Rd., Kendall.	Short-term	See Strategy Summary Map Reference 27.

Immediate = *Commenced or to commence 2010/11*
Short Term = *Commence investigations 2011/12 – 2014/15 (timing to be determined in annual works program by Council)*
Medium term = *Approximate commencement 2015 – 2025 (subject to review)*
Long term = *Approximate commencement 2025+ (subject to review)*

18 February 2015 Resolution of Council

On 18 February 2015, Council resolved as follows relating to the Sancrox Structure Plan:

"That Council:

1. Note the revised Greater Sancrox Area Structure Plan as described in this report.

2. Include as part of Council's current review of the Port Macquarie-Hastings Urban Growth Management Strategy 2011, consideration/investigations;

a. to determine whether urban development relating to Port Macquarie should be permitted to the west of the Pacific Highway with such consideration/investigations to include the potential urban capability/serviceability/capacity of lands between Oxley Highway to the north, Pacific Highway to the west and Houston Mitchell Drive to the south in reaching any conclusion or conclusions; and

b. as to the viability of rural residential development in the Greater Sancrox area.

3. Request the General Manager report to a Council Meeting promptly after the aforesaid review is completed and endorsed/adopted by Council with respect to the Greater Sancrox Area focusing on the implications of the review on that Area.

4. Defer this matter until after consideration of the report dealt with in 3 above."

The Structure Plan was noted but not formally endorsed by Council due to the UGMS review commencing and the potential change in future planning of the area to residential rather than rural-residential.

Point 3 of the above resolution required a further report promptly after the above review. This did not occur.

20 June 2018 – Report to Council on Urban Growth Management Strategy

Council considered a report on the Urban Growth Management Strategy on 20 June 2018 and resolved as follows:

"That Council:

1. Note the submissions received and recommended amendments to the draft Urban Growth Management Strategy contained in the attached Consultation Report.

2. Adopt the revised Urban Growth Management Strategy attached to this report.

3. Submit the revised Urban Growth Management Strategy to the Director General of the NSW Department of Planning for approval.

4. Delegate to the General Manager the authority to make minor amendments and corrections to the Strategy during referral to the Department of Planning.

5. That Council receive an annual update report in relation to the implementation and status of the Urban Growth Management Strategy actions during preparation of Council's annual Operational Plans.

6. That Council amend the revised Urban Growth Management Strategy attached to this report to address an ambiguity and ensure the body of the Strategy is consistent with Key Action #6, as follows: Page 62 be updated to reflect the combination of Fernbank Creek and Sancrox such that the wording is amended as follows: "The priority order for long term investigations around Port Macquarie in terms of land capability and suitability is Fernbank Creek and Sancrox, and then Lake Innes."

7. Note the resolution from the Ordinary Council Meeting of February 2015 that the General Manager is to provide a report to Council on the Greater Sancrox Area after the Urban Growth Management Strategy is endorsed/adopted by Council.

8. Request that the report be presented at or before the Council Meeting of September 2018 and that the report consider in more detail the timing of investigations and the resourcing requirements to achieve an earlier commencement."

Point 6 confirms that Sancrox is the priority for investigations and this was re-iterated as part of the discussion at the Council meeting where it was acknowledged that the UGMS was already one year in and that the investigations

were to occur in the first 1-2 years, and as such were to commence immediately to avoid further delay and meet the identified timing. Point 7 refers to the resolution of Council from February 2015 above relating to Le Clos Sancrox.

The report to Council on 20 June 2018 includes the following section of Le Clos Sancrox:

> *"The Le Clos Sancrox subdivision was approved by Council in 1986 to permit cooperative viticulture, including approximately 46 house lots with an average size of 3200 sqm. Unfortunately, it has proven very difficult to resolve on-site effluent disposal, bushfire protection and access arrangements for these house lots. In 2006, Council resolved to 'impose a Moratorium on all development of properties in the Le Clos Sancrox and Le Clos Verdun Estates until such time that appropriate rezoning and reconfiguration of the Estate has been finalised'.*
>
> *In 2009, the Le Clos Verdun estate was rezoned to rural residential, following coordinated investigations by landowners in that estate. Similar investigations have not been undertaken for the Le Clos Sancrox estate to date. The Sancrox area was proposed for rural residential and there have been structure plan investigations by Council. However, the Sancrox area has now been proposed generally for future urban development in the draft UGMS and the landowners are looking for a clear direction to provide certainty regarding development on their lots.*
>
> *Council planners have met with landowner representatives from the Le Clos Sancrox estate on two occasions since exhibition of the draft UGMS. The discussion with landowners has included an overview of the land supply and long term growth context in the draft UGMS, as discussed above, as well as the need for coordinated infrastructure and environmental planning from Council's and the community's perspective.*
>
> *The landowner representatives have indicated a willingness to coordinate a reconfiguration of the existing Le Clos subdivision. This will need to include preparation of support studies, funding for key infrastructure and coordination of delivery, including environmental management. A number of options may exist for rezoning and reconfiguration and it is proposed to consider this in more detail in a separate report to Council as soon as possible, in accordance with Part 3 of the resolution of Council in February 2015 (shown earlier in this part of the report)."*

Point 8 requires the preparation of a report on Le Clos Sancrox now that the UGMS has been adopted.

We do however note that there was an error in the report extract quoted above. The rezoning of Verdun was gazetted on 12 January 2007, not 2009.

Discussions have been held by the landowners with Peter Cameron, Council's then Manager – Strategic Planning after the June 2018 Council meeting and they were invited to prepare this submission. The discussions held with Council were generally positive. A subsequent meeting was held with Council on 13 August 2018 to provide an update on the recent investigations and to confirm that the report will be finalised and submitted to form part of the upcoming report to Council.

16 August 2018 – Submission to Council Special Case for Rezoning & Preliminary Investigations – Le Clos Sancrox

Land Dynamics Australia prepared a letter to Council on behalf of the landowners at Le Clos Sancrox, following on from discussions with Council and the support to progress the rezoning of Le Clos Sancrox on its own, as a special case. The submission included:

1. Preliminary Planning Report for Rezoning
2. Broadscale Planning Analysis
3. Preliminary Constraints Mapping
4. Preliminary Sewer Planning Concept Plan
5. Preliminary Future Services Plan
6. Preliminary Concept Plan Option A

7. Preliminary Concept Plan Option B
8. Moratorium Letter
9. Extract Greater Sancrox Structure Plan
10. Preliminary Bushfire Assessment
11. Preliminary Ecology Assessment
12. Electricity Email
13. NBN Email
14. Minutes of Sancrox Quarry Community Consultative Committee meeting of 6 July 2018

Council has a copy of this background and details of the preliminary investigations should they be required during the consultation, however as the reports have been explored further, they have not been provided as an appendix in order to avoid confusion.

19 September 2018 – Further Report to Council

On 19 September 2018, Council considered a report in relation to the proposed Fernbank Creek and Sancrox Outline Plan and resolved as follows:

"That Council:

1. Request that the General Manager commence Stage 1 planning for the Fernbank Creek and Sancrox areas in 2018/19.

2. Request that the General Manager commence a review of planning for the West Lindfield deferred land in 2018/19, to potentially supplement the supply of residential land in the short term.

3. Write to the Le Clos Sancrox landowner representatives seeking confirmation from the landowner group that the landowners can act as one coordinated legal entity.

4. Subject to confirmation of 3 above, invite the landowner group to submit a proposal which can be considered by Council in parallel with, but not before completion of the preparation of the Outline Plan in 2 above.

5. Note the additional resource requirements as a result of recommendations 1 to 4 above and allow the General Manager to resource this increased program appropriately.

6. Submit an update report on all the above actions to the February 2019 meeting of council."

This resolution allowed the Planning Proposal for Le Clos Sancrox to be considered by Council in parallel with, but not before completion of the preparation of the Outline Plan.

In accordance with Point 3, on 17 October 2018 Council wrote to Land Dynamics:

"In accordance with part 3 of Council's resolution, would you please provide confirmation that all of the Le Clos Sancrox landowners are in agreement to act as one co-ordinated legal entity. Please provide further detail regarding the terms of that agreement which will enable the landowners to plan for and deliver coordinated outcomes."

Following on from discussions with Council to progress the Planning Proposal for Le Clos Sancrox in January 2019, information was submitted to Council on 31 January 2019 that advised "*as at this date there is 100% agreement on the formation of the Coordinated Legal Entity via Deed of Participation and Power of Attorney*" and included a report on the Formation of the Le Clos Sancrox Lot Owners (LCSLO) Coordinated Legal Entity (CLE).

20 February 2019

Council at its meeting of 20 February 2019 resolved:

"That Council:

1. Note the information in the February 2019 Strategic Land Use Planning - Fernbank Creek and Sancrox Report.

2. Note that a Greater Sancrox Area Structure Plan was tabled at the Council Meeting in February 2015 and deferred pending adoption of the UGMS.

3. Note that according to landowner representatives, the Le Clos Sancrox owners have all now committed to acting as a single entity to achieve a co-ordinated planning outcome.

4. Immediately commence Stage 1 planning to prepare an Outline Plan for Sancrox-Fernbank Creek as detailed in the UGMS.

5. Invite the Le Clos Sancrox landowners to submit a planning proposal in parallel with Stage 1 planning in order to assist in informing the planning process.

6. Allow the General Manager to adequately resource this program.

7. Include regular updates on this matter in the biannual Site Specific LEP Amendments Update Report in March and September of each year."

This resolution resolved to:

- Immediately commence Outline Planning for Sancrox-Fernbank Creek as detailed in the UGMS and provided resources to do so.
- Invite a Planning Proposal from Le Clos Sancrox in parallel with the outline planning. Importantly, this resolution allows Le Clos Sancrox planning to progress before the wider planning.

6 March 2019 – Commencement of Planning Proposal preparation

Discussions commenced between Council, Land Dynamics and the representative from Le Clos Sancrox regarding the preparation of the Planning Proposal.

12 April 2019 – Pre-lodgement Meeting

A pre-lodgement meeting was held between Land Dynamics and Peter Cameron, Council's then Manager – Strategic Planning and Jeffery Sharp, Council's Director Infrastructure.

The discussions included the documentation required for submission with the Planning Proposal and included an intent that once Gateway determination is achieved for the rezoning that a Development Application will be prepared, which will run concurrently with the rezoning and allow Council to have greater detail. This removed the need for a Development Control Plan.

21 June 2019 - Sewer & Water Discussions with Council

Discussions with Sam Rooney, Council's then Acting Water and Sewer Planning Manager Water and Sewer Strategic Planning Engineer Infrastructure, regarding the future sewer and watermain works that will be associated with the Planning Proposal.

5 July 2019 - Initial Regular Meeting with Council

Initial regular catch up with Council to ensure that we are on track and working in parallel with Council's Outline planning for Sancrox held. Planning and traffic was primarily discussed.

23 July 2019 - Regular Meeting with Council

Regular catch up with Council to ensure that we are on track and working in parallel with Council's Outline planning for Sancrox held. Stormwater and water quality primarily was discussed.

30 September 2019 - Regular Meeting with Council

Regular catch up with Council to ensure that we are on track and working in parallel with Council's Outline planning for Sancrox held. Ecology primarily was discussed and preliminary zoning and layout plans were tabled. Initial discussions regarding a Voluntary Planning Agreement, buffer to the quarry and the previous resolutions of Council were also discussed.

Note: the regular catch up was delayed in August 2019 due to the Manager – Strategic Planning departing Council and no leadership of the project temporarily. The meetings re-commenced in September 2019.

17 October 2019 – Meeting with Department of Planning, Industry and Environment's Planning Division

Below is a summary of the key discussions:

- Review need for land, land supply may be zoned but not necessarily developable.
- Address UGMS, variation principles and s9.1 Ministerial Directions.
- The Department identified this area for investigation.
- Explain the merits and how it fits in with the wider planning.
- Address inconsistency regarding the quarry.

18 October 2019 – Submission of Draft Documentation to Council

The Planning Proposal and suite of accompanying documentation was submitted to Council for review prior to the second pre-lodgement meeting with Council.

28 October 2019 – On-site Meeting with Department of Planning, Industry and Environment's Biodiversity and Conservation Division

Below is a summary of the key discussions:

- Address North Coast Regional Plan and avoid High Environmental Value.
- Explain how the proposal maximises avoidance and how the layout has evolved with respect to ecology. Look at constraints and opportunities, avoid HEV and form an argument which supports the proposed land uses.
- Consider Bio-certification at Planning Proposal stage.
- Consider aboriginal heritage.
- Consider impacts from basins, pathways and road edges in ecological assessment.
- Identify recreational open space, not just conservation.

A letter was received after the site visit with the Department of Planning, Industry and Environment's Biodiversity and Conservation Division which provided further information regarding biodiversity conservation, including how to apply and determination, as well as discussing consistency with the North Coast Regional Plan. These comments have been considered and incorporated into this document. Biodiversity Certification will be sought post Gateway.

1 November 2019 – Pre-lodgement with Council Prior to Lodgement

A second pre-lodgement meeting was held with Council's Planner and various technical officers. Detailed notes were provided regarding planning, ecology, bushfire, traffic, design guidelines, supply and demand, social impact economic impact, acoustics, Voluntary Planning Agreement and Vegetation Management Plan. Further information was provided separately regarding water and sewer.

PRE-LODGEMENT

As a result of the pre-lodgement meeting on 12 April 2019, Council provided information to assist in relation to preparation of this submission including identification of the required documentation. Below is a summary of the information that is to be addressed, as advised by Council.

- Planning report supporting the proposal including indicative zone boundaries, lot sizes, lot layout and proposed development staging. This is part of the planning proposal which needs to address DP&E guidelines, as noted below.
- Land supply and demand assessment.
- Current ecology survey and impact assessment. Stage 1 BAM report - requires registered assessor. Consideration of the Avoid, Minimise, Offset test. Early consultation with OEH recommended to ensure delivery offsets feasible and acceptable. Identify how proposed zones will allow achievement of the requirements of the BAM recommendations/outcomes.

- Bushfire assessment. Incorporate recommendations of bushfire assessment into lot layout/subdivision design noting preference for perimeter roads and ensuring APZs do not conflict with BAM requirements. Consider water supply issues, emergency/evacuation routes, etc.
- Infrastructure Servicing Strategy (water, sewer, stormwater, roads, footpaths and cycleways, electricity NBN etc). The Outline Plan is important here to determine the infrastructure needs for the area as a whole.
- Traffic assessment and modelling. The Outline Plan is important here to determine the infrastructure needs for the area as a whole.
- Aboriginal Archaeology. Including the need to consult the Local Aboriginal Land Council.
- Heritage if applicable – can be incorporated within the planning report.
- Flooding. Catchment based flood modelling. Floodplain management planning - Floodplain Development Manual process. Identification of Flood Planning Levels. Flood evacuation routes.
- Stormwater Quality and Onsite Detention Modelling. Concept stormwater quality and quantity management plan. Plan to be consistent with Council design specifications. Management facilities - long term ownership and management costs to be considered.
- Geotechnical / contamination. Address State Environmental Planning Policy No 55. Council's Contaminated Land Policy 2017.
- Urban design / development yield analysis. The Outline Plan is important here to determine the design for the area as a whole.
- Acoustic assessment. Potential noise sources: Traffic and adjoining land uses.
- Draft Planning Proposal prepared in accordance with the DPE Guidelines.
- Any proposal for a VPA – letter of offer if necessary only required at time of lodgement of PP.
- Quarry buffer review.
- Social Impact Assessment.
- Economic Impact Assessment.

A second pre-lodgement meeting was held with Council's Planner and various technical officers on 1 November 2019. Detailed notes were provided regarding planning, ecology, bushfire, traffic, design guidelines, supply and demand, social impact economic impact, acoustics, Voluntary Planning Agreement and Vegetation Management Plan. Further information was provided separately regarding water and sewer.

The cover letter contains a response to the issues raised as the second pre-lodgement meeting and appropriate changes made to the documentation before lodgement of this Planning Proposal.

This Planning Proposal has provided the requested information, including within accompanying Appendices.

PART 1 – OBJECTIVES OR INTENDED OUTCOMES SITE ANALYSIS

This Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 to rezone the subject land to enable development for residential purposes; development for local business purposes; and to conserve areas of environmental significance. This planning proposal is seeking re-zoning to allow for future urban development. A subdivision concept layout has been developed to demonstrate future subdivision layout and inform the proposed zones.



Figure 8 - Subdivision Concept Layout

The key objectives of this Planning Proposal is to:

- Achieve residential development of the site, complementary to the surrounding future desired character of the emerging residential area of Sancrox, whilst having regard to the existing characteristics of the area and the constraints of the site.
- Allow for a range of densities of residential development, as well as allowing for complimentary uses within residential zones including educational establishments.
- Enable commercial purposes, specifically a Local Centre to complement the proposed residential estate and provide supporting services for the residents.
- Conserve areas of environmental significance.

This Planning Proposal is accompanied by draft site specific Guidelines which includes provisions for future development of the land and sets standards for the entire estate.

PART 2 - EXPLANATION OF PROVISIONS

To facilitate development on the land, the following amendments to the Port Macquarie Local Environment Plan 2011 are proposed with the outcomes to be achieved by:

- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Land Zoning Map 13B on land comprising a number of landholdings collectively known as Le Clos Sancrox from RU1 Primary Production to:
  - R1 General Residential,
  - R3 Medium Density,
  - B2 Local Centre,
  - E2 Environmental Conservation,
  - E3 Environmental Management, and
  - E4 Environmental Living.
- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Lot Size Map 13B on land comprising a number of landholdings collectively known as Le Clos Sancrox to permit a minimum lot size of:
  - 450m² for the proposed R1 General Residential,
  - 450m² for the proposed R3 Medium Density,
  - No minimum lot size for the proposed B2 Local Centre,
  - 40 ha for the proposed E2 Environmental Conservation,
  - 40ha for the proposed E3 Environmental Management, and
  - 2000m² for the proposed E4 Environmental Living.
- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Floor Space Ratio Map 13B on land comprising a number of landholdings collectively known as Le Clos Sancrox to permit a maximum floor space ratio of:
  - 0.65:1 for the proposed R1 General Residential,
  - 1:1 for the proposed R3 Medium Density,
  - 1:1 for the proposed B2 Local Centre, and
  - 0.65:1 for the proposed E4 Environmental Living.

- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Height of Buildings Map on land comprising a number of landholdings collectively known as Le Clos Sancrox to permit a maximum height of:
  - 8.5m for the proposed R1 General Residential,
  - 11.5m for the proposed R3 Medium Density,
  - 11.5m for the proposed B2 Local Centre, and
  - 8.5m for the proposed E4 Environmental Living.

Existing Zoning

Under Council's principle planning instrument, Port Macquarie-Hastings Local Environmental Plan 2011, the subject site is zoned RU1 Primary Production with a minimum subdivision lot size of 40 hectares. This reflects the previous use of the area before residential rezoning and development and is no longer the appropriate zone.

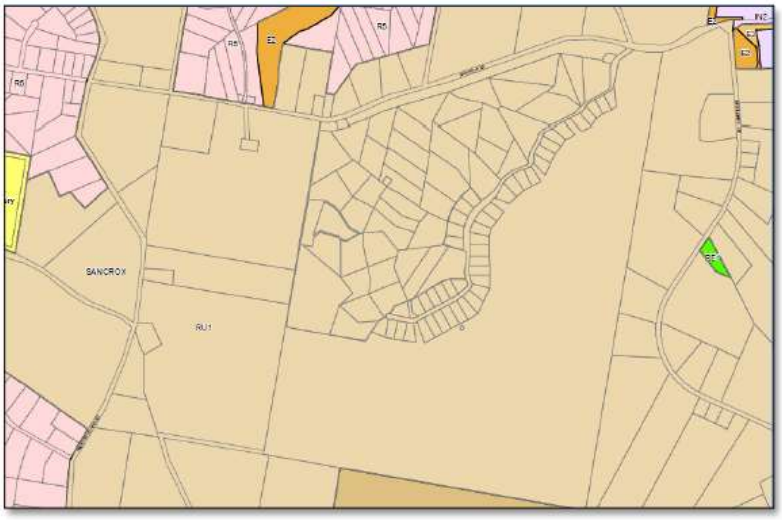


Figure 9 - Zoning Extract from PMHLEP 2011

The maps accompanying the current LEP do not identify the site as being affected by flooding, acid sulphate soils, heritage, koala habitat or height or floor space controls.

The site is immediately adjoined by rural zoned land, however pockets of R5 Large Lot Residential are distributed to the north and west and to the east is the Pacific Highway and areas of land zoned for industrial purposes.

Proposed Zone Changes

The existing zoning for rural purposes has not been appropriate for the site for numerous years and identified at the time of imposition of the Moratorium in 2006 that rezoning would be supported, however at the cost of the landowners. The Structure Planning work undertaken up to 2015 also identified the rezoning of the site as a priority. Subsequently Council has resolved over the past 18 months to rectify the situation and on the basis of the adopted UGMS, the invitation for the site specific rezoning was forthcoming.

The current UGMS has changed the thinking for the Sancrox planning, with a desire for residential rather than rural-residential, in order to satisfy the future planning demands for the wider area.

The R1 General Residential zoning table states:

Zone R1 General Residential

1 Objectives of zone

- To provide for the housing needs of the community.

- To provide for a variety of housing types and densities.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.

2 Permitted without consent

Home occupations

3 Permitted with consent

Attached dwellings; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dwelling houses; Group homes; Home industries; Hostels; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Tank-based aquaculture; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Backpackers' accommodation; Boat building and repair facilities; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Electricity generating works; Entertainment facilities; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Marinas; Mooring pens; Mortuaries; Open cut mining; Passenger transport facilities; Port facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Service stations; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water storage facilities; Water treatment facilities; Wharf or boating facilities; Wholesale supplies

It is important that educational establishments and dwelling houses can be achieved in R1 General Residential zone.

The R3 Medium Density zoning table states:

Zone R3 Medium Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.

2 Permitted without consent

Home occupations

3 Permitted with consent

Attached dwellings; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Group homes; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Respite day care centres; Roads; Seniors housing; Tank-based aquaculture; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat building and repair facilities; Car parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Dual occupancies; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Marinas; Mooring pens; Mortuaries; Open cut mining; Passenger transport facilities; Pond-based aquaculture Port facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Semi-

detached dwellings; Service stations; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Wharf or boating facilities; Wholesale supplies

It is important that educational establishments and dwelling houses can be achieved in R3 Medium Density zone.

It is also envisaged that a low scale form of retail premises would operate to support the residential area.

The B2 Local Centre zoning table states:

Zone B2 Local Centre

1 Objectives of zone

- To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.
- To encourage employment opportunities in accessible locations.
- To maximise public transport patronage and encourage walking and cycling.
- To ensure that new developments make a positive contribution to the streetscape and contribute to a safe public environment.

2 Permitted without consent

Home occupations

3 Permitted with consent

Boarding houses; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hostels; Information and education facilities; Medical centres; Oyster aquaculture; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Service stations; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat building and repair facilities; Camping grounds; Caravan parks; Cemeteries; Correctional centres; Crematoria; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Marinas; Mooring pens; Mortuaries; Open cut mining; Pond-based aquaculture Research stations; Residential accommodation; Rural industries; Sewerage systems; Sex services premises; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Waste or resource management facilities; Wharf or boating facilities; Wholesale supplies

The proposed B2 zoning allows for a variety of land uses which would complement the emerging residential and existing rural-residential land uses nearby, as has been achieved by way of other local and neighbourhood centres such as Watonga and Waniora Shops.

The E2 Environmental Conservation zoning table states:

Zone E2 Environmental Conservation

1 Objectives of zone

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To protect coastal wetlands and littoral rainforests.
- To protect land affected by coastal processes and environmentally sensitive land.
- To prevent development that adversely affects, or would be adversely affected by, coastal processes.
- To enable development of public works and environmental facilities where such development would not have an overall detrimental impact on ecological, scientific, cultural or aesthetic values.

2 Permitted without consent

Nil

3 Permitted with consent

Environmental facilities; Environmental protection works; Oyster aquaculture; Recreation areas; Research stations; Roads

4 Prohibited

Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Pond-based aquaculture; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Tank-based aquaculture; Warehouse or distribution centres; Any other development not specified in item 2 or 3

The E3 Environmental Management zoning table states:

Zone E3 Environmental Management

1 Objectives of zone

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.

2 Permitted without consent

Home occupations

3 Permitted with consent

Community facilities; Dwelling houses; Emergency services facilities; Environmental facilities; Environmental protection works; Home-based child care; Home businesses; Horticulture; Information and education facilities; Kiosks; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Recreation areas; Research stations; Roads; Tank-based aquaculture; Water recreation structures

4 Prohibited

Industries; Multi dwelling housing; Residential flat buildings; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

The E4 Environmental Living zoning table states:

Zone E4 Environmental Living

1 Objectives of zone

- To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values.
- To ensure that residential development does not have an adverse effect on those values.

2 Permitted without consent

Home occupations

3 Permitted with consent

Backpackers' accommodation; Bed and breakfast accommodation; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dual occupancies (attached); Dwelling houses; Eco-tourist facilities; Educational establishments; Emergency services facilities; Environmental facilities; Environmental protection works; Home-based child care; Home businesses; Horticulture; Information and education facilities; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Recreation areas; Research stations; Respite day care centres; Roads; Tank-based aquaculture; Water recreation structures

4 Prohibited

Industries; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3

PART 3 – JUSTIFICATION

Consistent with the Department of Planning and Environment's publication "*A guide to preparing planning proposals*", this section includes:

- Section A: Need for the Planning Proposal
- Section B: Relationship to strategic planning framework
- Section C: Environmental, social and economic impact, and
- Section D: State and Commonwealth interests

In addition, the strategic merit test has been reviewed with respect to the Planning Proposal. Circular PS 16-004 by Department of Planning & Environment dated 30 August 2016 states:

> *"The key factor in determining whether a proposal should proceed to a Gateway determination should be its strategic merit. The Department has strengthened the Strategic Merit Test and proposals will now be assessed to determine if they are:*
>
> *• consistent with the relevant regional plan outside of the Greater Sydney Region, the relevant district plan within the Greater Sydney Region, or corridor/precinct plans applying to the site, including any draft regional, district or corridor/precinct plans released for public comment; or*
>
> *• consistent with a relevant local strategy that has been endorsed by the Department; or*
>
> *• responding to a change in circumstances, such as the investment in new infrastructure or changing demographic trends that have not been recognized by existing planning controls.*
>
> *A proposal that seeks to amend controls that are less than 5 years old will only be considered where it clearly meets the Strategic Merit Test.*
>
> ...
>
> *Having met the Strategic Merit Test, the relevant Planning Panel or the Commission must then determine if the proposal has site-specific merit, having regard to:*
>
> *• the natural environment (including known significant environmental values, resources or hazards);*
>
> *• the existing uses, approved uses and likely future uses of land in the vicinity of the land subject to the proposal; and*
>
> *• the services and infrastructure that are or will be available to meet the demands arising from the proposal and any proposed financial arrangements for infrastructure provision.*
>
> *Proposals that do not reasonably meet the assessment criteria above in the opinion of the Planning Panel or Commission will not be able to proceed to a Gateway determination."*

Section B demonstrates that the strategic merit test has been achieved.

The proposal has been assessed having regard for all State Environmental Planning Policies, Ministerial s.117 Directions and the relevant guidelines set out within the regional plans

Section A - Need for the Planning Proposal

3.1 Is the planning proposal a result of an endorsed local strategic planning statement, strategic study or report?

The Planning Proposal is the result of a strategic study, namely an outcome of the resolution of Council when adopting Urban Growth Management Strategy 2017-2036. Refer to discussion in background earlier. The subject site is subject of a Moratorium of development on the site, which will be resolved by way of this Planning Proposal. Council has resolved to proceed with a site specific Planning Proposal for the subject site in parallel with the wider

Outline Planning for the Fernbank Creek – Sancrox area. The planning undertaken as part of this site specific Planning Proposal will inform the greater area planning, whilst allowing the development of the site to occur earlier to resolve the long-standing Moratorium issue, which has been identified as a priority for resolution since its imposition in 2006.

The previous UGMS 2011-2031 identified Le Clos Sancrox as an immediate action to commence in 2010/11. The Structure Planning followed by development of an Issues Paper and formation of a Reference Group in 2011. A Structure Plan was developed and exhibited and finalised in 2015, but not adopted by Council. It is understood that the extensive Structure Planning in 2015 was delayed pending Council's Urban Growth Management Strategy and the change in strategy from rural-residential to residential zoning of the area.

The site has been identified as areas subject to Outline Planning in Council's Urban Growth Management Strategy. Rezoning the land is considered the most suitable and transparent way of achieving the objectives of this proposal.

3.2 Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The planning proposal is the only legal method of amending LEP 2011 to permit development applications to be submitted, considered and determined for a change of use of the site.

Council's UGMS 2017-2036 aims '*to achieve well-planned growth in the right places, to create a more diverse and prosperous economy and maintain a healthy environment and great places to live*' and the housing priorities for Port Macquarie housing choice strategies include:

> *"Preparation of an Outline Plan (Stage 1 investigations) for the Fernbank Creek and Sancrox potential future growth areas (Action 6), taking into account the significant environmental values and mineral resources transition areas (Action 6)."*

	Action	Description	Indicative timing
6	Preparation of an Outline Plan (Stage 1 investigations) for the Fernbank Creek and Sancrox potential future growth areas	Preliminary Stage 1 planning for potential future growth at Fernbank Creek and Sancrox	Year 2-4

Based on this, the timing is Year 2 (2018) to Year 4 (2020). This is consistent with the resolution of Council in 2018 and 2019 to commence Stage 1 planning for the Fernbank Creek and Sancrox areas in 2018/19 and most recently the resolution of 20 February 2019 to immediately commence Stage 1 investigations and invite the Planning Proposal from Le Clos Sancrox, which could occur in parallel, and if before, will inform the wider Stage 1 investigations.

The Planning Proposal avoids significant ecological impacts and will allow appropriate development that will manage environmental hazards and achieve housing choice in Sancrox. The site is capable of connection to existing water and sewerage services, without reliance on adjoining properties.

Section B - Relationship to strategic planning framework

3.3 Will the planning proposal give effect to the objectives and actions of the applicable regional, or district plan or strategy (including any exhibited draft plans or strategies)?

The North Coast Regional Plan 2036 identifies that the greatest population growth pressure will be experienced around the regional cities like Tweed Heads, Coffs Harbour and Port Macquarie. As such bringing greater opportunities for housing choice to meet the growing and changing population. The Strategy encourages accommodation of coastal growth whilst protecting coastal values and locating within an existing main settlement. In doing so, the site is considered suitable for residential purposes, with a small component of business zoned land to accommodate the information centre, for the following reasons:

- The site is already serviced and the future development can easily be serviced by extension of existing services and provision of a SPS in an unformed road reserve, which does not rely upon adjoining

landowners. The SPS would service a wider catchment than the subject site, which assists with Council's wider planning.

- Notwithstanding the zoning, there will be no loss of agricultural land as it has not been successfully utilised for agricultural purposes and is not identified as significant farmland. agricultural purposes and is not identified as significant farmland.' Whilst the lack of success of past agricultural pursuits is not a clear indication that the land is unviable for agriculture, there is already a development consent in place which includes a form of housing on this site. It is acknowledged that there will be a loss of primary production land, however the highest and best use is as proposed within this Planning Proposal given that the land has not been identified as significant farmland and does not facilitate any existing agricultural production. Further, given the relatively small lot sizes and isolation from mapped important agricultural land and buffers due to vegetation corridors, it is unlikely that this area will be used for productive agricultural purposes in the future and the proposal does not increase the likelihood of conflict or impact on current adjoining land due to the current absence of agricultural land use or future agricultural activities in the locality due to the current constraints and surrounding land uses.
- The site is not subject to flooding or acid sulfate soils.
- The site is located within close proximity of the settlements of Port Macquarie and Wauchope, providing good services and facilities for the future residents.
- The small commercial portion of land will complement the residential area and provide a service for existing and future local residents, which is not currently provided in the area.

The Regional Plan acknowledges Port Macquarie as "*a regional city with a thriving cultural and civic centre, accommodating a distinctive mix of retail, commercial, tourism, entertainment and cultural activities. Coastal and rural centres, such as Lake Cathie, Bonny Hills, Laurieton and Wauchope, will continue to provide local jobs and lifestyle housing options that support their character. The area has a diverse and vibrant economy as a result of ongoing investment in the health, education, agriculture and aviation sectors. The Port Macquarie Base Hospital; the development of the new Charles Sturt University Campus; and the ongoing delivery of tertiary education by other providers, including the University of Newcastle and North Coast TAFE, will increase local opportunities and deliver jobs.*"

North Coast Settlement Planning Guidelines have been reviewed to provide a framework to ensure adequate supply of housing is provided to meet the population needs. In reviewing, the constraints planning has been undertaken and areas of high environmental value have been excluded. The guidelines indicates that ""*Future settlement, where permitted by the regional strategies and outside the agreed growth areas, must be located to minimise environmental impacts and be sustainable. Such settlement must satisfy the sustainability criteria contained in Appendix 1 of the Regional Strategies.*" The site is located outside of the urban investigation area boundaries identified in the plan, however this is addressed below, and the assessment criteria considered to demonstrate the merit of this Planning Proposal.

In response to the need for additional housing stock identified in the Regional Strategy, this site is a prime opportunity to accommodate additional housing without adverse environmental impacts or loss of agricultural land given this site has not been utilized as a vineyard for approximately 30 years. The use of cleared land adopts the sustainable land use principles, rather than utilizing land which is currently used for agricultural purposes or contains ecological features.

The proposal is consistent with the Regional Plan goals as follows:

- Settlement planning principles indicates urban growth areas off the Pacific Highway.
- Enhances areas of high environmental value. This has been reflected in the large areas of environmental zoned land recommended, which was informed by the ecological assessment and the desire to create corridors and enhance the connectivity through the site and into adjoining large areas of ecological value.

- Developable areas have been focused on areas of least biodiversity sensitivity and the "avoid, minimise, offset" principles adopted.
- Reduce the risk from natural hazards as the site is not flood prone and bushfire constraints have been managed through the subdivision concept plan and will comply with Planning for Bushfire Protection 2006 and Draft 2018 plan.
- Transport corridors are utilised and strengthened. Sancrox Road provides direct accessed to the Pacific Highway and planning has had regard to the future high speed rail to the east.
- The local economy will thrive with the addition of residents and creation of a local commercial centre to assist with the day to day needs of the existing and future residents.
- A safe and efficient transport network is identified, which will service the development of the subject site and connect into the wider area planning, including provision of a Collector Road through the site and connection to the highway via the existing good connections.
- Productive agricultural lands are protected. The subject site is a failed viticulture use and is not identified as important farmland under the plan.
- The proposed planning of the subject site can be used to plan the wider Sancrox urban expansion, coordinate development and infrastructure, protect the local character and environment of an area, and establish stronger relationships between communities.
- Provides housing, services and facilities that are within walking distance of each other, including housing if varying densities and forms, as well as an opportunity for a school and child care centre, all connected via a series of pathways which facilitates walking and cycling. The housing diversity may also include seniors' living housing to assist with the aging population.
- Engagement with Aboriginal communities has occurred during the planning process and a report is contained in an appendix.
- The distinct character of the site and the North Coast has been considered in the concept subdivision plan, which respects the landform, ecological features and views from the site.
- The site and the concept layout takes advantage of both existing and new road, water, sewer and stormwater infrastructure and does not rely upon adjoining landowners for connections or extensions.
- The housing will assist Council to achieve the minimum housing supply each local government area should plan to deliver over the next 20 years to meet population growth.

The Regional Plan states:

> *"Figure 10 shows the minimum housing supply each local government area should plan to deliver over the next 20 years to meet population growth. Certain councils may not have sufficient capacity in their urban growth areas to satisfy demand. As a priority, councils should work with their local communities to identify appropriate locations to provide an adequate supply of residential land. The delivery of housing in significant release areas can be accelerated by identifying where upfront investment in local infrastructure can assist land release. The NSW Government's Housing Acceleration Fund offers funding for new infrastructure projects that support housing supply."*

The area specific portion of Figure 10 referenced within the Regional Plan indicates an increase of 8,800 additional dwellings between 2016 and 2036.

It is considered that the Planning Proposal is consistent with the Regional Plan as it satisfies the Variation Criteria required for development outside the Urban Growth Area and has merit. These criteria form the basis of the strategic merit and site-specific merit assessment for the rezoning review process.

Appendix A of the Regional Plan contains the Urban Growth Area Variation Principles, which are stated below and a comment provided.

Urban Growth Area Variation Principles		Comment
Policy	The variation needs to be consistent with the objectives and outcomes in the North Coast Regional Plan 2036 and any relevant Section 117 Directions and State Environmental Planning Policies, and should consider the intent of any applicable local growth management strategy.	Consistent. Refer to discussion within this Planning Proposal document.
Infrastructure	The variation needs to consider the use of committed and planned major transport, water and sewerage infrastructure, and have no cost to government. The variation should only be permitted if adequate and cost-effective infrastructure can be provided to match the expected population.	The road network, transport and servicing of the site and the wider area has been considered in the specialist reports and plans. Upgrades can be provided without relying upon adjoining private landowners and will service the wider area.
Environmental and farmland protection	The variation should avoid areas: • of high environmental or heritage value; and • mapped as important farmland, unless consistent with the interim variation criteria prior to finalising the farmland mapping review.	The ecological assessment of the subject site has informed the proposed zoning and embraced the avoid principle in particular. In doing so, large areas of ecological value will be enhanced and corridors created, to provide good connection to large areas of ecological significance on adjoining land. The ecological outcome is far superior to that envisaged in the Structure Planning undertaken in 2015. The maps accompanying the current LEP do not identify the site as being affected by heritage. Further commentary is provided in Section 3.7 regarding consistency with the Regional Plan in terms of biodiversity and high environmental lands, and the reasoning behind the current layout and how the 'avoid, minimise, offset' hierarchy has been achieved.
Land use conflict	The variation must be appropriately separated from incompatible land uses, including agricultural activities, sewage treatment plants, waste facilities and productive resource lands.	The quarry located to the north-east of the site is the main incompatible land use. It is to be noted that Council's position with respect to the quarry for a number of years is that any required buffer must be accommodated on site and this is reflected in the Structure Planning for the wider area. This is consistent with a regional wildlife corridor indicated in Council's Development Control Plan (shown green in Figure 11 in Section 3.7 below relating to ecology), based on their ecological work undertaken. This corridor provides a clear vegetated barrier between the quarry and subject site. A current State Significant Development proposal has been exhibited from 30 October 2019 to 27 November 2019 for an expansion of the quarry westwards into the regionally significant ecological corridor. There is no certainty regarding approval of this application and given that this application extends into the regional significant ecological

		corridor, extends the life beyond previous agreements under DA 2012/305 and associated Planning Agreement and associated restrictions on development of adjoining industrial land until 2018, to allow for the quarry to be exhausted. Regular contact has occurred with the assessing officer for the proposal and no response has been forthcoming from the applicant with request to the letters requesting information and a response to submissions dated 18 December 2109, 22 January 2020 and 26 February 2020. The partial response which includes a Blast Management Plan has been provided, which addresses how safety and minimisation of impact at neighbouring sites will be achieved and maintained, as well as detailing the blast clearance being well within their boundaries and away from LCS. The DCP plan had a clear delineation of the industrial land from other land to the east, with the ecological corridor as a buffer. The proposed Le Clos Sancrox zoning and concept layout further increases this ecological corridor within the site to provide a larger buffer to the existing quarry and any expansion, should it be approved. The wider area of Sancrox surrounding the site is currently zoned rural, as is the subject site currently. Given the progression of the wider Outline Planning and the outcomes of the 2015 Structure Plan, it is reasonable to expect that the adjoining land to the north and west will be rezoned in the coming years, with a short period of time in transition between the rezoning of this site. The land to the south and west is of high environmental value and identified by Council in previous investigations as being a significant ecological corridor. The proposed zonings and concept layout provides for a vegetated corridor along these two boundaries which will provide a buffer to the environmentally significant land to the south and east, assisting with reducing any potential land use conflict. The proposed vegetated buffer has also been extended to the north-east corner of the site and along Sancrox Road to further enhance the wider ecological buffer, retain vegetation and assist with land use conflict between the existing quarry further to the east and the potential high speed rail. Notwithstanding the current rural zoning, there will be no loss of agricultural land as it has not been successfully utilised for agricultural purposes and is not identified as significant farmland or for agricultural purposes and is not identified as significant farmland.' Whilst the lack of success of past agricultural pursuits is not a clear indication

		that the land is unviable for agriculture, there is already a development consent in place which includes a form of housing on this site. It is acknowledged that there will be a loss of primary production land, however the highest and best use is as proposed within this Planning Proposal given that the land has not been identified as significant farmland and does not facilitate any existing agricultural production. Further, given the relatively small lot sizes and isolation from mapped important agricultural land and buffers due to vegetation corridors, it is unlikely that this area will be used for productive agricultural purposes in the future and the proposal does not increase the likelihood of conflict or impact on current adjoining land due to the current absence of agricultural land use or future agricultural activities in the locality due to the current constraints and surrounding land uses.
Avoiding risk	The variation must avoid physically constrained land identified as: • flood prone; • bushfire-prone; • highly erodible; • having a severe slope; and • having acid sulfate soils.	The site is bushfire prone land and bushfire constraints have been managed through the subdivision concept plan and will comply with Planning for Bushfire Protection 2006 and Draft 2018 plan. The zonings have been developed having regard to the necessary Asset Protection Zones. A Bushfire Assessment and associated APZ plans accompanies this Planning Proposal. A Strategic Bushfire Study will form part of the Planning Proposal post Gateway. It is however noted that the level of detail provided in the planning proposal will support and reinforce the matters required for consideration in the Strategic Bushfire Study as the Planning Proposal report will include sufficient information for its use as a subdivision scale bushfire hazard report. Therefore, the proposed bushfire report will contain a greater level of information than contemplated by a Strategic Bushfire Study. Buffers to areas of public infrastructure will reflect the assessed level of bushfire hazard for the areas. The assessed level of bushfire threat will consider existing and plant vegetation characteristics and management. APZ's will be in accordance with Planning for Bush Fire Protection 2006 as this is the relevant compliance standard. Provision will however be made for compliance with Planning for Bush Fire Protection 2018 although uncertainty exists regarding the nature of compliance required under Planning for Bush Fire Protection 2018. Council is required to consult with the Rural Fire Service after a Gateway Determination has been issued. Planning for Bushfire Protection 2019 has

		been released and the RFS website indicates "*It is expected that PBP 2019 will be legislatively adopted on 1 March 2020. The NSW RFS has committed that a minimum two month period will be provided between the time notification of the adoption date is given and the adoption date of PBP 2019*". During the current period, either the existing 2006 or proposed 2019 version can be used. With respect to LEP preparation, PBP 2019 states "*As part of the consultation process with the NSW RFS, a bush fire assessment is required to be submitted to demonstrate compliance with the s9.1(2) Directions and PBP. Where the proposal is of a strategic nature, this should take the form of a Strategic Bush Fire Study particularly if this PP is proposed to progress concurrently with a development application*." PDP 2019 also requires an indicative development layout where residential, which demonstrates APZ. An indicative subdivision layout, with APZ clearly demonstrated, has been provided. The bushfire assessment provided is sufficient for Gateway determination and can be amended based on Gateway determination and feedback from the RFS. No other hazards are applicable to the site.
Heritage	The variation must protect and manage Aboriginal and non-Aboriginal heritage.	The Planning Proposal is supported by an Aboriginal Cultural Heritage Assessment prepared by the Birpai Local Aboriginal Land Council. The assessment advised that there is no reason that the rezoning cannot proceed in respect to Aboriginal Cultural Heritage issues. The rezoning can continue, subject to monitoring of any future earthworks during development of the site. An AHIMS search has not revealed aboriginal heritage on the site or within 50m of the site and a copy of the search forms an attachment to this report. In accordance with the NSW Office of Environment and Heritage's "Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales" and flowchart in Section 8, no further investigation is required and it is standard practice if any item of heritage significance is revealed during construction of the development works will cease immediately and the appropriate authorities will be contacted. The maps accompanying the current LEP do not identify the site as being affected by heritage, nor the surrounding land. No State listed items are located within the vicinity of the site. Council's website indicates that "*During the early settlement of the Hastings valley, a customs post was situated*

		at Sancrox to collect duties on the freight transported on the Hastings River. It is said that a Frenchman was the first person in charge of the customs station and various names were bestowed on the area, including the name St Croix. It is believed that the name Sancrox was derived from this early settlement name." There is a strong French history of ownership in the area, which has strong connections to the Cassegrain family in the recent 50 or so years. There is no evidence of European heritage significant on the Le Clos Sancrox site, which is removed from the waterfront.
Coastal area	Only minor and contiguous variations to urban growth areas in the coastal area will be considered due to its environmental sensitivity and the range of land uses competing for this limited area.	The site is located west of the Pacific Highway, therefore not applicable.

The Planning Proposal is considered to have planning merit for the following reasons:

- It gives effect to the Regional Plan.
- It gives effect to local Urban Growth Management Strategy.
- It responds to a change in circumstances with respect to the 2015 Structure Plan created for Sancrox and now reflects a desire for residential rather than rural-residential.
- It has site-specific merit, having regard to the unconstrained nature of the site; the retention and enhancement of the natural environment; the unique situation of a Moratorium being placed on the current development consent on the site, which prevents any development; and that services and infrastructure are readily available or easily extended to the site to facilitate the Planning Proposal.

3.4 Will the planning proposal give effect to a council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

Urban Growth Management Strategy 2017-2036

The UGMS identifies areas of growth and investigation. Within the previous Urban Growth Management Strategy (UGMS) 2010-2031, the re-subdivision of the Le Clos farms at Sancrox was mentioned heavily, with immediate timing for investigations which was indicated as commencing in 2010/11. The Structure Planning work did occur to satisfy a key objective of the UGMS in force at that time and was reported to Council for adoption in 2015 and delayed pending the revised UGMS.

UGMS 2017-2036, as exhibited did not support investigations at Sancrox, however as a result of public interest, with a large number of submissions to the exhibited documents from landowners of Le Clos Sancrox, the UGMS was amended prior to adoption and Le Clos Sancrox included in the Structure Plan for Sancrox in the adopted UGMS 2017-2036. The Strategy did however identify Sancrox as a "*new residential investigation area'* and a key action to be implemented.

The report to Council on 20 June 2018 was detailed with respect to Le Clos Sancrox, as touched on above and indicated that Council could support investigation areas outside of the urban growth boundary in the Regional Plan, such as Le Clos Sancrox, and that Outline plans are to be prepared. The adopted UGMS includes Le Clos Sancrox as part of Outline Plan areas, as shown below highlighted yellow in the figure below.

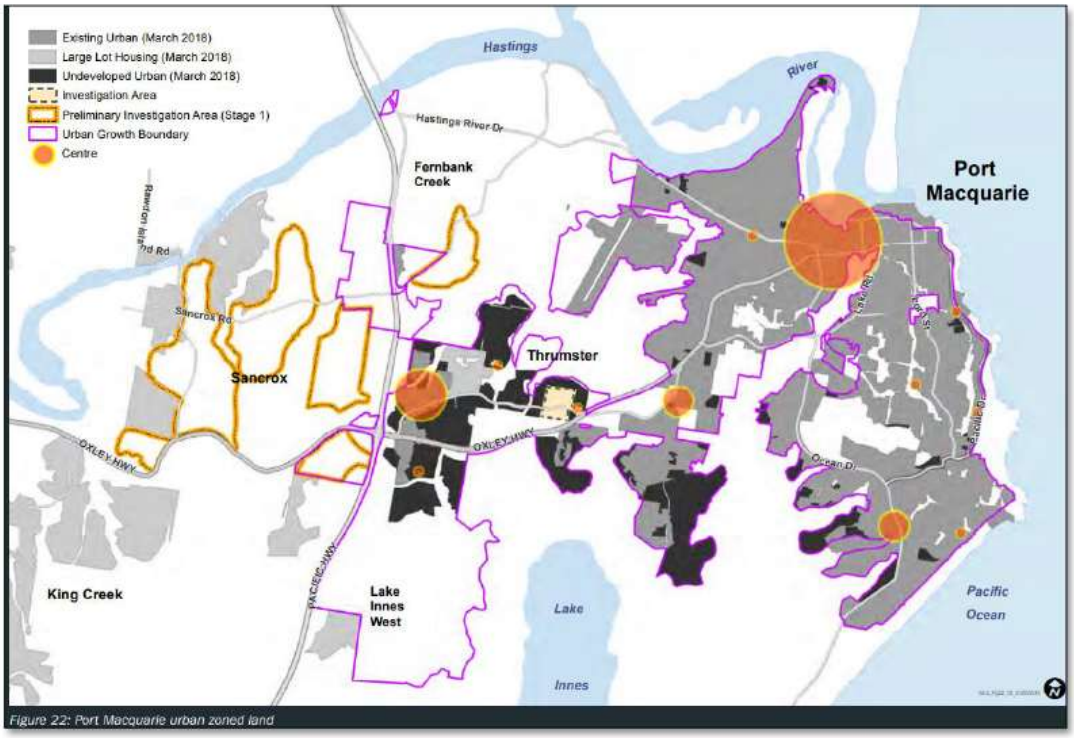


Figure 10 - UGMS Outline Plan Areas Identified yellow (source: www.pmhc.nsw.gov.au)

The UGMS report stated:

> *"In addition to planning for the West Lindfield deferred area, it is proposed that Council commence Stage 1 investigations for the Fernbank Creek and Sancrox areas, as discussed above, commencing in year 2 of this Strategy.*
>
> *This is proposed to involve:*
>
> *• Consideration of the structure planning work already done for the Sancrox area,*
>
> *• Consult landowners regarding future growth and the investigation process,*
>
> *• Preparation of an Outline Plan for urban development in the Fernbank Creek and Sancrox areas, to identify precincts and areas where the coordination of development can be achieved,*
>
> *• State government endorsement of the Outline Plan as proposed in the DP&E submission (see Part 2A of this report), and*
>
> *• Commencement of more detailed investigations in one or more of those precincts, subject to the outcomes of the Outline Plan.*
>
> *The preparation of an Outline Plan is an important step given the high level of fragmentation in the Sancrox area and the need for coordinated infrastructure and environmental management outcomes. Isolated, ad hoc proposals on individual properties will not result in a coordinated outcome.*
>
> *The aim of the Outline Plan will be to create a plan for long term growth, including sustainable local communities and urban environments. There will need to be consultation with multiple landowners, State agencies and the community, similar to the planning undertaken by Council for the Thrumster and Rainbow Beach urban release areas.*

The Outline Plan will provide a framework for more detailed precinct plan investigations, and then local environmental plan, development control plan and contributions planning for individual precincts. It will not result in the rezoning of all potential future growth areas in the Fernbank Creek and Sancrox areas significantly ahead of the supply principles in the UGMS.

Infrastructure funding will be a key issue and the expected sequence of development in these areas is generally east to west given the need for sewerage infrastructure from Fernbank Creek to Sancrox.

Environmental management will also be a key issue. Current known areas of high environmental value or hazard (e.g. flooding) are not proposed be investigated for urban development and the focus of investigations will therefore be on potential future growth A and B, as shown in the long term growth analysis in this report.

The preliminary consultation and investigation will consider the need for support studies to address key matters, such as:

- *Urban design*
- *Heritage values*
- *Environmental issues*
- *Hazards such as bushfire, flooding and buffers between uses*
- *Transport planning and infrastructure*
- *Water, sewerage and stormwater infrastructure*
- *Social and recreational opportunities*

More detailed follow up investigations are expected to be proposed in stages for specific precincts following completion of the Outline Plan."

It was clearly identified that servicing and environmental considerations would be key. These have been considered in detail as part of the accompanying specialist reports including ecology, which demonstrates that Le Clos Sancrox has no unmanageable constraints and is ideal for progression to the site specific Planning Proposal. This information will compliment and inform the wider Outline Planning for the greater Fernbank Creek – Sancrox area. Further, the united and committed group of landowners at Le Clos Sancrox will ensure that the Outline Planning will occur in a timely manner and with less issues than a group of unrelated landowners, as with the remainder of Sancrox.

A Key Action of the UGMS2017-2036 relating to Housing Choice states:

6	Preparation of an Outline Plan (Stage 1 investigations) for the Fernbank Creek and Sancrox potential future growth areas	Preliminary Stage 1 planning for potential future growth at Fernbank Creek and Sancrox	Year 2-4

Council has resolved in February 2019 to make Le Clos Sancrox a priority in their planning and allow the site specific planning to proceed on its own and will compliment and inform the wider Outline Planning. This is consistent with the Key Action above.

The site specific planning has had regard to the previous Structure Planning work with respect to environmental considerations, road network, identified developable land and servicing. The change of land use from rural-residential to residential to reflect the desires of the UGMS 2017-2036 will continue the previous Structure Planning work and the investigations for this site specific Planning Proposal has had regard to the UGMS Outline Plan Areas Identified yellow, in particular with respect to traffic impacts.

UGMS also identified that the planning for rural-residential at Sancrox has been deferred given the supply at Beechwood, Kendall and surrounds.

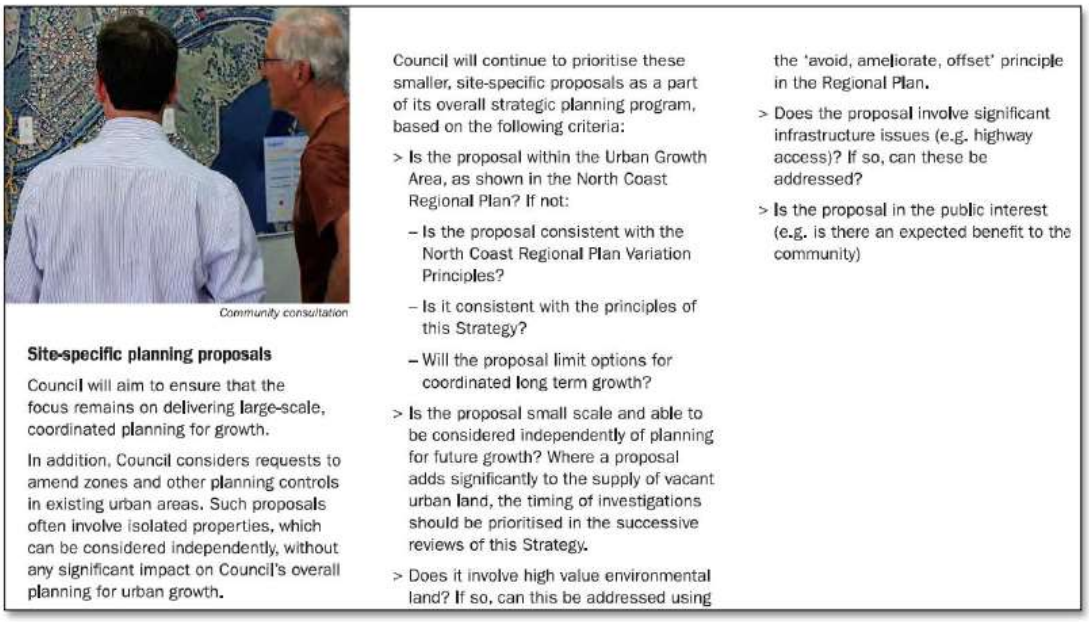
UGMS specifically states (p.62):

"The Sancrox area (areas B1 to B4) has been investigated by Council since adoption of the 2011 Urban Growth Management Strategy, including significant consultation with local residents and landowners. There are areas of existing rural residential development and fragmented ownership, areas of high biodiversity

vegetation, preferred koala habitat and environmental corridors. There is also a high speed rail corridor identified by the Federal government and a need for buffers to extractive resources and industry. Despite these constraints, there are large relatively unconstrained areas, including the Le Clos Sancrox estate, which have considerable potential for future residential development."

We note the letter dated 2 November 2018 from the Department of Planning & Environment which approved the UGMS, subject to certain requirements. We note the second dot point allows individual planning proposals outside of the regional plan urban growth area boundaries where "*individual planning proposals can demonstrate consistency with the regional plan and the urban growth area variation principles*". This document demonstrates this consistency.

The UGMS allows for site specific planning proposals as part of the overall strategic planning program, as detailed below.



Community consultation

Site-specific planning proposals

Council will aim to ensure that the focus remains on delivering large-scale, coordinated planning for growth.

In addition, Council considers requests to amend zones and other planning controls in existing urban areas. Such proposals often involve isolated properties, which can be considered independently, without any significant impact on Council's overall planning for urban growth.

Council will continue to prioritise these smaller, site-specific proposals as a part of its overall strategic planning program, based on the following criteria:

> Is the proposal within the Urban Growth Area, as shown in the North Coast Regional Plan? If not:

– Is the proposal consistent with the North Coast Regional Plan Variation Principles?

– Is it consistent with the principles of this Strategy?

– Will the proposal limit options for coordinated long term growth?

> Is the proposal small scale and able to be considered independently of planning for future growth? Where a proposal adds significantly to the supply of vacant urban land, the timing of investigations should be prioritised in the successive reviews of this Strategy.

> Does it involve high value environmental land? If so, can this be addressed using the 'avoid, ameliorate, offset' principle in the Regional Plan.

> Does the proposal involve significant infrastructure issues (e.g. highway access)? If so, can these be addressed?

> Is the proposal in the public interest (e.g. is there an expected benefit to the community)

Figure 11 - UGMS Site Specific Planning Proposal Extract (source: www.pmhc.nsw.gov.au)

This Planning Proposal is not considered to be premature before the Structure Planning for the wider area given the history of the site with respect to a consent for dwellings in place on the site and that the site is located west of the Pacific Highway, outside of the coastal strip, as well as being identified for investigation.

The Planning Proposal provides a balanced outcome for the subject land in that it provides future residential opportunities on predominantly cleared land, protection and embellishment of land with environmental value and addresses the on-going issue of a Moratorium imposed on the landowners, restricting legal development of their land.

The Planning Proposal has both strategic and site specific merit and is consistent with The Regional Plan and principles of the UGMS, as demonstrated in this document and the assessment against the Urban Growth Area Variation Principles and S9.1 Ministerial Directions.

The Planning Proposal does not add significantly to the supply, with approx. 683 residential lots in total. Approx. 500 dwellings per year are provided in the LGA based on recent building approval data, which equates to an additional year of land supply for the LGA. This would be absorbed in the current UGMS figures given the areas within the current residential zoning that are significantly constrained and unlikely to be developed, as discussed in the land supply and demand report. Noting that development of this size is generally staged, the supply of the

650 lots would occur over a number of years (estimated to be 50 per stage based on our experience of other local subdivisions), full development of the site could be 10-15 years away.

The Residential Land Supply & Demand Assessment accompanying this report has considered the future growth of Sancrox, the impact of population growth on dwelling demand (and hence lot demand), the adequacy of land presently zoned or identified for development at Sancrox and the broader state of supply and demand in the Port Macquarie Hastings area. The key conclusions and findings of the report are:

- Sancrox is an important growth area in the context of the Port Macquarie Hastings market and is identified as an residential investigate area.
- A key factor to note that coastal subdivisions were granted approval by the State Government on a large scale in the LGA around 2009. Many of these consent have been in place for a large number of years and only have been constructed and available in the market in recent years and continuing currently. This however will dry up in the coming years and there is a need to commence the rezoning process now for future areas of housing given the length of time to undertake a rezoning.
- Subdivisions are usually staged over a number of years and do not provide this instant boost of land into the economy at one time. Noting that development of this size is generally staged, the supply of the 650 lots would occur over a number of years (estimated to be 50 per stage based on our experience of other local subdivisions), full development of the site could be 10-15 years away. Further, land release is often market driven.
- A further consideration relates to a large amount of land zoned for residential purposes but being highly constrained due to ecological value and unlikely to result in approval being granted for subdivision. This skews some of the housing projections undertaken by Council as part of the UGMS.
- The relative ease of extending services and roads and the lack of available land in Sancrox, the identified land is suitable for rezoning ahead of Council's Structure Plan for the wider area. This additional land will reduce the demand on existing housing and lot stock.

The land does contain limited areas of high environmental value, however the principles of avoid, minimise and offset have been adopted.

The infrastructure requirements of the Planning Proposal have been considered and are manageable.

Consideration of the Public Interest has occurred as part of the Social Impact Assessment. There is further opportunity for additional consultant when the Planning Proposal, and subsequent Development Application, are exhibited. Noting that the feedback was generally positive and the amenity impacts such as noise from the nearby animal boarding establishment and quarry have been addressed in the design of the concept subdivision plan.

This Planning Proposal gives effect the UGMS and associated resolutions of Council.

Towards 2030 Community Strategic Plan

The key strategies of Towards 2030 Community Strategic Plan for both business and industry and natural and built environment are satisfied by this Planning Proposal. The Planning Proposal will:

- Provide for business zoned lands in close proximity to existing and proposed urban areas, assisting residents with their day to day needs.
- Provide for effective management and maintenance of urban services (water, sewer)
- Assist in minimising the impact of natural events, through appropriate environmental zoning and mitigation measures; and
- Facilitate development that is compatible with the natural and built environment.

3.5 Is the planning proposal consistent with applicable State Environmental Planning Policies?

In assessment against the relevant State Environmental Planning Policies (SEPP) is shown in the following table.

SEPP	Comment

State Environmental Planning Policy (Koala Habitat Protection) 2020	This policy encourages the conservation and management of natural vegetation areas that provide habitat for koalas to ensure permanent wild populations will be maintained over their present range.
	
	The site contains Potential Koala Habitat, but a combination of a grid-based SAT survey, spotlighting and call playback failed to detect any Koalas. This is confirmed by the ecological assessment undertaken and included as an appendix. There are no other statutory considerations required under KSEPP 2020 for Potential Koala Habitat (PKH). Majority of PKH retained and PKH losses are offset via planting with Tallowwood-dominated vegetation. Connectivity for koalas around and through the site is maintained and enhanced.
	
	It is important to note at the time of preparation of this PP, SEPP 44 was in force and now KSEPP 2020 is in force, which essentially is the same as SEPP 44, hence the site remains as Potential Koala Habitat only.
	
	The Ecological Assessment indicates:
	• The site contains Potential Koala Habitat (e.g. Lot 48), but a combination of a SAT survey, spotlighting and call playback in the breeding seasons failed to detect any Koalas, despite adjacent land to the south and east being identified as Core Koala Habitat (low density Koala population).
	• A KPoM is thus not required.
	• Notwithstanding this, the proposed development concept considers the potential for long term recovery of the local Koala population via:
	  ○ Converting the majority of the currently heavily forested parts of the site (much of which is currently zoned for large lot residential) to an Environmental zoning to protect it in perpetuity.
	  ○ Infill planting with native forest dominated by Koala food trees in the existing cleared area in the southwest to reinforce local and regional linkage values.
	  ○ Retaining and augmenting riparian zones to maintain local corridor values.
	  ○ Utilising best practice for road crossings of riparian zones to provide for Koalas to pass under the roads.
	
	Extensive ecological investigations were undertaken by Biolink as part of the Structure Plan in 2015. Those investigations identified a sub-regional connection in a north-south direction to the east of the site and a local connection through the centre of the site. The indicative concept plan prepared for this Planning Proposal have been more environmental conscious and avoided larger areas than indicated in the Structure Planning and has created additional corridors and linkages than envisaged. Following the ecological investigations and discussions with Council, the footprint of the future residential subdivision and associated proposed zonings was reduced to allow for increased koala food tree retention and creation of corridor links.
	
	It is considered that the Planning Proposal is consistent with this direction.

(Coastal Management) 2018	The aim of this Policy is to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the Coastal Management Act 2016, including the management objectives for each coastal management area, by: (a) managing development in the coastal zone and protecting the environmental assets of the coast, and (b) establishing a framework for land use planning to guide decision-making in the coastal zone, and (c) mapping the 4 coastal management areas that comprise the NSW coastal zone for the purpose

SEPP	Comment
	of the definitions in the Coastal Management Act 2016. Below is an extract of the SEPP mapping which identified a small portion along the central portion of the northern boundary as being affected by wetlands proximity area mapping. Development is not precluded from the mapped area but rather is Designated Development at the Development Application stage. Given the location on Sancrox Road, opposite an unformed road and as it is a low point on the site and will exceptional sight distance, this area cannot be avoided by development. The environmental qualities in this area have been considered in the Subdivision Concept plan.  *Figure 12 – Coastal Management SEPP extract* It is considered that the Planning Proposal is consistent with this direction.
(Primary Production and Rural Development) 2019	The aims of the Policy are to facilitate orderly economic use and development of lands for primary production. The land is not mapped as regionally significant farmland and the history of the site and the location of the site is not suitable agricultural land. Whilst the site is currently zoned for rural purposes, the development consent in place allows for a use which allows for 46 dwellings in close proximity and is not the traditional agricultural or rural-residential use of the land. As such, the proposed rezoning for urban purposes is not inconsistent and does not result in loss of ideal rural land. Notwithstanding the zoning, there will be no loss of agricultural land as it has not been successfully utilised for agricultural purposes and is not identified as significant farmland or agricultural purposes and is not identified as significant farmland.' Whilst the lack of success of past agricultural pursuits is not a clear indication that the land is unviable for agriculture, there is already a development consent in place which includes a form of housing on this site. It is acknowledged that there will be a loss of primary production land, however the highest and best use is as proposed within this Planning Proposal given that the land has not been identified as significant farmland and does not facilitate any existing agricultural production. Further, given the relatively small lot sizes and isolation from mapped important agricultural land and buffers due to vegetation corridors, it is unlikely that

SEPP	Comment
	this area will be used for productive agricultural purposes in the future and the proposal does not increase the likelihood of conflict or impact on current adjoining land due to the current absence of agricultural land use or future agricultural activities in the locality due to the current constraints and surrounding land uses.
BASIX 2004	This SEPP will apply to the development residential land if rezoned. It is considered that the Planning Proposal is consistent with this direction.
No. 55—Remediation of Land	SEPP 55 requires consideration to be given prior to rezoning land, as to whether or not the site is contaminated. Council will confirm where further investigation is required, however this has occurred as part of the overall development Le Clos Sancrox Road, Sancrox. The site is not registered on Council's contaminated lands register nor does the Contamination Assessment indicate that the previous use would preclude the proposed residential use. It is considered that the Planning Proposal is consistent with this direction.
(Infrastructure) 2007	The aim of this Policy is to facilitate the effective delivery of infrastructure. The site has frontage to Sancrox Road, which has access to the east to the Pacific Highway and Oxley Highway to the south via Rawdon Island Road. The traffic assessment accompanying this Planning Proposal does not identify the need for intersection upgrades at these major roads. It is considered that the Planning Proposal is consistent with this direction.
(Housing for Seniors or People with a Disability) 2004	Seniors housing or aged care facilities, whilst permissible land uses within the proposed residential zones, are not known if they will be established within the site. The proposed zonings allow for seniors living and the provision of a small business zone will assist with proximity to facilities and services.
(Educational Establishments and Child Care Facilities) 2017	Education facilities, whilst permissible land uses within the proposed residential zones, are not known if they will be established within the site. The proposed residential zoning will support an educational establishment or child care facility, consistent with the SEPP.

3.6 Is the planning proposal consistent with applicable Ministerial Directions (S9.1 directions)?

The below table is a review of the proposal against the relevant S9.1 Ministerial Directions.

Direction	Comment
1. Employment and Resources 1.1 Business and Industrial Zones 1.2 Rural Zones 1.3 Mining, Petroleum Production and Extractive Industries 1.4 Oyster Aquaculture 1.5 Rural Lands	*1.1 - Business and Industrial Zones* This proposal includes a small parcel of commercially zoned land to facilitate the provision of a small component of retail/business. This facility will be primarily for the surrounding residents and visitors to the school and child care centre or any other complimentary uses in the residential areas and is appropriately located. The objectives of this direction are to encourage growth in suitable locations, protect employment land in business and industrial zones and support the viability of identified centres. The addition of this small pocket of business land will not alter the hierarchy of commercial land within the Port Macquarie area, will not impact upon existing employment land and does not alter the viability of the identified strategic centres. This facility is smaller than a Neighbourhood Centre and the total potential floor space area for employment lands in the area is not expected to be reduced by this proposal. This proposed business zone will increase the liveability of the development of Sancrox, whilst still allowing for the nearby town centres of Thrumster (Sovereign Place) and Wauchope to be the main attracters. This

Direction	Comment
	inconsistency is justified by the economic assessment accompanying Proposal is consistent with this direction. *1.2 - Rural Zones* The proposal is inconsistent with the direction as it rezones land from rural to residential and business purposes. This inconsistency is permitted by the Direction given that it "*is of minor significance*". The objective of this direction is to protect the agricultural production value of rural land. The land is not currently being used for rural purposes and is not economically viable to continue in a state of limbo with a development application unable to be acted upon and a Moratorium in place. Further, the inconsistency is considered justifiable on the basis that the site is identified in Council's UGMS for investigation and by resolution of Council. Notwithstanding the rural zoning, there will be no loss of agricultural land as it has not been successfully utilised for agricultural purposes and is not identified as significant farmland or agricultural purposes and is not identified as significant farmland.' Whilst the lack of success of past agricultural pursuits is not a clear indication that the land is unviable for agriculture, there is already a development consent in place which includes a form of housing on this site. It is acknowledged that there will be a loss of primary production land, however the highest and best use is as proposed within this Planning Proposal given that the land has not been identified as significant farmland and does not facilitate any existing agricultural production. Further, given the relatively small lot sizes and isolation from mapped important agricultural land and buffers due to vegetation corridors, it is unlikely that this area will be used for productive agricultural purposes in the future and the proposal does not increase the likelihood of conflict or impact on current adjoining land due to the current absence of agricultural land use or future agricultural activities in the locality due to the current constraints and surrounding land uses. *1.3 Mining, Petroleum Production and Extractive Industries* This applies where there is potential to restricting the potential development of resources of coal, other minerals, petroleum or extractive materials which are of State or regional significance by permitting a land use that is likely to be incompatible with such development. The existing quarry to the north-east has in the recent years had plans to expand, and is currently on exhibition for comment. The plan is shown below, with the existing quarry on the eastern portion of the site and the expanded quarry shown in orange, extending in a westerly direction.

Direction	Comment
	 *Figure 13 – Extract from EIS for Quarry Expansion (source: https://www.planningportal.nsw.gov.au/major-projects/project/9946)* The quarry has ample room to accommodate any necessary buffers on the site, which coupled with Sancrox Road and any proposed mounding and planting along the road frontage, will provide ample separation and should not prevent operations to continue or expand in some form. There is ample room within the quarry site to contain any buffers to be contained within the quarry site to minimise impacts to the investigation area of Sancrox. This is consistent with a regional wildlife corridor indicated in Council's Development Control Plan (shown green in Figure 14 in Section 3.7 below relating to ecology), based on their ecological work undertaken. This corridor provides a clear vegetated barrier between the quarry and subject site. A current State Significant Development proposal has recently been exhibited for an expansion of the quarry westwards into the regionally significant ecological corridor. There is no certainty regarding approval of this application and given that this application extends into the regional significant ecological corridor, extends the life beyond previous agreements under DA 2012/305 and associated Planning Agreement and associated restrictions on development of adjoining industrial land until 2018, to allow for the quarry to be exhausted. Whilst the application is still awaiting additional information to allow the assessment of the expansion to continue, a partial response which includes a Blast Management Plan has been provided, which addresses how safety and minimisation of impact at neighbouring sites will be achieved and maintained, as well as detailing the blast clearance being well within their boundaries and away from LCS. This document provides certainty that LCS is some 550m away from the outer edge of the blast clearance and this land is well vegetated. The EIS for the Quarry Expansion also considered noise and the findings of their assessment and concluded that there was a need for mitigation measures to ensure compliance with relevant construction and operational noise levels. The measures relate primarily to operational controls such as hours of operation, limiting idling of engines, regular maintained machines, movements to occur in a forward direction to avoid reversing alarms, control of complaints, management

Direction	Comment
	plans and most importantly bunding. Implementation of these measures will prevent any impacts from the Quarry for Le Clos Sancrox with respect to noise or vibration. The EIS for the Quarry Expansion also considered air quality and the findings of their assessment and identified some air quality exceedances. The measures relate primarily to operational controls such as roads being sealed, dust extraction, water sprays, mobile sprinklers, watering, storage of dry product and delivery of product to the quarry and installation of vapour balancing system. Implementation of these measures will prevent any impacts from the Quarry for Le Clos Sancrox with respect to air quality. The EIS for the Quarry Expansion also considered air quality and the findings of their assessment and indicated that there is unlikely to be visual impacts due to the landform and topography and existing vegetation screening The DCP plan had a clear delineation of the industrial land from other land to the east, with the ecological corridor as a buffer. The proposed Le Clos Sancrox zoning and concept layout further increases this ecological corridor within the site to provide a larger buffer to the existing quarry and any expansion, should it be approved. The proposed Le Clos Sancrox zonings and concept layout provides for a vegetated corridor along these two boundaries which will provide a buffer to the environmentally significant land to the south and east, assisting with reducing any potential land use conflict. The proposed vegetated buffer has also been extended to the north-east corner of the site and along Sancrox Road to further enhance the wider ecological buffer, retain vegetation and assist with land use conflict between the existing quarry further to the east. It is clear that whilst the expansion of the quarry is not ideal, this Planning Proposal has taken measures to ensure that there is adequate separation between uses and screening by retention of existing vegetation. Given that Sancrox is expanding and is the logical extension between Port Macquarie and Wauchope and has been supported via Structure Plans, Urban Growth Management Plans and Development Control Plans, for urban expansion, further increase in the quarry in this location appears to be at odds with the planning to date. A review of quarries on the mid-coast has indicated an existing availability, coupled with approval of a new quarry at Bago, which indicates this quarry in not a scarce resource. This inconsistency is of minor significance as there is no certainty regarding the expansion and the site has room to accommodate buffers. *1.5 - Rural Lands* The purpose of this SEPP (Rural lands) is to prevent the loss of rural lands and maintain the rural settlements and lifestyle. The site, whilst zoned RU1, does not form part of a rural settlement or contribute to the rural lifestyle given it is a failed viticulture and development application for a form of housing which varies from the surrounding rural-residential. This inconsistency is permitted by the Direction given that it "is of minor significance" and is complies with the objectives of the SEPP. Further, the inconsistency is considered justifiable on the basis that the site is identified in Council's UGMS for investigation and by resolution of Council.

Direction	Comment
2. Environment and Heritage 2.1 Environment Protection Zones 2.2 Coastal Protection 2.3 Heritage Conservation 2.4 Recreation Vehicle Areas 2.5 Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs	2.1 Environment Protection Zones This Planning Proposal includes 1 ha of E2 land, 24.5 ha of E3 land and 1.5 ha of E4 zoned land. The principles of "avoid, minimise and offset" have been adopted in determining the environmental zones and developable area, minimising impacts upon areas of high environmental value. Proposal is consistent with this direction. *2.2 Coastal Protection* The Planning Proposal does not affect the natural attributes of the NSW coast. Whilst the site is largely cleared, the SEPP mapping which identified a small portion along the central portion of the northern boundary as being affected by wetlands proximity area mapping. Development is not precluded from the mapped area but rather is Designated Development at the Development Application stage. Given the location on Sancrox Road, opposite an unformed road and as it is a low point on the site and will exceptional sight distance, this area cannot be avoided by development. The environmental qualities in this area have been considered in determining the zonings and Subdivision Concept Plan. Proposal is inconsistent with this direction, however, the Consistency Criteria within the Direction could be met. *2.3 Heritage Conservation* The Planning Proposal is supported by an Aboriginal Cultural Heritage Assessment prepared by the Birpai Local Aboriginal Land Council. The assessment advised that there is no reason that the rezoning cannot proceed in respect to Aboriginal Cultural Heritage issues. The Recommendations of the report state: *"Based on the Site Inspection and other investigations, there is no reason for an Aboriginal Cultural and Heritage perspective that this rezoning cannot proceed, subject to the following:* 1. *An Aboriginal Sites office be present when excavation or clearing commences.* 2. *At such time as development site works start, should any artefacts be turned up or located, Birpai LALC Aboriginal Site Officers are to be contacted immediately and work on site stopped pending further assessment."* The rezoning can continue, subject to monitoring of any future earthworks during development of the site. An AHIMS search has not revealed aboriginal heritage on the site or within 50m of the site and a copy of the search forms an attachment to this report. In accordance with the NSW Office of Environment and Heritage's "Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales" and flowchart in Section 8, no further investigation is required and it is standard practice if any item of heritage significance is revealed during construction of the development works will cease immediately and the appropriate authorities will be contacted. The maps accompanying the current LEP do not identify the site as being affected by heritage, nor the surrounding land. No State listed items are located within the vicinity of the site. The proposal is consistent with the Direction.

Direction	Comment
3. Housing, Infrastructure and Urban Development 3.1 Residential Zones 3.2 Caravan Parks and Manufactured Home Estates 3.3 Home Occupations 3.4 Integrating Land Use and Transport 3.5 Development Near Regulated Airports and Defence Airfields 3.6 Shooting Ranges 3.7 Reduction in non-hosted short term rental accommodation period	*3.1 Residential Zones* The objective of this direction is to broaden the choice of building types and locations, make more efficient use of existing infrastructure and services, reduce the consumption of land for housing and associated urban development on the urban fringe, and be of good design. The proposal to rezone the subject land to allow residential development is considered to be efficient use of existing land and services and given that the site is largely cleared and not significant farmland, it does not result in substantial environmental impacts such as large scale loss of trees or impacts upon threatened species. The services provided to the site can be extended to the proposed residential zoned land. A variety of housing forms may result given the proposed R1 and R3 zones, in accordance with the Direction. The proposal does not contain any provisions which will reduce the permissible residential density of the land. The proposal is consistent with the Direction. *3.4 Integrating Land Use and Transport* As this proposal creates urban land, this Direction applies. The objective of this direction is to ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts improve access to housing, jobs and services by walking, cycling and public transport, reduce dependence on cars, and travel demand including the number of trips, especially by car. The Sancrox area is serviced by Busways Route 335W, which provides access into the centre of Port Macquarie and Wauchope. Provision has been made within the Concept Subdivision Plan for upgrade of Sancrox Road to include cycleway and pathways and a Collector Road through the site, with a roundabout on the western boundary which allows for bus turn arounds until such time as the adjoining land is developed and a through connection established. It is expected that as the wider Sancrox area develops, Busways will provide services via the Collector Road system. In determining the appropriate zonings for the site, the constraints were determined and a concept layout developed, which includes an upgrade of Sancrox Road, Collectors Roads through the site and creation of on-road and off-road alternate transport such as walking or cycling both within and between the adjoining sites. Ultimately as the area develops, Sancrox Road would provide pedestrian and cycling connections to the employment land further to the east, a future high speed rail is that progresses and the surrounding residential development once the wider planning is finalised. Further, the traffic assessment indicates that two round-a-bouts are required on Sancrox Rd at Road 1 and 2. And that the provision of bus bays at these intersections is necessary. Bus stops will also be incorporated into the future Collector Roads through the site to allow for future connections. The proposal is consistent with the Direction.
4. Hazard and Risk 4.1 Acid Sulfate Soils 4.2 Mine Subsidence and Unstable Land 4.3 Flood Prone Land 4.4 Planning for Bushfire Protection	*4.4 Planning for Bushfire Protection* A Bushfire report has been prepared and accompanies this Planning Proposal with respect to the bushfire impacts as the site is mapped as bushfire prone land. Appropriate APZ can be accommodated on site and has informed the environmental zoned land boundaries. The required APZ will be contained in residentially zoned land. The Direction requires that Council consult with the Rural Fire Service after a Gateway Determination has been issued. Planning for Bushfire Protection 2019

Direction	Comment
	has been released and the RFS website indicates "*It is expected that PBP 2019 will be legislatively adopted on 1 March 2020. The NSW RFS has committed that a minimum two month period will be provided between the time notification of the adoption date is given and the adoption date of PBP 2019*". During the current period, either the existing 2006 or proposed 2019 version can be used. With respect to LEP preparation, PBP 2019 states *"As part of the consultation process with the NSW RFS, a bush fire assessment is required to be submitted to demonstrate compliance with the s9.1(2) Directions and PBP. Where the proposal is of a strategic nature, this should take the form of a Strategic Bush Fire Study particularly if this PP is proposed to progress concurrently with a development application*." PDP 2019 also requires an indicative development layout where residential, which demonstrates APZ. A Strategic Bush Fire Study has been prepared. An indicative subdivision layout, with APZ clearly demonstrated, has been provided. The bushfire assessment provided is sufficient for Gateway determination and can be amended based on gateway determination and feedback from the RFS. The Development Application will not be lodged until after Gateway determination. The proposal is consistent with the Direction.
5. Regional Planning 5.1 Implementation of Regional Strategies 5.2 Sydney Drinking Water Catchments 5.3 Farmland of State and Regional Significance on the NSW Far North Coast 5.4 Commercial and Retail Development along the Pacific Highway, North Coast 5.5 Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA) (Revoked 18 June 2010) 5.6 Sydney to Canberra Corridor (Revoked 10 July 2008. See amended Direction 5.1) 5.7 Central Coast (Revoked 10 July 2008. See amended Direction5.1) 5.8 Second Sydney Airport: Badgerys Creek (Revoked 20August 2018) 5.9 North West Rail Link Corridor Strategy 5.10 Implementation of Regional Plans 5.11 Development of Aboriginal Land Council land	*5.1 Implementation of Regional Strategies* The objective of this direction is to give legal effect to the vision, land use strategy, goals, directions and actions contained in Regional Plans. In accordance with North Coast Regional Plan 2036, this site is a prime opportunity to accommodate additional housing without adverse environmental impacts or loss of agricultural land. The small commercial component does not impact upon the strategies. Consistency of this planning proposal with the North Coast Regional Plan 2036 is demonstrated within Section 3.3.
6. Local Plan Making 6.1 Approval and Referral Requirements	*6.1 Approval and Referral Requirements* The Planning Proposal does not include provisions that require the concurrence, consultation or referral of development applications to a Minister or public

Direction	Comment
6.2 Reserving Land for Public Purposes 6.3 Site Specific Provisions	authority.

It is acknowledged that additional information may be required after a Gateway determination has been issued, to demonstrate consistency with a direction or enable the Secretary to agree to an unresolved inconsistency.

Section C - Environmental, social and economic impact

3.7 Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

The planning proposal does not impact on threatened species, populations or ecological communities of the habitat. The site is highly disturbed with areas of ecological value and no serious or irreversible flora, fauna or environmental impacts are anticipated. Having regard to the high level of disturbance and absence of biodiversity values identified for the site, it is considered unlikely that any threatened species, populations or ecological communities would be adversely affected because of the proposal. Refer to the accompanying Ecological Assessment which is an appendix to this report.

The principles of avoid and minimising have been employed and the tree removal has been limited and the areas of importance have been incorporated into the proposed E3 zones. Along the eastern boundary of the site, in the area which accommodates dwelling sites, vegetation has ben retained and an appropriate zoning of E4 recommended to accommodate the existing dwelling and vegetation retention. The original development footprint was larger in size and extended into the cleared southern area and along the eastern boundary where the current arrangement allows for dwelling sites. During the ecological review and discussions with Council, these two key areas along the southern and eastern boundaries were expected from future development and an environmental zoning proposed in order to create a corridor along the entire eastern and south boundary, with the exception of the two dwellings in existence in this area. The existing Le Clos Sancrox Road, which will need to be upgraded, will form the buffer between the new development and the corridor being created. This corridor will significantly enhance the regional corridor on the adjoining land, which continues in a northward direction, as shown below.

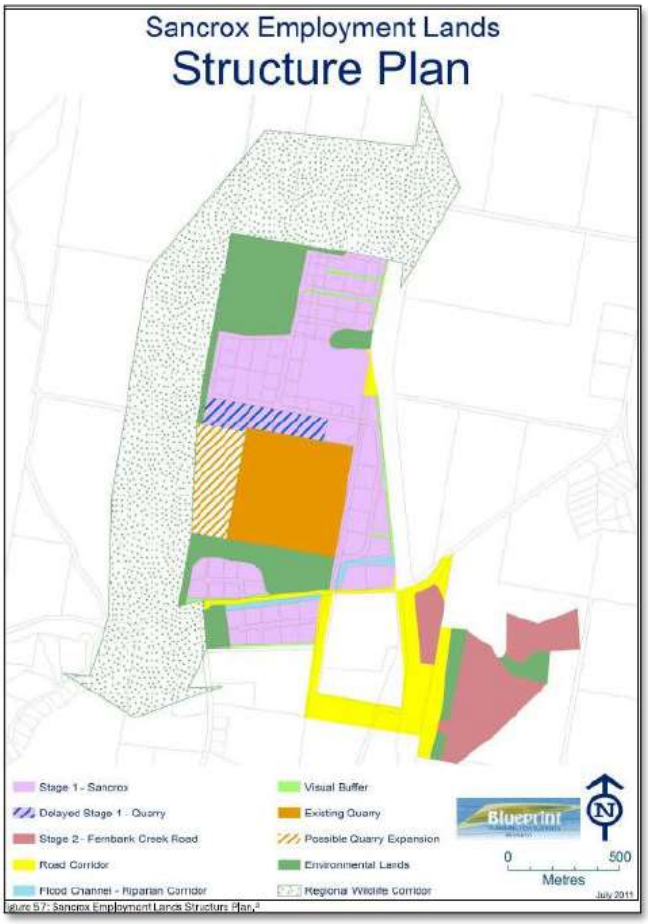


Figure 14 - Regional Wildlife Corridor (shown green dotted) – PMHC Development Control Plan (source: www.pmhc.nsw.gov.au)

As an extension of this corridor and to minimise vegetation removal, a vegetated corridor has now been retained along Sancrox Road. This will assist visually and acoustically, in addition to its key function from an ecological perspective. Further, it provides a buffer to the quarry further to the east.

The preliminary ecological advice addresses the principles of avoid, minimize offset under the *Biodiversity Conservation Act 2016*. The figure below indicates the vegetation is being removed by the likely development based on the concept plan, and that considerably more area is available for offset planting. This offset planting is in addition to existing vegetation being retained.

The assessment confirms that there is EEC in three areas of the site, one being along the northern boundary in the central area of the site and the other along the western boundary in the vicinity of the existing dam.

A draft Vegetation Management Plan is being developed for the overall development, based on the concept and a draft accompanies this document and shown below. It is proposed that the environmental lands be dedicated to Council and the VMP ensures maintenance.

The design has allowed for wider road reserves within the R1 land in order to accommodate the drainage swales throughout the site, but this will have a due purpose from an ecological perspective to provide an increased buffer to the areas of environmental value.

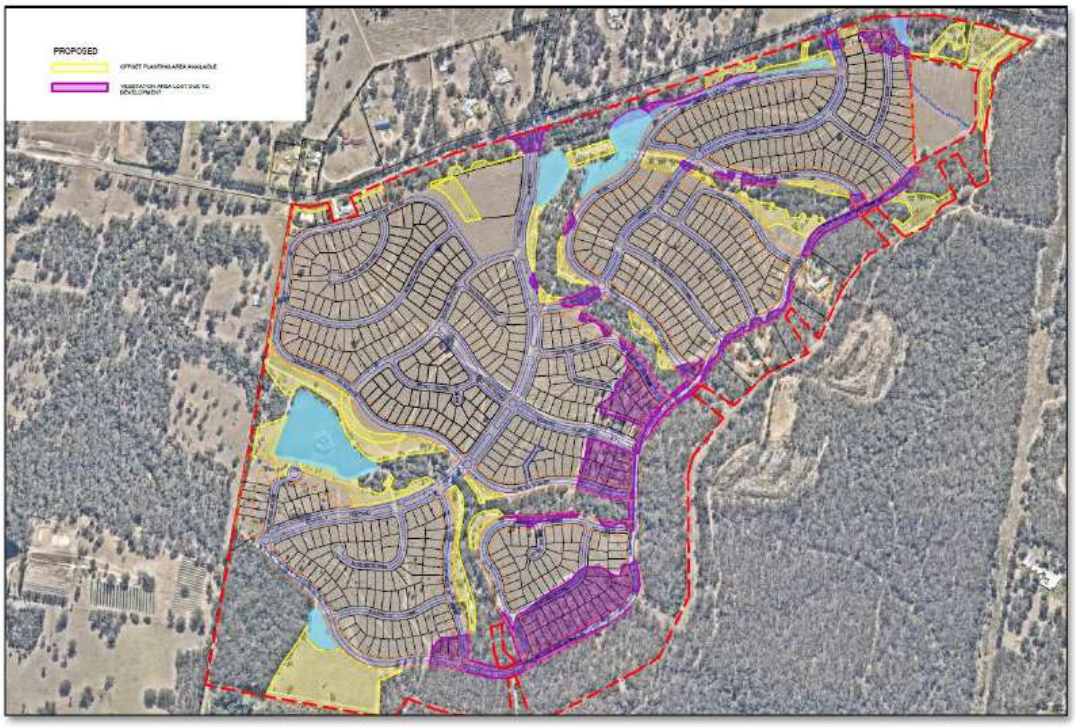


Figure 15 – Amount of Vegetation Removed & Offset Planting area available

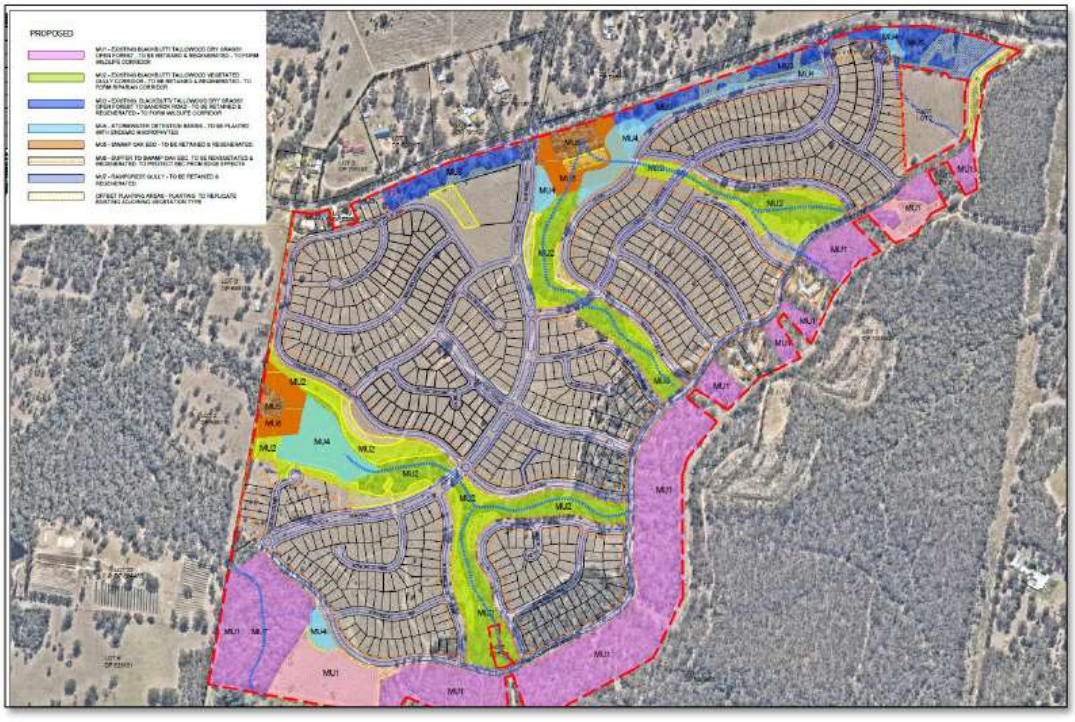


Figure 16 – Draft Vegetation Management Plan

Based on discussions with Council's Ecologist, the key consideration is the overall ecological benefit rather than numbers of replacement planting that has been achieved. Preliminary discussions have been undertaken with Department of Planning, Industry and Environment's Biodiversity and Conservation Division. Below is a summary of the key discussions:

- Address North Coast Regional Plan and avoid High Environmental Value.
- Explain how the proposal maximises avoidance and how the layout has evolved with respect to ecology.
- Look at constraints and opportunities, avoid HEV and form an argument which supports the proposed land uses.
- Consider Bio-certification at Planning Proposal stage.

A letter was received following the site visit which explained biodiversity certification.

Further consultation after Gateway determination is issued can occur with the NSW Office of Environment and Heritage regarding the of the biodiversity assessment, its' methods and findings if necessary.

Biodiversity certification is to be pursued with the aim of exhibition of documentation concurrently with the Planning Proposal documentation.

3.8 Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

Bushfire

The site is identified as being bushfire prone land and the vegetation being retained creates a threat for the future development. The indicative lot layout and road design has incorporated perimeter roads and Asset Protection Zones into the design and within residential zones and not environmental zones. Refer to the accompanying Bushfire Assessment which concludes that subject to the implementation of appropriate bushfire threat reduction measures, bushfire risk is manageable.

Appropriate APZ can be accommodated on site and has informed the environmental zoned land boundaries. The required APZ will be contained in residentially zoned land.

Council is required to consult with the Rural Fire Service after a Gateway Determination has been issued. Planning for Bushfire Protection 2019 has been released and the RFS website indicates "*It is expected that PBP 2019 will be legislatively adopted on 1 March 2020. The NSW RFS has committed that a minimum two month period will be provided between the time notification of the adoption date is given and the adoption date of PBP 2019*". During the current period, either the existing 2006 or proposed 2019 version can be used.

With respect to LEP preparation, PBP 2019 states *"As part of the consultation process with the NSW RFS, a bush fire assessment is required to be submitted to demonstrate compliance with the s9.1(2) Directions and PBP. Where the proposal is of a strategic nature, this should take the form of a Strategic Bush Fire Study particularly if this PP is proposed to progress concurrently with a development application."* PDP 2019 also requires an indicative development layout where residential, which demonstrates APZ.

A Strategic Bush Fire Study has also been prepared.

An indicative subdivision layout, with APZ clearly demonstrated, has been provided. The bushfire assessment provided is sufficient for Gateway determination and can be amended based on Gateway determination and feedback from the RFS.

Any future development on the site is capable of satisfying bushfire requirements and will be subject to individual assessment at the Development Application stage.

Residential Amenity

The proposed zoning which was informed by the indicative layout, has had regard to the residential amenity of the future residents within the estate, as well as the adjoining land uses.

Amenity Impacts from Quarry

To the north-east of the site is a quarry and consideration has been given to the potential impacts with respect to their operations and the need for a buffer. The extract below from the UGMS indicates a resource transition area which appears to extend onto the north-east corner of the site, as circled green on the image.

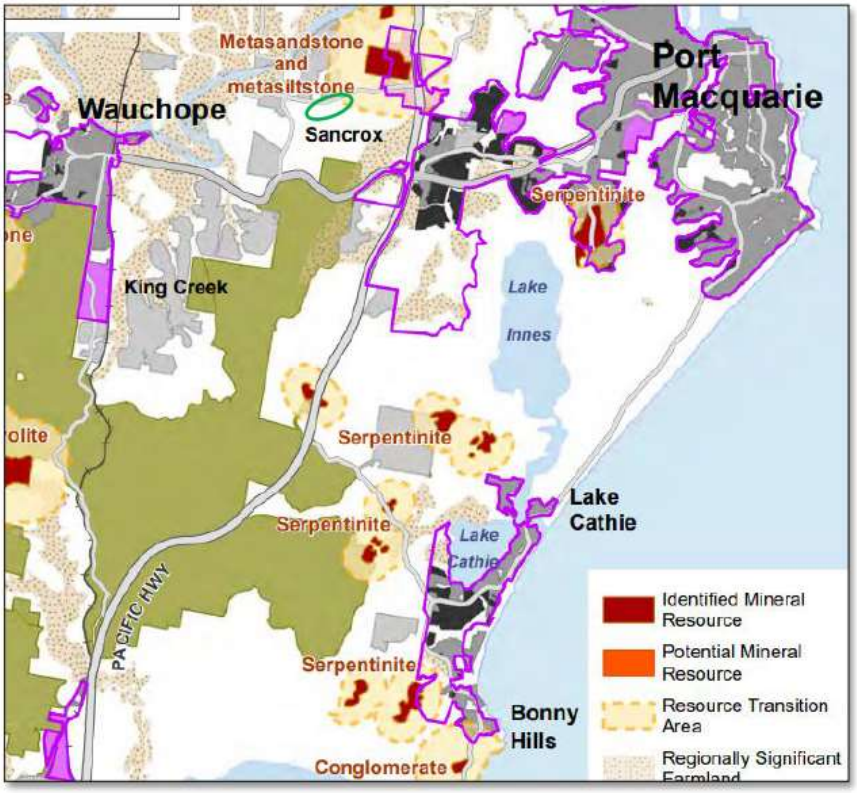


Figure 17 - Natural resource locations UGMS (source: www.pmhc.nsw.gov.au)

The Secretary's requirements have been sought in 2015 and again in 2017 for an expansion of Sancrox Quarry (SSD-7293). An Environmental Impact Statement has now been prepared and an application lodged for State Significant Development. The quarry has ample room to accommodate any necessary buffers on the site, which coupled with Sancrox Road and any proposed mounding and planting along the road frontage, will provide ample separation and should not prevent operations to continue or expand in some form. There is ample room within the quarry site to contain any buffers to be contained within the quarry site to minimise impacts to the investigation area of Sancrox. This is consistent with a regional wildlife corridor indicated in Council's Development Control Plan (shown green in Figure 14 in Section 3.7 relating to ecology), based on their ecological work undertaken. This corridor provides a clear vegetated barrier between the quarry and subject site.

A current State Significant Development proposal has recently been exhibited for an expansion of the quarry westwards into the regionally significant ecological corridor. There is no certainty regarding approval of this application and given that this application extends into the regional significant ecological corridor, extends the life beyond previous agreements under DA 2012/305 and associated Planning Agreement and associated restrictions on development of adjoining industrial land until 2018, to allow for the quarry to be exhausted. The DCP plan had a clear delineation of the industrial land from other land to the east, with the ecological corridor as a buffer. The

proposed Le Clos Sancrox zoning and concept layout further increases this ecological corridor within the site to provide a larger buffer to the existing quarry and any expansion, should it be approved.

The proposed Le Clos Sancrox zonings and concept layout provides for a vegetated corridor along these two boundaries which will provide a buffer to the environmentally significant land to the south and east, assisting with reducing any potential land use conflict. The proposed vegetated buffer has also been extended to the north-east corner of the site and along Sancrox Road to further enhance the wider ecological buffer, retain vegetation and assist with land use conflict between the existing quarry further to the east.

It is clear that whilst the expansion of the quarry is not ideal, this Planning Proposal has taken measures to ensure that there is adequate separation between uses and screening by retention of existing vegetation. Given that Sancrox is expanding and is the logical extension between Port Macquarie and Wauchope and has been supported via Structure Plans, Urban Growth Management Plans and Development Control Plans, for urban expansion, further increase in the quarry in this location appears to be at odds with the planning to date.

Representatives from Le Clos Sancrox are part of the Community Consultative Committee with Hanson. Hanson has advised the Sancrox Quarry Community Consultative Committee at the meeting of 6 July 2018, in Item 6 of the Minutes, in response to a question in respect to the impact of future development upon adjoining properties that "*there are policies in place that trigger when land acquisition is required. Hanson are engineering the project according, to avoid this trigger*". This is consistent with Council's request for buffers to remain on site.

The comments below also have regard to the potential acoustic impacts from the quarry, as discussed below.

Acoustic & Vibration

An Acoustic review has occurred and accompanies this report, which considers the adjoining land uses and traffic noise. These include Sancrox Road, the quarry, the animal boarding and breeding establishment, potential high speed rail to the west and existing adjoining land uses. It is to be noted that in order to retain trees along Sancrox Road, there is a considerable setback to Sancrox Rd, which can also be embellished with mounding or landscaping to assist further with acoustic qualities.

An Acoustic Review was undertaken with respect to the existing nearby land uses including the quarry, as well as the proposed residential land use and potential for educational establishment. The conclusion states:

"Concerning traffic noise:

- *Noise from existing significant roads will comply at the development due to the large distance. The site is approximately 1500 m from the Pacific Highway.*
- *Traffic noise generated by the development on Sancrox Road is expected to comply at existing Receptors. Those existing residences are generally setback 40 m from the road.*
- *Traffic noise generated by the development is expected to comply at future Receptors within the development itself.*
- *If the school is located on site, traffic noise into the school should be assessed. Depending on the location of the school, minor noise mitigation is may be required.*

Concerning noise from industrial facilities external to the site:

- *The Sancrox Quarry S Assessment was used to show that noise from the Quarry will comply with appropriate noise trigger levels at all locations and all times. Noise from blasting and vibration will also comply.*
- *Noise from the existing kennel north of the site may be audible at some lots. It is recommended that noise from the kennel be assessed and if mitigation is necessary and agreement be reached with the operator of the kennel.*

Concerning noise from the proposed High Speed Rail:

- *Given that the distance from the alignment to the nearest proposed lots, and that the railway line may be in cut at this location, it is probable that noise from the railway will comply with guidelines at residential lots.*
- *HSR noise to a school, particularly if the school is located in the north-east corner of the site, may need to be considered. While noise to playgrounds will generally be satisfactory, noise to classrooms may require closed windows and therefore consideration of ventilation."*

No major acoustic impacts have been identified and at the development Application stage, individual ameliorative measures can be imposed.

The EIS for the Quarry Expansion also considered noise and the findings of their assessment and concluded that there was a need for mitigation measures to ensure compliance with relevant construction and operational noise levels. The measures relate primarily to operational controls such as hours of operation, limiting idling of engines, regular maintained machines, movements to occur in a forward direction to avoid reversing alarms, control of complaints, management plans and most importantly bunding. Implementation of these measures will prevent any impacts from the Quarry for Le Clos Sancrox with respect to noise or vibration.

Air Quality

The EIS for the Quarry Expansion also considered air quality and the findings of their assessment and identified some air quality exceedances. The measures relate primarily to operational controls such as roads being sealed, dust extraction, water sprays, mobile sprinklers, watering, storage of dry product and delivery of product to the quarry and installation of vapour balancing system. Implementation of these measures will prevent any impacts from the Quarry for Le Clos Sancrox with respect to air quality.

Visual Impacts

The site has frontage to Sancrox Road and will be visible to passers-by. It is also noted that Urban Design Guidelines have been developed for the estate which maintains a consistent and acceptable visual appearance of the overall development and landscape buffer provide screening to Sancrox Rd.

The EIS for the Quarry Expansion also considered air quality and the findings of their assessment and indicated that there is unlikely to be visual impacts due to the landform and topography and existing vegetation screening.

3.9 How has the planning proposal adequately addressed any social and economic effects?

Social

A Social Impact Assessment was undertaken, which included a letterbox drop to surrounding properties and survey questions to be completed.

The concept design for the site provides opportunities for pedestrian and cycle connectivity throughout the entire development, which reduces the dependency on vehicles. A site has been identified for a potential school and child care centre in the western portion of the site in the vicinity of the local business centre. The portion of R3 zoned land also allows for increased densities and variety of housing form, in walking distance of the local centre and bus stops ion the proposed Collector Road.

With respect to the wider context, discussions with Council Officers have identified the need for a pathway and/or cycleway along Sancrox Road, which will provide connection to the future development in Sancrox, as well as the existing industrial area to the east, future high speed rail to the east and existing recreational areas further to the west.

The environmental constraints of the site are managed and embellished and a buffer including mounding and landscaping in addition to fencing has been provided to Sancrox Road.

The proposal includes potentially positive social and economic benefits through employment generation within the small retail zone, as well as through the construction process for all zones.

It is not considered that the business component will be a major attractor in its own right due to its small size and will complement the developing residential areas, as well as the existing population of Sancrox.

It is concluded in the Social Impact Assessment that negative impacts associated with the proposed rezoning to allow for the subdivision can be mitigated as part of the development application design and assessment process, as well as through appropriate ongoing site management and as part of a refinement of certain aspects of the site design. None of the issues identified in the consultation would prevent the rezoning from occurring.

This Social Impact Assessment has sought to identify any issues relating to the rezoning and corresponding subdivision. A positive social benefit is gained for the future residents and the wider Sancrox area.

Economic

Based on the Concept Subdivision Plan, the yield of the site is expected as follows:

- Residential – approx.638 lots in R1 zoned land (73.2 ha), 42 lots in R3 zoned land (2.3 ha) and 3 lots in E4 land (existing dwellings on 1.5ha)
- Business - approx. 1 ha of commercially zoned land

It is expected that this yield will bring a boost to the centre of Wauchope in particular.

During the Social Impact Assessment survey, a response was received from Hanson who operate the quarry to the north-east of the site. Beyond the amenity impacts discussed elsewhere, there could be a perceived economic impact upon the quarry with the addition of new residents into the area. However, the proposed zoning and concept subdivision layout has incorporated a vegetated buffer, which in combination with the upgrades Sancrox Road and the ecological corridor and buffers within the quarry site are sufficient, and any economic impacts are not directly resulting from the subject Planning Proposal.

In most instances, business zoned land is determined at the time of the overall zoning of a growth area and the population would follow. However, in this instance, there is already a demand established from the recent residential growth of Sancrox and neighbouring estates. The development of a new state in Sancrox contributes significantly to the need for business in this area to provide for the day to day conveniences of the existing and proposed residents and visitors and nearby workers.

In keeping with the strategies, development of Le Clos Sancrox and the wider Sancrox area, along with the identified continued population growth, further strengthens the need for business land and a local or neighbourhood centre.

The business growth within Wauchope and Thrumster has considerable need and the subject site is identified as a prime location to accommodate the ever increasing demand and given that Le Clos Sancrox is emerging as the first development within the area.

Below is a summary of the key findings of this Economic Impact Assessment:

- There is unlikely to be an adverse impact upon the retail hierarchy of Port Macquarie given the small scale proposed.
- There is a strong need for a neighbourhood or local centre between Thrumster and Wauchope and the proposed zoning addresses a shortfall of the lower end of the hierarchy since the closure of Sancrox corner store.
- The local or neighbourhood centre will service existing residents, as well as the new population from Le Clos Sancrox and the remainder of the Sancrox area once developed.
- The potential economic impact will not threaten the viability or level of service presently enjoyed by residents and visitors, but will enhance the overall level of service by providing a facility not presently

available in the region. Any potential impacts are likely to be in the short term and would be made good through the provision of a new local centre.

- Will reduce car dependency due to its planned integration into the development of the new Le Clos Sancrox estate with good connectivity for walking and cycling and public transport.
- The net benefit to the community in providing a local or neighbourhood centre within Le Clos Sancrox residential development is the key contribution to provision of a liveable community.
- There will be an economic injection will be experienced by the businesses who operate from the proposed business land and the location and connections ensure easy access.

Section D - State and Commonwealth interests

3.10 Is there adequate public infrastructure for the planning proposal?

Road Network

From an accessibility viewpoint, the subject site is well located with respect to major roads and the traffic network. The site has frontage to Sancrox Road, which has access to the east to the Pacific Highway and Oxley Highway to the south via Rawdon Island Road. The traffic assessment accompanying this Planning Proposal identifies the need for road upgrades to Sancrox Road and addition of round-a-bouts at the two new roads. There is no need for intersection upgrades at existing intersections with Sancrox Road, however has recommended minor intersection works as the development progresses, in order to improve road safety, but not directly related to the Le Clos Sancrox development. This provides a wider public benefit for the area.

The upgrade works to Sancrox Road would allow for bus stops, pedestrian pathways and Cycleway, which all assist with connections into the future subdivision and connection from Le Clos Sancrox to the wider community.

A Traffic Impact Assessment accompanies this Planning Proposal.

Servicing

The existing infrastructure is adequate to serve or meet the needs of the proposal, with additional upgrades required by way of road works, new intersections, a new Sewer Pump Station (in public road) and extension of services within the public road to the site. The investigations undertaken have concluded that the upgrades would be funded by the developer of the site and there is no expected shortfall in service provision. The provision and funding of State infrastructure is not necessary for this proposal.

Given the previous Structure Plan investigations and the updated current investigations, scale of the planning proposal is not expected to place additional unreasonable demand on the road network, open space, waste facilities or local emergency services. The area is already serviced with all necessary public infrastructure in place.

Essential infrastructure currently available to the subject site is water, electricity and telecommunications . A number of the services may need to be upgraded to ensure capacity is met and this will require further investigation. Discussions were held with Council officers in August 2018 in regard to future sewer and water servicing requirements and it was confirmed that the site 'is unconstrained' in relation to servicing. The accompanying plans show preliminary future servicing concepts for the subject site.

Stormwater & Water Quality

The site naturally drains towards Sancrox Road and the western boundary with a number of first and second order streams dissecting the site. A large dam is located to the central western boundary of the property capturing a large portion of the runoff from the subject property and adjoining property to the south and west. The intent would be to provide bioretention in the gullies, utilizing the natural topography of the site.

Water qualities measures are included in the stormwater design to treat the water as it traverses the site via a series of swales, to avoid the need for large basins.

The design has allowed for wider road reserves within the R1 land in order to accommodate the drainage swales throughout the site. The wider road reserve will have many additional benefits in addition to accommodating the drainage infrastructure, but will also increase the openness of the overall development, provide further buffer to the areas of environmental value and allow for asset protection zones.

Sewer

Sewer is not currently available to the site but is located to the eastern end of Sancrox Rd, adjoining Expressway Spares. Preliminary discussions with Council's Sewer & Water Manager at a meeting on 7 August 2018 have indicated that numerous options are available, and constraints are minimal in providing sewer to the site. These discussions were progressed further in July 2019.

A new sewer pump station will be required to service the site. The preferred option would be to provide a 'centralised' sewer pump station to the north of the site allowing greater flexibility to service a larger surrounding area. A rising main would be required along Sancrox Road feeding back into the existing sewer pump station located at the intersection of Sancrox Rd and the Pacific Highway. This would then discharge into the existing gravity fed network. Sewer servicing of the subject site can alternatively be managed by way of a 'self-servicing' sewer pump station upon the site itself with a sewer rising main leading back to the existing SPS at Pacific Highway intersection. Although not the preferred option it would be considered if time and landowner consent issues delayed or prevented the 'centralised' option from occurring within a reasonable timeframe.

Land Dynamics have prepared preliminary calculations to ensure the provision of a gravity sewer system within the site and leading to a 'self-servicing' pump station is feasible. These calculations have also been extended to include a 'centralised' pump station option including a larger surrounding catchment area. The below figure shows indicative gravity fed sewer options within an extended catchment highlighting approximate invert levels and the ability for this system to be a workable option.

Water

Although the UGMS mentions a very limited water supply from the existing Sancrox Reservoir to the Sancrox area for domestic and firefighting purposes (UGMS, p.111), a new 20 mega litre reservoir has been constructed. This reservoir caters for the current and future demands of urban development and Urban growth areas including the Sancrox area.

The current water supply network to the site is shown in the diagram below. The existing 100mm diameter and 150mm diameter watermains are located along Sancrox Road and within the development site. It is envisaged however that the 300mm water main near to Expressway Spares to the east will need to be upgraded in the future along Sancrox Road to the subject site. This was confirmed by Council's Sewer & Water Manager who highlighted that any upgrades would be a requirement of any future development.

Telecommunications

A Dial Before You Dig search shows that telecommunications already exists to the site servicing the smaller existing lots along the Le Clos Sancrox Road. This network will be upgraded to service any future lots and development sites.

Confirmation has been received from NBN Co in 2018 that NBN can be made available to the development site. Discussions have occurred directly with NBN and they have provided an email confirming availability and likely costs.

Electricity

A Dial Before You Dig search shows that an electrical network already exists to the site servicing the smaller existing lots along the Le Clos Sancrox Road. This network will be upgraded to service any future lots and developments sites. An email was received from Essential Energy in 2018 confirming that the site can be serviced, subject to staging.

Railway

Wauchope station is located approximately 6km to the west of the site and provides access to Sydney to the south and Brisbane to the north.

The map below is an extract from the Phase 2 investigations that depicts the relevant portion of the provisional rail corridor for the proposed high-speed rail alignment from north to south commencing at Brisbane and finishing at Melbourne, noting the indicated alignment is outside of the subject site.

Having regard to the possible location of the Port Macquarie station to the east of the site, and within walking distance of the site, provides opportunities for greater public transport use by the residents and less car dependency, which is a good planning outcome around railway stations.

Council's advice to date has indicated that there is no certainty that the high speed rail will proceed, and this may in fact be correct given its location through heavily vegetated and ecologically significant land to the east, as well as the quarry land to the north-east. Notwithstanding this, the design has had regard to the corridor and there is the ability to extend the pedestrian connectivity to the station in the future should it eventuate.

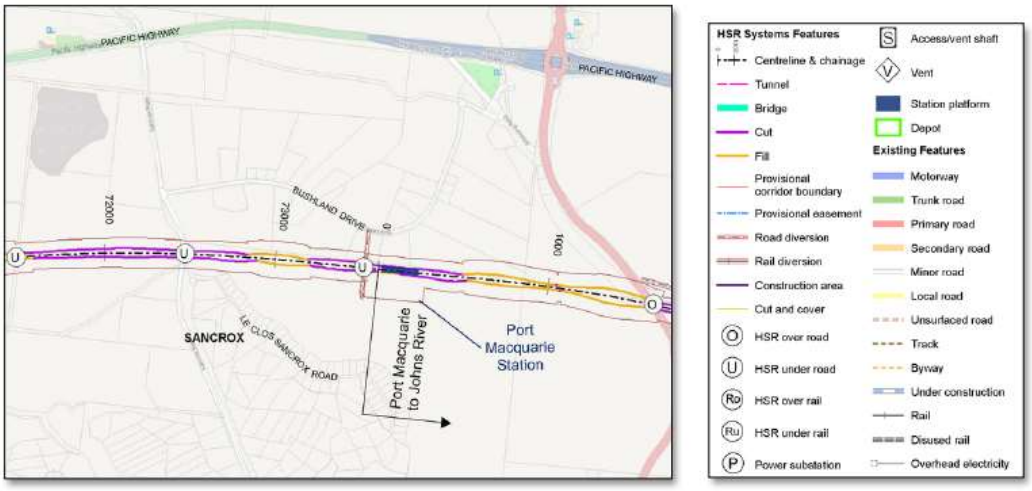


Figure 18 - Phase 2 Investigations - High-speed rail alignment Extract (source: www.infrastructure.gov.au/rail/publications/high-speed-rail-study-reports)

3.11 What are the views of State and Commonwealth public authorities consulted in accordance with the Gateway determination?

Consultation in relation to this proposal will be undertaken in accordance with relevant statutory requirements as part of the planning process, which occurs post-Gateway determination.

Proactive consultation in relation to this proposal has been undertaken with representatives of the Department of Planning, Industry and Environment's Planning Division, as well as the Biodiversity and Conservation Division. Below is a summary of the key discussions with both divisions.

Department of Planning, Industry and Environment's Planning Division

- Review need for land, land supply may be zoned but not necessarily developable.
- Address UGMS, variation principles and s9.1 Ministerial Directions.
- The Department identified this area for investigation.
- Explain the merits and how it fits in with the wider planning.
- Address inconsistency regarding the quarry.

Department of Planning, Industry and Environment's Biodiversity and Conservation Division

- Address North Coast Regional Plan and avoid High Environmental Value.

- Explain how the proposal maximises avoidance and how the layout has evolved with respect to ecology. Look at constraints and opportunities, avoid HEV and form an argument which supports the proposed land uses.
- Consider Bio-certification at Planning Proposal stage.
- Consider aboriginal heritage.
- Consider impacts from basins, pathways and road edges in ecological assessment.
- Identify recreational open space, not just conservation.

A letter was received after the site visit with the Department of Planning, Industry and Environment's Biodiversity and Conservation Division which provided further information regarding biodiversity conservation, including how to apply and determination, as well as discussing consistency with the North Coast Regional Plan. These comments have been considered and incorporated into this document. Biodiversity Certification will be sought post Gateway.

As part of the informing planning work, discussions were held with the Department of Education to ascertain whether a public school would be appropriate in this location, who advised that they did not feel there was a need. This is not a view shared given the lack of existing schools in the area and the current demand on existing local schools, including private schools. Discussions have occurred with a private school provider who has expressed considerable interest and the north-west corner of the site has been earmarked as a possible future location, noting that R1 zone allows educational establishments. To date, no agreement has been reached and as such the planning proposal is progressing on a residential zoning.

A pre-lodgement meeting has been held with Council to discuss the Planning Proposal following the resolutions of Council to invite a site specific Planning Proposal. Council has advised that the Planning proposal has merit and requested a formal submission to Council for inclusion within Council's Strategic Planning Program. The requested documentation at the pre-lodgement has been provided.

PART 4 – MAPPING

The proposed LEP map amendments are indicated below, with a comparison between the existing and proposed maps Map 13B on land comprising a number of landholdings collectively known as Le Clos Sancrox.

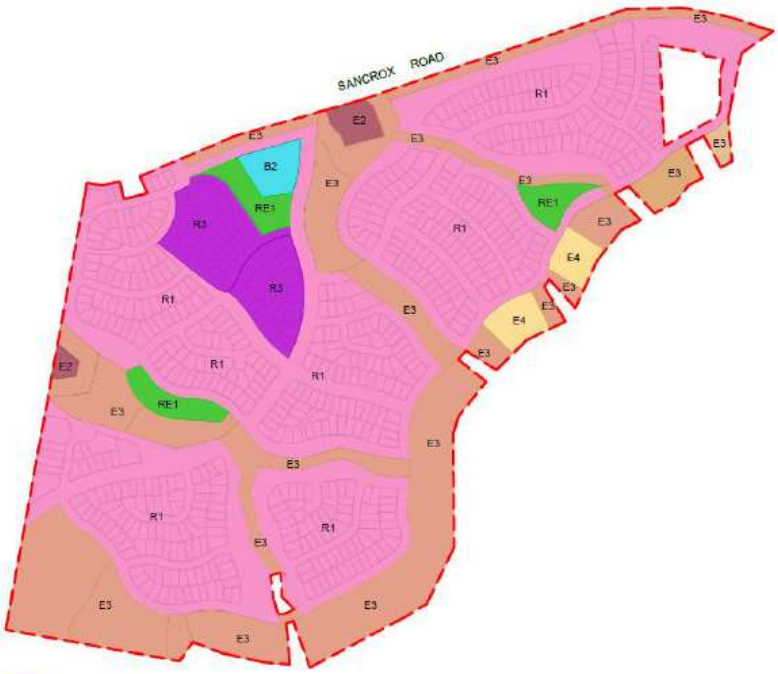
Zoning Map

Current



RU1 Primary Production

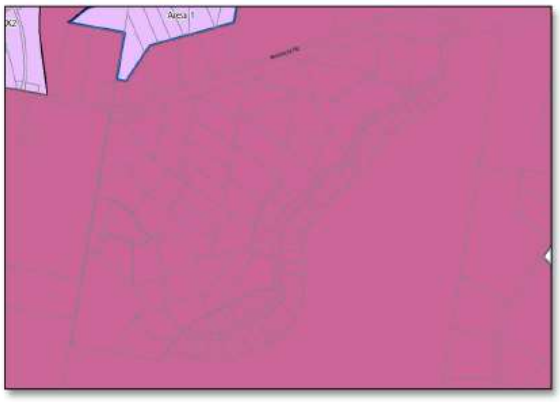
Proposed



E1 National Parks and Nature Reserves
E2 Environmental Conservation
E3 Environmental Management
E4 Environmental Living
R1 General Residential
R3 Med ium Density Residential
B2 Local Centre

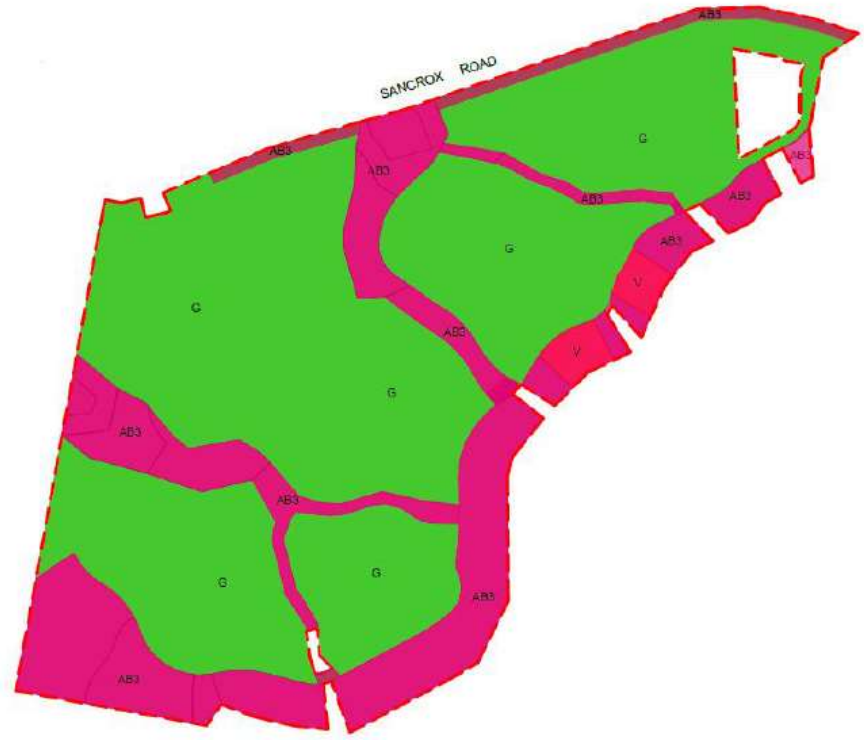
Lot Size Map

Current



AB3 40 ha

Proposed



G 450 V 2000 AB3 40 ha

Floor Space Ratio Map

Current

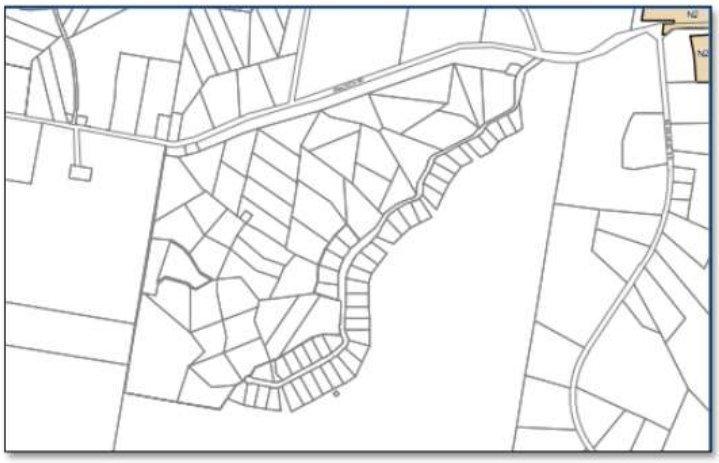
N/A

Proposed

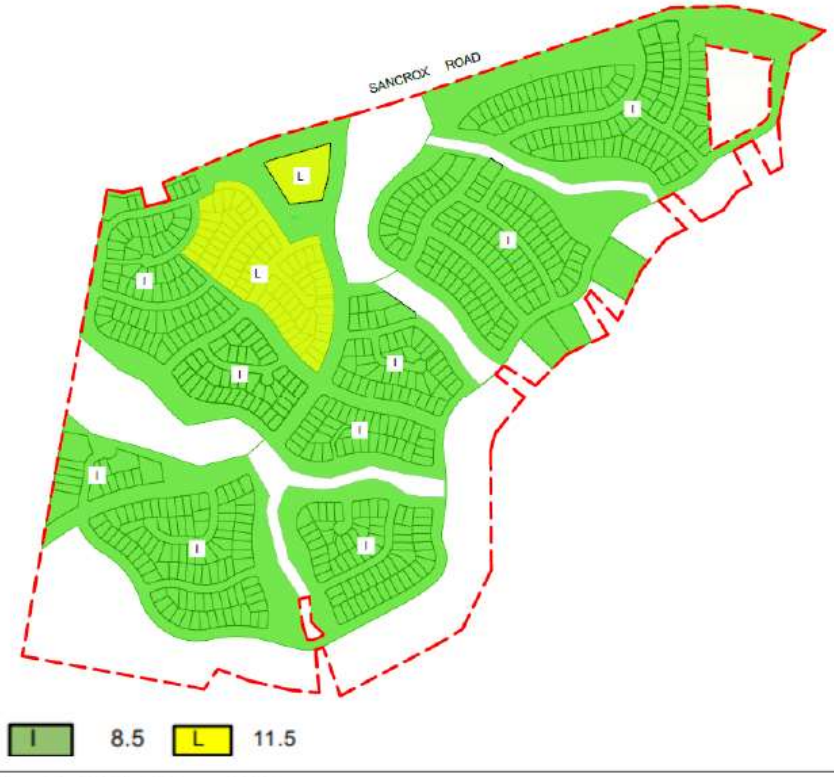

SANCROX ROAD
N
N
G
G
G

Height of Buildings Map

Current



Proposed


SANCROX ROAD
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PART 5 – COMMUNITY CONSULTATION

The planning proposal will be placed on public exhibition by Council in accordance with the Department of Planning and Environment's "*A guide to preparing local environmental plans*". The proposal is considered to be 'low' impact. Whilst the subject land and surrounding land is zoned primarily for rural uses, the area is under investigation as part of Council's wider strategic planning to transition to smaller lot residential. The proposed pattern of surrounding land use zones and/or land uses will complement the large lot residential which is prevalent in the area and the wider small lot residential in the adjacent Thrumster; is consistent with the strategic planning framework; presents minimal issues with regard to infrastructure servicing which is capable of extension and the additional requirements will be identified and addressed through the planning proposal process; is not a principal LEP; and does not reclassify public land. Rezoning of the land was invited over 13 years ago, Structure Planning had commenced and finalised in 2015 and the latest UGMS 2017-2036 indicated outline planning could occur on this site.

The proposal to rezone the subject land to allow residential development is considered to be efficient use of existing land and services and given that the site is largely cleared and not significant farmland, it does not result in substantial environmental impacts such as large scale loss of trees or impacts upon threatened species. The services provided to the site can be extended to the proposed residential zoned land. The wider area of Sancrox surrounding the site is currently zoned rural, as is the subject site currently. Given the progression of the wider Outline Planning and the outcomes of the 2015 Structure Plan, it is reasonable to expect that the adjoining land to the north and west will be rezoned in the coming years, with a short period of time in transition between the rezoning of this site. The land to the south and west is of high environmental value and identified by Council in previous investigations as being a significant ecological corridor. The proposed zonings and concept layout provides for a vegetated corridor along these two boundaries which will provide a buffer to the environmentally significant land to the south and east, assisting with reducing any potential land use conflict. The proposed vegetated buffer has also been extended to the north-east corner of the site and along Sancrox Road to further enhance the wider ecological buffer, retain vegetation and assist with land use conflict between the existing quarry further to the east and the potential high speed rail.

The future development presents no significant issues with regard to infrastructure servicing, acknowledging that that there will be additional infrastructure and service requirements, but that these additional requirements have been identified and addressed within the appendices accompanying the Planning Proposal.

As part of the Social Impact Assessment, a survey was conducted of surrounding properties and overall the response to rezoning was positive. One of surveys returned indicated they did not support a change in zoning, due to a perceived impact upon the operations of the quarry. Since that time, a State Significant Development for expansion of the quarry has been placed on exhibition, noting that there is no certainty regarding approval of this application.

Council will exhibit the Planning Proposal after Gateway determination and is likely to include an advertisement in the local paper, consultation with adjoining landowners, display at Council and on Council's website.

PART 6 – PROJECT TIMELINE

There is desire for this rezoning to occur concurrently with a Development Application being lodged once Gateway determination is received. This will allow the development of the land to occur immediately after the land is rezoned.

Based on the resolutions of Council, this site specific Planning Proposal will occur in parallel with Outline Planning for wider Fernbank Creek – Sancrox area. The resolutions indicate that the plan under this proposal will inform the wider planning but does not require this proposal to be delayed. Council at its meeting of 20 February 2019 resolved:

"That Council:

1. Note the information in the February 2019 Strategic Land Use Planning - Fernbank Creek and Sancrox Report.

2. Note that a Greater Sancrox Area Structure Plan was tabled at the Council Meeting in February 2015 and deferred pending adoption of the UGMS.

3. Note that according to landowner representatives, the Le Clos Sancrox owners have all now committed to acting as a single entity to achieve a co-ordinated planning outcome.

4. Immediately commence Stage 1 planning to prepare an Outline Plan for Sancrox-Fernbank Creek as detailed in the UGMS.

5. Invite the Le Clos Sancrox landowners to submit a planning proposal in parallel with Stage 1 planning in order to assist in informing the planning process.

6. Allow the General Manager to adequately resource this program.

7. Include regular updates on this matter in the biannual Site Specific LEP Amendments Update Report in March and September of each year."

Below is an indicative timeframe.

March 2019	Anticipated commencement date (date of Gateway determination)
April 2020	Anticipated timeframe for the completion of required technical information
May 2020	Timeframe for government agency consultation (pre and post exhibition as required by Gateway determination)
June 2020	Commencement and completion dates for public exhibition period
July 2020	Timeframe for consideration of submissions
August 2020	Timeframe for the consideration of a proposal post exhibition
September 2020	Date of submission to the Department to finalise the LEP
October 2020	Anticipated date the local plan-making authority will make the plan (if authorised)
November 2020	Anticipated date the local plan-making authority will forward to the PCO for publication

CONCLUSION

This report recommends that Council proceed with a Planning Proposal, as described in this report, and seek a Gateway Determination from the NSW Department of Planning and Environment pursuant to section 3.34 of the *Environmental Planning and Assessment Act 1979*.

To facilitate development on the land, the following amendments to the Port Macquarie Local Environment Plan 2011 are proposed with the outcomes to be achieved by:

- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Land Zoning Map 13B on land comprising a number of landholdings collectively known as Le Clos Sancrox from RU1 Primary Production to:
    - R1 General Residential,
    - R3 Medium Density,
    - B2 Local Centre,
    - E2 Environmental Conservation,
    - E3 Environmental Management, and
    - E4 Environmental Living.

- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Lot Size Map 13B on land comprising a number of landholdings collectively known as Le Clos Sancrox to permit a minimum lot size of:
  - 450m² for the proposed R1 General Residential,
  - 450m² for the proposed R3 Medium Density,
  - No minimum lot size for the proposed B2 Local Centre,
  - 40 ha for the proposed E2 Environmental Conservation,
  - 40ha for the proposed E3 Environmental Management, and
  - 2000m² for the proposed E4 Environmental Living.
- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Floor Space Ratio Map 13B on land comprising a number of landholdings collectively known as Le Clos Sancrox to permit a maximum floor space ratio of:
  - 0.65:1 for the proposed R1 General Residential,
  - 1:1 for the proposed R3 Medium Density,
  - 1:1 for the proposed B2 Local Centre, and
  - 0.65:1 for the proposed E4 Environmental Living.
- Amending the Port Macquarie – Hastings Local Environmental Plan 2011 Height of Buildings Map on land comprising a number of landholdings collectively known as Le Clos Sancrox to permit a maximum height of:
  - 8.5m for the proposed R1 General Residential,
  - 11.5m for the proposed R3 Medium Density,
  - 11.5m for the proposed B2 Local Centre, and
  - 8.5m for the proposed E4 Environmental Living.

Progression of this Planning Proposal to Gateway for determination to enable the rezoning will allow for additional residential housing stock for the area, with ancillary business uses and environmental land.

The site has a development consent in place which allows for housing, however it is not considered to be the most suitable outcome for the site. Further, the Moratorium on development on the site has been in place for an extended period of time and Council has resolved to deal with this site specific Planning Proposal as a priority in this regard.

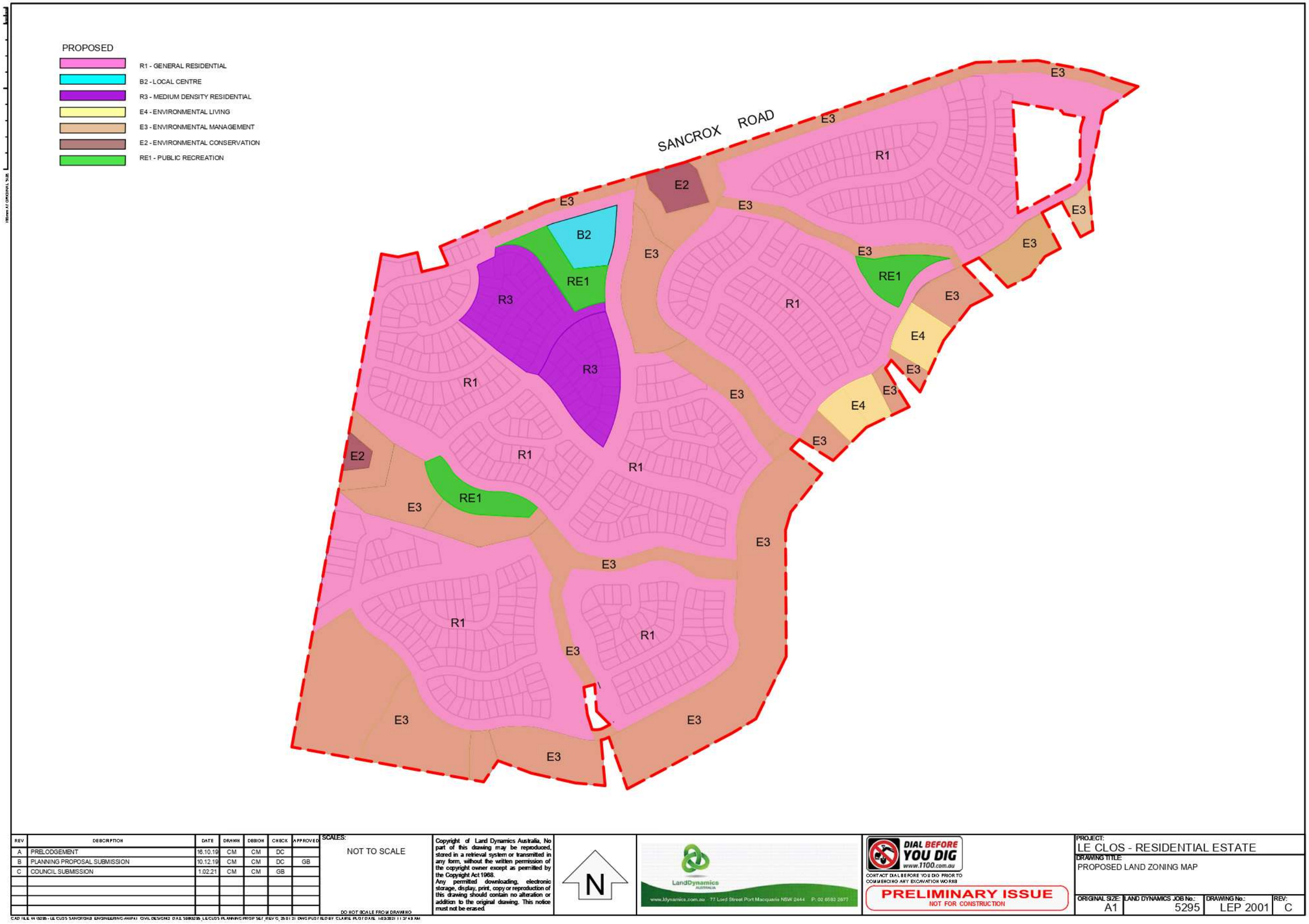
The environmental qualities of the site have led the way for formation of the proposed zoning and the concept subdivision plan has provided for a high standard of liveability for the further residents.

The Guidelines developed for the site will ensure a high standard of development results, which will set the tone for the quality development expected in the emerging Sancrox area.

The Planning Proposal is considered appropriate and allows a sustainable use of the land and provision of additional housing for the locality, consistent with regional and local plans.

APPENDICES

A. Proposed Local Environmental Plan Map Set
B. Ecological Assessment
C. Vegetation Offsets Plan
D. Bushfire Assessment
E. Bushfire APZ Plan
F. Traffic Assessment
G. Overall Sewer Strategy
H. Development Lots Servicing Strategy
I. Stormwater Quality Assessment, Onsite Detention Modelling & Flooding Review
J. Contamination Report
K. Aboriginal Cultural Heritage Assessment
L. Land Supply and Demand Assessment
M. Social Impact Assessment
N. Economic Impact Assessment
O. Acoustic Review
P. Subdivision Concept Layout Overall
Q. Subdivision Concept Layout Detailed
R. Urban Design Guidelines & Building Guidelines
S. Vegetation Management Plan
T. Voluntary Planning Agreement Request Letter
U. Landowners Report & Deed



REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECK	APPROVED
A	PRELODGEMENT	16.10.19	CM	CM	DC	
B	PLANNING PROPOSAL SUBMISSION	10.12.19	CM	CM	DC	GB
C	COUNCIL SUBMISSION	1.02.21	CM	CM	GB	

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PRELIMINARY ISSUE
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PROJECT: LE CLOS - RESIDENTIAL ESTATE
DRAWING TITLE: PROPOSED LAND ZONING MAP

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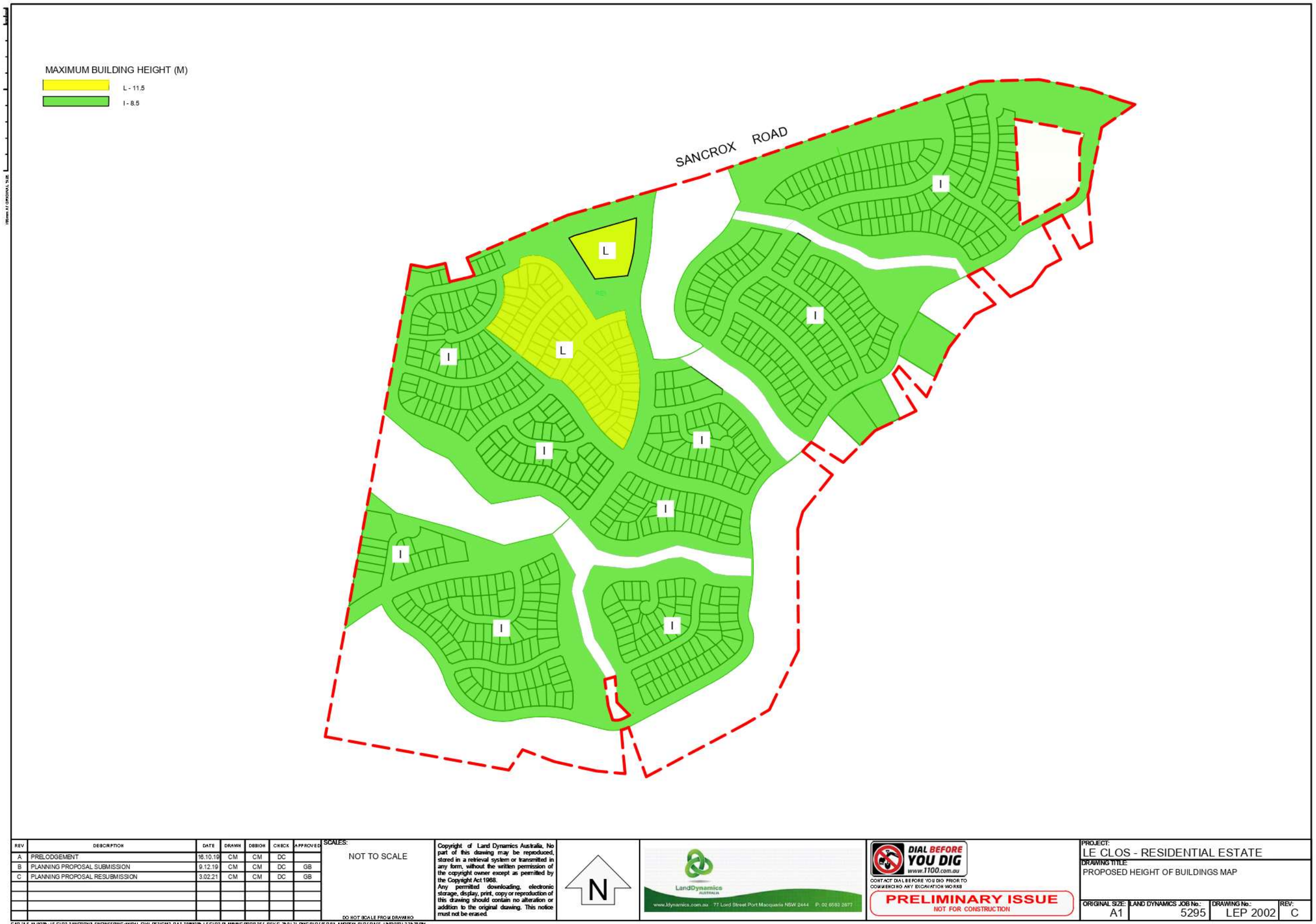

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECK	APPROVED
A	PRELODGEMENT	16.10.19	CM	CM	DC	
B	PLANNING PROPOSAL SUBMISSION	9.12.19	CM	CM	DC	GB
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PRELIMINARY ISSUE
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PROJECT:
LE CLOS - RESIDENTIAL ESTATE

DRAWING TITLE:
PROPOSED HEIGHT OF BUILDINGS MAP

ORIGINAL SIZE:	LAND DYNAMICS JOB No.:	DRAWING No.:	REV:
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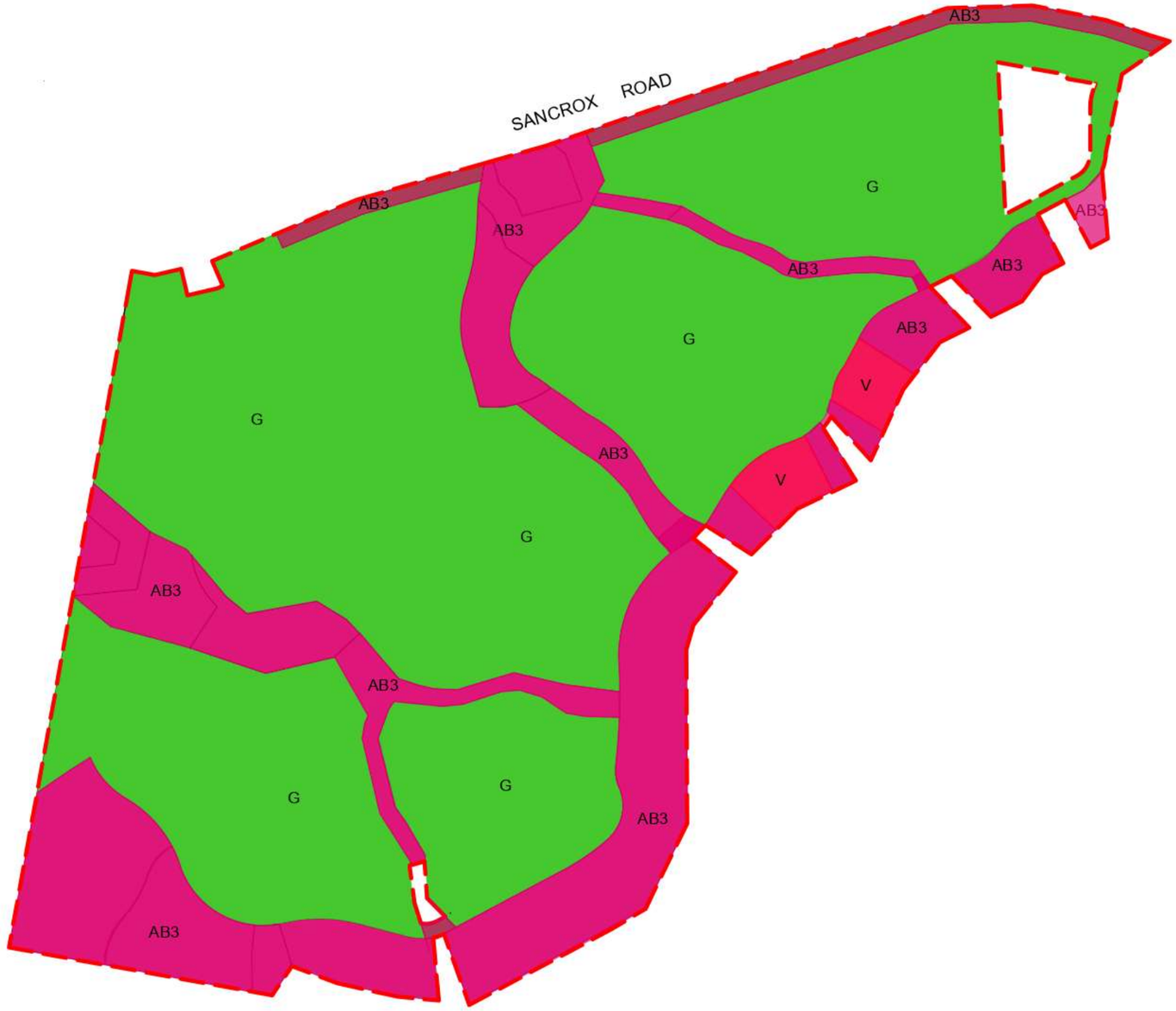
MINIMUM LOT SIZE (M2)

- G - 450
- V - 2000
- AB3 - 40HA



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B	PLANNING PROPOSAL SUBMISSION	9.12.19	CM	CM	DC	GB
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NOT FOR CONSTRUCTION

PROJECT: LE CLOS - RESIDENTIAL ESTATE
DRAWING TITLE: PROPOSED LOT SIZE MAP

ORIGINAL SIZE:	LAND DYNAMICS JOB No.:	DRAWING No.:	REV:
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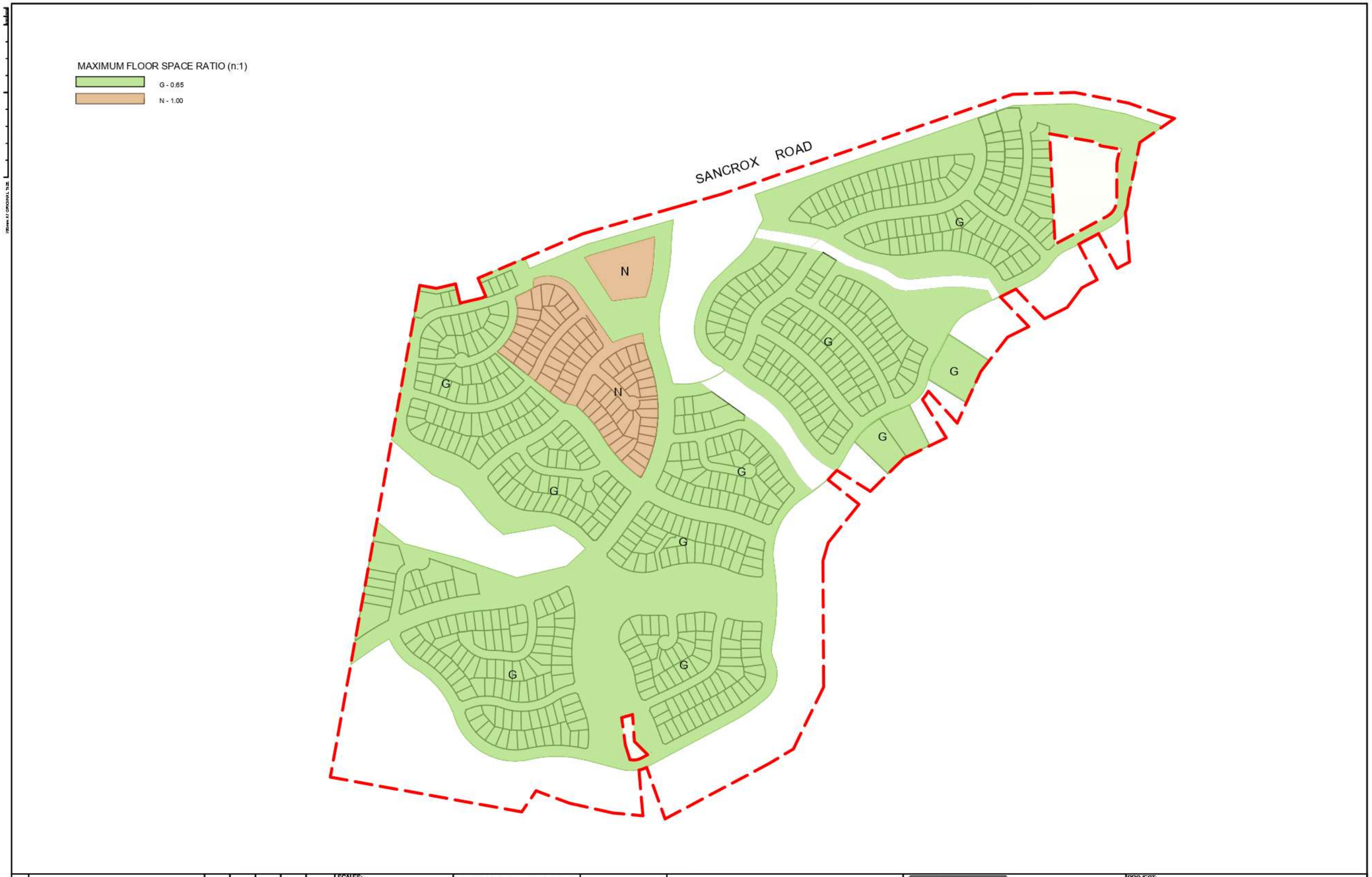

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PRELIMINARY ISSUE
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PROJECT:
LE CLOS - RESIDENTIAL ESTATE

DRAWING TITLE:
PROPOSED FLOOR SPACE RATIO MAP

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Wednesday, 17 February 2021

Donna Clarke
Land Dynamics Pty Ltd
PO Box 2459
Port Macquarie
NSW 2444

Delivery via email: donna.clarke@ldynamics.com.au

ABN 86139603268
6 John Street
Port Macquarie 2444
Phone: 6593 6178
Mobile: 0431 833 968
Email: jbenvironsw@gmail.com

Dear Donna,

Re: Constraints advice for proposed rezoning and future residential development of Le Clos, Sancrox.

As per request, we provide a summary of our findings to date; an assessment of the Avoid/Minimise/Offset principles under the *Biodiversity Conservation Act 2016*; mitigation measures; and a preliminary overview assessment of other statutory obligations for the proposed.

The detailed information will be provided in the Biodiversity Certification Assessment Report (BCAR), which is to be prepared after approval of Planning Proposal for a final development concept for which bio-certification is to be sought.

1 VEGETATION

1.1 Plant Community Types

Three PCTs were identified on the site (one artificial being the aquatic vegetation in the large dam) in a series of vegetation zones based on broad condition (see **Figure 1**).

The two forest PCTs show high levels historical disturbance ie past logging, total clearing and more recently cattle grazing. One is completely artificial – established by a soakage created below the dam, although the Swamp Oak may also be non-original (ie. not originally in this area):

- PCT 690 – Blackbutt - Tallowwood dry grassy open forest of the central parts NSW North Coast Bioregion: Occurs in good condition (Vegetation Integrity >60) as regrowth forest, and very low condition (VI <5) as paddocks/former vineyards.
- PCT 1235 - Swamp Oak swamp forest of the coastal lowlands of the NSW North Coast Bioregion: Two patches of regrowth with approximate VI 55.
- 1740 - Tall Spike Rush freshwater wetland: Occurs as fringe around the edge of the large dam. VI not assessed as retained. Edge highly trampled by cattle.

1.2 Endangered Ecological Communities (EECs)

The proposed development envelope contains only limited areas of one EEC – *Swamp Oak Swamp Forest on Coastal Floodplains* (see **Figure 2**).

This EEC was confirmed to occur on alluvial soils at the head of the 3rd order stream on Lot 48, where it has regrown from previous clearing and may not be the original EEC. Another patch in a soak below the large dam in the west was assumed to be this EEC as no on-site soil tests were undertaken here.

The PMHC EEC mapping also maps the vegetation around the ephemeral watercourse in the southwest corner of the site as the EEC – *River-flat Eucalypt Forest on Coastal Floodplains*. A foot traverse of this area noted vegetation matching an ecotonal *River-flat Eucalypt Forest* (as defined by presence of Flooded Gum) or perhaps *Subtropical Floodplain Forest on Coastal Floodplains* as there is not clear dominance in the canopy and the understorey is dominated by common rainforest species, but only along the narrow centreline of the watercourse. The overwhelming majority of the remnant is dry sclerophyll forest on mapped residual soils whose floristics do not match any EEC listing.

1.3 Threatened Flora

No threatened flora have been found. A seasonal (spring-summer) survey for *Asperula asthenes* failed to detect any plants.

As cattle have access to the limited area of generic potential habitat around the large dam and have heavily trampled this area, this species is considered highly unlikely to be present.

Figure 1: PCTs and VZs on site

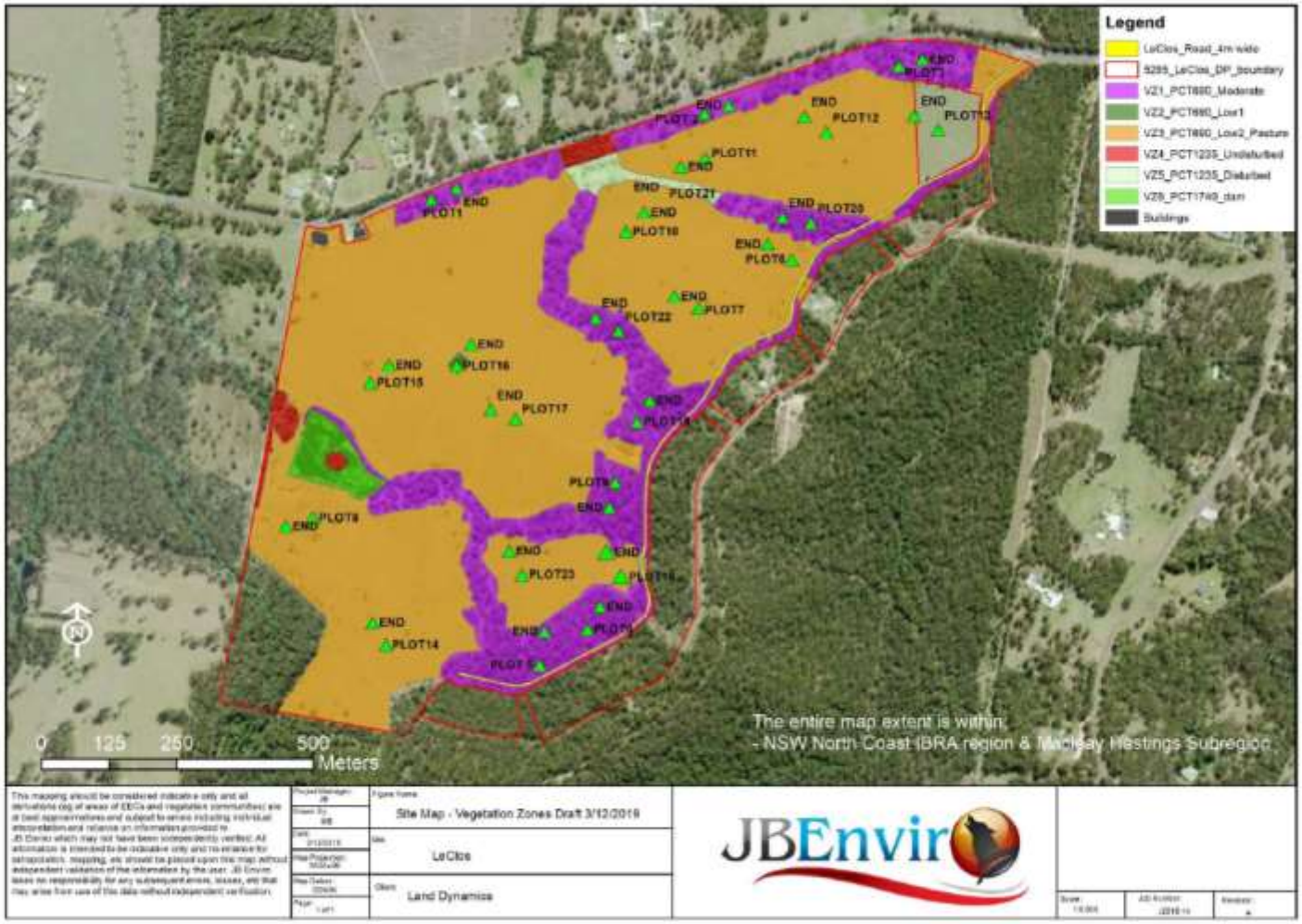
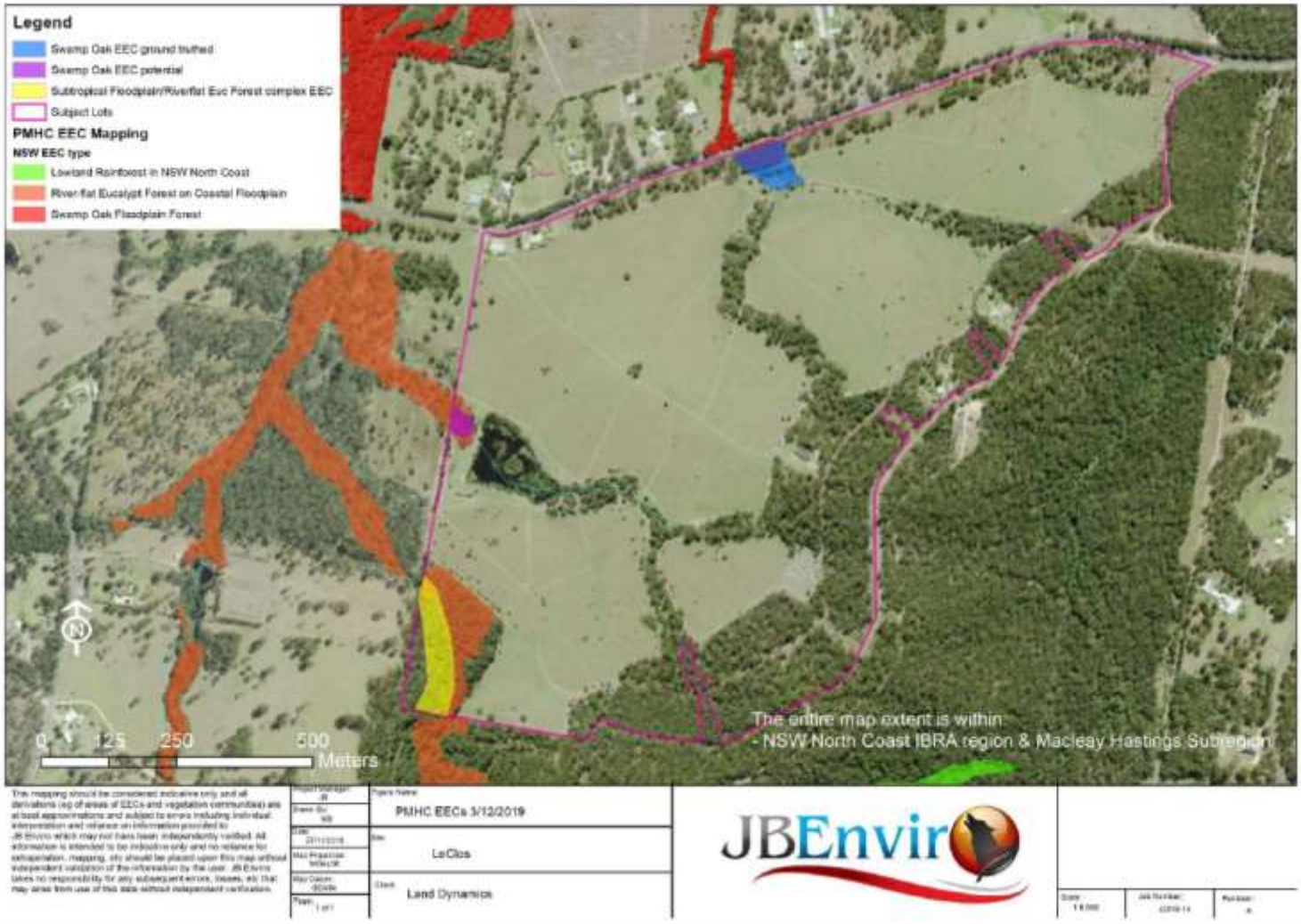


Figure 2: EECs on site



2 FAUNA

2.1 Survey Methods

A comprehensive fauna survey has been conducted from July to September 2019 and later in December-January 2019/2020, and in February 2021 using the following methods, primarily to target Species Credit Species:

Table 1: Survey effort for fauna survey

Method	Habitat (ha)	Stratification units	Total effort	Target species
Arboreal Elliot A	<50 ha	1 (<50ha)	14 PIR cameras set for 6 weeks (total effort of 392 trap nights)	Squirrel Glider, Brushtailed Phascogale, Eastern Pygmy Possum
Arboreal Elliot B	<50 ha	1 (<50ha)		
Arboreal hair tubes	<50 ha	1 (<50ha)		
Area search	<50 ha	1 (<50ha)	32hrs: Walked 1km long transect across all habitats on site, doing area (0.5ha) search/call detection every 100m for up to 20mins per hectare depending on habitat) in the forest. Minimum 4hr per transect.	Ecosystem credit species, diurnal raptors, Bush-stone Curlew
Cage traps	Not used as no relevant Species Credit target species and Ecosystem species assumed present.			
Call playback/detection		1 (<50ha)	12hrs over 12 nights in July-August. One to two sites per night.	Powerful Owl, Masked Owl, Barking Owl, Bush-stone Curlew, Koala, Yellow-bellied Glider
Call recording (Anabat)		1 (<50ha)	Undertaken in Dec-Jan breeding period with two machines set at the large dam for 4 weeks.	Southern Myotis and all other Ecosystem Credit microchiropteran bat species.
Harp trapping		1 (<50ha)	Not used as no suitable potential flyways, and Anabat sufficient to detect target species.	Southern Myotis and all other Ecosystem Credit microchiropteran bat species.
Mist netting	Not used as Eastern Blossom Bat and Golden-tipped Bat not likely potential occurrences.			
Pitfall traps with drift net	<50 ha	1 (<50ha)	Modified Elliot A traps used for higher effectiveness.	Common Planigale
Terrestrial camera traps	<50 ha	1 (<50ha)	4 PIR cameras set for 4 weeks (total effort of 112 trap nights) paired with arboreal cameras in upper slope habitats	Ecosystem credit species, Rufous Bettong
Sand plots	Not used as habitat too disturbed or otherwise unsuitable for target species.			

Method	Habitat (ha)	Stratification units	Total effort	Target species
Search for scats and signs; turning over logs and debris, and raking leaf litter for reptiles and frogs.	<50 ha	1 (<50ha)	18hrs over the site.	Glossy Black Cockatoo, Powerful Owl, Masked Owl, Barking Owl, Koala, Pale-headed Snake, Stephen's Banded Snake, Three-toed Snake-toothed Skink
Spotlighting from vehicle	<50 ha	1 (<50ha)	1.6km along current access road each night for 8 non-consecutive nights in July-August (1/5hrs per survey night); and repeat in Dec-Jan.	Powerful Owl, Masked Owl, Barking Owl, Koala, Yellow-bellied Glider, Greater Glider, Squirrel Glider, Brushtailed Phascogale, Spotted-tail Quoll, Ecosystem credit species, Pale-headed Snake, Stephen's Banded Snake
Spotlighting on foot	<50 ha	1 (<50ha)	32hrs in July-August and again in Dec-Jan (two ecologists over 8 non consecutive nights at min. 2hrs per night each) through forest or either side of drainage lines, targeting all hollow-bearing trees.	
Stagwatching	<50 ha	1 (<50ha)	10hrs in July-August. 10hrs in December-January	Glossy Black Cockatoo, Powerful Owl, Masked Owl, Barking Owl, Greater Glider, Squirrel Glider, Brushtailed Phascogale, Pale-headed Snake, Stephen's Banded Snake, Ecosystem credit species
Terrestrial Elliot A	<50 ha	1 (<50ha)	120 traps/night over 8 over two non-consecutive weeks (960 trap nights).	Common Planigale, Eastern Pygmy Possum, New Holland Mouse
Terrestrial Elliot B	Not used as no relevant Species Credit target species (4 terrestrial PIRC set for interest).			
Terrestrial hair tubes	Not used as no relevant Species Credit target species (4 terrestrial PIRC set for interest).			
Watercourse search	<2ha	1	Scours in several drainage lines inspected via aural-visual surveys for up to 2hrs per night over 4 nights in December-January 2019-2020; and 3 nights February 2021. Call playback for 2 mins at each scour, every 50m around big dam and one side of small dam, followed by minimum 2 minutes listening.	Ecosystem credit species, Green-thighed Frog, Green and Golden Bell Frog, Pale Headed Snake.
Wetland census (diurnal)	<1ha	1	Aural-visual surveys 2hrs per session traversing all sides of the 2 dams, repeated 4 times (8hrs) in December-January 2019-2020 and 2 times in February 2021. Call playback for 2mins at each scour/dam	Green and Golden Bell Frog

Method	Habitat (ha)	Stratification units	Total effort	Target species
			(every 50m around big dam), followed by minimum 2 minutes listening.	
Wetland census (nocturnal)	<1ha	1	Scours in several drainage lines inspected via aural-visual surveys for up to 2hrs per night over 4 nights in December-January 2019-2020; and 3 nights February 2021. Call playback for 2 mins at each scour, every 50m around big dam and one side of small dam, followed by minimum 2 minutes listening.	Ecosystem credit species, Green-thighed Frog, Green and Golden Bell Frog
Tadpole survey	1	1	Dip net survey of the two dams in February 2021 following wet period in late December-early January promoting ideal breeding conditions. 6 sample sites in main dam (Plague Minnow present); 2 in small dam. Scours with water sampled with single sample site per scour.	Green-thighed Frog, Green and Golden Bell Frog

2.2 Threatened Species

2.2.1 Detected Species

The Glossy Black Cockatoo was detected via chewed cones. A Powerful Owl was heard calling >1km south of the site during spotlighting/call playback.

The site does not contain any potential breeding hollows for these species.

The Southern Myotis was confirmed via call detection to be foraging over the large dam. This bat could potentially roost in tree hollows on site.

2.2.2 Other Target Species

Only common species of birds were detected by the diurnal surveys. The latter was dominated by medium to large woodland birds.

No response was made to nocturnal call playback of any mammal species.

Spotlighting was extremely unproductive. A few common macropods, possums, diurnal birds and foxes were the only fauna observed.

PIR cameras recorded the Brushtail Possum, Sugar Glider and Northern Brown Bandicoots. Elliot A trapping recorded very few Brown Antechinus and Bush Rats.

There are no large raptor nests on site.

Only common frogs typical of modified rural habitats and their tadpoles were detected over all survey periods. Plague Minnow are abundant in the large dam, which is a key limitation, as is cattle grazing of the emergent aquatic vegetation in both dams.

3 KOALA HABITAT PROTECTION SEPP 2020

The site contains Potential Koala Habitat (eg. Lot 48), but a combination of a SAT survey (see **Figure 3**), spotlighting and call playback in the breeding seasons failed to detect any Koalas, despite adjacent land to the south and east being identified as Core Koala Habitat (low density Koala population).

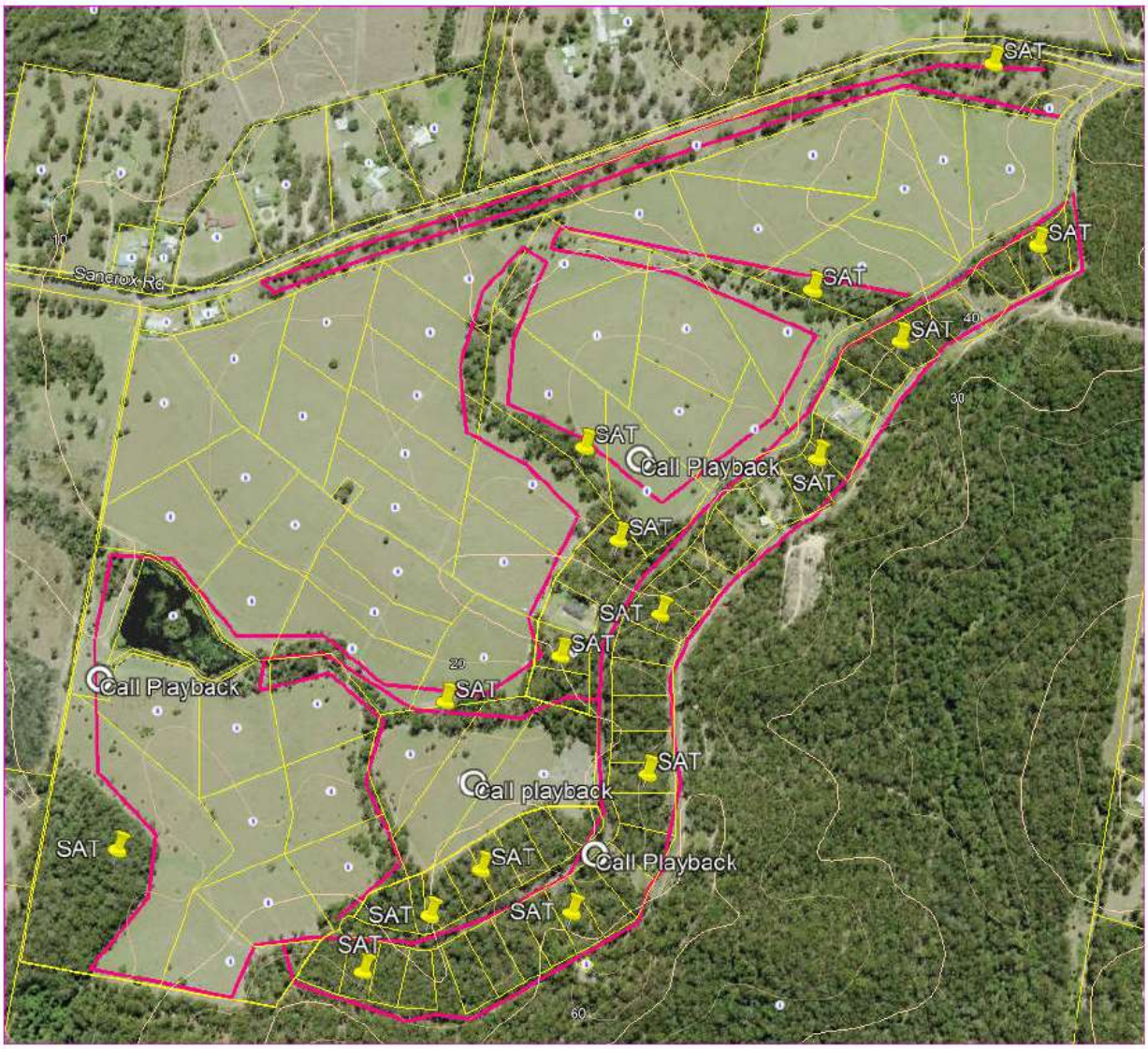
A KPoM is thus not required.

Notwithstanding this, the proposed development concept in **Figure 5** considers the potential for long term recovery of the local Koala population via:

- Converting the majority of the currently heavily forested parts of the site (much of which is currently zoned for large lot residential) to an Environmental zoning to protect it in perpetuity.
- Infill planting with native forest dominated by Koala food trees in the existing cleared area in the southwest to reinforce local and regional linkage values.
- Retaining and augmenting riparian zones to maintain local corridor values.
- Utilising best practice for road crossings of riparian zones to provide for Koalas to pass under the roads.

Figure 3: Koala survey (winter-spring)

Red line indicates spotlighting route



4 PMHC DCP

4.1 EECs:

The EECs identified on site will require 35m fully vegetated buffer zones under the DCP.

These will be achieved either in combination with the riparian zone infill planting (northern EEC) or as a distinct planted zone (western EEC), as shown in Figure 5. The southwest EEC has an existing vegetated buffer.

Planting will be governed by a Vegetation Management Plan (VMP).

4.2 Hollow-bearing trees (HBTs):

The site (the upper half of the eastern large lots were not surveyed as not impacted) contains the following as illustrated in **Figure 4**:

- 15 hollow-bearing trees (potentially a few more on upper slopes of eastern fringe of site on large lot residential area)
- 18 hollow-bearing termitaria.

The following appear to fall into the development envelope:

- 4 hollow-bearing trees (3 stags in poor condition, 1 large Grey Gum on the edge of the existing road possibly at risk if road widened)
- 4 termitaria with cavities (low value as dens for mammals often due to isolation or likely small internal cavity size).

The assessment under the DCP HBT protocol is provided in **Table 2**. The hollow-bearing trees which occur close to very close (latter being the aforementioned Grey Gum) to the edge of the existing access road formation are to be surveyed to determine if they can be retained during upgrade of the road.

Any HBT or hollow-bearing termitaria which has to be removed will be offset with nest boxes or similar artificial hollow (eg. recent entrance making strategy into suitable trees pioneered by OEH in Coonabarabran) at a ratio of at least 1:1 per hollow. Where one hollow may support fauna with different internal cavity requirements, more nest boxes will be required eg. bat boxes and bird or glider boxes for the one hollow.

The eastern E1 area and Lot 48 which contain the bulk of the site's hollow-bearing trees and termitaria (most termitaria are in the drainage lines) will be protected in perpetuity by rezoning these areas to Environmental Protection.

Figure 4: Hollow-bearing trees (H) and arboreal termitaria (T) on site

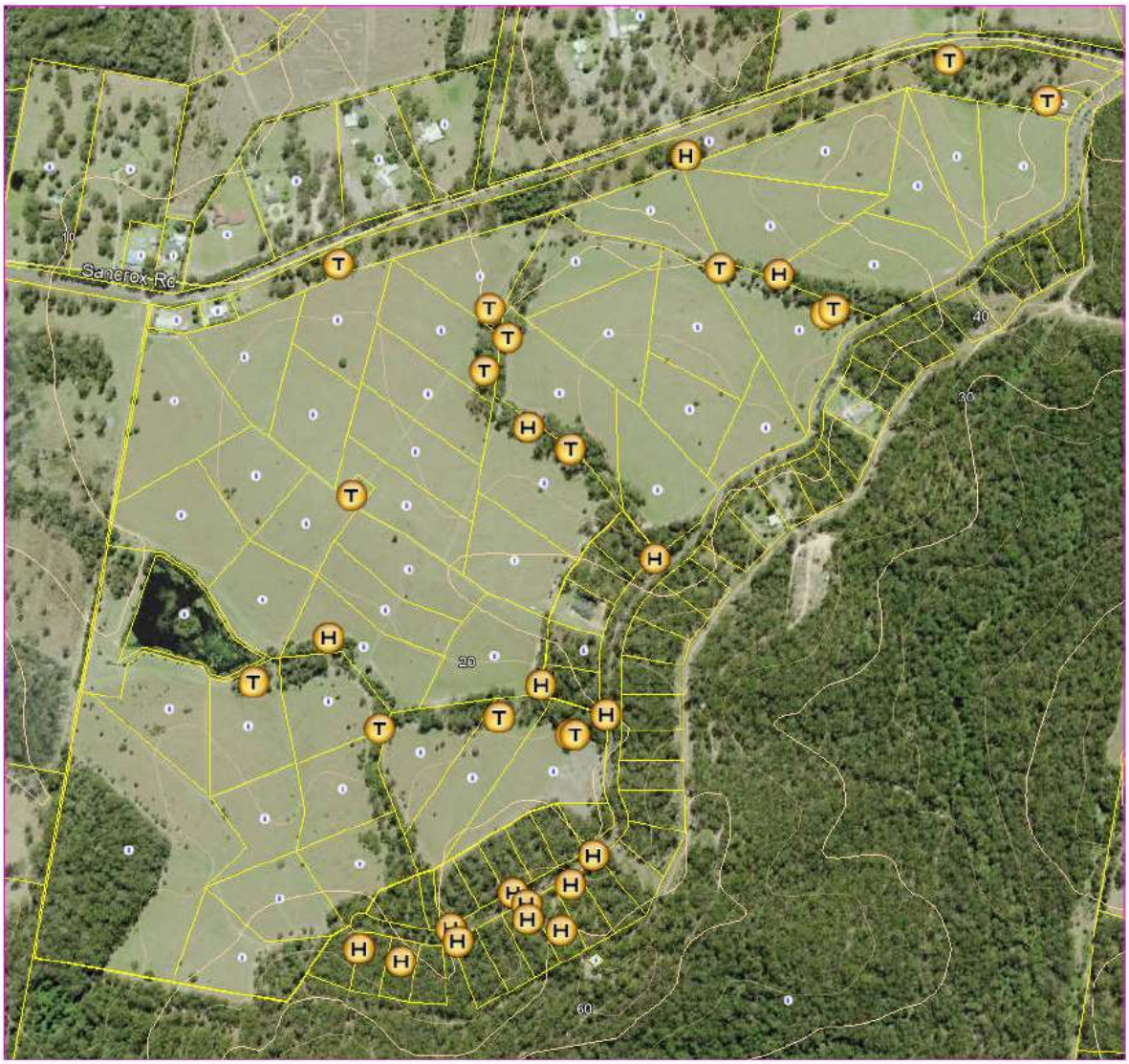


Table 2: PMHC DCP 2013 HBT protocol assessment

HBT	Tree species	Alive/Dead		Trunk DBH (cm)		No. Hollows		Hollow Size (cm)		Habitat Proximity		Longevity		Total Score	Comments
1	stag	Dead	1	<60	0	1	0	>10cm	3	<30m	2	High	0	6	Consists of a small arboreal termitaria in handful of trees on top of hill in open paddock. **To be removed.**
2	Grey Gum 1	Alive	3	60-80	1.5	2-4	1.5	>10cm	3	<30m	2	High	3	14	On edge of 1st order drainage line and retained in VRZ. Likely Brushtail Possum scratches on trunk. Two medium sized branch hollows.
3	stag	Dead	1	<60	0	1	0	>10cm	3	<30m	2	Low	0	6	Single chimney hollow in broken leader which offers no significant value – at best a Brushtail Possum or Wood Duck. Highly comprised stability by major fire scar at base. **To be removed.**
4	stag	Dead	1	<60 (cm	0	1	0	>5cm	2	<30m	2	High	0	5	Final stage stag (no crown limbs) with basal fire scar on edge of Le Clos Rd. Small termitaria in top and fissure hollow on north side. **To be removed**.
5	stag	Dead	1	80-100	3	2-4	1.5	>10cm	3	<30m	2	High	0	10.5	Very large final stage stag with stubs of former twin leaders with chimney hollows on top, probably dirt filled. Fissures on side indicating limited viability. **To be removed**.
6	Tallowwood	Alive	3	60-80	1.5	2-4	1	<5cm	1	<30m	2	High	3	11.5	Over-rated value as hollows only in termitaria and likely to be limited internal cavity as termitaria is not very wide in girth. **To be removed**.
7	Thick-leaved Mahogany	Alive	3	<60	0	1	0	<5cm	1	In situ	3	High	3	10	Single trunk hollow at base of leader split. Potential Sugar Glider, bat or small parrot hollow. Near crossing but appears retained.
8	White Stringybark 1	Alive	3	<60	0	2-4	1.5	<5cm	1	<30m	2	High	3	10.5	Small termitaria (about 50cm diameter) with two small hollows, probably not occupied due to insufficient internal cavity. **Possibly to be removed**

HBT	Tree species	Alive/Dead		Trunk DBH (cm)		No. Hollows		Hollow Size (cm)		Habitat Proximity		Longevity		Total Score	Comments
9	White Stringybark 2	Alive	3	<60	0	2-4	1.5	<5cm	1	<30m	2	High	3	10.5	Small termitaria with small hollows, probably not occupied due to insufficient internal cavity. **Possibly to be removed**
10	Grey Gum 2	Alive	3	80-100	3	2-4	1.5	>5cm	2	In situ	3	High	3	15.5	Very large, mature Grey Gum on edge of existing Le Clos Rd, **possibly at risk of removal by road upgrade**. Bark scratched and hollows likely occupied.

Photo 1: The largest stag to be removed

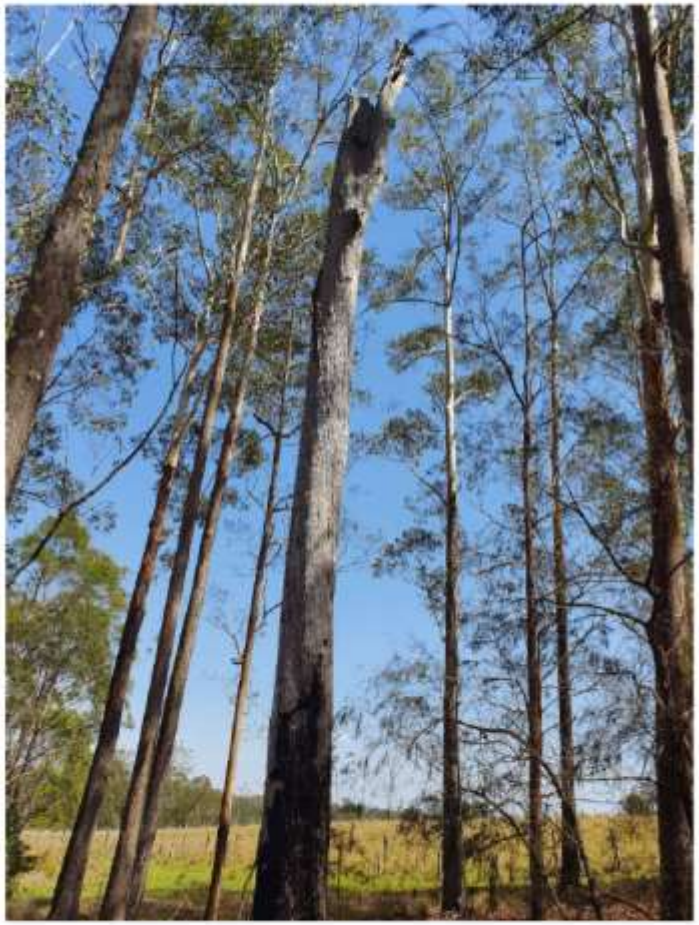


Photo 2: A typical termitaria to be removed



4.3 Koala Food Trees:

The DCP requires 1:2 offsets for loss of Koala food trees (KFTs).

The vast majority of KFTs have been avoided by retaining the majority of existing forest on site. The total number (295) of primary and secondary KFTs to be removed is estimated as follows:

- Primary browse: 69 Tallowwoods
- Secondary browse: 226 Grey Gums

Many of the Grey Gums are only suppressed trees <6m tall and <15cm trunk DBH in the southwest patches which will never achieve a significant level of development due to competition with established canopy trees. The site has also experienced no significant fire since its recovery post-logging, and these trees may well be lost in natural pruning events such as a medium to high intensity fire event.

A smaller number of other supplementary tree species will also be removed (eg. White Stringybark).

The primary and secondary trees are to be replaced in the infill planting of the riparian zones as co-dominant species in the plantings here, in existing canopy gaps on Lot 48, and in the large southwest offset area as part of complete revegetation of these areas for a net biodiversity benefit, in line with the objectives of section 2.6.3.2 of the DCP: "*To retain viable representative samples of native vegetation, which have an intact structure and complete floristics, wherever practical*".

4.4 Riparian zones:

In line with the *Water Management* (WM) *Act 2000*, vegetated riparian zones (VRZs) will be established along the drainage lines. Offsets for intrusions into the VRZ are met by infill planting to widen the riparian zones.

The Biodiversity Assessment Methodology (BAM) has recommended different specifications for buffer widths, as does the PMHC DCP 2013. The following table compares these widths (WMA Act and BAM measured from one side of the watercourse from top of bank, hence total width is double specifications shown):

Table 3: PMHC DCP 2013 riparian zone buffers

Stream Order	WMA Act VRZ (m)	BAM buffers (m)	DCP 2013 Intermittent Flow (m)	DCP 2013 Permanent Flow (m)
1	10	10	10	30
2	20	20	40	40
3	30	30	50	50
4	40	40	65	65
5	40	40	-	-
6+	40	50	-	-

5 BIODIVERSITY CONSERVATION ACT 2016

5.1 Serious and Irreversible Impacts

No SAII species is known or likely to occur, hence no SAII threshold is exceeded.

5.2 Biodiversity Offset

In addition to the mitigation measures, the proposal will require Ecosystem Credits for the approx. 6.61ha of dry sclerophyll forest PCT, and Species Credits for the Southern Myotis.

The DA consent will specify the offset requirements, and the credits must be retired before commencement of the activity.

5.3 Avoid, Minimise, Offset, and Prescribed Impacts

The following tables assesses the relevant sections of the BAM which assess the "Avoid Minimise Offset" principles, and Prescribed Impacts in line with the BAM (see section 8, sub-sections 8.1-8.3), and BAM Operations Manual for Stage 2.

5.3.1 Locating a Project to Avoid and Minimise Impacts

The following table details where the proposal has aimed to avoid and minimise impacts on vegetation and habitat by location of the development footprint after considering the findings of the BAM and fauna survey, which saw significant changes to the original concept layout to reduce the extent of vegetation removal.

Table 4: Locating a project to avoid and minimise impacts on vegetation and habitat

Approach	How addressed	Justification
Locating the proposal in areas where there are no biodiversity values	• Majority of development footprint located within former vineyards which was below minimum VI hence no offsets required. • Original footprint included development of Lot 48. Lot 48 now largely retained for corridor values, hollow-bearing trees and density of primary-preferred KFTs. • Southwest corner remnant identified as significant for corridor and riparian buffer role, hence retained as is. • Large dam retained with perimeter vegetation to be expanded to improve connectivity and buffering. • EECs retained with buffers. • Majority of primary preferred KFTs and HBTs retained.	• Three areas of forest to be cleared to consolidate separation of core forest habitats from riparian corridors for higher long term bushfire management practicality, and reduce incentive for fauna to cross multiple points of a main road and hence be exposed to vehicle strike. This allows mitigation to be focused as key crossing points for maximum effectiveness. • Net gain in forest area via infill planting of riparian zones, Lot 48 and southern revegetation area to widen key local linkages. • Majority of high value vegetation kept separate from development and adjoining other forest habitat, to be dedicated public reserve.
Locating the proposal in areas where the native vegetation or threatened species habitat is in the poorest condition	As above: development is predominantly focussed on former vineyards.	As above plus removal of approximately 6.61ha of native vegetation offset by revegetation of approx. 9.41ha.
Locating the project in areas that avoid habitat for species and vegetation in high threat categories (e.g. an EEC or CEEC), indicated by the biodiversity risk weighting for a species	• All EECs avoided and retained with buffers as per DCP.	• EECs retained within vegetated riparian zones within public reserves. • VMP to improve condition of the EECs and establishment of buffer zone where not currently present (western EEC).

Approach	How addressed	Justification
Locating the proposal such that connectivity enabling movement of species and genetic material between areas of adjacent or nearby habitat is maintained	• All existing riparian zones with forest retained as vegetated. • Number of riparian zone crossings minimised by road design. • Crossings of Lot 48 and riparian zones mitigated by best practice in line with RMS standards. • No more residences east of existing access road to minimise additional fragmentation. • APZs setback from retained and revegetation areas via roads and dwelling setback. • No residential developing in southern cleared area to pose a gap between forested land east and west within a key local corridor.	• All riparian zone corridors apart from southwest corner currently have high edge effect constraints, or major gaps in forest connectivity. Replanting these area (eg. both sides of the large dam) improves the functional effectiveness of these riparian zones as corridors, and helps offset the road crossings. • Crossings of Lot 48 and riparian zones mitigated by best practice in line with RMS standards. • Key corridor via southwest retained and significantly augmented via infill planting of over 2ha of cleared land to widen corridor and buffer edge effects. This corridor is much more significant for local movements to the northwest given its width, connection to a large body of core habitat to the south, and connection to the next largest local remnant to the northwest.

5.3.2 Designing a Project to Avoid and Minimise Impacts

The development has been designed in a way which avoids and minimises impacts as outlined below:

Table 5: Designing a proposal to avoid and minimise impacts on vegetation and habitat

Approach	How addressed	Justification
Reducing the clearing footprint of the project	• Majority of development has focused on existing cleared land where VI <20 hence no Ecosystem Credits required. • All currently approved lots for dwellings east of current access road not developed now to be dedicated as public reserve.	• Four areas of existing forest in southeast to be removed to consolidate separate core forest habitat and development for more practical bushfire control, and reduce incentive for fauna to cross multiple points of a main road and hence be exposed to vehicle strike. • Layout retains most of Lot 48 for its linkage value, and more importantly the majority of forest fringing the east and south, with revegetation seeing a net gain.
Locating ancillary facilities in areas where there are no biodiversity values	• Stormwater infrastructure within existing cleared areas. • APZs achieved via setback from public reserves. • No residential lots to have retained vegetation hence 10/50 rule will not apply. • Communications, power, water and electricity combined with road easements, or existing (eg. along current access road).	
Locating ancillary facilities in areas where the native vegetation or threatened species habitat is in the poorest condition (i.e. areas that have a lower Vegetation Integrity score)	As above.	As above.
Locating ancillary facilities in areas that avoid habitat for species and vegetation in high threat status categories (e.g. an EEC or CEEC)	As above – all EECs avoided.	Primary access may trim edges of EEC buffer zone but this is countered by WSUD measures and infill planting to fill in canopy gaps and widen upstream VRZs, adding further buffer functions.

Approach	How addressed	Justification
Providing structures to enable species and genetic material to move across barriers or hostile gaps	• Crossings of riparian zones and Lot 48 linear corridor in line with RMS best practice designs.	• Crossings of riparian zones unavoidable due to other constraints eg. safe bushfire escape and serviceability for school buses and garbage trucks. • Utilising best practice design and methodology to mitigate impacts of linear infrastructure.
Making provision for the demarcation, ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation habitat on the development site.	• Total extent of infill planting and revegetation will see net gain in forest cover. • VMP to manage all revegetation, and improve condition of existing forest eg. removal of lantana from Lot 48 EEC. • Retained habitat to be dedicated as public reserve.	• Infill planting and revegetation under VMP aims to achieve net gain in forest habitat, buffer EECs but also achieve same or net gain in KFTs to meet DPC objectives.
Efforts to avoid and minimise impacts through design must be documented and justified.	• As above.	As stated above

5.3.3 Prescribed biodiversity impacts

The future development is assessed for prescribed biodiversity impacts as follows:

Table 6: Prescribed biodiversity impacts

Prescribed biodiversity impact	Description in relation to the development site	Threatened species or ecological communities affected
Impacts of development on the habitat of threatened species or ecological communities associated with: • karst, caves, crevices, cliffs and other geological features of significance, or • rocks, or • human made structures, or • non-native vegetation	• No karst, caves, rocks, abandoned buildings, mines, etc on site. • No non-native vegetation providing habitat. • Large dam offers potential foraging habitat for Southern Myotis.	• Large dam offers potential foraging habitat for Southern Myotis and to be buffered by vegetated buffer.
Impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range	• Crossing of 3 of the 4 main riparian zones with roads and of linear corridor along Lot 48 by roads. • Most important linkage (southwest corridor) retained and to be significantly augmented by infill planting over 2ha of pasture. • Eastern parts of site retained forested separated by existing road from residential area development apart from existing dwellings. • All remaining habitat to be dedicated public reserve to maintain values in perpetuity.	• Increased vehicle strike risk for any fauna crossing current access and new threat to fauna using the central and northern riparian zones. • Not Core Koala Habitat and Lot 48 and three riparian zones do not provide key linkages to any significant habitat to north or northwest due to historical clearing for rural landuses and eventual physical barrier of Hastings River. • No threatened species with low mobility confirmed to use the corridors affected.

Prescribed biodiversity impact	Description in relation to the development site	Threatened species or ecological communities affected
Impacts of development on movement of threatened species that maintains their lifecycle	As above	• No threatened species with low mobility and dependent on the affected linkages for lifecycle movements confirmed to use the corridors affected. The affected riparian zones and Lot 48 highly constrained by edge effects. • Southwest corridor augmentation will affirm its value as the most significant local corridor.
Impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining)	• No dams to be removed. • Urbanisation of catchment mitigated by WSUD and infilling of riparian zones to widen VRZ or create where currently absent, to buffer nutrient and runoff changes. • No reduction of flows to Coastal Floodplain EECs – no new dams created.	• Swamp Oak Floodplain Forest and River-flat Eucalypt Forest EEC present, but buffered by existing or proposed vegetated buffers and WSUD. • Southern Myotis would forage periodically forage over large dam, but again buffered by existing or proposed vegetated buffers and WSUD.
Impacts of vehicle strikes on threatened species or on animals that are part of a TEC.	• No TECs directly impacted by roads. • Crossing of three riparian zones by roads will pose new threat to fauna which are common to both TECs and non-TECs.	• No TEC's directly impacted. • Marginal Green-thighed Frog potential habitat in southwest not affected.

5.3.5 Locating a project to avoid and minimise prescribed biodiversity impacts

The following table evaluates if the development has been located in a way which avoids and minimises prescribed biodiversity impacts:

Table 7: Locating a project to avoid and minimise prescribed biodiversity impacts

Approach	How addressed	Justification
Locating the envelope of surface works to avoid direct impacts on the habitat features	• Most of development footprint in vegetation below minimum VI. • Minimised number of crossings of riparian zones. • Large dam retained.	• No impacts on bushrock. • No non-native vegetation providing habitat for threatened species. • Large dam offers foraging habitat for Southern Myotis.
Locating the envelope of sub-surface works, both in the horizontal and vertical plane, to avoid and minimise operations beneath the habitat features, e.g. locating long wall panels away from geological features of significance or water dependent plant communities and their supporting aquifers	• No change to current watertable or landscape drainage patterns	• Major drainage lines are retained as per WM Act requirements. • Infill planting to widen VRZs above statutory requirements.
Locating the project to avoid severing or interfering with corridors connecting different areas of habitat, migratory flight paths to important habitat or preferred local movement pathways	• Minimised crossing of riparian zones and Lot 48 subject to other constraints. • Consolidation of habitat to east and south which provides the key local corridor for biodiversity, and providing a distinct separation from residential development via the existing access road.	• Current zoning potentially allows clearing/fragmentation of intact forest along eastern fringe for dwellings. Now conserved as public reserve. • Removal of patches of forest outside riparian zones west of existing access allows consolidation of habitat and residential land, improving practical management of bushfire in the long term under a drier climate.

Approach	How addressed	Justification
Optimising project layout to minimise interactions with threatened and protected species and ecological communities, e.g. designing turbine layout to allow buffers around features that attract and support aerial species, such as forest edges, riparian corridors and wetlands, ridgetops and gullies	• Consolidation of core habitat to east and south separated from residential footprint by boundary road. • Southwest corner avoided and existing gap in southern corridor to be infilled to offset changes in edge effects impacting other riparian linkages and Lot 48 linkage. • EECs retained with buffers and in public reserve. • All remaining habitat retained in public reserves in zoning that prevents future development.	• Consolidation of core habitat to east and south separated from residential footprint by boundary road assists in reducing vehicle strike risk, dumping of greenwastes, conflicts between bushfire risk perception and ecological management. • Dedication of all habitat to public reserve consolidates conservation management to one authority.
Locating the project to avoid direct impacts on water bodies	• All existing dams retained within riparian zones with widening of VRZs to increase buffering.	• Large dam recognised as providing source of biodiversity in study area, and periodic foraging habitat for Southern Myotis.

5.3.6 Designing a project to avoid and minimise prescribed biodiversity impacts

The following table evaluates if the development has been designed in a way which avoids and minimises prescribed biodiversity impacts.

Table 8: Designing a project to avoid and minimise prescribed biodiversity impacts

Approach	How addressed	Justification
Engineering solutions, e.g. proven techniques to minimise fracturing of bedrock underlying features of geological significance, water dependent communities and their supporting aquifers; proven engineering solutions to restore connectivity and favoured movement pathways	• Road design at crossings of riparian zones and Lot 48 to incorporate underpass and arboreal crossings in line with RMS best practice.	• Maintain current values of these areas as linkages, although southwest corridor has the most significant value due to its width and direct connection between the remnant northwest and Cowarra State Forest to the south.

Approach	How addressed	Justification
Design of project elements to minimise interactions with threatened and protected species and ecological communities	• Consolidation of core habitat to east and south separated from residential footprint by boundary road. • Southwest corner avoided and existing gap in southern corridor to be infilled to offset changes in edge effects impacting other riparian linkages and Lot 48 linkage. • EECs retained with buffers and in public reserve. • All remaining habitat retained in public reserves in zoning that prevents future development.	• Consolidation of core habitat to east and south separated from residential footprint by boundary road assists in reducing vehicle strike risk, dumping of greenwastes, conflicts between bushfire risk perception and ecological management. • Dedication of all habitat to public reserve consolidates conservation management to one authority.
Design of the project to maintain environmental processes critical to the formation and persistence of habitat features not associated with native vegetation	• Overwhelming majority of forest retained in public reserves. • Fallen HBTs and large trees to be relocated to southern revegetation area to act as hollow logs.	• Consolidation of core habitat to east and south which form part of larger local band of largely intact forest extending north from Cowarra State Forest to northern Sancrox. Maintaining this larger edge:volume ratio buffers edge effects and also increases viability of local populations via higher carrying capacity and niche diversity, than achievable in narrow riparian zones or small patches of forest separated by roads from core habitat.
Design of the project to maintain hydrological processes that sustain threatened species and TECs	• All riparian zone crossings to include structures to maintain free flows, and also not increase erosion and sedimentation eg. via scouring. • No diversion of low away from TECs. • WSUD to maintain water quality to statutory limits.	• Design of crossings to meet statutory requirements. • Design of WSUD to meet statutory requirements.

Approach	How addressed	Justification
Design of the project to avoid and minimise downstream impacts on rivers, wetlands and estuaries by control of the quality of water released from the site.	• All riparian zone crossings to include structures to maintain free flows, and also not increase erosion and sedimentation eg. via scouring. • WSUD to maintain water quality to statutory limits. • Widening of VRZs beyond statutory requirement and infill planting to revegetate currently non-forested riparian zones.	• Design of crossings to meet statutory requirements. • Design of WSUD to meet statutory requirements. • Contributes to meeting net gain in habitat objective.

6 MITIGATION MEASURES

The following table details the draft proposed mitigation measures, which are in addition to the offsets required under the BC Act:

Table 9: Mitigation measures

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Infill planting of riparian zones to widen corridors. • Approximately 9.41ha to be re-established or augmented to forest. • Includes KFTs offsets to meet DCP. • Includes VRZ requirements for WM Act 2000 to offset crossings. • Area to be protected in perpetuity.	High: • Loss of approx. 6.61ha of vegetation for development. • Three riparian zones crossed by roads.	Very low: • Condition of consent. • Governed by VMP. • Compliance enforcement under development consent by PMHC.	• Infill area between APZ and existing riparian zones outside recreation and WSUD areas. • Canopy trees dominated by KFTs (except adjunct to roads). • Understorey of rainforest pioneer species to reduce fire risk. • Outer edge of *Lomandra* or *Gahnia*. • Vegetation Management Plan (VMP) to guide and govern. • Area to be protected in perpetuity.	• Enhanced buffering of riparian zones. • Enhanced carrying capacity. • Enhanced corridor functions. • Pedestrian access only via provided paths.	Construction to operation	Proponent (VMP) PMHC (compliance enforcement)

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Infill southwest offset area: • Offset loss of approx. 6.61ha of fully structured dry sclerophyll forest for crossings and residential lots. • Includes KFTs offsets to meet DCP.	High: • Loss of 6.61ha of vegetation for development. • Three riparian zones crossed by roads.	Very low: • Condition of consent with performance indicators linked to subsequent approvals. • Governed by VMP. • Compliance enforcement under development consent by PMHC.	• Infill paddock in southwest with fully structured forest, grading from dry to wet sclerophyll with slope. • Canopy trees dominated by KFTs (except adjunct to roads). • Understorey to vary from dry sclerophyll to rainforest pioneer species as per natural succession to assist bushfire management. • Outer edge fronting development planted with *Lomandra* or *Gahnia*. • Vegetation Management Plan (VMP) to guide and govern. • Area to be protected in perpetuity. • Retain firetrail along boundaries.	• Enhanced carrying capacity. • Enhanced northwest corridor function. • Pedestrian access only via provided paths.	Construction to operation	Proponent (VMP) PMHC (compliance enforcement)

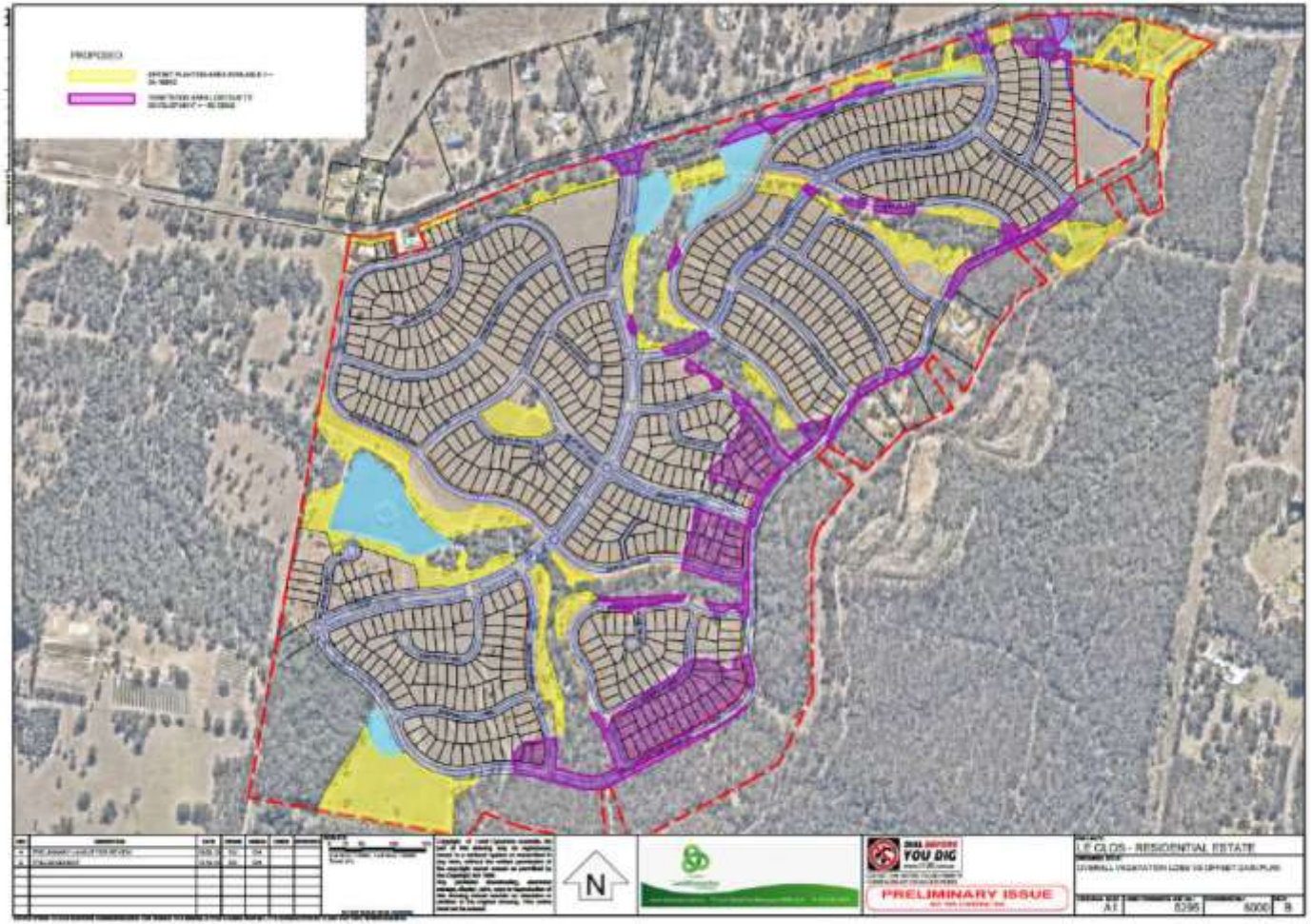
Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Planting out of EEC buffers as per DCP	Low: • Currently subject to runoff from former vineyard, now grazed by cattle.	Very low: • Combined with VRZ widening, EECs will be significantly buffered from current status	• EECs to be buffered by 35m planting of fully structured native forest, which will include KFTs. • Implemented under VMP.	• DCP obligations met. • Additional biodiversity. • Additional carrying capacity	Construction - operation	Proponent
Fauna crossings - terrestrial	High – three riparian zones to be crossed as well as two crossings of ribbon of forest on Lot 48, creating new barrier with increased threat of vehicle mortality.	Very low: • Crossings to be designed at pre-DA stage and meet RMS standard principles.	• Riparian zone crossings to use minimum 3m x 3m culverts – subject to topography but not <2.4m x 2.4m. • Fauna furniture to be provided as per RMS guidelines. • Fauna fencing (floppy top or similar) up and downstream of crossing to funnel fauna into the underpass. • Streetlighting on road at crossing points to maximise driver detection of fauna.	• No effective barrier to fauna movement.	Construction	Proponent

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Fauna crossings - arboreal	High – three riparian zones to be crossed and two crossings of Lot 48, creating new barrier with increased threat of vehicle mortality.	Very low: • Crossings to be designed at pre-DA stage and meet RMS standard principles.	• Rope bridge to be provided over each riparian zone and Lot 48 crossings.	• No effective barrier to fauna movement.	Construction	Proponent
Install nest boxes to offset loss of minimum 7 hollow-bearing trees and arboreal termitaria: • All hollow-bearing trees lost are stags with limited longevity eg. basal fire scars.	High: • Development will see loss of 3 hollow-bearing trees and 4 termitaria. One to two more hollow-bearing trees may need removal for existing road upgrade	Nil: • Final road design to avoid additional HBT loss if possible. • Offset via nest boxes per hollow, including 2 extra HBTs in case have to be removed.	• Two HBTs on edge of existing road to be surveyed and accounted in final road redesign. • Nest boxes to be erected in retained forest along east and southwest where hollows are currently uncommon or absent. • Nest boxes to be erected at least 2 months before clearing to allow fauna to detect them.	• HBT loss minimised. • Offset requirements of DCP met.	Construction	Proponent Ecologist

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Relocation of hollow logs to southwest offset area to augment habitat regeneration: • Studies show coarse woody debris is a key habitat component for biodiversity. • Hollow logs take >100 years to recruit from regrowth forest, but enhance biodiversity via provided refuge and foraging substrate.	High: • Logs will be destroyed during clearing. • >100 years to gain logs in planted area via natural processes.	Low: • Logs relocated to meet consent condition. • Ecologist to direct and document log relocation.	• Relocate any salvageable current or potential (>50cm DBH) hollow-bearing trees and logs to southwest offset area during clearing phase. • Randomly locate to provide refuge habitat for fauna.	• Majority of existing hollows and logs relocated. • Higher diversity of fauna in offset area within 10yrs of planting.	Construction	Proponent Ecologist
Timing works to avoid critical life cycle events such as breeding or nursing.	High – loss of at least 7 hollow-bearing trees and termitaria, plus some groundcover and logs.	Low	Clearing outside breeding season of Southern Myotis which has potential to roost in tree hollows.	Avoid impacts on breeding.	Avoid spring-summer	Proponent
Instigating clearing protocols including pre-clearing surveys and staged clearing, and the presence of a trained ecological or licensed wildlife handler during clearing events	High – loss of at least 7 hollow-bearing trees and termitaria, plus some groundcover and logs.	Low	Consent condition requiring the measure in future DA.	Minimal if any fauna mortality	Prior to and during clearing.	Proponent PMHC Ecologist.
Clearing protocols that identify vegetation to be retained, prevent inadvertent damage and reduce soil disturbance	Moderate – risk of impacts on retained KFTs and HBTs, and adjacent EECs.	Low	Consent condition requiring the measure in future DA.	EECs and habitat features protected during construction.	DA consent and construction phase.	Proponent PMHC

Measure	Risk before mitigation	Risk after mitigation	Action	Outcome	Timing	Responsibility
Sediment barriers or sedimentation ponds to control the quality of water released from the site into the receiving environment during dwelling construction	High – risk of impacts on EEC and large dam (frog and Southern Myotis habitat)	Low	• Consent condition requiring the measure in future DA. • Development complies with WSUD during construction and operation.	Watercourses and dam protected during construction and operation.	DA consent and construction phase.	Proponent PMHC
Selective retention of in APZ during clearing.	High – risk of loss of these trees	Very low	Consent condition requiring the measure in future DA.	Protected during construction.	DA consent and construction phase.	Proponent PMHC
Temporary fencing and signage to protect significant environmental features such as riparian zones during construction.	High – risk of impacts riparian zone.	Very low	Consent condition requiring the measure in future DA.	Threatened plant protected during construction.	DA consent and construction phase.	Proponent PMHC
Hygiene protocols to prevent the spread of weeds or pathogens between infected areas and uninfected areas	Low – risk of introduction of frog and plant diseases.	Very low	Consent condition in future DA for hygiene measures ie. washdown of construction machinery before entering site.	No disease introduced during major earthmoving works.	DA consent and construction phase.	PMHC
Staff training and site briefing to communicate environmental features to be protected and measures to be implemented.	High – risk of impacts on riparian zone.	Very low	Consent condition requiring include toolbox talks to ensure all workers aware of issues.	No impacts during construction.	DA consent and construction phase.	Proponent PMHC
Firewood collection banned from public reserves	Low risk of residents collecting firewood.	Very low	• Protective zoning. • Signage indicating public reserve and firewood collection is illegal	No firewood collection	DA consent Operation	Proponent PMHC

Figure 5: Proposed loss and gain areas



7 EPBC Act 1999

The provisions of the EPBC Act require determination of whether the proposal has, will or is likely to have a significant impact on a "*matter of national environmental significance*". These matters are listed and addressed as follows:

1. **World Heritage Properties**: The site/study area is not listed as a World Heritage area nor does the proposal affect any such area.

2. **Ramsar Wetlands of International Significance**: No Ramsar wetland occurs on or adjacent to the site, nor does the proposal affect a Ramsar Wetland.

3. **Threatened Species and Communities:** The White-throated Needletail (Vulnerable), Koala (Vulnerable), Grey-Headed Flying Fox (Vulnerable) and the Spotted-tail Quoll (Endangered) considered potential occurrences in the study area. One EEC has been confirmed to occur, and possibly an ecotonal version of another nominated EEC may occur. None are considered at risk of a significant impact.

4. **Migratory Species Protected under International Agreements**: No migratory species is likely to be significantly affected by the proposal.

5. **Nuclear Actions**: The proposal is not a nuclear action.

6. **The Commonwealth Marine Environment (CME)**: Listed as relevant to the site though is not within the CME nor does it affect such.

7. **The Great Barrier Reef Marine Park:** The proposal does not affect the Great Barrier Reef Marine Park.

8. **National Heritage**: The site does not contain an item of National Heritage.

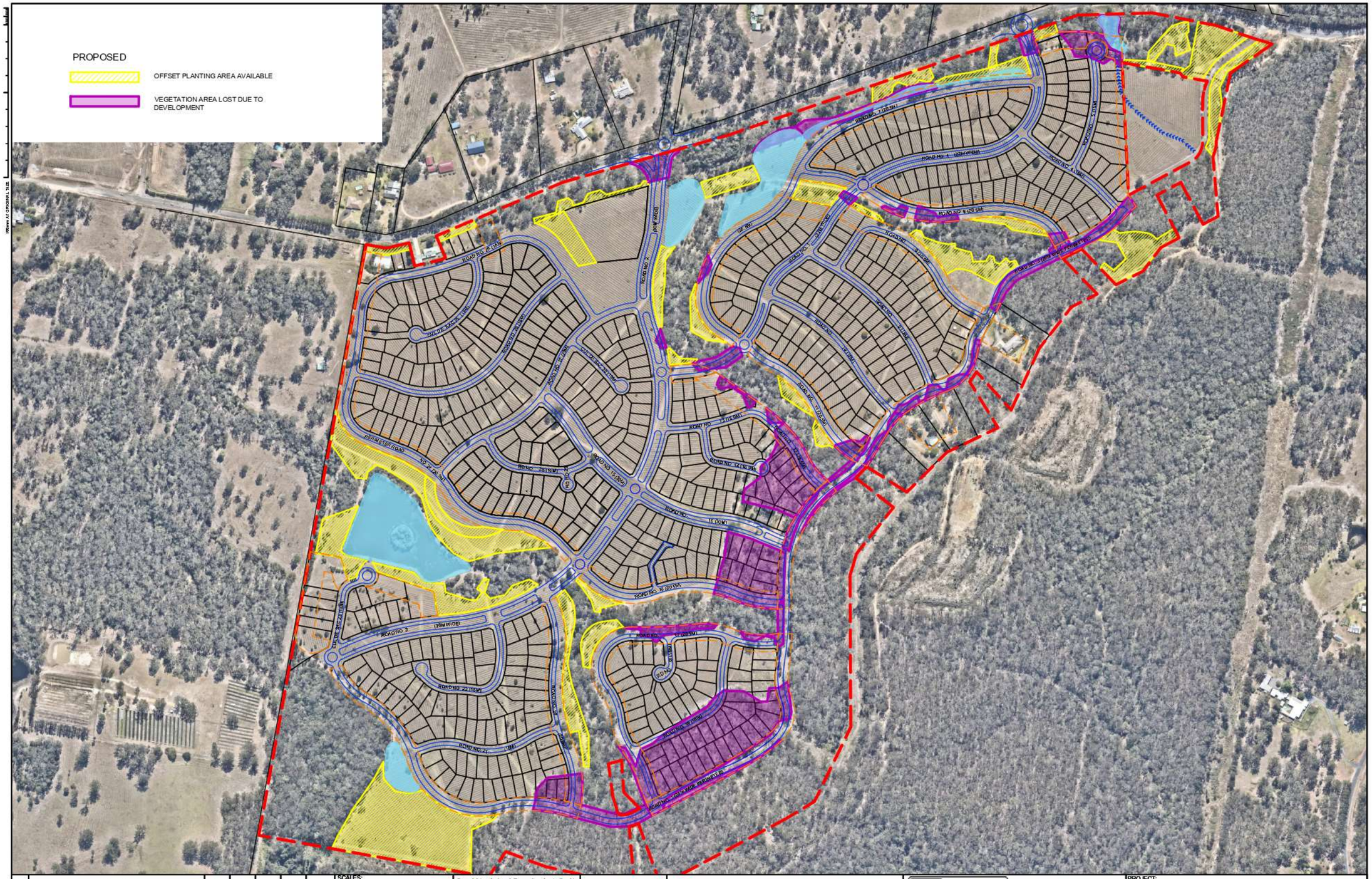
9. **A water resource, in relation to coal seam gas development and large coal mining development:** The proposal is not a mining development.

The proposal thus is not considered to require referral to the Department of Environment and Energy (DotEE) for approval under the EPBC Act.

Yours faithfully,



Jason Berrigan.
Director, JBEnviro
B. Nat. Res. (Hons). Grad. Cert. (Fish.).
MECANSW, MRZSNSW, MABS, MAHS, MAPCN


PROPOSED
OFFSET PLANTING AREA AVAILABLE
VEGETATION AREA LOST DUE TO DEVELOPMENT
ROAD NO. 1 (20M WIDE)
ROAD NO. 2 (16M WIDE)
ROAD NO. 3 (16M WIDE)
ROAD NO. 4 (16M WIDE)
ROAD NO. 5 (16M WIDE)
ROAD NO. 6 (16M WIDE)
ROAD NO. 7 (16M WIDE)
ROAD NO. 8 (16M WIDE)
ROAD NO. 9 (16M WIDE)
ROAD NO.

DAVID PENSINI
Building Certification and
Environmental Services

25th January 2021

Land Dynamics Australia
PO Box 2459
PORT MACQUARIE NSW 2444

Attention: Graham Burns

Dear Sir,

Re: Strategic Bushfire Study – Proposed Rezoning Lot 1 DP 776681, Lots 3 – 48 DP 776681 and Lot 50 DP 776681 Le Clos Sancrox Road, Sancrox

It is proposed to rezone land, which is known as Lot 1 DP 776681, Lots 3 – 48 DP 776681 and Lot 50 DP 776681 Le Clos Sancrox Road, Sancrox so as to provide for the following land use zonings;

- General Residential (R1); and
- Medium Density (R3); and
- Environmental Living (E4); and
- Village Centre (B2); and
- Environmental Conservation (E2); and
- Environmental Management (E3).

A concept plan for the proposed rezoning and its future development is provided as **Appendix 1**.

It is noted that NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 provides that for strategic development proposals in bush fire prone areas a Strategic Bush Fire Study is to be prepared.

The level of information required within such a study is dependent upon the nature of the LEP amendment, scale of the proposal, the bush fire risk and its potential impact upon the wider infrastructure network. The Strategic Bush Fire Study provides the opportunity to assess whether new development is appropriate in the bush fire hazard context. It also provides the ability to assess the strategic implications of future development for bush fire mitigation and management.

In accordance with Table 4.2.1 of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 the following Strategic Bushfire Study is provided in relation to the proposed rezoning. It is noted that this Study is additional and complementary to the Preliminary Draft Bushfire Hazard Assessment Report prepared by David Pensini – Building Certification and Environmental Services dated October 2019.

1.0 LANDSCAPE ASSESSMENT

In order to determine the likelihood of a bush fire, its potential severity and intensity and the potential impact on life and property in the context of the broader surrounding landscape the following methodology was taken.

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1.1 Assessment Methodology

(i) Stage 1 - Desktop Survey

The identification and assessment of existing and historic information pertaining to the subject site in relation to;

- Weather
- Vegetation.
- Topographic features.

(ii) Stage 2 - Field Survey.

Detailed inspections of the subject site were undertaken by David Pensini - Building Certification and Environmental Services in April 2019, 8th October 2019 and the 20th January 2021 in order to identify relevant bushfire hazard factors and characteristics such as;

- Topographic conditions.
- Vegetation characteristics.
- Weather
- Fire Danger

Each of the above factors need to be considered in determining the bushfire hazard for the subject site and proposed rezoning. These factors must be reviewed in determining the bushfire protection measures which are applicable to the subject site and the proposed rezoning of the areas of land which are the subject of this report.

The assessment of slope and vegetation characteristics has been carried out in accordance with Appendix 1 of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

1.2 Topography

Topography is a major factor to consider when assessing the bushfire risk of any development which is subject to compliance with the requirements of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019. Therefore, the slope of the subject site and surrounding area, (to a distance of 100m), was measured using a Suunto PM-5/360 PC Clinometer.

The topography of the subject site and the immediate area is influenced by an east to west hill/ridgeline the crest of which is located to the south of the subject site. Consequently, slope conditions are, in the main, gentle to moderate south to north downslopes towards the meander of the Hastings River which is located at distance to the north of the subject site. It is however noted that a number of small south to north flowing intermittently flowing creek/gullies are present on the subject site with these features providing for undulating slope conditions over the subject site albeit that slope conditions remain gentle with slopes becoming steeper with distance towards the south. Slope conditions on adjoining and adjacent land are similar to the subject site although slopes on land to the south become steeper and transition to southerly downslopes.

Slope conditions over the subject site and on adjoining and adjacent land can be seen in **Figure 1** below;

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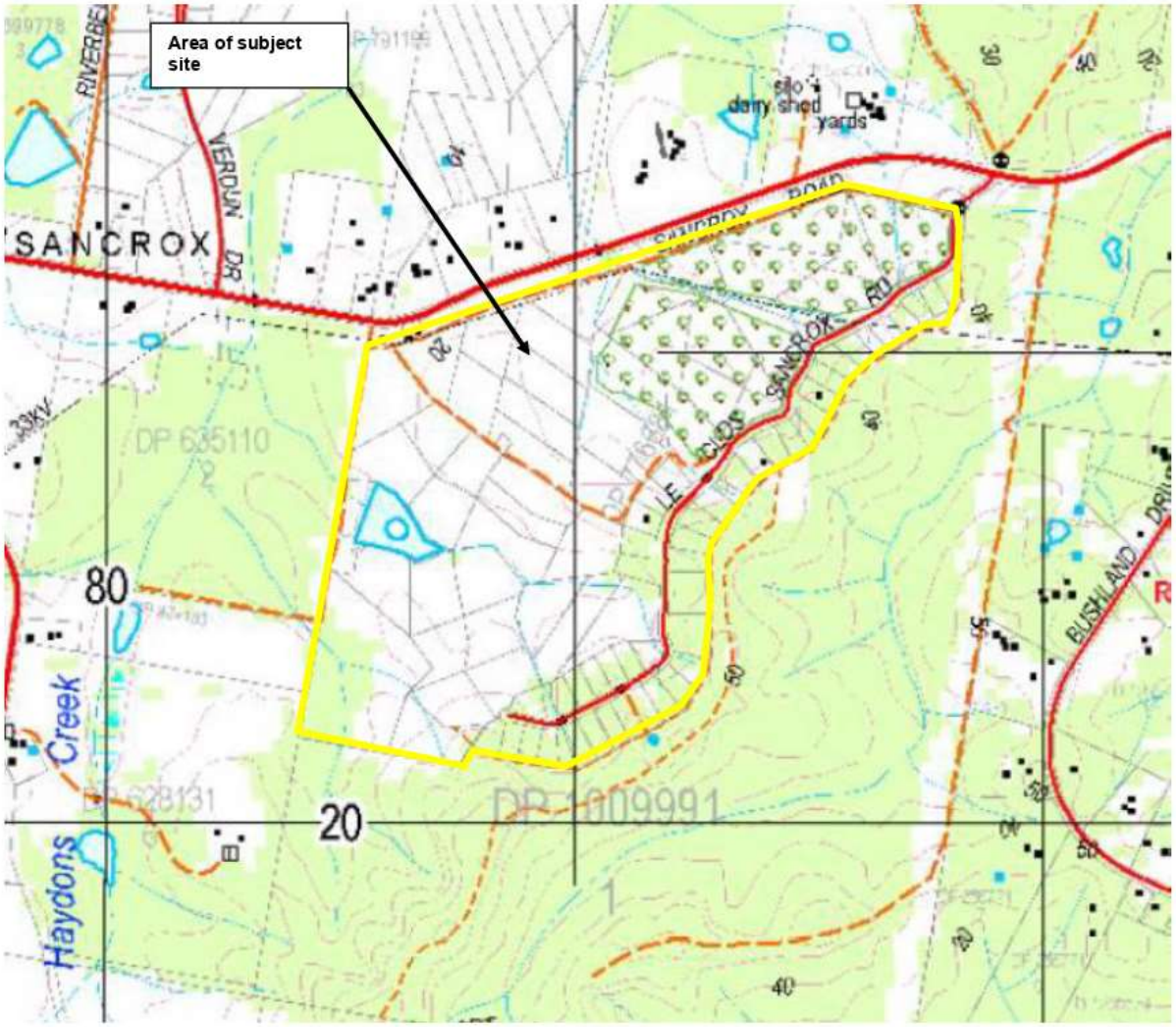
Figure 1 – Topographic Conditions



The following table indicates the slopes measured within the vegetation affecting the site of the proposed rezoning.

Table 1 - Slope Assessment Results

DIRECTION OF HAZARD	SLOPE	UPSLOPE/DOWN SLOPE
Within the subject site	4° - 5°	Down slope
North	2° - 3°	Down slope
South	4° - 5° (0°)	Down slope
East	4° - 5°	Down slope
West	4° - 5°	Down slope

Having regards to the above the topography of the subject site and surrounds does not represent any major constraints in terms of bushfire behaviour.

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1.3 Vegetation Assessment

The vegetation on and surrounding the area of the subject site which is proposed to be rezoned was assessed over a distance of 140m from the proposed development.

The vegetation formations were classified using the system adopted as per Keith (2004) and in accordance with Appendix 1 of NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

The following information is provided in relation to the floristic characteristics of the subject site and adjoining and adjacent land in the area which is the subject of the rezoning proposal as relevant to bushfire hazard assessment.

In adopting a conservative approach to bushfire hazard assessment, worst case vegetation characteristics have been identified.

1.3.1 Vegetation within Development Site

The subject site contains a number of vegetation communities with grasslands with scattered and small clusters of trees predominating over the majority of the subject site.

Areas of Dry Sclerophyll Forest are present in the southern portion of the subject site with a number of narrow bands of remnant highly disturbed of Wet Sclerophyll Forest retained adjacent to the north flowing intermittently flowing creek/gullies which are present on the subject site. A small area of Forested Wetland is located in the far southwestern portion of the subject site in conjunction with areas of Dry Sclerophyll Forest.

A narrow band of remnant highly disturbed area of Dry Sclerophyll Forest has been retained immediately adjacent to the Sancrox Road reserve which adjoins the subject site along its northern boundary. It is also noted that a small area of Forested Wetland vegetation is present adjacent to the northern boundary of the subject site roughly in the area of the mid-point of the boundary.

It is noted that the development concept for the subject site provides for the modification of vegetation so as to provide for managed land within the proposed residential and village centre lots and associated infrastructure such as roads and active use open public spaces. It is however noted that areas of unmanaged hazard vegetation will be retained within the proposed 'green corridors', environmental living lots and the areas of bushland which are proposed to be retained along the southern portion of the subject site and within proposed offset areas. Having regards to the above in adopting a conservative approach to bushfire hazard assessment the following vegetation classifications have been adopted for the purposes of this report;

- 'Green Corridors' within the subject site – Wet Sclerophyll Forest. It is noted that whilst width and riparian context of some of the proposed corridors could support a remnant vegetation classification, (i.e. specification similar to Rainforest), in adopting a conservative approach to hazard assessment a Forest classification has been adopted.

- 'Green Corridor' adjacent to the western portion of northern boundary of the subject site – Specification similar to Rainforest. This classification has been adopted on the basis of the narrow width, (<30m), of this area of vegetation and the fragmentation of continuity of vegetation which will result due to the presence of Sancrox Road and managed vegetation to the north and the predominance of managed vegetation to the south. Additionally, the proposed public road intersections will further fragment this narrow band of vegetation.

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- 'Green Corridor' adjacent to the eastern portion of northern boundary of the subject site – Dry Sclerophyll Forest.
- Retained Forest vegetation within environmental living lots – Wet Sclerophyll Forest.
- Vegetation within offset public reserve - Wet Sclerophyll Forest.
- Vegetation within unmanaged bushland within residual lot/public reserve – Wet Sclerophyll Forest.

1.3.2 Vegetation on Adjoining and Adjacent Land to Development Site

The following vegetation characteristics were identified as being relevant to the proposed rezoning of the subject site having regard to the vegetation characteristics of adjoining and adjacent land.

Vegetation to the north of the subject site is dominated by Grasslands with scattered and clusters of trees although some areas of Wet Sclerophyll Forest are located at distance to the north of the subject site.

A mix of grasslands with scattered and clusters of trees and areas of Dry Sclerophyll Forest and Forested Wetland are present to the west of the subject site. In adopting a conservative approach to hazard management, a Wet Sclerophyll Forest classification was adopted for the land to the west of the subject site.

The aforementioned assessment of vegetation is consistent with vegetation mapping of the area conducted by Port Macquarie-Hastings Council in 2013, refer to **Figure 2** below;

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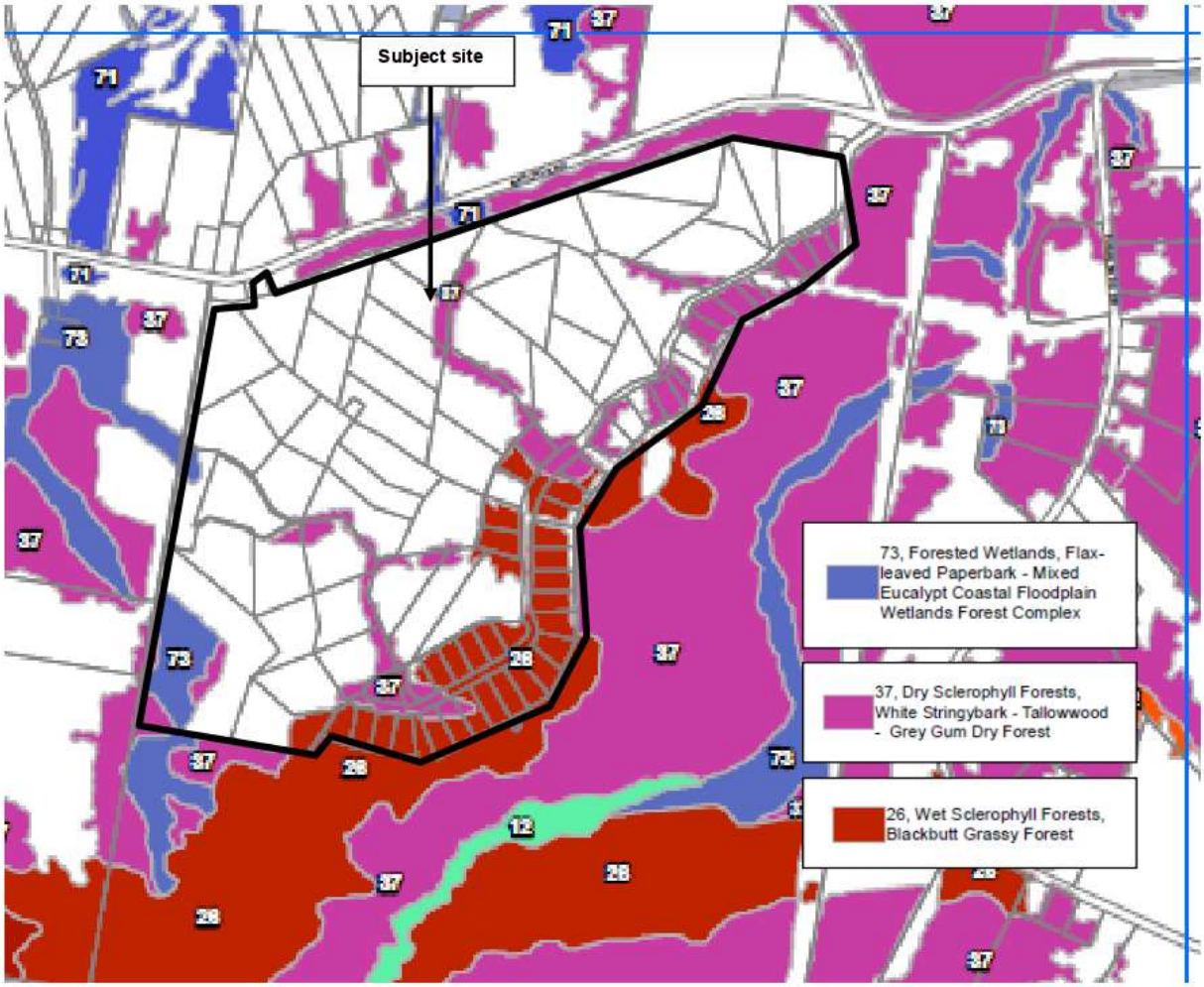
Figure 2 - Vegetation Characteristics of Area



An indication of the relationship of the vegetation of bushfire significance to the area of land which are proposed to be rezoned is presented in **Figure 3** below.

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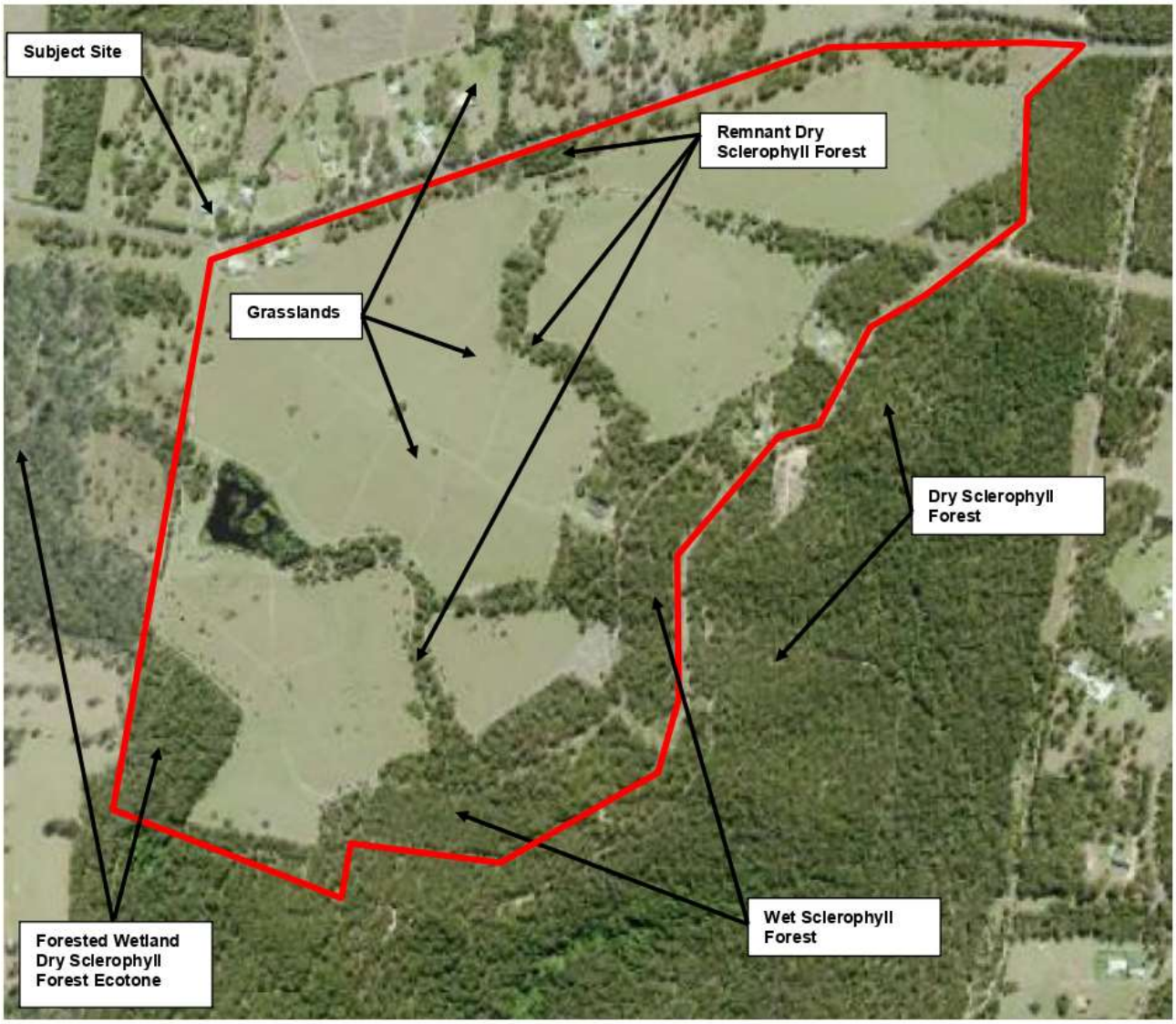
Figure 3 - Vegetation Relationships to the Subject Land



The following table summarizes the worst-case vegetation structures which are of bushfire significance to the proposed rezoning and consequential development allotments.

Table 2 – Summary of Vegetation Characteristics

ASPECT	VEGETATION DESCRIPTION	VEGETATION CLASSIFICATION – (Keith, 2004)
Within the subject site	Wet and Dry Sclerophyll Forest within the proposed 'Green Corridors', environmental living lots and bushland areas which are not subject to development.	Wet and Dry Sclerophyll Forest

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	Specification similar to Rainforest within proposed 'Green Corridor' along the western portion of the northern property boundary of the subject site	Rainforest Specification
	Grasslands within undeveloped stages of the proposed subdivision	Grasslands
North	Grasslands within developed rural/rural residential lots	Grasslands
South	Wet Sclerophyll Forest on adjoining land.	Wet Sclerophyll Forest
East	Dry Sclerophyll Forest on adjoining land.	Dry Sclerophyll Forest
West	Grasslands with scattered trees and areas of Wet Sclerophyll Forest and Forested Wetland on adjoining land.	Wet Sclerophyll Forest

It is noted that the identification of areas of bushfire hazard vegetation is generally consistent with the bushfire risk mapping for the area, refer to **Figure 4**, however the characteristics of the vegetation which is proposed to be retained within the 'green corridors' within the subject site would suggest a Category 2 classification rather than a Category 1 classification as provided for in the following figure.

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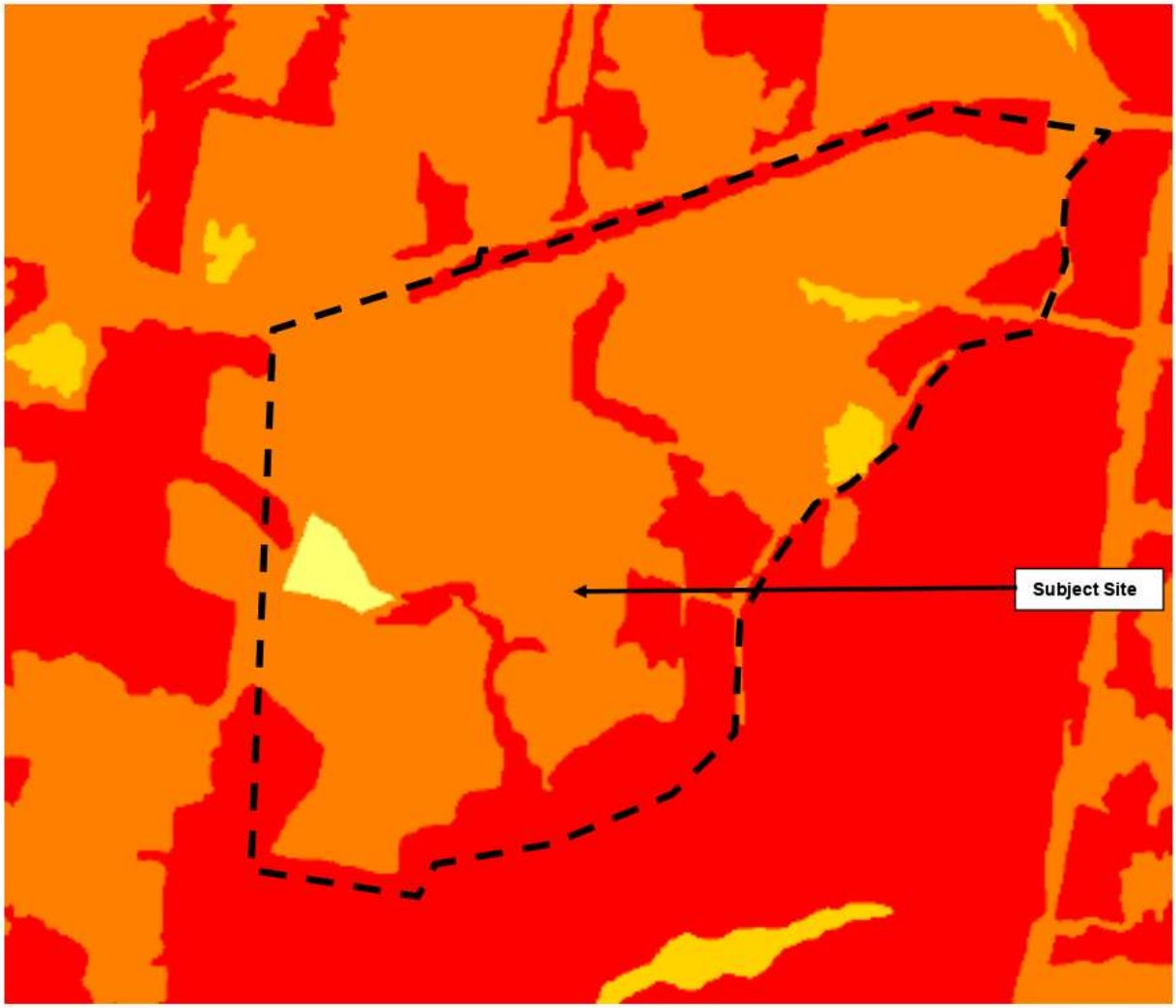
Figure 4 – Extract from Bushfire Risk Mapping



1.4 Climate/Weather

The typical/average climate of the Port Macquarie area is a humid subtropical climate characterised by warm humid summers and mild winters. The average daily maximum temperature is around 21.5^{0}C, while the average daily minimum temperature is around 10^{0}C - 11^{0}C.

Long-term average annual rainfall is around 1,500mm whilst annual pan evaporation is estimated to be approximately 1,400mm.

Based on long-term, (1910–2011), observations, temperatures have been increasing in the North Coast Region since about 1970, with higher temperatures experienced in recent decades. This warming trend is expected to continue, with anticipated considerable rainfall variability across seasons and from year to year. These projected changes include increasing maximum and minimum temperatures, increasing number of hot days, decreasing number of cold nights together with winter rainfall and increasing autumn and spring rainfall. Average fire weather and severe fire weather days are projected to increase in summer and spring.

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The bush fire season for the Port Macquarie area generally runs from July to November, however, can extend into December or January with low rainfalls. Strong northwest to southwest winds often prevail within that time of year. Longer bush fire seasons occur when summer rainfall is lower than normal, with the bush fire season extending through summer to early autumn. Serious fires have occurred late in the season under dry summer conditions.

Prevailing weather conditions associated with the bush fire season are characterised by dry north-westerly winds, usually associated with high pressure systems and the passage of cold fronts. Extended periods of low rainfall, and the resultant fuel moisture deficiencies, combined with summer temperatures and hot dry westerly winds form the circumstances for high intensity fires to develop. Although summer rains generally bring an end to the fire season, short dry spells can create extensive wildfires in the area as late as April. Generally, these fires have proved to be less damaging than those occurring in spring/early summer. The climate projections indicate that there is a likelihood of more frequent and higher intensity bushfires occurring when low seasonal rainfall occurs.

Notwithstanding the above, it is noted bushfires do not always conform to widely accepted characteristics. Other fire weather conditions must also be contemplated such as preceding weather conditions, (such as low rainfall or drought), air temperature and relative humidity. If the area has been subject to drought or low rainfall for a period of time, vegetation health tends to deteriorate with increased leaf drop, curing and drying. This contributes to increased ground fuel loads and general ignition susceptibility. Prolonged dry periods also reduce soil moisture content.

Air temperatures of above 30 degrees Celsius are typically conducive to more severe fire weather, as are extended periods of higher-than-average air temperatures. In conjunction, low relative humidity, (i.e. low air moisture content), is also a contributing factor to increased fire weather.

In concert, all of the above factors can impact on the ability for fire to propagate, and alter behaviour and intensity characteristics and as such, fire weather is a significant component of bushfire hazard. Whilst an assessment of vegetation types, fuel loads, effective slope and other factors can be readily undertaken, fire weather can fluctuate across days, weeks and seasons and can have a significant impact on the potential for bushfire threat as well as influence bushfire behaviour and intensity.

In accordance with NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019, NSW Rural Fire Service, ***NSW Local Government Areas FDI,*** May 2017 and Table 2.1 of AS 3959 - 2018, the fire weather for the subject site is based upon the 1:50 year fire weather scenario and has a Fire Danger Index (FDI) of 80.

Based upon the above it is considered that climatic conditions are at times conducive to supporting bushfire, with the subject site containing and being located adjacent to areas of vegetation which provide for fuel loads sufficient to support and promote bushfires.

2.0 BUSHFIRE RISK ASSESSMENT

2.1 Overview of Bushfire Attack Mechanisms

Bushfires have long remained a fundamental characteristic of the Australian bush landscape, and likewise Australians have long retained a strong affinity with bush environments.

There remain a number of common factors which are associated with bushfire hazard and events and these include the incidence of fire weather, availability of fuel along with its type, structure and continuity or fragmentation, and the context of development at the urban / bushland interface.

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Bushfire attack refers to the various methods in which bushfire may impact upon life and property and principally encompass the following modes of attack:

(i) Direct flame contact

Direct flame attack refers to flame contact from the main fire front, where the flame which engulfs burning vegetation is one and the same as that which assumes contact with the building. It is estimated that only 10 to 20 per cent of buildings lost to bushfire occur as a direct result of flame attack.

(ii) Ember and firebrand attack

The convective forces of bushfire raise burning embers into the atmosphere on prevailing winds and deposit them to the ground ahead of the fire front.

Typically, ember attack occurs approximately 30 minutes prior to the arrival of the fire front and continues during the impact of the fire front and for several hours afterwards, thus it is the longest lasting impact of bushfire attack. Firebrands occur in a very similar manner but relate to larger items of debris that may still be carried by the wind when alight, such as candle and ribbon barks. In essence, building loss via ember attack relates largely to the vulnerabilities and peculiarities of each building, its distance from hazardous vegetation and whether an occupant (or the like) is present to actively defend it. It is estimated by the CSIRO that approximately 80 to 90 per cent of buildings lost by bushfire are lost as a result of ember attack either in isolation or in combination with radiant heat impact.

(iii) Radiant heat flux

Exposure to radiant heat remains one of the leading causes of fatalities associated with bushfire events. Measured in kilowatts per m2, radiant heat is the heat energy released from the fire front which radiates to the surrounding environment, deteriorating rapidly over distance. In terms of impact on buildings, radiant heat can pre-heat materials making them more susceptible to ignition or can cause non-piloted ignition of certain materials if the energy transmitted reaches a threshold level. Radiant heat can also damage building materials such as window glazing, allowing openings into a building through which embers may enter. Radiant heat impact is an especially important factor in building-to-building ignition.

In terms of radiant heat exposure for humans, it can cause pain to unprotected skin in milder situations or life threatening and fatal injury in higher exposure thresholds.

(iv) Fire-driven wind

The convective forces of bushfire typically result in strong to gale force fire-driven winds which in itself, can lead to building damage. The typical effects of fire driven wind include the conveyance of embers, damage from branches and debris hitting the building, as well as direct damage to vulnerable building components such as lifting roofs or roof materials and the damage / breakage of windows.

(v) Smoke

Smoke emission remains a secondary effect of bushfire and is one which is typically not addressed by bushfire assessments. Irrespective, it is important to note the potentially severe impact of smoke emission on the human respiratory system. It can lead to difficulties in breathing, severe coughing, blurred or otherwise compromised vision, and can prove fatal. It is also important to note that toxic

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smoke can occur during bushfire, particularly where buildings or materials are ignited. With regard to evacuation, it can reduce visibility and create difficulties for particularly vulnerable persons.

In the progression of a bushfire event, the above five methods interact either exclusively or in concert. It is estimated that approximately 80 to 90 per cent of buildings lost to bushfire are located within 100m of the bushland interface, hence the relevance of statutory provisions and recommendations implemented across Australia which respond to various types of buildings within 100m of adjacent classifiable vegetation.

2.2 Bushfire Activity History

The Mid Coast Bush Fire Risk Management Plan, (BFMP 2019), identifies that the main sources of ignition in mid coast area, (includes the subject site), are:

- Escapes from Legal Burning off
- Incendiarism/arson
- Re ignition of previous wildfire or hazard reduction
- Illegal burning off
- Lightning

Many of the abovementioned fires occur as a result of private 'Hazard Reduction' burns by private landowners, which by act or omission have escaped into forested areas requiring major suppression efforts.

Incendiarism/arson commonly occurs in both grassland and forested areas across the Midcoast area. Increased visitation is thought to be a contributing factor to increased incidence of incendiarism.

Lightning activity in the area is mainly associated with late spring and summer thunderstorm activity, which is normally, (but not always), accompanied by rainfall.

The subject site and surrounds are not known to have an extensive history of bushfire.

Recent bushfire activity was not detected on or immediately adjacent to the subject site despite bushfires to the northwest, south and west of Port Macquarie during November and December 2019 and January 2020.

It is noted that the bushfire activity around Port Macquarie in November/December 2019 and January 2020 was predominately to the east of the Pacific Highway with the closest area of bushfire activity to the subject site being approximately 1.5km to the east of the subject site.

The Mid Coast BFMC Bush Fire Risk Management Plan 2019 does not identify any particular 'at risk' assets on or adjacent to the subject site nor does it identify any specific bushfire threat management actions for the locality.

2.3 Potential Bush Fire Behaviour

Whilst each bushfire event is different, fire spreads by responding to changes in fuel, terrain, and weather conditions. Therefore, based on landscape conditions and fire history, potential fire behaviour can be determined.

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It is generally anticipated that a potential fire within the locality and surrounds, would spread more quickly and have the potential for higher intensities when burning under the influence of southerly winds, particularly during warmer summer months.

In this regard the most likely bushfire risk scenario would be a fire moving from the south towards the north within the Forest vegetation contained within the undeveloped areas of land in the southern, eastern and western aspects of the subject site. This risk is however tempered by the generally upslope topography within the hazard vegetation to the south of the subject site and the reduced and fragmented fuel loads which are present on adjoining land to the west of the subject site. The south to north fire spread scenario was demonstrated in the November/December 2019 bushfires to the south and west of Port Macquarie.

Additionally, it is possible that bushfires may also move from adjoining and adjacent land to the north towards the south under the influence of northerly wind conditions. This risk is however tempered by the reduced fuel loads associated with the residentially occupied areas of land which extend to the north of Sancrox Road.

The proposed presence of vegetated 'green corridors' and remnant areas of vegetation within the development site do present as a bushfire risk to the future development of the subject site however the generally narrow width of the corridors and the fragmentation of connectivity of vegetation does significantly reduce the risk of bushfire risk and impact associated with fire within these areas. It is noted that the bushfire risk posed by the vegetation which is to be retained onsite could be reduced via its removal/modification however this needs to be balanced against the environmental and aesthetic values of the vegetation, the risk posed to assets and life safety of a bushfire within the 'green corridors' and remnant areas of bushland together with opportunities to reduce risk via the implementation of bushfire threat management measures.

Not withstanding the above the subject site does have the potential to be exposed to landscape scale bushfires due to the extent of bushland which extends to the south and east of the subject site.

The bushfire risk which is relevant to the subject site and proposed rezoning is summarized as follows;

Table 3 – Summary of Bushfire Behaviour Risk Summary

ASPECT	VEGETATION DESCRIPTION	SLOPE CONDITION	WORST CASE WIND INFLUENCE
Within the subject site	Wet and Dry Sclerophyll Forest within the proposed 'Green Corridors', environmental living lots and bushland areas which are not subject to development.	4° - 5° Downslope	Northerly
	Wet and Dry Sclerophyll Forest within the proposed 'Green Corridors' along the western portion of the northern property boundary of the subject site		Northerly
	Grasslands within undeveloped stages of the proposed subdivision		Variable – depending on staging
North	Grasslands within developed rural/rural residential lots	2° - 3° Downslope	Northerly

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South	Wet Sclerophyll Forest on adjoining land.	4˚ - 5˚ (0˚) Upslope	Southerly and northerly
East	Dry Sclerophyll Forest on adjoining land.	4˚ - 5˚ Downslope	Southerly and northerly
West	Grasslands with scattered trees and areas of Wet Sclerophyll Forest and Forested Wetland on adjoining land.	4˚ - 5˚ Downslope	Southerly and northerly

2.4 Impacts of Climate Change

Climate change influences bushfires in the following four ways:

- **A longer fire season.** Hotter conditions mean a longer fire season, leading to more dangerous bushfires and leaving less time for hazard reduction.
- **Hotter temperatures.** Australia is getting hotter, with more extreme hot days and longer, hotter heatwaves. These conditions are increasing the risk of bushfires in many areas.
- **Drier vegetation & 'fuel'.** Hotter conditions and periods of low rainfall dry out soil and vegetation, increasing fire risk.
- **More lightning.** A warmer climate increases the chance of lightning, which is a key factor in starting fires.

The climate projections indicate that there is a likelihood of more frequent and higher intensity bushfires occurring when low seasonal rainfall occurs.

2.5 Summary of Landscape Bushfire Risk Assessment

The landscape assessment indicates the potential for bushfire attack of the subject site given the presence of bushfire hazard vegetation within the subject site and on adjoining and adjacent lands.

Available information indicates a limited fire history for the subject site and within the immediately surrounding area.

The risk of bushfire impact can however be reduced in terms of the future development of the subject site through the integration of appropriate fire mitigation via the provision of appropriate bushfire protection measures within the subject site as part of its future development. In particular, the subject site can facilitate APZ's without extensive vegetation clearing whilst other design mechanisms including perimeter roads and a connected public road network can be integrated into the future development of the subject site.

The landscape assessment indicates that it is feasible to design and build resilience into the planned community that matches or exceeds the bushfire protection requirements provided for by NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

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3.0 LAND USE ASSESSMENT

3.1 Existing Land Use Context

Being located at distance to the northwest of the developed areas of Port Macquarie land uses within the locality, including the subject site, have until recently been dominated by rural and bushland activities.

In this regard, the area of the subject site which is proposed to be developed has a history of use for viticulture associated with the operation of Cassegrain Wines. However, in more recent times the land has been used for cattle grazing purposes following the decommissioning of grape growing activities on the subject site.

The character of the area is predominately rural although the construction of a number of separate residential dwellings on land within the subject site provides for a rural residential feel within the subject site.

Large rural sized allotments adjoin the subject site to the south, east and west whilst a number of smaller rural sized lots of land are present to the north. Rural residential lots are present at distance to the northwest and southeast of the subject site whilst the Pacific Highway is located approximately 1.4km to the east of the subject site with industrial land use present adjacent to the highway.

It is noted that the subject site currently comprises forty-eight (48) separate allotments of land which reflects the co-operative viticulture venture which was intended for the land within the subject site. This approach provided for Torrens title house lots and an attached land lot which was to be used as part of the viticulture activities on the subject site. The current lot configuration reflects the original co-operative approach to the productive utilization of the land, refer to **Figure 5**.

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Figure 5 – Subject Site

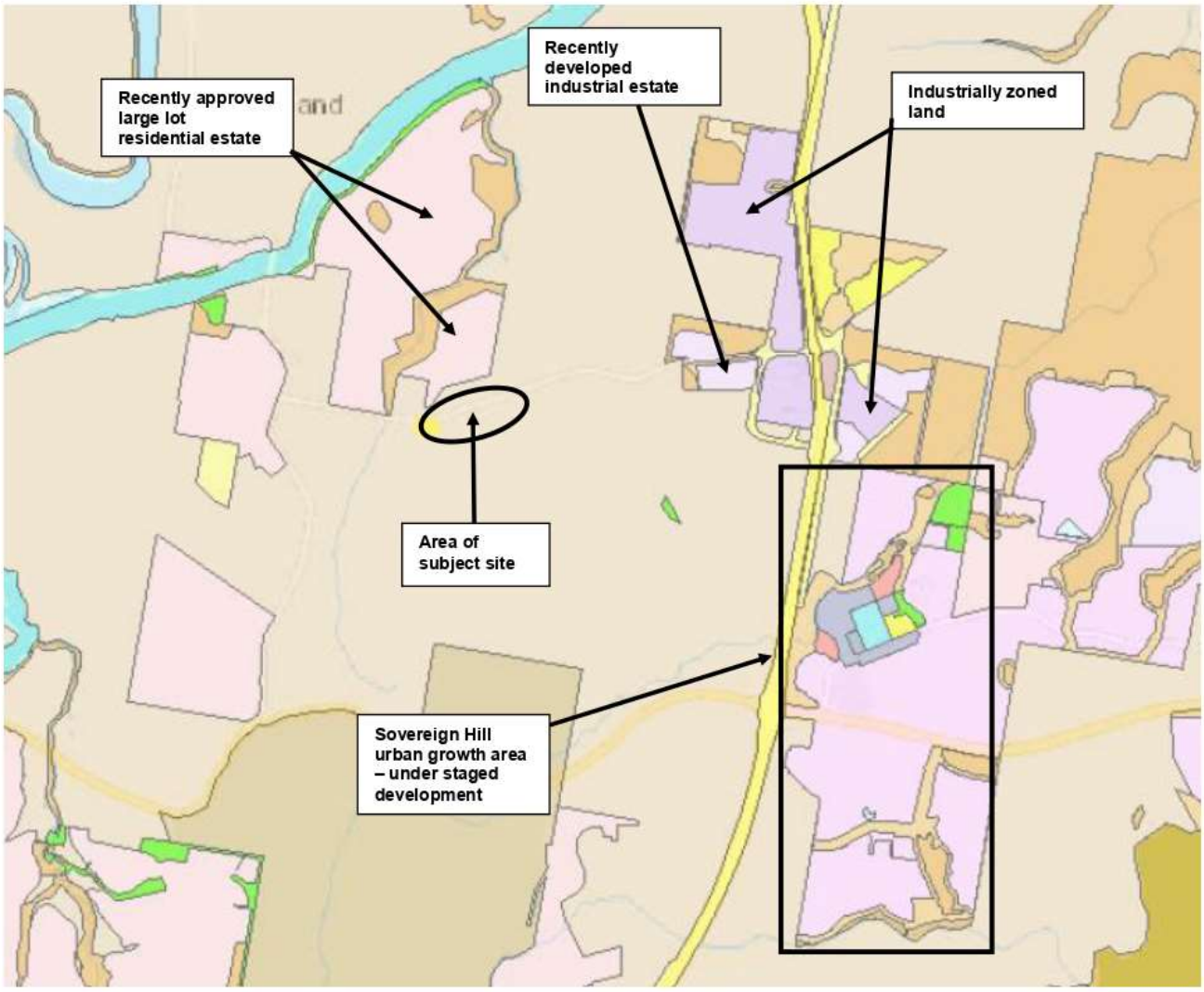


The original development concept for the subject site envisaged a higher level of residential occupancy than that which currently exists. At present there are three (3) separate residential dwellings within the subject site however the original development concept for the site provided for a significantly greater number of dwellings each of which was to be linked to a designated grape growing area within Le Clos Estate. The original development concept did not however proceed beyond the building infrastructure which is currently present in the southern portion of the subject site.

Being located approximately 2.5km to the northwest of the Sovereign Hills urban growth area, (which is located to the west of the urbanized area of Port Macquarie and known as Area 13), the land within the area has recently and will continue to experience significant land use change with residential and industrial development expanding into undeveloped land with a rural/rural residential land use history.

The area of land which is proposed to be rezoned does not currently have a direct context and relationship with existing or approved residential areas however the subject site is within an area which is identified as being potentially suitable to accommodate the westerly expansion of Port Macquarie. In this regard a recently approved industrial subdivision is located approximately 700m to the east of the subject site. Additionally, a large lot residential subdivision has been constructed on land approximately 450m to the west of the subject site. These two recent developments highlight the changing nature of land use within the locality, refer to **Figure 6** below.

Figure 6 – Existing Land Use Context



3.2 Future land use context

Whilst the subject site does not form part of an existing urban growth area, the Hastings Urban Growth Strategy, (HUGS), 2017 identifies the subject site as forming part of an area of land which maybe suitable as a potential long term growth area as modelled in hypothetical future growth scenarios.

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Figure 7 – Urban Growth Investigation Opportunities

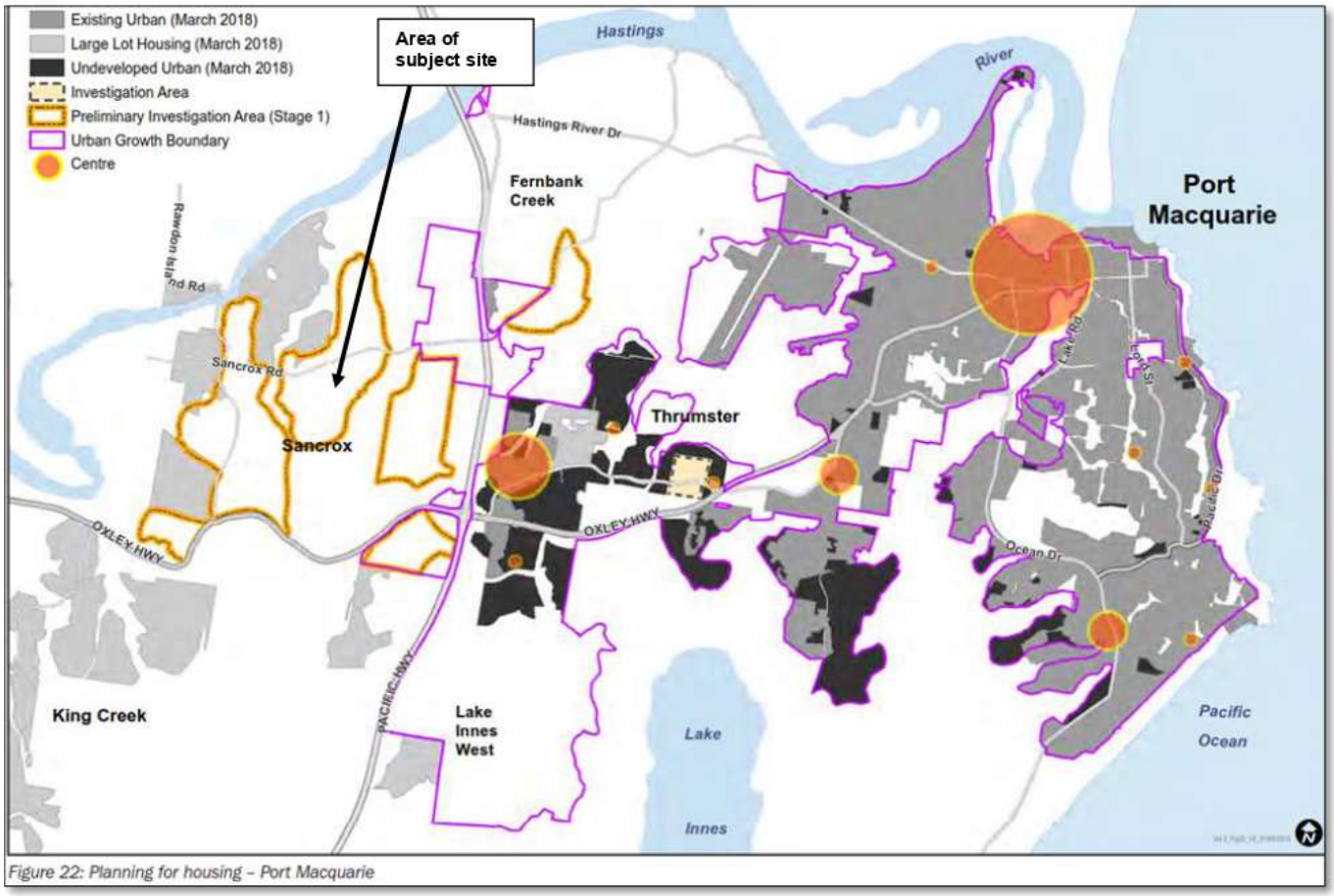

Figure 22: Planning for housing – Port Macquarie

Additionally, North Coast Regional Plan 2036 has been prepared to guide land use planning priorities and decisions to 2036 and has identified "*The regional cities of Tweed Heads, Lismore, Coffs Harbour and Port Macquarie are the primary growth anchors, delivering new jobs, and more diverse housing as well as high quality essential services*".

Whilst the subject site is located outside of the urban investigation area boundaries identified in the plan, in response to the need for additional housing stock identified in the Regional Strategy, the subject site provides a prime opportunity to accommodate additional housing without adverse environmental impacts or loss of agricultural land given that the site has not been utilized as a vineyard for approximately 30 years.

The use of cleared land, as is the case with the subject site, adopts the sustainable land use principles, rather than utilizing land which is currently used for agricultural purposes or contains ecological features. This is supported via the following constraints mapping for the subject site. It is noted that the following mapping includes the provision of the minimum required APZ's (as per NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019), in order to reflect the constraints to development posed by the areas of bushfire prone vegetation on and adjacent to the subject site;

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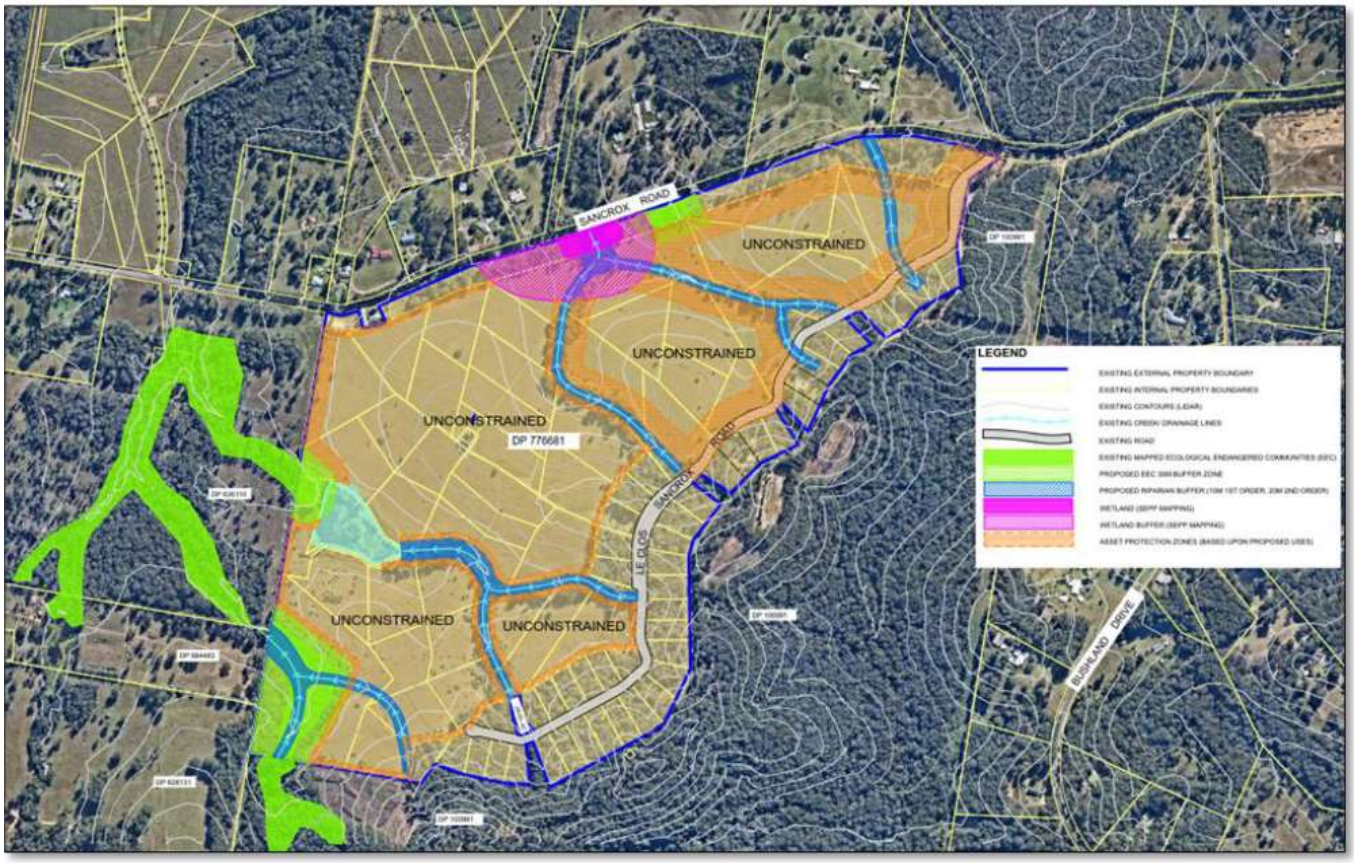
Figure 8 – Land Use Constraints Mapping



Notwithstanding the proposed rezoning, areas of bushland will continue to adjoin the subject site to the south, east and west whilst residentially occupied rural residential lots will continue to be present to the north of the subject site. Accordingly, the subject area of land does and will continue to have an interface with areas of land containing bushfire hazard vegetation. In this regard the ongoing presence of the bushfire hazard vegetation on adjoining and adjacent land needs to be taken into consideration in the identification of bushfire threat mitigation and management responses which are relevant to the future residential and commercial development of the area of land which is the subject of this report.

However, the generally cleared nature of the land which is the subject of this report and the absence of major constraints in terms of landform and topography to the future development of the subject land suggests that the proposed rezoning of the land is consistent with sound town planning outcomes.

3.3 Proposed Land Uses and Occupant Characteristics.

The proposed rezoning proposes the following land use zones;

- General Residential (R1); and
- Medium Density (R3); and
- Environmental Living (E4); and
- Village Centre (B2); and

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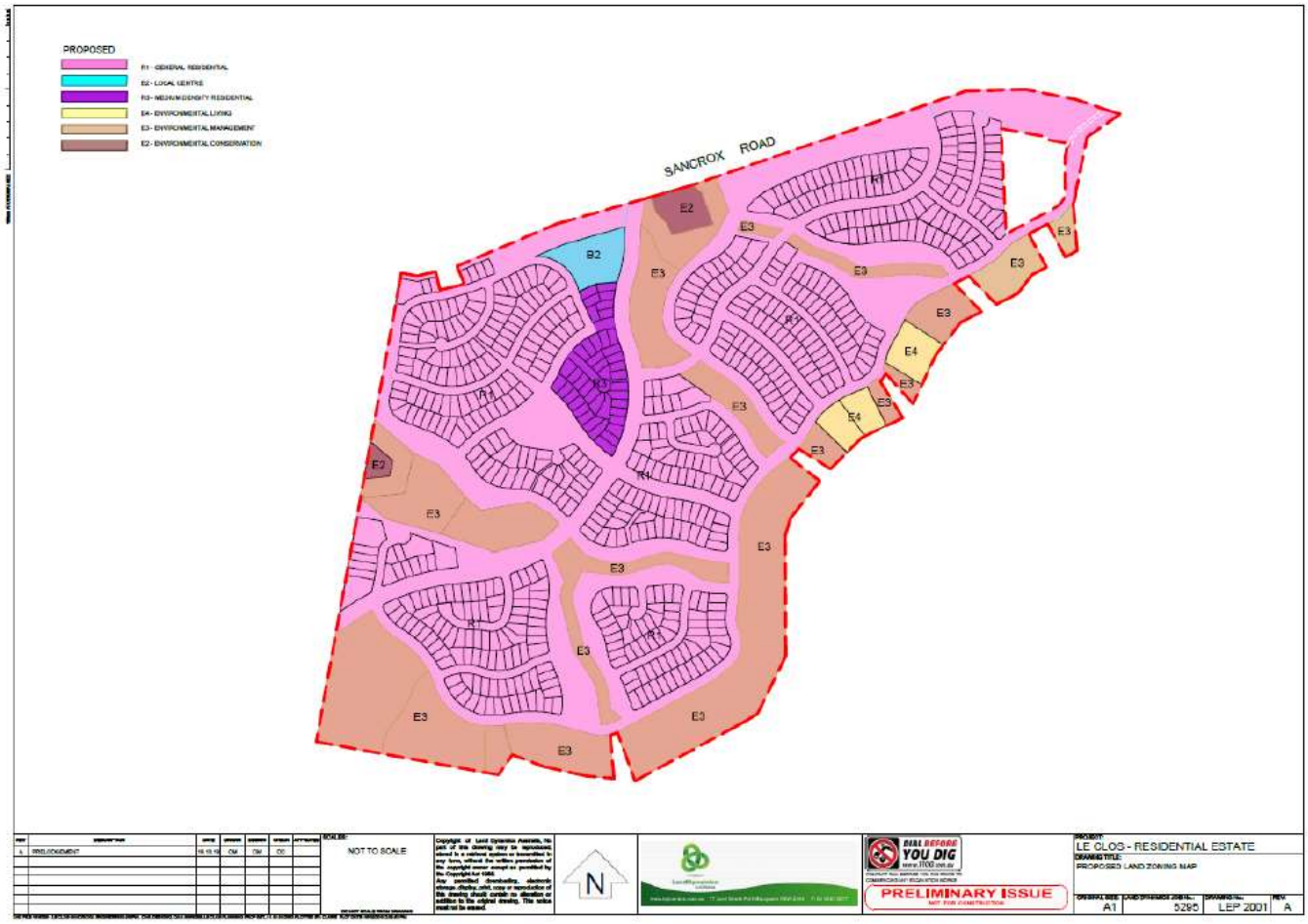
- Environmental Conservation (E2); and
- Environmental Management (E3).

The proposed zones are shown in **Figure 9** below;

Figure 9 – Proposed Land Use Zones



It is noted that the rezoning is proposed to facilitate the development of the subject area of land for residential dwelling and commercial (Business) development via separate Torrens Title lots. It would therefore be expected that the density of future development and the characteristics of occupants would be entirely consistent with that expected within urban residential and associated business areas.

The typical permitted land uses associated with the proposed rezoning are summarized as follows;

Table 4 – Permitted Uses

	Residential (R1) Zone	Medium Density Residential (R3) Zone	Business - Local Centre (B2) Zone	Environmental Living (E4) Zone
Objectives of Zone	• *To provide for the housing needs of the community.* • *To provide for a variety of housing types and densities.* • *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*	• *To provide for the housing needs of the community within a medium density residential environment.* • *To provide a variety of housing types within a medium density residential environment.* • *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*	• *To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area.* • *To encourage employment opportunities in accessible locations.* • *To maximise public transport patronage and encourage walking and cycling.* • *To ensure that new developments make a positive contribution to the streetscape and contribute to a safe public environment.*	• *To provide for low impact residential development in areas with special ecological, scientific or aesthetic values.* • *To ensure that residential development does not have an adverse effect on those values.*
Permitted without consent	*Home-based child care; Home occupations*	*Home occupations*	*Home occupations*	*Home occupations*
Permitted with consent	*Attached dwellings; Boarding houses; Business identification signs; Child care centres; Community facilities; Dwelling houses; Group homes; Home industries; Hostels; Multi dwelling housing; Neighbourhood shops; Places of public worship; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Any other development not specified in item 2 or 4.*	*Attached dwellings; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Group homes; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Respite day care centres; Roads; Seniors housing; Tank-based aquaculture; Any other development not specified in item 2 or 4*	*Boarding houses; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Hostels; Information and education facilities; Medical centres; Oyster aquaculture; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Service stations; Shop top housing; Tank-based aquaculture; Tourist*	*Backpackers' accommodation; Bed and breakfast accommodation; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dual occupancies (attached); Dwelling houses; Eco-tourist facilities; Educational establishments; Emergency services facilities; Environmental facilities; Environmental protection works;*

			and visitor accommodation; Any other development not specified in item 2 or 4.	*Home-based child care; Home businesses; Horticulture; Information and education facilities; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Recreation areas; Research stations; Respite day care centres; Roads; Tank-based aquaculture; Water recreation structures*
Prohibited	*Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Backpackers' accommodation; Boat building and repair facilities; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Electricity generating works; Entertainment facilities; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Marinas; Mooring pens; Mortuaries; Open cut*	*Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat building and repair facilities; Car parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Dual occupancies; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training*	*Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Boat building and repair facilities; Camping grounds; Caravan parks; Cemeteries; Correctional centres; Crematoria; Eco-tourist facilities; Electricity generating works; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Marinas; Mooring pens; Mortuaries; Open cut mining; Pond-based aquaculture Research stations; Residential accommodation; Rural*	*Industries; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3*

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	mining; Passenger transport facilities; Port facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Service stations; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water storage facilities; Water treatment facilities; Wharf or boating facilities; Wholesale supplies	*facilities; Industries; Marinas; Mooring pens; Mortuaries; Open cut mining; Passenger transport facilities; Pond-based aquaculture Port facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Semi-detached dwellings; Service stations; Sewerage systems; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Wharf or boating facilities; Wholesale supplies*	*industries; Sewerage systems; Sex services premises; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Waste or resource management facilities; Wharf or boating facilities; Wholesale supplies*	

In addition to the proposed residential dwelling and commercial (Business) land use zonings, the 'green corridors' and remnant bushland areas which are proposed to be retained on the subject site will be protected from development via Environmental Conservation (E2) and Environmental Management (E3) land use zonings.

The development concept for the subject site provides, in the main, for typically sized residential lots which would support a density of occupation which would be expected for an urban residential area. Accordingly, the future population demographics for the area would not present as being particularly 'vulnerable' in the context of socio-economic, mobility or emergency response factors.

Other future land use factors which are considered to be relevant to the proposed development are;

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- The bushfire risk associated with the proposed commercial (Business) B2 land use zoning is reduced in the context of life safety due to the non-residential activities associated with this use. This is acknowledged in the nature and extent of bushfire threat management measures which are required by NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 for commercial developments. Additionally, the location of the proposed business zone on the subject site and its spatial relationships to and the characteristics of the areas of the hazard vegetation provide for a reduced risk of bushfire threat to this proposed land use area.

- The development concept for the subject site does provide for a higher density of development via the Medium Density Residential (R3) zoning however apart for the potential increase in occupant numbers the future population demographics for this zone would not present as being particularly 'vulnerable' in the context of socio-economic, mobility or emergency response factors.

  As with the Business land use zoning the location of the proposed Medium Density Residential zone on the subject site and its spatial relationships to and the characteristics of the areas of hazard vegetation provide for a reduced risk of bushfire threat to this land use area.

- It is noted that the proposed Environmental Living (E4) zoning is centred upon the existing developed and residentially occupied lots within the subject site. In this regard the proposed zoning reflects the environmental values and lifestyle expectations which are provided for by existing residential development.

  Accordingly, the level of risk associated with the proposed E4 land use zone for residential occupancy is unchanged from that which currently exists. In this regard the proposed rezoning of the subject site would potentially provide for improved bushfire threat management outcomes for the occupants of assets within this land use area via the improvements to access and egress, services, emergency response and evacuation which would accompany the development of the subject site as proposed via the rezoning.

- It is acknowledged that the permitted land uses as provided for by the proposed zonings could support higher densities of occupation and involve occupants with characteristics which increase their level of vulnerability to emergency events such as bushfire and may reduce their abilities to respond in an emergency. In the context of bushfire risk these vulnerabilities are reflected in the Special Fire Protection Purpose development types, (NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019).

  It is however noted that the form of development contemplated by the concept plan for the subject site would not be expected to support these forms of development. Notwithstanding this, future development proposals which contemplate Special Fire Protection Purpose developments would need to be assessed on their own merits in terms of responding to bushfire threat and management.

3.4 Defining 'Acceptable' Land Use Planning Risk

With respect to land use planning for natural hazards, defining exactly what represents 'acceptable' risk can be a difficult task. Understanding community expectation of what represents acceptable risk versus unacceptable risk is the basis of much research both in Australia and internationally.

It is noted that in NSW, NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 has been adopted as the appropriate risk management standard in relation to land use planning and development

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control in relation to property and life safety albeit that there remains an understanding that despite this combination of planning, building and other bushfire protection measures provided for in NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019, asset loss may still occur in more extreme events.

Having regard to the above, the bushfire risk to assets can be minimized through compliance with the relevant threat management measures contained within NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 as this represents the appropriate land use planning and development control standards albeit that a level of property loss is 'accepted' to a degree by existing land use planning and building construction frameworks.

Property and infrastructure may be lost in a catastrophic event, but the key determinate of 'acceptable' risk is life safety risk, and whether the proposed land use rationale, density and settlement pattern supports and enables life safety, including safe evacuation.

In analysing the question of life safety, the following key points are considered to be relevant as to the suitability of the subject site for rezoning:

- the nature of urban growth is such that in regional coastal locations the rezoning of land will inevitably provide for a bushland interface. On a local level this is evident in existing urban growth Areas 13 (west of Port Macquarie), 14 (Lake Cathie/Bonny Hills) and 15 (West Haven), whereby new major population centres have an interface with areas of bushfire hazard vegetation. Accordingly, the issue for consideration is whether the bushfire risk posed to new development is consistent with community expectation and reflects the relevant bushfire threat management requirements which are provided for by current development standards.

  As provided for in the landscape assessment there are no major constraints to the proposed residential occupation of the subject site as proposed via the rezoning as it is feasible to design and build resilience into the planned community that matches or exceeds the bushfire protection requirements provided for by NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019.

  The landscape characteristics of the subject site and surrounding land are entirely consistent with that contemplated by NSW Rural Fire Service, ***Planning for Bushfire Protection***, 2019 for new development.

- the current and future population demographics for the area does not present as particularly 'vulnerable';

- the limited fire history within the subject site and surrounding areas;

- the generally cleared nature of the land which is the subject of this report and the absence of major constraints in terms of landform and topography to the development of the subject site;

- the risk benefit in relation to existing development in the area. The majority of historical residential development on the subject site has occurred without the benefit of more recent land use planning consideration from a bushfire perspective. In this regard the rezoning of the subject site and its future residential subdivision development provides an opportunity to provide for improved bushfire threat management outcomes for historical residential development on the subject site, in particular access and egress, the provision of services and emergency response and evacuation;

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- the proposed evacuation options provide for high levels of movement to and from the subject site with alternative means of access to and egress from the subject site available via existing and proposed public road infrastructure. This issue is further discussed in **Section 3.0** of this report;

  It is also noted that given the size of the subject site opportunities will exist for future occupants to remain onsite and be protected from the impacts of bushfire;

- the opportunities to reduce life safety risk through the application of accepted and tested bushfire threat management measures which respond to the level of bushfire threat; and

- the close proximity of existing emergency services. This issue is further discussed in **Section 4.0** of this report;

Having regards to the above it is considered that the level of asset and life safety risk associated with the proposed rezoning of the subject site is consistent with the relevant community expectations and the relevant land use planning and development control standards.

Based upon the above information there would appear to be no major land use planning constraints to the proposed rezoning of the land and its future development as residential and business lots.

3.0 ACCESS AND EGRESS

The development concept for the subject site provides that access to future development would be via a new public road system which will connect with Sancrox Road which adjoins the subject site along the northern property boundary of the subject site.

The road hierarchy which has been adopted for the future development of the subject site provides for an efficient and effective movement of vehicles with a variety of access and egress opportunities available through the interconnection of the proposed public road network. This is important from an evacuation perspective whereby the proposed road system will provide for capacity of use, alternatives for travel and the minimization of conflict between residents and emergency services.

In this regard the design concept for the future subdivision of the subject site provides for at least two (2) separate intersections with Sancrox Road, one in the western portion of the northern property boundary whilst the other will be located in the eastern portion of the northern property boundary. The new public road system has been designed so as to form a series of connecting perimeter roads which will separate the developed areas of the subject site from those areas which are proposed to contain areas of bushfire hazard vegetation. This network of perimeter roads will separate the development areas from unmanaged bushfire prone vegetation. This approach is entirely consistent with best practice bushfire threat management with the perimeter roads providing for safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface.

Additionally, the perimeter road approach which has been taken to the design of the public road infrastructure provides for high levels of access to the areas of hazard vegetation which are to be retained within the subject site and on adjoining land to the south, east and west. This is important not only from the perspective of providing suitable asset protection zones for future assets but also for the purposes of mounting bushfire control/suppression activities. As can be seen in the development

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concept for the subject site, the creation of lots with a direct interface with bushfire prone vegetation has been minimized with the use of perimeter roads maximized.

Access to future lots would also be via the network of new public roads which will provide, in conjunction with the main connecting perimeter public roads, direct public road frontage to each of the proposed lots. It is also noted that the design of the proposed subdivision provides for the integration of some of the proposed public roads with future public roads which will service future development to the southwest of the subject development site.

The access and egress design for the proposed future development of the subject site provides that the number of 'no through' roads have been minimized with the length of any 'no through' roads being generally less than 200m.

The design of the public road system not only provides for alternatives for travel to and from the subject site but also within the subject site with at least two alternatives for travel available from the majority of the proposed lots. This is particularly relevant to the vegetated 'green corridor' areas which are proposed to be retained within the subject site. In this regard the concept design provides for at least two routes across these unmanaged areas which not only provides for alternatives in access and egress but also provides for fire spread containment opportunities as well as fire suppression activities.

It is understood that all new roads within the future subdivision will be two-way and will be constructed to normal residential street standards. It is noted that the development concept will need to provide for temporary turning heads to some public roads until such times as the staged residential development of land within the subject site.

The sequence of staging of the proposed development can also provide for the maximization of perimeter road access whilst minimizing the length and extent of temporary 'no through' roads. Any staging of future development should provide for the movement of vehicles away from areas of bushfire hazard with movement into the centre of the development site provided for. This approach would provide for movement to and from areas of the subject site which would be sheltered from the impacts of bushfire.

Connection of the proposed new public road infrastructure which will service the future development of the subject site will be principally from the east and west using Sancrox Road which adjoins the northern boundary of the subject site. Travel via Sancrox Road to the east provides for connection with the Pacific Highway which is located approximately 1.4km from the subject site whilst travel to the west of the subject site for a distance of approximately 4km provides for connection to the Oxley Highway. It is noted that the relationship of the subject site to and its connection with major road infrastructure, (Pacific Highway and Oxley Highway), supports the suitability of the subject site for rezoning from an access and egress perspective.

It is also noted that there a number of other public roads which connect with Sancrox Road in proximity to the subject site thereby providing for a range of access and egress options to and from the subject site. It is also noted that areas which would be protected from the impacts of bushfire are located within 1.5km to the east and west of the subject site with the availability of these areas significant in the context of emergency evacuation, refer to **Figure 10** below;

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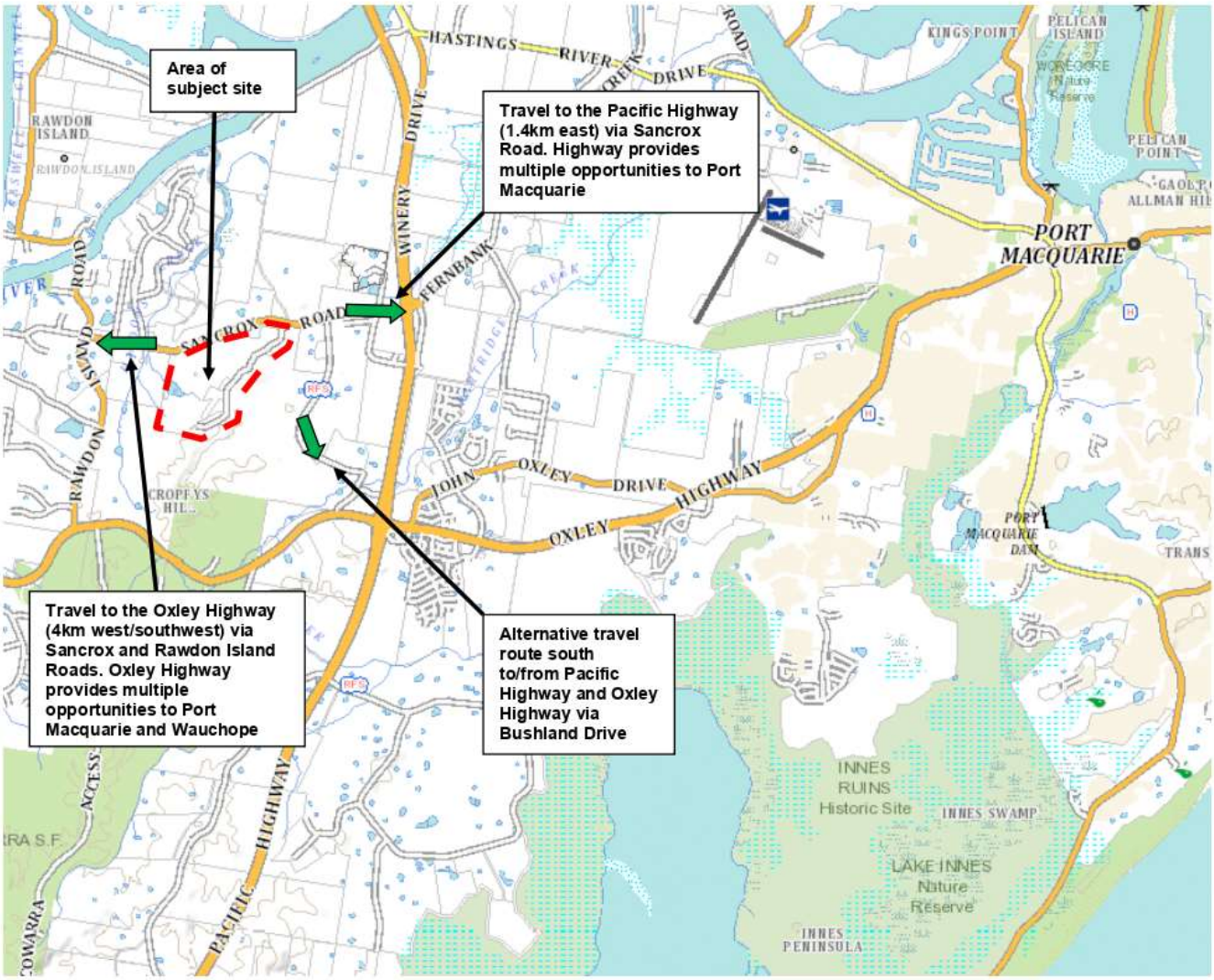
Figure 10 – Access and Egress Opportunities



Having regards to the above, the access and egress strategy for the subject site takes advantage of existing public road infrastructure which, in the main, provides for access to and egress from areas which would be protected from the impacts of bushfire.

It is noted that the future development of the subject site would be subject to compliance with Chapter 5 of NSW Rural Fire Service, ***Planning for Bushfire Protection,*** 2019 which provides the relevant access and egress bushfire threat management outcomes which are relevant to new residential subdivision development.

It is also noted that a provisional rail corridor has been identified adjacent to the eastern boundary of the subject site with this corridor supporting the proposed high speed rail network connecting Brisbane to Melbourne, refer to **Figure 11** below. The development of t high-speed rail infrastructure not only has strategic local and regional transportation implications but would also assist as a threat management measure in terms of bushfire risk in the eastern aspect of the subject site.

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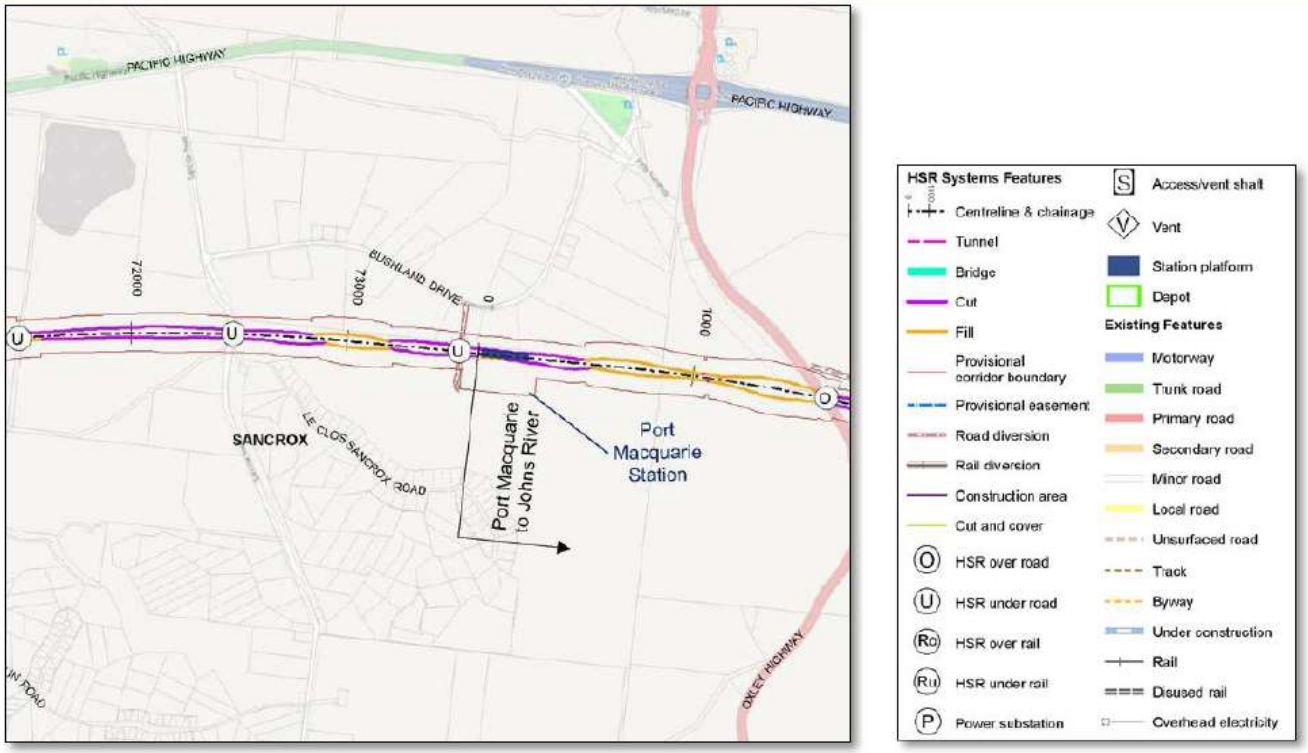
Figure 11 – High Speed Rail Corridor



4.0 EMERGENCY SERVICES

The question of increased demand for emergency services is a difficult one in a strategic land use planning context. On the one hand, the proposed development increases exposure of people, property and infrastructure, including increased exposure of firefighting personnel. However, the intent of this risk assessment process seeks to rationalise the strategic land use planning approach to mitigate this extent of risk exposure, acknowledging that not all risk can be avoided, and thus residual risk will remain and be transferred to others, (emergency services, the community, insurers, etc.).

At present emergency services are centred predominately upon resources from Port Macquarie, with Wauchope also supporting a range of emergency services which can respond to any incidents. Port Macquarie is located approximately 12.5km by road from the subject site whilst Wauchope is located approximately 8.5km by road from the subject site. Travel distances and times to and for emergency services are considered to be appropriate for residential development and importantly the location of the subject site provides for a range of emergency service options and opportunities, refer to **Table 5** below.

Table 5 – Emergency Services Locations

EMERGENCY SERVICE	LOCATION	ROAD TRAVEL DISTANCE TO SUBJECT SITE	ROUTE TO SUBJECT SITE
State Emergency Service	Port Macquarie – Central Road	Approximately 12km	Central Road/Lake Road/Oxley Highway/Pacific Highway/Sancrox Road
Police Service	Port Macquarie – Hay Street	Approximately 12km	Hay Street/Clarence Street/Horton Street/Gordon Street/ Oxley Highway/Pacific Highway/Sancrox Road
	Wauchope- Young Street	Approximately 9km	Young Street/Hastings Street/High Street/Oxley Highway/Rawdon Island Road/Sancrox Road
Ambulance Service	Port Macquarie – Central Road	Approximately 12km	Central Road/Lake Road/Oxley Highway/Pacific Highway/Sancrox Road
	Wauchope – High Street	Approximately 9.2km	High Street/Oxley Highway/Rawdon Island Road/Sancrox Road
Hospitals	Port Macquarie – Wrights Road	Approximately 9.5km	Wrights Road/Oxley Highway/Pacific Highway/Sancrox Road
	Wauchope – High Street	Approximately 9.2km	High Street/Oxley Highway/Rawdon Island Road/Sancrox Road
NSW Fire and Rescue	Port Macquarie – Central Road	Approximately 12km	Central Road/Lake Road/Oxley Highway/Pacific Highway/Sancrox Road
	Wauchope - Campbell	Approximately 9km	Campbell Street/High Street/Oxley Highway/Rawdon Island Road/Sancrox Road
NSW RFS	Fire Control Centre – Cameron Street	Approximately 9.1km	Cameron Street/High Street/Oxley Highway/Rawdon Island Road/Sancrox Road
	Sancrox-Thrumster Brigade – Bushland Drive	Approximately 1.7km	Bushland Drive/Sancrox Road
	Lake Innes – Lake Innes Drive	Approximately 6km	Lake Innes Drive/Pacific Highway/Sancrox Road
	Hastings-Wauchope – Cameron Street	Approximately 9.1km	Cameron Street/High Street/Oxley Highway/Rawdon Island Road/Sancrox Road
	Telegraph Point – Mooney Street	Approximately 14.5km	Mooney Street/Telegraph Point Road/ Pacific Highway/Sancrox Road
Airport	Port Macquarie – Boundary Street	Approximately 6km (direct air travel distance) Approximately 9.2km (by road)	Boundary Street/Hastings River Drive/Fernbank Creek Road/Wamuyan Drive/Frogs Road/Sancrox Road

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Specifically, in relation to bushfire, it is noted that the Sancrox-Thrumster RFS brigade is located within 1.7km of the subject site whilst the Lake Innes and King Creek services are located within 6km of the subject site. In addition, the NSW Fire Brigades at Port Macquarie and Wauchope provide for additional firefighting resources in reasonable proximity to the subject site.

The proposed rezoning of the land will however increase the demand for emergency services on the basis that the proposed rezoning of land does;

- increase the interface between residential and business development and areas of bushfire hazard vegetation when considered in the context of the nature and extent of the existing land use; and

- change the nature and density of development from that which already exists.

Notwithstanding the above, any increase in demand for emergency services associated with the proposed rezoning of land, (and its subsequent development), needs to be balanced against the fact that the nature of urban expansion which is associated with the rezoning and subsequent development of land for residential purposes is such that increases in demand for emergency services is inevitable as emergency services are required for a range of population safety and health protection issues associated with population growth. For example, in an urban context firefighting resources are required not only to respond to bushfire incidents but also in relation to responding to a range of building fire scenarios and causes.

Any increase in demand for services needs to be considered in relation to the needs for urban expansion in order to support local population growth.

An important consideration in relation to emergency services is the options and opportunities for evacuation. Having regards to the information contained in **Section 3** of this report the following factors are considered to be relevant to the issue of evacuation;

- the current and future population demographics for the area does not present as particularly 'vulnerable' in terms of evacuation responsiveness and ability;

- the concept design for road infrastructure provides for multiple evacuation travel options for any future residential subdivision development of the subject site;

- travel distances to areas of safety will be relatively short with alternative means of access to and egress from the subject site and future development available;

- the proposed road hierarchy and the interconnection of the proposed public road infrastructure will provide for safe access and egress for firefighting vehicles while residents are evacuating as well as providing a safe operational environment for emergency service personnel during firefighting and emergency management on the interface with hazard vegetation.

- Sancrox Road has connection with major road infrastructure to the east (Pacific Highway – approximately 1.5km) and west (Oxley Highway – approximately 4km) with this road infrastructure providing for high levels of emergency access to and egress from the subject site.

- a number of other public roads which connect with Sancrox Road in proximity to the subject site provide for a range of access and egress options to and from the subject site.

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- areas which would be protected from the impacts of bushfire are located within 1.5km to the east and west of the subject site with the availability of these areas significant in the context of emergency evacuation;

- given the size of the subject site areas which would be protected from the impacts of bushfire will be available within the future development areas.

Having regards to the above, the risk for occupants and emergency service personnel of becoming isolated and at risk of harm is reduced significantly reduced by the availability of a range of emergency evacuation features and opportunities.

It is also considered that there is substantial opportunity to reduce life safety risk through the application of accepted and tested bushfire threat management measures which respond to the level of bushfire threat.

5.0 INFRASTRUCTURE

5.1 Servicing

Essential infrastructure currently available to the subject site is water, electricity and telecommunications.

A number of the services may need to be upgraded to ensure capacity is met and this will require further investigation. Discussions have been held with Council officers in August 2018 in regard to future sewer and water servicing requirements and it was confirmed that the site 'is unconstrained' in relation to servicing. The figure below shows preliminary future servicing concepts for the subject site.

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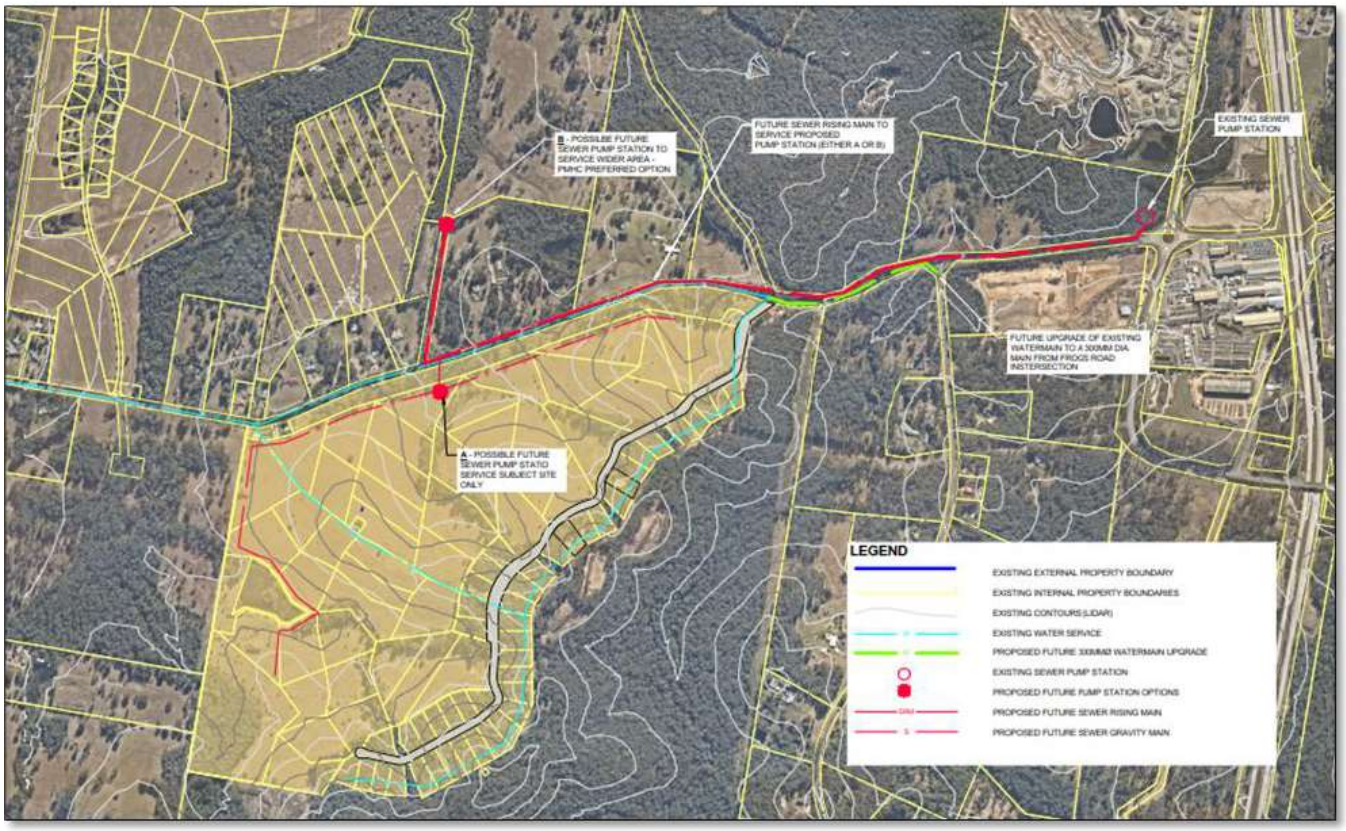
Figure 12 – Preliminary Servicing Plan Extract



5.2 Water Supply

The current water supply network to the site is shown in the diagram below. The existing 100mm diameter and 150mm diameter watermains are located along Sancrox Road and within the development site. It is envisaged however that the 300mm water main near to Expressway Spares to the east will need to be upgraded in the future along Sancrox Road to the subject site.

A new 20 mega litre reservoir has been constructed to cater for the current and future demands of urban development and urban growth areas including the Sancrox area.

Given that the proposed rezoning and future development of land provides for residential and business allotments, all future lots will have access to the reticulated water supply, the extension of which will be required by Port Macquarie-Hastings Council to service future subdivisions.

There are no apparent water servicing issues which would preclude the proposed rezoning of land and subsequent development of land particularly when considered in the context of the recent changes in land use and population densities to the east, (industrial subdivision), and west, (large lot residential estate), of the subject site.

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5.3 Sewerage Infrastructure

Sewer is not currently available to the site but is located to the eastern end of Sancrox Road, adjoining Expressway Spares. A new sewer pump station will be required to service the site. The preferred option would be to provide a 'centralised' sewer pump station to the north of the site allowing greater flexibility to service a larger surrounding area.

A rising main would be required along Sancrox Road feeding back into the existing sewer pump station located at the intersection of Sancrox Rd and the Pacific Highway. This would then discharge into the existing gravity fed network.

Sewer servicing of the subject site can alternatively be managed by way of a 'self-servicing' sewer pump station upon the site itself with a sewer rising main leading back to the existing SPS at Pacific Highway intersection. Although not the preferred option it would be considered if time and landowner consent issues delayed or prevented the 'centralised' option from occurring within a reasonable timeframe.

5.4 Electricity and Communications Infrastructure

Electricity supply and communications infrastructure is available in the locality and will be accessible for extension to the future development of the subject areas of land albeit that the augmentation of the existing infrastructure will be required in order to cater for the demands of future development.

It is however noted that an overhead electricity transmission powerline transects the eastern, (north to south), and northern, (east to west), portions of the subject with the presence of this infrastructure being a risk in terms of bushfire ignition and spread not only to the subject site but adjoining and adjacent land.

It is also noted that an electivity transmission powerline is located adjacent to the southern boundary of the subject site with this infrastructure being present in order to service the historical residential occupation and viticultural development of the subject site.

Electricity can start bushfires when infrastructure is damaged or foreign objects contact powerlines. This can cause arcing and generate sparks that can ignite dry vegetation. While the number of bushfires ignited by electricity is very low, (<3% of bushfires), once started they have the potential to burn large areas.

Whilst the risks posed to future development in the area from bushfires associated with the overhead electricity transmission powerlines will be reduced via reduced areas of unmanaged vegetation in the locality it is acknowledge that the presence of the overhead electricity transmission powerlines is an issue in terms of bushfire threat management albeit that the bushfire risk associated with the power line is considered to be low by virtue of the history of fire ignition associated with power lines in the area, the nature and extent of fuel loads adjacent to the route of the line and the high levels of access to the power line route. Notwithstanding this, the rezoning and future development of the subject site provides an opportunity to reduce the bushfire risk via relocation and/or provision of replacement underground services. This is particularly the case for the higher bushfire risk infrastructure which is located immediately adjacent to the southern boundary of the subject site and appears to only service assets within the subject site. This infrastructure is located adjacent to forest vegetation and represents a higher risk of bushfire ignition than the electivity supply infrastructure which transects the subject site.

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It is noted that the proposed rezoning of the subject site and its residential occupation would provide for increased surveillance of bushfire ignition at a local level which in combination with the integration of the minimum bushfire threat management strategies which are relevant to new residential subdivision would assist in reducing the risk associated with vegetation ignition by electricity supply infrastructure.

Reticulated gas services are not available in the locality and are therefore not available to the subject areas of land.

6.0 ADJOINING LAND

It is noted that the rezoning of land will not change or alter the ability of adjoining and adjacent landowners to carry out bushfire threat management activities nor will the proposed rezoning of the subject land place increased pressure on adjoining landowners to introduce or implement Bushfire Management Plans as a result of the proposed rezoning.

The rezoning of the subject site will provide for managed vegetation to be present within the majority of the subject site whilst Forest and Forested Wetland vegetation will be present to the south, east and west of the subject site with managed vegetation associated with historic rural residential lots extending to the north of the subject site.

In this regard the proposed rezoning and future development of the subject land will impose no additional bushfire threat management obligations or responsibilities on adjoining land managers from that which currently exists.

It is noted that the rezoning of the land and its subsequent development for residential and business uses does not change or alter the ability of adjoining land to carry a bushfire as vegetation characteristics will remain relatively unchanged from the existing assessed level of bushfire threat.

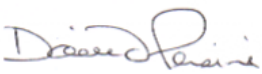
Importantly the proposed rezoning of the subject site provides for opportunities to implement improved vegetation management practices within the subject site thereby reducing the existing level of bushfire threat posed by the subject site to adjoining and adjacent land holdings. Additionally, the rezoning and future development of the subject site will provide for improved access to areas of hazard vegetation on adjoining and adjacent land which will be of benefit to the adjoining and adjacent land manager in terms of responding to bushfire threat management associated with their land.

7.0 CCONCLUSION

Based upon the information provided above the proposed rezoning of land does not pose any bushfire threat management risks which could not be resolved through the development planning process with development able to be accommodated and comply with the relevant and applicable bushfire threat management standards.

Should I be able to provide any further assistance please do not hesitate to contact me on 0434 166 150.

Yours Faithfully,



David Pensini

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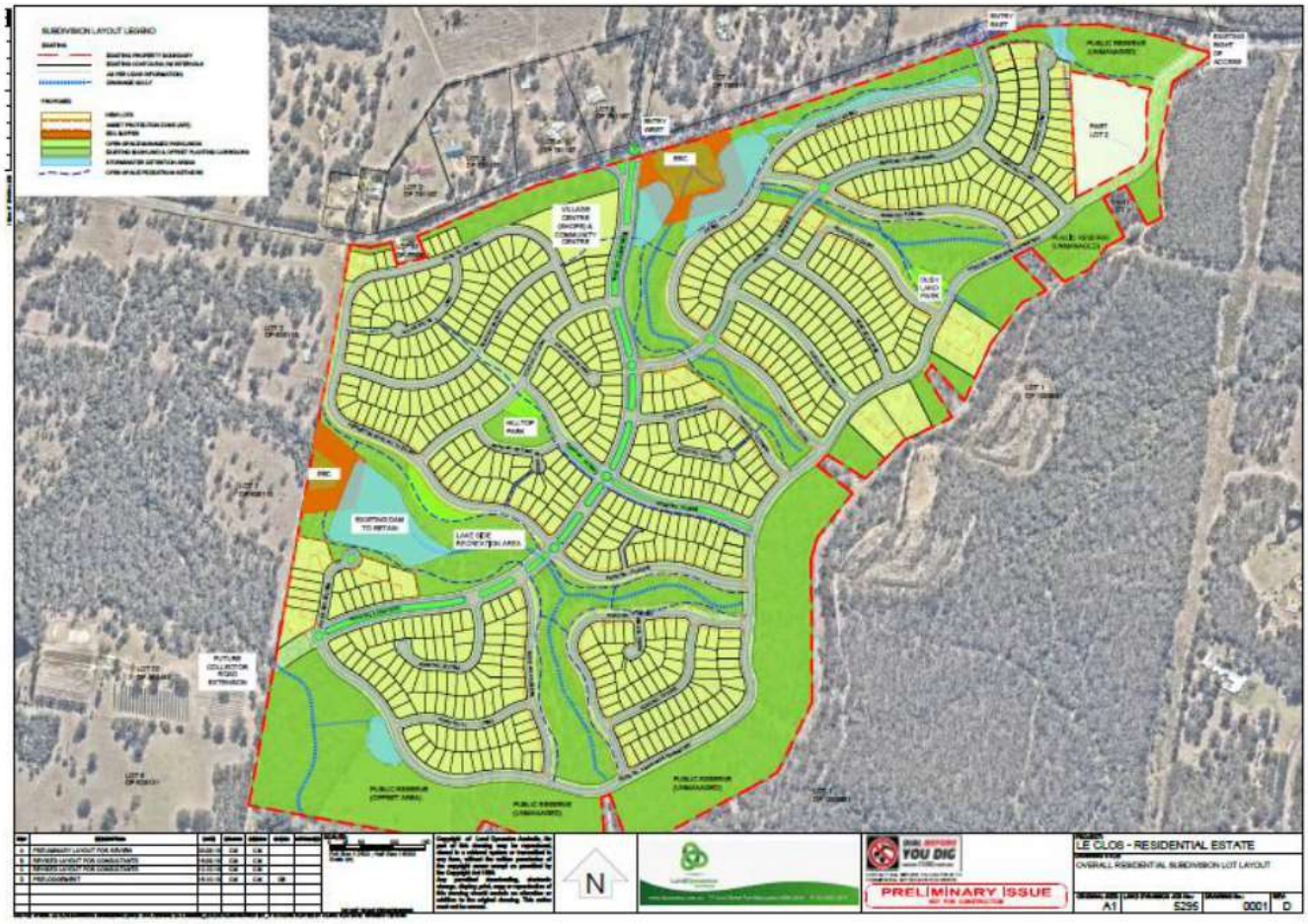
APPENDIX 1 – REZONING AREA AND DEVELOPMENT CONCEPT



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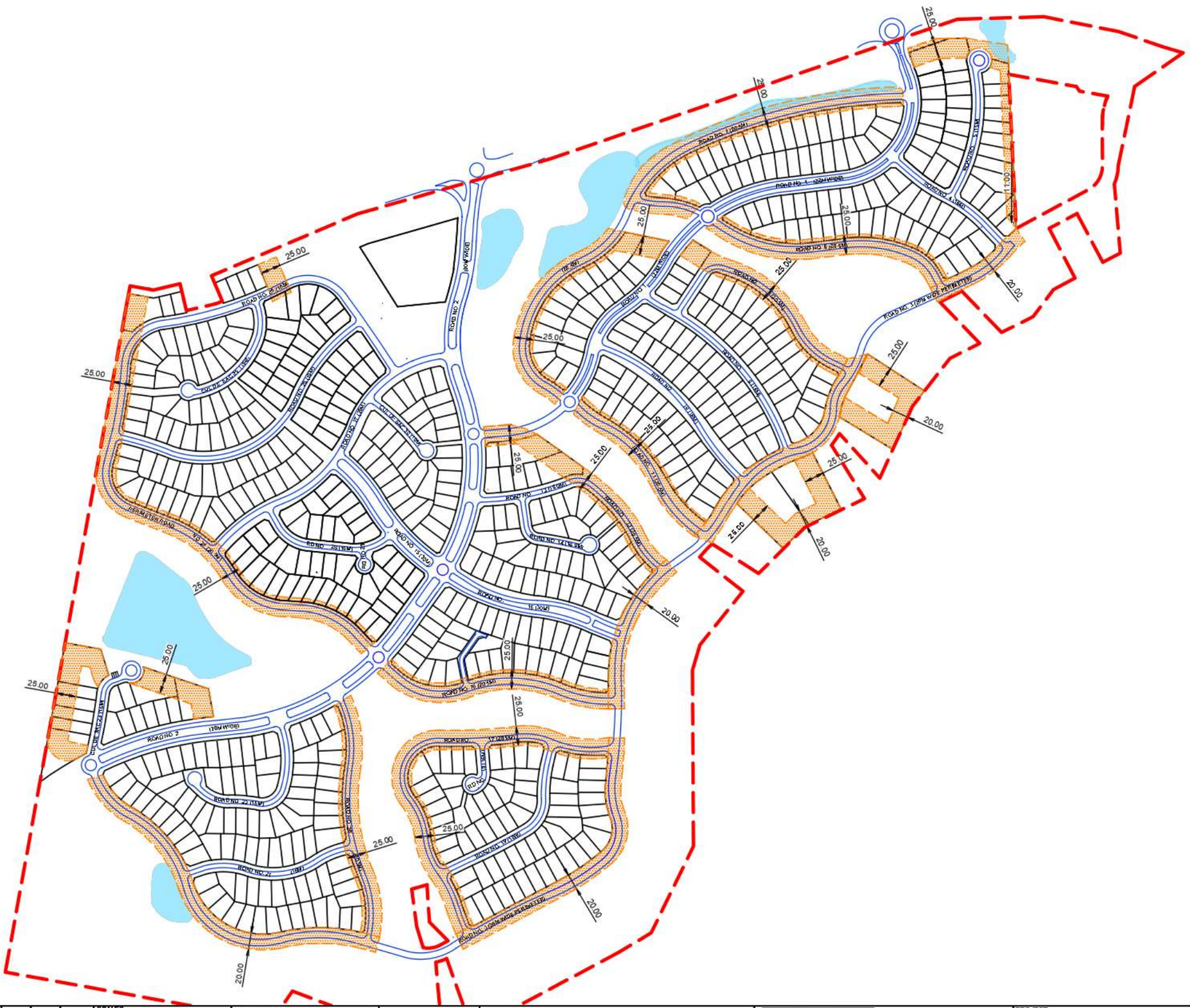
ASSET PROTECTION ZONE (APZ)

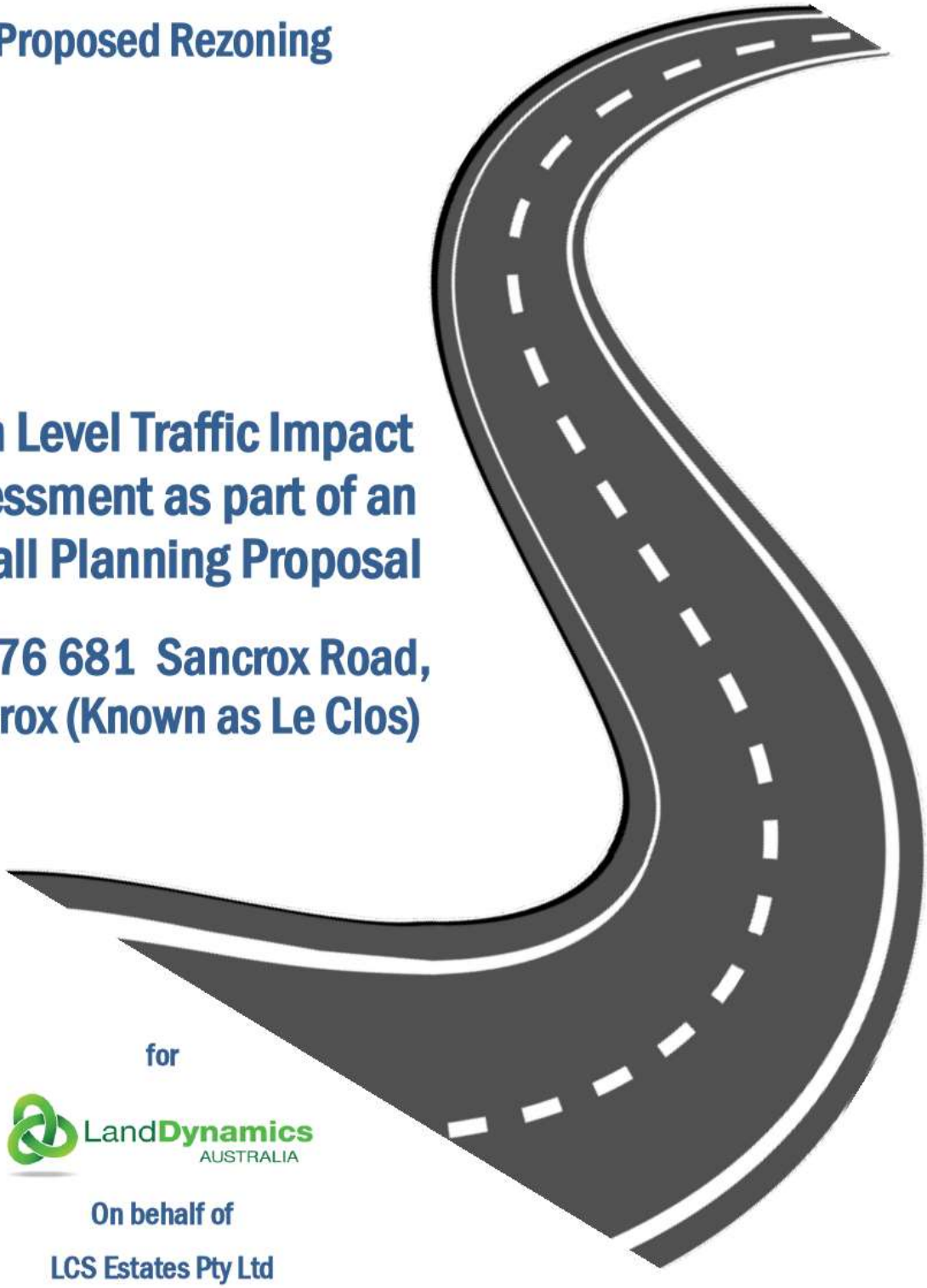
ASSET PROTECTION ZONE



Proposed Rezoning

High Level Traffic Impact Assessment as part of an overall Planning Proposal

DP 776 681 Sancrox Road, Sancrox (Known as Le Clos)



for

LandDynamics AUSTRALIA

On behalf of

LCS Estates Pty Ltd

9 December 2019

Traffic Impact Assessment Details

Edition / Revision No.	1	2	3	
Document Status	Internal Review	DRAFT for Client Comment	FINAL	
Prepared By	Craig Nethery Director	Craig Nethery Director	Craig Nethery Director	
Reviewed By	Andy Davis Director	Andy Davis Director	Andy Davis Director	
Date	9 December 2019	9 December 2019	10 December 2019	
Issued To	Andy Davis, Director	Donna Clarke, Town Planner Land Dynamics Australia	Donna Clarke, Town Planner Land Dynamics Australia	

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EXECUTIVE SUMMARY

StreetWise Road Safety and Traffic Services have been engaged by Land Dynamics Australia on behalf of LCS Estates Pty Ltd to prepare a High Level Traffic Impact Assessment (TIA) as part of an overall Planning Proposal for a residential development at DP 776681 Sancrox Road, Sancrox known as Le Clos.
This High Level TIA will assess a proposed residential development of the area known as "Le Clos" on Sancrox Road, Sancrox as part of a planning proposal for the site.

Land Dynamics Australia has provided the following indication of how the site will be developed:-

- Village Centre Site (approximately 1.0 hectares in area) Zone B2,
- Existing 3 of Residential (approximately 1.50 hectares in area) Zone E4,
- Approximately 638 Low Density Residential lots (approximately 73.2 hectares in area) Zone R1, and
- Approximately 42 Medium Density Residential lots (approximately 2.3 hectares in area) Zone R3

Port Macquarie Hastings Council has indicated they have not commenced strategic planning for the area known as Sancrox / Rawdon Island. In order for this development to gain development approval (ie rezoning) some background strategic traffic planning will need to be undertaken as part of the assessment for future traffic impacts by this development relating to future local road network (Sancrox Road) upgrades.

In completing this assessment both StreetWise and Land Dynamics staff have attended a number of meetings with Port Macquarie Hastings Council Planning staff to discuss the approach and what the scope of the assessment will be.

It is hoped the assessments completed for this site and the study area will be utilised by Port Macquarie Hastings Council for future strategic planning of the area in question.

Currently there are six public access points / intersections located along Sancrox Road:-

1) Rawdon Island Road,
2) Riverbank Road,
3) Verdun Drive,
4) Le Clos,
5) Bushlands Drive, and
6) The Pacific Highway

Port Macquarie Hastings Council's Urban Growth Management Strategy (UGMS) provides an indication of the land available for rezoning to residential development. This assessment recommends utilising the existing access points with the addition of the proposed access points for the Le Clos development.

This report will give an indication of the possible future upgrades required for Sancrox Road for these locations. The future upgrades will be assessed on the derived future

traffic generation yields. A detailed assessment has been completed for the new intersections proposed as part of the Le Clos development.

It shall be noted previous extensive traffic assessment had been completed for the study area based on large lot residential development Greater Sancrox Concept Road Layout Review & Traffic Modelling (SMEC, 2014). However, with the advent of Port Macquarie Hastings Council's Urban Growth Management Strategy (UGMS) this has now required a rework of the future traffic generation for the development areas to small lot residential.

Port Macquarie Hastings Council has also provide information with regard to an approved industrial subdivision for the area known as Sancrox North in this assessment. (See Appendix B – Approved Subdivision Layout) It is also noted at the time of this assessment being completed the Department of Planning, Industry and Environment has received a development application for the expansion of the existing Hanson's Quarry located within the Sancrox North area.

As part of determining the study area to be assessed for this report input from Port Macquarie Hastings Council staff was sought. Council staff indicated they would like to see the inclusion of the Fernbank Creek area located to the east of the Pacific Highway included as part of this assessment.

Discussions were had on how much this area would impact the study area. However, it is felt the Fernbank Creek area would have minimal impacts on the proposed future traffic flows of Sancrox Road, Bushlands Drive and Rawdon Island Road.

Most of the traffic generated in the Fernbank Creek area would more than likely travel east via Fernbank Creek Road and Hastings River Drive. Any traffic flows to the north and south would likely via the Pacific Highway. Any possible trips to the west (possibly Wauchope) would more than likely be via the Pacific Highway to the Oxley Highway or via the Sancrox Interchange onto Bushlands Drive and the Oxley Highway. All trips would be considered to be internalised accessing the future Village Centre proposed as part of the Le Clos development.

Based on the derived traffic generations for the study area the following local road network (Sancrox Road) upgrades are required.

- Minimum of one travel lane in each direction (3.50m wide),
- 1.50m wide (clear width), 2.0m (if kerb & gutter) cycle lanes along edge of each travel lane,
- 0.5m shoulder outside of cycle lane. Given the future traffic volumes this will allow for emergency stopping where a vehicle can stand within the shoulder / cycle lane outside of the travel lane not obstructing traffic and therefore reducing any roadside hazard,
- 2.50m wide raised central median to allow for pedestrian / cyclist crossing, and
- Auxiliary lanes (turn lanes, acceleration & deceleration lanes) as required. (See intersection upgrades for details).

- Sancrox Rd & Rawdon Island Rd Intersection
  - a central island diameter of 16.0m,
  - a circulating roadway width of 9.0m,

- single lane entry / exit on all legs,
- offroad cyclist access on all legs, and
- pedestrian refuges on the Sancrox Rd (west) and Rawdon Island Road (north) legs.

- Sancrox Rd & Riverbend Rd Intersection
  - a central island diameter of 16.0m,
  - a circulating roadway width of 9.0m,
  - single lane entry / exit on all legs,
  - offroad cyclist access on all legs, and
  - pedestrian refuges on the Sancrox Rd (west) and Riverbend Road (south) legs.

- Sancrox Rd & Verdun Drive Intersection
  - Upgraded to a Type CHR(s) intersection layout.

- Sancrox Rd & Road No.1 (Le Clos) Intersection
  - Proposed single lane roundabout,
  - Plus eastbound right turn bay (Sancrox Rd),
  - Plus westbound left turn bay (Sancrox Rd),
  - Plus eastbound left turn bay (Road No.1 – North), and
  - Off road provision for cyclists through roundabout. (all legs)

- Sancrox Rd & Road No.2 (Le Clos) Intersection
  - Proposed single lane roundabout,
  - Plus separate eastbound left turn slip lane (Road No.2 - North),
  - Plus separate westbound left turn slip lane (Sancrox Rd),
  - Plus eastbound right turn bay (Sancrox Rd),
  - Plus westbound left turn bay (Sancrox Rd), and
  - Off road provision for cyclists through roundabout. (all legs)

- Sancrox Rd & Bushlands Drive Intersection
  - Upgraded to a Type CHR(s) intersection layout (by the year 2030).
  - Upgraded to a Type CHR Channelised intersection layout (by the year 2040).

- Sancrox Rd & Bushlands Drive Intersection (roundabout)
  - Add extra eastbound lane on entry to roundabout (Sancrox Rd, by the year 2040)
  - Upgrade off road provision for cyclists through roundabout. (all legs)

Further detailed assessment of the above upgrades will be required as development in the area comes on line. For the purposes of this assessment a design horizon of 30 years was used.

In order for the Le Clos development to indicate its direct impacts on the local road network (Sancrox Road) a separate assessment was completed taking into account the proposed future Le Clos traffic generation and traffic growth excluding the remainder of the study area development. The following local road network upgrades can be directly attributed to the Le Clos development:-

- In accordance with Figure 4.50 the development is to upgrade Sancrox Road to half width design cross section along full frontage.
- Provision of 2 roundabouts (Road No.1 and Road No.2). The construction of the northern legs of Roads No.1 and 2 roundabouts is to be undertaken by others as future development dictates.
- Provision of a Shared Path along the Sancrox Road frontage of the Le Clos site generally in accordance with Figure 4.50. All other shared path facilities are to be constructed by others as future development dictates.
- Provision of Public Transport Facilities (Bus Bay) at each of the proposed development intersections (roundabouts). All other public transport facilities are to be constructed by others as future development dictates.
- The intersection of Sancrox Road and Bushlands Drive will need to upgraded to a type CHR(s) intersection at the year 2030. Any further upgrades to this intersection are to be completed by others as future development in the area dictates.

1. INTRODUCTION

1.1 General

StreetWise Road Safety and Traffic Services have been engaged by Land Dynamics Australia on behalf of LCS Estates Pty Ltd to prepare a High Level Traffic Impact Assessment (TIA) as part of an overall Planning Proposal for a residential development at DP 776681 Sancrox Road, Sancrox known as Le Clos.

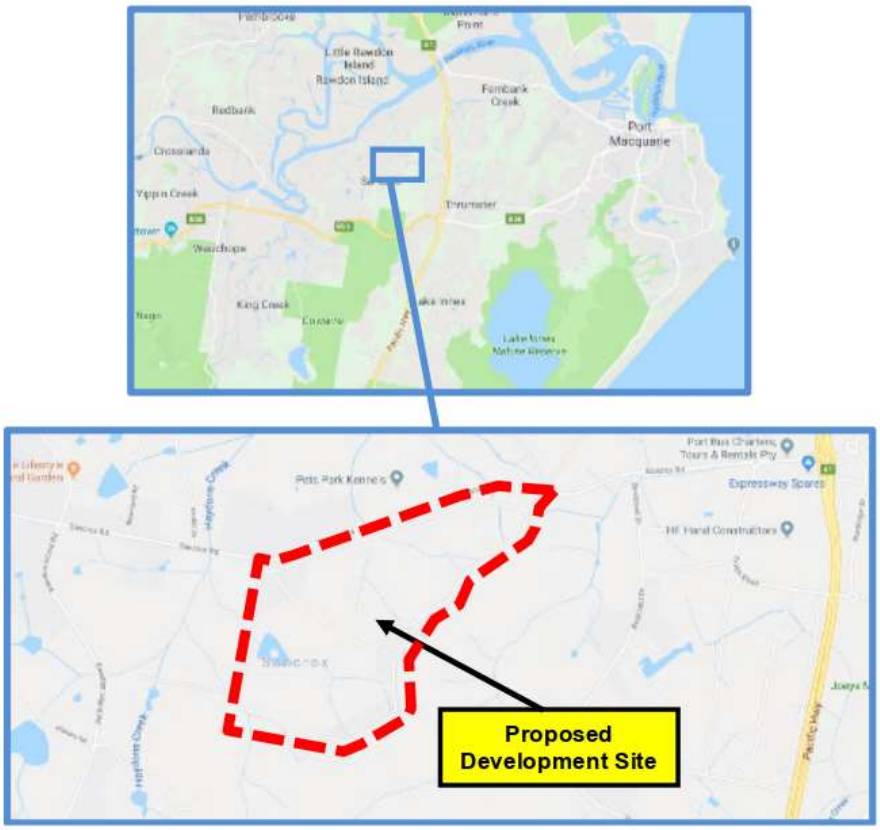


Figure 1.1 – LOCALITY SKETCH

1.2 Description of Project

This High Level TIA will assess a proposed residential development of the area known as "Le Clos" on Sancrox Road, Sancrox as part of a planning proposal for the site. (See Appendix A for Development Site Plan)

Land Dynamics Australia has provided the following indication of how the site will be developed:-

- Village Centre Site (approximately 1.0 hectares in area) Zone B2,
- Existing 3 of Residential (approximately 1.50 hectares in area) Zone E4,
- Approximately 638 Low Density Residential lots (approximately 73.2 hectares in area) Zone R1, and
- Approximately 42 Medium Density Residential lots (approximately 2.3 hectares in area) Zone R3

The above land use components will be assessed to determine the high level traffic impacts on the local road network.

1.3 References

The following references will be utilised to aid in the completion of this TIA:-

- Greater Sancrox Concept Road Layout Review & Traffic Modelling (SMEC, 2014)
- Austroads Guide to Road Design
- Austroads Guide to Traffic Management, and
- Port Macquarie Hastings Council Design Specifications (Mainly, D1 – Geometric Road)
- Port Macquarie Hastings Council's Urban Growth Management Strategy (UGMS)
- Approved Development of Industrial Subdivision known as Sancrox North at the intersection of the Pacific Motorway and Sancrox Road. (DA 305/2012) (See Appendix B – Approved Subdivision Layout)

1.4 Road Network

1.4.1 The Local Road Network

For the purposes of this high level TIA the road network to be assessed will be bounded by the Pacific Highway (A1) in the east, The Oxley Highway (B56) in the south, Sancrox Road to the north and Rawdon Island Road to the west. See Figure 1.1 for context of the Local Road Network.

1.4.2 The Pacific Motorway (A1)

The Pacific Motorway (A1) is part of the national motorway system providing north south connection between cities (Sydney, Newcastle and Brisbane) and towns (Taree, Port Macquarie, Coffs Harbour and Ballina) on the eastern seaboard.

Both the Federal and New South Wales (NSW) State Governments have provided funding for the upgrade of the section of the highway between Taree and the NSW / Queensland Border with the section located near Sancrox recently completed to motorway standard in 2017.

This upgrade to motorway standard provides for dual lane carriageways in each direction to a 110km/h posted speed limit standard with a grade separated interchange located near the industrial operation known as "Expressway Spares".

1.4.3 The Oxley Highway (B56)

The Oxley Highway (B56) is part of the national motorway system providing eastwest connection between Port Macquarie, Tamworth and Gunnedah to the west.

The Oxley Highway has recently been upgraded in the vicinity of the Rawdon Island Road intersection where the intersection has been realigned and overtaking lanes have been provided in each direction.

The posted speed limit in the vicinity of the Rawdon Island Road intersection is 90km/h.

1.4.4 Sancrox Road

Sancrox Road is a collector road servicing the Sancrox and Rawdon Island areas providing connection to Port Macquarie via the Pacific Highway and the Oxley Highway.
The formation width of Sancrox Road is generally 8.50m with 3.25m wide travel lanes. The vertical alignment is considered to be undulating with possibly some substandard vertical crest (further detailed assessment will need to be completed to determine the extent of this) for the posted speed limit at the time. The horizontal alignment is generally acceptable for the posted speed limit with some further detailed assessment required for some curves at the eastern end of Sancrox Road.

The posted speed limit for Sancrox Road is 80km/h.

1.4.5 Rawdon Island Road

Rawdon Island Road is a collector road servicing the Sancrox and Rawdon Island areas providing connection to Port Macquarie via the Oxley Highway.

The formation width of Rawdon Island Road is generally 8.50m with 3.25m wide travel lanes. The vertical alignment is considered to be undulating with possibly some substandard vertical crest (further detailed assessment will need to be completed to determine the extent of this) for the posted speed limit at the time. The horizontal alignment is generally acceptable for the posted speed limit with some further detailed assessment required for some curves along the alignment.

The posted speed limit for Sancrox Road is 80km/h.

1.4.6 Intersection of Sancrox Road & Frogs Road

The existing roundabout at the intersection of Sancrox Road and Frogs Road was constructed as part of the Pacific Highway upgrade where a grade separated interchange was provided for local access.

The roundabout will be the main access location for the future Sancrox Employment lands (Industrial Area) located to the north of the roundabout where currently a hard rock quarry gains uses it for access.

Sight distance is currently acceptable for the standards on all four legs of the roundabout.



Sancrox Road – Looking East



Sancrox Road – Looking West



Frogs Road – Looking South



Frogs Road – Looking North

1.4.7 Intersection of Sancrox Road & Bushlands Drive

The intersection of Sancrox Road and Bushlands Drive generally conforms to a BAR/BAL T junction layout with some shoulder widening for the left turn out and right turn in movements.

Sight distance is currently acceptable for the standards in both directions along Sancrox Road.



Sancrox Road – Looking West



Bushlands Drive – Looking North

1.4.1 Intersection of Sancrox Road & Le Clos Access Road

The existing intersection of Sancrox Road and the Le Clos Access Road generally conforms to a BAR/BAL T junction layout. There is no widening provided at the intersection for the safe turning of heavy vehicles out of Verdun Drive to remain in their lane.

Sight distance is currently not acceptable for the standards in both directions along Sancrox Road for both the horizontal and vertical alignments.

It shall be noted this access location will be closed in the future redevelopment of the Le Clos site.



Sancrox Road – Looking East



Sancrox Road – Looking West



Le Clos Access Road – Looking North

1.4.2 Intersection of Sancrox Road & Verdun Drive

The existing intersection of Sancrox Road and Verdun Drive generally conforms to a BAR/BAL T junction layout. There is no widening provided at the intersection for the safe turning of heavy vehicles out of Verdun Drive to remain in their lane.

Sight distance is currently acceptable for the standards in both directions along Sancrox Road.



Sancrox Road – Looking East



Sancrox Road – Looking West



Le Clos Access Road – Looking South

1.4.3 Intersection of Sancrox Road & Riverbend Road

The intersection of Sancrox Road and Riverbend Road generally conforms to a BAR/BAL T junction layout with widening at its intersection to allow for heavy vehicles to turn safely within their lane.

Sight distance is currently acceptable for the westbound approach however the eastbound approach may not be acceptable for the current posted speed limit.



Sancrox Road – Looking East



Sancrox Road – Looking West



Riverbend Road – Looking South

1.4.4 Intersection of Sancrox Road & Rawdon Island Road

The intersection is an uncontrolled four way intersection. Sancrox Road (west) services the local rural residential subdivision while Sancrox Road (east) provides connection for the Rawdon Island and Sancrox areas to in Port Macquarie and beyond.

Rawdon Island (north) services the local Rawdon Island area and provides connection to Port Macquarie via Sancrox Road (east). Rawdon Island (south) services, the areas of Walters road and Muscio Road and Warrigal Ridge to the south along with providing connection for these areas to Port Macquarie via either the Oxley Highway or Sancrox Road.

Sight distance on the Sancrox Road (east) approach is constrained for both the north and south directions by vegetation on both sides of the intersection. Sight distance to the south is also reduced by the vertical crest alignment on Rawdon Island Road (south) for the current posted speed limit. To make turning at the intersection safer Give Way signs are installed on both sides of Sancrox Road.

Sight distance on the Rawdon Island Road (south) approach is constrained for both the east and west directions by vegetation on both sides of the intersection.



Sancrox Road (east) – Looking West



Sancrox Road (west) – Looking East



Rawdon Island Road (north) – Looking South



Rawdon Island Road (south) – Looking North

2. EXISTING TRAFFIC VOLUMES

2.1 Background Traffic Volumes

To aid in the completion of the assessment, StreetWise Road Safety and Traffic Services have completed a manual intersection count to determine the AM and PM peak traffic periods for the following intersections:-

- Sancrox Road & Frogs Road, and
- Sancrox Road & Rawdon Island Road

Figures 2.10 and 2.11 provide a summary of the AM and PM peak period traffic flows for both of the intersections in question. The counts indicated the AM Peak to be between 7.45 and 8.45am with the PM Peak being between 4.45 and 5.45pm.

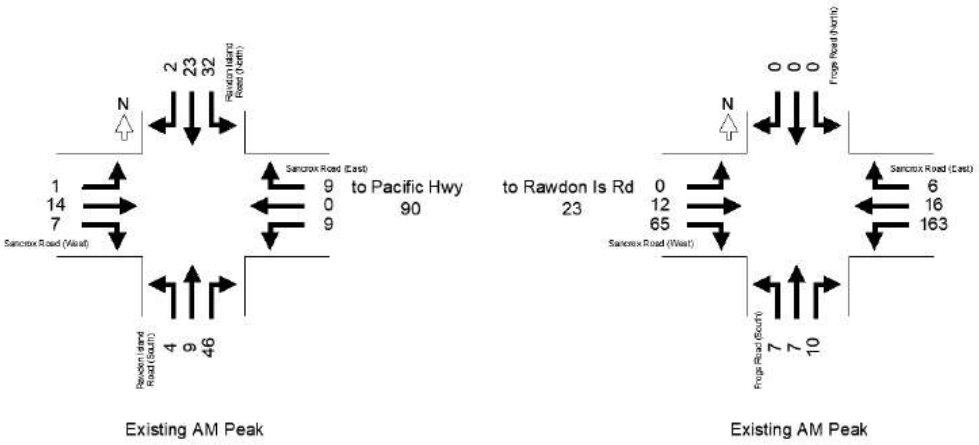


Figure 2.10 – EXISTING AM PEAK PERIOD TRAFFIC FLOWS (BOTH INTERSECTIONS)

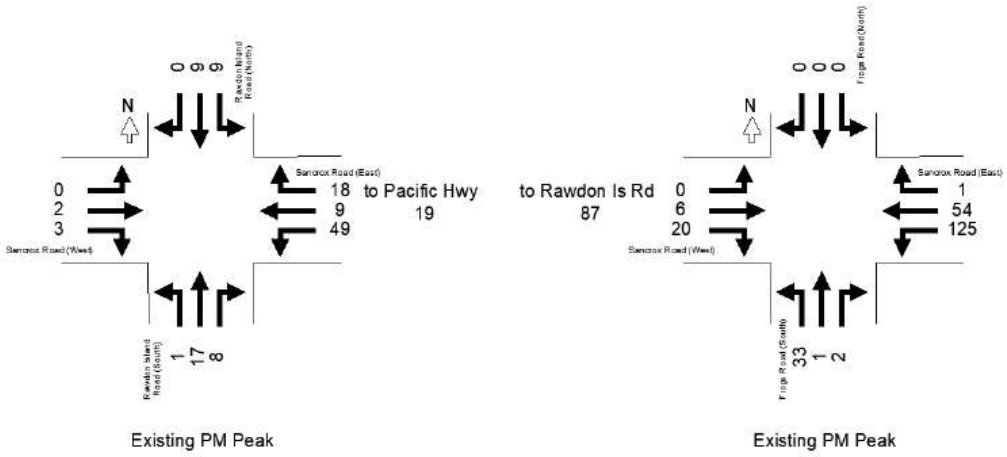


Figure 2.11 – EXISTING PM PEAK PERIOD TRAFFIC FLOWS (BOTH INTERSECTIONS)

A summary of the raw intersection counts is provided in Appendix C of this report.

Figures 2.12 and 2.13 summarise the Sancrox Road and Rawdon Island Road intersection configuration major turn requirements for the AM and PM peak periods:-

- Rawdon Island Road Southbound – Left into Sancrox Road,
- Rawdon Island Road Northbound – Right into Sancrox Road, and

- Sancrox Road Westbound – Left into Rawdon Island Road.
- Sancrox Road Westbound – Right into Rawdon Island Road.

based on Figure 2.26c of the Austroads Guide to Traffic Management, Part 6 – Intersections, Interchanges and Crossings.

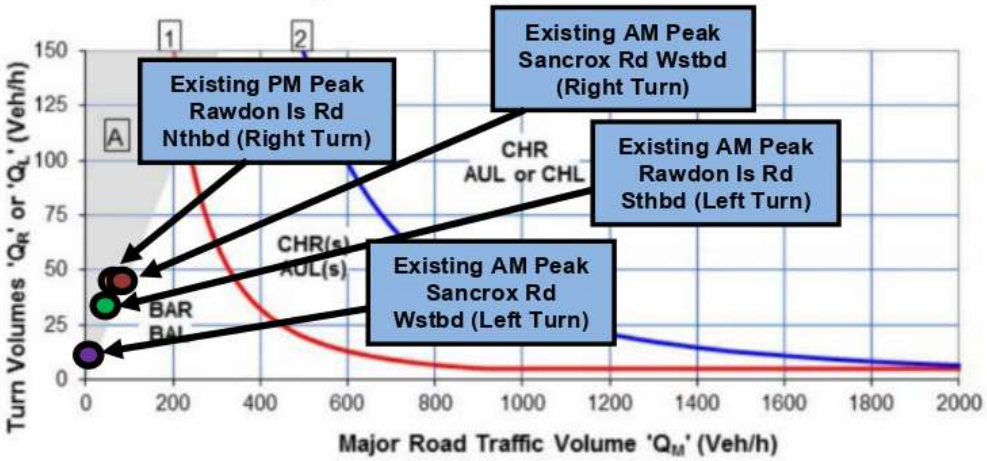


Figure 2.12 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS (MAJOR TURN MOVEMENTS FOR AM PEAK AT SANCROX ROAD & RAWDON ISLAND ROAD INTERSECTION)

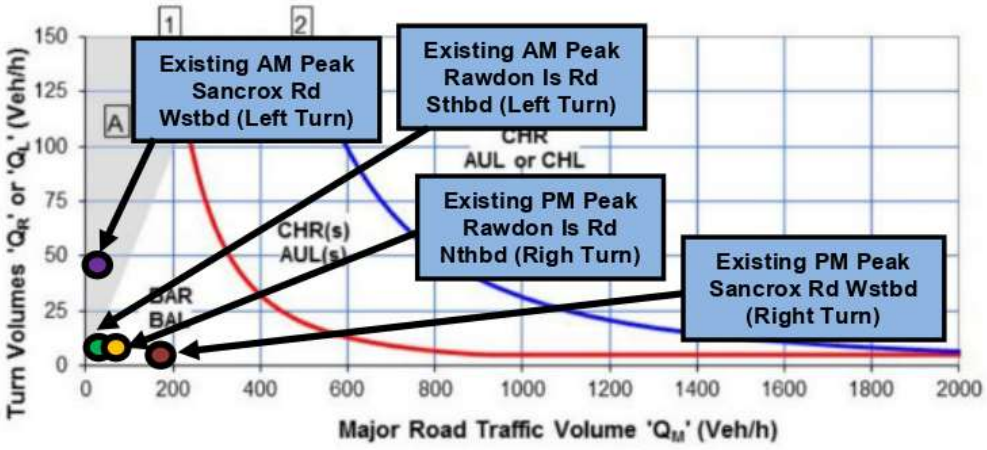


Figure 2.13 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS (MAJOR TURN MOVEMENTS FOR PM PEAK AT SANCROX ROAD & RAWDON ISLAND ROAD INTERSECTION)

The assessment, based in the existing traffic volumes at the time, indicates the intersection configuration is justified as a BAR / BAL layout for both the AM and PM peak periods.

3. FUTURE TRAFFIC ASSESSMENT

3.1 Land Use Traffic Generation Rates

As outlined in section 1.2 of this assessment the following proposed land uses will be part of the overall redevelopment of the Le Clos site:-

- Village Centre Site (approximately 1.0 hectares in area) Zone B2,
- Existing 3 of Residential (approximately 1.50 hectares in area) Zone E4,
- Approximately 638 Low Density Residential lots (approximately 73.2 hectares in area) Zone R1, and
- Approximately 42 Medium Density Residential lots (approximately 2.3 hectares in area) Zone R3

It shall be noted previous extensive traffic assessment had been completed for the study area based on large lot residential development Greater Sancrox Concept Road Layout Review & Traffic Modelling (SMEC, 2014). However, with the advent of Port Macquarie Hastings Council's Urban Growth Management Strategy (UGMS) this has now required a rework of the future traffic generation for the development areas to small lot residential.

3.1.1 Traffic Flow Generation

The primary reference documents used to determine the traffic flow generated by the developments are the "RMS Guide to Traffic Generating Developments" and PMHC Development Control Plan 2013.

3.1.2 RMS Guidelines

The RMS Guide to Traffic Generating Developments provides the following trip generation rates to be used for the land use components to be considered for this development.

- Village Centre Site
  - 12.3 to 16.3 peak hour trips for up to 10 000sqm GLFA *(RMS Technical Direction – TD13-04a)*
- Existing Residential
  - 4 to 6.5 trips per dwelling
  - 0.4 to 0.65 weekday peak hour trips per dwelling *(RMS Guide to Traffic Generating Developments)*
- Low Density Residential
  - 7.4 daily trips per dwelling in regional areas.
  - 0.75 peak hour trips per dwelling in regional areas. *(RMS Technical Direction – TD13-04a)*

3.1.3 Port Macquarie Hastings Council Guidelines

Port Macquarie Hastings Council (PMHC) does not prescribe traffic generation rates.

3.1.4 Traffic Generation Rates to be Adopted for this Assessment

Based on the above information the following assumptions have been made for the determination of future traffic generation per land use as proposed by this development.

- Village Centre Site
  - 12.3 peak hour trips for up to 10 000sqm GLFA
- Medium Density Residential
  - 4 to 6.5 trips per dwelling
  - 0.4 to 0.65 weekday peak hour trips per dwelling

(RMS Guide to Traffic Generating Developments)

- Low Density Residential
  - 7.4 daily trips per dwelling in regional areas.
  - 0.75 peak hour trips per dwelling in regional areas.
    (RMS Technical Direction – TD13-04a)

3.2 Proposed Traffic Generation – Le Clos Development

Table 3.20 provides a summary of the future traffic generation is provide for the land use components of the development.

Land Use	Area (ha)	Daily Trip Rate	Peak Hour Trip Rate	Daily Trip Generation	Peak Hour Trip Generation
Village Centre Site	1.0	Nil	12.3	5000	500
Low Density	57.3	7.4	0.75	4722	479
Medium Density	2.3	4.0 - 6.5	0.4-0.65	160-260	16-26
Total Development Trip Generation				9982	1005

Table 3.20 – SUMMARY OF FUTURE TRAFFIC GENERATION

3.3 Possible Future Traffic Generation – Study Area

In order to give a true indication of the impacts future traffic volumes will have on the local road network an assessment of the possible future development yields in the area needs to be assessed.

For the purposes of this assessment Figure 3.30 indicates the study area to be assessed to determine possible future traffic generation. The study area generally takes in the following localities:-

- Bengal Street,
- Sancrox Central (Riverbend Road),
- Sancrox Central (South of Sancrox Road),
- Walters Road (North of Walters Road only)
- Le Clos Verdun,
- Le Clos,
- Sancrox North
- Freeman / Stubbs Land,
- Bushlands Drive, and
- Sancrox Employment Lands (North of Sancrox Road)

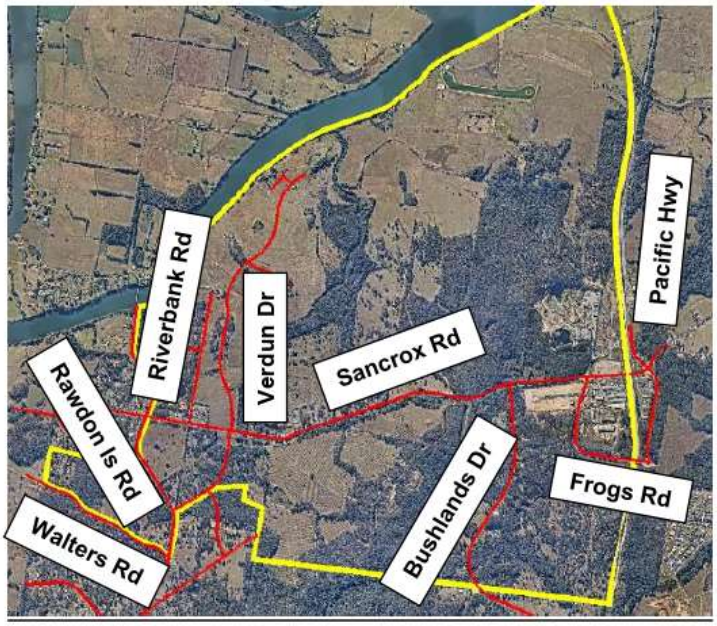


Figure 3.30 – STUDY AREA

Table 3.30 provides an indication of the assumed traffic generation each locality will generate over a design horizon period of 30 years to the year 2050.

Locality	Peak Hour Trip Generation			Daily Trip Generation		
	2030	2040	2050	2030	2040	2050
Bengal Street	19	38	38	190	380	380
Sancrox Central (Riverbend Road, North)	58	126	254	592	1260	2530
Sancrox Central (Riverbend Road, South)	80	164	330	800	1640	3298
Walters Road (North of Walters Road)	11	22	22	110	220	220
Le Clos Verdun	31	92	140	310	922	1397
Le Clos	See Section 3.2			See Section 3.2		
Sancrox North	35	80	160	29	78	126
Freeman / Stubbs Land	146	388	805	1455	3880	8046
Bushlands Drive	27	40	70	270	395	700
Sancrox Employment Lands (North of Sancrox Road)	1388	1454	1454	13875	16971	16971

Table 3.30 – SUMMARY OF STUDY AREA FUTURE TRAFFIC GENERATION

3.3.1 Traffic Generation Calculation Assumptions

The following assumptions have been used in order to calculate the above traffic generations for the study area:-

- All areas have been assumed to be zoned Residential Zone R1 and R3 (E4 existing) with exception being the Employment (Industrial) Land accessing Frogs Road to the north of the study area.
- See Section 3.2 of this report for a detailed assessment of the proposed land uses assessed for the Le Clos development traffic generation,
- A lot yield of 11 lots per hectare was used to calculate the number of lots,

- Traffic generation rates of 7.4 trips per day and 0.75 trips per peak hour were used for low density residential and 4.0 to 6.5 daily trips and 0.4 to 0.65 peak hour trips for these land uses. (In accordance with the RMS Technical Direction – TD13-04a), and
- Traffic generation rates of 5 trips per 100m^2 Gross Floor Area (GFA) per day and 0.5 trips per 100m^2 GFA per peak hour were used for the employment land use. (In accordance with the *Greater Sancrox Concept Road Layout Review & Traffic Modelling Report, SMEC 2014*).

3.4 Traffic Generation – Employment Land (Sancrox North)

As part of assessing the future road network impacts this study will assess the industrial land area known as Sancrox North located on the northwestern corner of the intersection of the Pacific Motorway and Sancrox Road.

In April 2013 Port Macquarie Hastings Council provided development approval for a 72 lot industrial subdivision. (See Figure 3.40). It shall also be noted the existing Hanson's Quarry has lodged a development application with the Department of Planning, Industry and Environment to expand its current footprint and output.

This traffic study will detail the traffic to be generated by these development in order to assess the future road network impacts.

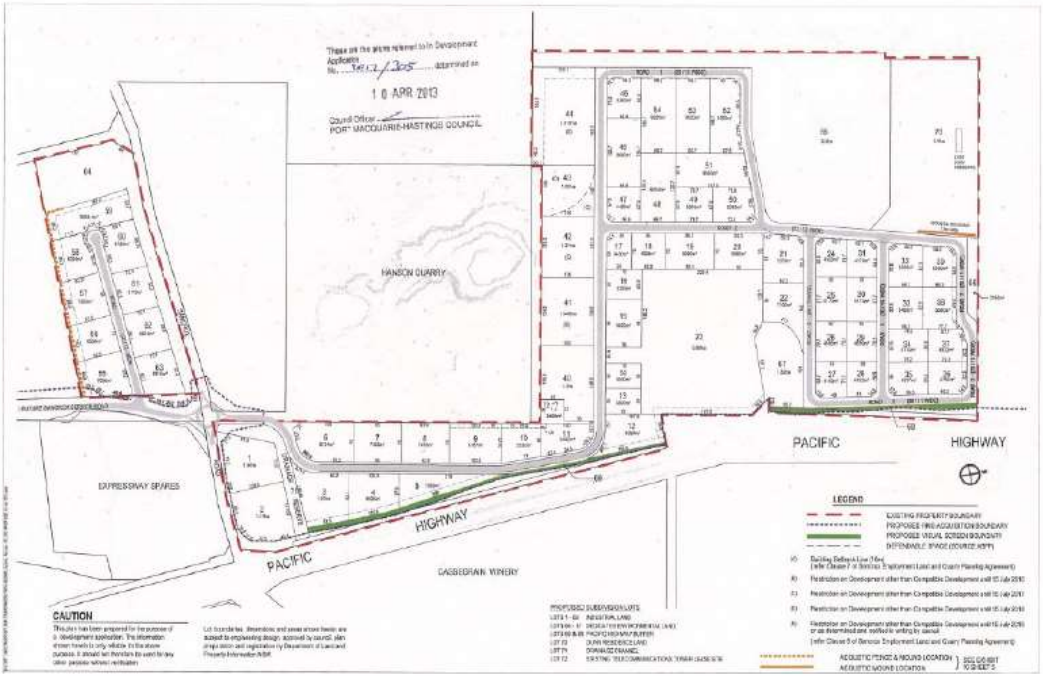


Figure 3.40 – APPROVED INDUSTRIAL LAND SUBDIVISION LAYOUT

3.4.1 Sancrox North Industrial Subdivision

As indicated Port Macquarie Hastings Council has recently approved a industrial subdivision for the area known as Sancrox North.

As part of the approval process a Traffic Study for the development was completed TTM Consulting (August 2009) to assess the future road network impacts created by this development. The following information is provided as a snapshot of the parameters used in the TTM report.

- 4 different industrial land uses were assessed,
- RMS peak hour traffic generation rates assumed 2571 peak hour trips *(Table 2, TTM report),*
- 2202 peak trips using the RMS Employee Density calculation. *(These figures were adopted in the report),*
- Traffic Assignment, AM Peak: 80% IN / 20% OUT, PM Peak: 20% IN / 80% OUT
- 2% Traffic Growth Rate *(adopted from SMEC Area 13 Sancrox Traffic Study – 2007),*
- A Design Horizon of 20 years was used *(to the year 2029),*
- The Pacific Highway Upgrade had not been commenced at the time of the TTM report being prepared, and
- The report only assessed the assessed the future impacts on the intersection of the Pacific Highway and Sancrox Road. There is detailed assessment of any traffic impacts west of Expressway Spares *(now Frogs Road).*

For the purposes of this Le Clos rezoning Traffic Study the above peak hour traffic generation figures will be used as Port Macquarie Hastings Council has provided development approval based on these figures and assumptions.

3.4.2 Hanson Quarry Development Application Proposal

At the time of this report being prepared StreetWise Road Safety & Traffic Services were made aware the existing Hanson's Hardrock Quarry located on the northern side of Sancrox Road off Frogs Road had lodged a development application with the Department of Planning, Industry and Environment to expand its operation. The quarry currently has approval to extract 455 000 tonnes per annum over 20 years and wants to increase this output to 750 000 tonnes per annum for a period of 30 years. The area of the quarry will increase from 17.2 hectares to 48.60 hectares.

The proposed expansion will increase trip movements to approximately 576 trips per day (24 peak hour trips).

3.4.3 Employment Land Take up / Development in the Municipality

Port Macquarie Hastings Council completed a review of its Industrial Land Strategy in 2015. As part of this review the report suggested the Port Macquarie Hastings area would require the rezoning of 78 to 135 hectares of land to meet the demand up to 2036. This equates to a take up (development of) 4.9 and 8.4 hectares a year over this period. The report also states the Sancrox Employment Land area including Sancrox North takeup would be higher given its locational advantage.

Since development approval for the Sancrox North subdivision was granted in April 2013 there has been approximately 2.41 hectares developed up to September 2019. This represents a take up of 3.7 hectares a year for this period. This is approximately 1.2 hectares a year less than the minimum take up prescribed in the Industrial Land Strategy review. For the purposes of this assessment the existing development take up rate for Sancrox North and the minimum Industrial Land Strategy review rates will be used. Table 3.40 provides a summary of the future traffic generation for the

Sancrox North area based on the design horizon used in this report. For the worst case full development of the Sancrox North Industrial area will be reached in 12.2 years.

Design Horizon (Years)	3.7 hect / yr take up rate (Hectares)	Traffic Generation		4.9 hect / yr take up rate (Hectares)	Traffic Generation		Comments
		Daily (5 trips / 100m² GFA)	Peak Hr (0.5 trips / 100m² GFA)		Daily (5 trips / 100m² GFA)	Peak Hr (0.5 trips / 100m² GFA)	
5	18.5	6938	694	24.5	9188	919	
9.2				45.3	16971	1697	Full Development for 4.9 hect rate
10	37.0	13875	1388	49.0	18375	1838	
12.2	45.3	16971	1697				Full Development for 3.7 hect rate
15	55.5	20813	2081	73.5	27563	2756	Not Required
20	74.0	27750	2775	98.0	36750	3675	Not Required
25	92.5	34688	3469	122.5	45938	4594	Not Required
30	111.0	41625	4163	147.0	55125	5513	Not Required

Table 3.40 – SUMMARY OF INDUSTRIAL LAND TRAFFIC GENERATION PER DEVELOPMENT (HECTARE) TAKE UP RATE

It shall also be noted, Council staff have indicated there is currently more than 200 hectares of zoned industrial land that remains vacant in the municipality and it is unlikely any further land will be rezoned industrial in the near future.

3.5 Inclusion of the Fernbank Creek Investigation Area in this assessment

As part of determining the study area to be assessed for this report input from Port Macquarie Hastings Council staff was sought. Council staff indicated they would like to see the inclusion of the Fernbank Creek area located to the east of the Pacific Highway included as part of this assessment.

Discussions were had on how much this area would impact the study area. However, it is felt the Fernbank Creek area would have minimal impacts on the proposed future traffic flows of Sancrox Road, Bushlands Drive and Rawdon Island Road.

The reason this is most of the traffic generated in the Fernbank Creek area would more than likely travel east via Fernbank Creek Road and Hastings River Drive. Any traffic flows to the north and south would likely via the Pacific Highway. Any possible trips to the west (possibly Wauchope) would more than likely be via the Pacific Highway to the Oxley Highway or via the Sancrox Interchange onto Bushlands Drive and the Oxley Highway. All trips would be considered to be internalised accessing the future Village Centre proposed as part of the Le Clos development.

3.6 Traffic Distribution

The following traffic distribution assumptions have been made for this assessment.

3.6.1 Traffic Distribution – Le Clos

The Le Clos development will utilise two access points for future egress to and from the development to be known as:-

- Road No.1 – Eastern Access location, and
- Road No.2 – Western Access location.

The following traffic distribution assumptions were made for this development:-

- Road No.1 – 12% of total development traffic generation, and
- Road No.2 – 88% of total development traffic generation.

3.6.2 Traffic Distribution – Bengal Street

It is assumed 100% of the total future traffic generation for the Bengal Street area will access Sancrox Road via Rawdon Island Road.

3.6.3 Traffic Distribution – Sancrox Central (Riverbank Road, North)

The following traffic distributions have been assumed for the Sancrox Central (Riverbank Rd, North) area:-

- 50% of future traffic generation directly to Rawdon Island Road (north), and
- 50% of future traffic generation directly to Sancrox Road.

3.6.4 Traffic Distribution – Sancrox Central (Riverbank Road, South)

The following traffic distributions have been assumed for the Sancrox Central (Riverbank Rd, South) area:-

- 50% of future traffic generation directly to Rawdon Island Road (south), and
- 50% of future traffic generation directly to Sancrox Road.

3.6.5 Traffic Distribution – Walters Road (Northern Side)

The following traffic distributions have been assumed for the Sancrox Central area:-

- 50% of future traffic generation Walters Road, Northern Side directly to Rawdon Island Road (north), and
- 50% of future traffic generation Walters Road, Northern Side directly to Rawdon Island Road (south). Not part of this assessment.

3.6.6 Traffic Distribution – Le Clos Verdun (Verdun Drive)

It is assumed 100% of the total future traffic generation for the Le Clos Verdun area will access Sancrox Road.

3.6.7 Traffic Distribution – Sancrox North

It is assumed 100% of the total future traffic generation for the Sancrox North area will access Sancrox Road via the Road No.2 (Le Clos) access location.

3.6.8 Traffic Distribution – Freeman / Stubbs Land

The following traffic distributions have been assumed for the Freeman / Stubbs land area:-

- 30% of future traffic generation to access Sancrox Road via Road No.2 (Le Clos) access location, and
- 70% of future traffic generation to access Sancrox Road via Road No.1 (Le Clos) access location.

3.6.9 Traffic Distribution – Bushlands Drive

The following traffic distributions have been assumed for the Bushlands Drive area:-

- 50% of future traffic generation to access Sancrox Road, and
- 50% of future traffic generation to access Sancrox Road. Not part of this assessment.

3.6.10 Traffic Distribution – Sancrox Employment Land (North of Sancrox Road)

It is assumed 100% of the total future traffic generation for the Sancrox Employment Land (north of Sancrox Road) will access Sancrox Road via the Frogs Road roundabout.

3.7 Traffic Assignment

The following traffic assignment assumptions have been made for this assessment.

3.7.1 Possible Future Traffic Assignment – Rawdon Island Road Intersection

- From Rawdon Island Road (North) including Bengal Street and Sancrox Central (Riverbank Road, North) direct access to Rawdon Island Road (North)
  - 1% to the west (Sancrox Road, west)
  - 31% to the south (Rawdon Island Road, south), and
  - 68% to the east (Sancrox Road, east)

- From Rawdon Island Road (South) including Walters Road (north of Walters Road) and Sancrox Central (South) direct access to Rawdon Island Road (South)
  - 2% to the west (Sancrox Road, west)
  - 28% to the north (Rawdon Island Road, north), and
  - 70% to the east (Sancrox Road, east)

- From Sancrox Road (West)
  - 4% to the north (Rawdon Island Road, north)
  - 64% to the east (Sancrox Road, east), and
  - 32% to the south (Rawdon Island Road, south)

- From Sancrox Road (East) including all westbound traffic east of the Rawdon Island Road intersection.
  - 5% to the west (Sancrox Road, west)
  - 15% to the north (Rawdon Island Road, north), and
  - 80% to the south (Rawdon Island Road, south)

3.7.2 Possible Future Traffic Assignment – Riverbank Road Intersection

- From Rawdon Island Road Intersection including all eastbound traffic.
  - 10% to the north (Riverbank Road, north)
  - 80% to the east (Sancrox Road, east), and
  - 10% to the south (Riverbank Road, south)
- From Sancrox Road (East) including all eastbound traffic.
  - 15% to the north (Riverbank Road, north)
  - 70% to the west (Sancrox Road, east), and
  - 15% to the south (Riverbank Road, south)
- From Riverbank Road (North)
  - 30% to the west (Sancrox Road, west)
  - 10% to the south (Riverbend Road, south), and
  - 60% to the east (Sancrox Road, east)
- From Riverbank Road (South)
  - 30% to the west (Sancrox Road, west)
  - 10% to the north (Riverbend Road, north), and

- 60% to the east (Sancrox Road, east)

3.7.3 Traffic Assignment – Verdun Drive Intersection

- From Riverbend Road Intersection including all eastbound traffic.
  - 5% to the north (Verdun Drive), and
  - 95% to the east (Sancrox Road, east),
- From Sancrox Road (East) including all eastbound traffic.
  - 1% to the north (Verdun Drive), and
  - 95% to the east (Sancrox Road, east)
- From Verdun Drive
  - 30% to the west (Sancrox Road, west), and
  - 70% to the east (Sancrox Road, east)

3.7.4 Traffic Assignment – Road No.2 (Le Clos) Intersection

- From Verdun Drive Intersection including all eastbound traffic.
  - 1% to the north (Road No.2, north)
  - 69% to the east (Sancrox Road, east), and
  - 30% to the south (Road No.2, south)
- From Road No.1 Intersection including all westbound traffic.
  - 20% to the north (Road No.2, north)
  - 50% to the west (Sancrox Road, west), and
  - 30% to the south (Road No.2, south)
- From Road No.2 (North)
  - 25% to the west (Sancrox Road, west)
  - 20% to the south (Road No.2, south), and
  - 55% to the east (Sancrox Road, east)
- From Road No.2 (South)
  - 29% to the west (Sancrox Road, west)
  - 1% to the north (Road No.2, north), and
  - 70% to the east (Sancrox Road, east)

3.7.5 Traffic Assignment – Road No.1 (Le Clos) Intersection

- From Road No.2 Intersection including all eastbound traffic.
  - 10% to the north (Road No.1, north)
  - 70% to the east (Sancrox Road, east), and
  - 20% to the south (Road No.1, south)
- From Bushlands Drive Intersection including all westbound traffic.
  - 20% to the north (Road No.2, north)
  - 60% to the west (Sancrox Road, west), and
  - 20% to the south (Road No.2, south)
- From Road No.1 (North)
  - 25% to the west (Sancrox Road, west)
  - 20% to the south (Road No.2, south), and
  - 55% to the east (Sancrox Road, east)

- From Road No.1 (South)
  - 29% to the west (Sancrox Road, west)
  - 1% to the north (Road No.2, north), and
  - 70% to the east (Sancrox Road, east)

3.7.6 Possible Future Traffic Assignment – Bushlands Drive Intersection

- From Road No.1 Intersection including all eastbound traffic.
  - 70% to the east (Sancrox Road, east), and
  - 30% to the south (Bushlands Drive)
- From Frogs Road Intersection including all westbound traffic.
  - 80% to the west (Sancrox Road, west), and
  - 20% to the south (Bushlands Drive)
- From Bushlands Drive
  - 25% to the west (Sancrox Road, west)
  - 20% to the south (Road No.2, south), and
  - 55% to the east (Sancrox Road, east)

3.7.7 Possible Future Traffic Assignment – Frogs Road Intersection

- From Bushlands Drive Intersection including all eastbound traffic.
  - 20% to the north (Frogs Road, north)
  - 40% to the east (Pacific Highway, north), and
  - 40% to the south (Pacific Highway, south)
- From Sancrox Road (East) including all westbound traffic.
  - 20% to the north (Frogs Road, north)
  - 50% to the west (Sancrox Road, west), and
  - 30% to the south (Frogs Road, south)
- From Frogs Road (North)
  - 10% to the west (Sancrox Road, west)
  - 40% to the south (Frogs Road, south), and
  - 50% to the east (Sancrox Road, east)
- From Frogs Road (South)
  - 20% to the west (Sancrox Road, west)
  - 60% to the north (Frogs Road, north), and
  - 20% to the east (Sancrox Road, east)

4. SANCROX ROAD FUTURE STRUCTURE / CORRIDOR PLAN

4.1 Sancrox Road Structure Plan

Port Macquarie Hastings Council has indicated they have not yet commenced strategic planning for the area known as Sancrox / Rawdon Island. In order for this development to gain development approval some background strategic traffic planning will be undertaken as part of the assessment for future traffic impacts by this development.

It is hoped the assessments completed for this site and the study area will be utilised by Port Macquarie Hastings Council for future strategic planning of the area in question.

Currently there are six public access points / intersections located along Sancrox Road:-

1) Rawdon Island Road,
2) Riverbank Road,
3) Verdun Drive,
4) Le Clos,
5) Bushlands Drive, and
6) The Pacific Highway

Figure 4.10 indicates the available land area that can be rezoned and developed as residential (orange hatch) and / or industrial land (blue hatch).

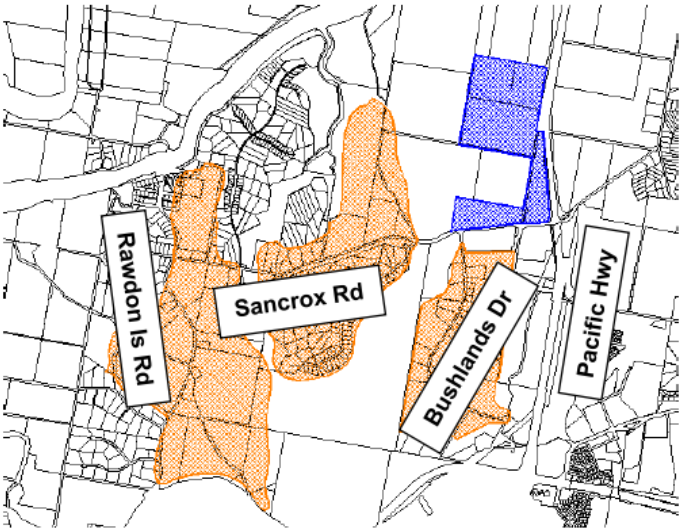


Figure 4.10– LAND SUBJECTTO REZONING FOR FUTURE RESIDENTIAL & IDUSTRIAL DEVELOPMENT

Taking into account the locations of the land available for rezoning in the study area it is recommended the existing access points:-

- Rawdon Island Road,
- Riverbank Road (north),
- Verdun Drive,
- Bushlands Drive, and
- Frogs Road.

along with the addition of the two locations proposed by the Le Clos development and a Riverbank Road (south) be utilised for future controlled access to these areas.

This report will give an indication of the possible future upgrades required for Sancrox Road at these locations. The future upgrades will be assessed based on the derived future traffic generation yields for the study area. It shall be noted a detailed assessment will also be completed for the new intersections proposed as part of the Le Clos residential development.

4.2 Estimated Future Traffic Volumes – Study Area Wide

Based on the calculations for the possible traffic generation and assumptions for the distribution and assignment of the future traffic generation for the study area the following traffic flows have been derived for the nominated intersection for a design horizon of 30 years at 10 year intervals basing the flows on the worst case scenario of the 2019 AM peak period intersection counts and a traffic growth rate of 1.5% applied to the 2019 figures for a 30 year period for the Rawdon Island Road and Frogs Road intersections. Figures 4.20 to 4.26 provide a summary of possible predicted traffic flows for the access locations within the study area.

Based on these projected traffic volumes Section 3 of this assessment provides indications for the upgrade treatments at each of the intersections in question.

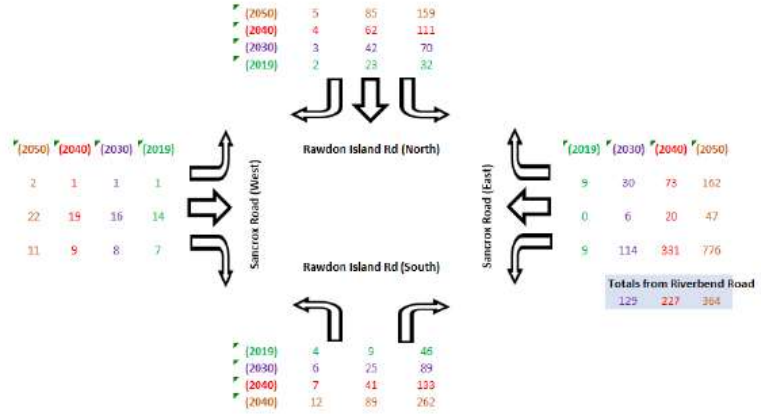


Figure 4.20 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & RAWDON ISLAND ROAD INTERSECTION (30 YEAR DESIGN HORIZON)

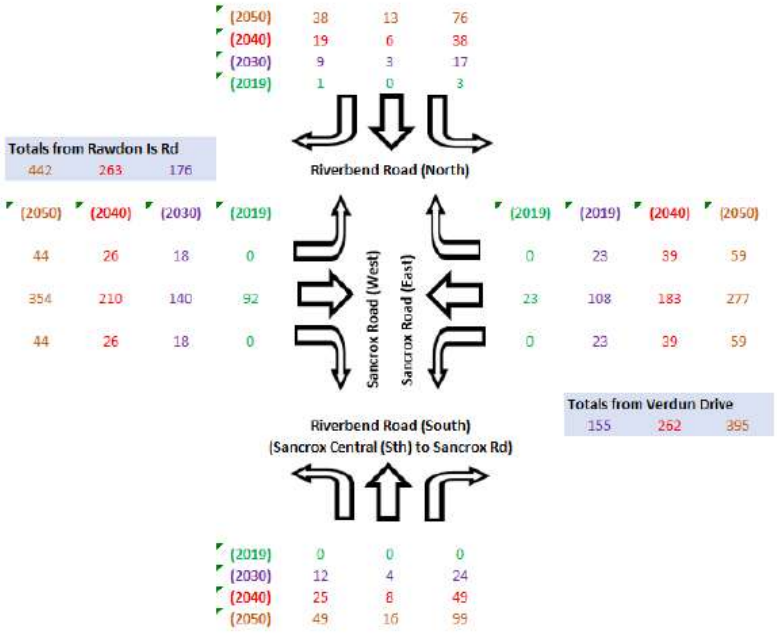


Figure 4.21 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & RIVERBEND ROAD INTERSECTION (30 YEAR DESIGN HORIZON)

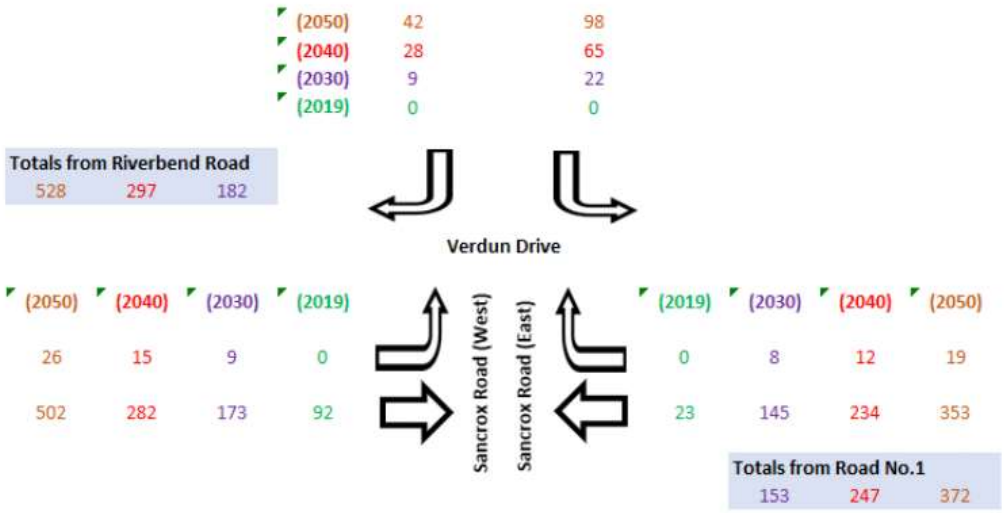


Figure 4.22 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & VERDUN DRIVE INTERSECTION (30 YEAR DESIGN HORIZON)

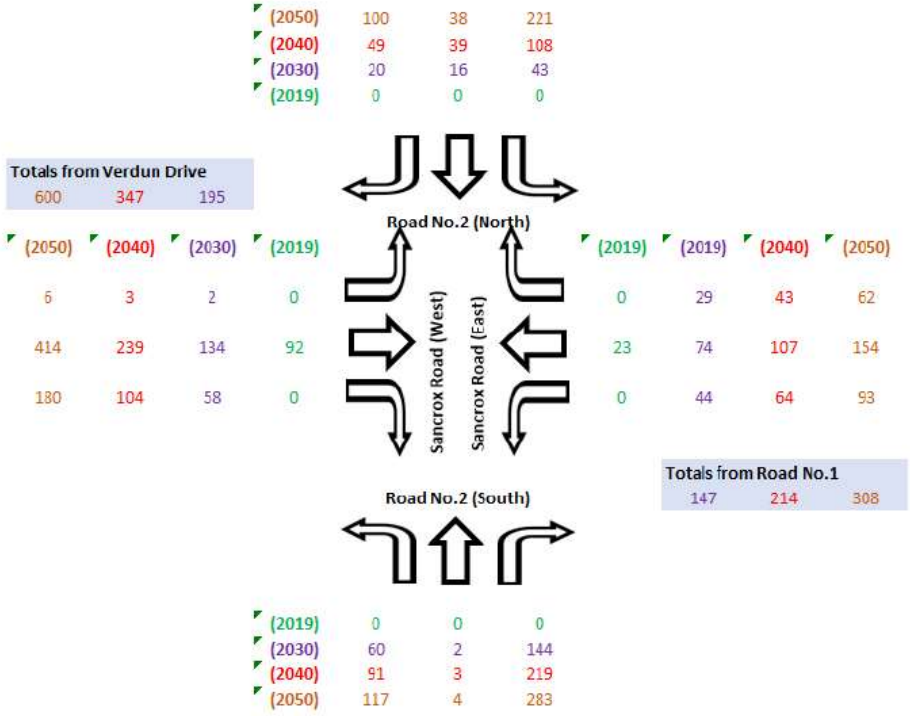


Figure 4.23 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & ROAD NO.2 (Le Clos) INTERSECTION (30 YEAR DESIGN HORIZON)

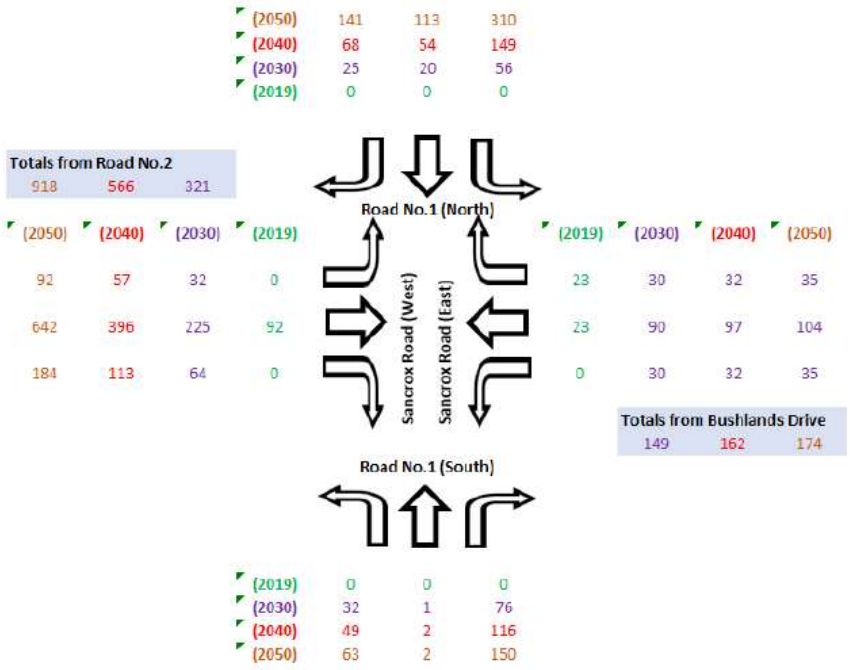


Figure 4.24 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & ROAD NO.1 (Le Clos) INTERSECTION (30 YEAR DESIGN HORIZON)

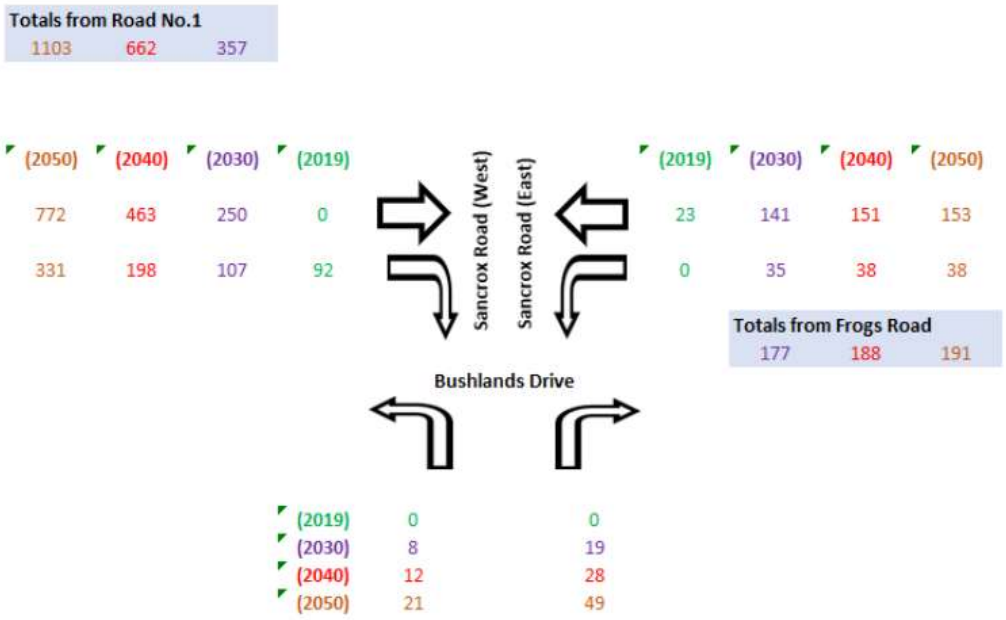


Figure 4.25 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & BUSHLANDS DRIVE INTERSECTION (30 YEAR DESIGN HORIZON)

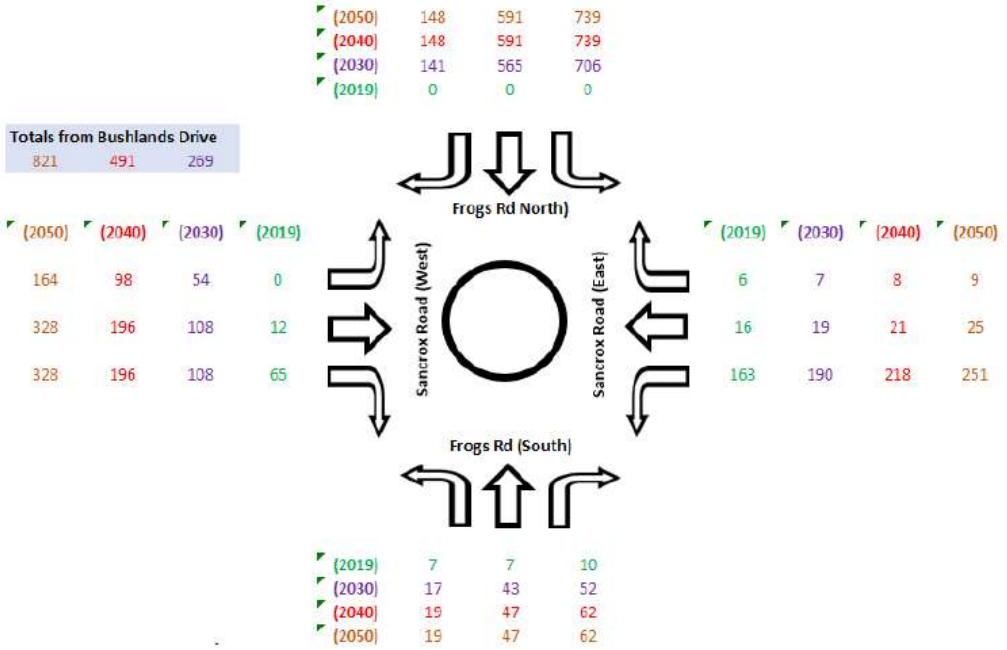


Figure 4.26 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & FROGS ROAD INTERSECTION (30 YEAR DESIGN HORIZON)

4.3 Possible Future Traffic Volumes – Le Clos Only

As part of this assessment there is a requirement to determine what road network upgrades will be triggered by this development so a Voluntary Planning Agreement (VPA) or Contributions Plan can be setup.

For the purposes of this assessment only the predicted future traffic generation for the Le Clos development will be added to the existing traffic volumes (section 2.1) to determine if the development triggers any upgrades to the road network, be it road widening or intersection upgrades.

Based on the calculations for the possible traffic generation and assumptions for the distribution and assignment of the traffic generation for the Le Clos development, the following traffic flows have been derived for the nominated intersections for a design horizon of 30 years at 10 year intervals basing the flows on the worst case scenario of the 2019 AM peak period intersection counts and a traffic growth rate of 1.5% applied to the 2019 figures for a 30 year period for the Rawdon Island Road and Frogs Road intersections. Figures 4.30 to 4.36 provide a summary of possible predicted traffic flows for the access locations within the study area.

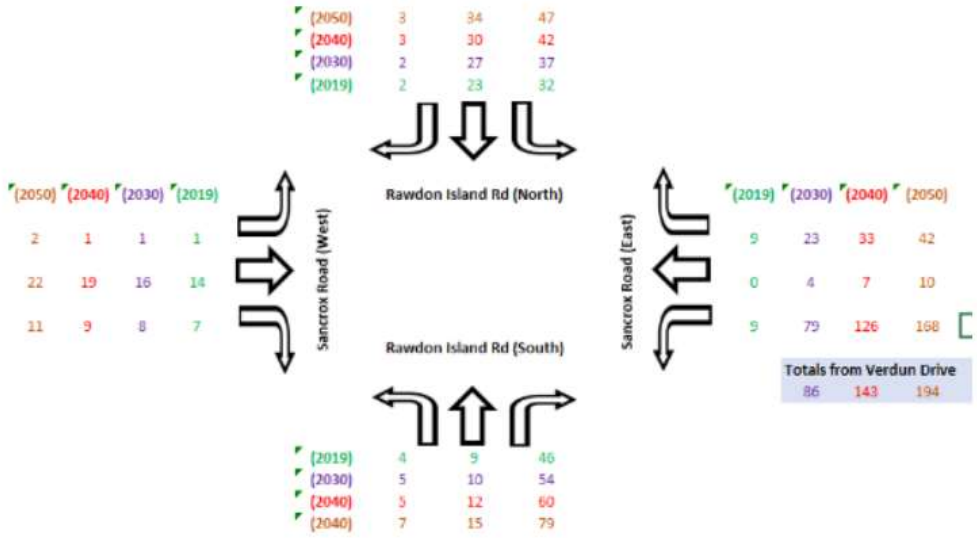


Figure 4.30 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & RAWDON ISLAND ROAD INTERSECTION (30 YEAR DESIGN HORIZON, LE CLOS FUTURE TRAFFIC GENERATION ONY)

Figure 4.31 summarises the Sancrox Road and Rawdon Island Road intersection configuration major turn requirements for the 30 year design horizon:-

- Rawdon Island Road Southbound – Left into Sancrox Road,
- Rawdon Island Road Northbound – Right into Sancrox Road, and
- Sancrox Road Westbound – Left into Rawdon Island Road.
- Sancrox Road Westbound – Right into Rawdon Island Road.

based on Figure 2.26c of the Austroads Guide to Traffic Management, Part 6 – Intersections, Interchanges and Crossings.

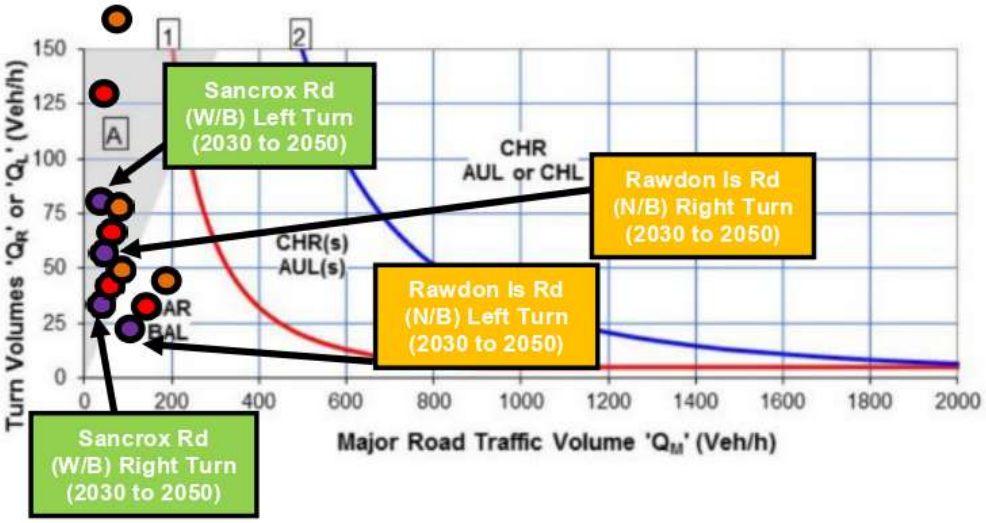


Figure 4.31 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS - SANCROX RD & RAWDON ISLAND ROAD INTERSECTION DESIGN HORIZON, (LE CLOS DEVELOPMENT ONLY)

The assessment, based on the projected traffic generation for the Le Clos development only, indicates the intersection configuration will operate adequately as a BAR / BAL layout for the 30 year design horizon. This is in keeping with the existing intersection configuration.

However, it shall be noted, four way cross junctions are not ideal from a road safety point of view where there could be a number of turn movements crossing each other creating sight distance issues for through traffic.

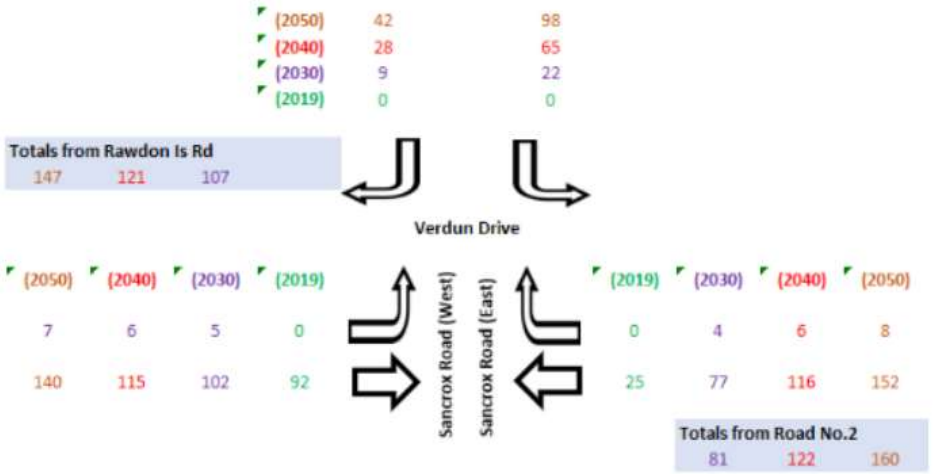


Figure 4.32 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & VERDUN INTERSECTION (30 YEAR DESIGN HORIZON, LE CLOS FUTURE TRAFFIC GENERATION ONY)

Figure 4.33 summarises the Sancrox Road and Verdun Drive intersection configuration major turn requirements for the 30 year design horizon:-

- Sancrox Road Eastbound – Left into Verdun Drive, and
- Sancrox Road Westbound – Right into Verdun Drive.

based on Figure 2.26c of the Austroads Guide to Traffic Management, Part 6 – Intersections, Interchanges and Crossings.

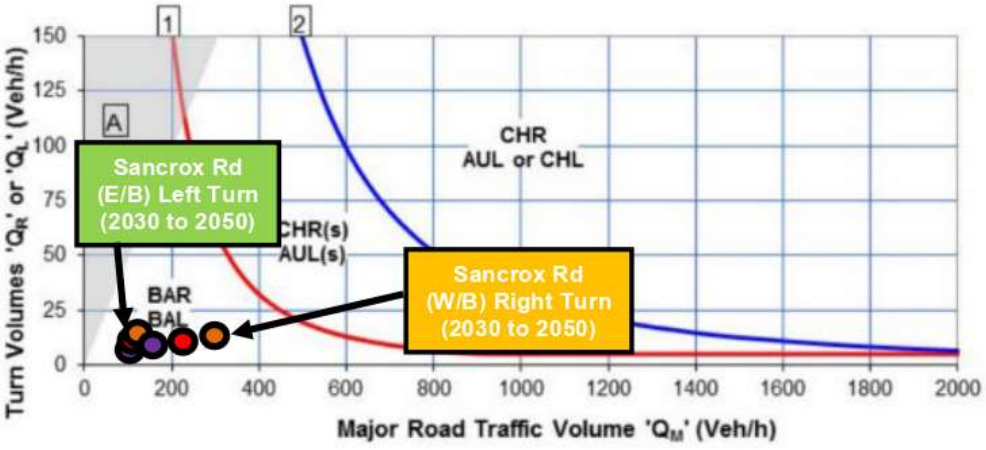


Figure 4.33 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS - SANCROX RD & VERDUN DRIVE INTERSECTION DESIGN HORIZON, (LE CLOS DEVELOPMENT ONLY)

The assessment, based on the projected traffic generation for the Le Clos development only, indicates the intersection configuration will operate adequately as a BAR / BAL layout for the 30 year design horizon.

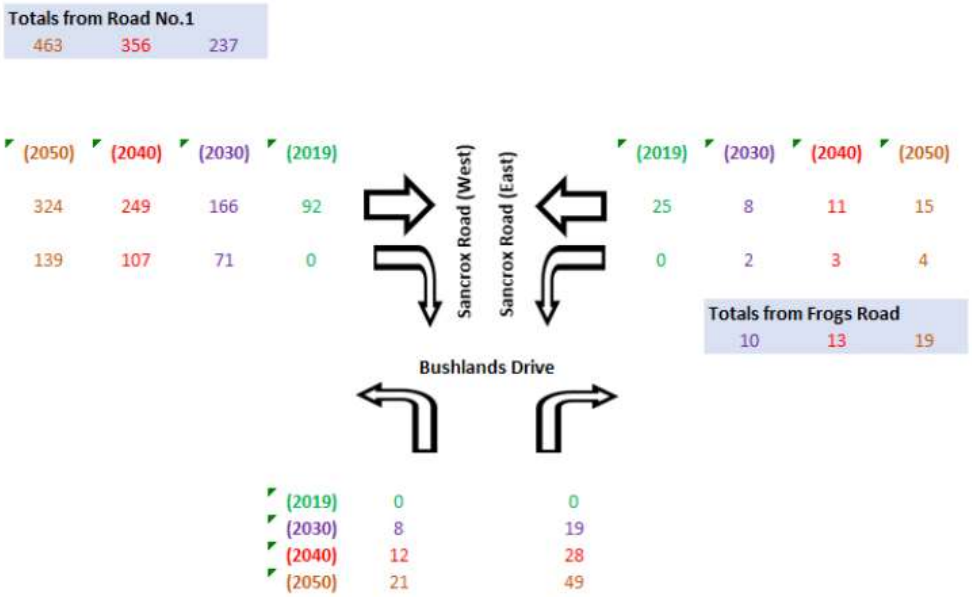


Figure 4.34 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & BUSHLANDS DRIVE INTERSECTION (30 YEAR DESIGN HORIZON, LE CLOS FUTURE TRAFFIC GENERATION ONY)

Figure 4.35 summarises the Sancrox Road and Verdun Drive intersection configuration major turn requirements for the 30 year design horizon:-

- Sancrox Road Eastbound – Right into Bushlands Drive, and
- Sancrox Road Westbound – Left into Bushlands Drive.

based on Figure 2.26c of the Austroads Guide to Traffic Management, Part 6 – Intersections, Interchanges and Crossings.

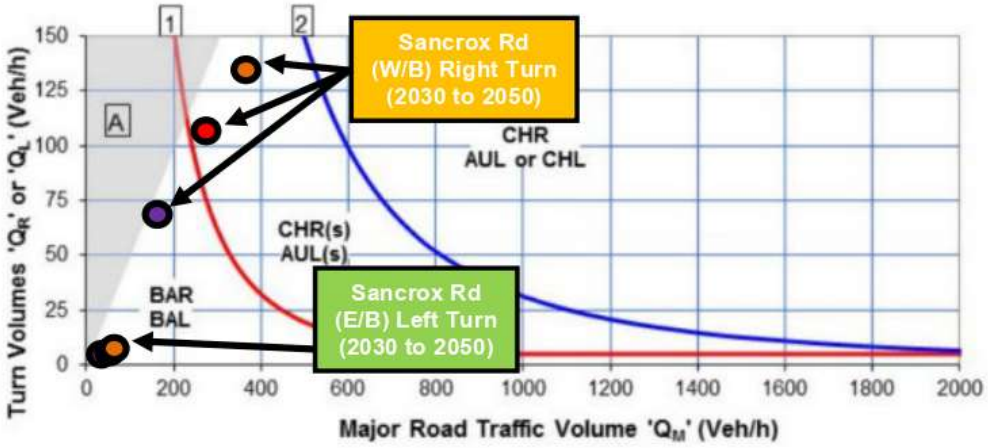


Figure 4.35 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS - SANCROX RD & VERDUN DRIVE INTERSECTION DESIGN HORIZON, (LE CLOS DEVELOPMENT ONLY)

The assessment, based on the projected traffic generation for the Le Clos development only, indicates the intersection configuration will need to be upgraded to a CHR(s) layout beyond the design horizon year of 2040.

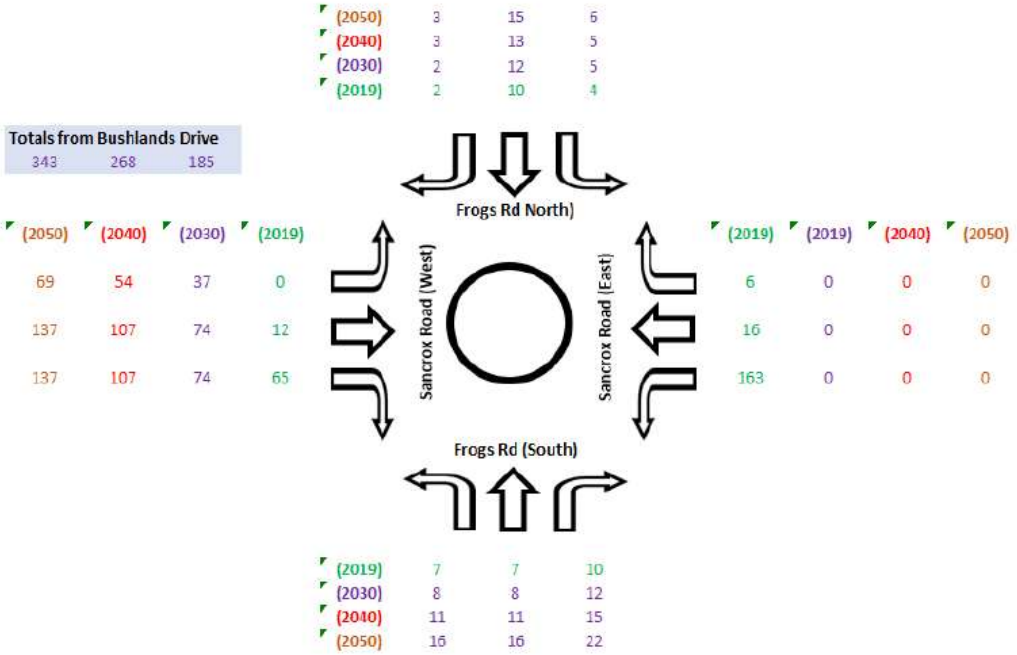


Figure 4.36 – FUTURE TRAFFIC FLOWS – SANCROX ROAD & FROGS ROAD INTERSECTION (30 YEAR DESIGN HORIZON, LE CLOS FUTURE TRAFFIC GENERATION ONY)

4.4 Future Road Capacity

Currently Sancrox Road is catering for approximately 2790 and Rawdon Island Road is 1420 vehicles per day, Annual Average Daily Traffic (AADT).
This assessment will determine Sancrox Road (19091 vpd, 1909 vphr two way) and Rawdon Island Road (15150 vpd, 1515 vphr two way) at the end of the 30 year design horizon.

In accordance with Port Macquarie Hastings Council's version of the AUSPEC-1 D01-Geometric Road Design (2003) – Table D1.5 these roads are classified as being Arterial Roads (up to 20000 vpd) with reference to the traffic volumes.

It shall be noted in accordance with the Austroads Guide to Traffic Management, Part 3 – Traffic Studies and Analysis (2013) the lane capacity for an urban road can be upto 900 vehicles per hour or 9000 vehicles per day (Table 4.30 below).

Type of lane	One-way mid-block capacity (pc/hr)
Median or inner lane	
• Divided road	1000
• Undivided road	900
Middle lane (of a 3-lane carriageway)	
• Divided road	900
• Undivided road	1000
Kerb lane	
• Adjacent to parking lane	900
• Occasional parked vehicles	600
• Clearway conditions	900

Source: Table 5.1 of Austroads Guide to Traffic Management Part 3

Table 4.30 – AUSTROADS LANE CAPACITY

Given this assessment has calculated Sancrox Road will be slightly over the 900 vphr threshold and Rawdon Island Road will fall under this threshold the remainder of this assessment will be based on the Austroads Guide and not the PMHC AUSSPEC version given it is the most upto date guide for the consideration of lane capacity.

With regard to Sancrox Road being over the Austroads threshold it shall be noted the 30 year design horizon predicted traffic volumes are very conservative in this assessment.

4.4.1 PMHC Review of AUSSPEC Version

As part of this assessment PMHC's Acting Group Manager of Infrastructure Planning, Cameron Hawkins was contacted re clarification of the matter of lane capacities. He clarified, PMHC at the time of this assessment being prepared, was completing a review of council's AUSSPEC version and was bringing it more into line with the more recent Austroads guidelines.

4.5 Future Road Corridor Plan – Vehicular Traffic

Given the above assessment criteria being completed the following road infrastructure upgrades are proposed as the future corridor plan for Sancrox Road. The design cross sections provided in this assessment are based on the Austroads Guide to Road Design, Part 3 – Geometric Design.

4.5.1 Sancrox Road

Generally as a minimum Sancrox Road should be upgraded for a design speed standard of 70km/h to:-

- Minimum of one travel lane in each direction (3.50m wide),
- 1.50m wide (clear width), 2.0m (if kerb & gutter) cycle lanes along edge of each travel lane,
- 0.5m shoulder outside of cycle lane. Given the future traffic volumes this will allow for emergency stopping where a vehicle can stand within the shoulder / cycle lane outside of the travel lane not obstructing traffic and therefore reducing any roadside hazard,
- 2.50m wide raised central median to allow for pedestrian / cyclist crossing, and
- Auxiliary lanes (turn lanes, acceleration & deceleration lanes) as required. (See intersection upgrades for details).

Figure 4.50 Provides an indication of the design cross section Sancrox Road should be upgraded to.

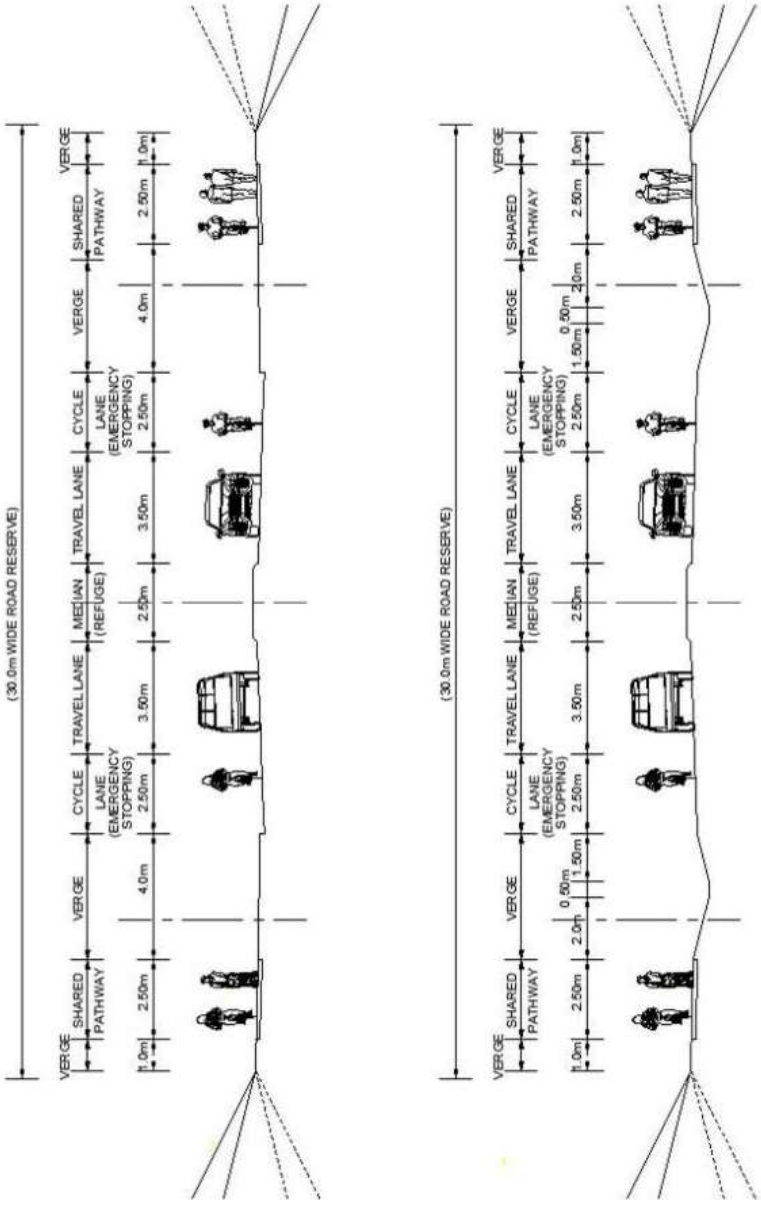


Figure 4.50 – FUTURE DESIGN CROSS SECTION, SANCROX ROAD

4.5.2 Sancrox Road & Rawdon Island Road Intersection

There is no requirement to upgrade the intersection of Sancrox Road and Rawdon Island Road based on either traffic volumes or roadway capacity. However, from a road safety point of view it is not ideal to have an uncontrolled four way intersection.

Therefore is it recommended the existing uncontrolled intersection be replaced with a roundabout. The geometric layout of the roundabout should generally conform to:-

- a central island diameter of 16.0m,
- a circulating roadway width of 9.0m,
- single lane entry / exit on all legs,

- offroad cyclist access on all legs, and
- pedestrian refuges on the Sancrox Rd (west) and Rawdon Island Road (north) legs.

4.5.3 Sancrox Road & Riverbend Road Intersection

The existing intersection of Sancrox Road and Riverbend Road generally conforms to a BAR/BAL T junction layout. Given this location is recognised as an area for future residential development (ie north and south of Sancrox Road) this location should be upgraded for the future residential requirements. Again, there is no requirement to upgrade this intersection based on either traffic volumes or roadway capacity.

However, from a road safety point of view it is not ideal to have an uncontrolled four way intersection. Therefore is it recommended the existing uncontrolled intersection be replaced with a roundabout. The geometric layout of the roundabout should generally conform to:-

- a central island diameter of 16.0m,
- a circulating roadway width of 9.0m,
- single lane entry / exit on all legs,
- offroad cyclist access on all legs, and
- pedestrian refuges on the Sancrox Rd (west) and Riverbend Road (south) legs.

4.5.4 Sancrox Road & Verdun Drive Intersection

The existing intersection of Sancrox Road and Verdun Drive generally conforms to a BAR/BAL T junction layout with some shoulder widening for the left turn out and right turn in movements.

Based on Figure 2.26c of the Austroads Guide to Traffic Management, Part 6 – Intersections, Interchanges and Crossings the following assessment of the future traffic flows at the intersection have been assessed for the 30 year design horizon.

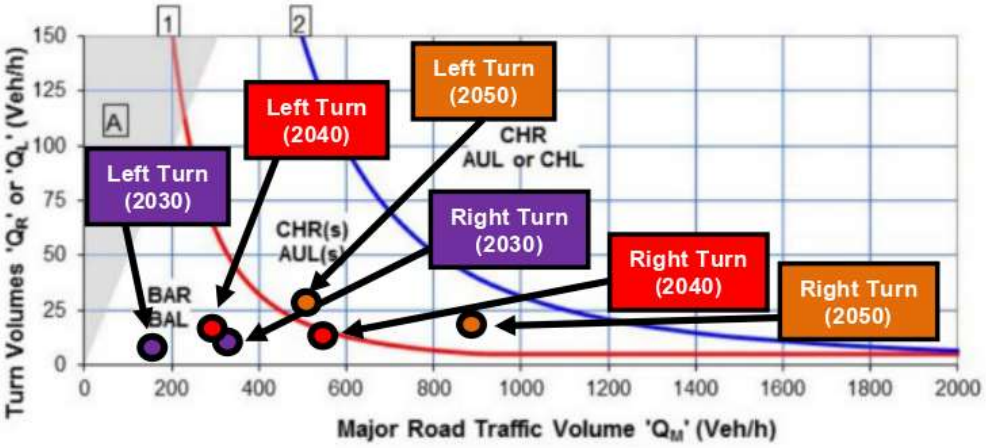


Figure 4.51 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS (SANCROX RD & VERDUN DRIVE INTERSECTION DESIGN HORIZON)

Based on the warrant assessment above, the intersection of Sancrox Road and Verdun Drive will need to be upgraded to a minimum standard of a Type CHR(s)

treatment by the year 2050. For the purposes of this assessment a Type CHR(s) / AUL intersection layout will be modelled in SIDRA software modelling.



Figure 4.52 – SANCROX ROAD & VERDUN DRIVE T JUNCTION INTERSECTION LAYOUT (WITH LEFT SLIP OUT)

The following inputs were used in the setup of the model: -

- Posted speed limits, Sancrox Road = 60km/h, and Verdun Drive = 60km/h;
- SIDRA default values used unless noted otherwise.
- GAP acceptance for sign-controlled intersections adopted from Appendix E of RMS Traffic Modelling Guidelines v1.0 (2013), and are summarised in the table below:

Movement	Gap Acceptance (s)	Follow Up Headway (s)
Right turn from Major Rd	4.0	2.0
Left Turn from Minor Rd	4.5	2.5
Right Turn from Minor Rd	5.5	3.5

Table 4.50 – GAP Acceptance for Controlled Intersections

Assumptions

- HV % of 5% on all legs;
- SIDRA default values for Peak Flow Factor (95%) and Peak Period (30 minutes per hour); and
- Model Type = New South Wales.

Table 4.51 provides a summary of the 30 year design horizon SIDRA modelling results for the future intersection arrangement.

	2030	2040	2050	2050 No Slip Lane
Average Delay (secs)	0.80	1.2	1.30	**1.60**
LOS	A	A	A	**A**
95% percentile queue (m)	1.0	1.0	3.0	**4.0**
Degree of Saturation	0.096	0.157	0.280	**0.280**

Table 4.51 – SIDRA MODELLING SUMMARY FOR 30 YEAR DESIGN HORIZON

The Sancrox Road and Verdun Drive intersection will operate adequately and within capacity for all modelled scenarios.

Further to the assessment above, SIDRA software modelling was completed to determine if a left slip (acceleration) lane out of Verdun Drive will be required as part of the intersection upgrade. Table 4.51 summarises this modelling indicating the originally proposed left slip out of Verdun Drive is not required. See Figure 4.52 for revised proposed upgraded intersection layout.



Figure 4.53 –REVISED SANCROX ROAD & VERDUN DRIVE INTERSECTION LAYOUT

4.5.5 Sancrox Road & Le Clos Access Intersection

The existing Le Clos Access Road intersection will be replaced in the redevelopment of the site with two access locations. No further assessment of this intersection will be undertaken. See section 5 of this assessment for further detailed assessment of the proposed access locations.

4.5.6 Sancrox Road & Bushlands Drive Intersection

The existing intersection of Sancrox Road and Bushlands Drive generally conforms to a BAR/BAL T junction layout.

Based on Figure 2.26c of the Austroads Guide to Traffic Management, Part 6 – Intersections, Interchanges and Crossings the following assessment of the future traffic flows at the intersection have been assessed for the 30 year design horizon.

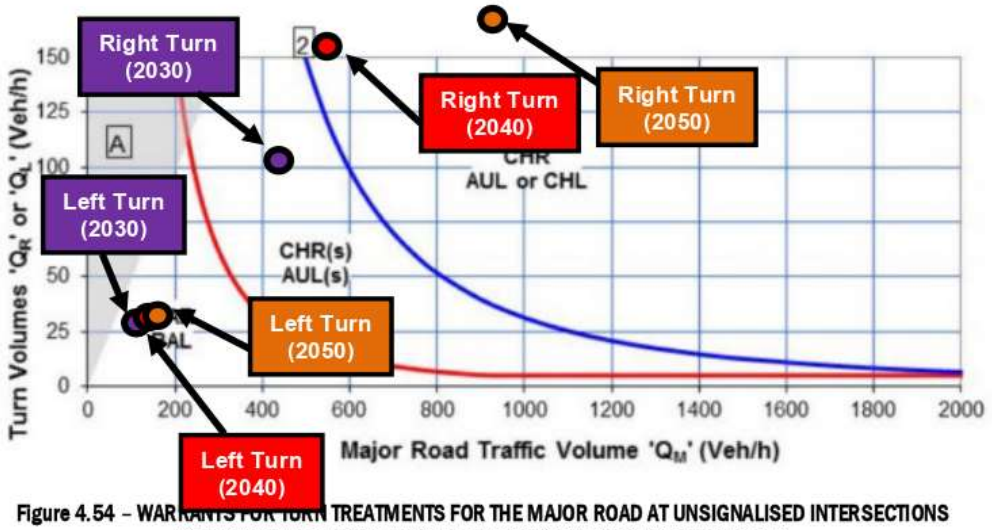


Figure 4.54 – WARRANTS FOR TURN TREATMENTS FOR THE MAJOR ROAD AT UNSIGNALISED INTERSECTIONS (SANCROX RD & BUSHLANDS DRIVE INTERSECTION DESIGN HORIZON)

Based on the warrant assessment above, the intersection of Sancrox Road and Bushlands Drive will need to be upgraded to a minimum standard of a Type CHR(s) treatment by the year 2030. Consideration will need to be given beyond the year 2040 for the signalisation of the intersection due to the eastbound through and right turn movements at the intersection.



Figure 4.55 – SANCROX ROAD & BUSHLANDS DRIVE CHANNELISED INTERSECTION LAYOUT

In order to do this, SIDRA software modelling was used to assess the proposed intersection layout.

The following inputs were used in the setup of the model: -

- Posted speed limits, Sancrox Road = 60km/h, and Bushlands Drive = 60km/h;
- SIDRA default values used unless noted otherwise.
- GAP acceptance for sign-controlled intersections adopted from Appendix E of RMS Traffic Modelling Guidelines v1.0 (2013), and are summarised in the table below:

Movement	Gap Acceptance (s)	Follow Up Headway (s)
Right turn from Major Rd	4.0	2.0
Left Turn from Minor Rd	4.5	2.5
Right Turn from Minor Rd	5.5	3.5

Table 4.52 – GAP Acceptance for Controlled Intersections

Assumptions

- HV % of 5% on all legs;
- SIDRA default values for Peak Flow Factor (95%) and Peak Period (30 minutes per hour); and
- Model Type = New South Wales.

Table 4.53 provides a summary of the 30 year design horizon SIDRA modelling results for the future intersection arrangement.

	2030	2040	2050	2050 No Seagull
Average Delay (secs)	1.80	2.0	2.10	**2.60**
LOS	A	A	A	**A**
95% percentile queue (m)	3.0	5.0	9.0	**9.0**
Degree of Saturation	0.139	0.258	0.430	**0.430**

Table 4.53 – SIDRA MODELLING SUMMARY FOR 30 YEAR DESIGN HORIZON (SANCROX ROAD & BUSHLANDS DRIVE INTERSECTION)

The Sancrox Road and Bushlands Drive intersection will operate adequately and within capacity for all modelled scenarios.

Further to the assessment above, SIDRA software modelling was completed to determine if channelization (seagull) of the intersection will be required into the future as part of the intersection upgrade. Table 4.53 summarises this modelling indicating the originally proposed channelization of the intersection will not be required as a future upgrade.

However, from a road safety point of view channelization of the intersection will make it safe for turning traffic at the intersection by minimising any merge conflicts on the departure side of the right turn out of Bushlands Drive.

4.5.7 Sancrox Road & Frogs Road Intersection (Roundabout)

The existing roundabout at the intersection of Sancrox Road and Frogs Road was constructed as part of the Pacific Highway upgrade where a grade separated interchange was provided for local access.

4.6 Future Road Corridor Plan – Pedestrian Access

Currently there is no formal provision for pedestrians along Sancrox Road or within the study area in question. As a minimum connection should be provided along the length of Sancrox Road with internal connections via future land developments.

Figure 4.40 provides an indication of the design cross section to be implemented for the Sancrox Road Corridor. In summary, a 2.50m wide shared path to be located 2 to 4.0m from the edge of the shoulder. This shared path will provide a safer experience

for the inexperienced cyclists plus provide pedestrian connection along the Sancrox Road corridor.

Crossing points (pedestrian / cyclist refuges) are to be provided at a number of locations along Sancrox Road to provide east / west and north / south connections across the road alignment. See Appendix E for indicative locations of pedestrian / cyclist refuges.

4.7 Future Road Corridor Plan – Cyclist Access

Currently there is no formal provision for cyclists along Sancrox Road or the study area in question. As a minimum connection should be provided along the length of Sancrox Road with internal connections via future land developments.

Figure 4.40 provides an indication of the design cross section to be implemented for the Sancrox Road Corridor. In summary a 1.50m wide cycle lane is to be provided on each edge of the formation. This width should be increased to 2.0m wide where kerb and gutter is provided so to provide a effective minimum width of 1.50m for a cyclist to travel in. Further to this requirement, 0.50m wide shoulder is to be provided along the outside edge of each cycle lane. This is because, if a vehicle breaks down it can pull over into the cycle lane / shoulder without obstructing traffic in the travel lane thus minimising any road safety issues.

Also to be included as part of the design cross section, is the construction of a 2.50m wide shared path to be located 2 to 4.0m from the edge of the shoulder. This shared path will provide a safer experience for the inexperienced cyclists plus provide pedestrian connection along the Sancrox Road corridor.

4.8 Future Road Corridor Plan – Public Transport

Currently there is no provision for public transport along Sancrox Road or within the study area in question. As development increases in the area planning for public transport will need to be included in any future strategic planning for the area.

As a minimum consideration will need to be given for bus stop facilities along Sancrox Road in accordance with Port Macquarie Hastings Council's design standards at the time.

The future planning will need to consider connection to residential and commercial areas in relation to ease of access for all users.

4.9 Summary of Sancrox Road Structure / Corridor Plan Requirements

The following summary of the make up of the Sancrox Road Structure / Corridor Plan is based on Future Traffic Generation, Roadway Capacity, Intersection Assessment and Road Safety considerations.
The summary also provides an indication of the upgrade impacts for the local road network that the Le Clos development will create given the timing of other residential development in the area.

4.9.1 Le Clos Development Only Structure / Corridor Plan Upgrade Requirements

As indicated previously the Le Clos development will more than likely generate impacts on the local road network as there is no other residential development planned in the area at the time of this assessment being completed. Based on this

the following recommended upgrades are required to be completed by the development:-

- Minimum design standard to be 70km/h.
- Upgrade design and construction of the Sancrox Road frontage for the Le Clos site to a standard of half the design cross section suggested in Figure 4.50. Southern side of Sancrox Road to carriageway centreline. Future development in the area to be responsible for the upgrade of the northern side of Sancrox Road in this location.
- Design and Construction of 2 roundabouts (Road No.1 and Road No.2). The construction of the northern legs of Roads No.1 and 2 is to be undertaken by others as future development dictates.
- Design and Construction of a Shared Path along the Sancrox Road frontage of the Le Clos site generally in accordance with Figure 4.50. All other shared path facilities are to be constructed by others as future development dictates.
- Provision of Public Transport Facilities (Bus Bay) at each of the proposed development intersections (roundabouts). All other public transport facilities are to be constructed by others as future development dictates.
- The intersection of Sancrox Road and Bushlands Drive will need to upgraded to a type CHR(s) intersection at the year 2030. Any further upgrades to this intersection are to be completed by others as future development in the area dictates.

4.9.2 Whole of Study Area Structure / Corridor Plan Upgrade Requirements

As the area of Sancrox / Rawdon Island develops into the future there will be a requirement to upgrade the local road network based on increased traffic generation / flows and increased possibility of road safety issues relative to these increased flows. Based on the assessments of this report the following recommendations are made for the future upgrade requirements of the local road network (ie. Sancrox Road).

- Minimum design standard to be 70km/h.
- Generally the upgrading of Sancrox Road to the standard indicated in Figure 4.50 of this report by others excluding the Le Clos development as nominated in section 4.9.1.
- Future upgrade of the intersection of Sancrox Road and Rawdon Island to a single lane roundabout on each leg of the roundabout including off road access for cyclists at the roundabout. This is a road safety requirement as four way uncontrolled intersection are not acceptable with regard to road safety. The upgrade of this intersection should be commenced within 10 years of residential development commencing in the area other than that of the Le Clos site.
- Future upgrade of the intersection of Sancrox Road and Riverbend Road to a single lane roundabout on each leg of the roundabout including off road access for cyclists at the roundabout. This upgrade will be dictated by development in the area. Other than that of the Le Clos site. Further detailed assessment will need to be completed to determine the timing of this upgrade requirement.
- Future upgrade of the intersection of Sancrox Road and Verdun Drive to a Type CHR(s) intersection layout including off road access for cyclists and pedestrians at the intersection. This upgrade will be dictated by development

in the area. Other than that of the Le Clos site. Further detailed assessment will need to be completed to determine the timing of this upgrade requirement.

- Construction of Northern leg of the roundabout including off road access for cyclists at the roundabout. (Road No.1) at the Le Clos location. This upgrade will be dictated by development in the area. Other than that of the Le Clos site. Further detailed assessment will need to be completed to determine the timing of this upgrade requirement.
- Construction of Northern leg of the roundabout including off road access for cyclists at the roundabout. (Road No.2) at the Le Clos location. This upgrade will be dictated by development in the area. Other than that of the Le Clos site. Further detailed assessment will need to be completed to determine the timing of this upgrade requirement.
- The intersection of Sancrox Road and Bushlands Drive will need to upgraded to a type CHR channelised seagull intersection beyond the year 2040 once development other than that of the Le Clos site commences. The Le Clos development will require this intersection to be upgraded to a type CHR(s) intersection layout by the year 2040. Any further upgrades (channelised seagull) to this intersection are to be completed by others as future development in the area dictates.
- Future upgrade of the existing roundabout at the intersection of Sancrox Road and Frogs Road to cater for two eastbound entry lane on Sancrox Road including revised provision for off road access for cyclists and pedestrians at the roundabout. This upgrade requirement is driven by road safety with regard to lane changing at the roundabout and the increased likelihood of heavy traffic to and from the north of the roundabout with the future development of the Sancrox Employment Land area. This upgrade should be commenced within 10 years of the employment land starting development. This upgrade will be dictated by development in the area. Other than that of the Le Clos site.
- Design and Construction of a Shared Path along each side of Sancrox Road generally in accordance with Figure 4.50. All shared path facilities are to be constructed by others as future development dictates. Other than that of the Le Clos site.
- Provision of Public Transport Facilities as required by Port Macquarie Hastings Council at the time. All public transport facilities are to be constructed by others as future development dictates. Other than that of the Le Clos site.

5. LE CLOS DEVELOPMENT DETAILED INTERSECTION ASSESSMENT

The Le Clos development proposes to have two access points to service the site. Being,

- Road No.1 (approximately 500m west of the existing access road on Sancrox Road, and
- Road No.2 (approximately 500m west of the Road No.1 intersection on Sancrox Road)

These access points will be in the form of roundabout facilities.

5.1 Road No.1 Intersection Assessment

SIDRA software modelling has been completed for the intersection of Sancrox Road and Road No.1 (Le Clos Development) to determine the Level of Service (LoS) of the future intersection configuration including traffic distribution and assignment for the 30 year design horizon.

Figure 5.10 provides an indication of the roundabout layout assessment by SIDRA.



Figure 5.10 – SANCROX ROAD & Road No.1 ROUNDABOUT LAYOUT

The following inputs were used in the setup of the model: -

- Posted speed limits, Sancrox Road = 60km/h, and Road No.1 = 60km/h;
- SIDRA default values used unless noted otherwise.
- GAP acceptance for sign-controlled intersections adopted from Appendix E of RMS Traffic Modelling Guidelines v1.0 (2013), and are summarised in the table below:

Movement	Gap Acceptance (s)	Follow Up Headway (s)
Right turn from Major Rd	4.0	2.0
Left Turn from Minor Rd	4.5	2.5
Right Turn from Minor Rd	5.5	3.5

Table 5.10 – GAP Acceptance for Controlled Intersections

Assumptions

- HV % of 5% on all legs;
- SIDRA default values for Peak Flow Factor (95%) and Peak Period (30 minutes per hour); and
- Model Type = New South Wales.

Table 5.11 provides a summary of the 30 year design horizon SIDRA modelling results for the future intersection arrangement.

	2030	2040	2050	2050 alternative
Average Delay (secs)	6.2	7.2	49.5	10.1
LOS	A	A	D	A
95% percentile queue (m)	5.0	17.0	419.0	33.0
Degree of Saturation	0.136	0.350	1.090	0.513

Table 5.11 – SIDRA MODELLING SUMMARY FOR 30 YEAR DESIGN HORIZON

The Sancrox Road and Road No.1 intersection will operate adequately and within capacity for all modelled scenarios of 2030 and 2040 with exception of the 2050 period. The Northern leg fails due to the high volume of eastbound traffic.

Further testing revealed that addition of a 30m long left turn lane on the northern leg would provide adequate capacity in 2050 to reduce Average Delay to 10.1s, LOS A, 95th percentile queue of 33m and DoS of 0.513.



Figure 5.11 – REVISED SANCROX ROAD & Road No.1 ROUNDABOUT LAYOUT

5.2 Road No.2 Intersection Assessment

SIDRA software modelling has been completed for the intersection of Sancrox Road and Road No.2 (Le Clos Development) to determine the Level of Service (LoS) of the future intersection configuration including traffic distribution and assignment for the 30 year design horizon.

Figure 5.20 provides an indication of the roundabout layout assessment by SIDRA.

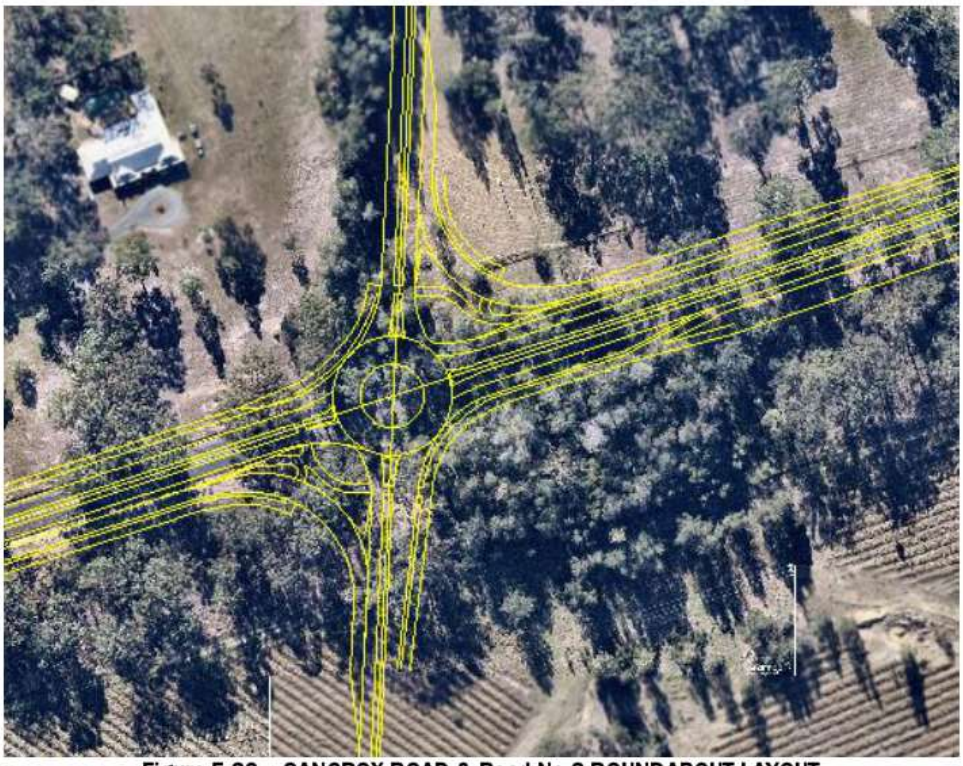


Figure 5.20 – SANCROX ROAD & Road No.2 ROUNDABOUT LAYOUT

The following inputs were used in the setup of the model: -

- Posted speed limits, Sancrox Road = 60km/h, and Road No.1 = 60km/h;
- SIDRA default values used unless noted otherwise.
- GAP acceptance for sign-controlled intersections adopted from Appendix E of RMS Traffic Modelling Guidelines v1.0 (2013), and are summarised in the table below:

Movement	Gap Acceptance (s)	Follow Up Headway (s)
Right turn from Major Rd	4.0	2.0
Left Turn from Minor Rd	4.5	2.5
Right Turn from Minor Rd	5.5	3.5

Table 5.20 – GAP Acceptance for Controlled Intersections

Assumptions

- HV % of 5% on all legs;
- SIDRA default values for Peak Flow Factor (95%) and Peak Period (30 minutes per hour); and
- Model Type = New South Wales.

Table 5.21 provides a summary of the 30 year design horizon SIDRA modelling results for the future intersection arrangement.

	2030	2040	2050
Average Delay (secs)	6.5	6.8	7.5
LOS	A	A	A
95% percentile queue (m)	4.0	7.0	14.0
Degree of Saturation	0.100	0.163	0.278

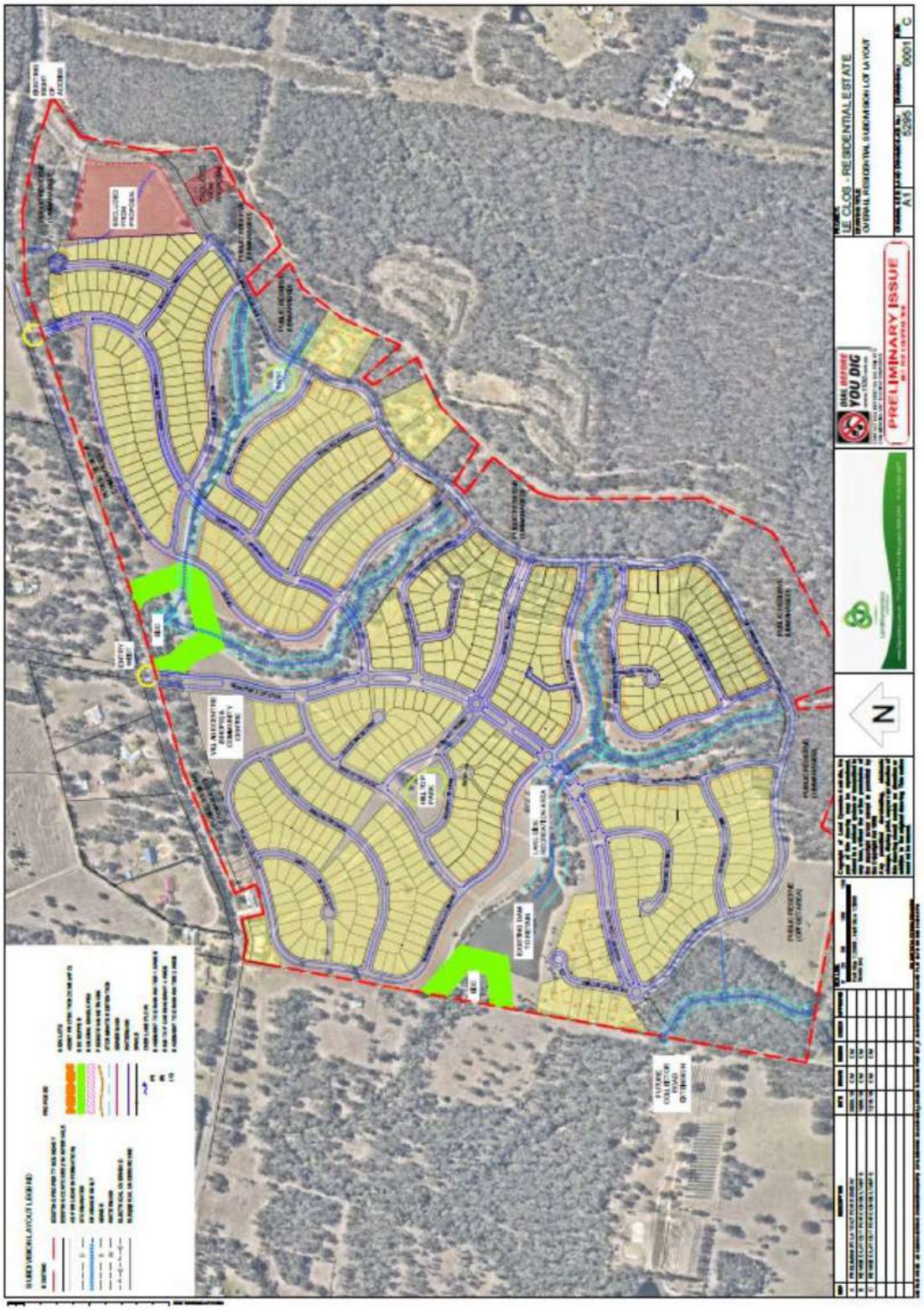
Table 5.21 – SIDRA MODELLING SUMMARY FOR 30 YEAR DESIGN HORIZON

The Sancrox Road and Road No.2 intersection will operate adequately and within capacity for all modelled scenarios of the design horizon period.

6. RECOMMENDATIONS

- In accordance with the assessments of this report it is recommended the following local road network (Sancrox Road) upgrades be directly attributed to the Le Clos Development and therefore be completed as the development staging requires.
  - In accordance with Figure 4.50 of this report the development is to upgrade Sancrox Road to half width design cross section along full frontage of the site.
  - Provision of 2 roundabouts (Road No.1 and Road No.2). Development staging will determine when each of the roundabouts are to be installed. The construction of the northern legs of Roads No.1 and 2 roundabouts is to be undertaken by others as future development dictates.
  - Provision of a Shared Path along the Sancrox Road frontage of the Le Clos site generally in accordance with Figure 4.50. All other shared path facilities are to be constructed by others as future development dictates.
  - Provision of Public Transport Facilities (Bus Bay) at each of the proposed development intersections (roundabouts). All other public transport facilities are to be constructed by others as future development dictates.
  - The intersection of Sancrox Road and Bushlands Drive will need to upgraded to a type CHR(s) intersection at the year 2030. Any further upgrades to this intersection are to be completed by others as future development in the area dictates.

APPENDIX A
DEVELOPMENT SITE PLAN PROPOSAL


LE CLOS - RESIDENTIAL ESTATE
PRELIMINARY ISSUE
DIAL BEFORE YOU DIG
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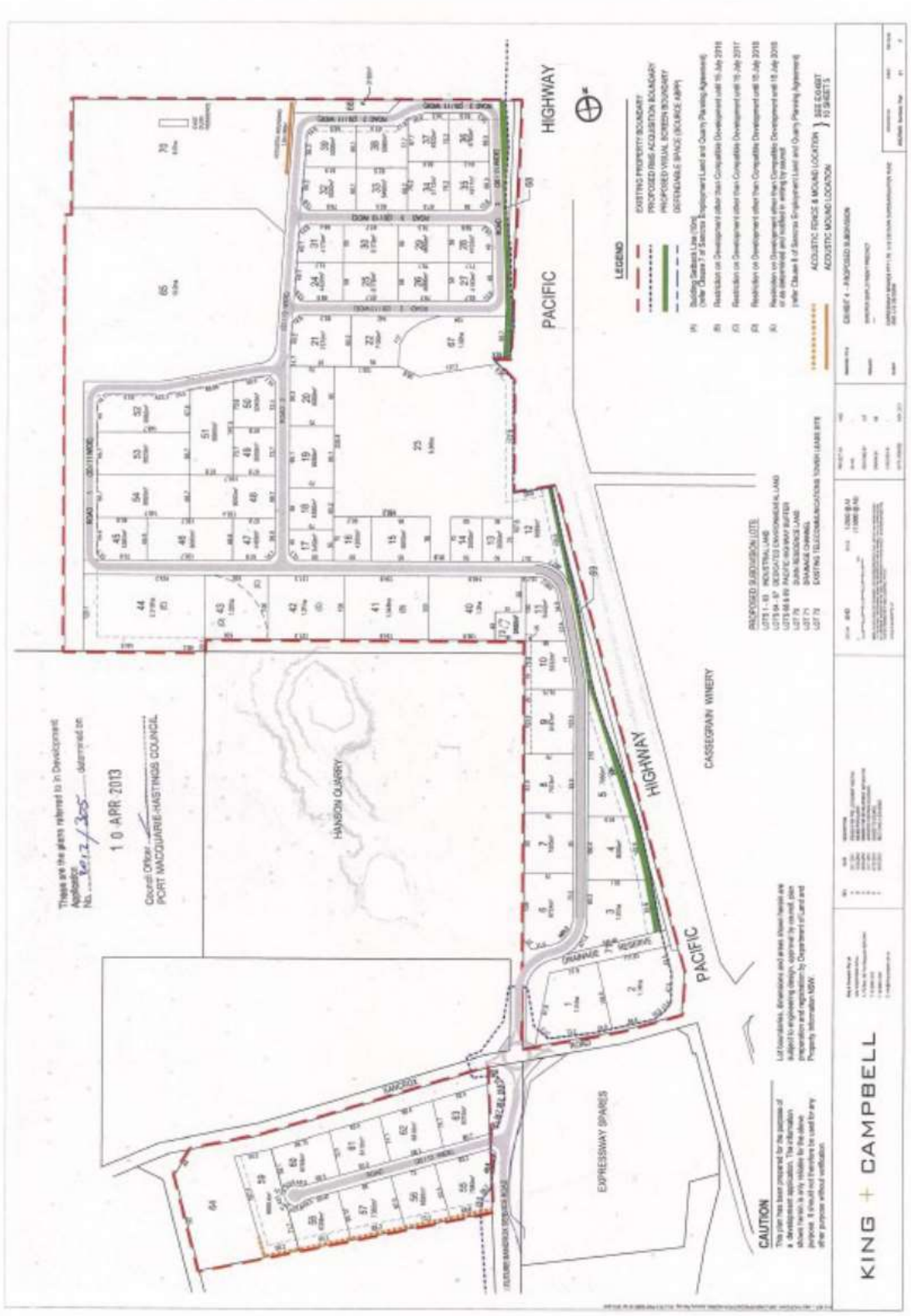
APPENDIX B

APPROVED SANCROX NORTH INDUSTRIAL SUBDIVISION


PACIFIC HIGHWAY
LEGEND
HANSON QUARRY
CASSEGRAIN WINERY
PACIFIC HIGHWAY
EXPRESSWAY SPARES
KING + CAMPBELL
CAUTION
10 APR 2013

APPENDIX C
INTERSECTION TRAFFIC COUNT DATA

Job No.	82019
Client	Land Dynamics Aust
Suburb	Sancrox
Location	Sancrox Rd & Frogs Rd
Day/Date	Thursday 27 June 2019
Weather	Overcast & Some Showers
Description	Intersection Count

Approach	Frogs Rd (south)																Sancrox Road (East)													
Direction	1 (Left Turn)				2 (Through)				3 (Right Turn)				3U (U Turn)				4 (Left Turn)				5 (Through)				6 (Right Turn)				6U (U Turn)			
Time Period	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total
7:00 to 7:15	1	0	0	1	5	0	0	5	3	0	0	3				0	4	1	0	5	6	1	0	7	8	1	0	9				0
7:15 to 7:30	2	0	0	2	3	2	0	5	0	0	0	0				0	8	1	0	9	3	1	0	4	1	1	0	2				0
7:30 to 7:45	1	0	0	1	2	1	0	3	3	1	0	4				0	12	1	0	13	2	0	0	2	3	1	0	4				0
7:45 to 8:00	2	0	0	2	2	2	0	4	2	0	0	2				0	23	4	0	27	2	1	0	3	3	1	0	4				0
8:00 to 8:15	1	0	0	1	2	0	0	2	3	0	0	3				0	38	2	0	40	8	0	0	8	1	1	0	2				0
8:15 to 8:30	3	0	0	3	0	0	0	0	3	0	0	3				0	38	3	0	41	3	0	0	3	0	0	0	0				0
8:30 to 8:45	0	1	0	1	1	0	0	1	0	2	0	2				0	53	2	0	55	2	0	0	2	0	0	0	0				0
8:45 to 9:00	1	2	0	3	0	0	0	0	0	2	0	2				0	23	0	0	23	0	0	0	0	0	0	0	0				0
9:00 to 9:15				0				0				0				0				0				0				0				0
9:15 to 9:30				0				0				0				0				0				0				0				0
9:30 to 9:45				0				0				0				0				0				0				0				0
9:45 to 10:00				0				0				0				0				0				0				0				0
AM Totals	11	3	0	14	15	5	0	20	14	5	0	19	0	0	0	0	199	14	0	213	26	3	0	29	16	5	0	21	0	0	0	0

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Job No.	82019
Client	Land Dynamics Aust
Suburb	Sancrox
Location	Sancrox Rd & Frogs Rd
Day/Date	Thursday 27 June 2019
Weather	Overcast & Some Showers
Description	Intersection Count

Approach	Frogs Rd (Quarry Access)															Sancrox Road (West)														
Direction	7 (Left Turn)				8 (Through)				9 (Right Turn)				9U (U Turn)				10 (Left Turn)				11 (Through)				12 (Right Turn)				12U (U Turn)			
Time Period	Cars	Truck s	Buses	Total	Cars	Truck s	Buses	Total	Cars	Truck s	Buses	Total	Cars	Truck s	Buses	Total	Cars	Truck s	Buses	Total	Cars	Truck s	Buses	Total	Cars	Truck s	Buses	Total	Cars	Truck s	Buses	Total
7:00 to 7:15				0				0				0				0	0	1	0	1	7	0	0	7	3	1	0	4				0
7:15 to 7:30				0				0				0				0	0	0	0	0	8	0	0	8	5	0	0	5				0
7:30 to 7:45				0				0				0				0	0	0	0	0	3	0	0	3	12	0	0	12				0
7:45 to 8:00				0				0				0				0	0	0	0	0	1	0	0	1	13	0	0	13				0
8:00 to 8:15				0				0				0				0	0	0	0	0	4	0	0	4	16	0	0	16				0
8:15 to 8:30				0				0				0				0	0	0	0	0	2	0	0	2	19	0	0	19				0
8:30 to 8:45				0				0				0				0	0	0	0	0	5	0	0	5	17	0	0	17				0
8:45 to 9:00				0				0				0				0	0	0	0	0	2	0	0	2	11	0	0	11				0
9:00 to 9:15				0				0				0				0				0				0				0				0
9:15 to 9:30				0				0				0				0				0				0				0				0
9:30 to 9:45				0				0				0				0				0				0				0				0
9:45 to 10:00				0				0				0				0				0				0				0				0
AM Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	32	0	0	32	96	1	0	97	0	0	0	0

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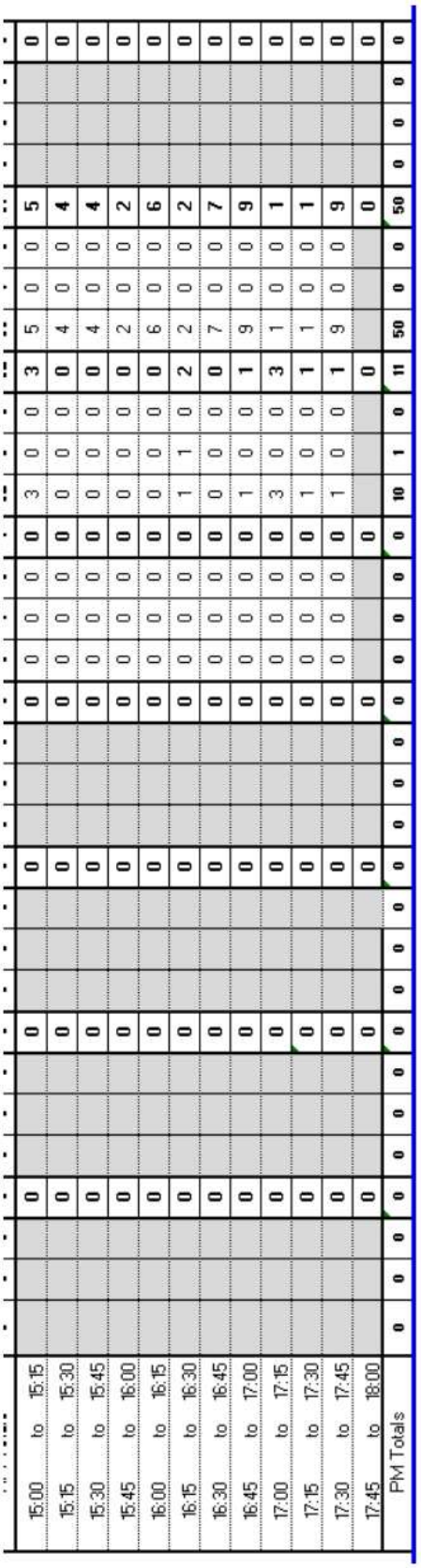

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Job No. 82019
Client Land Dynamics Aust
Suburb Sancrox
Location Sancrox Rd & Rawdon Is Rd Rd

Day/Date Thursday 27 June 2019
Weather Rain, Cloudy & Overcast
Description Intersection Count

Approach	Rawdon Island Rd (south)																Sancrox Road (east)															
Direction	1 (Left Turn)				2 (Through)				3 (Right Turn)				3U (U Turn)				4 (Left Turn)				5 (Through)				6 (Right Turn)				6U (U Turn)			
Time Period	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total
7:00 to 7:15	0	0	0	**0**	4	0	0	**4**	2	2	0	**4**				**0**	1	0	0	**1**	0	0	0	**0**	1	2	0	**3**				**0**
7:15 to 7:30	0	0	0	**0**	2	0	0	**2**	6	0	0	**6**				**0**	1	0	0	**1**	0	0	0	**0**	1	0	0	**1**				**0**
7:30 to 7:45	0	0	0	**0**	1	1	0	**2**	8	0	0	**8**				**0**	3	1	0	**4**	1	0	0	**1**	1	0	0	**1**				**0**
7:45 to 8:00	1	0	0	**1**	1	0	0	**1**	12	0	0	**12**				**0**	1	0	0	**1**	0	0	0	**0**	1	2	0	**3**				**0**
8:00 to 8:15	3	0	0	**3**	2	0	0	**2**	9	0	0	**9**				**0**	5	0	0	**5**	0	0	0	**0**	2	0	0	**2**				**0**
8:15 to 8:30	0	0	0	**0**	1	0	0	**1**	18	0	0	**18**				**0**	1	0	0	**1**	0	0	0	**0**	2	0	0	**2**				**0**
8:30 to 8:45	0	0	0	**0**	1	3	0	**4**	7	0	0	**7**				**0**	2	0	0	**2**	0	0	0	**0**	2	0	0	**2**				**0**
8:45 to 9:00	0	0	0	**0**	1	0	0	**1**	7	0	0	**7**				**0**	3	1	0	**4**	1	1	0	**2**	1	0	0	**1**				**0**
9:00 to 9:15				**0**				**0**				**0**				**0**				**0**				**0**				**0**				**0**
9:15 to 9:30				**0**				**0**				**0**				**0**				**0**				**0**				**0**				**0**
9:30 to 9:45				**0**				**0**				**0**				**0**				**0**				**0**				**0**				**0**
9:45 to 10:00				**0**				**0**				**0**				**0**				**0**				**0**				**0**				**0**
AM Totals	4	0	0	**4**	13	4	0	**17**	69	2	0	**71**	0	0	0	**0**	17	2	0	**19**	2	1	0	**3**	11	4	0	**15**	0	0	0	**0**

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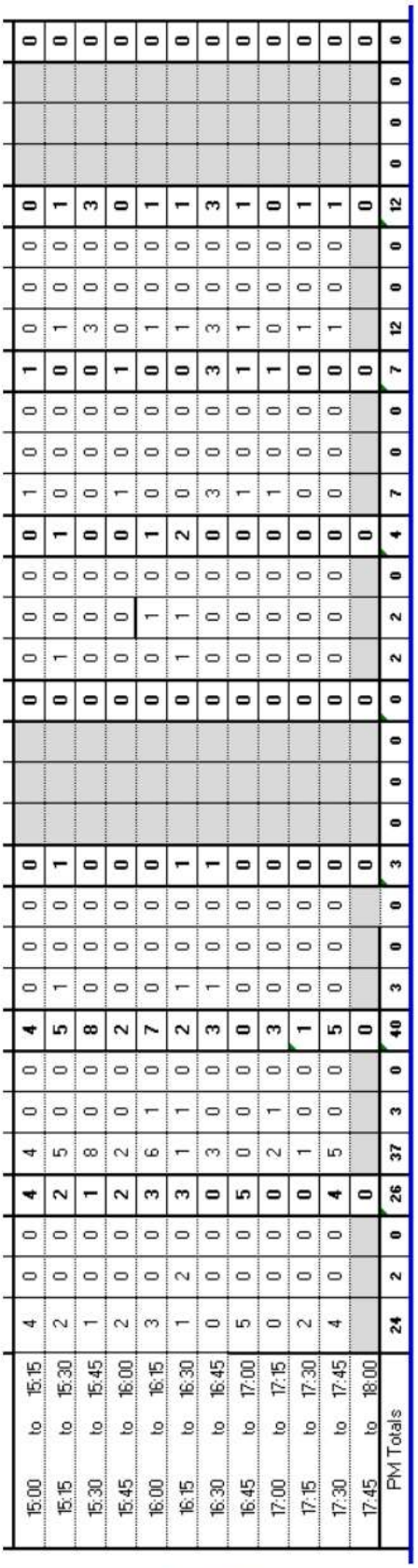
Job No. 82019
Client Land Dynamics Aust
Suburb Sancrox
Location Sancrox Rd & Rawdon Is Rd Rd

Day/Date Thursday 27 June 2019
Weather Rain, Cloudy & Overcast
Description Intersection Count

Approach	Rawdon Island Rd (north)																Sancrox Road (west)															
Direction	7 (Left Turn)				8 (Through)				9 (Right Turn)				9U (U Turn)				10 (Left Turn)				11 (Through)				12 (Right Turn)				12U (U Turn)			
Time Period	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total	Cars	Trucks	Buses	Total
7:00 to 7:15	4	0	0	4	1	3	0	4	0	0	0	0				0	0	0	0	0	2	0	0	2	0	0	0	0				0
7:15 to 7:30	3	0	0	3	2	5	0	7	0	0	0	0				0	0	0	0	0	2	0	0	2	2	0	0	2				0
7:30 to 7:45	4	0	0	4	3	1	0	4	0	1	0	1				0	0	0	0	0	6	1	0	7	0	0	0	0				0
7:45 to 8:00	4	0	0	4	3	3	0	6	1	0	0	1				0	1	0	0	1	3	0	0	3	1	0	0	1				0
8:00 to 8:15	13	0	0	13	7	0	0	7	0	1	0	1				0	0	0	0	0	4	0	0	4	0	1	0	1				0
8:15 to 8:30	7	0	0	7	6	0	0	6	0	0	0	0				0	0	0	0	0	3	0	0	3	2	0	0	2				0
8:30 to 8:45	7	1	0	8	4	0	0	4	0	0	0	0				0	0	0	0	0	4	0	0	4	3	0	0	3				0
8:45 to 9:00	3	0	0	3	6	0	0	6	0	0	0	0				0	0	0		0	1	0	0	1	0	0		0				0
9:00 to 9:15				0				0				0				0				0				0				0				0
9:15 to 9:30				0				0				0				0				0				0				0				0
9:30 to 9:45				0				0				0				0				0				0				0				0
9:45 to 10:00				0				0				0				0				0				0				0				0
AM Totals	45	1	0	46	32	12	0	44	1	2	0	3	0	0	0	0	1	0	0	1	25	1	0	26	8	1	0	9	0	0	0	0

Draft



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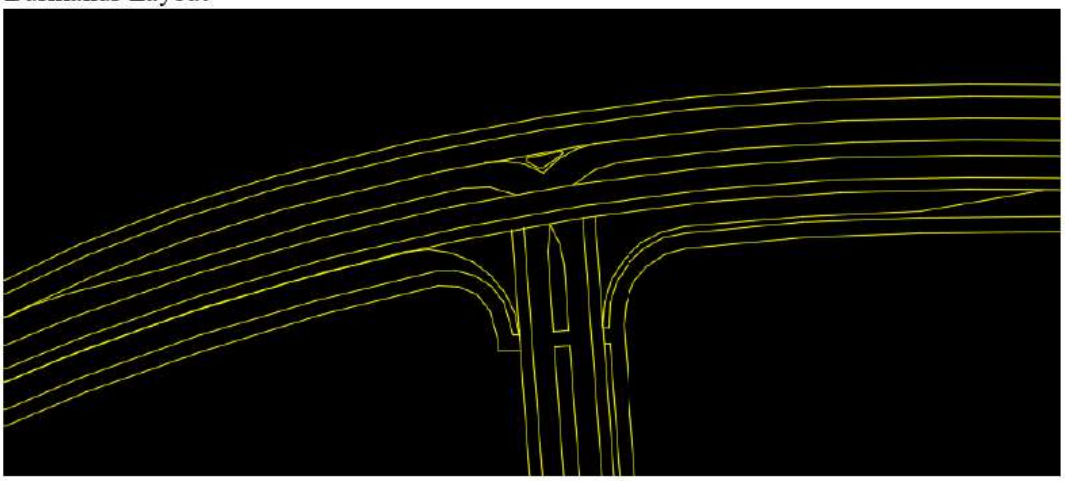
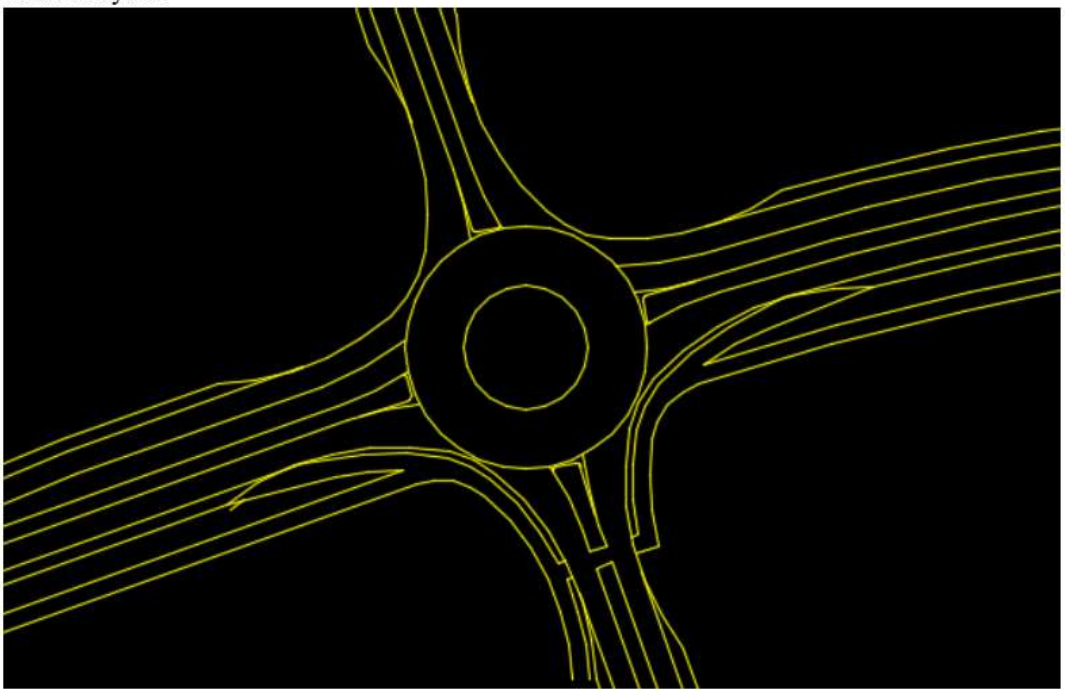
APPENDIX D

SIDRA MODELLING REPORT

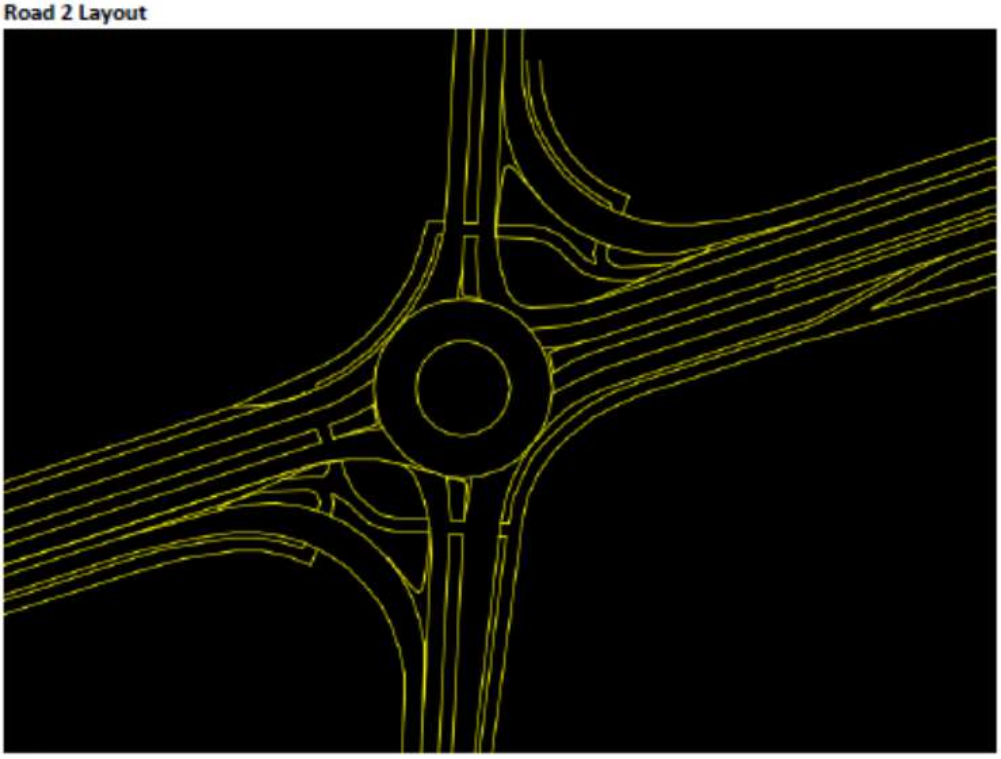
Bushlands Layout



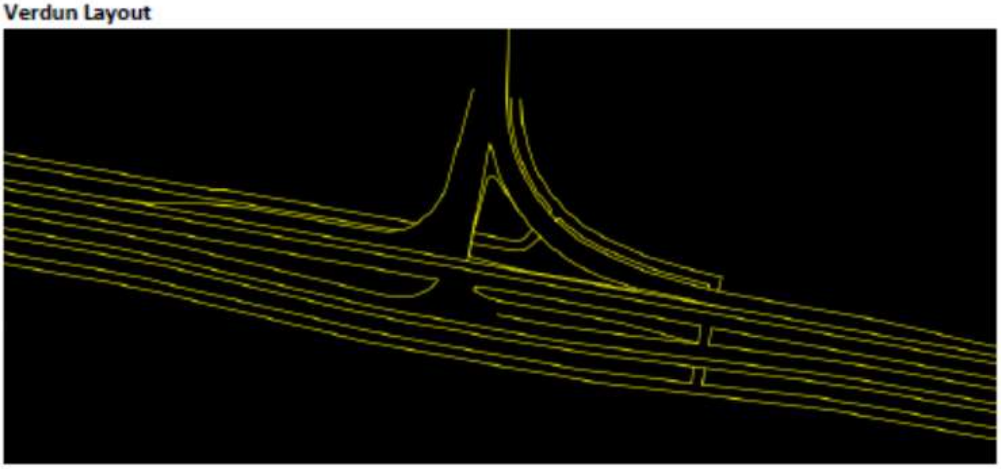
Road 1 layout



Road 2 Layout



Verdun Layout



SIDRA Model Output Summary

Detailed outputs are following, however a summary of outputs is in the table below. The outputs are direct from SIDRA Intersection.

Table 1 - SIDRA output Summary SANCROX ROAD & BUSHLANDS DRIVE INTERSECTION (Seagull)

	2030	2040	2050	2050 No seagull
Average Delay	~~(1.9s)~~ 1.8s	~~(1.9s)~~ 2.0s	~~(2.1s)~~ 2.1s	~~(2.5s)~~ 2.6s
LOS	A	A	A	B
95% percentile queue	3m	5m	9m	9m
Degree of Saturation	0.139	0.258	0.430	0.430

Table 2 - SIDRA output Summary SANCROX ROAD & ROAD 1 INTERSECTION

	2030	2040	2050	2050 alternative
Average Delay	6.2s	7.2s	49.5s	10.1s
LOS	A	A	D	A
95% percentile queue	5m	17m	419m	33m
Degree of Saturation	0.136	0.350	1.090	0.513

Table 3 - SIDRA output Summary SANCROX ROAD & ROAD 2 INTERSECTION

	2030	2040	2050
Average Delay	6.5s	6.8s	7.5s
LOS	A	A	A
95% percentile queue	4m	7m	14m
Degree of Saturation	0.100	0.163	0.278

Table 4 - SIDRA output Summary SANCROX ROAD & VERDUN DRIVE INTERSECTION

	2030	2040	2050	2050 No slip lane
Average Delay	0.8s	1.2s	1.3s	1.6s
LOS	A	A	A	A
95% percentile queue	1m	1m	3m	4m
Degree of Saturation	0.096	0.157	0.280	0.280

Bushlands Drive

Removing the seagull acceleration lane increases the average delay for the right out from 8s to 20s in 2050, resulting in a LOS B for the right out. Most other metrics are unchanged or similar.

Road 1

The intersection operates adequately and within capacity for all modelled scenarios with exception of 2050 where the Northern leg fails due to the high volume of eastbound traffic.

Testing of an alternative scenario revealed that the addition of a 30m long left turn lane on the northern leg would provide adequate capacity in 2050 to reduce Average Delay to 10.1s, LOS A, 95th percentile queue of 33m and DoS of 0.513.

Tested alternative layout for 2050 showing additional left turn lane on northern leg is included in Appendix C.

Road 2

The intersection operates adequately and within capacity for all modelled scenarios.

Verdun Drive

The intersection operates adequately and within capacity for all modelled scenarios.

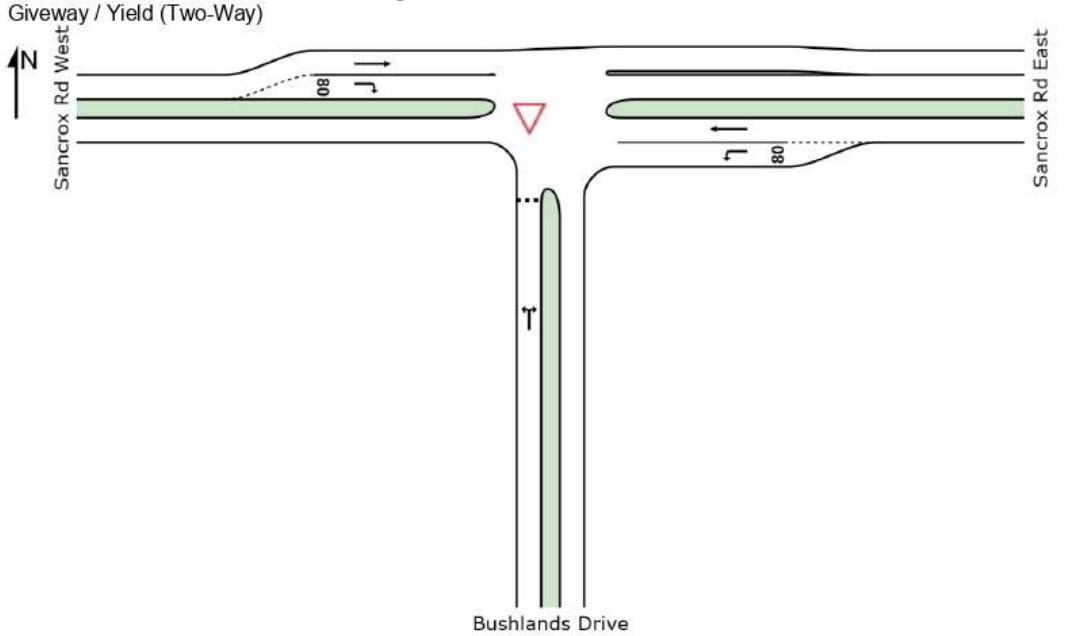
An alternative layout was requested to be tested, with the southbound left turn slip lane removed. This scenario operates adequately in 2050, with the left turn incurring an average delay of 9s with Degree of Saturation of 0.147. The tested alternative layout outputs are in Appendix C.

BUSHLANDS DRIVE - Model outputs

SITE LAYOUT

Site: Sancrox Rd and Bushlands Dr - seagull

Sancrox Road and Bushlands Drive - seagull
Giveway / Yield (Two-Way)



MOVEMENT SUMMARY

Site: Sancrox Rd and Bushlands Dr - 2030 seagull

Sancrox Rd and Bushlands Dr - 2030 seagull
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Bushlands Drive											
1	L2	8	5.0	0.027	6.1	LOS A	0.1	0.7	0.28	0.58	52.6
3	R2	20	5.0	0.027	6.6	LOS A	0.1	0.7	0.28	0.58	52.3
Approach		28	5.0	0.027	6.5	LOS A	0.1	0.7	0.28	0.58	52.4
East: Sancrox Rd East											
4	L2	37	5.0	0.021	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
5	T1	148	5.0	0.079	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		185	5.0	0.079	1.1	NA	0.0	0.0	0.00	0.11	58.5
West: Sancrox Rd West											
11	T1	263	5.0	0.139	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R2	113	5.0	0.076	6.1	LOS A	0.4	2.6	0.30	0.58	52.1
Approach		376	5.0	0.139	1.8	NA	0.4	2.6	0.09	0.17	57.4
All Vehicles		589	5.0	0.139	1.8	NA	0.4	2.6	0.07	0.17	57.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Bushlands Dr - 2040 seagull

Sancrox Rd and Bushlands Dr - 2040 seagull
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Bushlands Drive											
1	L2	13	5.0	0.043	6.1	LOS A	0.1	1.1	0.32	0.61	52.4
3	R2	29	5.0	0.043	7.2	LOS A	0.1	1.1	0.32	0.61	52.2
Approach		42	5.0	0.043	6.9	LOS A	0.1	1.1	0.32	0.61	52.3
East: Sancrox Rd East											
4	L2	40	5.0	0.022	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
5	T1	159	5.0	0.084	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		199	5.0	0.084	1.1	NA	0.0	0.0	0.00	0.12	58.5
West: Sancrox Rd West											
11	T1	487	5.0	0.258	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
12	R2	208	5.0	0.143	6.2	LOS A	0.7	5.0	0.33	0.59	52.0
Approach		696	5.0	0.258	1.9	NA	0.7	5.0	0.10	0.18	57.3
All Vehicles		937	5.0	0.258	2.0	NA	0.7	5.0	0.09	0.18	57.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Bushlands Dr - 2050 seagull

Sancrox Rd and Bushlands Dr - 2050 seagull
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID		ODMo Demand Flows [Total	HV]	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Bushlands Drive											
1	L2	22	5.0	0.085	6.1	LOS A	0.3	2.1	0.36	0.65	51.9
3	R2	52	5.0	0.085	8.2	LOS A	0.3	2.1	0.36	0.65	51.7
Approach		74	5.0	0.085	7.6	LOS A	0.3	2.1	0.36	0.65	51.8
East: Sancrox Rd East											
4	L2	40	5.0	0.022	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
5	T1	161	5.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		201	5.0	0.085	1.1	NA	0.0	0.0	0.00	0.11	58.5
West: Sancrox Rd West											
11	T1	813	5.0	0.430	0.1	LOS A	0.0	0.0	0.00	0.00	59.9
12	R2	348	5.0	0.239	6.3	LOS A	1.3	9.1	0.36	0.60	51.9
Approach		1161	5.0	0.430	1.9	NA	1.3	9.1	0.11	0.18	57.2
All Vehicles		1436	5.0	0.430	2.1	NA	1.3	9.1	0.11	0.20	57.1

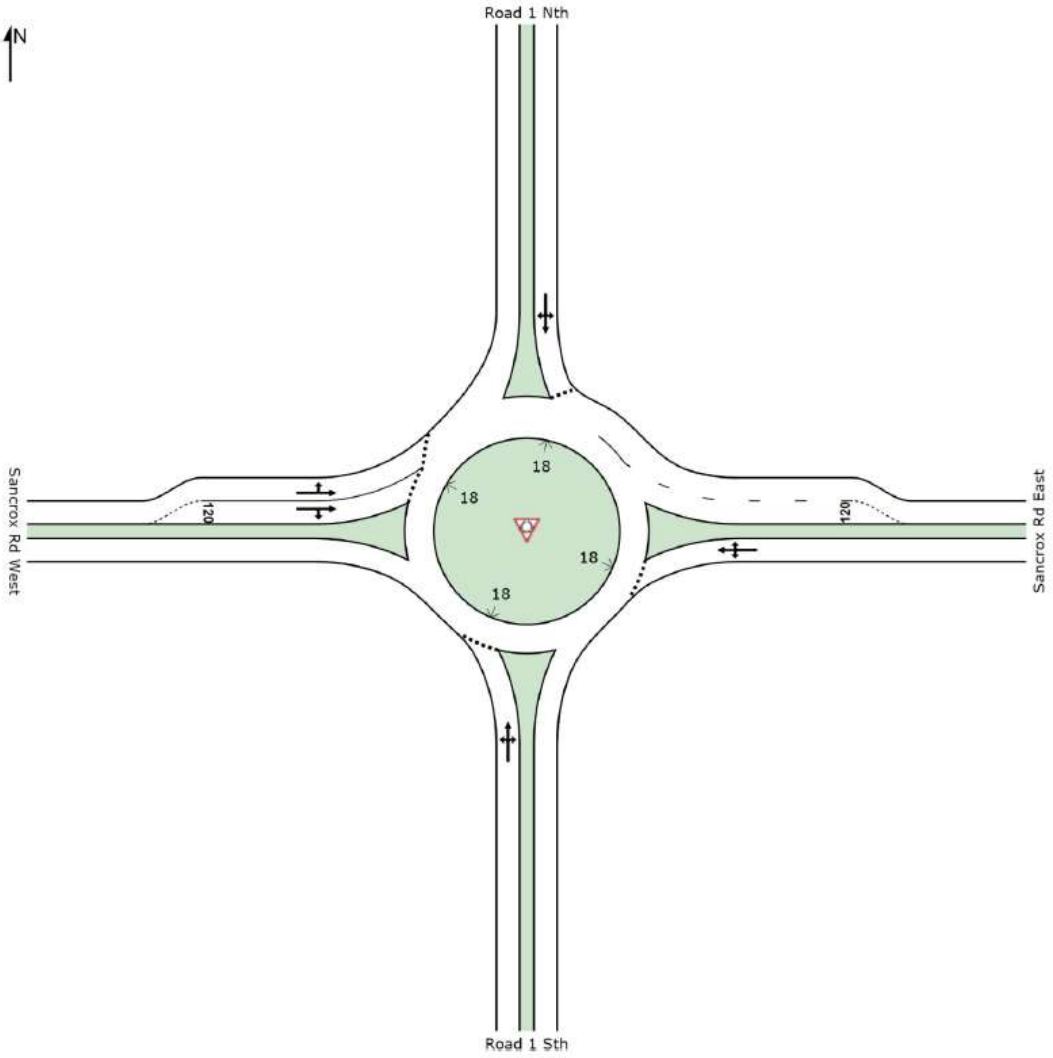
Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

ROAD 1 - Model outputs

SITE LAYOUT

Site: Sancrox Rd and Road 1 - 2030

Sancrox Rd and Road 1
Roundabout



MOVEMENT SUMMARY

Site: Sancrox Rd and Road 1 - 2030

Sancrox Rd and Road 1
Roundabout

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Road 1 Sth											
1	L2	34	5.0	0.087	4.4	LOS A	0.4	3.2	0.22	0.58	52.2
2	T1	1	5.0	0.087	4.6	LOS A	0.4	3.2	0.22	0.58	53.5
3	R2	80	5.0	0.087	9.0	LOS A	0.4	3.2	0.22	0.58	53.3
Approach		115	5.0	0.087	7.6	LOS A	0.4	3.2	0.22	0.58	53.0
East: Sancrox Rd East											
4	L2	13	5.0	0.049	4.5	LOS A	0.2	1.8	0.27	0.49	53.5
5	T1	37	5.0	0.049	4.8	LOS A	0.2	1.8	0.27	0.49	54.8
6	R2	13	5.0	0.049	9.2	LOS A	0.2	1.8	0.27	0.49	54.6
Approach		62	5.0	0.049	5.6	LOS A	0.2	1.8	0.27	0.49	54.4
North: Road 1 Nth											

7	L2	59	5.0	0.104	6.0	LOS A	0.5	4.0	0.50	0.62	52.7
8	T1	21	5.0	0.104	6.2	LOS A	0.5	4.0	0.50	0.62	53.9
9	R2	26	5.0	0.104	10.6	LOS A	0.5	4.0	0.50	0.62	53.7
Approach		106	5.0	0.104	7.2	LOS A	0.5	4.0	0.50	0.62	53.2
West: Sancrox Rd West											
10	L2	34	5.0	0.136	4.7	LOS A	0.7	5.3	0.24	0.43	53.9
11	T1	237	5.0	0.136	4.7	LOS A	0.7	5.3	0.24	0.46	55.0
12	R2	67	5.0	0.101	9.1	LOS A	0.5	3.7	0.25	0.55	53.6
Approach		338	5.0	0.136	5.6	LOS A	0.7	5.3	0.24	0.48	54.6
All Vehicles		621	5.0	0.136	6.2	LOS A	0.7	5.3	0.28	0.52	54.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Road 1 - 2040

Sancrox Rd and Road 1
Roundabout

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Road 1 Sth											
1	L2	52	5.0	0.145	4.8	LOS A	0.8	5.8	0.34	0.60	51.9
2	T1	2	5.0	0.145	5.1	LOS A	0.8	5.8	0.34	0.60	53.1
3	R2	122	5.0	0.145	9.5	LOS A	0.8	5.8	0.34	0.60	52.9
Approach		176	5.0	0.145	8.0	LOS A	0.8	5.8	0.34	0.60	52.6
East: Sancrox Rd East											
4	L2	20	5.0	0.089	5.2	LOS A	0.5	3.4	0.42	0.55	52.9
5	T1	59	5.0	0.089	5.5	LOS A	0.5	3.4	0.42	0.55	54.1
6	R2	20	5.0	0.089	9.9	LOS A	0.5	3.4	0.42	0.55	54.0
Approach		99	5.0	0.089	6.3	LOS A	0.5	3.4	0.42	0.55	53.8
North: Road 1 Nth											
7	L2	157	5.0	0.350	8.6	LOS A	2.3	16.5	0.75	0.81	50.9
8	T1	57	5.0	0.350	8.9	LOS A	2.3	16.5	0.75	0.81	52.1
9	R2	72	5.0	0.350	13.3	LOS A	2.3	16.5	0.75	0.81	51.9
Approach		285	5.0	0.350	9.8	LOS A	2.3	16.5	0.75	0.81	51.4
West: Sancrox Rd West											
10	L2	60	5.0	0.250	4.9	LOS A	1.5	11.2	0.34	0.47	53.5
11	T1	417	5.0	0.250	4.9	LOS A	1.5	11.2	0.34	0.49	54.6
12	R2	119	5.0	0.185	9.5	LOS A	1.0	7.6	0.34	0.57	53.3
Approach		596	5.0	0.250	5.8	LOS A	1.5	11.2	0.34	0.51	54.2
All Vehicles		1156	5.0	0.350	7.2	LOS A	2.3	16.5	0.45	0.60	53.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Road 1 - 2050

Sancrox Rd and Road 1
Roundabout

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Road 1 Sth											
1	L2	66	5.0	0.206	5.4	LOS A	1.2	9.0	0.48	0.65	51.5
2	T1	2	5.0	0.206	5.6	LOS A	1.2	9.0	0.48	0.65	52.7
3	R2	158	5.0	0.206	10.0	LOS A	1.2	9.0	0.48	0.65	52.5
Approach		226	5.0	0.206	8.6	LOS A	1.2	9.0	0.48	0.65	52.2
East: Sancrox Rd East											
4	L2	28	5.0	0.152	6.4	LOS A	0.9	6.6	0.60	0.66	52.1
5	T1	85	5.0	0.152	6.6	LOS A	0.9	6.6	0.60	0.66	53.4
6	R2	28	5.0	0.152	11.0	LOS A	0.9	6.6	0.60	0.66	53.2
Approach		142	5.0	0.152	7.5	LOS A	0.9	6.6	0.60	0.66	53.1
North: Road 1 Nth											
7	L2	326	5.0	1.090	144.5	LOS F	57.4	419.2	1.00	3.19	17.7
8	T1	119	5.0	1.090	144.7	LOS F	57.4	419.2	1.00	3.19	17.9
9	R2	148	5.0	1.090	149.1	LOS F	57.4	419.2	1.00	3.19	17.9
Approach		594	5.0	1.090	145.7	LOS F	57.4	419.2	1.00	3.19	17.8
West: Sancrox Rd West											
10	L2	97	5.0	0.420	5.3	LOS A	3.1	22.8	0.47	0.52	52.9
11	T1	676	5.0	0.420	5.3	LOS A	3.1	22.8	0.46	0.54	54.0
12	R2	194	5.0	0.311	9.9	LOS A	2.0	14.5	0.45	0.61	52.9
Approach		966	5.0	0.420	6.2	LOS A	3.1	22.8	0.46	0.55	53.7
All Vehicles		1928	5.0	1.090	49.5	LOS D	57.4	419.2	0.64	1.38	33.1

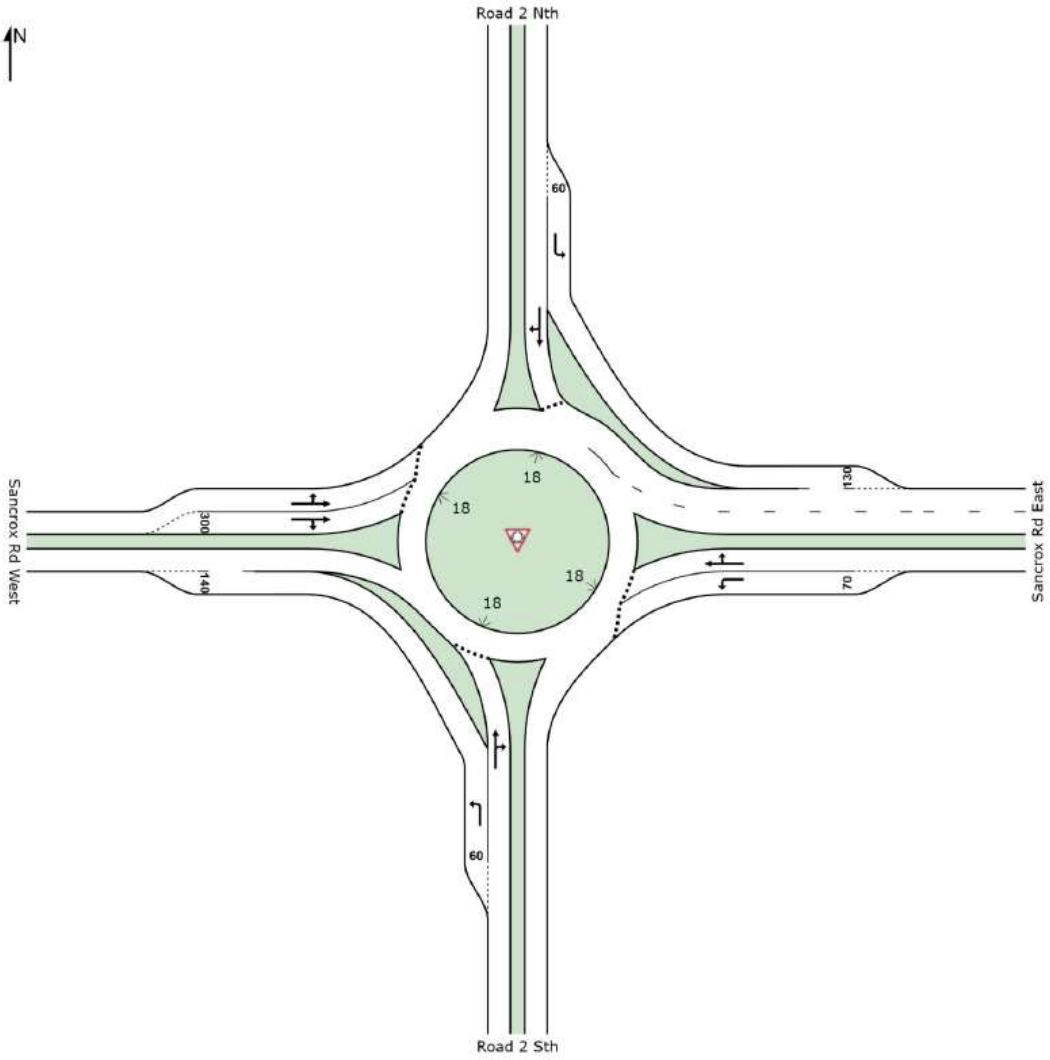
Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

ROAD 2 - Model outputs

SITE LAYOUT

Site: Sancrox Rd and Road 2

Sancrox Rd and Road 2
Roundabout



MOVEMENT SUMMARY

Site: Sancrox Rd and Road 2 - 2030

Sancrox Rd and Road 2
Roundabout

Movement Performance - Vehicles

Mov ID		ODMo Demand Flows v Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Road 2 Sth											
1	L2	63	5.0	0.034	3.7	LOS A	0.0	0.0	0.00	0.47	55.8
2	T1	2	5.0	0.100	4.6	LOS A	0.5	3.7	0.22	0.60	52.4
3	R2	152	5.0	0.100	9.0	LOS A	0.5	3.7	0.22	0.60	52.3
Approach		217	5.0	0.100	7.4	LOS A	0.5	3.7	0.16	0.56	53.2
East: Sancrox Rd East											
4	L2	29	5.0	0.025	4.8	LOS A	0.1	0.9	0.25	0.48	54.0
5	T1	48	5.0	0.045	4.6	LOS A	0.2	1.6	0.23	0.49	54.6
6	R2	20	5.0	0.045	9.0	LOS A	0.2	1.6	0.23	0.49	54.4
Approach		98	5.0	0.045	5.6	LOS A	0.2	1.6	0.23	0.49	54.4

North: Road 2 Nth											
7	L2	45	5.0	0.024	3.7	LOS A	0.0	0.0	0.00	0.47	55.8
8	T1	17	5.0	0.030	5.5	LOS A	0.2	1.1	0.44	0.58	53.0
9	R2	21	5.0	0.030	9.9	LOS A	0.2	1.1	0.44	0.58	52.9
Approach		83	5.0	0.030	5.6	LOS A	0.2	1.1	0.20	0.52	54.5
West: Sancrox Rd West											
10	L2	2	5.0	0.076	4.9	LOS A	0.4	2.9	0.32	0.45	53.5
11	T1	141	5.0	0.076	4.9	LOS A	0.4	2.9	0.32	0.48	54.5
12	R2	61	5.0	0.076	9.5	LOS A	0.4	2.8	0.33	0.58	53.0
Approach		204	5.0	0.076	6.3	LOS A	0.4	2.9	0.32	0.51	54.1
All Vehicles		602	5.0	0.100	6.5	LOS A	0.5	3.7	0.23	0.53	53.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Road 2 - 2040

Sancrox Rd and Road 2
Roundabout

Movement Performance - Vehicles

Mov ID		ODMo Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Road 2 Sth											
1	L2	96	5.0	0.052	3.7	LOS A	0.0	0.0	0.00	0.47	55.8
2	T1	3	5.0	0.163	5.0	LOS A	0.9	6.7	0.35	0.62	52.0
3	R2	231	5.0	0.163	9.4	LOS A	0.9	6.7	0.35	0.62	51.9
Approach		329	5.0	0.163	7.7	LOS A	0.9	6.7	0.25	0.58	52.9
East: Sancrox Rd East											
4	L2	55	5.0	0.051	5.4	LOS A	0.3	1.8	0.37	0.53	53.6
5	T1	91	5.0	0.091	5.0	LOS A	0.5	3.5	0.35	0.52	54.1
6	R2	37	5.0	0.091	9.4	LOS A	0.5	3.5	0.35	0.52	53.9
Approach		182	5.0	0.091	6.0	LOS A	0.5	3.5	0.36	0.52	53.9
North: Road 2 Nth											
7	L2	114	5.0	0.061	3.7	LOS A	0.0	0.0	0.00	0.47	55.8
8	T1	41	5.0	0.086	6.8	LOS A	0.5	3.7	0.61	0.67	52.3
9	R2	52	5.0	0.086	11.2	LOS A	0.5	3.7	0.61	0.67	52.1
Approach		206	5.0	0.086	6.2	LOS A	0.5	3.7	0.28	0.56	54.1
West: Sancrox Rd West											
10	L2	3	5.0	0.148	5.4	LOS A	0.8	6.1	0.43	0.51	53.0
11	T1	252	5.0	0.148	5.4	LOS A	0.8	6.1	0.43	0.54	54.1
12	R2	109	5.0	0.148	10.0	LOS A	0.8	5.9	0.45	0.63	52.6
Approach		364	5.0	0.148	6.8	LOS A	0.8	6.1	0.44	0.56	53.6
All Vehicles		1082	5.0	0.163	6.8	LOS A	0.9	6.7	0.34	0.56	53.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Road 2 - 2050

Sancrox Rd and Road 2
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Road 2 Sth											
1	L2	123	5.0	0.066	3.7	LOS A	0.0	0.0	0.00	0.47	55.8
2	T1	4	5.0	0.233	5.7	LOS A	1.4	10.5	0.50	0.67	51.6
3	R2	298	5.0	0.233	10.0	LOS A	1.4	10.5	0.50	0.67	51.4
Approach		425	5.0	0.233	8.2	LOS A	1.4	10.5	0.35	0.61	52.6
East: Sancrox Rd East											
4	L2	91	5.0	0.094	6.1	LOS A	0.5	3.6	0.50	0.60	53.2
5	T1	151	5.0	0.165	5.6	LOS A	1.0	7.1	0.49	0.59	53.5
6	R2	60	5.0	0.165	10.0	LOS A	1.0	7.1	0.49	0.59	53.4
Approach		301	5.0	0.165	6.7	LOS A	1.0	7.1	0.49	0.59	53.4
North: Road 2 Nth											
7	L2	233	5.0	0.125	3.7	LOS A	0.0	0.0	0.00	0.47	55.8
8	T1	40	5.0	0.183	10.1	LOS A	1.3	9.8	0.85	0.81	49.8
9	R2	105	5.0	0.183	14.5	LOS A	1.3	9.8	0.85	0.81	49.7
Approach		378	5.0	0.183	7.4	LOS A	1.3	9.8	0.33	0.60	53.3
West: Sancrox Rd West											
10	L2	6	5.0	0.278	6.0	LOS A	1.8	13.3	0.56	0.58	52.5
11	T1	436	5.0	0.278	6.0	LOS A	1.8	13.3	0.56	0.61	53.5
12	R2	189	5.0	0.278	10.8	LOS A	1.7	12.6	0.58	0.70	52.1
Approach		632	5.0	0.278	7.5	LOS A	1.8	13.3	0.57	0.64	53.1
All Vehicles		1736	5.0	0.278	7.5	LOS A	1.8	13.3	0.45	0.61	53.1

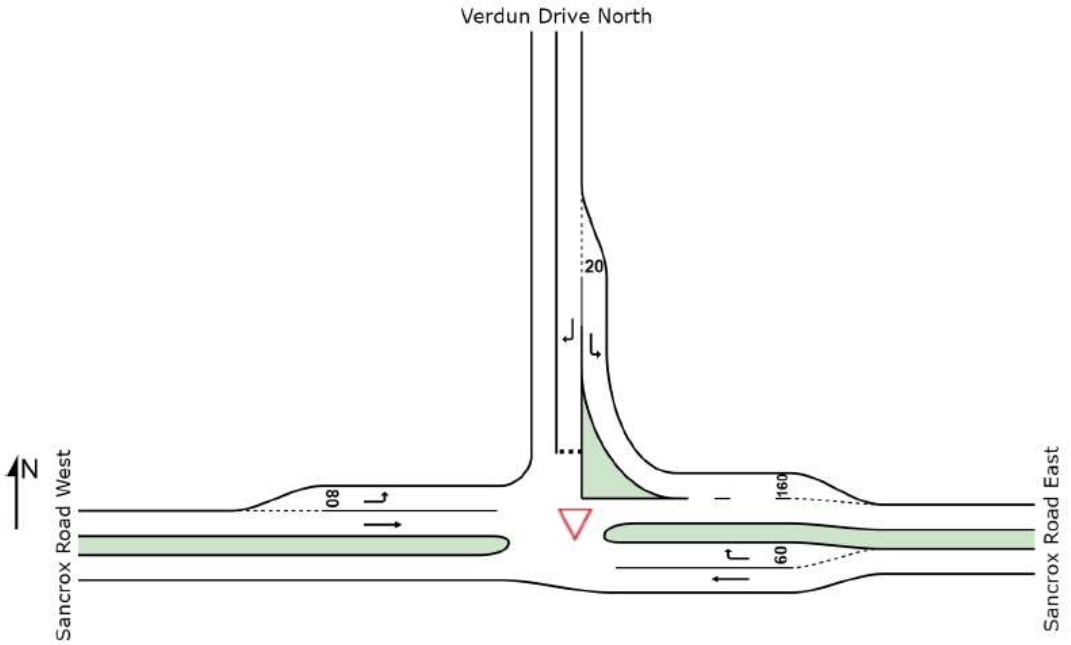
Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

VERDUN DRIVE - Model outputs

SITE LAYOUT

Site: Sancrox Rd and Verdun Dr - 2030

Sancrox Rd and Verdun Dr - 2030
Giveway / Yield (Two-Way)



MOVEMENT SUMMARY

Site: Sancrox Rd and Verdun Dr - 2030

Sancrox Rd and Verdun Dr - 2030
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Sancrox Road East											
5	T1	125	5.0	0.066	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	6	5.0	0.004	6.2	LOS A	0.0	0.1	0.30	0.52	52.5
Approach		132	5.0	0.066	0.3	NA	0.0	0.1	0.01	0.03	59.6
North: Verdun Drive North											
7	L2	23	5.0	0.013	5.7	LOS A	0.0	0.0	0.00	0.53	54.8
9	R2	9	5.0	0.010	6.8	LOS A	0.0	0.2	0.34	0.59	52.2
Approach		33	5.0	0.013	6.0	LOS A	0.0	0.2	0.10	0.54	54.0
West: Sancrox Road		d West									
10	L2	9	5.0	0.005	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
11	T1	182	5.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		192	5.0	0.096	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		356	5.0	0.096	0.8	NA	0.0	0.2	0.01	0.07	59.0

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Verdun Dr - 2040

Sancrox Rd and Verdun Dr - 2040
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD	Mo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
			veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Sancrox Road East												
5	T1		226	5.0	0.120	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2		12	5.0	0.009	6.6	LOS A	0.0	0.3	0.39	0.56	52.2
Approach			238	5.0	0.120	0.3	NA	0.0	0.3	0.02	0.03	59.5
North: Verdun Drive North												
7	L2		68	5.0	0.038	5.7	LOS A	0.0	0.0	0.00	0.53	54.8
9	R2		29	5.0	0.040	8.1	LOS A	0.1	0.9	0.46	0.70	51.3
Approach			98	5.0	0.040	6.4	LOS A	0.1	0.9	0.14	0.58	53.7
West: Sancrox Road			d West									
10	L2		16	5.0	0.009	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
11	T1		297	5.0	0.157	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach			313	5.0	0.157	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles			648	5.0	0.157	1.2	NA	0.1	0.9	0.03	0.11	58.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Verdun Dr - 2050

Sancrox Rd and Verdun Dr - 2050
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD	Mo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
			veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Sancrox Road East												
5	T1		360	5.0	0.191	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2		19	5.0	0.020	7.9	LOS A	0.1	0.6	0.53	0.65	51.6
Approach			379	5.0	0.191	0.4	NA	0.1	0.6	0.03	0.03	59.5
North: Verdun Drive												
7	L2		103	5.0	0.058	5.7	LOS A	0.0	0.0	0.00	0.53	54.8
9	R2		44	5.0	0.097	11.7	LOS A	0.3	2.2	0.66	0.86	48.8
Approach			147	5.0	0.097	7.5	LOS A	0.3	2.2	0.20	0.63	52.9
West: Sancrox Road West												
10	L2		27	5.0	0.015	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
11	T1		528	5.0	0.280	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach			556	5.0	0.280	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles			1082	5.0	0.280	1.3	NA	0.3	2.2	0.04	0.11	58.5

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

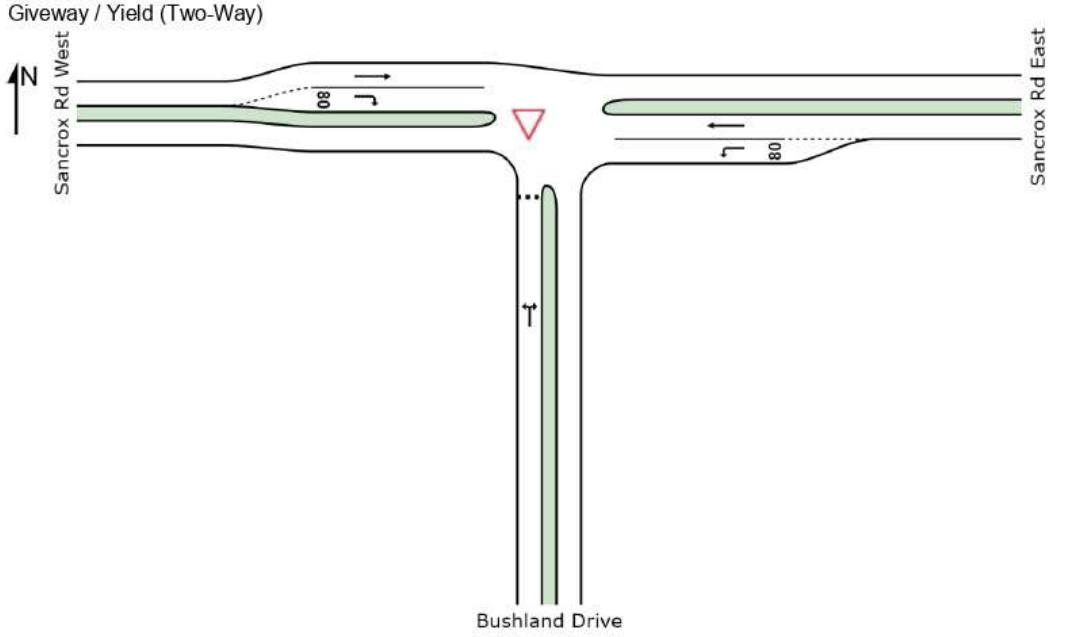
Alternative Layouts

BUSHLAND DRIVE ALTERNATIVE (no seagull) - Model outputs

SITE LAYOUT

Site: Sancrox Rd and Bushlands Dr - 2050 ALT - CHR

New Site
Giveway / Yield (Two-Way)



MOVEMENT SUMMARY

Site: Sancrox Rd and Bushlands Dr - 2030 ALT - CHR

Sancrox Rd and Bushlands Dr - 2030 ALT - CHR
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Bushland Drive											
1	L2	8	5.0	0.033	6.1	LOS A	0.1	0.8	0.34	0.62	52.0
3	R2	20	5.0	0.033	8.0	LOS A	0.1	0.8	0.34	0.62	51.8
Approach		28	5.0	0.033	7.4	LOS A	0.1	0.8	0.34	0.62	51.8
East: Sancrox Rd East											
4	L2	37	5.0	0.021	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
5	T1	148	5.0	0.079	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		185	5.0	0.079	1.1	NA	0.0	0.0	0.00	0.11	58.5
West: Sancrox Rd West											
11	T1	263	5.0	0.139	0.0	LOS A	0.0	0.0	0.00	0.00	60.0

12	R2	113	5.0	0.076	6.1	LOS A	0.4	2.6	0.30	0.58	52.1
Approach		376	5.0	0.139	1.8	NA	0.4	2.6	0.09	0.17	57.4
All Vehicles		589	5.0	0.139	1.9	NA	0.4	2.6	0.07	0.18	57.4

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Bushlands Dr - 2040 ALT - CHR

Sancrox Rd and Bushlands Dr - 2040 ALT - CHR
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Bushland Drive											
1	L2	13	5.0	0.069	6.1	LOS A	0.2	1.6	0.41	0.69	50.5
3	R2	29	5.0	0.069	11.0	LOS A	0.2	1.6	0.41	0.69	50.3
Approach		42	5.0	0.069	9.5	LOS A	0.2	1.6	0.41	0.69	50.4
East: Sancrox Rd East											
4	L2	40	5.0	0.022	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
5	T1	159	5.0	0.084	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		199	5.0	0.084	1.1	NA	0.0	0.0	0.00	0.12	58.5
West: Sancrox Rd West											
11	T1	487	5.0	0.258	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
12	R2	208	5.0	0.143	6.2	LOS A	0.7	5.0	0.33	0.59	52.0
Approach		696	5.0	0.258	1.9	NA	0.7	5.0	0.10	0.18	57.3
All Vehicles		937	5.0	0.258	2.1	NA	0.7	5.0	0.09	0.19	57.2

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Bushlands Dr - 2050 ALT - CHR

Sancrox Rd and Bushlands Dr - 2050 ALT - CHR
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Bushland Drive											
1	L2	22	5.0	0.238	6.8	LOS A	0.8	5.6	0.60	0.77	45.9
3	R2	52	5.0	0.238	21.0	LOS B	0.8	5.6	0.60	0.77	45.7
Approach		74	5.0	0.238	16.7	LOS B	0.8	5.6	0.60	0.77	45.8
East: Sancrox Rd East											
4	L2	40	5.0	0.022	5.6	LOS A	0.0	0.0	0.00	0.58	53.4

5 T1		161	5.0	0.085	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		201	5.0	0.085	1.1	NA	0.0	0.0	0.00	0.11	58.5
West: Sancrox Rd West											
11	T1	813	5.0	0.430	0.1	LOS A	0.0	0.0	0.00	0.00	59.9
12	R2	348	5.0	0.239	6.3	LOS A	1.3	9.1	0.36	0.60	51.9
Approach		1161	5.0	0.430	1.9	NA	1.3	9.1	0.11	0.18	57.2
All Vehicles		1436	5.0	0.430	2.6	NA	1.3	9.1	0.12	0.20	56.7

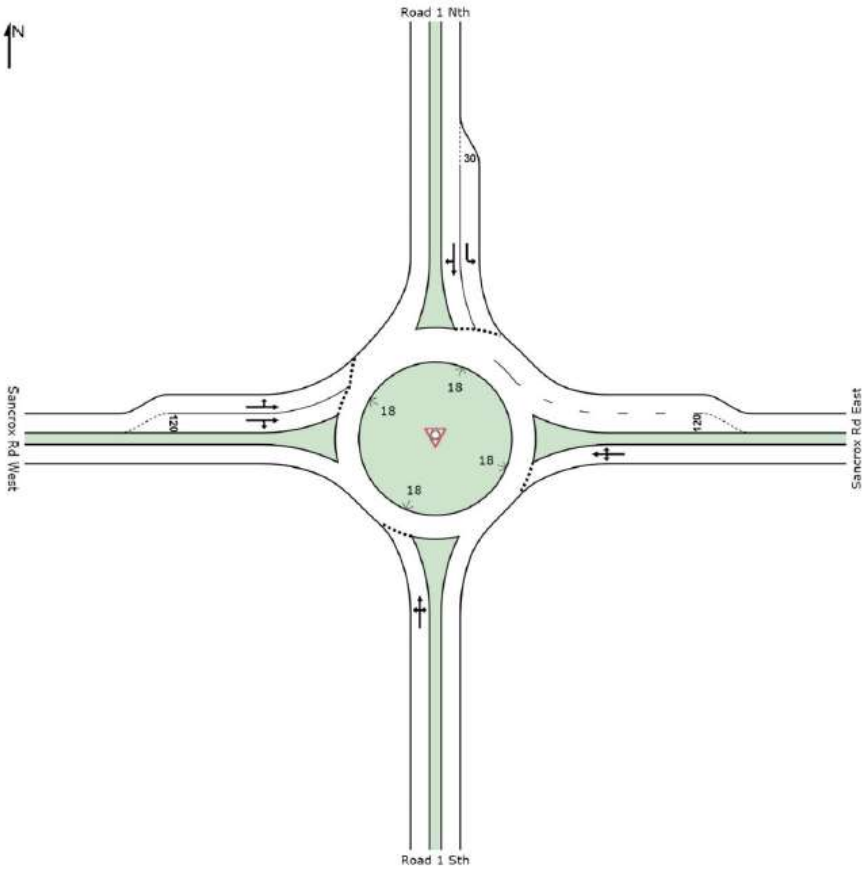
Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

ROAD 1 ALTERNATIVE (additional lane north leg) - Model outputs

SITE LAYOUT

Site: Sancrox Rd and Road 1 - Alternative

Sancrox Rd and Road 1
Roundabout



MOVEMENT SUMMARY

Site: Sancrox Rd and Road 1 - 2050 - Alternative

Sancrox Rd and Road 1
Roundabout

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Road 1 Sth											
1	L2	66	5.0	0.208	5.5	LOS A	1.2	9.1	0.49	0.65	51.4
2	T1	2	5.0	0.208	5.7	LOS A	1.2	9.1	0.49	0.65	52.6
3	R2	158	5.0	0.208	10.1	LOS A	1.2	9.1	0.49	0.65	52.5
Approach		226	5.0	0.208	8.7	LOS A	1.2	9.1	0.49	0.65	52.2
East: Sancrox Rd East											
4	L2	28	5.0	0.155	6.5	LOS A	0.9	6.8	0.62	0.67	52.1
5	T1	85	5.0	0.155	6.8	LOS A	0.9	6.8	0.62	0.67	53.3
6	R2	28	5.0	0.155	11.2	LOS A	0.9	6.8	0.62	0.67	53.1
Approach		142	5.0	0.155	7.6	LOS A	0.9	6.8	0.62	0.67	53.0
North: Road 1 Nth											
7	L2	326	5.0	0.460	14.3	LOS A	4.2	30.7	0.98	0.99	47.7
8	T1	119	5.0	0.513	19.1	LOS B	4.5	33.2	0.96	1.10	44.9
9	R2	148	5.0	0.513	23.5	LOS B	4.5	33.2	0.96	1.10	44.8
Approach		594	5.0	0.513	17.6	LOS B	4.5	33.2	0.97	1.04	46.3
West: Sancrox Rd West											
10	L2	97	5.0	0.420	5.3	LOS A	3.1	22.9	0.47	0.52	52.9
11	T1	676	5.0	0.420	5.3	LOS A	3.1	22.9	0.46	0.54	54.0
12	R2	194	5.0	0.312	9.9	LOS A	2.0	14.6	0.45	0.61	52.9
Approach		966	5.0	0.420	6.2	LOS A	3.1	22.9	0.46	0.55	53.7
All Vehicles		1928	5.0	0.513	10.1	LOS A	4.5	33.2	0.63	0.72	51.0

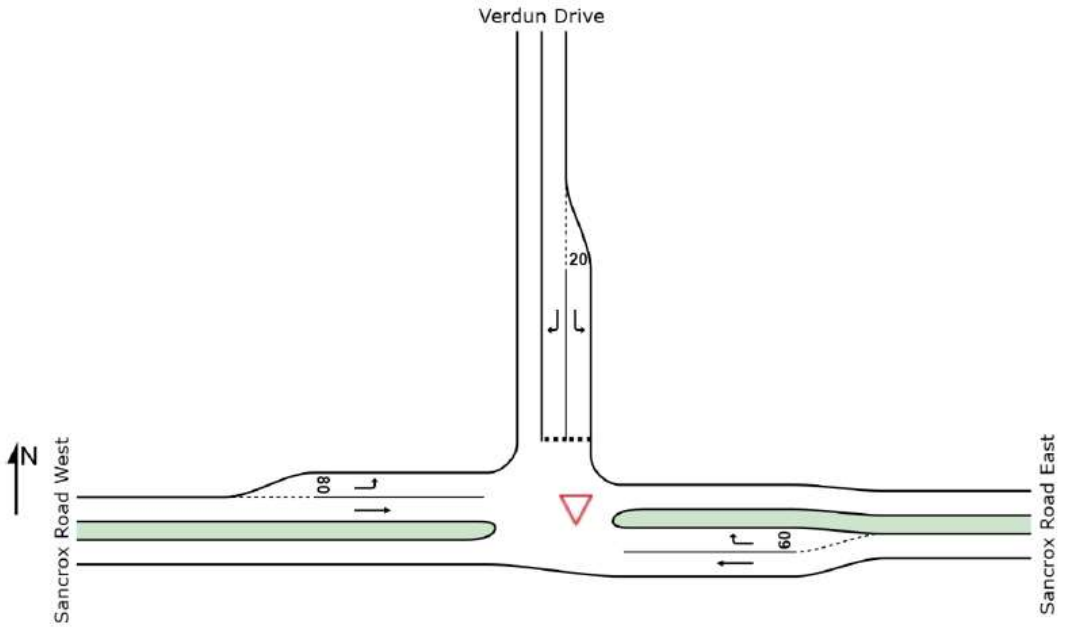
Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

VERDUN ROAD ALTERNATIVE (no left slip lane) - Model outputs

SITE LAYOUT

Site: Sancrox Rd and Verdun Dr - ALT no slip

Sancrox Rd and Verdun Dr - ALT no slip
Giveway / Yield (Two-Way)



MOVEMENT SUMMARY

Site: Sancrox Rd and Verdun Dr - 2030 - ALT no slip

Sancrox Rd and Verdun Dr - 2030 - ALT no slip
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	ODMo	Demand Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Sancrox Road East											
5	T1	125	5.0	0.066	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	6	5.0	0.004	6.1	LOS A	0.0	0.1	0.30	0.53	52.3
Approach		132	5.0	0.066	0.3	NA	0.0	0.1	0.01	0.03	59.6
North: Verdun Drive											
7	L2	23	5.0	0.021	6.3	LOS A	0.1	0.5	0.27	0.56	52.6
9	R2	9	5.0	0.010	6.8	LOS A	0.0	0.2	0.34	0.59	52.2
Approach		33	5.0	0.021	6.5	LOS A	0.1	0.5	0.29	0.57	52.4
West: Sancrox Road West											
10	L2	9	5.0	0.005	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
11	T1	182	5.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		192	5.0	0.096	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		356	5.0	0.096	0.9	NA	0.1	0.5	0.03	0.08	58.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Sancrox Rd and Verdun Dr - 2040 - ALT no slip

Sancrox Rd and Verdun Dr - 2040 - ALT no slip
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID		ODMo Demand Flows [Total	HV]	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Sancrox Road East											
5	T1	226	5.0	0.120	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	12	5.0	0.009	6.6	LOS A	0.0	0.3	0.39	0.56	52.0
Approach		238	5.0	0.120	0.3	NA	0.0	0.3	0.02	0.03	59.5
North: Verdun Drive											
7	L2	68	5.0	0.072	7.0	LOS A	0.3	1.9	0.37	0.63	52.2
9	R2	29	5.0	0.040	8.1	LOS A	0.1	0.9	0.46	0.70	51.3
Approach		98	5.0	0.072	7.3	LOS A	0.3	1.9	0.40	0.65	52.0
West: Sancrox Road West											
10	L2	16	5.0	0.009	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
11	T1	297	5.0	0.157	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		313	5.0	0.157	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		648	5.0	0.157	1.4	NA	0.3	1.9	0.07	0.12	58.3

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



MOVEMENT SUMMARY

Site: Sancrox Rd and Verdun Dr - 2050 - ALT no slip

Sancrox Rd and Verdun Dr - 2050 - ALT no slip
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

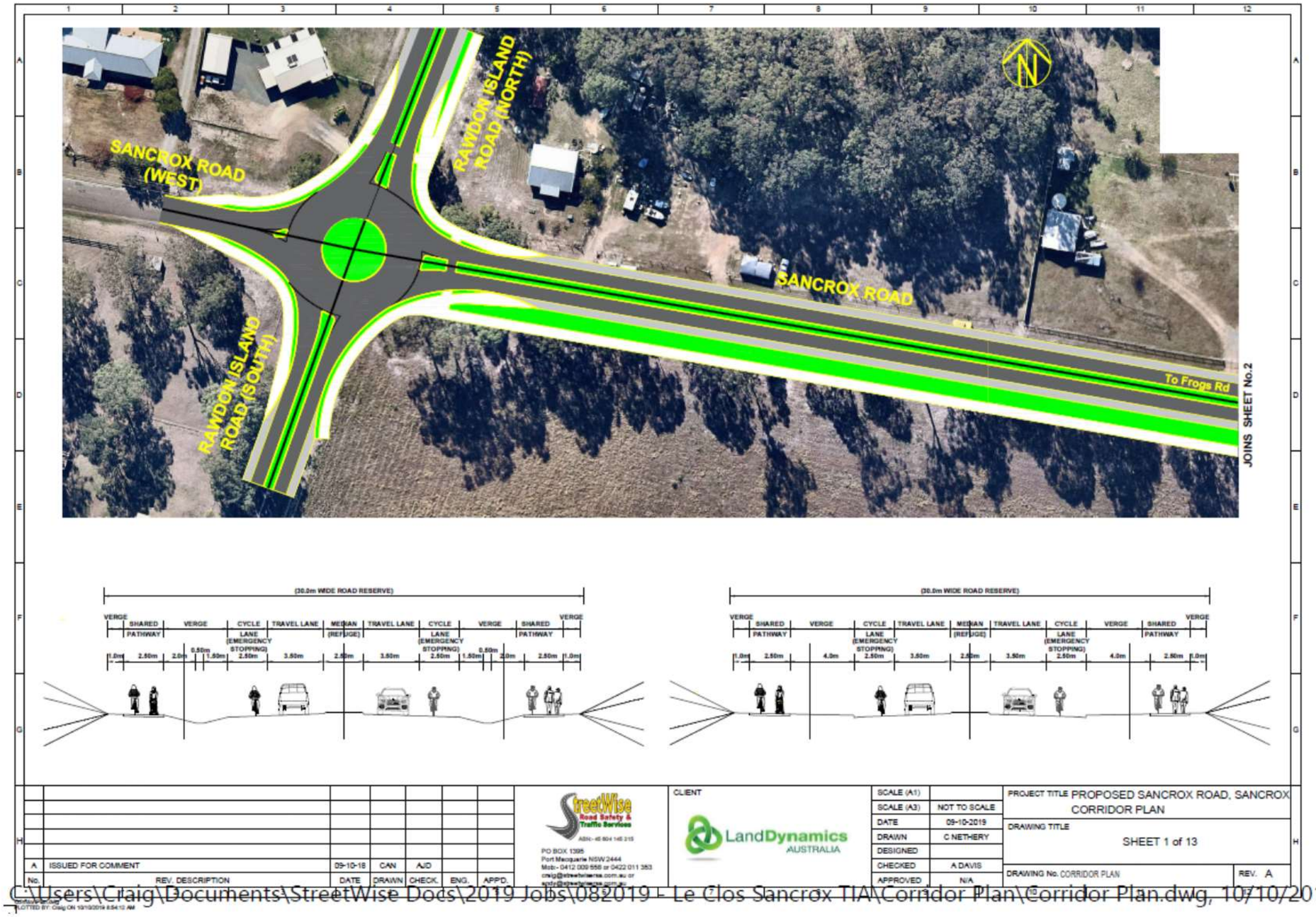
Mov ID		ODMo Demand Flows [Total	HV]	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Sancrox Road East											
5	T1	360	5.0	0.191	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
6	R2	19	5.0	0.020	7.9	LOS A	0.1	0.6	0.53	0.66	51.4
Approach		379	5.0	0.191	0.4	NA	0.1	0.6	0.03	0.03	59.5
North: Verdun Drive											
7	L2	103	5.0	0.147	8.9	LOS A	0.5	3.8	0.53	0.78	50.9
9	R2	44	5.0	0.097	11.7	LOS A	0.3	2.2	0.66	0.86	48.8
Approach		147	5.0	0.147	9.7	LOS A	0.5	3.8	0.57	0.80	50.3
West: Sancrox Road West											
10	L2	27	5.0	0.015	5.6	LOS A	0.0	0.0	0.00	0.58	53.4
11	T1	528	5.0	0.280	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		556	5.0	0.280	0.3	NA	0.0	0.0	0.00	0.03	59.6
All Vehicles		1082	5.0	0.280	1.6	NA	0.5	3.8	0.09	0.14	58.1

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

APPENDIX E

PROPOSED SANCROX CORRIDOR PLAN



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StreetWise Road Safety & Traffic Services
ABN:- 45 604 145 215
PO BOX 1395
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craig@streetwiseres.com.au or
ajd@streetwiseres.com.au

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SCALE (A1)	
SCALE (A3)	NOT TO SCALE
DATE	09-10-2019
DRAWN	C NETHERY
DESIGNED	
CHECKED	A DAVIS
APPROVED	N/A

PROJECT TITLE PROPOSED SANCROX ROAD, SANCROX
CORRIDOR PLAN

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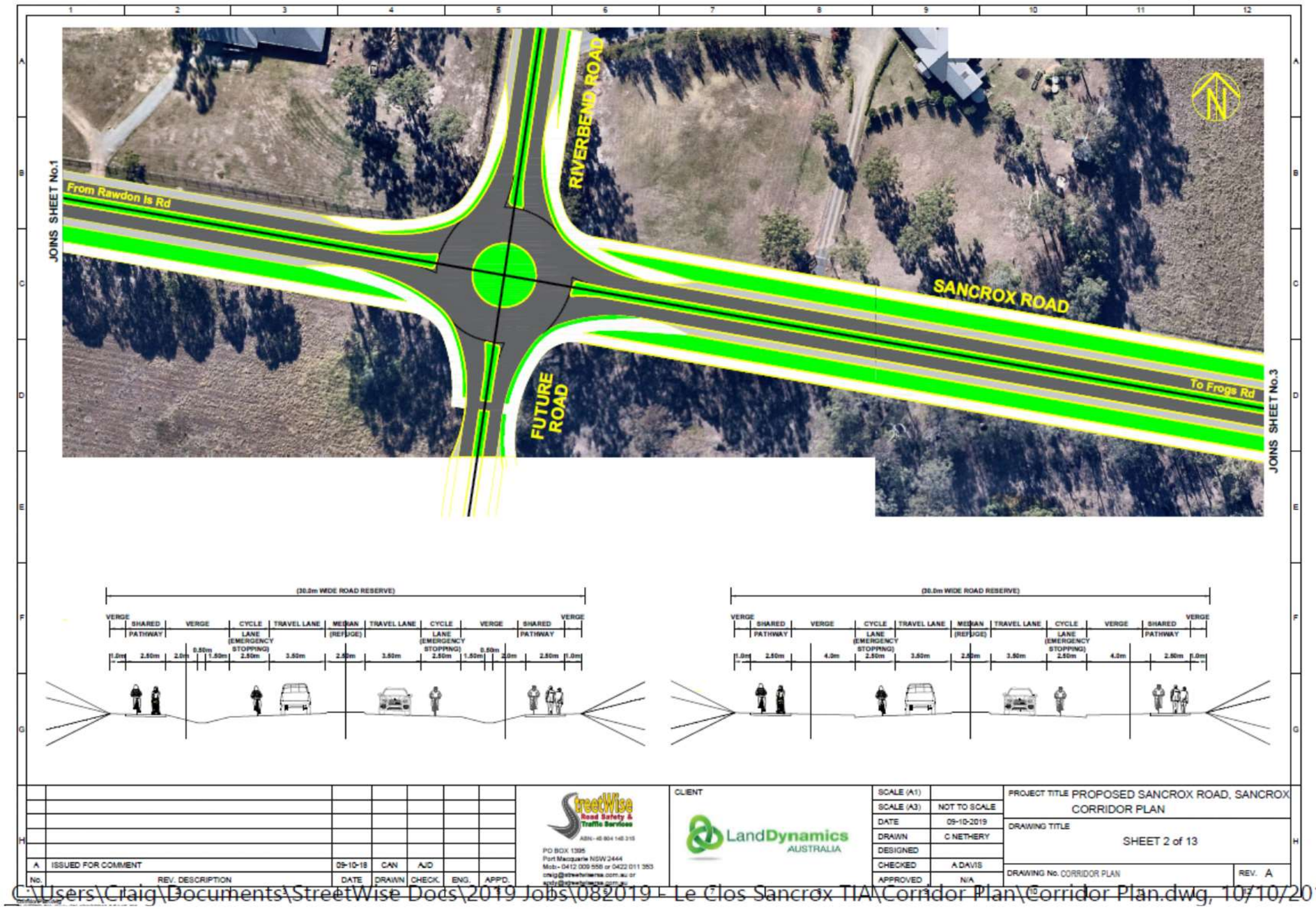

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SCALE (A3)	NOT TO SCALE
DATE	09-10-2019
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DESIGNED	
CHECKED	A DAVIS
APPROVED	N/A

PROJECT TITLE PROPOSED SANCROX ROAD, SANCROX CORRIDOR PLAN

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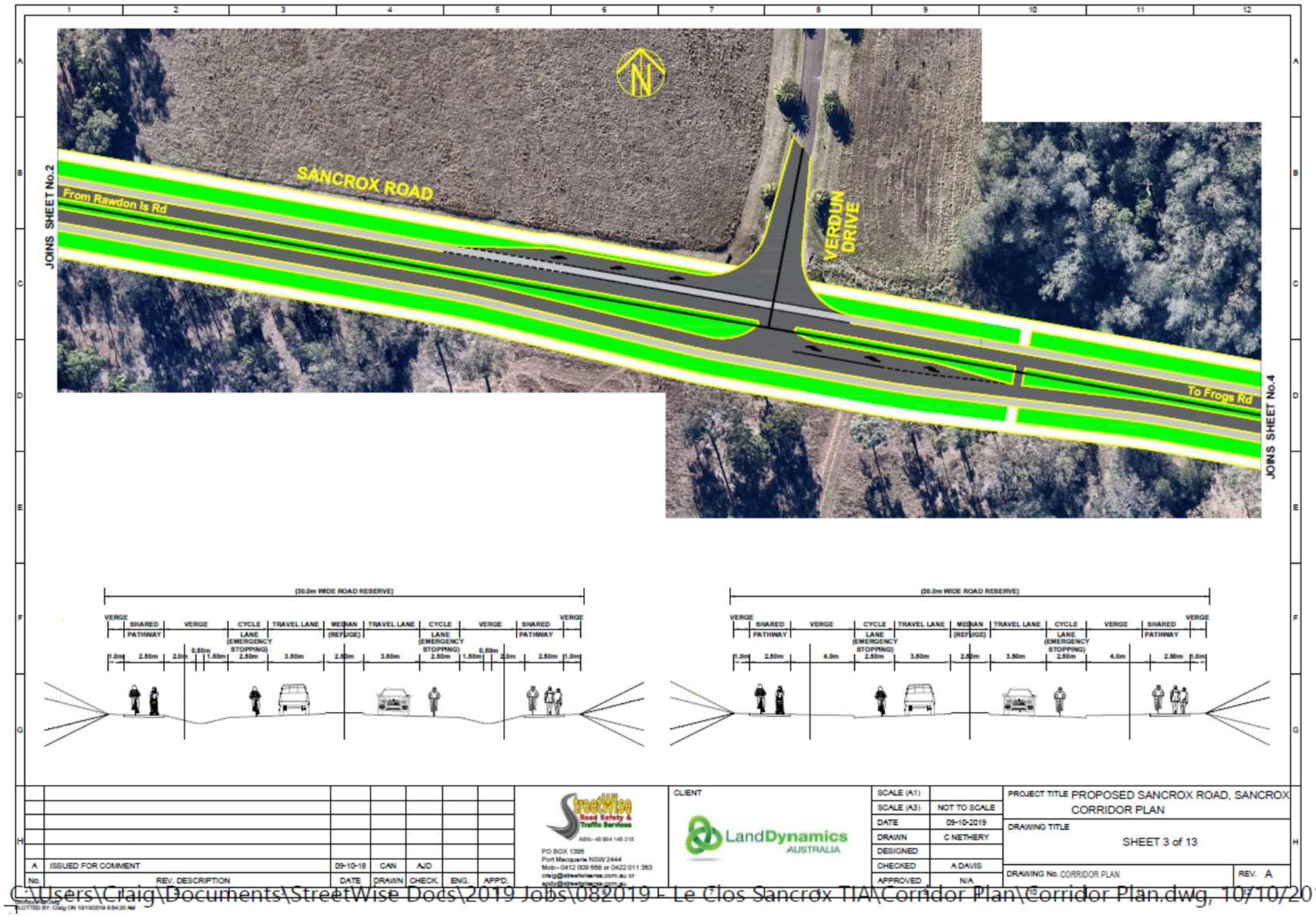
SANCROX ROAD
From Rawdon Is Rd
VERDUN DRIVE
To Frogs Rd
JOINS SHEET No.2
JOINS SHEET No.4
(30.0m WIDE ROAD RESERVE)
VERGE
SHARED PATHWAY
CYCLE LANE (EMERGENCY STOPPING)
TRAVEL LANE
MEDIAN (REFUGE)
1.0m 2.50m 2.0m 0.50m 1.50m 2.50m 3.50m 2.50m 3.50m 2.50m 1.50m 2.0m 2.50m 1.0m
(30.0m WIDE ROAD RESERVE)
1.0m 2.50m 4.0m 2.50m 3.50m 2.50m 3.50m 2.50m 4.0m 2.50m 1.0m
A ISSUED FOR COMMENT 09-10-19 CAN AJD
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APPROVED N/A
PROJECT TITLE PROPOSED SANCROX ROAD, SANCROX CORRIDOR PLAN
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DRAWING No. CORRIDOR PLAN
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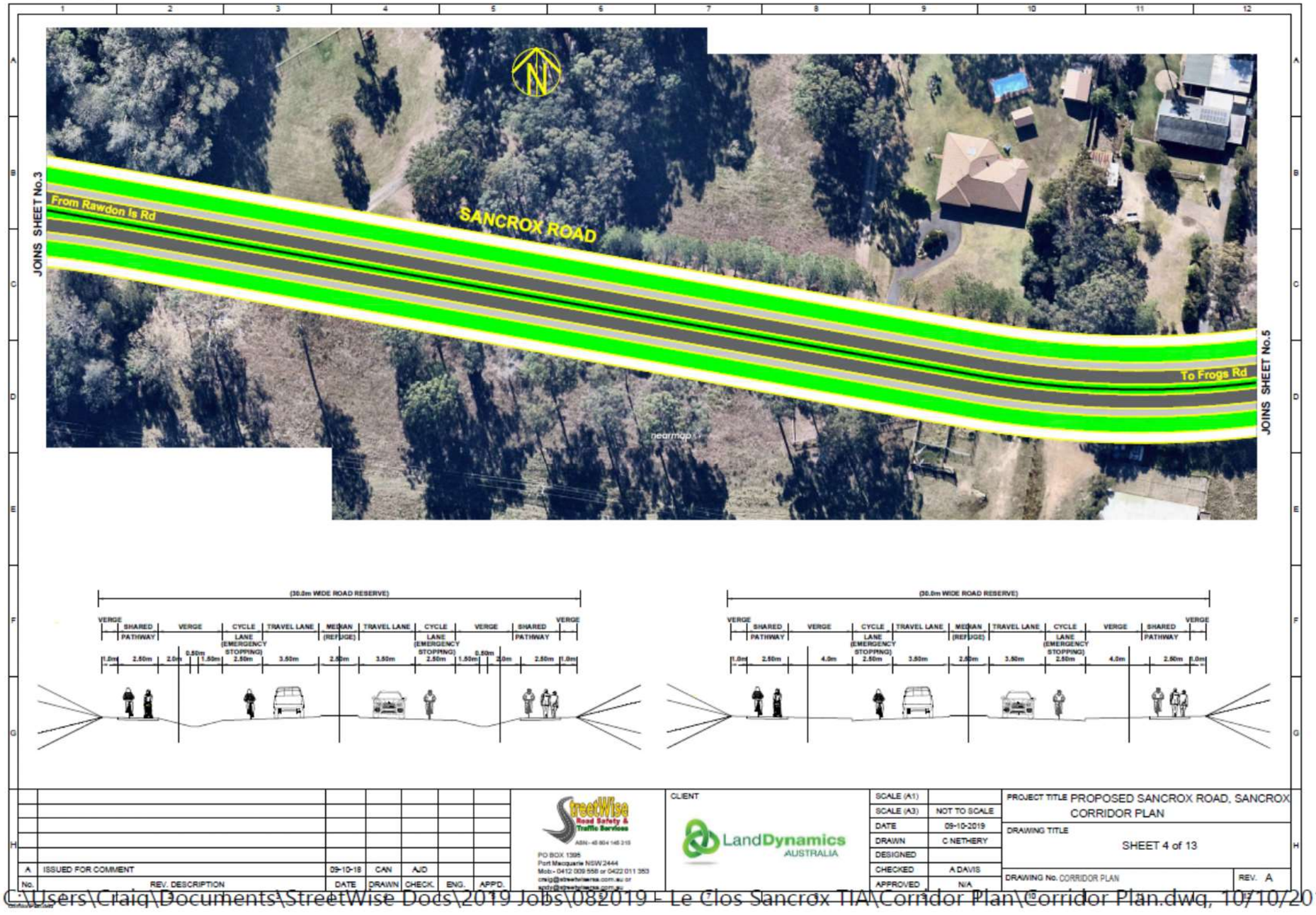
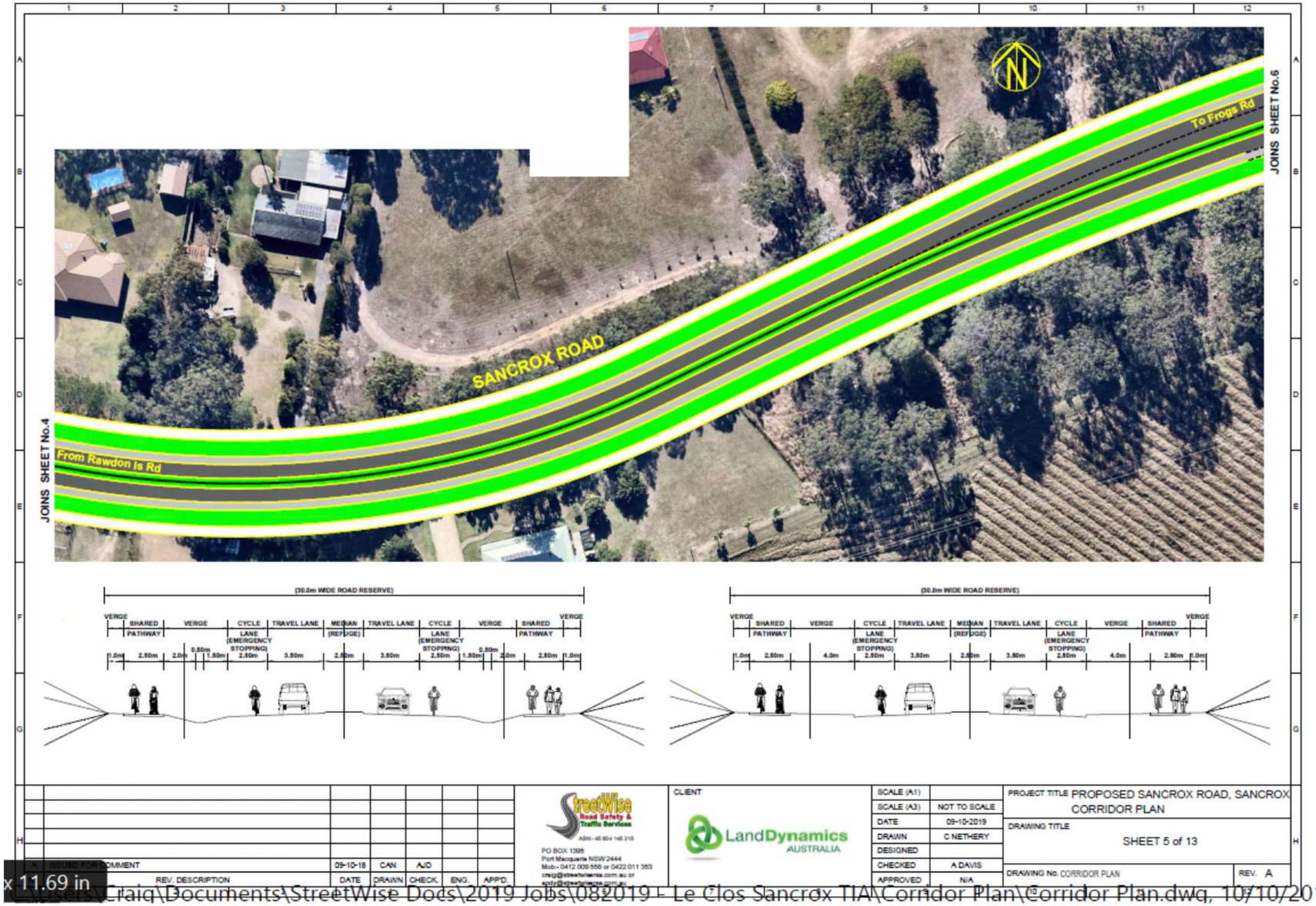
High Level Traffic Impact Assessment as part of an overall Planning Proposal
DP 776 681 Sancrox Road, Sancrox (Known as Le Clos) Proposed Rezoning




SANCROX ROAD
To Frogs Rd
From Rawdon Is Rd
JOINS SHEET No.6
JOINS SHEET No.4
(30.0m WIDE ROAD RESERVE)
VERGE
SHARED PATHWAY
CYCLE LANE (EMERGENCY STOPPING)
TRAVEL LANE
MEDIAN (REFUGE)
1.0m 2.50m 2.0m 0.50m 1.50m 2.50m 3.50m 2.50m 3.50m 2.50m 1.50m 0.50m 2.0m 2.50m 1.0m
(30.0m WIDE ROAD RESERVE)
1.0m 2.50m 4.0m 2.50m 3.50m 2.50m 3.50m 2.50m 4.0m 2.50m 1.0m
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Port Macquarie NSW 2444
Mob:- 0412 009 558 or 0422 011 353
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SCALE (A3) NOT TO SCALE
DATE 09-10-2019
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APPROVED N/A
PROJECT TITLE PROPOSED SANCROX ROAD, SANCROX CORRIDOR PLAN
DRAWING TITLE SHEET 5 of 13
DRAWING No. CORRIDOR PLAN
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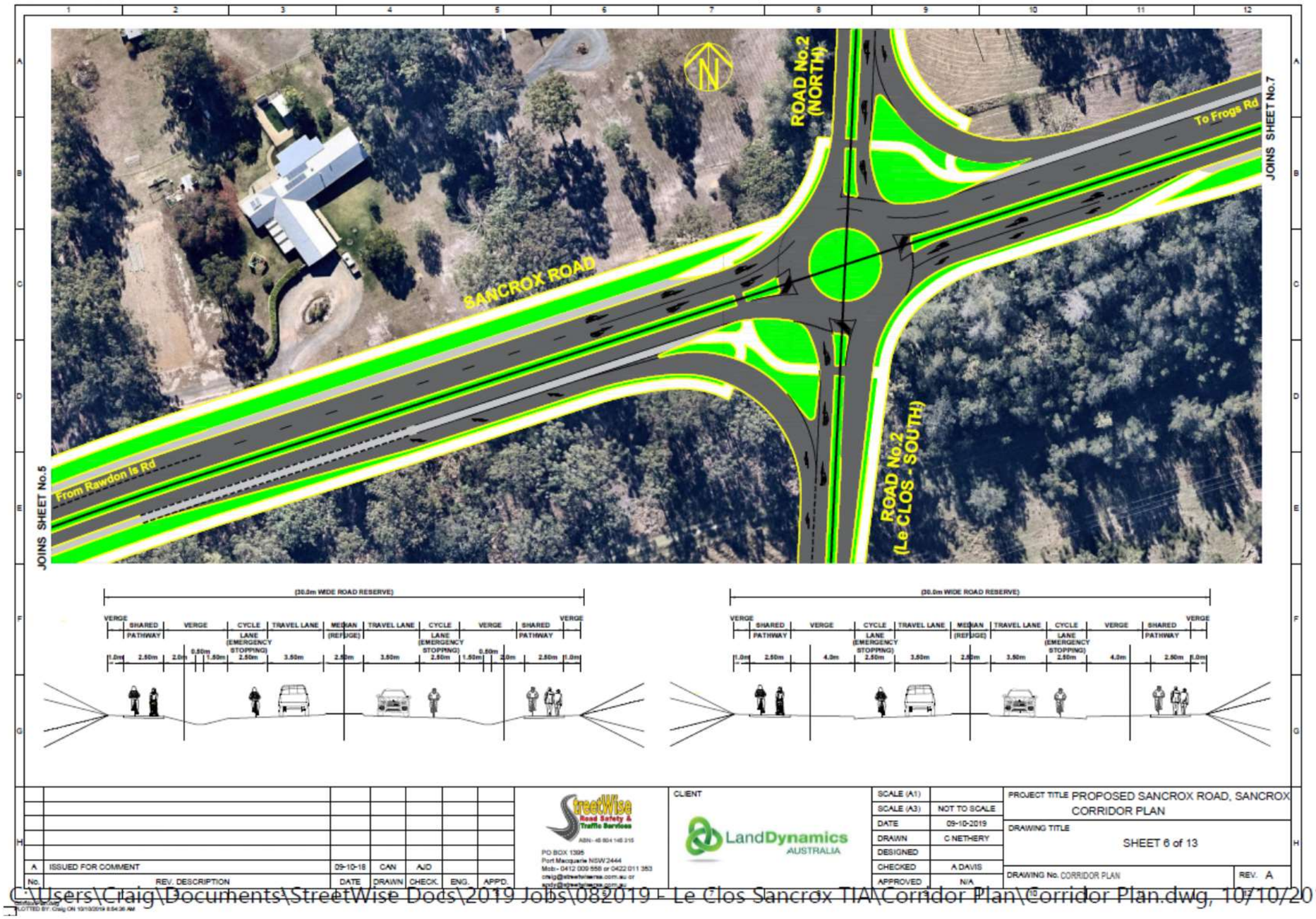
SANCROX ROAD
ROAD No.2 (NORTH)
To Frogs Rd
From Rawdon Is Rd
JOINS SHEET No.5
JOINS SHEET No.7
ROAD No.2 (Le CLOS - SOUTH)
(30.0m WIDE ROAD RESERVE)
VERGE
SHARED PATHWAY
CYCLE LANE (EMERGENCY STOPPING)
TRAVEL LANE
MEDIAN (REFUGE)
1.0m
2.50m
2.0m
0.50m
1.50m
3.50m
4.0m
(30.0m WIDE ROAD RESERVE)
StreetWise Road Safety & Traffic Services
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CORRIDOR PLAN
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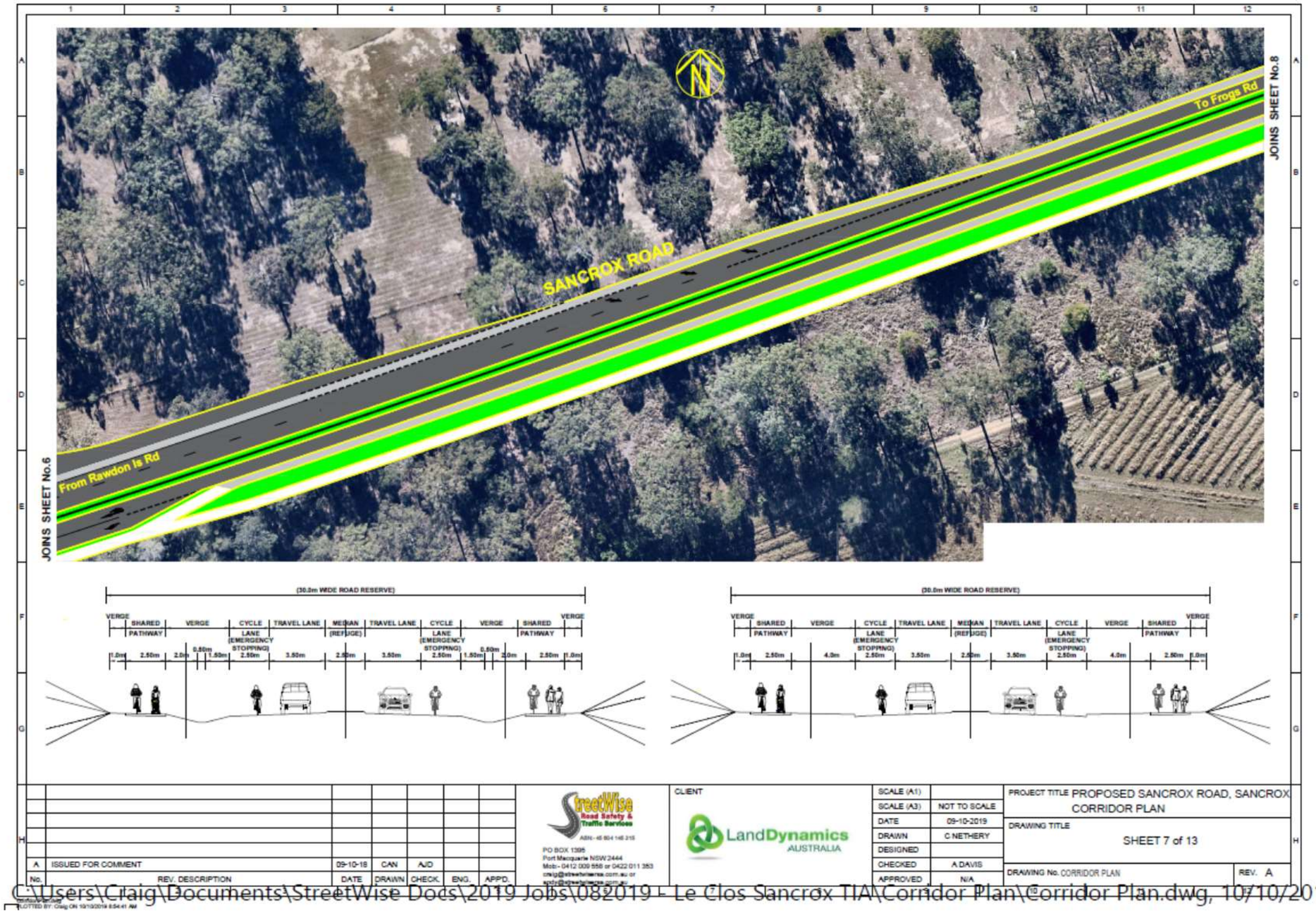
SANCROX ROAD
To Frogs Rd
From Rawdon Is Rd
JOINS SHEET No.6
JOINS SHEET No.8
(30.0m WIDE ROAD RESERVE)
VERGE
SHARED PATHWAY
CYCLE LANE (EMERGENCY STOPPING)
TRAVEL LANE
MEDIAN (REFUGE)
1.0m
2.50m
2.0m
0.50m
1.50m
3.50m
4.0m
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Mob:- 0412 009 558 or 0422 011 353
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LandDynamics AUSTRALIA
SCALE (A1)
SCALE (A3) NOT TO SCALE
DATE 09-10-2019
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DRAWING No. CORRIDOR PLAN
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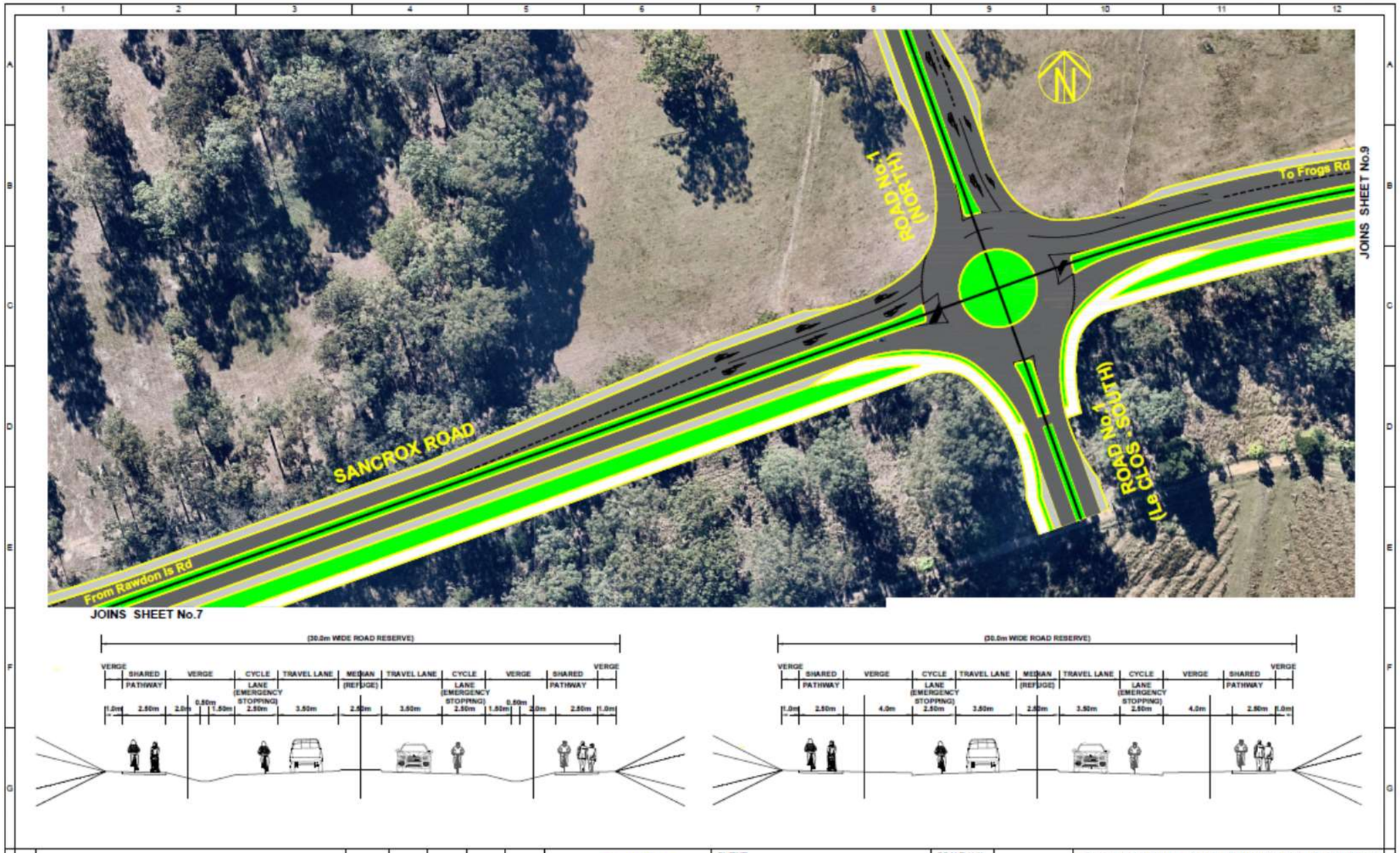

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SCALE (A1)	
SCALE (A3)	NOT TO SCALE
DATE	09-10-2019
DRAWN	C NETHERY
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CHECKED	A DAVIS
APPROVED	N/A

PROJECT TITLE PROPOSED SANCROX ROAD, SANCROX CORRIDOR PLAN

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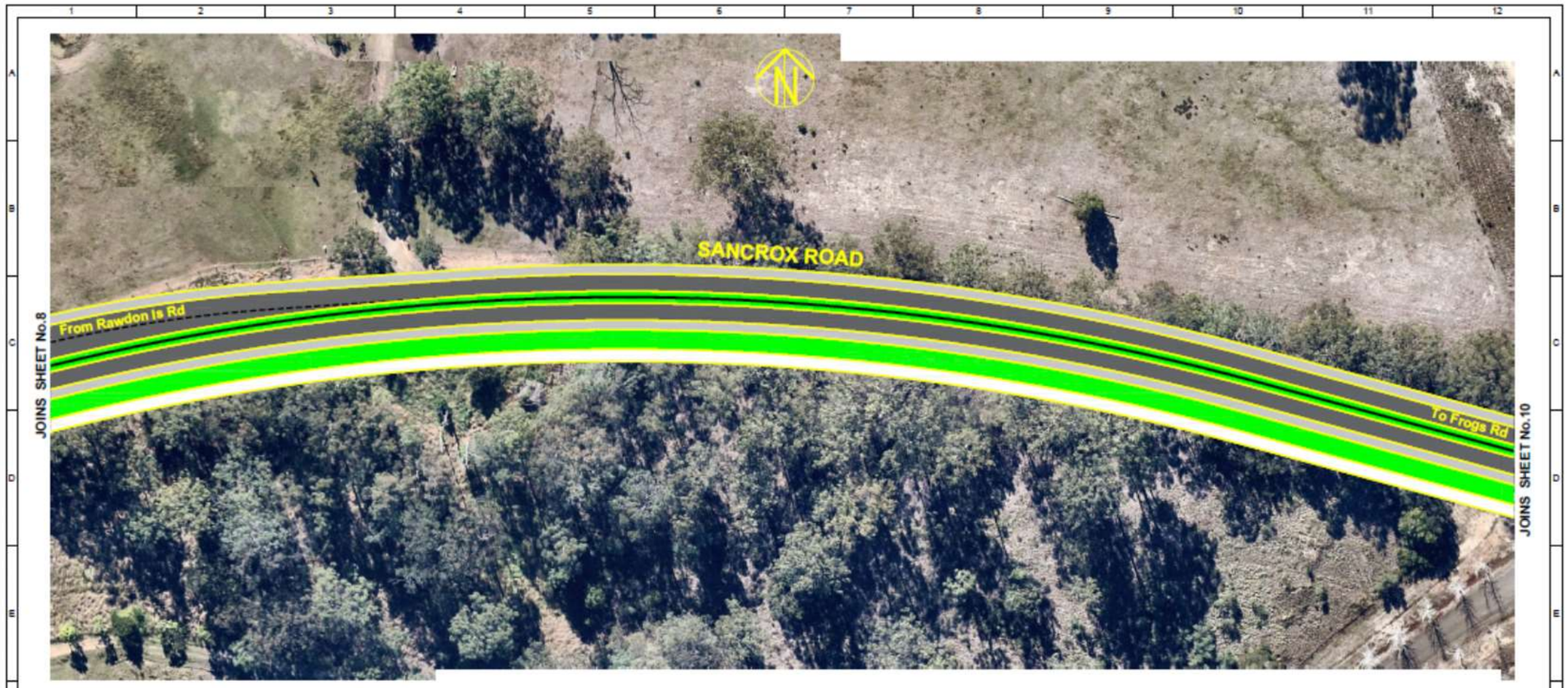

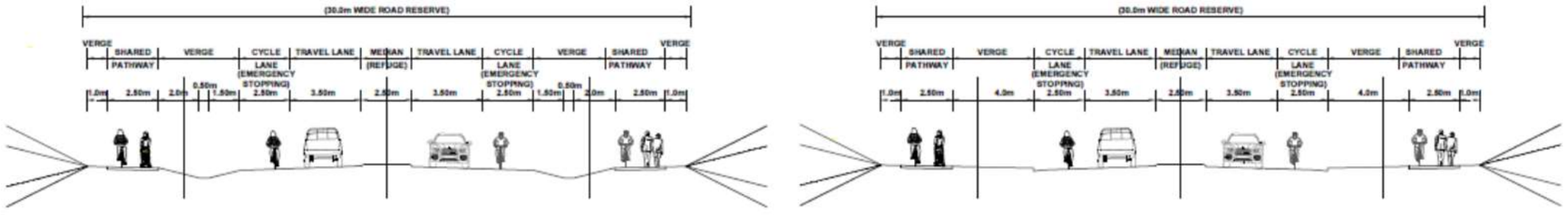

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Port Macquarie NSW 2444
Mob:- 0412 009 550 or 0422 011 353

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LandDynamics AUSTRALIA

SCALE (A1)	
SCALE (A3)	NOT TO SCALE
DATE	09-10-2019
DRAWN	C NETHERY
DESIGNED	
CHECKED	A DAVIS
APPROVED	N/A

PROJECT TITLE PROPOSED SANCROX ROAD, SANCROX
CORRIDOR PLAN

DRAWING TITLE
SHEET 9 of 13

DRAWING No. CORRIDOR PLAN REV. A

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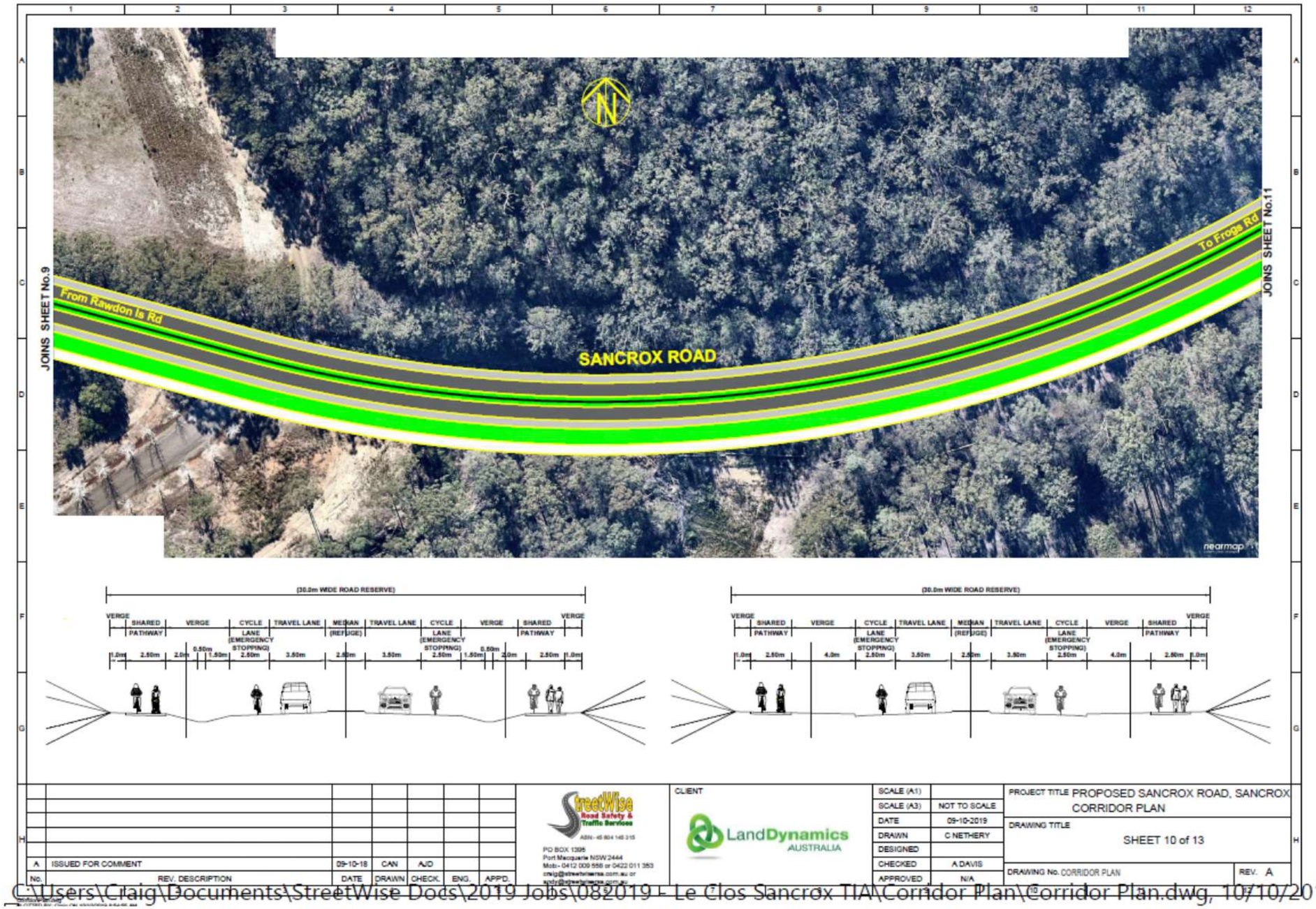
JOINS SHEET No.9
From Rawdon Is Rd
SANCROX ROAD
To Frogs Rd
JOINS SHEET No.11
nearmap
(30.0m WIDE ROAD RESERVE)
VERGE
SHARED PATHWAY
VERGE
CYCLE LANE (EMERGENCY STOPPING)
TRAVEL LANE
MEDIAN (REFUGE)
TRAVEL LANE
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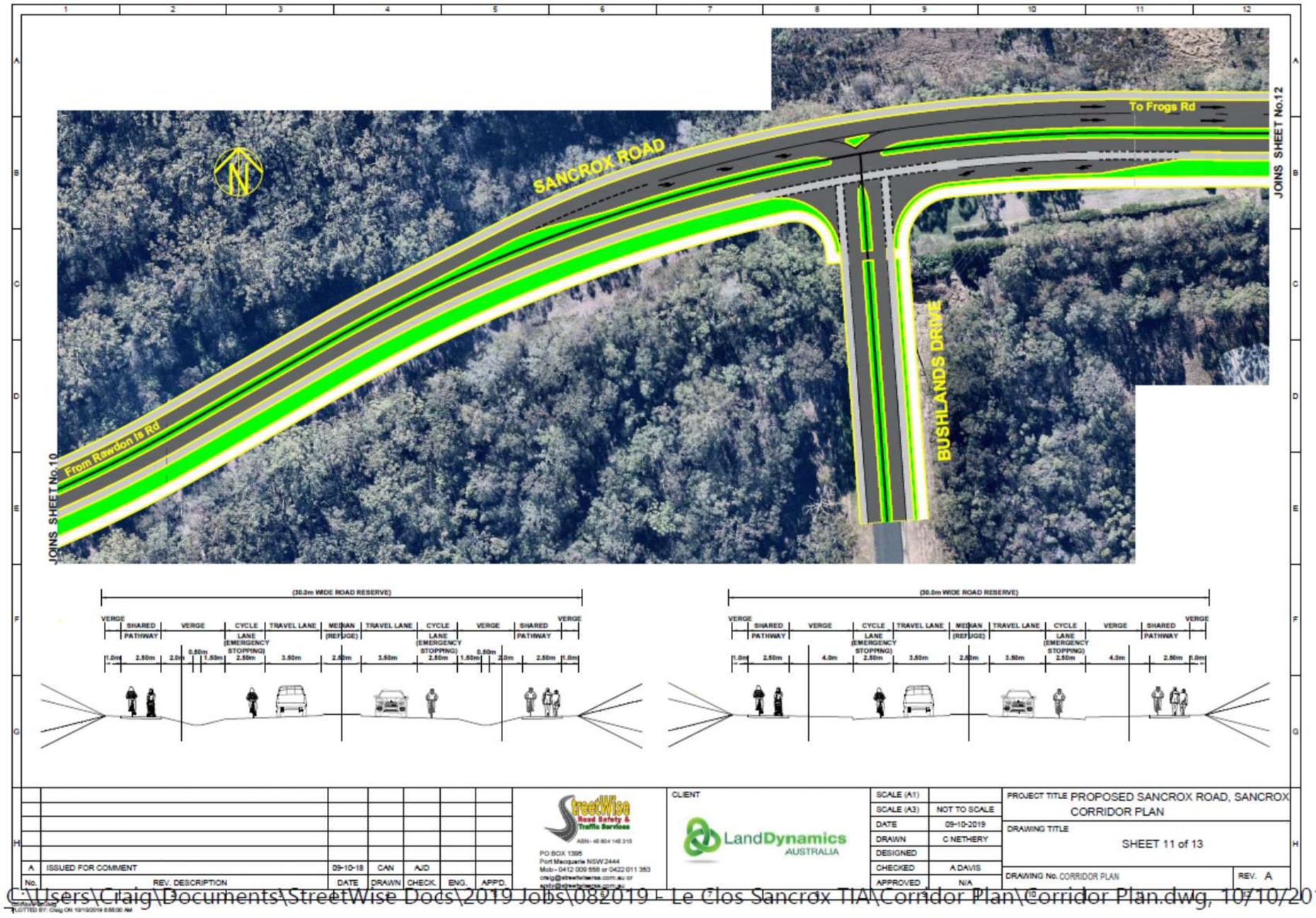

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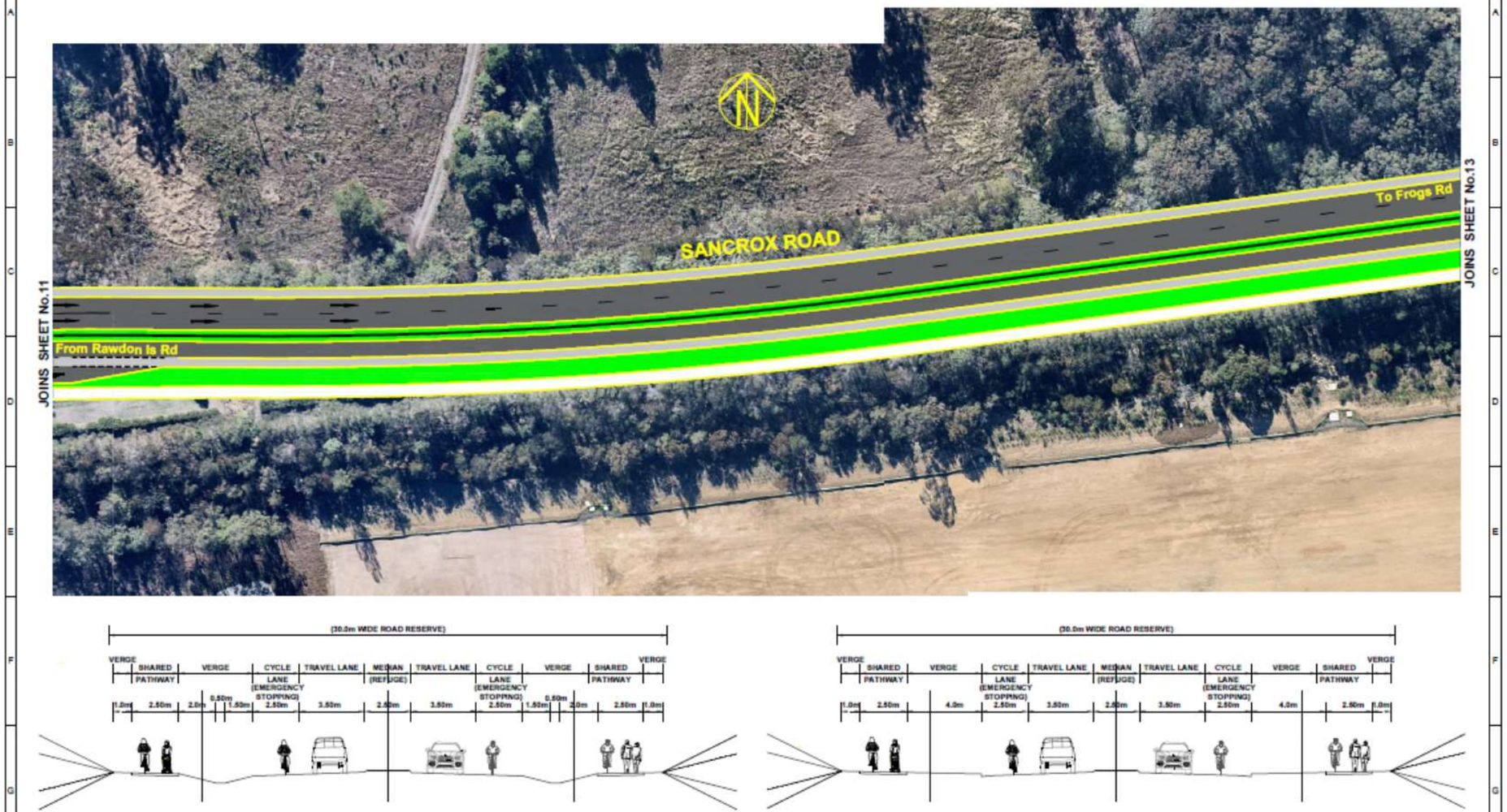

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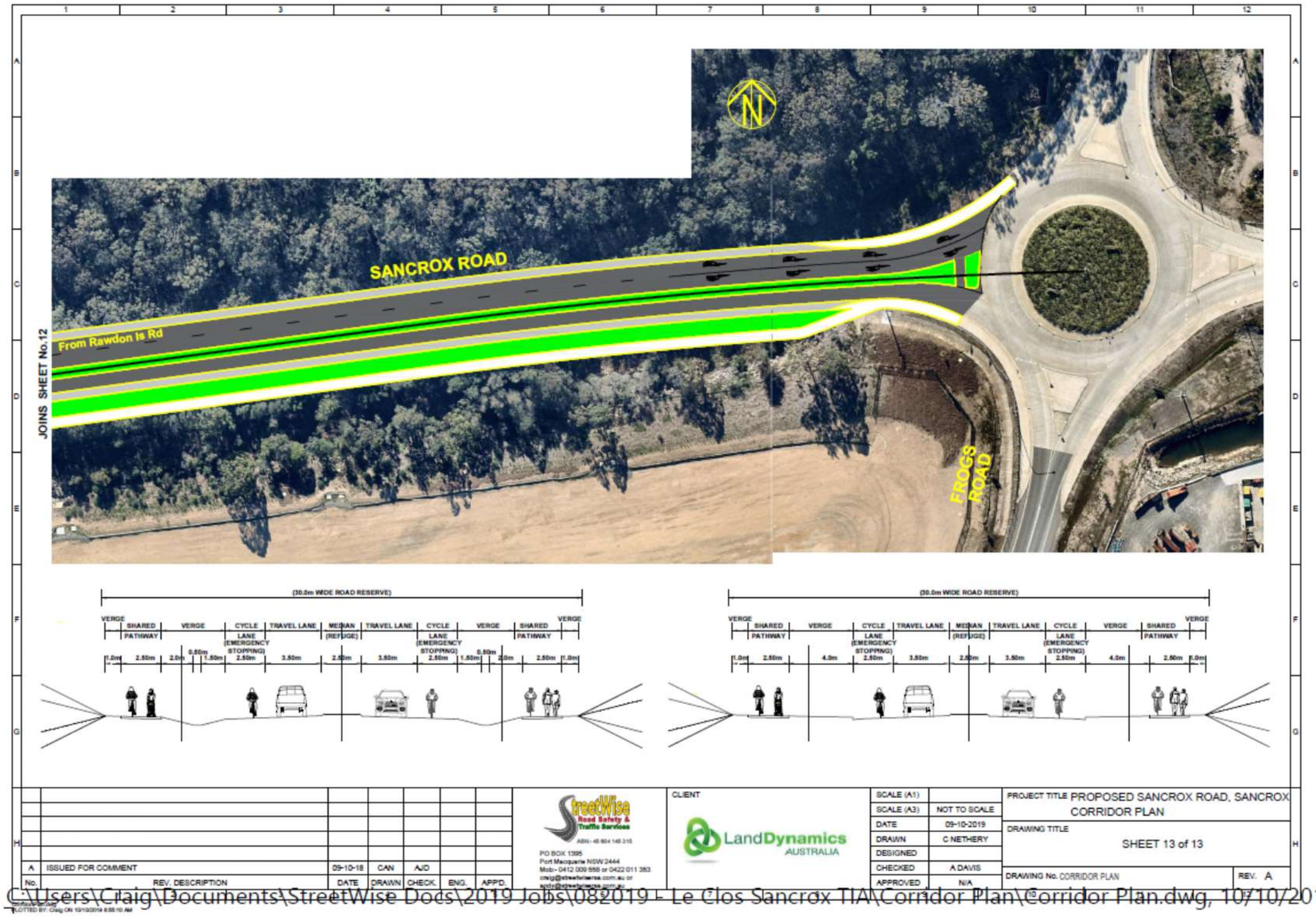
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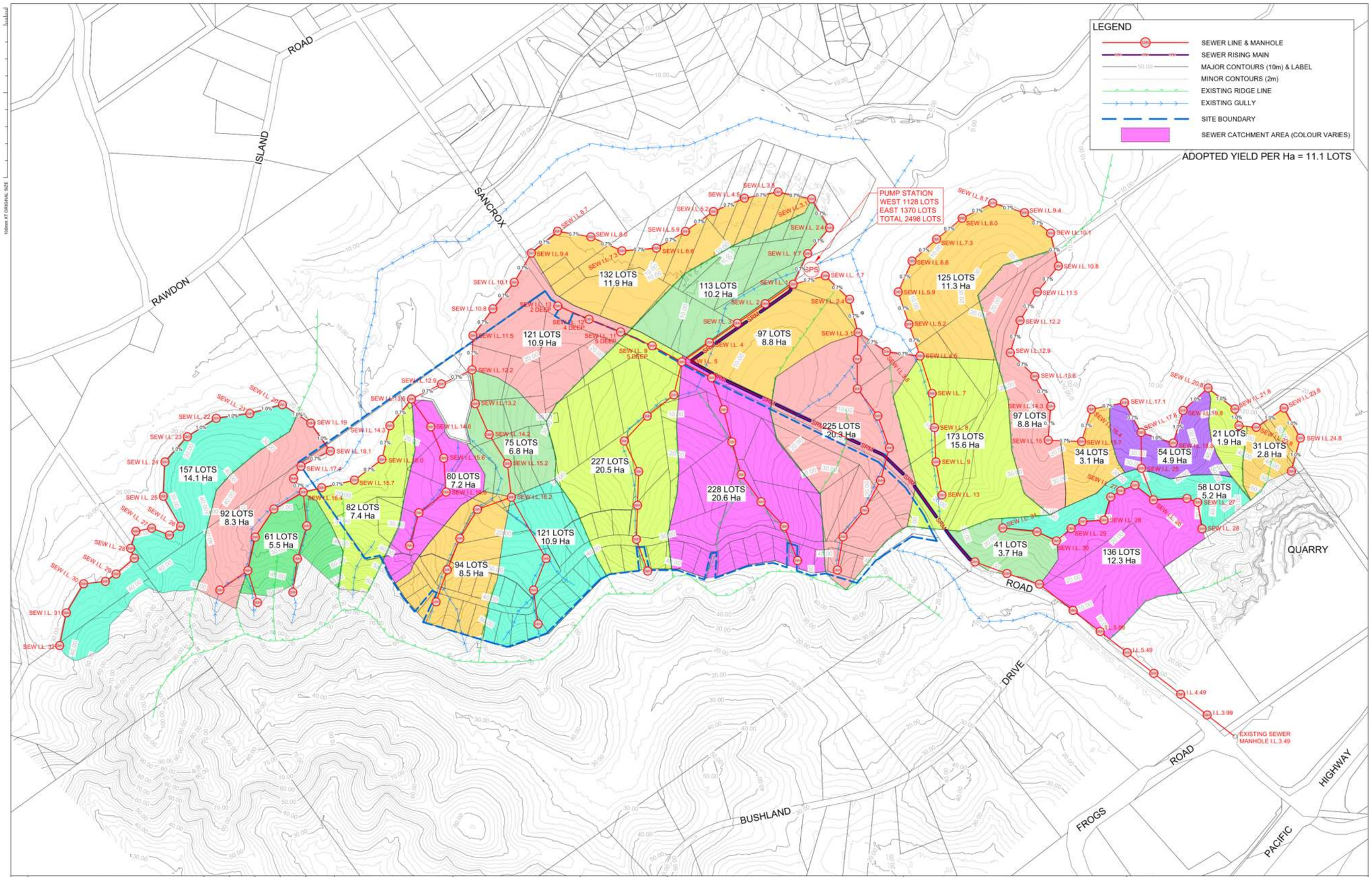

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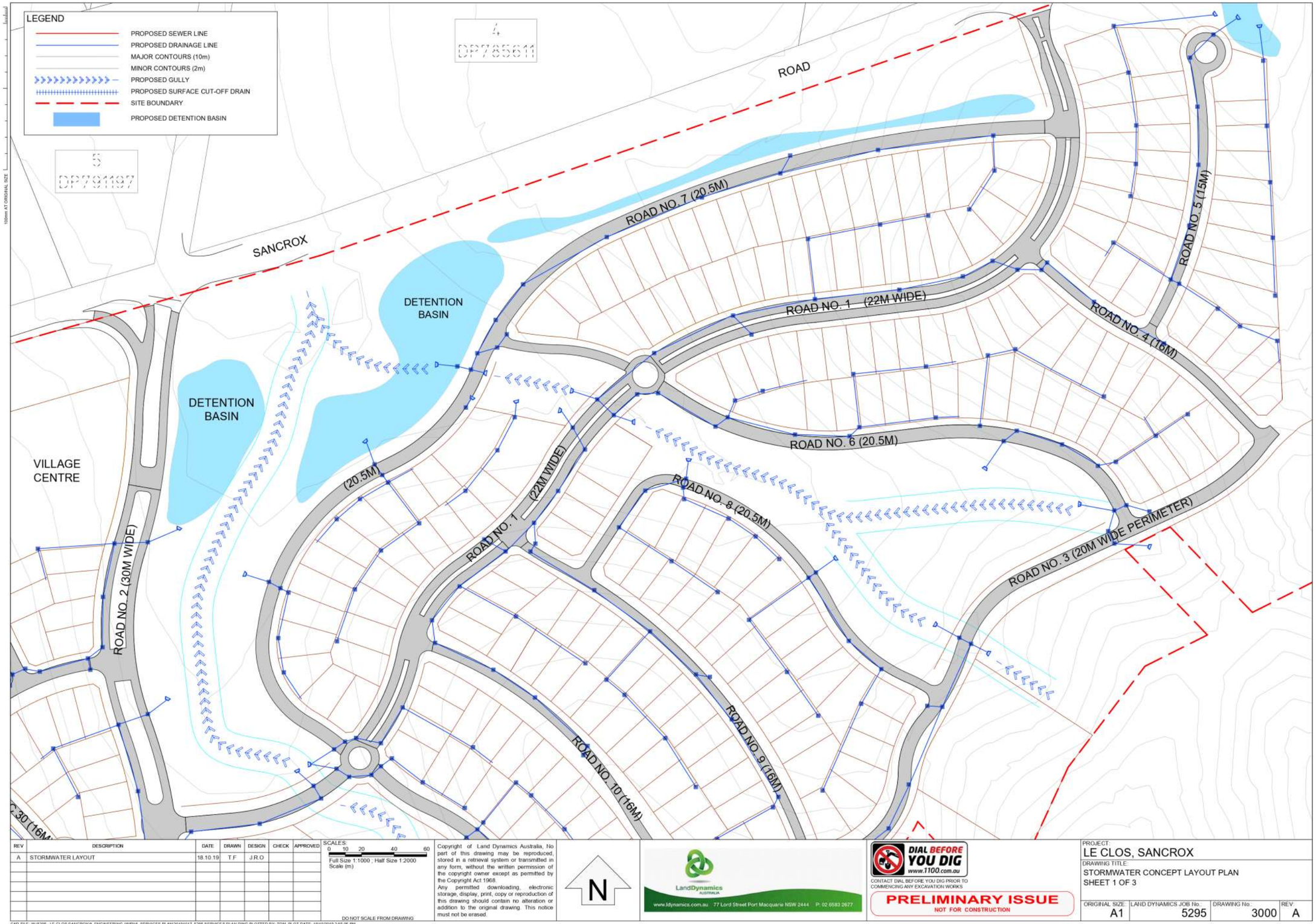

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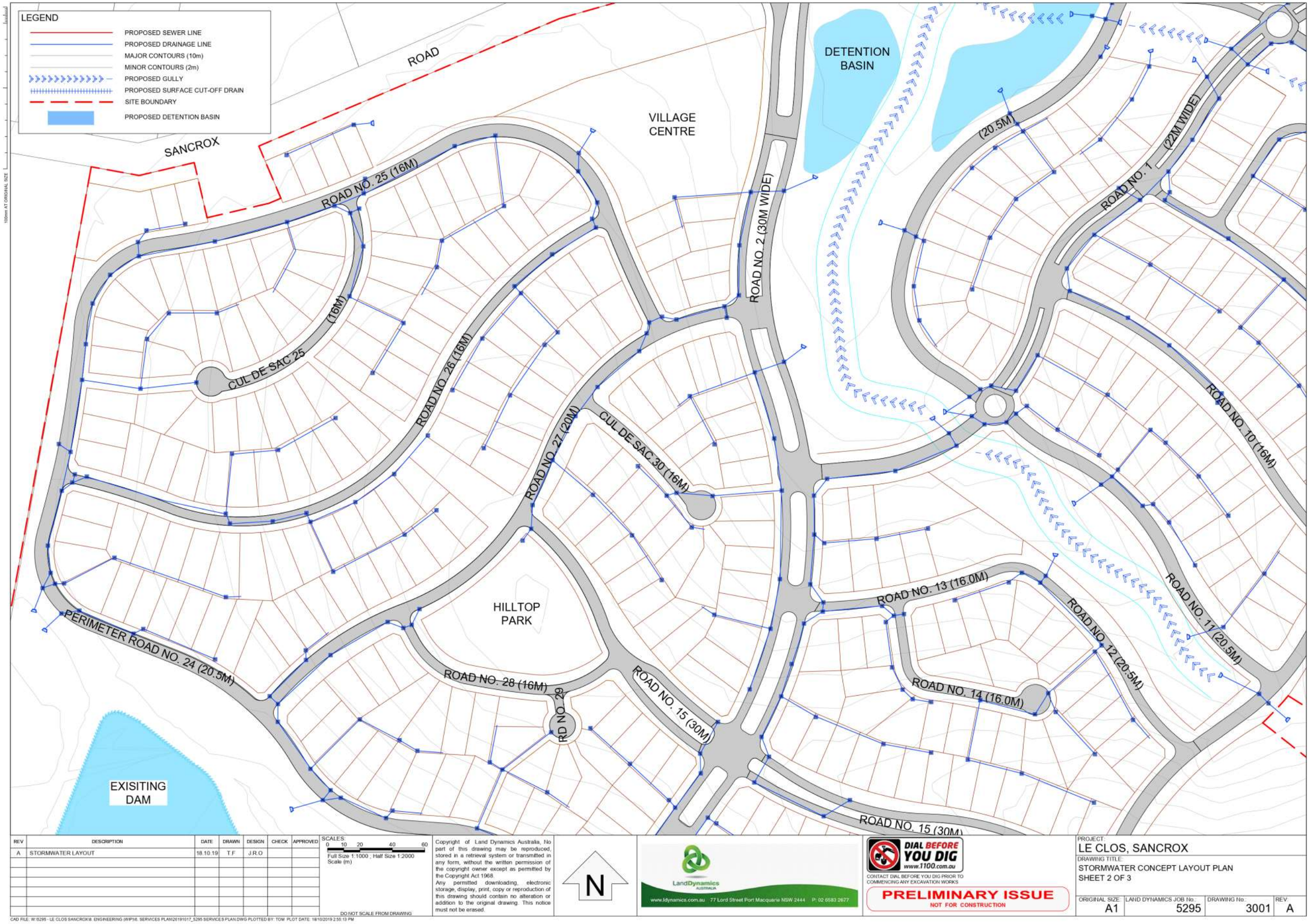

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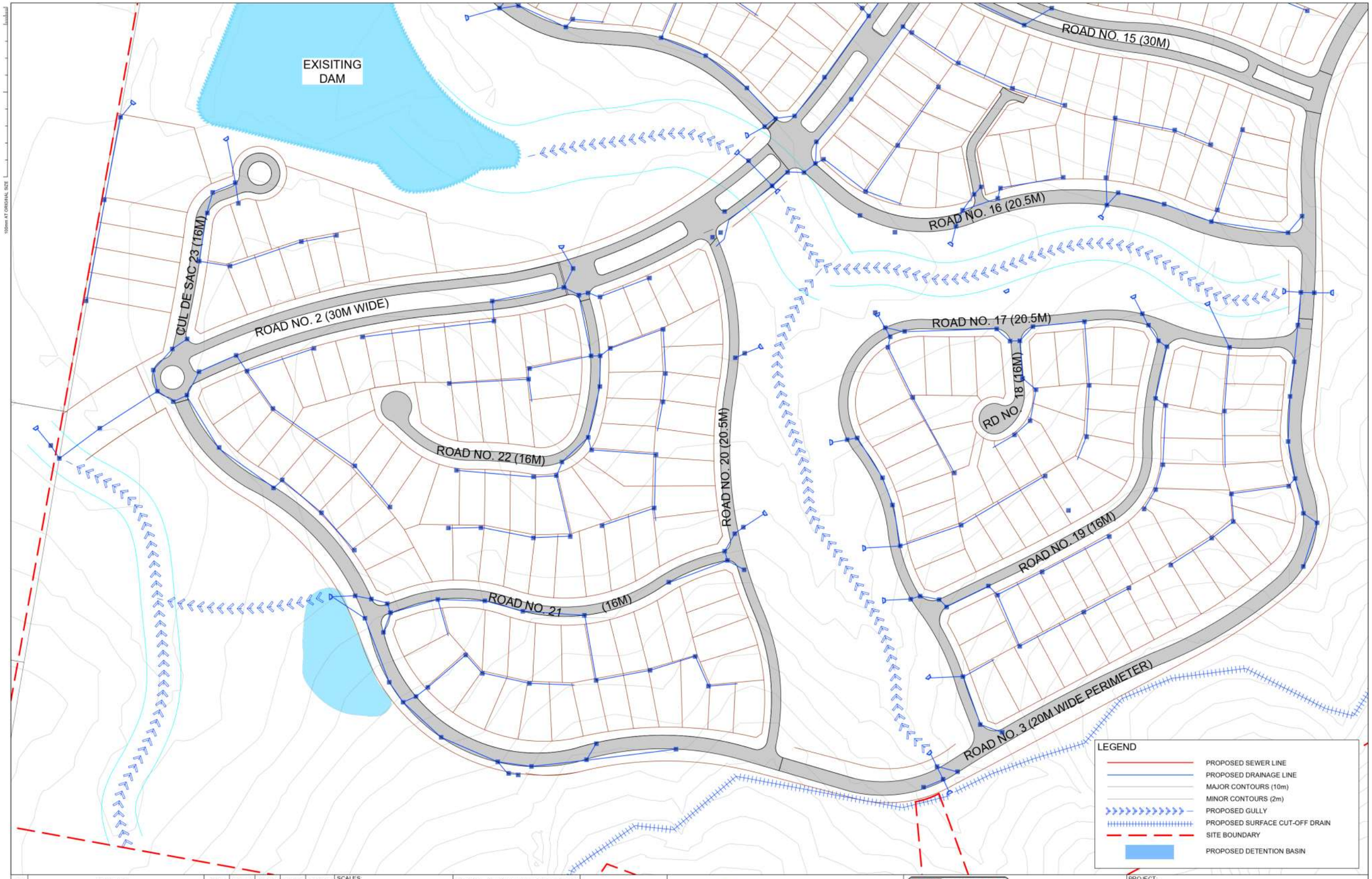

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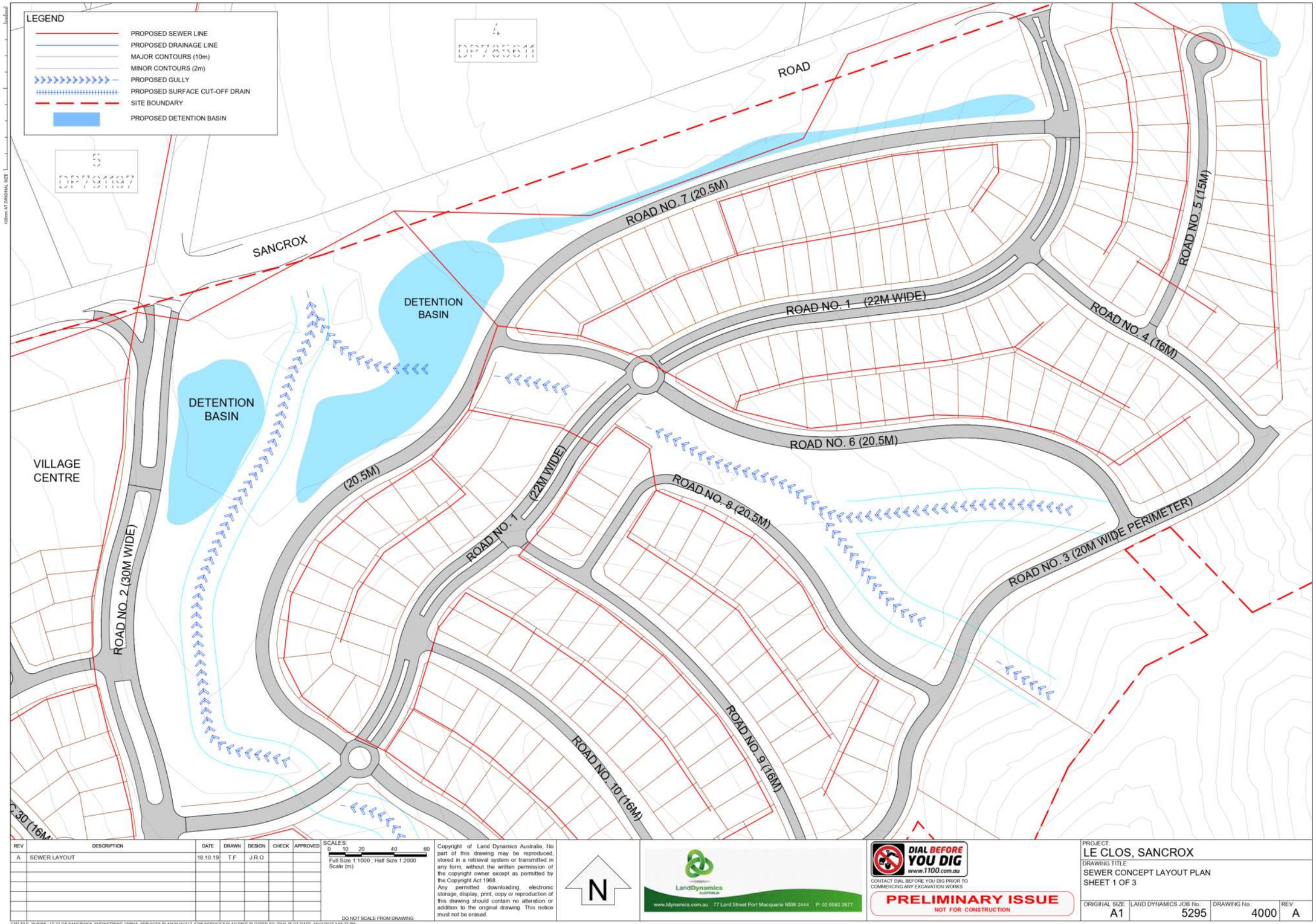

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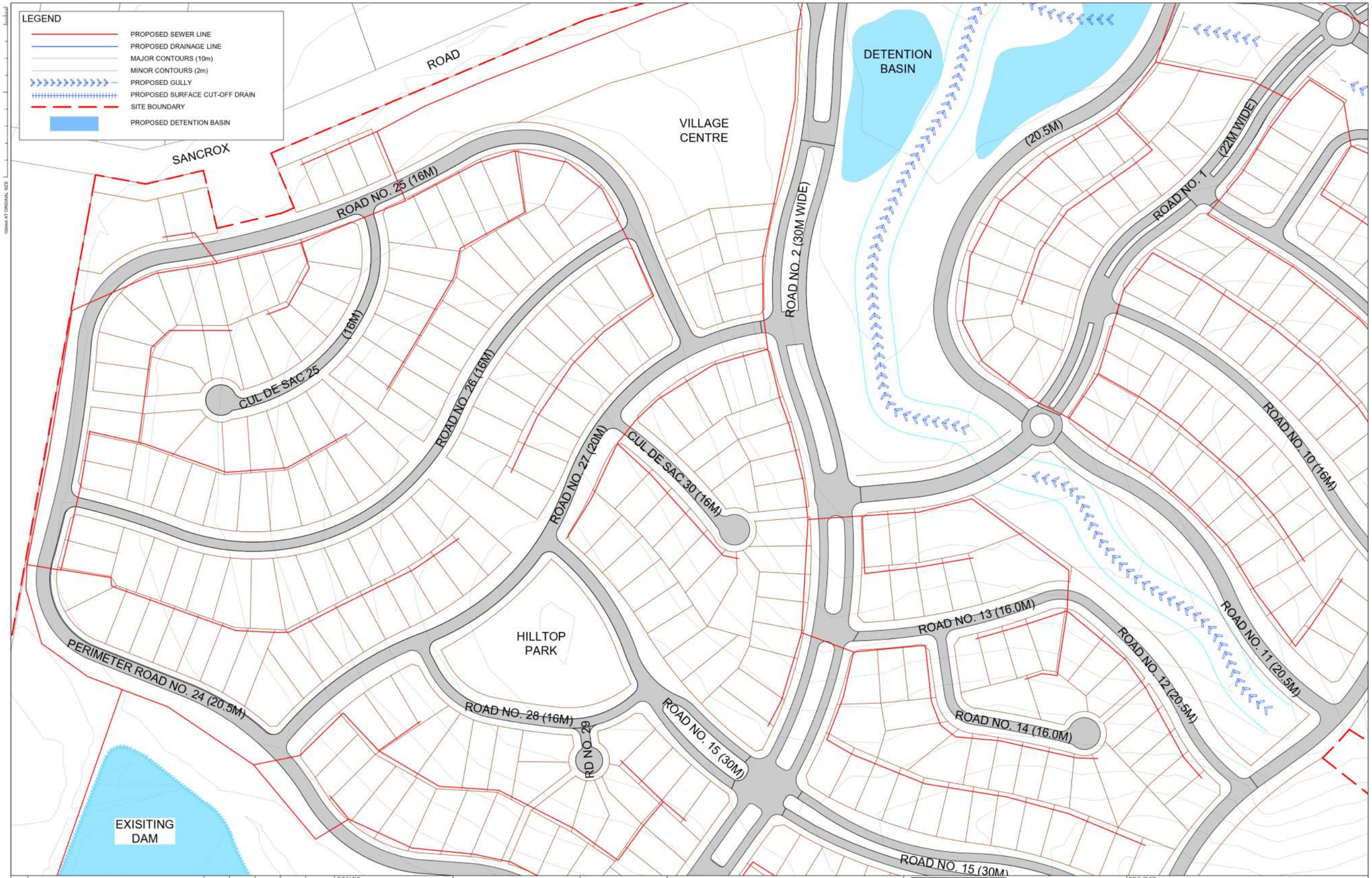

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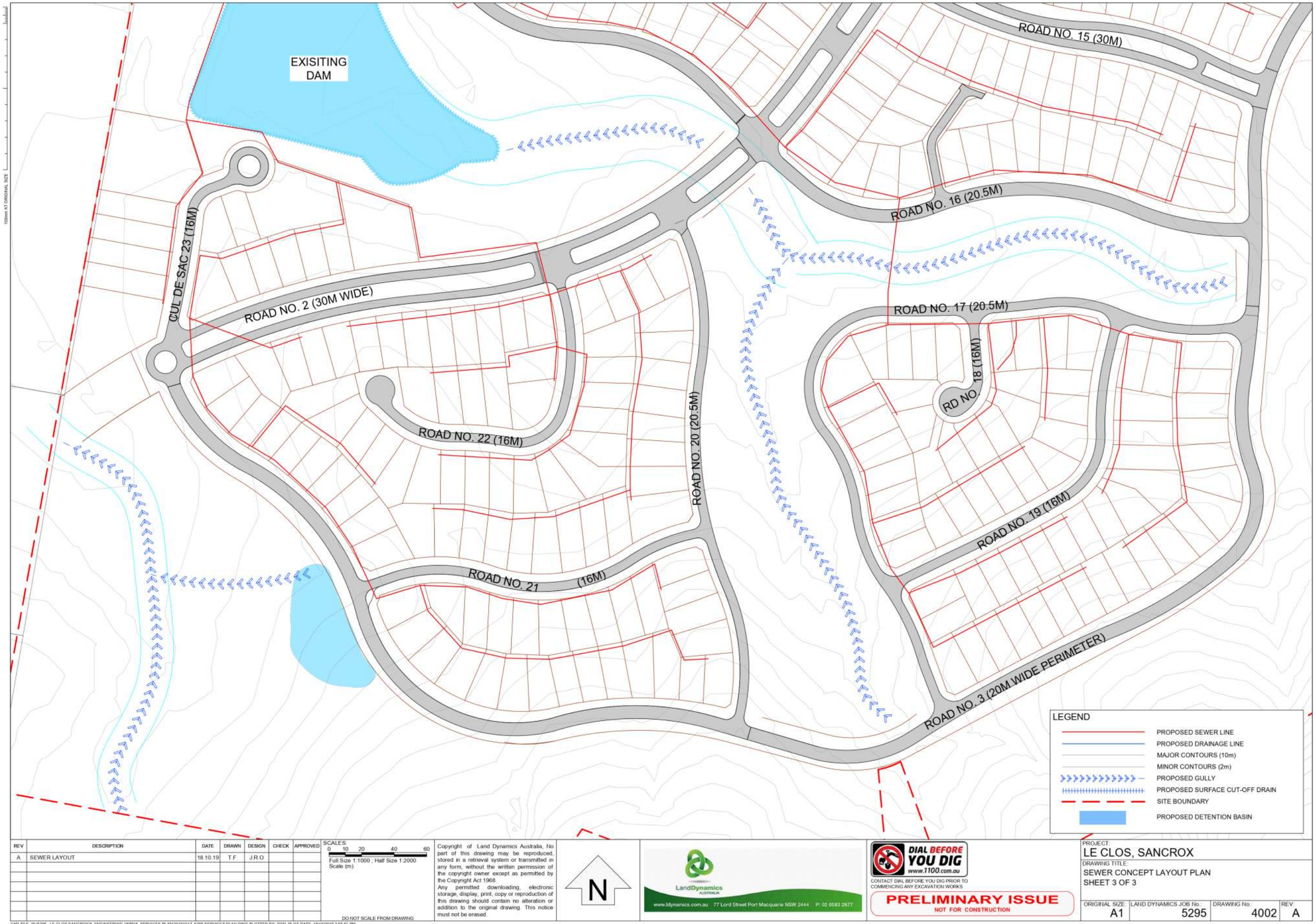

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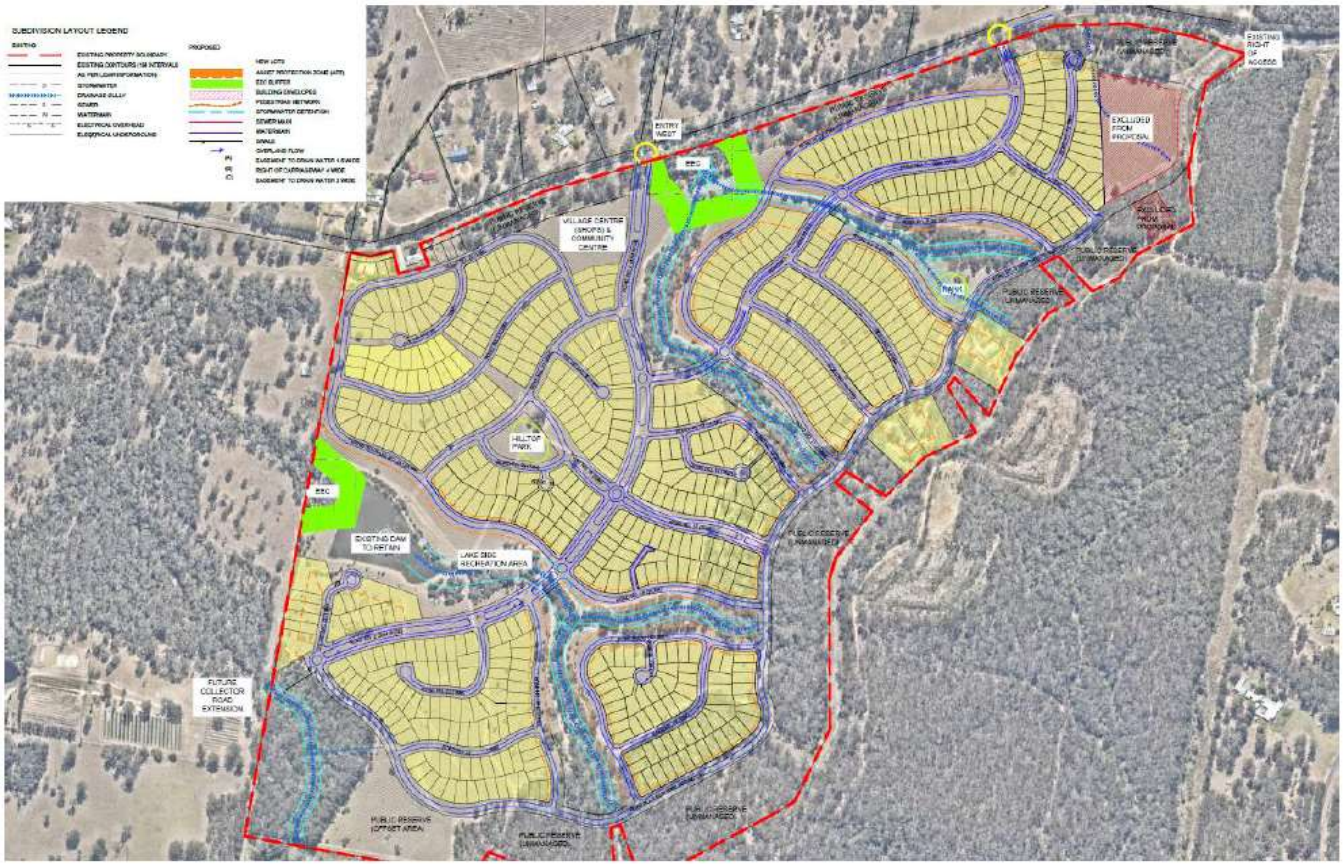

STORMWATER MANAGEMENT PLAN

Le Clos Sancrox – Sancrox Road, Sancrox

On Behalf of

LCS Estates Pty Ltd

Land Dynamics Australia

October 2019

Document No. 5295-SW-RPT01

LandDynamics AUSTRALIA ABN 63 137 881 942
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Document History

Revision / Issue Record

Revision	Document Type	Reviewed by	Approved by	Date Issued
A	Report	M.J.S.	M.J.S.	21.10.2019

Distribution Record

Recipient	Revision No. / Quantity Issued				
	A	B	C	D	E
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1.0 EXECUTIVE SUMMARY

Land Dynamics has been engaged by LCS Estate Pty Ltd to prepare a Stormwater Management Plan (SMP) accompany a Planning Proposal to amend the existing land use and a Development Application (DA) for the modified residential subdivision layout on the lots registered in DP776681, Sancrox Road, Sancrox.

This report demonstrates the development will be constructed and operated generally in accordance with the Water Sensitive Urban Design (WSUD), requirements of Port Macquarie-Hastings Council (PMHC) and best management practices.

In this document are assessments for three primary areas:

- Stormwater Quantity (Hydrology & Detention Sizing)
- Flooding
- Stormwater Quality (Water Sensitive Urban Design)

A hydrologic analysis was undertaken to assess rainfall runoff generated within the pre-developed area and the post developed area. Results show that the overall development will increase flows from pre-developed state as elaborated in Section 5.7. The flow difference will be managed by number of stormwater detention basins to maintain peak outflow to the downstream properties.

Proposed detention basins have been sized to mitigate flows for 20%, 5% and 1% AEP storm events. Pre-developed and post-developed flow comparisons are attached in Appendix B.

Stormwater quality assessment was undertaken to design the preliminary treatment train to meet the Water Quality objectives and PMHC quality requirements. Refer to 6.0 for details. The proposed treatment train consists of number of roadside vegetated swales and end-of-line detention/bioretention basins that allow for treated stormwater discharge. Preliminary detention/bioretention basin design details provided in section 6.3.2.

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2.0 INTRODUCTION

This Stormwater Management Plan identifies the stormwater quantity and quality management measures required for the proposed residential subdivision lot layout on the landholdings registered in DP776681, Sancrox Road, Sancrox, which is within the jurisdiction of Port Macquarie - Hastings Council.

The preliminary development layout used for the assessment is presented in Appendix C.

3.0 EXISTING SITE CHARACTERISTICS

3.1 Site Description

The subject site is located on the Mid North Coast within the Port Macquarie-Hastings local government area, and forms part of the Greater Sancrox Area, as identified by Council. The subject land comprises a number of landholdings and is collectively known as Le Clos Sancrox. The plan below in Figure 1 details the extent of the boundaries of the properties included.

The site is located on the southern side of Sancrox Road, approximately 1.3km from the Pacific Highway to the east, which links with Brisbane to the north and Sydney to the south. Sancrox Road also links to Port Macquarie to the east and Wauchope to the west. Le Clos Sancrox Road located in the southeast side of the site.

The site is relatively cleared, with vegetation in fingers through the site and around the edges. However, catchment areas located upstream of the Le Clos Sancrox Road (perimeter road) are covered by dense vegetation. Several drainage lines dissect the site falling towards Sancrox Rd.

An aerial photo is provided in Figure 3-1 below.



Figure 3-1 Site Aerial Photo (Source: Six Maps)

3.2 Property Description and Area

The development is proposed to be undertaken within the parcels of land registered in DP776681 known as Le Clos Sancrox, with a total area of approximately 105 hectares.

3.3 Existing Land Use

The site is currently zoned RU1 Primary Production under the LEP 2011. The is currently used primarily as grazing field for cattle with a few rural residential dwellings.

3.4 Existing Topography and Site Drainage

The site generally grades towards the north and crosses the Sancrox Road through existing culvert under. Part of the site slopes towards the west. A number of watercourses traverse the site from the upper areas down towards the dam and northern boundary in the central area of the site. Upstream part of the catchment is steep with an average slope of 10% to 15%. However, lower part of the catchment adjacent to the becomes flatter with an average slope of 1% to 5%.

Stormwater runoff from the site flows towards Haydons Creek in the north and finally connects to the Hastings River adjacent to Lot 9 DP 286585.

4.0 PROPOSED DEVELOPMENT

The proposed development incorporates 683 residential lots and 1 lot for village enter and community facility. Refer to Figure 4 below for the proposed development layout.

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Figure 4 Proposed Development Layout

5.0 STORMWATER QUANTITY MANAGEMENT

5.1 Existing Topography and Catchments

A number of watercourses traverse the site from the upper areas down towards the dam and northern boundary in the central area of the site. The site generally grades towards the north and crosses the Sancrox Road via existing culvert. Part of the site slopes towards the west.

See Figure 5-1 below for existing catchment

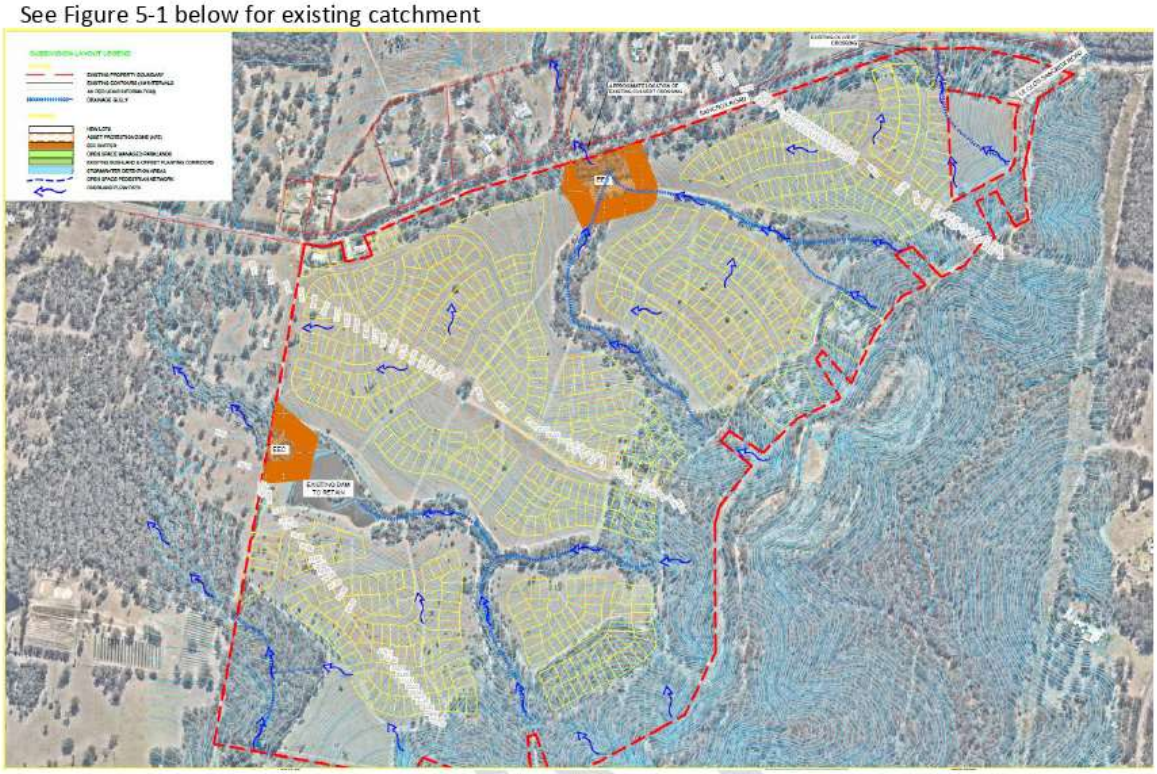

Figure 5-1 Existing Contour and Overland Flow path

5.2 Proposed Discharge Characteristics

For the proposed scenario, the site will retain its existing point of discharge. The flows from upstream catchments will be conveyed through the proposed site in a similar manner to existing via sheet flow through the site with no obstruction from the development. The discharge from the development will be detained and treated prior to release via a detention/bioretention basin to ensure non-worsening of downstream flows to safeguard downstream waterways in terms of both stormwater quantity and meeting quality targets. Refer to proposed catchment boundaries shown in Figure 5-2.

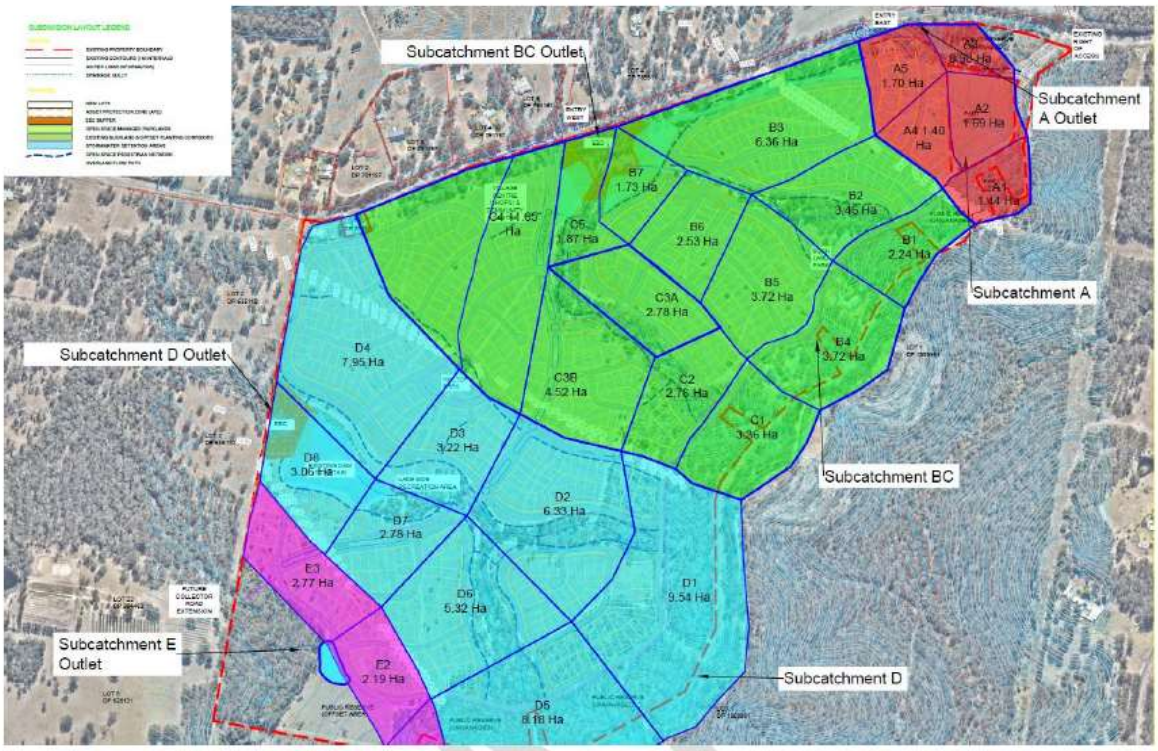

Figure 5-2 Proposed Catchment Boundaries

5.3 Flooding

The proposed site is within the Hastings River catchment. Port Macquarie Hastings Council (PMHC) completed Hastings River Flood Study Update in September 2018. Flood study results shows that this site is not within the flood prone area. The development area is not located within the 1% AEP and PMF flood extent. The Finished Floor Levels are to be confirmed during detailed design with confirmation of flood levels by Council.

Figure 5-3-1 shows 1% Flood Extent (without climate change) and Figure 5-3-2 depicts the flood extent in PMF plus 0.4m Tidal event

The Hastings River flood maps are attached in Appendix A.

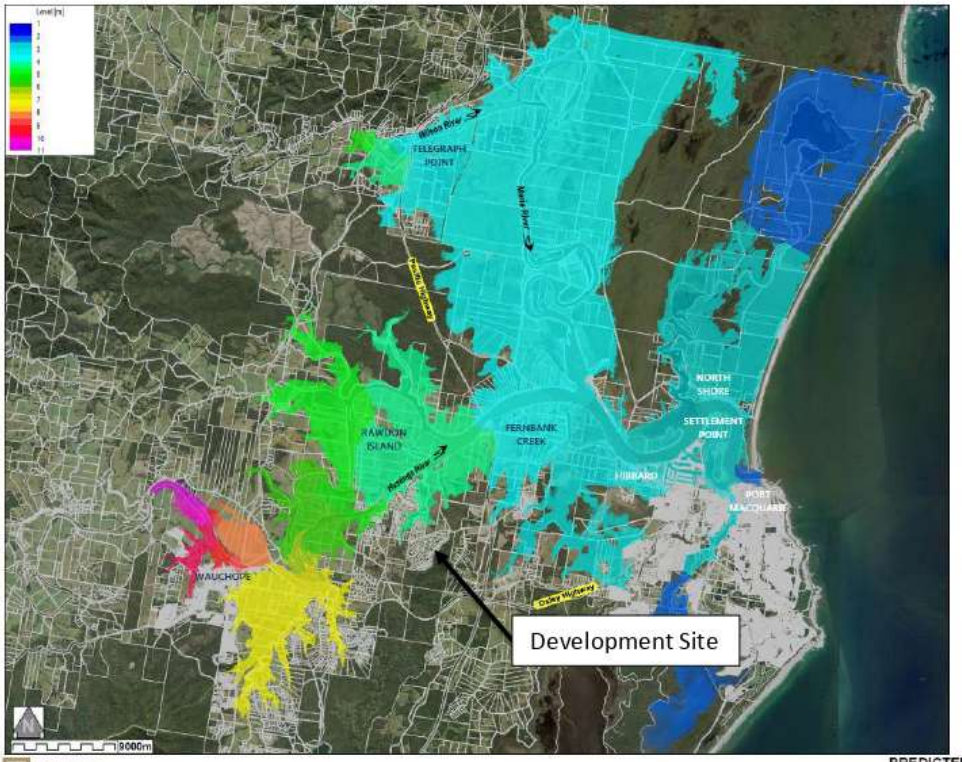

Figure 5-3-1 1% AEP Flood Extent

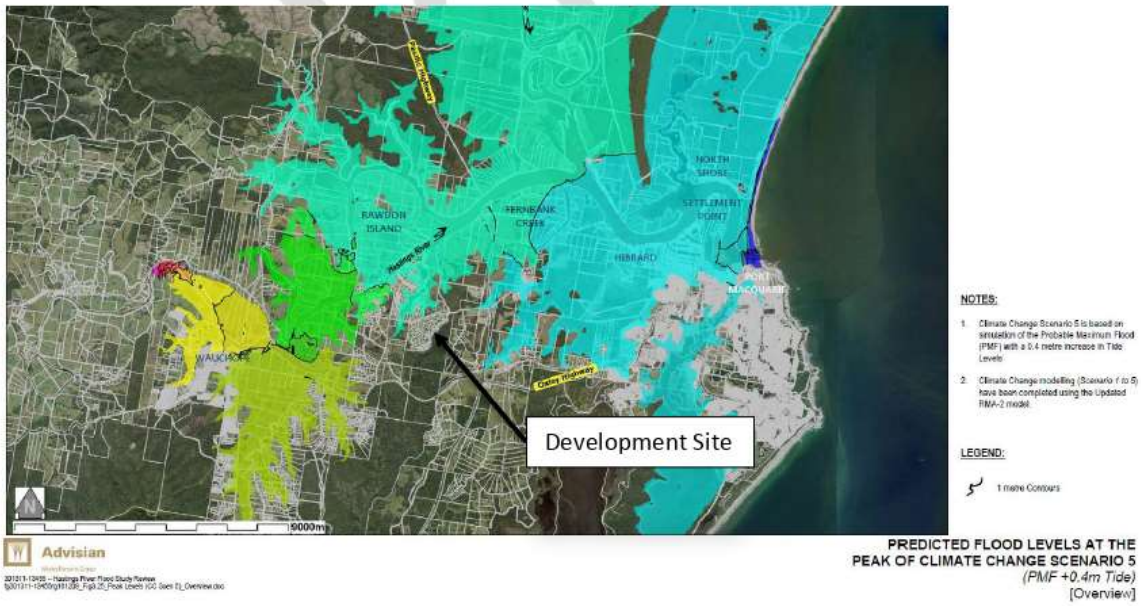

Figure 5-3-2 PMF+0.4m Tide Flood Extent

5.4 Hydrology

A hydrological assessment was undertaken, using Intensity Frequency Duration and rainfall data in accordance with ARR2016 temporal pattern which was derived from ARR Data Hub and from Bureau of Meteorology respectively. ARR2016 data was extracted from data huon 23rd of September 2019.

The site has been assessed under three scenarios:

- Existing Scenario – the site in its current state;
- Developed Unmitigated Scenario – the site is developed excluding stormwater detention;
- Mitigated Scenario – the site is developed including stormwater detention.

5.5 DRAINS Analysis

The DRAINS/RAFTS model has been developed which consists of a three separate model that incorporates nodes representing areas for existing and developed case scenarios. The DRAINS program performs design and analysis calculations for urban stormwater drainage systems and models the flood behaviour of rural and urban catchments. DRAINS displays the components of a drainage system as "objects", and presents information about these and the results of calculations pictorially. DRAINS has many applications, from sizing of single drainage pipes to complex analyses of large, established pipe drainage systems and river basins.

Figure 5-5 below shows the DRAINS/XP-RAFTS model configuration.

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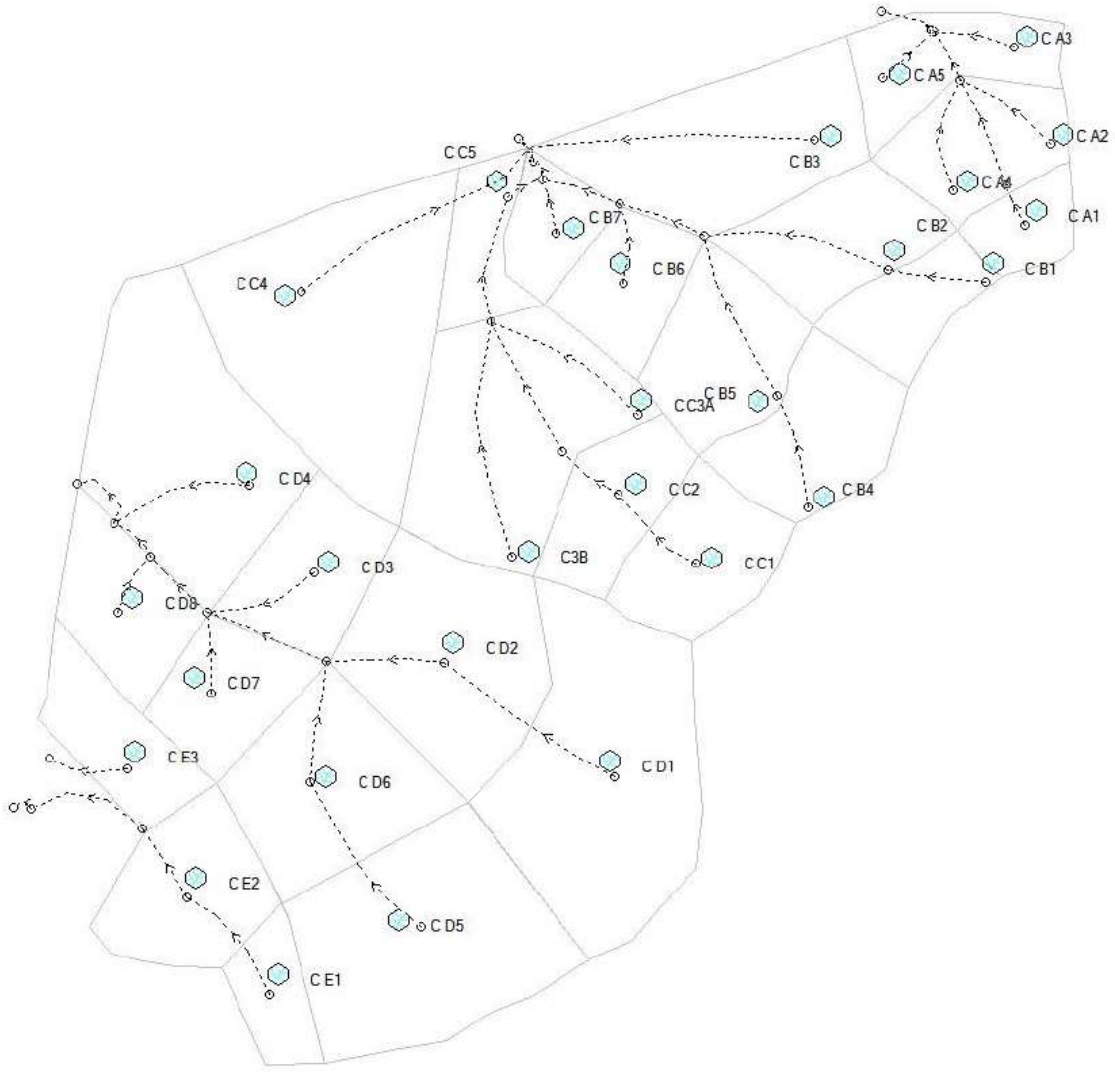

Figure 5-5 DRAINS (RAFTS) Model (Existing and Unmitigated Developed Scenarios)

5.6 RAFTS Methodology

The existing site and developed site was modelled as lumped sub-catchments with the extent catchments. This allows for an accurate representation of Manning's roughness coefficients for each area. The upstream external catchments have been modelled as lump catchments with consideration of the existing characteristics.

PERN values:

The PERN parameter within RAFTS is a unit-less empirical parameter used to describe the roughness value of individual catchment areas, and is considered somewhat similar to the Manning's 'n' value.

The RAFTS PERN values adopted are shown below in table 5-6-1

Table 5-6-1 PERN values

Table B-2 PERN Values Adopted

PERN Value	Description
0.02	Impervious Area
0.035	Urban Pervious Area
0.05	Rural Pastures
0.12	Forested Catchments

The sub-catchments were delineated based on the above regions, and a single PERN value generated based on the relative areas of each of the above within the sub-catchment.

Table 5-6-2 below summarises the existing catchment parameters used to assess the existing stormwater flows generated from each sub-catchment.

Table 5-6-2 Existing Catchment Parameters

Pre developed Scenario					
Catchment	**Area (Ha)**	**% Impervious**	**% Pervious**	**Slope%**	**PERN**
A1	1.44	**0**	100	17.1	0.05
A2	1.69	**0**	100	10.5	0.025
A3	0.98	**0**	100	9.6	0.05
A4	1.4	**0**	100	10.6	0.025
A5	1.7	**0**	100	10.3	0.025
B1	2.24	**0**	100	10.4	0.05
B2	3.46	**0**	100	4.7	0.025
B3	6.36	**0**	100	5.8	0.025
B4	3.72	**0**	100	15.9	0.05
B5	3.72	**0**	100	6	0.025
B6	2.53	**0**	100	8.2	0.025
B7	1.73	**0**	100	4.1	0.025
C1	3.36	**0**	100	15.3	0.05

C2	2.76	**0**	100	4.3	0.05
C3A	7.3	**0**	100	6.7	0.025
C3B	4.52	**0**	100	8.6	0.025
C4	11.65	**0**	100	4.9	0.025
C5	1.87	**0**	100	2.4	0.03
D1	9.54	**0**	100	12.5	0.08
D2	6.33	**0**	100	3.4	0.03
D3	3.22	**0**	100	5.6	0.04
D4	7.95	**0**	100	6.5	0.03
D5	8.18	**0**	100	13.1	0.08
D6	5.32	**0**	100	5.6	0.03
D7	2.78	**0**	100	5.2	0.04
D8	3.06	**0**	100	3.6	0.05
E1	1.83	**0**	100	23.7	0.05
E2	2.19	**0**	100	8.2	0.025
E3	2.77	**0**	100	5.9	0.025

The RAFTS Method was used to determine discharge flow rates of each catchment for standard 5%, 20% and 1% AEP event, from 10-min to 6-hour durations.

5.7 DRAINS Results – Unmitigated Scenario

Table 5-7-1 below summarises the stormwater flows generated from each sub-catchment due to the proposed development.

Table 5-7-1 Existing Catchment Parameters

Post Developed Scenario					
Catchment	**Area (Ha)**	**% Impervious**	**% Pervious**	**Slope%**	**PERN**
A1	1.44	5	95	17.1	0.05
A2	1.69	60	40	10.5	0.015
A3	0.98	0	100	9.6	0.05
A4	1.4	60	40	10.6	0.015
A5	1.7	50	50	10.3	0.015
B1	2.24	10	90	10.4	0.05
B2	3.46	60	40	4.7	0.015
B3	6.36	42	58	5.8	0.02
B4	3.72	10	90	15.9	0.05
B5	3.72	60	40	6	0.015
B6	2.53	60	40	8.2	0.015
B7	1.73	30	70	4.1	0.015
C1	3.36	10	90	15.3	0.05
C2	2.76	40	60	4.3	0.02
C3	7.3	40	60	8.6	0.02

C4	11.65	70	30	4.9	0.015
C5	1.87	10	90	3.2	0.025
D1	9.54	21	79	12.5	0.04
D2	6.33	50	50	3.4	0.02
D3	3.22	50	50	5.6	0.02
D4	7.95	60	40	6.5	0.015
D5	8.18	10	90	13.1	0.07
D6	5.32	50	50	5.6	0.02
D7	2.78	40	60	5.2	0.02
D8	3.06	40	60	3.6	0.03
E1	1.83	0	100	23.7	0.05
E2	2.19	60	40	8.2	0.015
E3	2.77	60	40	5.9	0.015

A summary of the results is provided in Table 5-7-2 below.

Table 5-7-2 Discharge Summary from DRAINS Analysis (Existing site and Unmitigated Developed site)

Catchment	Scenario	Peak Flow Rate for Average Recurrence Interval (m^3/s)		
		20% AEP	5% AEP	1% AEP
Sub-catchment A (Outlet)	Existing	1.91	2.82	3.88
	Developed	2.31	3.59	4.79
Sub-catchment BC (Outlet)	Existing	10	14.6	20
	Developed	12.7	17.3	23.9
Sub-catchment D (Outlet)	Existing	7.46	10.8	15.2
	Developed	9.91	13.9	19.1
Sub-catchment E (Outlet)	Existing	1.77	2.55	3.6
	Developed	2.35	3.39	4.67

The results in Table 5-7 shows that the proposed development increases the peak flows from the site, indicating that there is a need for stormwater detention. Hence, to satisfy council requirements, further hydraulic and hydrological assessment is necessary.

5.8 DRAINS Results – Mitigated Scenario

Based on the results for the existing and unmitigated developed scenarios, stormwater detention basins was modelled as part of the mitigated scenario to detain and manage discharge flows from the site to ensure non-worsening of downstream conditions. See mitigated scenario DRAINS model configuration in Figure 5-8 below:

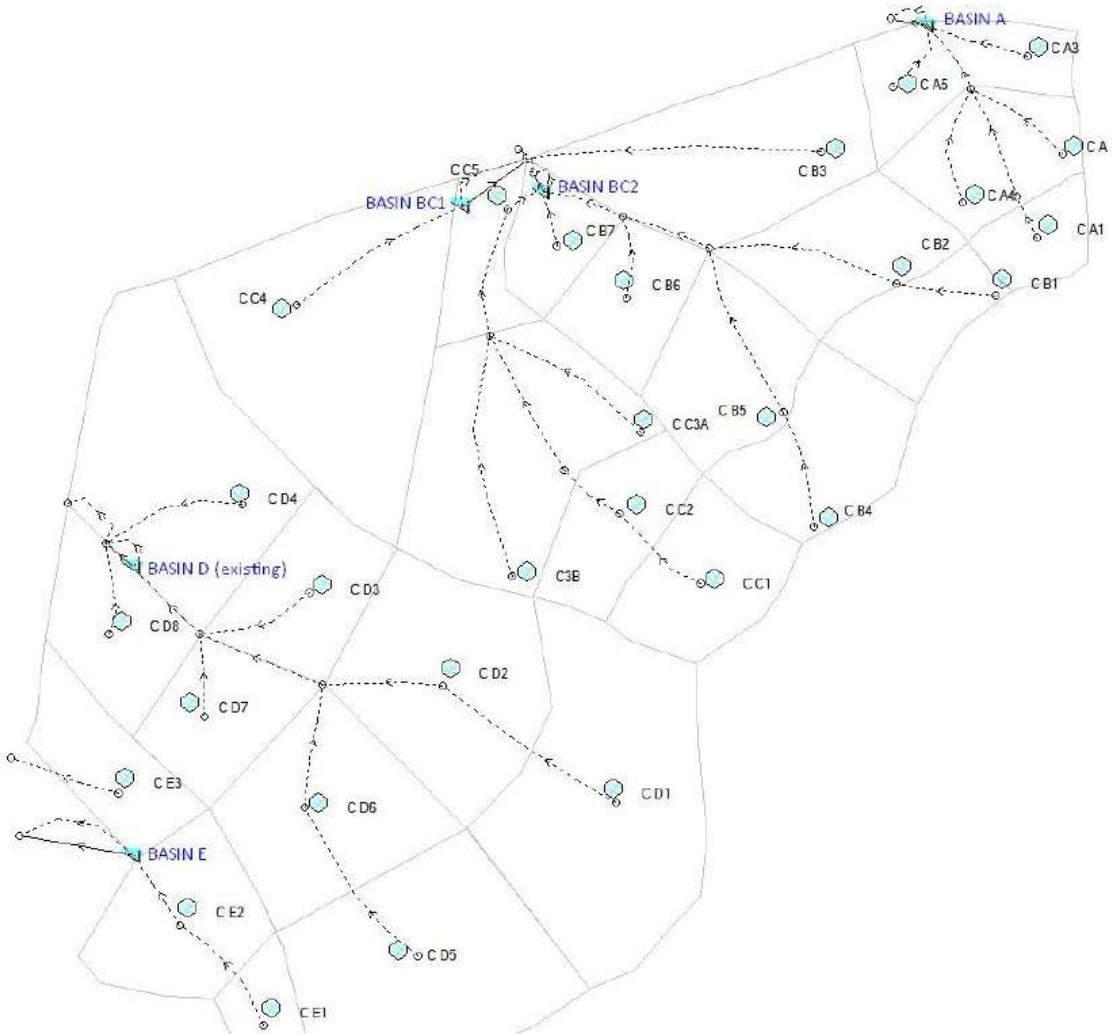

Figure 5-8 DRAINS/RAFTS Model (Mitigated Developed Scenarios)

The results seen in Table 5-8 below are from the DRAINS model which summarizes the peak discharge rates for each identified critical storm across the assessed AEP range at the assessment point for the catchments, in a mitigated scenario. The results show the proposed development can be satisfactorily attenuated to meet non-worsening criteria.

Table 5-8 Discharge Summary from DRAINS Analysis (Existing site and Mitigated Developed site)

Catchment	Scenario	Peak Flow Rate for Average Recurrence Interval (m^3/s)		
		20% AEP	5% AEP	1% AEP
Subcatchment A (Outlet)	Existing	1.91	2.82	3.88
	Developed	2.31	3.59	4.79
	Mitigated	1.47	2.12	3.5
Subcatchment BC (Outlet)	Existing	10	14.6	20
	Developed	12.7	17.3	23.9
	Mitigated	4.85	6.31	9.73
Subcatchment D (Outlet)	Existing	7.46	10.8	15.2
	Developed	9.91	13.9	19.1
	Mitigated	4.33	5.88	8.53
Subcatchment E (Outlet)	Existing	1.77	2.55	3.6
	Developed	2.35	3.39	4.67
	Mitigated	1.99	2.67	3.44

5.9 Detention Basin Details

To mitigate increase of the stormwater runoff due to the additional impervious areas, detentions basins proposed for each subcatchments prior to the final discharge. Figure 5-9-1 shows a concept stormwater plan with the preliminary location of the detention basins.

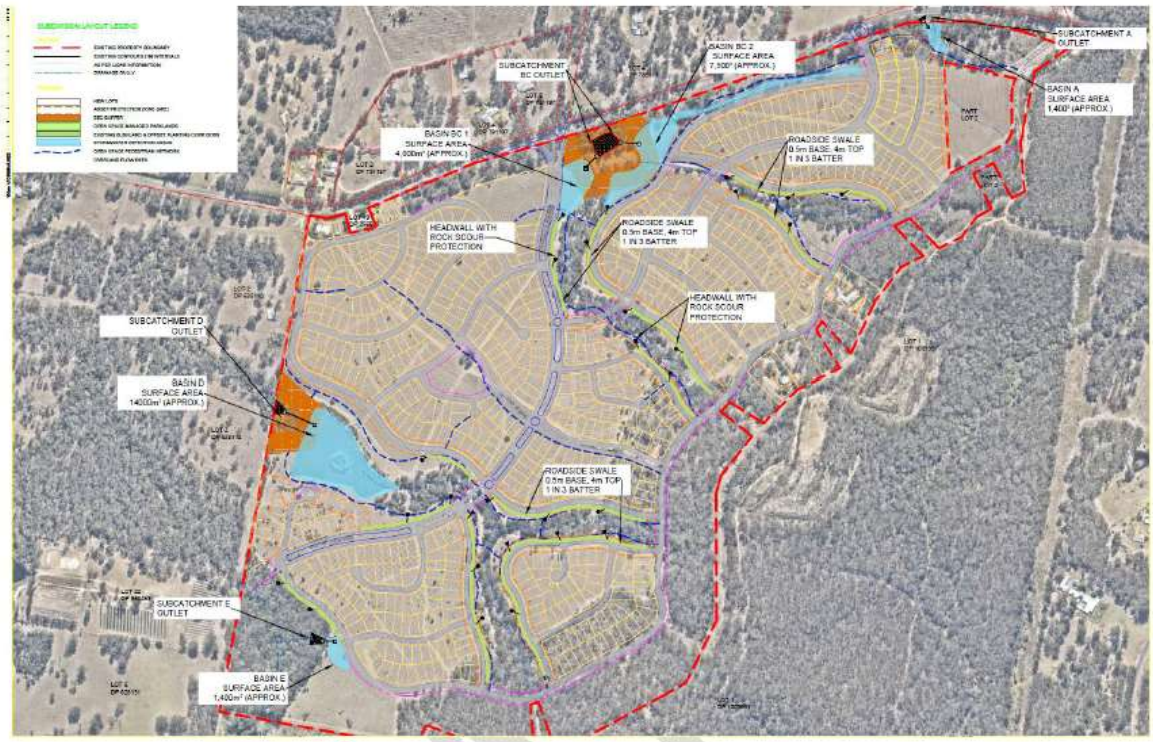

Figure 5-9-1- Concept stormwater plan with detention basin location

The properties of the detention basin are summarized in Table 5-9.

Table 5-9 Stormwater Detention Basin Details

Outlet	EXISTING CONDITION 1%AEP FLOW m3/s	POST DEV - UNMITIGATED 1% AEP FLOW m3/s	POST DEV - MITIGATED 1% AEP FLOW m3/s	DETENTION BASIN Surface Area m2	Maximum Depth, m
A	3.88	4.79	3.5	1400	1.5
BC	20	23.9	9.73	11500	2
D	15.2	19.1	8.53	14000	2
E1	3.6	4.67	3.44	1400	1.5

The hydraulic investigation and runoff-routing exercise has demonstrated that the proposed development increases stormwater discharge off site. The incorporation of a detention basins in the mitigated scenario demonstrates that flows can be controlled and managed to ensure non-worsening of the proposed development.

6.0 STORMWATER QUALITY MANAGEMENT

6.1 Environmental Values and Water Quality Objectives

To prevent degradation of Port Macquarie waterways, ecologically sustainable development principles have been embraced and regulated by PMHC. The core principles of Water Sensitive Urban Design (WSUD) are to:

- Protect natural ecosystems;
- Integrate stormwater treatment into the urban landscape;
- Protect water quality;
- Reduce runoff and peak flows; and
- Add value while minimizing development costs.

With these principles in mind, this stormwater management plan aims to:

1. Identify the water quality and quantity objectives and performance criteria;
2. Estimate the pollutant loads; and
3. Detail within the management plan, strategies aimed at achieving the required objectives.

Water quality objectives during both the construction and operational phases of a development are presented within PMHC guidelines and are detailed in this section of this report.

Water quality parameters and the proposed limits applicable for this development have been selected in accordance with the PMHC Stormwater Management Guidelines Table D7.7 as show in Table 6-1below:

Table 6-1 PMHC Stormwater Treatment Pollutant Reduction Targets

Pollutant	Objective
Suspended Solids (SS)	80% retention of average annual load
Total Phosphorus (TP)	45% retention of average annual load
Total Nitrogen (TN)	45% retention of average annual load
Litter	100% retention of litter greater than 5mm for flows up to 3month ARI peak flow

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6.2 Proposed Stormwater Treatment Devices

WSUD aims to minimize the impact of a development on the natural water cycle by reducing the export of pollutants, sediments and nutrients from the site into the natural watercourse. In order to treat the stormwater runoff from the site, various treatment devices can be used throughout the development area; and these concepts can be integrated into the overall design of the road layouts, road cross sections, stormwater layouts and water supply reticulation systems. Stormwater from the development will follow a specially designed stormwater quality treatment train prior to discharge from the site, which will ensure compliance with the water quality objectives.

It is proposed that road side swales and bioretention basins is implemented to provide water quality treatment to the abovementioned standards for the site. Details of the location and preliminary design of the proposed bioretention basin are presented in the Engineering Drawings in Appendix C of this report.

6.2.1 Bioretention System

A bioretention area is a vegetated region where runoff is filtered through a filter media layer (e.g. sandy loam) as it percolates downwards to receiving underlying reticulation. Specific vegetation is to be incorporated into the landscaping of bioretention areas which effectively reduce nutrient loads.

A typical section is also presented in Figure 6-2-1 with further standard details.

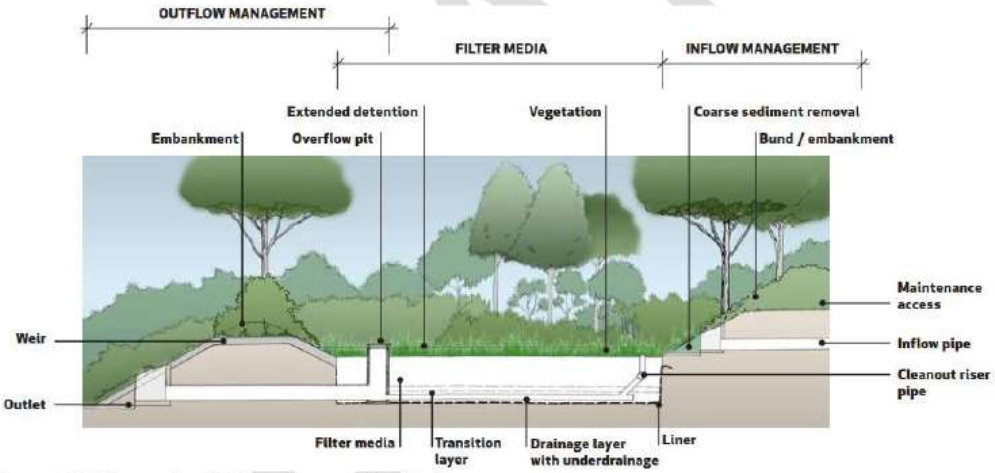


Figure 6-2-1 Example of Urban Bioretention Basin

6.3 Modelling Approach (MUSIC)

Modelling of the site was undertaken using the 'Model for Urban Stormwater Improvement Conceptualization (MUSIC) as promoted by the PMHC. The development was modelled using the split catchment approach. An appropriate type of land use was applied to all surface types within the developed catchments; where individual treatment devices were assigned the relevant modelling treatment parameters. Consequently, a treatment train was established for the site, ensuring that water discharging from the site adheres to the specified Water Quality Objectives.

Meteorological data for link input into MUSIC was obtained from the derived data for PMHC Coastal area. The catchment parameters of the MUSIC modelling are specified within the PMHC Guidelines – D7 Stormwater Management and have been modelled as such.

6.3.1 Source Nodes

The pollutant source node parameter inputs into the MUSIC model were determined using the NSW MUSIC Modelling Guidelines (August 2015), specifically Tables 5-6 and 5-7 for rural and residential surface types.

For the existing catchment, lumped catchment has been used for the areas with dense vegetation and rural agricultural land.

Developed catchment parameters were based on catchment details shown in table 5-7-1

6.3.2 Bioretention Basin Properties

Parameters used for the bioretention basin modelling have been summarized in Table 6-3-2 below:

Figure 6-3-2 Typical Details of Roadside Swale Properties

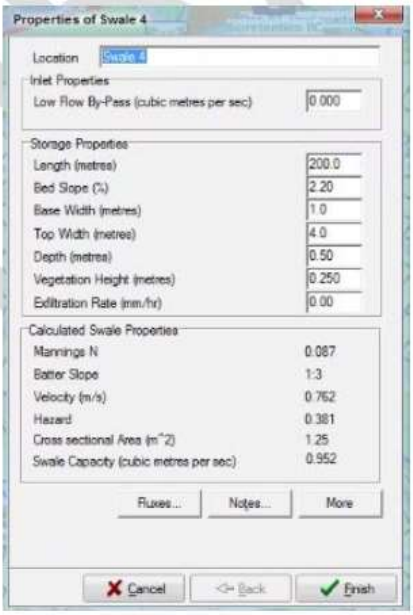


Table 6-3-2-1 Summary of Proposed Bioretention Basin A:

Parameter	Values
Minimum Filter Area (m²)	100
Extended Detention Depth (m)	0.2
Minimum Filter Media Depth (m)	0.3
Saturated Hydraulic Conductivity (mm/hour)	100
TN Content of Filter Media (mg/kg)	800
Orthophosphate Content of Filter Media (mg/kg)	50

Table 6-3-2-2 Summary of Proposed Bioretention Basin BC 1:

Parameter	Values
Minimum Filter Area (m²)	252
Extended Detention Depth (m)	0.3
Minimum Filter Media Depth (m)	0.5
Saturated Hydraulic Conductivity (mm/hour)	100
TN Content of Filter Media (mg/kg)	800
Orthophosphate Content of Filter Media (mg/kg)	55

Table 6-3-2-3 Summary of Proposed Bioretention Basin BC 2:

Parameter	Values
Minimum Filter Area (m²)	450
Extended Detention Depth (m)	0.2
Minimum Filter Media Depth (m)	0.5
Saturated Hydraulic Conductivity (mm/hour)	100
TN Content of Filter Media (mg/kg)	800
Orthophosphate Content of Filter Media (mg/kg)	55

Table 6-3-2-4 Summary of Proposed Basin D (existing Pond):

Parameter	Values
Surface Area (m²)	14,000
Extended Detention Depth (m)	1
Permanent Pool Volume	2000
Weir Crest Length (m)	8

Table 6-3-2-5 Summary of Proposed Bioretention Basin E

Parameter	Values
Minimum Filter Area (m²)	100
Extended Detention Depth (m)	0.2
Minimum Filter Media Depth (m)	0.5
Saturated Hydraulic Conductivity (mm/hour)	100
TN Content of Filter Media (mg/kg)	800
Orthophosphate Content of Filter Media (mg/kg)	55

6.3.3 MUSIC Model Layout and Results

The developed site has been modelled in accordance with a detailed sub-catchment regime to ensure the entire site meets pollutant reduction objectives. Refer to Figure 6-3-3 below for the modelled MUSIC layout.

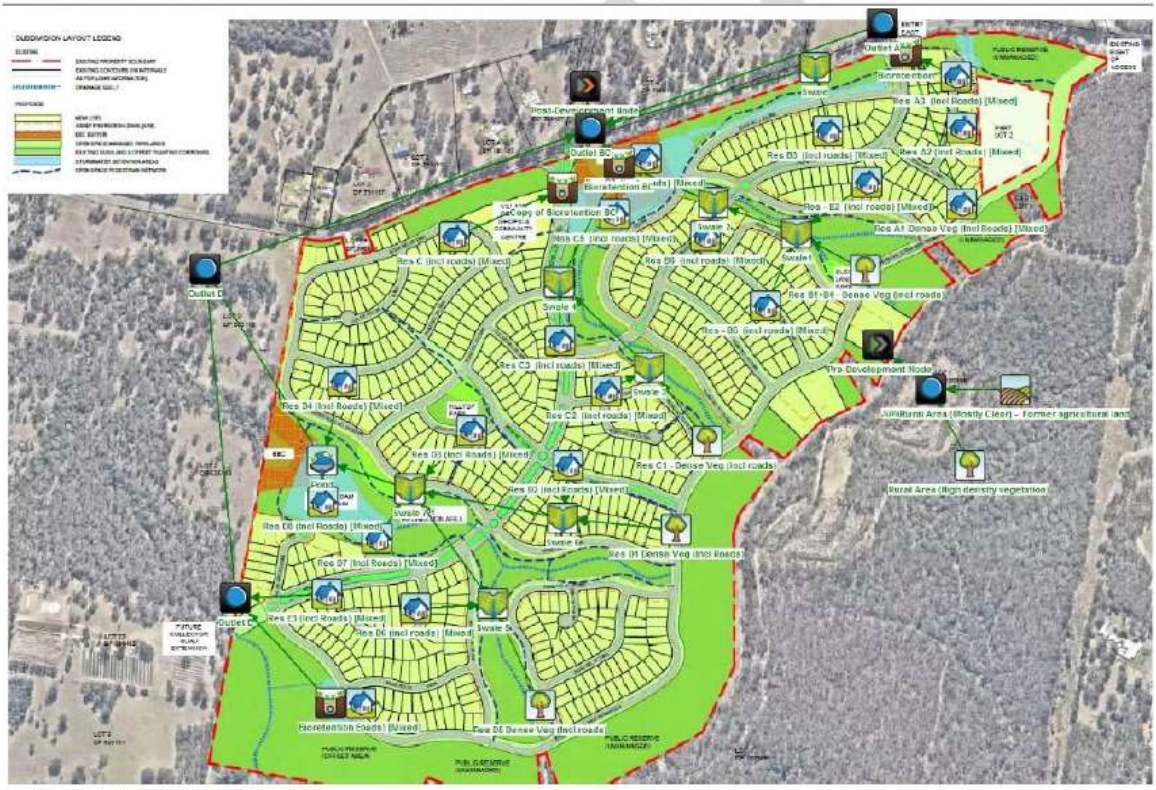
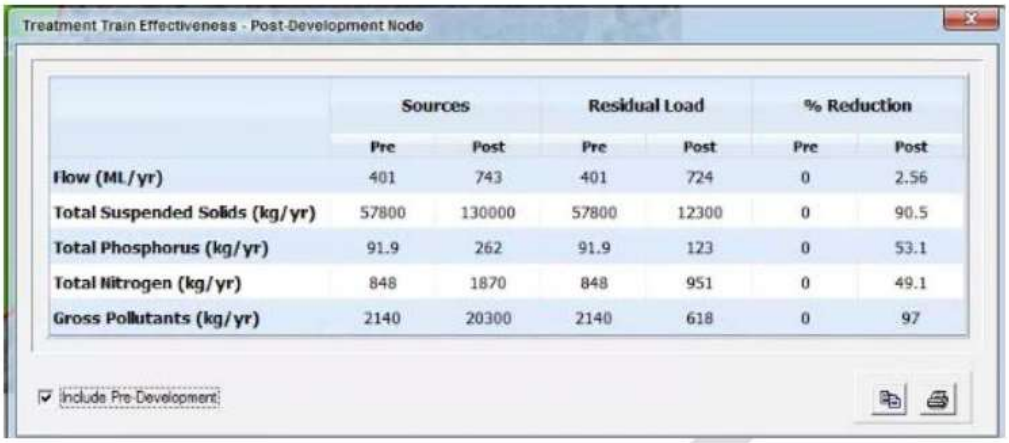


Figure 6-3-3 MUSIC Model Layout

The results in Table 6-3-3 below summarize site pollutant reductions achieved from the mitigated site over the 10-year modelling period, as compared to the nominated load reduction targets. The MUSIC results below show that the proposed stormwater treatment devices will improve the discharging stormwater quality as such the development's runoff meets the nominated load reduction targets set by PMHC. Refer to Appendix B for MUSIC results summary.

Table 6-3-3 Bioretention Pollutant Reduction Results



	Sources		Residual Load		% Reduction	
	Pre	Post	Pre	Post	Pre	Post
Flow (ML/yr)	401	743	401	724	0	2.56
Total Suspended Solids (kg/yr)	57800	130000	57800	12300	0	90.5
Total Phosphorus (kg/yr)	91.9	262	91.9	123	0	53.1
Total Nitrogen (kg/yr)	848	1870	848	951	0	49.1
Gross Pollutants (kg/yr)	2140	20300	2140	618	0	97

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7.0 CONCLUSION

This Stormwater Management Plan (SMP) has been prepared to provide a design proposal and guide to the stormwater quantity and quality management techniques for the site.

The three primary objectives of this SMP have been to ensure that:

- Suitable measures are incorporated in the development to ensure that there are no adverse impacts to downstream receiving waterways, property or infrastructure resulting from any increase to peak discharging stormwater flow rates.

- Details of a proposed stormwater quality treatment train are provided to ensure discharge of stormwater from the site is of adequate quality standards to comply with the requirements of PMHC.

The analysis presented in this report shows that the development overall will increase flows from the undeveloped state. However, this increase will be managed by diverting overland runoff into a specifically designed stormwater detention basin. The proposed measures will ensure no adverse impacts to downstream receiving waterways, properties or infrastructure is achieved.

The site will maintain existing major flow paths and its existing north and western boundary point of discharge, which will convey flows towards Haydons Creek.

A stormwater quality assessment is provided which demonstrates that a specially tailored treatment train will be required in order to meet the pollutant removal targets of PMHC during the operational phase of the proposed development.

To achieve the measures necessary for the two objectives, a number of roadside swales and detention/bioretention basins have been designed for the development. See Appendix C for preliminary details of the adopted stormwater mitigation and management measures.

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Appendix A – Hastings River Flood Map

Source: Hasting River Flood Study Update – Advisian September 2018

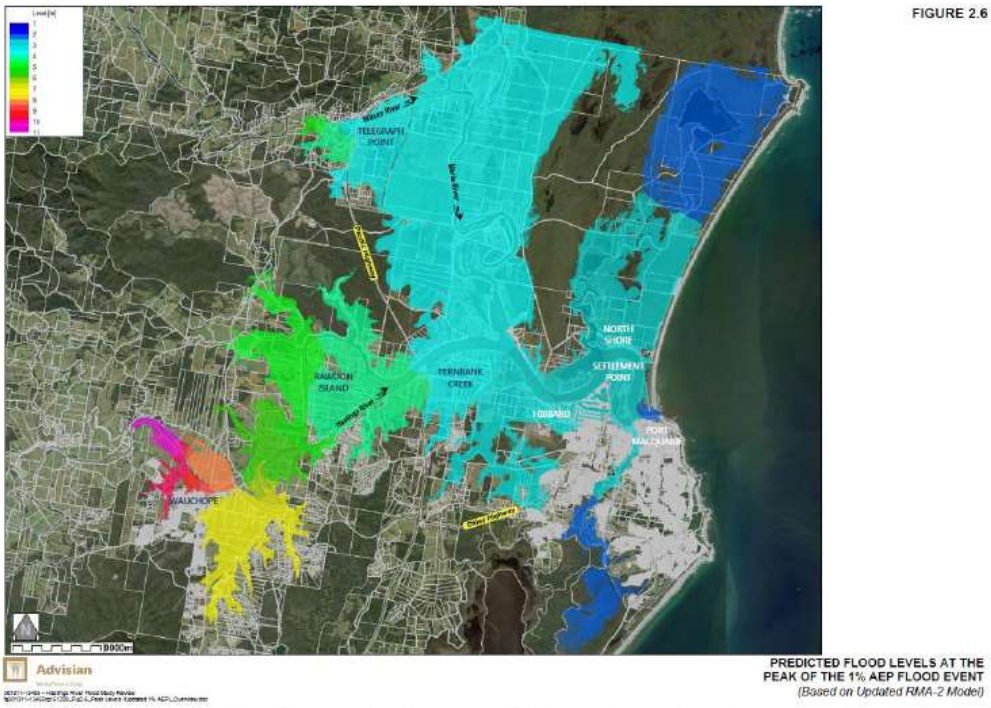

Figure: 1% AEP Flood Level

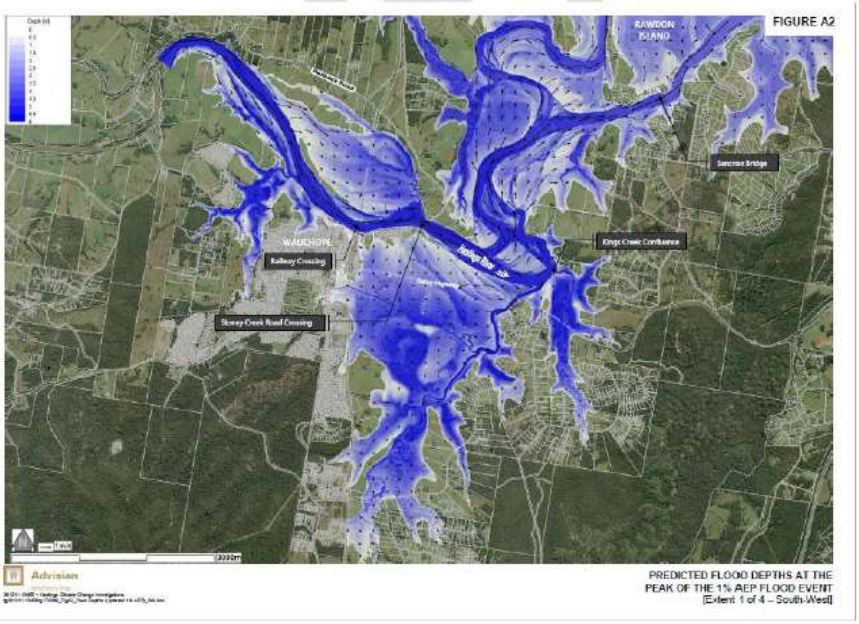

Figure: 1% AEP Flood Depth

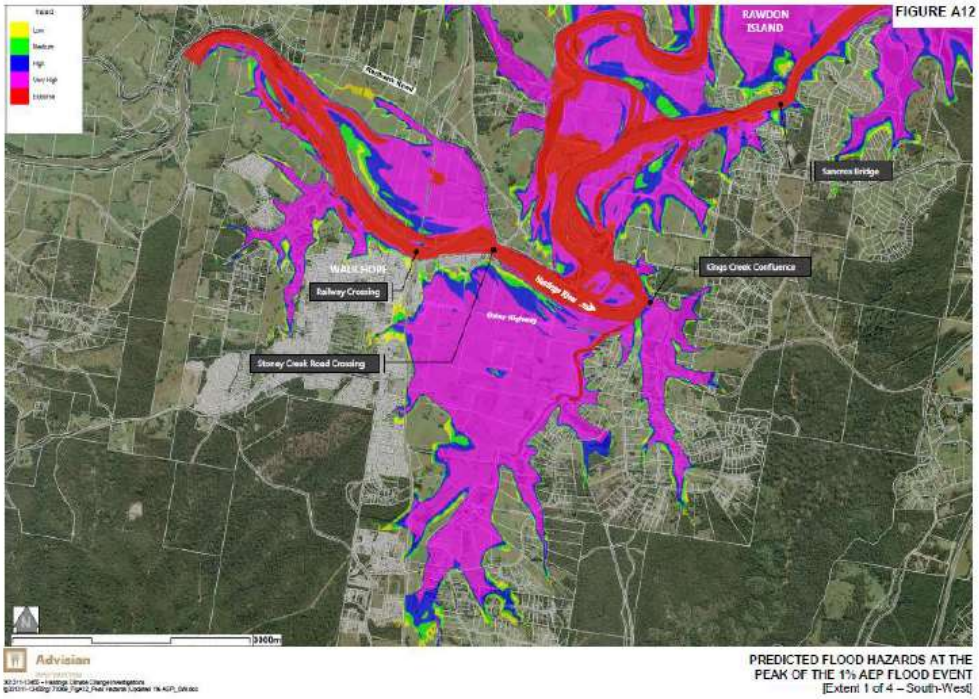

Figure: 1% AEP Flood Hazard

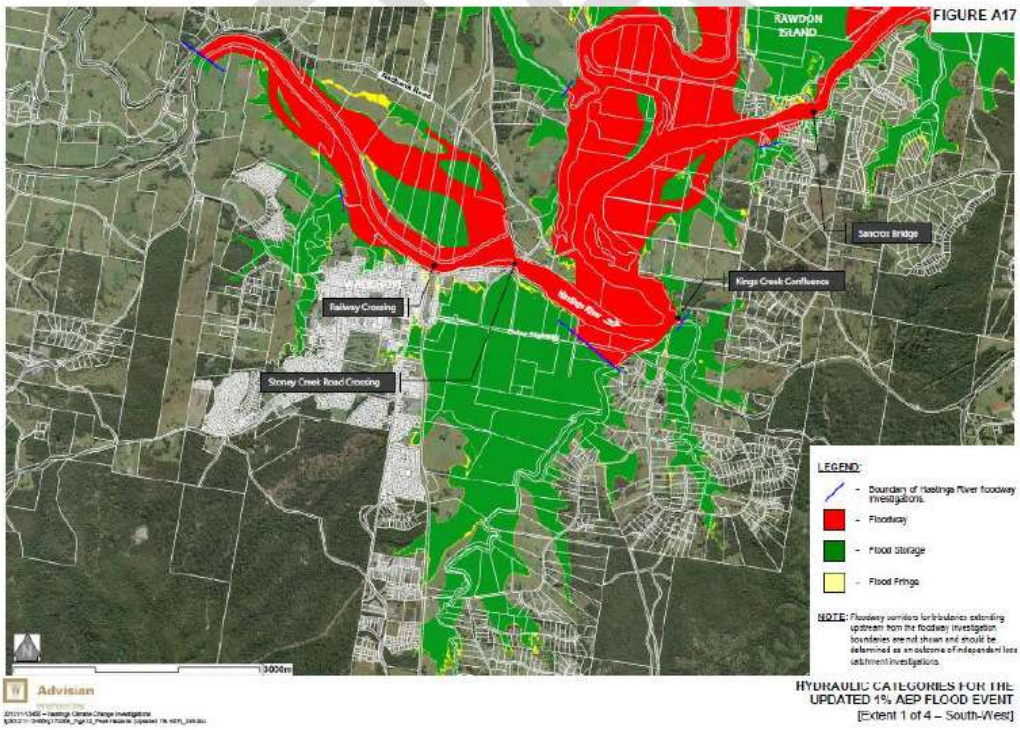

Figure: 1% AEP Flood – Hydraulic Category

Appendix B – Engineering Calculations

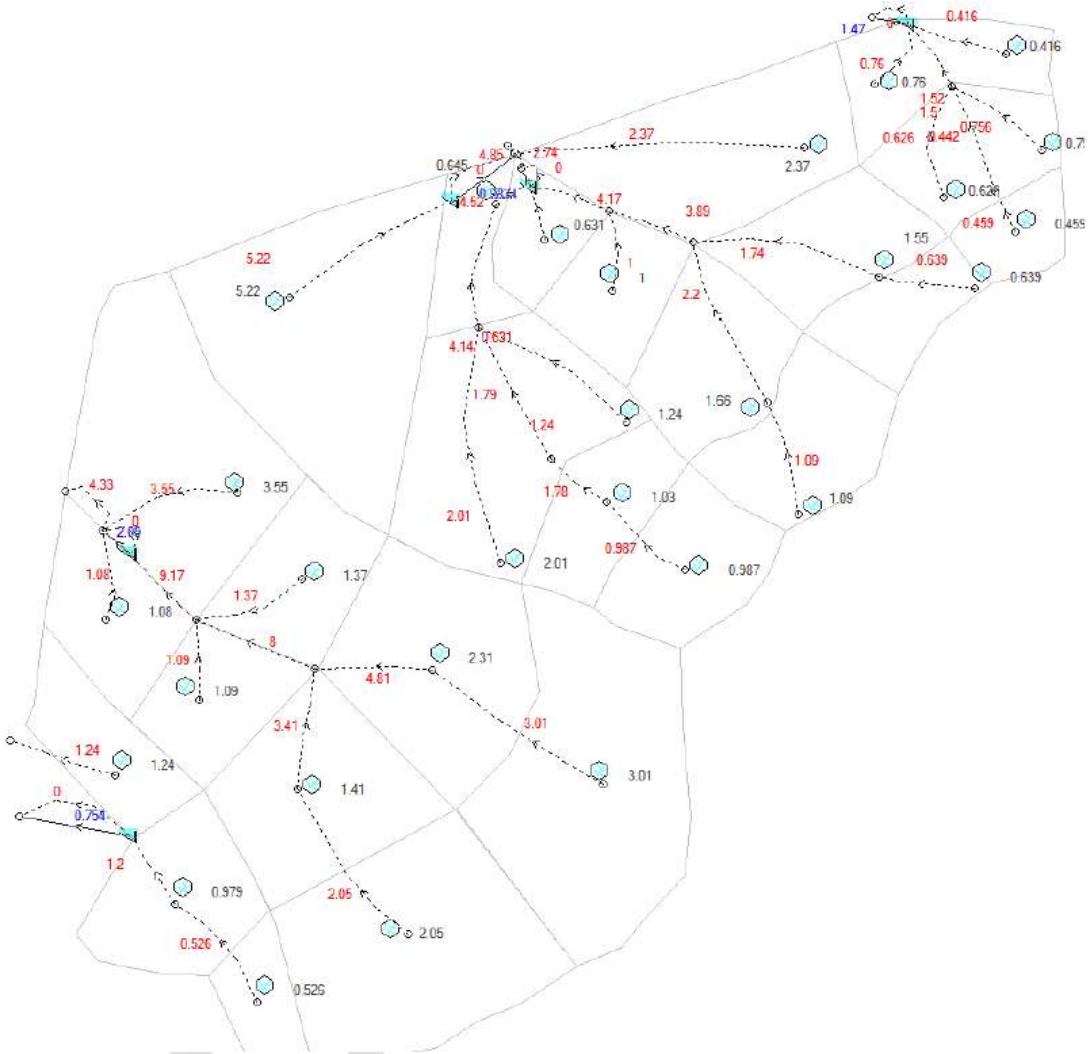

Figure: 20% AEP Mitigated Results – Drains (Rafts)

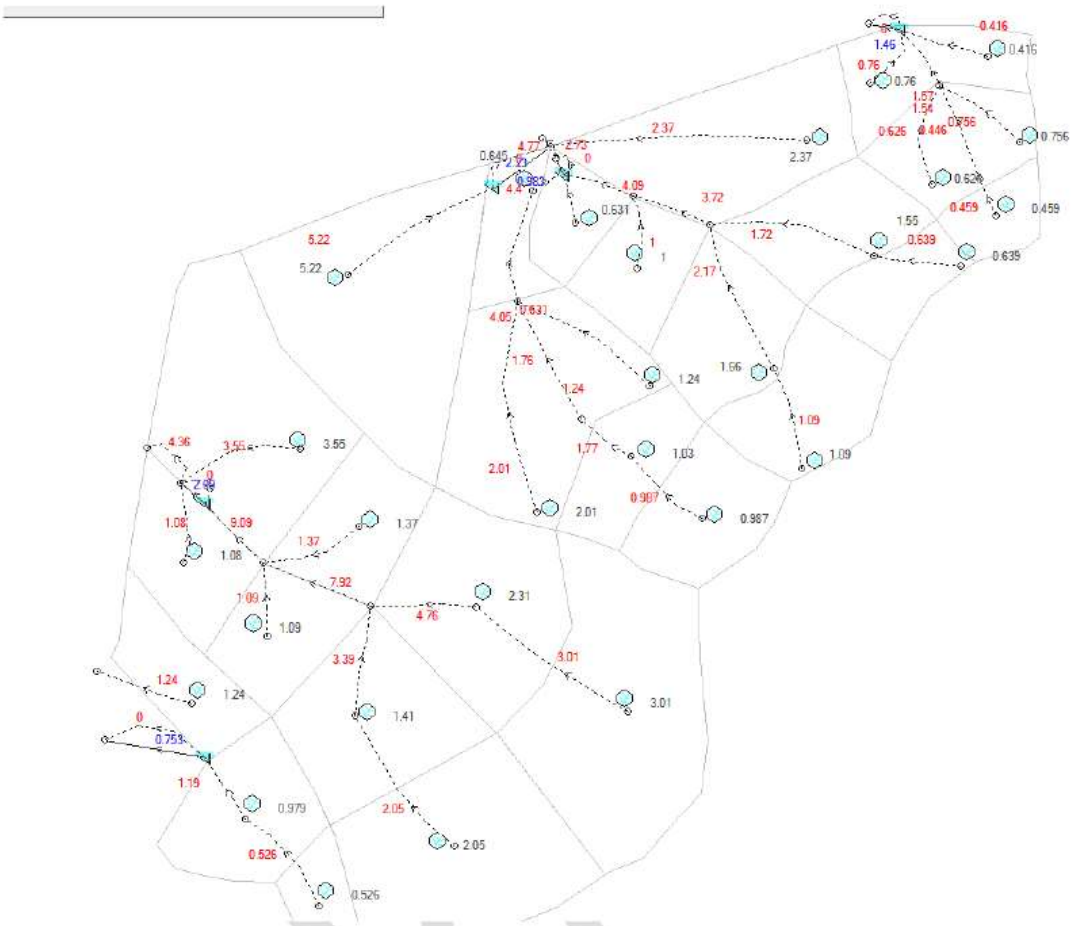

Figure: 5% AEP Mitigated Results – Drains (Rafts)

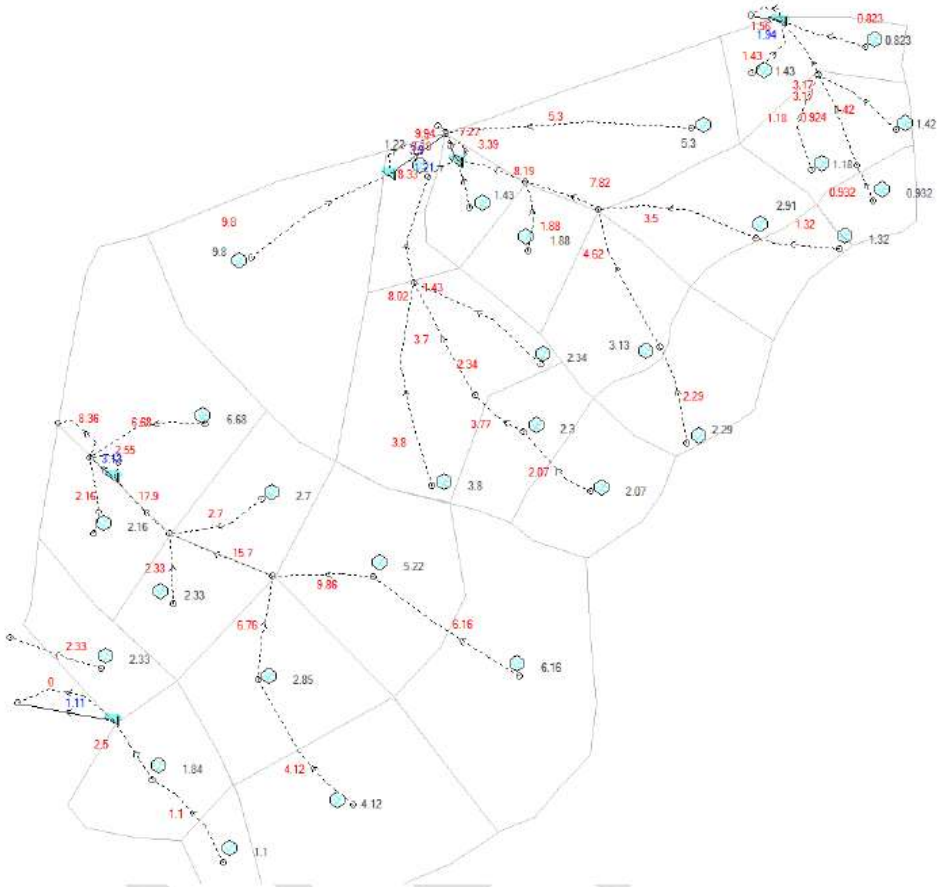

Figure: 1% AEP Mitigated Results – Drains (Rafts)

MUSIC MODEL RESULTS



Figure: Music Results

Appendix C – Engineering Drawings

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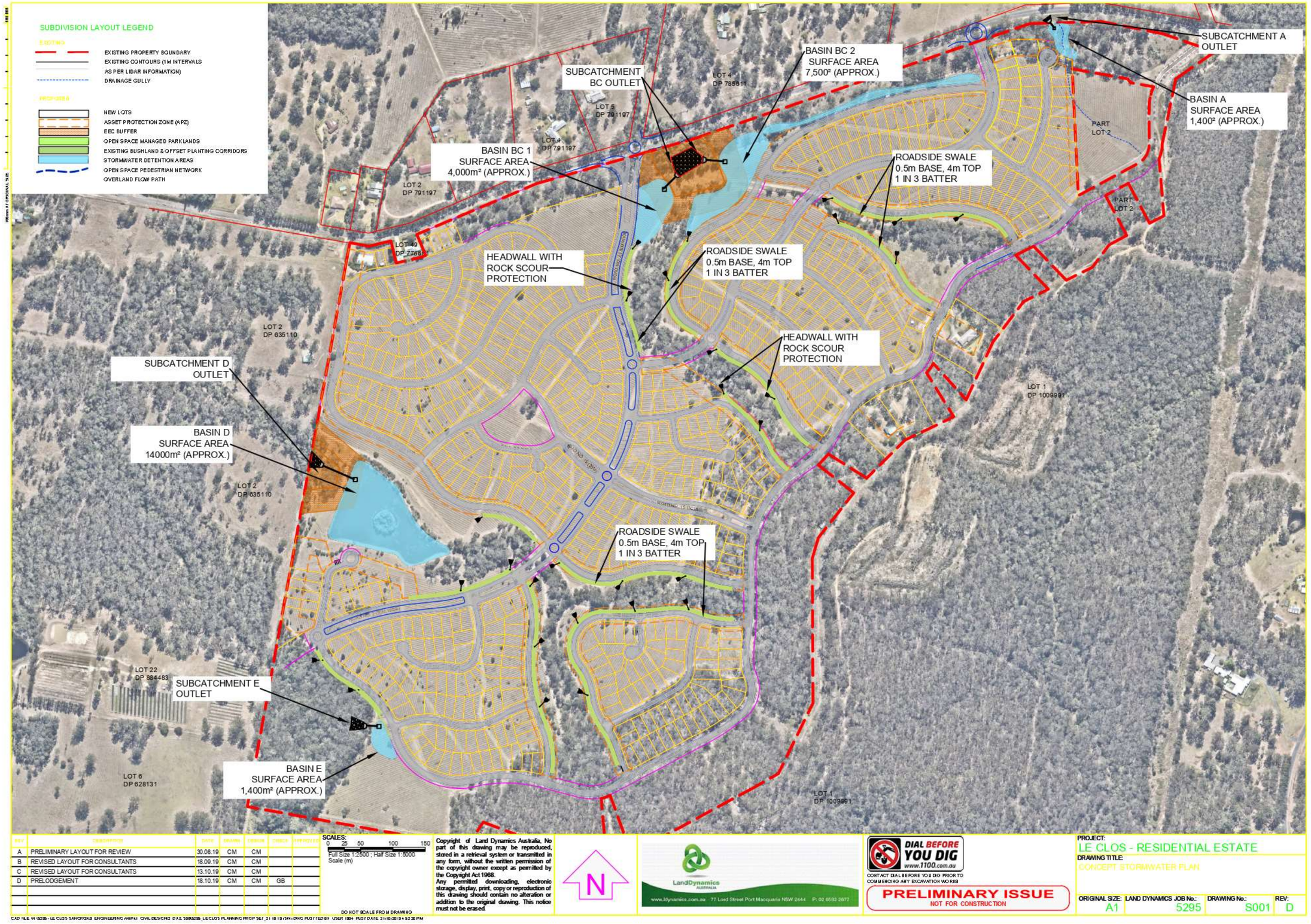

REV	DESCRIPTION	DATE	DRAWN	DESIGN	CHECK	APPROVED
A	PRELIMINARY LAYOUT FOR REVIEW	30.08.19	CM	CM		
B	REVISED LAYOUT FOR CONSULTANTS	18.09.19	CM	CM		
C	REVISED LAYOUT FOR CONSULTANTS	13.10.19	CM	CM		
D	PRELODGEMENT	18.10.19	CM	CM	GB	

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LCS Estates Pty Ltd

Stage 1 Site Contamination Assessment

Proposed Residential Rezoning

Le Clos, Sancrox Road, Sancrox

Report No. RGS20821.1-AD

27 September 2019

REGIONAL GEOTECHNICAL SOLUTIONS

REGIONAL GEOTECHNICAL SOLUTIONS

Manning-Great Lakes
Port Macquarie
Coffs Harbour

RGS20821.1-AD

27 September 2019

LCS Estates Pty Ltd
c-/ Land Dynamics Australia
PO Box 2459
PORT MACQUARIE NSW 2444

Attention: Graham Burns

Dear Graham,

RE: Proposed Residential Rezoning – Le Clos, Sancrox Road, Sancrox
Stage 1 Site Contamination Assessment

As requested, Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken a Stage 1 Site Contamination Assessment for the proposed residential rezoning of Lot No's 1 to 51 (excluding Lot No 49) DP776681 at Le Clos, Sancrox Road, Sancrox. The 50 lots are currently zoned RU1 – Primary Production.

The assessment found the site to be appropriate for the proposed residential development from a site contamination perspective provided the recommendations and advice of this report are adopted.

The assessment was prepared by Tim Morris, B. Appl Science (Geology). A Statement of Experience for Environmental Assessments is presented in Appendix B.

If you have any questions regarding this project, please contact the undersigned.

For and on behalf of Regional Geotechnical Solutions Pty Ltd

Prepared by

Tim Morris

Associate Engineering Geologist

Reviewed by

Andrew Hills

Senior Environmental Engineer

Regional Geotechnical Solutions Pty Ltd
ABN 51141848820

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Regional Geotechnical Solutions
RGS20821.1-AD
27 September 2019

1 INTRODUCTION

As requested, Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken a Stage 1 Site Contamination Assessment for the proposed residential rezoning of Lot No's 1 to 51 (excluding Lot No 49) DP776681 at Le Clos, Sancrox Road, Sancrox. The 50 lots are currently zoned RU1 – Primary Production.

The existing lots include areas of cleared farmland and some areas of thick vegetation. In addition, the following features are visible on available satellite imagery:

- Residential dwellings are present on Lot No's 9, 13, 44 and 49. Lot No. 49 is not part of the assessment. Access to Lot No's 9, 13 and 44 was not permitted as part of the assessment;
- A large farm shed is present in Lot No. 50;
- A small farm shed is present in Lot No. 45;
- Several unnamed intermittent tributaries of Haydon's Creek flow across the site, towards the north west; and
- A large farm dam approximately 1.4ha in area is present in Lot No. 52, located near the centre of the proposed rezoning area. Lot No. 52 is excluded from the assessment.

The purpose of the work described herein was to assess the suitability of the site for residential land use with respect to the presence of site contamination resulting from past land use and activities, as well as providing discussions and recommendations regarding

- Identification of Areas of Concern and Chemicals of Concern;
- Undertake limited targeted sampling and analysis at the selected Areas of Concern to allow some preliminary analysis of the presence of contamination;
- Evaluation of test results against industry accepted criteria for the intended landuse;
- Conclusions regarding the presence of contamination at the site and its potential impacts on the proposed residential landuse; and
- The requirement for remediation, further investigation, or ongoing management of site contamination.

The work was commissioned by Graham Burns on behalf of Land Dynamics Pty Ltd and was undertaken in accordance with proposal number RGS20821.1-AA dated 26 April 2019.

2 GUIDELINES AND ASSESSMENT CRITERIA

The assessment was aimed at fulfilling the requirements of a Stage 1 Contaminated Site Assessment in accordance with NSW EPA *Guidelines for Consultants Reporting on Contaminated Sites (2011).*

To evaluate results and for guidance on assessment requirements, the assessment adopted the guidelines provided in the *National Environment Protection (Assessment of Site Contamination) Measure (NEPM 2013).* The NEPM document provides a range of guidelines for assessment of contaminants for various land use scenarios. The proposed landuse is residential and as such comparison with the NEPM guideline values for Residential A landuse was considered appropriate. In accordance with the NEPM guideline the following criteria were adopted for this assessment:

- Health Investigation Levels (HILs) for Residential land use were used to assess the potential human health impact of heavy metals and PAH;

- Health Screening Levels (HSLs) for coarse textured (sand) or fine textured (silt and clay) soils on a Residential site were adopted as appropriate for the soils encountered to assess the potential human health impact of petroleum hydrocarbons and BTEX compounds;
- Ecological Investigation Levels (EILs) for Residential land use were used for evaluation of the potential ecological / environmental impact of heavy metals and PAH;
- Ecological Screening Levels (ESLs) for coarse textured (sand) soils or fine textured (silt and clay) soils on a Residential land use site were adopted as appropriate for the soils encountered, to assess the potential ecological / environmental impact of petroleum hydrocarbons and BTEX compounds.

In accordance with NEPM 2013, exceedance of the criteria does not necessarily deem that remediation is required, but is a trigger for further assessment of the extent of contamination and associated risks. The adopted criteria are presented in the results summary table in Appendix C.

3 METHODOLOGY

In accordance with the relevant sections of the *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (Amended 2013)*, the assessment involved the following process:

- A brief study of site history, with the aim of identifying past activities on or near the site that might have the potential to cause contamination;
- Site walkover to assess visible surface conditions and identify any evidence of contamination, or past activities that may cause contamination;
- Review of available recent and historical aerial photography for the last 50 years to identify visible evidence of potential contamination or potentially contaminating activities;
- Search of government records of groundwater use in the area;
- Using the above information, the site was characterised into Areas of Concern, in which the potential for contamination has been identified, and Chemicals of Concern were nominated that might be associated with those activities; and
- Based on the results of the site history study, judgemental sampling at selected locations was undertaken to assist in identifying potential contamination and assessing the requirement for further investigation or site management with regard to contamination.

4 SITE SETTING AND HISTORY

4.1 Site Description

The site is located to the south of Sancrox Road in an area of gently to moderately undulating topography where it is situated on the upper to lower slopes of several low ridgelines as shown in Figure 1.

A satellite image that shows the location of the site and the site setting is reproduced below.



***Plate 1**: Satellite image dated 2012 obtained from the NSW Government 'Six Maps 'website that illustrates the site location and setting. The approximate boundaries of the site comprising Lot No's 1 to 51 (excluding Lot No. 49) DP776681 at Le Clos, Sancrox are outlined in red.*

4.2 Historical Aerial Photography

Aerial photographs of the site were purchased from the NSW Land and Property Management Authority and reviewed to assist in identifying past land uses that may contribute to site contamination. The results of the review are summarised in Table 1.

Table 1- Aerial Photograph Summary

Year	*Lot No's 1 to 51 (excluding Lot No. 49) DP776681*	Surrounding Land
1979	Site does not appear to be disturbed and is thickly vegetated by bushland.	Thick bushland is located to the east and south. To the north and west of the site there is some cleared farmland.
1997	The site is mostly cleared with rows of grape vines visible on raised planting beds. A large dam is located on the western boundary and a shed is present in the north western corner (Lot 50).	Cleared farmland to the north. A dwelling is located next to shed in Lot 49. Small quarry (?) present to south east of Lot No. 13
2009 (Google Earth)	Grapevines are no longer present, although the raised planting beds are still visible. Le Clos Sancrox Road is present near south east boundary (= Lot 51). Dwellings are present in Lot No's 9, 13, 44	No significant change.
2019 (Google Earth)	Small farm shed is present in Lot 23 from 2016. A small farm shed was visible in Lot 45 between 2011 and 2018.	Some cleared land to the south.

4.3 NSW EPA Records

A check with the NSW EPA website (www.epa.nsw.gov.au) revealed that no notices have been issued on the site under the Contaminated Land Management Act (1997).

4.4 Lot Zoning

The lots are currently zoned RU1 – Primary Production.

4.5 Geology

The site is situated in an area underlain by the Byabarra Beds that can include lithic sandstone, mudstone, tuff and limestone.

The Port Macquarie 1:25,000 Coastal Quaternary Geology Sheet indicates alluvial / colluvial fan and valley fill is present in the alluvial depressions associated with the intermittent drainage lines and can include clay, silt, fluvial sand and gravel.

4.6 Groundwater

A groundwater bore search on the Water NSW website indicates that there are no licensed groundwater bores within 500m of the site boundary.

Regional groundwater flow direction typically follows topographic slopes, which for this site would be towards the north west.

4.7 Site Observations

Fieldwork was undertaken on 7 July 2019. Observations made during the site visit are summarised below:

- A gravel access track on a raised fill embankment was present in Lot 51 along the western boundary;
- Building materials from possible timber weather station were present in Lot 17;
- Rows of raised planting beds were present across the site where previous vineyard activities had occurred;
- Existing buildings included a large metal farm shed on a concrete slab in Lot 50 and a small farm shed in Lot 23. A gravel hard stand surface surrounded by a locked security fence was present around the hard stand area and it was therefore not accessible for the assessment. Two cars were parked on the hard stand at the time of the assessment. Building debris from the shed including metal roofing was present on the gravel hardstand surface; and
- Vegetation comprised pasture grasses with scattered trees in the areas previously used as vineyards. Thick vegetation was present in the drainage lines and along the southern boundary.

Typical site photographs are presented below.



Looking north west at raised planting beds for vineyards which have since been removed.



TP7 - Looking east at metal shed located in Lot 50



TP3 - Looking north at gravel access track on raised fill embankment in Lot 51.



TP13 - Culvert located in drainage line that that passes under Le Clos Sancrox Road in Lot 23.

4.8 Site History Summary

Based on available data the chronological development of the site was undertaken as summarised below:

- Aerial photographs indicate the site was cleared between 1979 and 1997 and the vineyards, dam in Lot 52, fill embankment in Lot 51 and metal shed in Lot 50 constructed in the same period;
- The fill embankment in Lot 51 may have been constructed from material won from the dam excavation;
- Aerial photographs indicate the vineyards were removed between 1997 and 2009;
- Dwellings were constructed in Lot No's 9, 13 and 44 between 1997 and 2009. Access to these lots was restricted; and
- A small farm shed was constructed in Lot No. 45 after 2011 and then demolished prior to 2018;
- A small farm shed was constructed in Lot 23 between 2016 and 2017.

5 SITE CONTAMINATION ASSESSMENT

5.1 Conceptual Site Model

Based on the site observations and knowledge obtained about site activities as outlined above, potential Areas of Concern and Chemicals of Concern were identified for the assessment as outlined in Table 2.

Table 2: Conceptual Site Model

Area of Concern	Mode of Potential Contamination	Chemicals of Concern	Targeted Sampling Location
AEC1: Soils in vicinity of sheds	Potential spillage of chemicals from containers including cleaning fluids/ fuel/oils, herbicide/ pesticide	Heavy Metals, TPH, BTEX, PAH, OC/OPP, asbestos	TP7, TP8, TP9
AEC2: Gravel hardstand	Leakage of fuels/oils from parked vehicles	Heavy Metals, TPH, BTEX, PAH	TP3, TP8
AEC3: Fill material	Imported fill of unknown origin (Possibly site won material from dam excavation)	Heavy Metals, TPH, BTEX, PAH, OC/OPP, asbestos	TP2, TP3, TP4
AEC4: Vineyards	Spraying of herbicide and pesticide	Heavy Metals, OC/OPP	TP1, TP5, TP6, TP9, TP10, TP11, TP12, TP13, TP14, TP15
Heavy Metals - Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc *BTEX - Benzene, Toluene, Ethylbenzene and Xylene* *TPH - Total Petroleum Hydrocarbons* *PAH – Polycyclic Aromatic Hydrocarbons* *OC/OPP – Organochlorine and Organophophorus Pesticides*			

5.2 Field Work

Field work for the assessment was undertaken on 9 July 2019. Fieldwork included:

- Site walkover to assess visible surface conditions and identify any evidence of contamination, or past activities that may cause contamination;
- 15 shallow test pits undertaken by hand tools, logged and sampled by an Engineering Geologist; and
- Test pit locations were based on professional judgement with consideration of the site history and visible site features.

The locations of the test pits are shown on Figure 1. They were obtained on site by measurement relative to existing site features

Soil samples were taken from selected depths using disposable gloves and hand tools which were decontaminated between sampling points using Decon90 detergent and deionised water. The samples were collected in acid-rinsed 250mL glass jars and placed in an ice-chilled cooler box.

5.3 Laboratory Testing

Samples were transported under chain-of-custody conditions to a NATA accredited specialist chemical testing laboratory, to be tested for the following suite of contaminants:

- Polycyclic Aromatic Hydrocarbons (PAH)

- Total Recoverable Hydrocarbons (TRH)
- Benzene, Toluene, Ethyl-benzene, Xylenes (BTEX)
- Organochlorine Pesticides (OC/OPs)
- Heavy metals (arsenic, cadmium, chromium, cobalt, copper, lead, mercury, and zinc)
- Presence of asbestos.

The results are presented in Appendix A. A summary table of the results comparing them to the adopted guidelines outlined in Section 2 is also presented in Appendix A.

5.4 Quality Control

Samples were obtained using industry accepted protocols for sample treatment, preservation, and equipment decontamination. A duplicate of TP6 (0.2 - 0.3m) was submitted to the laboratory for analysis as TP6B (0.2 – 0.3m). Results of the duplicate analysis indicated heavy metal concentrations correlated well between the samples.

In addition to the field QC procedures, the laboratory conducted internal quality control testing including surrogates, blanks, and laboratory duplicate samples. The results are presented with the laboratory test results in Appendix A.

On the basis of the results of the field and laboratory quality control procedures and testing the data is considered to reasonably represent the concentrations of contaminants in the soils at the sample locations at the time of sampling and the results can be adopted for this assessment.

5.5 Analysis Results

An appraisal of the laboratory test results presented in Appendix A is provided below with reference to the adopted soil investigation and screening levels discussed in Section 2.

- Concentrations of heavy metals were above detection, but were below adopted health investigation criteria for a residential site;
- Concentrations of Total Recoverable Hydrocarbon (TRH) were above detection in two samples (TP5, 0-0.1m & TP13 0 – 0.1m), but were below adopted health investigation criteria for a residential site;
- Concentrations of PAH hydrocarbons were below laboratory detection in all samples analysed;
- Concentrations of BTEX and PCB contaminants were below laboratory detection in all samples analysed;
- Concentrations of herbicide/pesticide contaminants were below laboratory detection in all samples analysed; and
- Asbestos was not detected in the four soil samples submitted.

6 ASSESSMENT AND CONCLUSIONS REGARDING SITE CONTAMINATION

A Stage 1 Site Contamination Assessment was undertaken to assess all past and present potentially contaminating activities and contamination types and evaluate the property's suitability for residential use.

6.1 Summary

Based on the results outlined in this report the following points and recommendations are made:

- Considering the age of the sheds present on site in Lot 50 and Lot 23 there is the potential for asbestos type building materials to have been used in their construction. Prior to site demolition works a hazardous material inspection should therefore be undertaken to determine if hazardous materials including asbestos are present;
- Where asbestos containing material is present an Asbestos Management Plan will require preparation by a person with management or control of the workplace and should be prepared with reference to the relevant SafeWork Australia's Code of Practices for asbestos management and removal to an appropriately licensed waste management facility;
- Containers of various chemicals (oils, fuels and the like) present within the sheds should be disposed of in accordance with Council and NSW EPA requirements prior to demolition works;
- A site walkover should be undertaken by a suitably qualified person following demolition of existing buildings and removal of concrete slabs and hardstand areas to assess for potential contamination of the underlying soils once they are exposed; and
- A fill embankment was located in Lot 51 along the western boundary and rows of fill mounds from previous vineyard activities are located across the site. Should any existing fill require removal off-site, it will require assessment for a Resource Recovery Exemption under Part 9, Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014 in accordance with the Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 – the Excavated Natural Material (ENM) Order 2014.

6.2 Conclusion

Based on the results obtained in this investigation the site is considered suitable for the proposed residential land use with regard to the presence of soil contamination provided the recommendations and advice of this report are adopted, and site preparation works are conducted in accordance with appropriate site management protocols and legislative requirements.

7 LIMITATIONS

The findings presented in the report and used as the basis for recommendations presented herein were obtained using normal, industry accepted environmental design practises and standards. To our knowledge, they represent a reasonable interpretation of the general condition of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points.

If site conditions encountered during construction vary from those discussed in this report, or, if potentially contaminated soils that contain foreign materials, or, soils with strong odours are

encountered during future works then Regional Geotechnical Solutions Pty Ltd should be contacted for further advice.

This report alone should not be used by contractors as the basis for preparation of tender documents or project estimates. Contractors using this report as a basis for preparation of tender documents should avail themselves of all relevant background information regarding the site before deciding on selection of construction materials and equipment.

If you have any questions regarding this project, or require any additional consultations, please contact the undersigned.

For and on behalf of

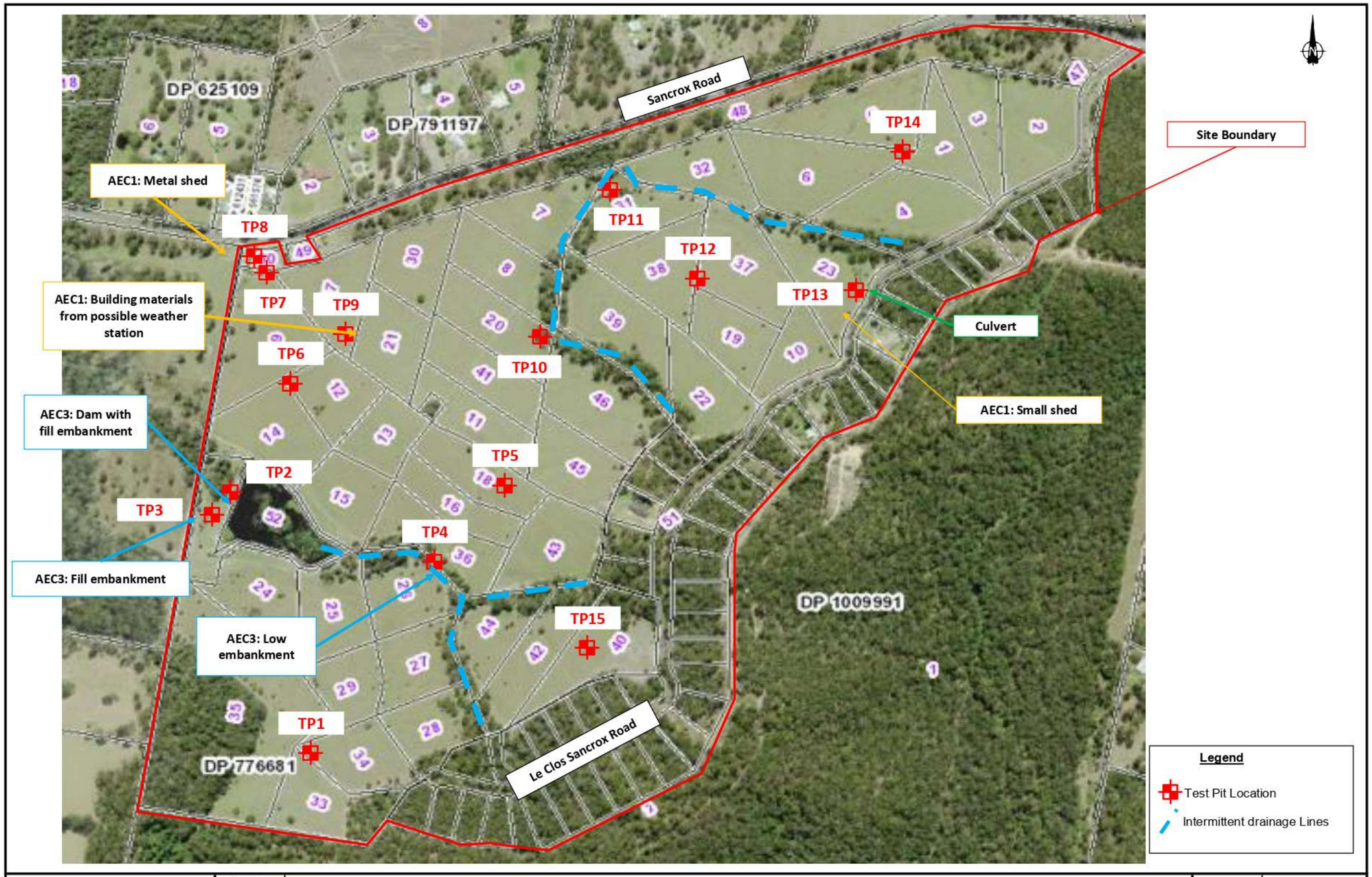
Regional Geotechnical Solutions Pty Ltd



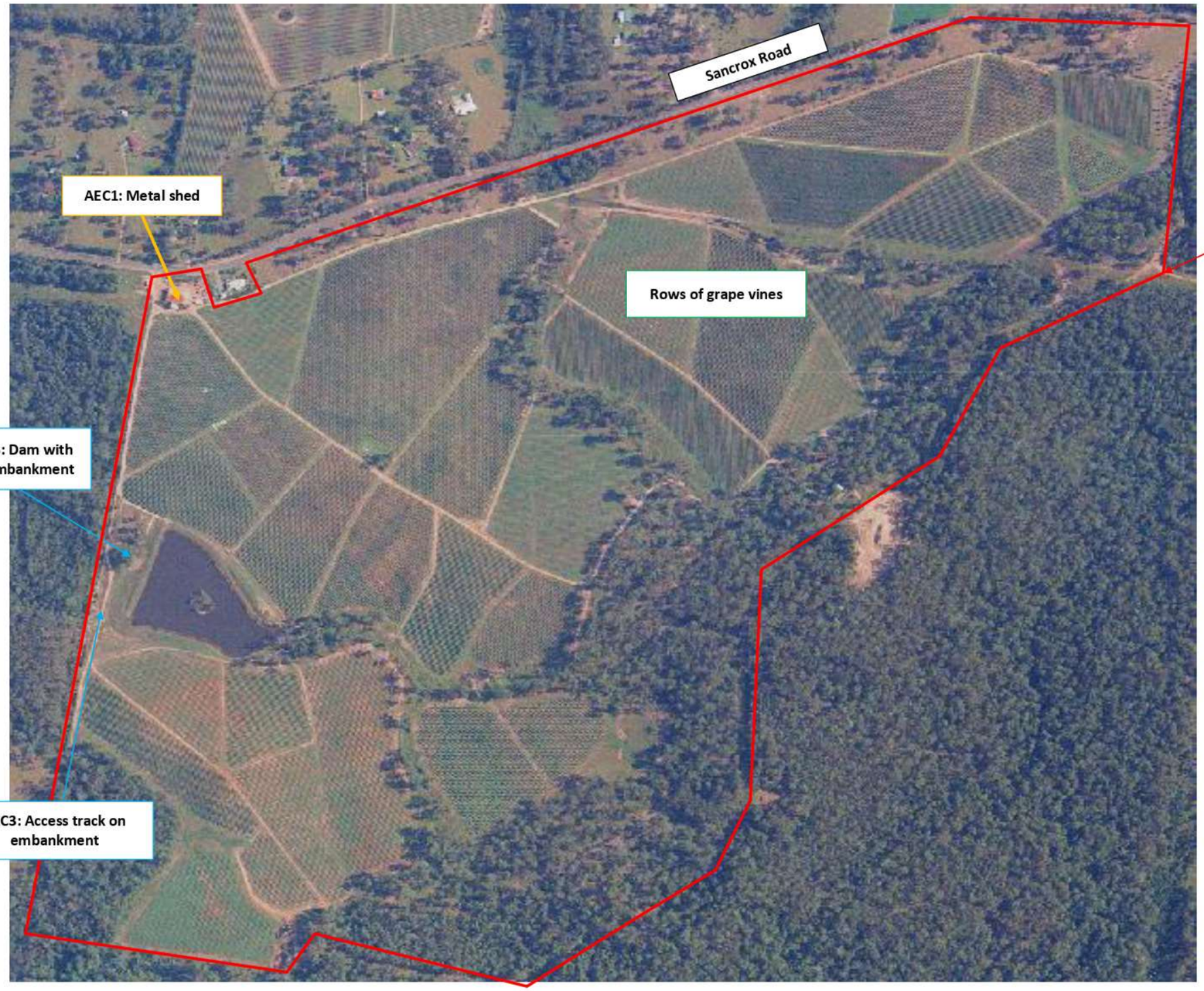
Tim Morris

Associate Engineering Geologist

Figures



REGIONAL GEOTECHNICAL SOLUTIONS	Client:	LAND DYNAMICS PTY LTD	Job No.	RGS20821.1
	Project:	PROPOSED REZONING	Drawn By:	GC
			Scale:	NTS
		LE CLOS SANCROX ROAD, SANCROX	Date:	12-Sep-19
	Title:	INVESTIGATION LOCATION PLAN	Figure No.	1



REGIONAL GEOTECHNICAL SOLUTIONS	Client:	LAND DYNAMICS PTY LTD	Job No.	RGS20821.1
	Project:	PROPOSED REZONING	Drawn By:	GC
			Scale:	NTS
		LE CLOS SANCROX ROAD, SANCROX	Date:	12-Sep-19
	Title:	1997 AERIAL PHOTOGRAPH	Figure No.	2

Appendix A

Laboratory Test Results

Regional Geotechnical Solutions
RGS20821.1-AD
27 September 2019

Comparison of Contamination Analysis Results with Adopted Investigation Levels (Results in mg/kg)

REGIONAL GEOTECHNICAL SOLUTIONS

Client: Land Dynamics
Job No. RGS20821.1
Project: Proposed Rezoning
Location: Le Clos, Sancrox Road, Sancrox

SAMPLE	DEPTH	Material	Asbestos Presence	TOTAL RECOVERABLE HYDROCARBONS					PAH		DDT+DDE	Aldrin	PCB	BTEX		Heavy Metals							
	(m)			C6-C10	C10-C16	C16-C34	C34-C40	TOTAL	Total	b-a-p (TEQ)	Pesticides	Pesticides		Sum	Napthalene	As	Cd	Cr (total)	Cu	Pb	Ni	Zn	Hg
TP1	0.0 - 0.1	Topsoil	----	----	----	----	----	----	----	----	----	----	----	----	----	6	<0.4	21	14	10	<5	10	<0..1
TP2	0.0 - 0.1	Topsoil	----	----	----	----	----	----	----	----	----	----	----	----	----	2.6	<0.4	11	13	9.6	15	55	<0..1
TP3	0.0 - 0.1	Fill	----	<20	<50	<100	<100	<100	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	12	<0.4	14	19	9.2	7.8	83	<0..1
TP4	0 - 0.1	Natural	----	----	----	----	----	----	----	----	----	----	----	----	----	13	<0.4	22	14	9.7	6.5	61	<0..1
TP5	0 - 0.1	Fill	----	<20	<50	<100	<100	<100	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	12	<0.4	11	5.2	8.1	<5	12	<0..1
TP5	0.3 - 0.4	Natural	----	----	----	----	----	----	----	----	----	----	----	----	----	14	<0.4	10	<5	9.8	<5	6.1	<0..1
TP6	0.2 - 0.3	Natural	----	----	----	----	----	----	----	----	----	----	----	----	----	<2	<0.4	9.6	<5	5.7	<5	<5	<0..1
Duplicate TP6B	0.2 - 0.3	Natural	----	----	----	----	----	----	----	----	----	----	----	----	----	5	<0.4	15	<5	8.1	<5	<5	<0..1
TP7	0 - 0.1	Fill	No	<20	<50	170	<100	170	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	5.8	0.6	12	19	15	5	230	1.1
TP8	0 - 0.1	Fill	No	<20	<50	<100	<100	<100	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	8.7	<0.4	22	31	17	9.3	130	<0..1
TP9	0 - 0.1	Natural	No	----	----	----	----	----	----	----	----	----	----	----	----	10	<0.4	19	7.4	14	<0.1	<5	<0..1
TP10	0 - 0.1	Natural	----	----	----	----	----	----	----	----	----	----	----	----	----	2.6	<0.4	10	5.5	7.4	<5	14	<0..1
TP11	0.25 - 0.35	Natural	----	----	----	----	----	----	----	----	----	----	----	----	----	2.8	<0.4	12	<5	8.5	<5	10	<0..1
TP13	0 - 0.1	Natural	----	<20	<50	110	<100	<100	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	7.9	<0.4	16	13	15	7.6	39	<0..1
TP14	0 - 0.1	Fill	No	<20	<50	<100	<100	<100	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	9.7	<0.4	1	9.4	14	<5	7.6	<0..1
TP14	0.4 - 0.5	Natural	----	<20	<50	<100	<100	<100	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	14	<0.4	14	<5	16	<5	5	<0..1
TP15	0 - 0.1	Fill	----	<20	<50	<100	<100	<100	<0.5	0.6	<0.05	<0.05	<0.1	<0.2	<1	10	<0.4	40	27	20	6.9	34	<0..1
TP15	0.3 - 0.4	Natural	----	----	----	----	----	----	----	----	----	----	----	----	----	4.9	<0.4	36	17	16	8.4	41	<0..1
CRITERIA (NEPM 2013)																							
Health Investigation Level (HIL):*			*0.001% (w/w)*						*300*	*3*	*240*	*6*				*100*	*20*	*100#*	*600*	*300*	*400*	*7400*	*40*
*Health Screening Level (HSL)***				*45*	*110*																		
*Ecological Screening Level (ESL)****				*180*	*120*	*300*	*2800*																
Ecological Investigation Level (EIL)@															*170*	*100*							

CRITERIA:

* Health Based Investigation Levels for Residential A (NEPM 2013)

** Health Screening Level (F2) for residential land use and fine grained soil (clay), 0 - 1m depth

*** Ecological Screening Level for residential land use

@ Ecological Investigation Level - aged (>2 years) for residential landuse

Chromium VI

Speciation testing confirmed only Chromium III present

Denotes concentration exceeds health based guideline for Residential A site

Denotes concentration exceeds ecological guideline for Residential A site

Denotes concentration exceeds health and ecological based guideline for Residential A site

eurofins | mgt

Certificate of Analysis

Regional Geotechnical Solutions
44 Bent Street
Wingham
NSW 2429

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Tim Morris**

Report **665040-S**
Project name PROPOSED REZONING
Project ID RGS20821.1
Received Date Jul 10, 2019

Client Sample ID			**TP1 0-0.1**	**TP2 0.1-0.2**	**TP3 0-0.5**	**TP4 0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S19-JI13477**	**S19-JI13478**	**S19-JI13479**	**S19-JI13480**
Date Sampled			**Not Provided**	**Not Provided**	**Not Provided**	**Not Provided**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	83	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-

Client Sample ID			TP1 0-0.1	TP2 0.1-0.2	TP3 0-0.5	TP4 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13477	S19-JI13478	S19-JI13479	S19-JI13480
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	104	-
p-Terphenyl-d14 (surr.)	1	%	-	-	106	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.2	mg/kg	-	-	< 0.2	-
Toxaphene	1	mg/kg	-	-	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	-	-	99	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	101	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	-
Bolstar	0.2	mg/kg	-	-	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	-
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	-
Coumaphos	2	mg/kg	-	-	< 2	-
Demeton-S	0.2	mg/kg	-	-	< 0.2	-
Demeton-O	0.2	mg/kg	-	-	< 0.2	-
Diazinon	0.2	mg/kg	-	-	< 0.2	-
Dichlorvos	0.2	mg/kg	-	-	< 0.2	-

Client Sample ID			TP1 0-0.1	TP2 0.1-0.2	TP3 0-0.5	TP4 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13477	S19-JI13478	S19-JI13479	S19-JI13480
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	-	-	< 0.2	-
Disulfoton	0.2	mg/kg	-	-	< 0.2	-
EPN	0.2	mg/kg	-	-	< 0.2	-
Ethion	0.2	mg/kg	-	-	< 0.2	-
Ethoprop	0.2	mg/kg	-	-	< 0.2	-
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	-
Fenitrothion	0.2	mg/kg	-	-	< 0.2	-
Fensulfothion	0.2	mg/kg	-	-	< 0.2	-
Fenthion	0.2	mg/kg	-	-	< 0.2	-
Malathion	0.2	mg/kg	-	-	< 0.2	-
Merphos	0.2	mg/kg	-	-	< 0.2	-
Methyl parathion	0.2	mg/kg	-	-	< 0.2	-
Mevinphos	0.2	mg/kg	-	-	< 0.2	-
Monocrotophos	2	mg/kg	-	-	< 2	-
Naled	0.2	mg/kg	-	-	< 0.2	-
Omethoate	2	mg/kg	-	-	< 2	-
Phorate	0.2	mg/kg	-	-	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	-
Pyrazophos	0.2	mg/kg	-	-	< 0.2	-
Ronnel	0.2	mg/kg	-	-	< 0.2	-
Terbufos	0.2	mg/kg	-	-	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	-
Tokuthion	0.2	mg/kg	-	-	< 0.2	-
Trichloronate	0.2	mg/kg	-	-	< 0.2	-
Triphenylphosphate (surr.)	1	%	-	-	99	-
Heavy Metals						
Arsenic	2	mg/kg	6.0	2.6	12	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	11	14	22
Copper	5	mg/kg	14	13	19	14
Lead	5	mg/kg	10	9.6	9.2	9.7
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	15	7.8	6.5
Zinc	5	mg/kg	10	55	83	61
% Moisture	1	%	19	20	4.5	25

Client Sample ID			TP5 0-0.1	TP5 0.3-0.4	TP6 0.2-0.3	TP6B 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13481	S19-JI13482	S19-JI13483	S19-JI13484
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-36 (Total)	50	mg/kg	< 50	-	-	-

eurofins | mgt

Client Sample ID			TP5 0-0.1	TP5 0.3-0.4	TP6 0.2-0.3	TP6B 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13481	S19-JI13482	S19-JI13483	S19-JI13484
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	112	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	98	-	-	-
p-Terphenyl-d14 (surr.)	1	%	100	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-

eurofins | mgt

Client Sample ID			TP5 0-0.1	TP5 0.3-0.4	TP6 0.2-0.3	TP6B 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13481	S19-JI13482	S19-JI13483	S19-JI13484
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Dibutylchlorendate (surr.)	1	%	112	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	117	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			TP5 0-0.1	TP5 0.3-0.4	TP6 0.2-0.3	TP6B 0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13481	S19-JI13482	S19-JI13483	S19-JI13484
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	92	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	12	14	< 2	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	11	10	9.6	15
Copper	5	mg/kg	5.2	< 5	< 5	< 5
Lead	5	mg/kg	8.1	9.8	5.7	8.1
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	12	6.1	< 5	< 5
% Moisture	1	%	18	16	9.0	11

Client Sample ID			TP7 0-0.1	TP8 0-0.1	TP9 0-0.1	TP10 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13485	S19-JI13486	S19-JI13487	S19-JI13488
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	23	< 20	-	-
TRH C15-C28	50	mg/kg	99	< 50	-	-
TRH C29-C36	50	mg/kg	100	< 50	-	-
TRH C10-36 (Total)	50	mg/kg	222	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	107	105	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	170	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	170	< 100	-	-

eurofins | mgt

Client Sample ID			TP7 0-0.1	TP8 0-0.1	TP9 0-0.1	TP10 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13485	S19-JI13486	S19-JI13487	S19-JI13488
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	107	109	-	-
p-Terphenyl-d14 (surr.)	1	%	106	109	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	102	95	-	-
Tetrachloro-m-xylene (surr.)	1	%	120	114	-	-

eurofins | mgt

Client Sample ID			TP7 0-0.1	TP8 0-0.1	TP9 0-0.1	TP10 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13485	S19-JI13486	S19-JI13487	S19-JI13488
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Coumaphos	2	mg/kg	< 2	< 2	-	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	-
EPN	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Monocrotophos	2	mg/kg	< 2	< 2	-	-
Naled	0.2	mg/kg	< 0.2	< 0.2	-	-
Omethoate	2	mg/kg	< 2	< 2	-	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	96	98	-	-
Heavy Metals						
Arsenic	2	mg/kg	5.8	8.7	10	2.6
Cadmium	0.4	mg/kg	0.6	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	22	19	10
Copper	5	mg/kg	19	31	7.4	5.5
Lead	5	mg/kg	15	17	14	7.4
Mercury	0.1	mg/kg	1.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.0	9.3	< 5	< 5
Zinc	5	mg/kg	230	130	21	14
% Moisture	1	%	38	17	25	21

eurofins | mgt

Client Sample ID			TP11 0.25-0.35	TP13 0-0.1	TP14 0-0.1	TP14 0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13489	S19-JI13490	S19-JI13491	S19-JI13492
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	66	< 50	< 50
TRH C29-C36	50	mg/kg	-	63	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	-	129	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	110	108	99
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	110	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	110	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	105	104	105
p-Terphenyl-d14 (surr.)	1	%	-	105	102	104

Client Sample ID			TP11 0.25-0.35	TP13 0-0.1	TP14 0-0.1	TP14 0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13489	S19-JI13490	S19-JI13491	S19-JI13492
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	118	117	117
Tetrachloro-m-xylene (surr.)	1	%	-	115	117	118
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

eurofins | mgt

Client Sample ID			TP11 0.25-0.35	TP13 0-0.1	TP14 0-0.1	TP14 0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S19-JI13489	S19-JI13490	S19-JI13491	S19-JI13492
Date Sampled			Not Provided	Not Provided	Not Provided	Not Provided
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	90	95	97
Heavy Metals						
Arsenic	2	mg/kg	2.8	7.9	9.7	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	16	11	14
Copper	5	mg/kg	< 5	13	9.4	< 5
Lead	5	mg/kg	8.5	15	14	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	7.6	< 5	< 5
Zinc	5	mg/kg	10	39	7.6	5.0
% Moisture	1	%	20	22	19	22

Client Sample ID			TP15 0-0.1	TP15 0.3-0.4
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-JI13493	S19-JI13494
Date Sampled			Not Provided	Not Provided
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	-
TRH C10-C14	20	mg/kg	< 20	-
TRH C15-C28	50	mg/kg	< 50	-
TRH C29-C36	50	mg/kg	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	-
BTEX				
Benzene	0.1	mg/kg	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	105	-

Client Sample ID			TP15 0-0.1	TP15 0.3-0.4
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl13493	S19-Jl13494
Date Sampled			Not Provided	Not Provided
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	106	-
p-Terphenyl-d14 (surr.)	1	%	106	-
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-

Client Sample ID			TP15 0-0.1	TP15 0.3-0.4
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl13493	S19-Jl13494
Date Sampled			Not Provided	Not Provided
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Heptachlor epoxide	0.05	mg/kg	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-
Toxaphene	1	mg/kg	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-
Dibutylchlorendate (surr.)	1	%	117	-
Tetrachloro-m-xylene (surr.)	1	%	117	-
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	-
Bolstar	0.2	mg/kg	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-
Coumaphos	2	mg/kg	< 2	-
Demeton-S	0.2	mg/kg	< 0.2	-
Demeton-O	0.2	mg/kg	< 0.2	-
Diazinon	0.2	mg/kg	< 0.2	-
Dichlorvos	0.2	mg/kg	< 0.2	-
Dimethoate	0.2	mg/kg	< 0.2	-
Disulfoton	0.2	mg/kg	< 0.2	-
EPN	0.2	mg/kg	< 0.2	-
Ethion	0.2	mg/kg	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.2	-
Ethyl parathion	0.2	mg/kg	< 0.2	-
Fenitrothion	0.2	mg/kg	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.2	-
Fenthion	0.2	mg/kg	< 0.2	-
Malathion	0.2	mg/kg	< 0.2	-
Merphos	0.2	mg/kg	< 0.2	-
Methyl parathion	0.2	mg/kg	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.2	-
Monocrotophos	2	mg/kg	< 2	-
Naled	0.2	mg/kg	< 0.2	-
Omethoate	2	mg/kg	< 2	-
Phorate	0.2	mg/kg	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-
Pyrazophos	0.2	mg/kg	< 0.2	-
Ronnel	0.2	mg/kg	< 0.2	-
Terbufos	0.2	mg/kg	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-
Tokuthion	0.2	mg/kg	< 0.2	-
Trichloronate	0.2	mg/kg	< 0.2	-
Triphenylphosphate (surr.)	1	%	96	-

Client Sample ID			TP15 0-0.1	TP15 0.3-0.4
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S19-Jl13493	S19-Jl13494
Date Sampled			Not Provided	Not Provided
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	2	mg/kg	10	4.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	40	36
Copper	5	mg/kg	27	17
Lead	5	mg/kg	20	16
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	6.9	8.4
Zinc	5	mg/kg	34	41
% Moisture	1	%	18	19

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Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 12, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 12, 2019	14 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 12, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 12, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 12, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Jul 12, 2019	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Jul 12, 2019	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Metals M8	Sydney	Jul 12, 2019	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Jul 10, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			

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NATA # 1261 Site # 18217

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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: Regional Geotechnical Solutions
Address: 44 Bent Street
Wingham
NSW 2429

Project Name: PROPOSED REZONING
Project ID: RGS20821.1

Order No.:
Report #: 665040
Phone: (02) 65535641
Fax:

Received: Jul 10, 2019 2:40 PM
Due: Jul 17, 2019
Priority: 5 Day
Contact Name: Tim Morris

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B10
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	TP1 0-0.1	Not Provided		Soil	S19-Jl13477			X		X	
2	TP2 0.1-0.2	Not Provided		Soil	S19-Jl13478			X		X	
3	TP3 0-0.5	Not Provided		Soil	S19-Jl13479				X	X	X
4	TP4 0-0.1	Not Provided		Soil	S19-Jl13480			X		X	
5	TP5 0-0.1	Not Provided		Soil	S19-Jl13481				X	X	X
6	TP5 0.3-0.4	Not Provided		Soil	S19-Jl13482			X		X	
7	TP6 0.2-0.3	Not Provided		Soil	S19-Jl13483			X		X	
8	TP6B 0.2-0.3	Not Provided		Soil	S19-Jl13484			X		X	
9	TP7 0-0.1	Not Provided		Soil	S19-Jl13485	X			X	X	X

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Order No.:
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Received: Jul 10, 2019 2:40 PM
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Priority: 5 Day
Contact Name: Tim Morris

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B10
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
10	TP8 0-0.1	Not Provided		Soil	S19-Jl13486	X			X	X	X
11	TP9 0-0.1	Not Provided		Soil	S19-Jl13487	X		X		X	
12	TP10 0-0.1	Not Provided		Soil	S19-Jl13488			X		X	
13	TP11 0.25-0.35	Not Provided		Soil	S19-Jl13489			X		X	
14	TP13 0-0.1	Not Provided		Soil	S19-Jl13490				X	X	X
15	TP14 0-0.1	Not Provided		Soil	S19-Jl13491				X	X	X
16	TP14 0.4-0.5	Not Provided		Soil	S19-Jl13492	X			X	X	X
17	TP15 0-0.1	Not Provided		Soil	S19-Jl13493				X	X	X
18	TP15 0.3-0.4	Not Provided		Soil	S19-Jl13494			X		X	
19	TP12 0.1-0.2	Not Provided		Soil	S19-Jl13495		X				
Test Counts						4	1	10	8	18	8

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

**NOTE: pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	96			70-130	Pass	
TRH C10-C14	%	86			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	101			70-130	Pass	
Toluene	%	101			70-130	Pass	
Ethylbenzene	%	103			70-130	Pass	
m&p-Xylenes	%	102			70-130	Pass	
o-Xylene	%	101			70-130	Pass	
Xylenes - Total	%	102			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	116			70-130	Pass	
TRH C6-C10	%	95			70-130	Pass	
TRH >C10-C16	%	81			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	105			70-130	Pass	
Acenaphthylene	%	102			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	94			70-130	Pass	
Benzo(a)pyrene	%	95			70-130	Pass	
Benzo(b&j)fluoranthene	%	79			70-130	Pass	
Benzo(g.h.i)perylene	%	95			70-130	Pass	
Benzo(k)fluoranthene	%	103			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a.h)anthracene	%	100			70-130	Pass	
Fluoranthene	%	100			70-130	Pass	
Fluorene	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	101			70-130	Pass	
Naphthalene	%	104			70-130	Pass	
Phenanthrene	%	103			70-130	Pass	
Pyrene	%	102			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	80			70-130	Pass	
4.4'-DDD	%	88			70-130	Pass	
4.4'-DDE	%	81			70-130	Pass	
4.4'-DDT	%	79			70-130	Pass	
a-BHC	%	81			70-130	Pass	
Aldrin	%	79			70-130	Pass	
b-BHC	%	73			70-130	Pass	
d-BHC	%	81			70-130	Pass	
Dieldrin	%	80			70-130	Pass	
Endosulfan I	%	78			70-130	Pass	
Endosulfan II	%	75			70-130	Pass	
Endosulfan sulphate	%	81			70-130	Pass	
Endrin	%	78			70-130	Pass	
Endrin aldehyde	%	73			70-130	Pass	
Endrin ketone	%	74			70-130	Pass	

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Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
g-BHC (Lindane)			%	80			70-130	Pass	
Heptachlor			%	77			70-130	Pass	
Heptachlor epoxide			%	81			70-130	Pass	
Hexachlorobenzene			%	79			70-130	Pass	
Methoxychlor			%	72			70-130	Pass	
LCS - % Recovery									
Organophosphorus Pesticides									
Diazinon			%	125			70-130	Pass	
Dimethoate			%	117			70-130	Pass	
Ethion			%	113			70-130	Pass	
Fenitrothion			%	98			70-130	Pass	
Methyl parathion			%	109			70-130	Pass	
Mevinphos			%	114			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	114			70-130	Pass	
Cadmium			%	103			70-130	Pass	
Chromium			%	106			70-130	Pass	
Copper			%	99			70-130	Pass	
Lead			%	104			70-130	Pass	
Mercury			%	107			70-130	Pass	
Nickel			%	100			70-130	Pass	
Zinc			%	100			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jl13478	CP	%	91			70-130	Pass	
Cadmium	S19-Jl13478	CP	%	100			70-130	Pass	
Chromium	S19-Jl13478	CP	%	109			70-130	Pass	
Copper	S19-Jl13478	CP	%	92			70-130	Pass	
Lead	S19-Jl13478	CP	%	99			70-130	Pass	
Mercury	S19-Jl13478	CP	%	113			70-130	Pass	
Nickel	S19-Jl13478	CP	%	100			70-130	Pass	
Zinc	S19-Jl13478	CP	%	101			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S19-Jl19147	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S19-Jl19147	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-Jl21245	NCP	%	122			70-130	Pass	
Acenaphthylene	S19-Jl21245	NCP	%	123			70-130	Pass	
Anthracene	S19-Jl21245	NCP	%	118			70-130	Pass	
Benz(a)anthracene	S19-Jl21245	NCP	%	112			70-130	Pass	
Chrysene	S19-Jl21245	NCP	%	108			70-130	Pass	
Fluoranthene	S19-Jl21245	NCP	%	123			70-130	Pass	
Fluorene	S19-Jl21245	NCP	%	127			70-130	Pass	
Naphthalene	S19-Jl21245	NCP	%	110			70-130	Pass	
Phenanthrene	S19-Jl21245	NCP	%	116			70-130	Pass	
Pyrene	S19-Jl21245	NCP	%	124			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dimethoate	S19-Jl21245	NCP	%	84			70-130	Pass	
Ethion	S19-Jl21245	NCP	%	118			70-130	Pass	
Fenitrothion	S19-Jl21245	NCP	%	104			70-130	Pass	
Methyl parathion	S19-Jl21245	NCP	%	116			70-130	Pass	
Mevinphos	S19-Jl21245	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S19-Jl13481	CP	%	84			70-130	Pass	
4.4'-DDD	S19-Jl13481	CP	%	102			70-130	Pass	
4.4'-DDE	S19-Jl13481	CP	%	76			70-130	Pass	
4.4'-DDT	S19-Jl13481	CP	%	73			70-130	Pass	
a-BHC	S19-Jl13481	CP	%	86			70-130	Pass	
Aldrin	S19-Jl13481	CP	%	85			70-130	Pass	
b-BHC	S19-Jl13481	CP	%	73			70-130	Pass	
d-BHC	S19-Jl13481	CP	%	80			70-130	Pass	
Dieldrin	S19-Jl13481	CP	%	80			70-130	Pass	
Endosulfan I	S19-Jl13481	CP	%	84			70-130	Pass	
Endosulfan II	S19-Jl13481	CP	%	78			70-130	Pass	
Endosulfan sulphate	S19-Jl13481	CP	%	79			70-130	Pass	
Endrin	S19-Jl13481	CP	%	74			70-130	Pass	
Endrin aldehyde	S19-Jl13481	CP	%	74			70-130	Pass	
Endrin ketone	S19-Jl13481	CP	%	79			70-130	Pass	
g-BHC (Lindane)	S19-Jl13481	CP	%	82			70-130	Pass	
Heptachlor	S19-Jl13481	CP	%	78			70-130	Pass	
Heptachlor epoxide	S19-Jl13481	CP	%	84			70-130	Pass	
Hexachlorobenzene	S19-Jl13481	CP	%	79			70-130	Pass	
Methoxychlor	S19-Jl13481	CP	%	73			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Jl13492	CP	%	86			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Jl13492	CP	%	90			70-130	Pass	
Toluene	S19-Jl13492	CP	%	94			70-130	Pass	
Ethylbenzene	S19-Jl13492	CP	%	95			70-130	Pass	
m&p-Xylenes	S19-Jl13492	CP	%	92			70-130	Pass	
o-Xylene	S19-Jl13492	CP	%	93			70-130	Pass	
Xylenes - Total	S19-Jl13492	CP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Jl13492	CP	%	86			70-130	Pass	
TRH C6-C10	S19-Jl13492	CP	%	87			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl13477	CP	mg/kg	6.0	6.1	2.0	30%	Pass	
Cadmium	S19-Jl13477	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl13477	CP	mg/kg	21	20	3.0	30%	Pass	
Copper	S19-Jl13477	CP	mg/kg	14	13	10	30%	Pass	
Lead	S19-Jl13477	CP	mg/kg	10	9.5	6.0	30%	Pass	
Mercury	S19-Jl13477	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl13477	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-Jl13477	CP	mg/kg	10	9.3	9.0	30%	Pass	

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Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-JI18039	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-JI18039	NCP	mg/kg	2.4	2.4	3.0	30%	Pass	
Anthracene	S19-JI18039	NCP	mg/kg	2.9	2.9	<1	30%	Pass	
Benz(a)anthracene	S19-JI18039	NCP	mg/kg	2.8	3.0	6.0	30%	Pass	
Benzo(a)pyrene	S19-JI18039	NCP	mg/kg	2.4	2.7	9.0	30%	Pass	
Benzo(b&j)fluoranthene	S19-JI18039	NCP	mg/kg	2.5	2.4	2.0	30%	Pass	
Benzo(g.h.i)perylene	S19-JI18039	NCP	mg/kg	2.0	2.1	7.0	30%	Pass	
Benzo(k)fluoranthene	S19-JI18039	NCP	mg/kg	2.1	2.8	28	30%	Pass	
Chrysene	S19-JI18039	NCP	mg/kg	2.8	2.9	4.0	30%	Pass	
Dibenz(a.h)anthracene	S19-JI18039	NCP	mg/kg	0.7	0.8	6.0	30%	Pass	
Fluoranthene	S19-JI18039	NCP	mg/kg	5.2	5.4	4.0	30%	Pass	
Fluorene	S19-JI18039	NCP	mg/kg	2.1	2.1	3.0	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-JI18039	NCP	mg/kg	1.8	1.9	6.0	30%	Pass	
Naphthalene	S19-JI18039	NCP	mg/kg	2.0	1.2	47	30%	Fail	Q15
Phenanthrene	S19-JI18039	NCP	mg/kg	5.4	5.7	6.0	30%	Pass	
Pyrene	S19-JI18039	NCP	mg/kg	5.9	6.2	5.0	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-JI10386	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-JI10386	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-JI10386	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-JI10386	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-JI13479	CP	%	4.5	5.1	13	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl13481	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl13481	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl13481	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S19-Jl13481	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-Jl13486	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-Jl13486	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-Jl13486	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-Jl13486	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-Jl13486	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-Jl13486	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Jl13489	CP	%	20	19	4.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-Jl13491	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-Jl13491	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-Jl13491	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-Jl13491	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-Jl13491	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-Jl13491	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-Jl13491	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-Jl13491	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-Jl13491	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins | mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Appendix B

Statement of Experience

Regional Geotechnical Solutions
RGS20821.1-AD
27 September 2019

REGIONAL GEOTECHNICAL SOLUTIONS

Manning-Great Lakes
Port Macquarie
Coffs Harbour

Contaminated Land Assessment – Statement of Experience

Report Author

Tim Morris - Associate Engineering Geologist

Date of Birth: 16 February 1972

Education & Affiliations

Bachelor of Applied Science (Honours, Geology) – University of Technology, Sydney

Graduate Certificate of Engineering Science - (Geotechnical) University of NSW

Summary

Tim worked in England from 2000 to 2002 as a Site Engineer on a range of geotechnical and environmental projects. From 2002 to 2006 he was the Acid Sulfate Soils Project Officer with Kempsey Shire Council. He then worked with the Coffey Group from 2006 to 2010 as an Engineering Geologist, working on geotechnical and environmental projects including roads, site investigations, site contamination assessments, construction and urban developments. During this time he was based out of the Port Macquarie office where he coordinated geotechnical and environmental projects and was the Port Macquarie Office Manager prior to leaving the company.

In 2010 he joined Regional Geotechnical Solutions, a consulting firm focused on providing high quality geotechnical consulting services to regional centres. He currently works on a broad range of geotechnical projects including site contamination assessments, pavement design, slope stability, and geotechnical foundation investigations.

Contamination Assessments – Previous Experience

Recent site contamination assessments completed by Tim for RGS on similar contamination assessment projects are summarised in Table 1.

Table 1 – Summary of Site Contamination Assessments

Job Number	Project	Location
RGS20494.1	Stage 1 and Stage 2 Contamination Assessment – Oxley Beach	Port Macquarie
RGS20578.1	Stage 1 Contamination Assessment – Proposed College, Kempsey Airport	Aldavilla
RGS00975.1	Stage 1 and Stage 2 Contamination Assessment – Proposed Daycare, 226 Oxley Highway	Port Macquarie

Birpai Local Aboriginal Land Council

Aboriginal Cultural Heritage Assessment

Lots 1-52 DP 776681

Sancrox Road

Sancrox

Prepared by

Birpai Local Aboriginal Land Council

In response to a

Proposed rezoning proposal by Land Dynamics

PO Box 876 Port Macquarie NSW 2444 Tel: 02 65849066 Email: birpailalc@midcoast.com.au

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PO Box 876 Port Macquarie NSW 2444 Tel: 02 65849066 Email: birpailalc@midcoast.com.au

1. Introduction

The subject land is located at Sancrox Road Sancrox and includes a number of lots in DP 76681. The land is approximately 90 ha and is located just over 10km west of the Port Macquarie CBD.

The Land is currently zoned as rural.

Port Macquarie Hastings Council's Development Control Plan states the following under Objective 8:

Objective 8 Development Provision 8.1'. This provisions states that "*Prior to any... clearing works... an inspection of the proposed development site is to be undertaken by an Aboriginal Cultural Sites Officer from the local Aboriginal Land Council and a report on the site inspection is to be obtained*

The objectives of this Inspection and report are:

- To identify whether the subject land contains objects or artefacts that are culturally relevant to the Birpai people.
- To determine if any potential harm on Aboriginal Cultural heritage would be likely to occur from the proposed development.
- To make recommendations to be included in the application to Hastings Council.

This report has been prepared for Land Dynamics for the proposed rezoning. It is not to be used for any other purpose

PO Box 876 Port Macquarie NSW 2444 Tel: 02 65849066 Email: birpailalc@midcoast.com.au

2. Investigator and Contributors

The Site Investigations have been undertaken by:

Mr. Jason Holten, Sites Officer of the Birpai Local Aboriginal Land Council

The site investigator has significant local experience in carrying out site survey investigations and regularly undertakes Sites works in the Port Macquarie area. Mr. Holten has a wealth of knowledge of Aboriginal Culture and Heritage in the local area.

3. Previous Archaeological work

A previous Aboriginal Heritage Assessment for the area was carried out by RPS in April 2012 for the developers.

A Development Control Plan exists for the site that requires an Officer from the Local Aboriginal Land Council inspect the site and provide a report prior to any clearing taking place.

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4. Landscape context

General Coastal character & predictive model

The results of reviews of archaeological investigations to date indicate that rocky shore, sandy beach, estuarine and hinterland environments were typically utilised by Aboriginal groups. The densest and most diverse archaeological remains are generally found along the coast where food resources were richer. Reliance on estuarine and adjacent hinterland areas was probably sporadic, possibly using freshwater swamps as a primary resource.

A large proportion of recorded sites indicate they have been found on flat terrain, predominantly in coastal heath, along estuarine stream banks, some woodland and dry sclerophyll eucalypt forest and in subtropical rainforest. Less commonly, sites are also found in undulating to hilly terrain either in dry sclerophyll eucalypt forest. Even less so in steep rugged terrain.

There is a greater likelihood of the existence and discovery of Aboriginal sites into the coastal plain. Particularly the crests and basal slopes of low spurlines that extend into and are situated adjacent to flood prone valley floors.

Stone artefacts may occur as open artefact scatters and isolated finds. Midden deposits may occur subsurface on former beach ridges and other alluvial or colluvial deposits which fringe valley floors. Including the former shoreline of the marine embayment and subsequent estuary which formed following the last sea level rise at around 6000 years BP.

Open artefact scatters (or campsites) are considered more likely to occur on relatively flat terrain, well-drained and not too distant from sources of freshwater or along the crests of low ridgelines.

Scarred trees may occur wherever old-growth trees remain. Potential locations include road reserves, remnant riparian vegetation on farmlands, and isolated trees within the state forests.

Prehistoric burial sites are most likely to be found in locally elevated landforms with a relatively deep profile of soft sediments of in the deposits of midden sites.

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Local Aboriginal History

Before European settlement, Aboriginal people roamed the area and used the land to hunt and gather food. Aboriginal ties to the land can be identified with the significant sites in and around the Port Macquarie area with some sites recorded, including burial sites at the Town Green in the CBD.

Location of the site

The subject land is located approximately 10km west of the Port Macquarie CBD. The site is generally surrounded by rural residential land to the North and rural land to the South and East

On site is still partially vegetated with a significant number of established trees and heavily grassed.

6 Site Survey & Results

Sampling Strategy

The sampling strategy is to attend the property by vehicle and undertake intensive walking inspection of the part of the site likely to be impacted upon by the proposed rezoning and future industrial lots.

In a landscape context, this area is consistent with the landscape unit "crests and basal slopes of low spurlines that extend into and are situated adjacent to flood prone valley floors". In this context intensive walking survey of the area is considered the most appropriate survey strategy.

The site survey was undertaken on 4 July 2019 by Mr Jason Holten, Senior Site Officer of Birpai Local Aboriginal Land Council and Donna Clarke from Land Dynamics.

Survey Coverage

On 4 July 2019 exposure and visibility across the site is described as generally good.

No text excavations were considered necessary and were not undertaken.

7. Results of Survey of 4 July 2019

After a lot of walking over the area the senior site officer, Mr Jason Holten noted that in some areas there had been a lot of disturbance over the years, with the removal of trees and stumps from the site and movement of topsoil, however other areas appeared relatively undisturbed. It was difficult to fully access the whole site due to the thickness of the undergrowth.

Mr Holten, Senior Sites Officer who attended the property and undertook the survey concluded that no evidence of Aboriginal activity was located on Lots 1-52 DP 776681, however it is recommended that a sites officer be present when clearing or excavation commences.

A Search of the AHIMS database did not find a record of any known Aboriginal Sites on the subject land.

Analysis & Discussion

Consultation with local Aboriginal peoples with a relationship to the area revealed no knowledge of occupation or cultural heritage associations with the subject land.

No site recording is required as there are no material traces, evidence or expressed knowledge of Aboriginal land use of the site.

The proposed clearing of lot 100 DP 1228060 is not considered likely to impact upon or have any significance for the local Aboriginal community and their cultural heritage.

The assessing site officers can see no reason why the proposal cannot continue.

Recommendation

Based on the Site Inspection and other investigation, there is no reason from an Aboriginal Cultural and Heritage perspective that this rezoning cannot proceed, subject to the following:

1. An Aboriginal Sites officer be present when excavation or clearing commences
2. At such time as development site works start, should any artefacts be turned up or located, Birpai LALC Aboriginal Site officers are to be contacted immediately and work on site stopped pending further assessment.

Signed

8/8/19.

Mr David Carroll

CEO - Birpai Local Aboriginal Land Council
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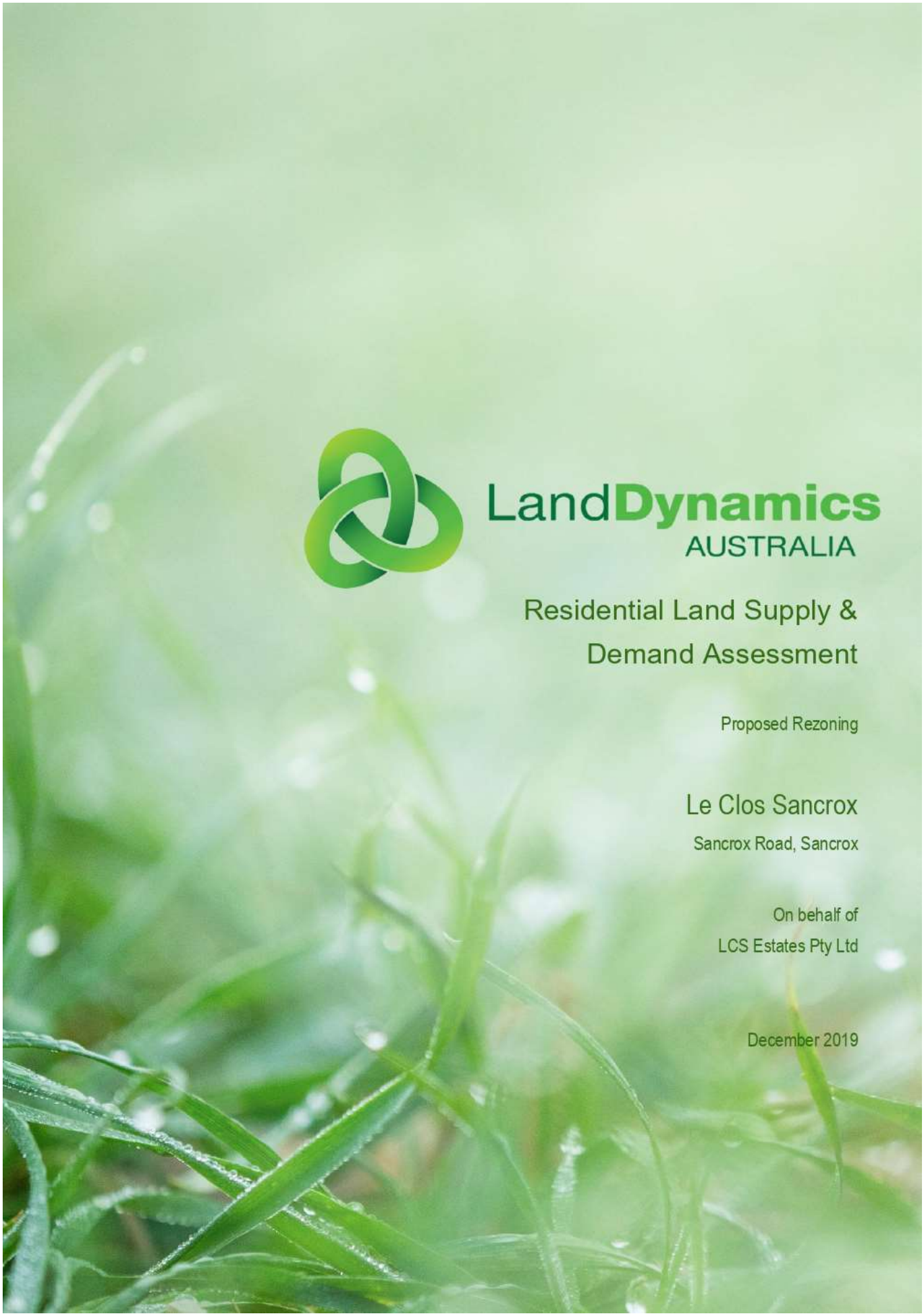
LandDynamics
AUSTRALIA
Residential Land Supply &
Demand Assessment
Proposed Rezoning
Le Clos Sancrox
Sancrox Road, Sancrox
On behalf of
LCS Estates Pty Ltd
December 2019

Prepared for:

LCS Estates Pty Ltd

Prepared By:

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	Name	Date
Prepared By	Donna Clarke	10/12/19
Checked By	Graham Burns	10/12/19



Disclaimer

This report was prepared in accordance with the scope of works set out in correspondence between the client and Land Dynamics Australia. To the best of Land Dynamics Australia's knowledge, the report presented herein accurately reflects the Client's intentions when the report was printed. However, it is recognised that conditions of approval at time of consent, post development application modification of the proposals design, and the influence of unanticipated future events may modify the outcomes described in this report.

Land Dynamics Australia used information and documentation provided by external persons, companies and authority. Whilst checks were completed by Land Dynamics Australia to ensure that this information and/or documentation was accurate, it has been taken on good faith and has not been independently verified. It is therefore advised that all information and conclusions presented in this report apply to the subject land at the time of assessment, and the subject proposal only.

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BACKGROUND

Land Dynamics was engaged by LCS Estate Pty Ltd to prepare a Land Supply & Demand Assessment to support and inform a Planning Proposal for land known as Le Clos, in the locality of Sancrox in the Port Macquarie Hastings Local Government Area (LGA). This report considers the adequacy of land supply at Sancrox.

The Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 to rezone the subject land to enable development for residential purposes; development for local business purposes; and to conserve areas of environmental significance.

The Development Application, which will be lodged concurrently or shortly after rezoning, is expected to include:

- Residential – approx.638 lots in R1 zoned land (73.2 ha), 42 lots in R3 zoned land (2.3 ha) and 3 lots in E4 land (existing dwellings on 1.5ha); and
- Business - approx. 1 ha of commercially zoned land.

Indicative layouts have been included in this report but are subject to change prior to lodgement of the Development Application.

1. INTRODUCTION

The following report is a residential land supply and demand assessment of Sancrox located in the Local Government area of Port Macquarie Hastings and includes:

- the identification of historical and current residential lot construction activity by supply type and location;
- identification of all zoned and unzoned major residential land supply stocks including estimates of lot yields on a project by project basis;
- examination of the future residential demand;
- presentation of potential future demand scenarios; and
- estimation of the years of supply of undeveloped broad hectare and major infill residential land stocks.

The assessment provides a robust and transparent assessment of the supply and demand for residential land across the Port Macquarie Hastings region. Where appropriate, comparisons to other regional Mid North Coast municipalities/urban centres are provided to further inform the relative 'state of play". In addition, the information will be of assistance to other related planning processes such as infrastructure and service planning.

1.1 Scope of report

Land Dynamics was engaged by LCS Estates Pty Ltd to prepare a Land Supply & Demand Assessment to support and inform a Planning Proposal for land known as Le Clos, in the locality of Sancrox in the Port Macquarie Hastings Local Government Area (LGA). This Land Supply & Demand Assessment addresses the following:

- Stage 1: Land supply and demand analysis for residential.
- Stage 2: Assessment of expansion options for residential.
- Stage 3: Preparation of masterplans for expansion options for residential, and commercial land.

1.2 Purpose

The monitoring of land supply is a key tool to assist in the management and development of growth across the Mid North Coast. The primary purpose of monitoring residential land supply is to improve the management of rural and urban growth by ensuring that council, public utilities, government and the development industry have access to

up-to-date and accurate information on residential land availability, development trends, new growth fronts, and their implications for planning and infrastructure investment.

The following report provides accurate, consistent and updated intelligence on residential land supply, demand and consumption. This in turn assists decision-makers in:

- maintaining an adequate supply of residential land for future housing purposes;
- providing information to underpin strategic planning in rural and urban centres;
- linking land use with infrastructure and service planning and provision; and
- taking early action to address potential land supply shortfalls and infrastructure constraints.

1.3 Approach

The following details the methodology undertaken to assess the supply of and demand for residential land in Port Macquarie Hastings local government area.

A land supply assessment of existing and available residential zoned land was conducted for the Sancrox area and the areas release areas of Port Macquarie. This was based on a desktop analysis of an aerial image and street observations, which focused on existing residentially zoned land within the current locality. The calculated/theoretical land supply, has been further considered in context of the number of dwelling allotments which could be created. These figures have then been assessed against the projected demand for new dwellings based on the projected population and household growth through to 2036.

1.4 Reports Reviewed

In preparing this report the following documents, reports and materials have been considered and taken into account:

- Review of the Urban Growth Management Report 2017-2036
- Review of the Greater Sancrox Structure Plan 2014 – 2034 (2015)
- Consideration of recent population growth in Sancrox and Greater Port Macquarie and the future outlook for population growth
- Translation of population growth to dwelling demand
- Review of the current status of land supply at Sancrox
- Consideration of additional matters relevant to the efficient and orderly management of residential land supply and the maintenance of a competitive housing market.
- Port Macquarie Hastings LEP 2011
- Port Macquarie Hastings Development Control Plan 2013
- Greater Sancrox Structure Plan 2014 – 2034 (2015), PMHC
- Towards 2030 Community Strategic Plan, PMHC
- North Coast Regional Plan 2036, PMHC
- Urban Growth Management Strategy, PMHC
- Economic Development Strategy, PMHC
- Mid North Coast Housing & Land Monitor (2016), Department of Planning and Environment
- Mid North Coast Residential Submarket Analysis (2014), Department of Planning and Environment
- Australian Bureau of Statistics, 2011 & 2016 Census Data

2. REGIONAL, LOCALITY & SITE CONTEXT

2.1 Port Macquarie Hastings: Regional Context

The Port Macquarie-Hastings region covers an area of 3,686 square kilometres and is located midway between Sydney and Brisbane; 420 kilometres north of Sydney and 510 kilometres south of Brisbane. The area is bisected north to south by the North Coast Rail Line and the Pacific Highway which connects Sydney and Brisbane.

2.2 Sancrox: Locality Context

Sancrox is located on the Mid North Coast within the Port Macquarie-Hastings local government area, and the Greater Sancrox Area (GSA). The GSA is located approximately 6.4km north east of the Wauchope town centre and 13km west of the Port Macquarie town centre and contains a land area of approximately 1,400 hectares (ha). The region is bound by the Oxley Highway to the south, the Pacific Highway to east and rural lands to the west and the Hastings River to the north. The predominate land use is rural, including agriculture and rural-residential. In general, lot sizes range between 1 to 10ha, with only four lots greater than 50 ha. The majority of small land parcels are located in the areas off Rawdon Island Road and Sancrox Road.

2.3 Le Clos Sancrox: Site Context

The subject land comprises a number of landholdings and is collectively known as Le Clos Sancrox. The plan below in Figure 1 details the extent of the boundaries of the properties included and Figure 2 provides the context of Le Clos Sancrox with respect to the greater Sancrox Area, Wauchope and Port Macquarie.

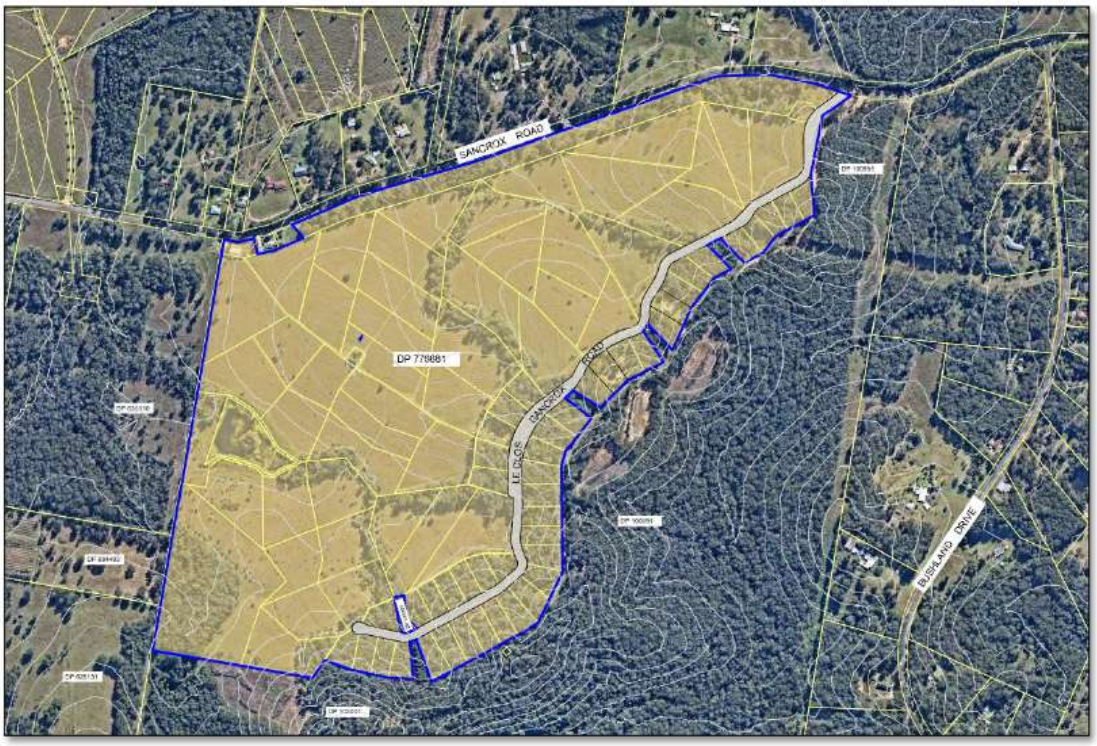


Figure 1 – Proposed Development Area Highlighted Yellow

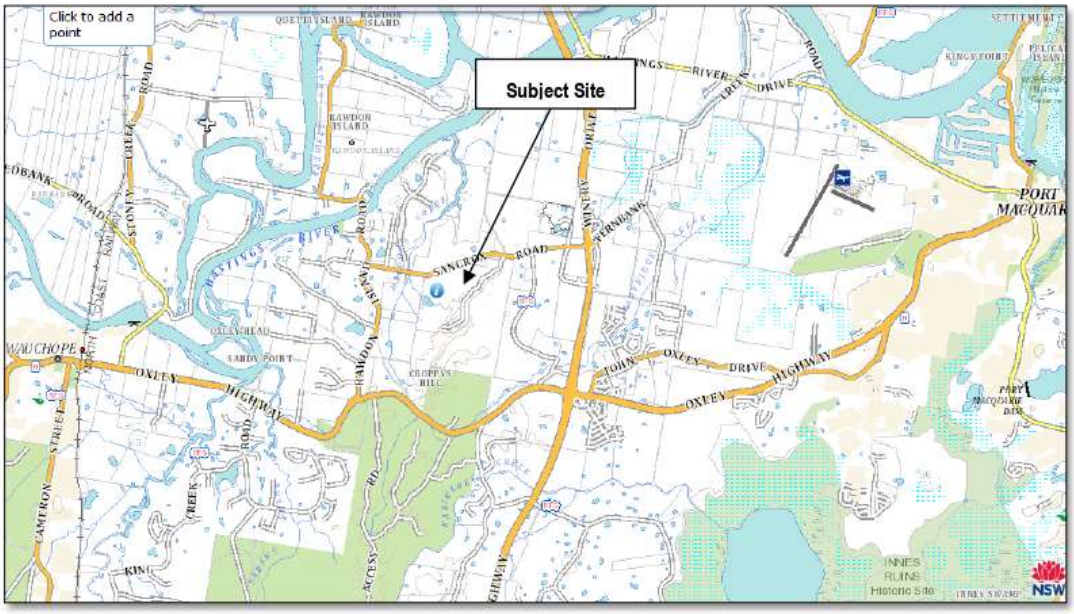


Figure 2 - Contextual Location of the subject land (source: www.sixmaps.nsw.gov.au)

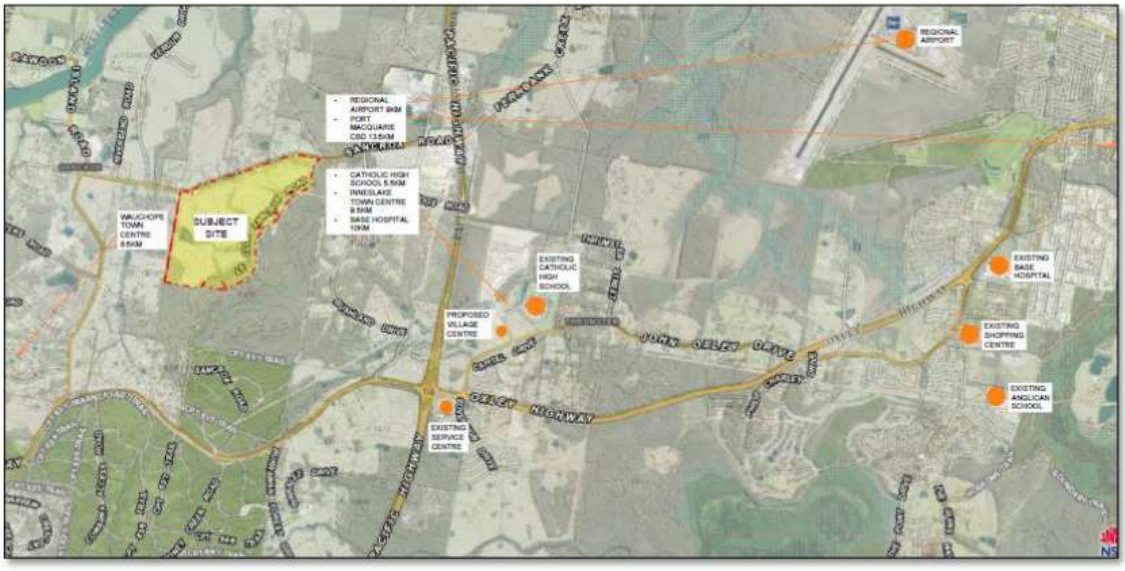


Figure 3 - Broadscale Analysis Extract

Le Clos Sancrox is part of the previous wider Cassegrain vineyards. To the north of the site is Verdun Estate which was also part of the previous vineyard land and has recently been rezoned by Council to large lot residential. To the north is a range of rural-residential dwellings and an animal boarding and breeding establishment. To the north-east of the site is Sancrox Quarry and further along Sancrox Road is Expressway Spares, which is part of a future industrial land investigations area. The site is generally surrounded by rural land, noting that extensive clearing has occurred on the land to the east recently.

The site is located on the southern side of Sancrox Road, approximately 1.3km from the Pacific Highway to the east, which links with Brisbane to the north and Sydney to the south. Sancrox Road also links to Port Macquarie to the east and Wauchope to the west. The site is relatively cleared, with vegetation in fingers through the site and around the edges. A number of drainage lines dissect the site falling towards Sancrox Rd.

The subject site is subject of a Moratorium of development on the site, which will be resolved by way of this Planning Proposal. Council has resolved to proceed with a site specific Planning Proposal for the subject site in parallel with the wider Outline Planning for the Fernbank Creek – Sancrox area. The planning undertaken as part of this Planning proposal will inform the greater area planning, whilst allowing the development of the site to occur earlier to resolve the Moratorium issue.

The site and surrounding area has been subject of extensive Structure Planning in 2015, which was delayed pending Council's Urban Growth Management Strategy and the change in strategy from rural-residential to residential zoning of the area.

The site has been identified as areas subject to Outline Planning in Council's Urban Growth Management Strategy. Rezoning the land is considered the most suitable and transparent way of achieving the objectives of this proposal.

The area of Sancrox is the logical next area for development, with Area 13 planning ceasing at the highway. This area of Thrumster is developing at a steady rate, with a good take up of land by purchasers.

The site is well located with easy access to the existing universities, schools, hospitals, shopping and other services and facilities within Port Macquarie and Wauchope.

3. STRATEGIC & STATUTORY PLANNING FRAMEWORK

3.1 Strategic: Regional

North Coast Regional Plan

North Coast Regional Plan 2036 has been prepared to guide land use planning priorities and decisions to 2036 and has identified "*The regional cities of Tweed Heads, Lismore, Coffs Harbour and Port Macquarie are the primary growth anchors, delivering new jobs, and more diverse housing as well as high quality essential services*".

North Coast Settlement Planning Guidelines 2019 have been reviewed to provide a framework to ensure adequate supply of housing is provided to meet the population needs. In reviewing, the constraints planning has been undertaken and areas of high environmental value have been excluded. The guidelines indicates that ""*Future settlement, where permitted by the regional strategies and outside the agreed growth areas, must be located to minimise environmental impacts and be sustainable. Such settlement must satisfy the sustainability criteria contained in Appendix 1 of the Regional Strategies.*" Refer to Planning Proposal for detailed assessment against the criteria.

Regionally Significant Farmland

The site is not identified as regionally significant farmland.

3.2 Strategic: Local

Port Macquarie Hastings Urban Growth Management Strategy 2011-2031

Within the previous UGMS 2010-2031, the re-subdivision of the Le Clos farms at Sancrox was mentioned heavily, with immediate timing for investigations which was indicated as commencing in 2010/11.

The recently adopted UGMS 2017-2036, as exhibited did not support investigations at Sancrox, however as a result of public interest, with a large number of submissions to the exhibited documents from landowners of Le Clos Sancrox, the UGMS was amended prior to adoption and Le Clos Sancrox included in the Structure Plan for Sancrox in the adopted UGMS 2017-2036.

The report to Council on 20 June 2018 was detailed with respect to Le Clos Sancrox, as touched on above and indicated that Council could support investigation areas outside of the urban growth boundary in the Regional Plan, such as Le Clos Sancrox. The adopted UGMS includes Le Clos Sancrox as part of Outline Plan areas, which Le Clos Sancrox is located within.

The resolutions of Council, with the latest being 20 February 2019, required immediate commencement of Stage 1 planning to prepare an Outline Plan for Sancrox-Fernbank Creek as detailed in the UGMS, and to invite the Le Clos Sancrox landowners to submit a planning proposal in parallel with Stage 1 planning in order to assist in informing the planning process.

Greater Sancrox Structure Plan 2015

In reviewing the Greater Sancrox Structure Plan Issues Paper dated October 2011, it is stated that "*a review of the Le Clos Sancrox subdivision has been identified by Council as a key element in planning for the Sancrox area*" and Le Clos Sancrox is identified on the maps within the document as "*possible future development precincts, coinciding with areas of lower ecological constraint*".

The Structure Planning work did occur to satisfy a key objective of the UGMS in force at that time and was reported to Council for adoption in 2015 and delayed pending the revised UGMS.

Rezoning of the land was invited over 13 years ago, Structure Planning had commenced and finalised in 2015 and the latest UGMS 2017-2036 indicated outline planning could occur on this site. It is acknowledged that a substantial amount of work has been undertaken by Council is the Greater Sancrox Structure Plan, which would assist in progressing the Outline Planning for Le Clos Sancrox. The Structure Plan identifies Le Clos Sancrox as a priority.

4. PROPOSED DEVELOPMENT

For the purposes of this Land Supply & Demand Assessment, both the proposed zonings and the indicative layout plan have been considered to provide greater certainty as to the expected development following rezoning.

The Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 to rezone the subject land to enable development for residential purposes; development for local business purposes; and to conserve areas of environmental significance.

The Development Application, which will be lodged concurrently or shortly after rezoning, is expected to include:

- Residential – approx.638 lots in R1 zoned land (73.2 ha), 42 lots in R3 zoned land (2.3 ha) and 3 lots in E4 land (existing dwellings on 1.5ha); and
- Business - approx. 1 ha of commercially zoned land.

Indicative layouts have been included in this report but are subject to change prior to lodgement of the Development Application.

An opportunity has been identified for a school to be accommodated within the development and these discussions will continue whilst the land is zoned. An educational establishment is a permitted land use in the R1 General Residential zone.



Figure 4 - Subdivision Concept Layout

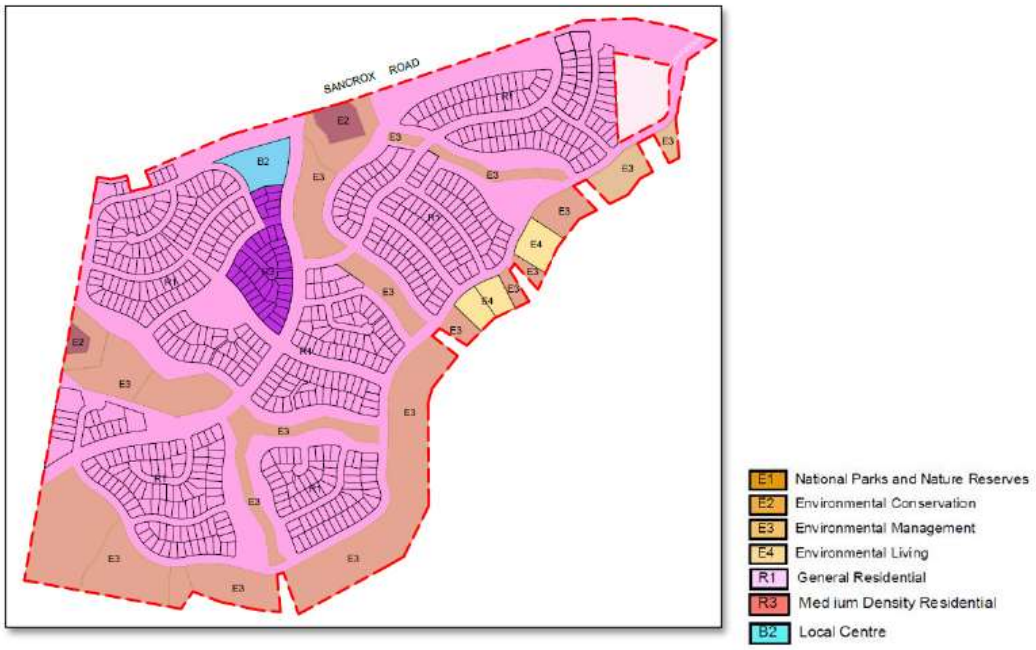


Figure 5 – Proposed Zoning

5. SUPPLY OF GENERAL RESIDENTIAL ZONED LAND

5.1 Supply analysis of R1 General Residential zoned land

The following three phases of analysis were applied to the supply of R1 General Residential land:

- Phase 1 – Classification of Land Parcels
- Phase 2 – Constraints Analysis
- Phase 3 – Estimation of Development Potential for Residential Land

Phase 1 – Classification of Land Parcels

Data on land parcels was obtained from Council's LEP maps. Below are extracts of the two relevant LEP maps. Stars have been identified where there is knowledge of the environmental constraints on residentially zoned land. A current aerial photograph is also provided of the area.

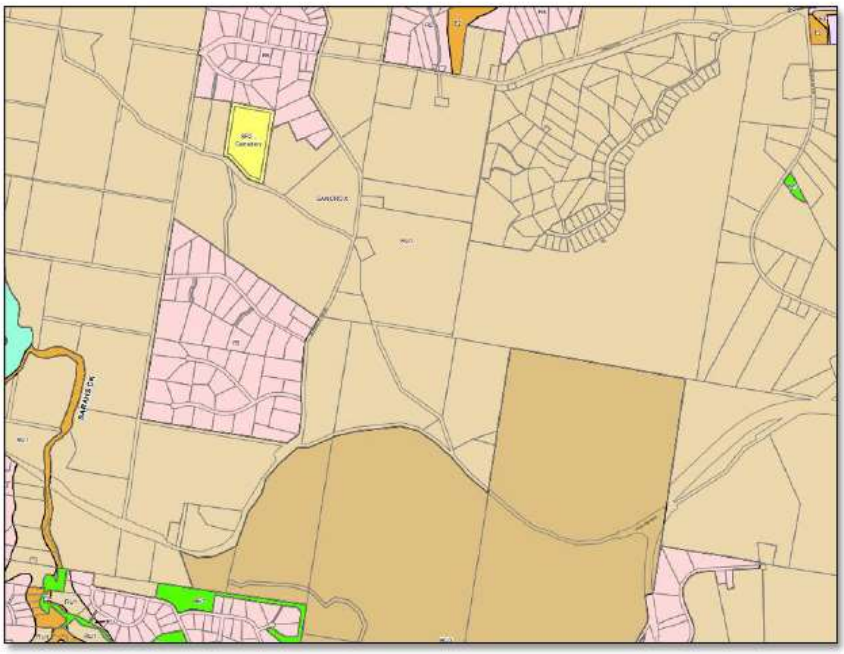


Figure 6 - Map 13B LEP Extract – Includes Le Clos Sancrox

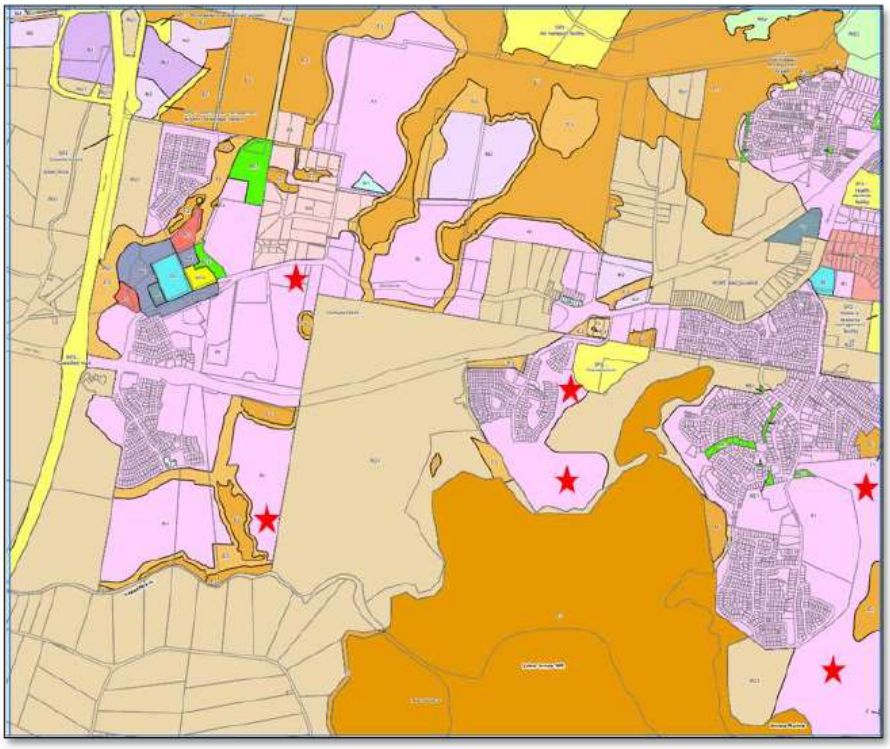


Figure 7 - Map 13D LEP Extract – With Stars identifying Residentially Zoned Land which is Constrained

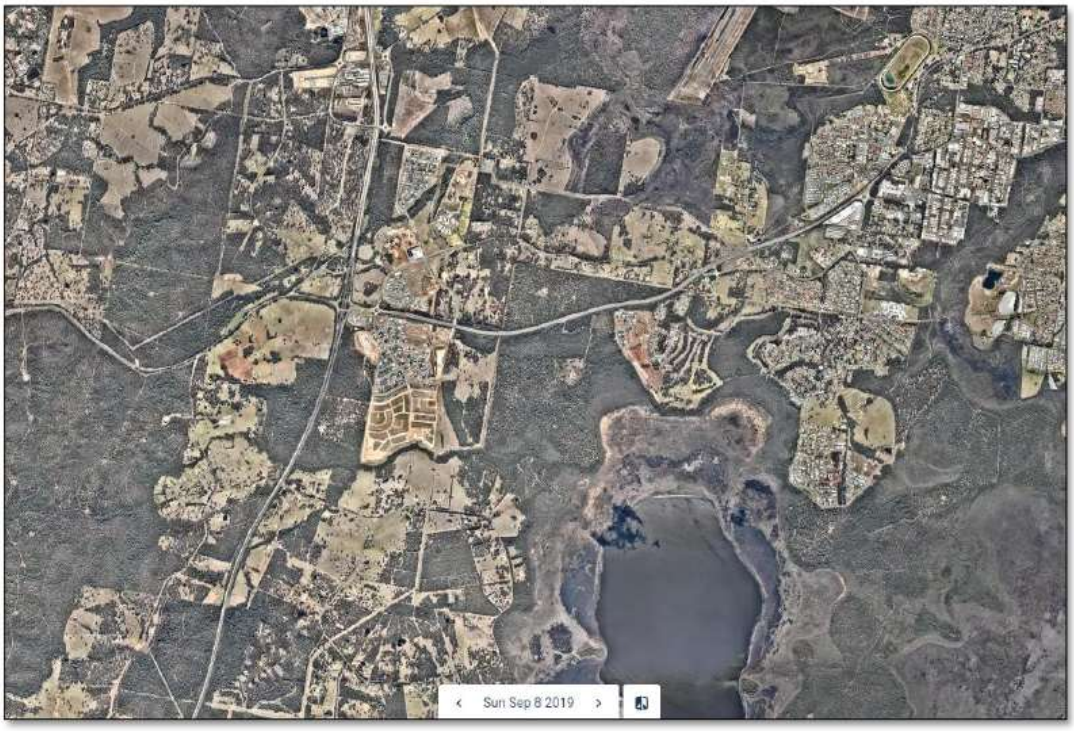


Figure 8 - Aerial Photograph which Clearly Shows Vegetation on these Identified Areas

Phase 2 – Constraints Analysis

The land identified above generally by stars is considered from a desktop analysis to have significant constraints that are likely to make development of the land impractical or unfeasible from an ecological perspective, having regard to the change in legislation to the Biodiversity Conservation Act, 2016. The Act embodies the principles to avoid, minimise and offset in that order of priority, when considering impacts assessed under the Act. The areas indicated by the Stars are all heavily vegetated and the principles of avoid and minimise are likely to have significant impact on the yield in these areas, before any consideration of the offset provisions of the Act. The costs associated with the offset provisions, if or when they are applied, will also place significant constraints on the yield. In addition further constraints also relate to bushfire controls, which are exacerbated where there are large areas of vegetation.

In considering the available residential land zone to meet the land supply targets identified by Council, the areas indicated by the Stars on the plan may result in no lots being developed in that area, or at the best a limited number only. Council has indicated in feedback from the pre-lodgement meeting that all residential zoned land identified as Undeveloped Urban within the Urban Growth Area Boundary of the UGMS needs to be considered as residential land supply. This however is not a true and accurate representation of land supply in the area given the issues noted above, and as can be demonstrated at developments such as Ascot Park where large areas of the property that are zoned residential R1, have been excluded from being developed due to environmental constraints.

Phase 3 – Estimation of Development Potential for Residential Land

Within the Port Macquarie to Thrumster corridor, Council has explored opportunities for release areas. There is potential for infill development and small site specific Planning Proposals in order to achieve a marginal increase in residential land supply.

The UGMS has identified areas at Sancrox as having potential for residential land. The figure below identifies the land area of the three areas in Sancrox, being a total of 591.9ha. Based on an average density of 10 dwellings per hectare, without detailed consideration of the constraints of the area, could potentially yield 5919 dwellings.

Figure 10 below identifies the Outline Planning Areas within the broader area between Thrumster and Wauchope. The discussions undertaken since March 2019 with Council officers indicated that the planning being undertaken as part of this site specific planning proposal should have regard to the outlined areas in close proximity of the site, as detailed in Figure 9, and not the broader area.

It is noted that Le Clos Sancrox has a site area of approx. 86.82ha and yields approx. 650 lots. Le Clos Sancrox is a relatively unconstrained site, however once the ecological and bushfire constraints, as well as the infrastructure including roads and services is provided, the estimated lot yield of 868 lots based on an average density of 10 dwellings per hectare is not achieved. This equates to 7.4 dwellings per hectare.

A desktop review of the other areas identified orange below, appear to indicate that they contain greater areas of vegetation and likely to therefore be subject to additional constraints than Le Clos. In this regard, it is not expected that the density of 7.4 dwellings per hectare achieved at Le Clos Sancrox would be achieved elsewhere in the investigation area. Therefore, the land availability at Le Clos Sancrox is important to assist in achieving the area wide targets.

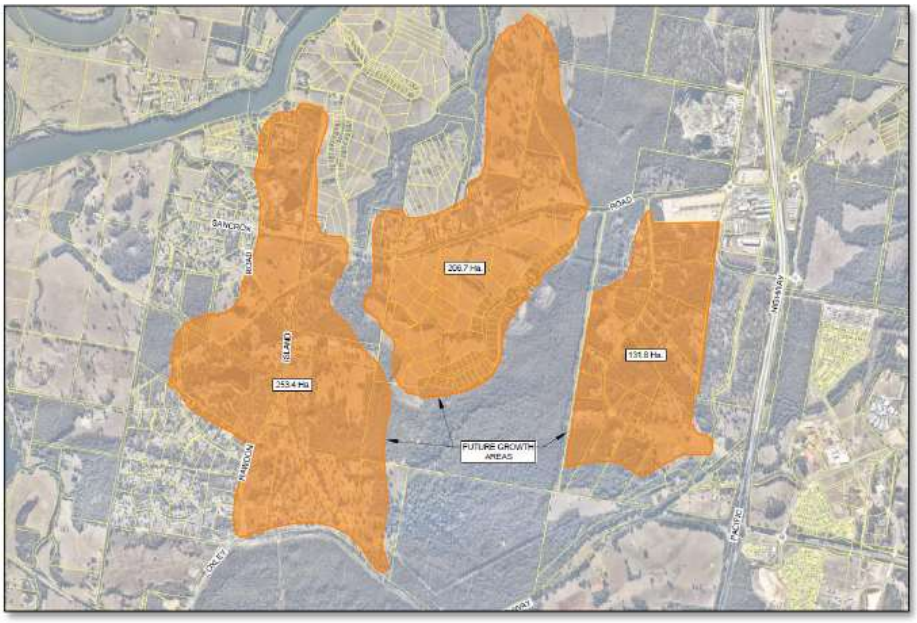


Figure 9 - Areas of Outline Precincts in UGMS

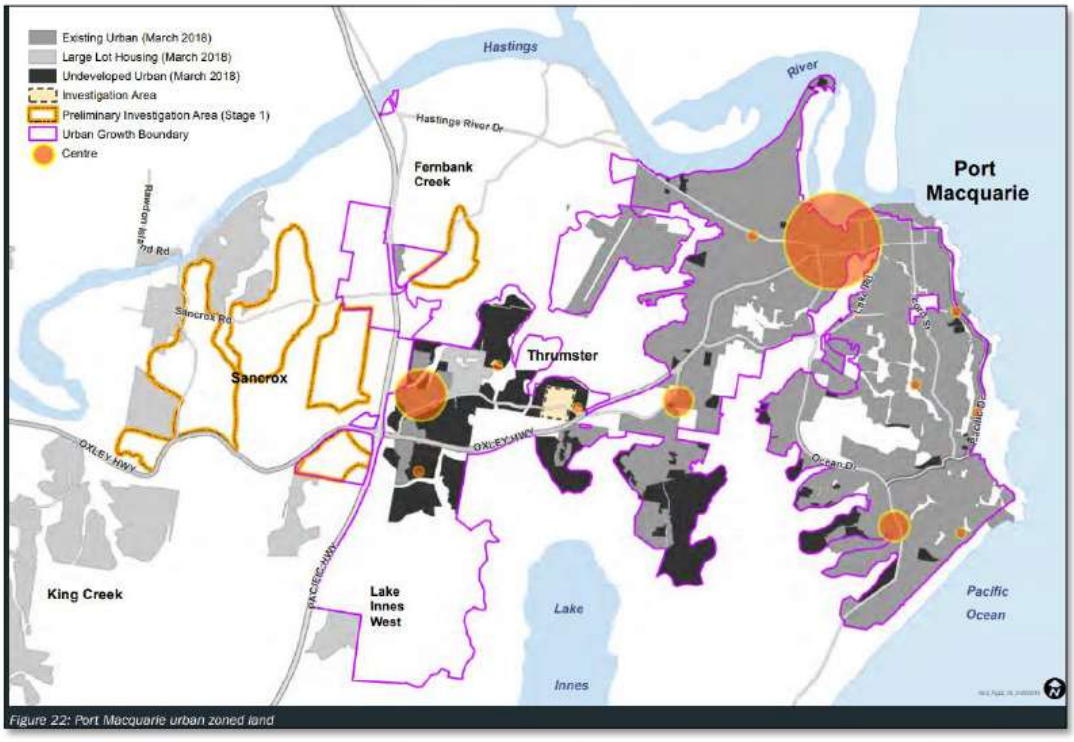


Figure 10 - UGMS Outline Plan Areas Identified yellow (source: www.pmhc.nsw.gov.au)

6. ECONOMIC PROFILE

6.1 Port Macquarie Hastings Economy Profile

Port Macquarie Hastings LGA is a long established community with regional centre status, with a population over 83,000, over 29,000 jobs and a gross regional product worth $5.028 billion. The regional status comes from its broad-based public and private business sectors, coupled with a dynamic retail and commercial district. Port Macquarie and surrounding areas has also been a thriving centre of tourism for many years.

Greater Port Macquarie has a $6 billion local economy and is a net exporter and PMHC Economy profile indicates that "*We sell more products and services to customers outside of the LGA (approx. $2.09 billion) than we import ($1.67 billion). This is considered to be an outstanding performance for a regional economy.*"

The number of employed people in the Port Macquarie-Hastings Council area has increased by 2,030 between 2011 and 2016. The largest changes in the jobs held by the resident population between 2011 and 2016 (see figures below) in Port Macquarie-Hastings Council area were for those employed in:

- Health Care and Social Assistance (+778 persons)
- Construction (+624 persons)
- Education and Training (+473 persons)

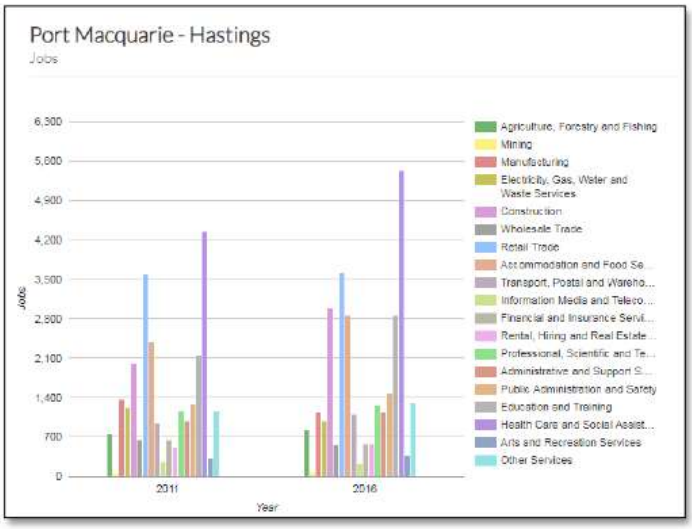


Figure 11 - Industry Employment Sector data for Port Macquarie Hastings. Source: ABS 2016, complied in economyprofile.com

The employment data presented above represents the number of people employed by businesses/organisations in each of the industry sectors in the Port Macquarie Hastings region. The employment data presented is destination of work data; no inference is made as to where people in a defined region reside.

An analysis of industry sector for employment held by the population in Port Macquarie-Hastings LGA in 2016 shows the three most popular industry sectors were, Health Care and Social Assistance (5,192 people or 17.5%), Retail Trade (3,424 people or 11.5%) and Construction (3,153 people or 10.6%). These three industries employed 39.7% of the total employed resident population. In comparison, Regional NSW employed 14.4% in Health Care and Social Assistance; 10.3% in Retail Trade; and 8.7% in Construction (see Figure 11).

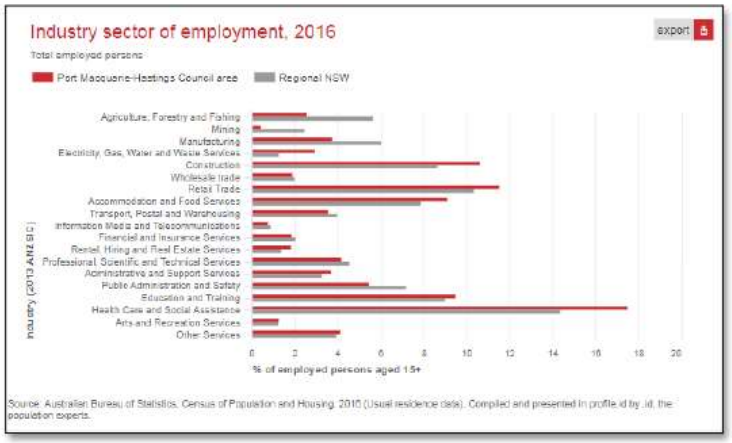


Figure 12 - Industry sector of employ 2016 (comparison with Regional NSW). Source: ABS, compiled in profile.id

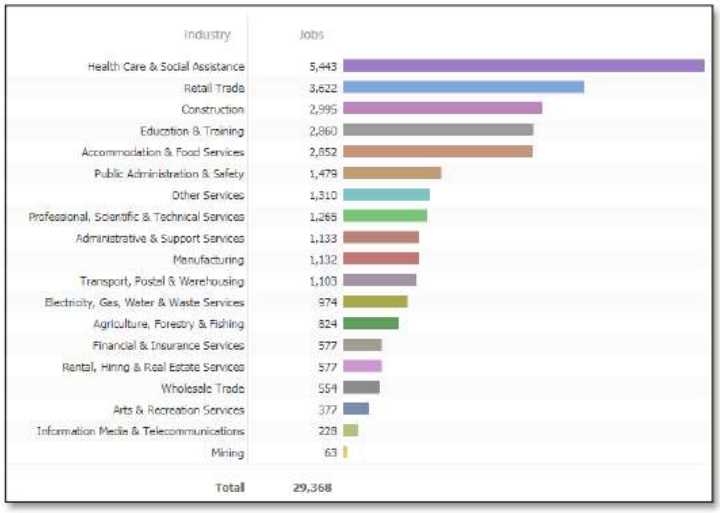


Figure 13 – Employment by Industry (Source: Latest REMPLAN data incorporating Australian Bureau of Statistics ' (ABS) 2016 Census Place of Work Employment Data, 2015 / 2016 National Input Output Tables and June 2018 Gross State Product).

The data presented above represents the number of people employed by industry sectors in the Port Macquarie region in 2016. It is estimated that 29,368 people work in Port Macquarie – Hastings and of this 2,995 or 10.20% work in the Construction industry.

7. RESIDENTIAL LAND SUPPLY ANALYSIS

7.1 Residential Land Supply

Within the Port Macquarie Hastings region growth is directed towards the west due to natural constraints such as National Parks, flood-prone land and Pacific Ocean.

With an identified demand of 10,000 dwellings by 2036, applying this ratio to Port Macquarie Hastings LGA means that it needs to supply an average 500 dwellings each year. The UGMS further states "*in 2017, we have over 1,000 hectares of undeveloped residential land, with capacity for around 9,000 new dwellings*" as shown in Figure

13. Although the UGMS does not mention Sancrox as a main area for new residential development, the locality is identified as a new residential investigation area with options for growth (see Figure 14).

The UGMS identifies if development continues westward to accommodation future population growth, then residential areas for long term growth could be depleted by 2070 in and around Port Macquarie. However, options do exist for further growth at Sancrox. The Urban Growth Management Strategy states that further options for growth exist at Fernbank Creek, Sancrox and at Lake Innes Drive and resolutions of Council support this. The planning is to have commenced for this area under the UGMS timing and this Planning Proposal is consistent with that timing.

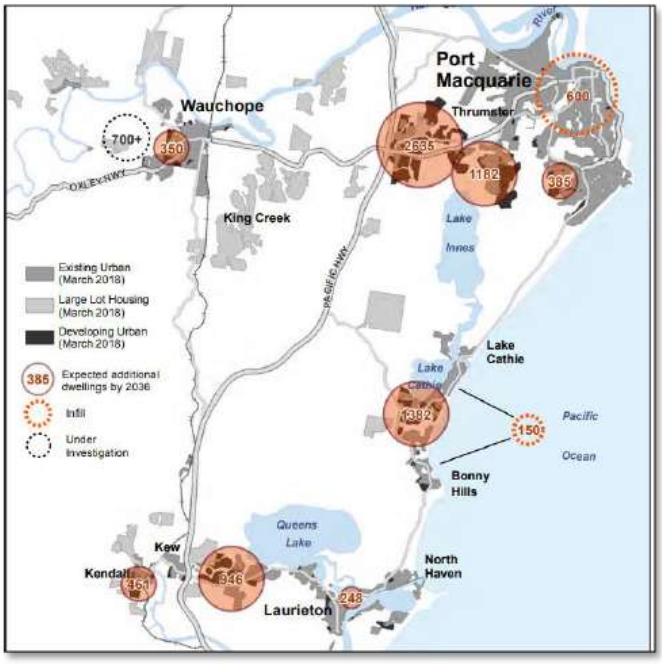


Figure 14 - potential dwelling yield estimates (2017) in key areas of housing supply (Source: UGMS pg 13)

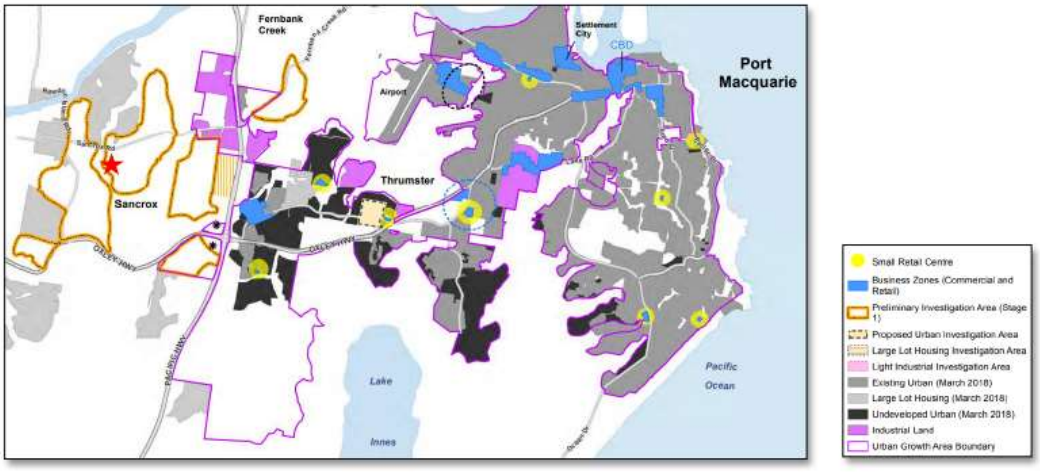


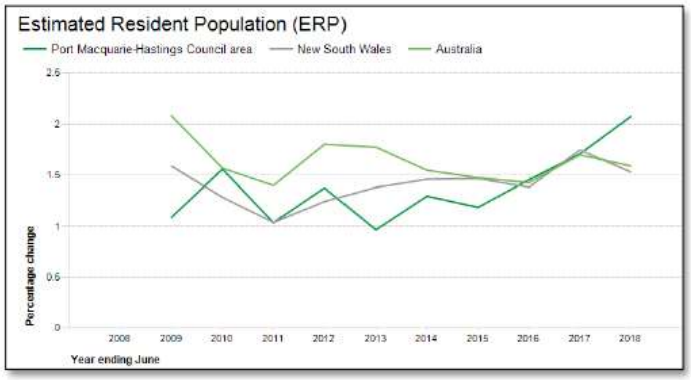
Figure 15 – Site identified by Red Star - UGMS Summary Map (Source: UGMS Pg. 33)

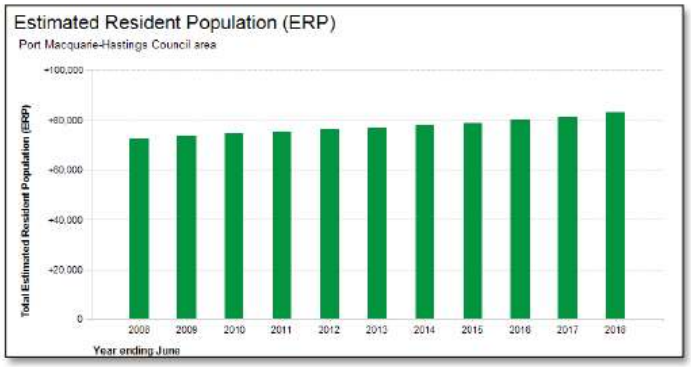
There is no denying that whilst Sancrox was identified for planning, given its later inclusion into the UGMS post exhibition, the population figures were not updated or Sancrox included in the projections.

7.2 Residential Land Demand

Historical Population Growth

Port Macquarie-Hastings Council area had an Estimated Resident Population (ERP) of 83,131 as of the 30 June 2018. The ERP is the official population of the area updated annually by the Australian Bureau of Statistics and is reassessed every Census. The chart and table, prepared by *.id - the population experts* shows the last 10 years ERP for Port Macquarie-Hastings Council area, the state and Australia, with percentage comparisons. The figures below indicate a growing population for the local government area.





Annual change in Estimated Resident Population (ERP) export reset

	Port Macquarie-Hastings Council area			New South Wales			Australia		
Year (ending June 30)	Number	Change in number	Change in percent	Number	Change in number	Change in percent	Number	Change in number	Change in percent
2018	83,131	+1,690	+2.08	7,988,241	+120,305	+1.53	24,992,880	+391,000	+1.59
2017	81,441	+1,368	+1.71	7,867,936	+135,078	+1.75	24,601,860	+410,953	+1.70
2016	80,073	+1,148	+1.45	7,732,858	+105,440	+1.38	24,190,907	+340,123	+1.43
2015	78,925	+925	+1.19	7,627,418	+110,223	+1.47	23,850,784	+346,646	+1.47
2014	78,000	+997	+1.29	7,517,195	+108,113	+1.46	23,504,138	+358,237	+1.55
2013	77,003	+737	+0.97	7,409,082	+100,877	+1.38	23,145,901	+403,426	+1.77
2012	76,266	+1,034	+1.37	7,308,205	+89,676	+1.24	22,742,475	+402,451	+1.80
2011	75,232	+772	+1.04	7,218,529	+74,237	+1.04	22,340,024	+308,274	+1.40
2010	74,460	+1,143	+1.56	7,144,292	+90,537	+1.28	22,031,750	+340,097	+1.57
2009	73,317	+789	+1.09	7,053,755	+110,294	+1.59	21,691,653	+442,454	+2.08
2008	72,528	–	–	6,943,461	–	–	21,249,199	–	–

Source: Australian Bureau of Statistics, Regional Population Growth, Australia (3218.0). Compiled and presented in economy.id by id., the population experts.

Figure 16 – Estimated Resident Population Tables (source: https://economy.id.com.au/port-macquarie-hastings/population)

Population Projections

As mentioned in the UGMS "*population growth drives the need for new dwellings, jobs, community facility and services*". The challenge is to "*provide sufficient land for new growth so that land can be developed in an efficient and affordable way, while ensuring we maintain our natural amenity and local character*".

Based on research, Port Macquarie population will reach 47,202 by the end of June 2019. Projection calculation is based on the average growth rate of 1.59% over the last eight years since 2011. It is believed using the recent years' figures (see table below) will make the estimation more accurate.

Over the last eight years of Port Macquarie's population, overall the growth rate is very strong and consistent ranging from 1.13% to 2.20%, adding around 469 to 964 people each year to the overall population. If you compare the 2011 and 2016 census figures, the growth rate is only 8% over a 5 year period, grown by 3,323 people. The reasons contribute to the strong population growth is that employment rate and birth rate are strong over the years. The growth is aligned with the national population growth.

Population projections for Port Macquarie, as indicated in the UGMS, across the LGA may increase from 80,000 in 2017 to 103,000 by 2036. This is an increase of 23,000 people, which averages out to an annual increase of 1,210 people.

Year	Population	Growth Rate
2011	41,491	n/a
2012	41,960	1.13%
2013	42,490	1.26%
2014	43,065	1.35%
2015	43,850	1.82%
2016	44,814	2.20%
2017	45,620	1.80%
2018	46,447	1.81%

Building Approvals

Port Macquarie-Hastings area's building approvals are used as a leading indicator of the general level of residential development, economic activity, employment and investment. Residential building activity depends on many factors varying with the state of the economy including interest rates, availability of mortgage funds, government spending, and business investment. Large financial changes or shocks, such as the Global Financial Crisis of 2008/09 can be observed in the data. However, the number of building approvals can fluctuate substantially from year to year simply as a result of the short-term nature of many construction projects, and the cyclical nature of the industry. (source: profile.idcommunity.com.au).

The building approval data for residential buildings in the Port Macquarie-Hastings LGA in the financial year 2018-19 was 685, with 453 being houses and 232 being other, (see Figure 16 below). Although the overall approvals have increased by 18, the approvals for houses have decreased by 98 in the FY 2017-18.

The residential buildings approvals data is illustrated in the chart below, along with the building approval values.

Port Macquarie-Hastings Council area	Number			Annual change		
Year (ending June 30)	Houses	Other	Total	Houses	Other	Total
2018-19 Jun FYTD	453	232	685	–	–	–
2017-18	551	116	667	+55	-100	-45
2016-17	496	216	712	+20	+60	+80
2015-16	476	156	632	+60	+8	+68
2014-15	416	150	566	+101	+59	+160
2013-14	315	91	406	+14	+34	+48
2012-13	301	57	358	+45	+1	+46
2011-12	256	56	312	+14	-94	-80
2010-11	242	150	392	-8	-81	-89
2009-10	250	231	481	-30	+177	+147
2008-09	280	54	334	-65	-99	-121
2007-08	345	110	455	+14	-15	-1
2006-07	331	125	456	-15	-106	-121
2005-06	346	231	577	-90	-34	-124
2004-05	436	265	701	-101	-43	-144
2003-04	537	308	845	+3	-50	-47
2002-03	534	358	892	-6	+137	+131
2001-02	540	171	711	–	–	–

Figure 17 – Residential Building Approvals data in Port Macquarie-Hastings LGA (Source ABS complied in profile.id)

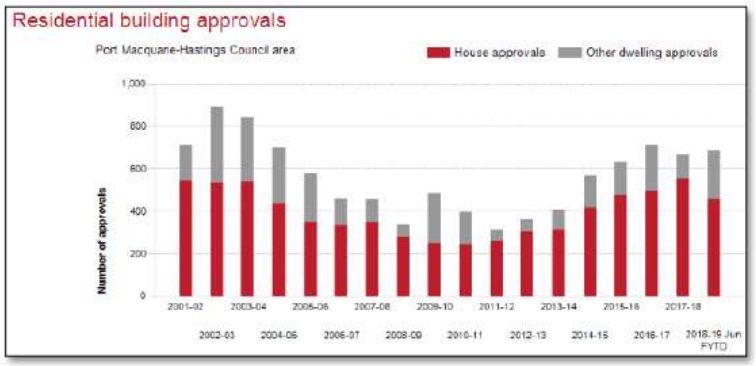


Figure 18 –Number of Building Approvals in Port Macquarie-Hastings LGA (source ABS complied in profile.id)

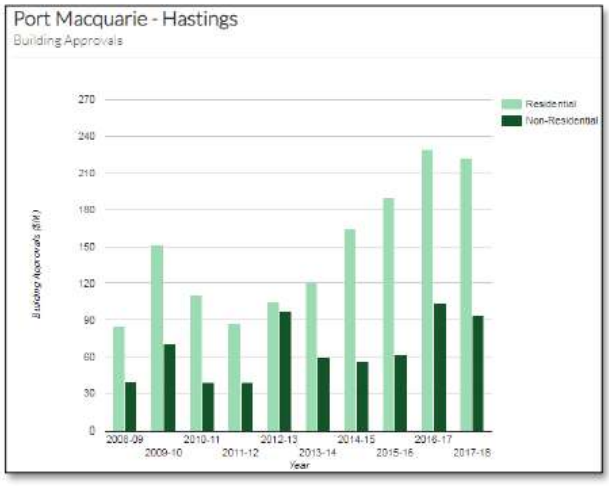


Figure 19 - Value of Building Approvals in Port Macquarie Hastings LGA. (Source: ABS, complied in economyprofile 2018)

The Building approvals data in the above table relates to the number and value of residential and non-residential building approvals, from information provided by approving authorities. Statistics of building work approved are compiled from:

- permits issued by Port Macquarie Hastings local government and other principal certifying authorities;
- contracts let or day labour work authorised by commonwealth, state, semi-government and local government authorities; and
- major building approvals in areas not subject to normal administrative approval e.g. building on remote mine sites.

The data above is sourced from the ABS monthly Building Approvals (BAPS) collection which consists of data relating to residential and non-residential building work above certain value limits that have been approved within the reference month. It includes building approvals that are comprised of the following activities:

- construction of new buildings
- alterations and additions to existing buildings
- approved non-structural renovation and refurbishment work
- approved installation of integral building fixtures.

Residential Buildings: contain one or more dwellings, intended for the provision of long term accommodation. Examples include: detached houses, townhouses, flats, cottages and weekenders. Ancillary outbuildings not containing dwellings built to existing residential buildings, such as garden sheds, gazebos and free standing garages, are treated as residential buildings.

Non-Residential Buildings: where significant non-residential functions are contained in a building, such as shops, hotel/motel rooms, or offices, the building is classified as non-residential. This may, for example, occur where a dwelling is attached to, or enclosed within, a non-residential building

Subdivision Approvals

A report was submitted to Council on 21 August 2019 which included statistics of development applications, including subdivisions. This report included the following table which summarises the type of DA and the value of work.

Value of Works DA	Apr-19	May-19	Jun-19	Total to date 2018 - 2019	Total 2017-2018	Total 2016 -2017
Ancillary DA	$2,212,870	$448,901	$264,086	$8,630,779	$8,649,369	$5,416,321
Ancillary CDC	$56,650	$476,159	$403,270	$4,461,919	$5,750,178	$1,559,611
Commercial DA	$19,695,148	$119,950	$14,238,200	$50,335,092	$17,415,409	$12,710,871
Commercial CDC	$0	$0	$100,000	$1,015,474	$2,380,814	$4,007,057
Community DA	$27,374,600	$2,049,500	$0	$36,258,032	$13,111,186	$1,851,000
Community CDC	$0	$0	$0	$345,078	$692,872	$330,000
Industrial DA	$1,750,000	$95,000	$1,077,400	$18,414,595	$13,919,469	$7,176,750
Industrial CDC	$200,000	$139,000	$0	$8,187,481	$757,727	$503,000
Residential DA	$22,348,156	$23,733,514	$9,759,822	$227,592,925	$266,406,644	$190,943,031
Residential CDC	$2,220,884	$3,155,510	$2,096,657	$37,815,194	$51,975,736	$37,712,396
Rural DA	$210,000	$304,000	$1,284,240	$9,693,549	$9,718,464	$7,635,746
Rural CDC	$0	$0	$0	$1,145,009	$1,638,082	$1,237,092
Subdivision DA	$27,642,000	$90,000	$680,000	$30,759,000	$18,137,000	$26,708,500
Tourist DA	$600,000	$68,400	$100,000	$3,395,692	$14,777,822	$1,711,860
Tourist CDC	$0	$0	$0	$0	$1,225,000	$690,000
Total	$104,310,308	$30,679,934	$30,003,675	$438,049,819	$426,555,772	$300,193,235

Figure 20 – Summary of Type of Development Applications & Value (source: www.pmhc.nsw.gov.au)

The report also states "*The following table outlines the estimated value of works per development type approved during the quarter along with the year to date value and value of the preceding 2 years. The 2018-2019 value of $438 million has surpassed the $426 million in 2017-2018. This result reinforces the confidence in the development sector and does not point toward any significant slow-down.*"

The table clearly shows a significant increase in Subdivision DA's from 2017-2018 being $18,137,000 to 2018-2019 being $30,759,000.

A key factor to note with respect to subdivisions in the local government area is that under the now repealed Part 3A of the Environmental Planning & Assessment Act, 1979, coastal subdivisions were granted approval by the State Government. This occurred on a large scale in the LGA around 2009. Many of these consent have been in place for a large number of years and have only been constructed and available in the market in recent years and continuing currently.

A further consideration relates to the large amount of land zoned for residential purposes, but being highly constrained due to ecological value and unlikely to result in approval being granted for subdivision. This skews some of the housing projections undertaken by Council as part of the UGMS.

Current Land for Sale in Sancrox

A review of land for sale in Sancrox on 15/10/19 identifies there are only 4 parcels of land available for purchase, all of which are indicated as being under offer.

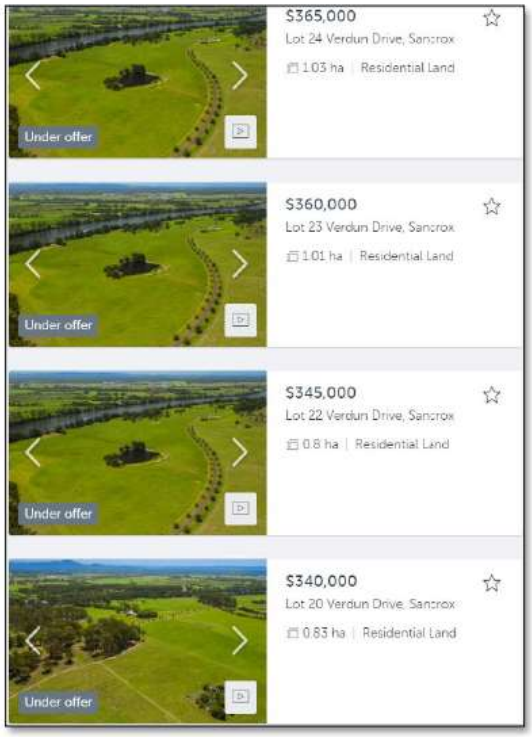


Figure 21 – Current land sales in Sancrox (source: www.realestate.com.au)

Only three dwellings were available for purchase. Both the land and dwellings for sale in Sancrox are a different form of residential land from that proposed in the indicative layout, with the proposed lots to be standards 450m² sized lots in a R1 General Residential zoning, rather than rural-residential land.

Current Land for Sale – Wider Area

A wider search of land for sale is shown in the image below, with no land available for purchase in the nearby Thrumster area.

The map highlights a large gap in the area between Wauchope and Ascot Park for land. It should be noted that Ascot Park is nearing its final stage and land supply will be exhausted.

Sovereign Hills land release is located to the east of the Pacific Highway in the area identified as having no sales. It is noted that Sovereign Hills manages land sales through their website and display village, with 20 lots available on the website as at 10/12/19. The total Sovereign Hills development will provide 2,400 lots in total at completion, based on the information on their website.

The figure below is a comparison of the Sovereign Hills sales plan and a recent Near Map image, which indicates the residential subdivision is well advance, with the Heritage stage to the south now being completed, with approx. 400 lots.



Figure 22 - Sovereign Hills development and recent Aerial Image (source: sovereignhills.com.au and www.nearmap.com)

The image below identifies a good supply of land at Lake Cathie, which correlates with the subdivisions which were granted consent under Part 3A of the Act and only now been developed some 10 years later.

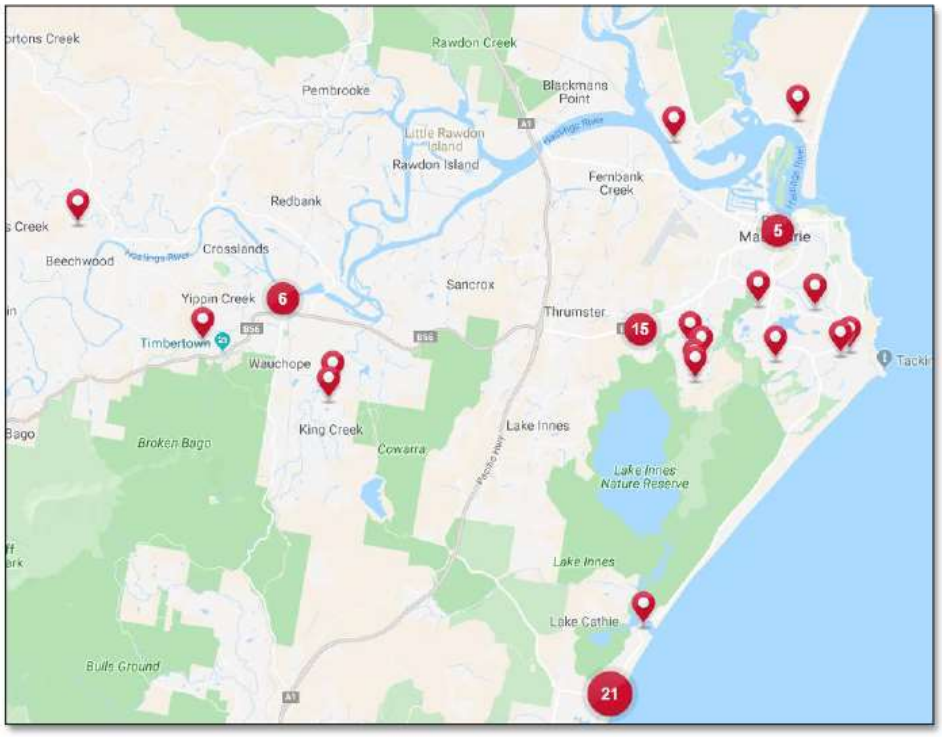


Figure 23 - Land for Sale in Wider Area (source: www.realestate.com.au) dated 15/10/2019

Previous Review

A document titled Mid North Coast Residential Submarket Analysis was prepared by MacroPlanDimasi for the Department of Planning & Environment, August 2014. Below is an extract of the Port Macquarie region. Many of the assumptions and trends remain applicable today.

REGION	SUPPLY	DEMAND	POPULATION, AGE & INCOME	HOUSE PRICES AND RENTALS	HOUSING TYPES REQUIRED
PORT MACQUARIE - HASTINGS	The Port Macquarie-Hastings LGA falls within the Hastings-Macleay subregion under the Mid North Coast Regional Strategy (2036). The MNCRS identified the need of an additional 18,300 new dwellings by 2031 for the subregion. In the LGA, total dwelling approvals has remained relatively stable. Since 2007, approximately 418 dwellings have been approved p.a. – the highest of any MNC LGA. Future dwelling growth is anticipated to eventuate through a combination of urban consolidation of existing centres and the release of land in identified release areas. The majority of future supply is expected to come from three locations – Thrumster, to the west of the Port Macquarie town centre, Lake Cathie/Bonny Hills and at Camden Haven. Collectively, these locations have an estimated capacity of 7,300 dwellings. A substantial proportion of new dwellings are also expected to materialise within the Port Macquarie – Wauchope corridor.	Housing demand within the Port Macquarie-Hastings LGA is strong, accentuated by strong dwelling approvals and robust population growth. Growth in household composition over the five years to 2011 has largely come from lone person households, while growth in family and couple family with no children households has also been strong. House sales have contracted in recent years; however remain high in comparison to other MNC LGA's. Our examination of house sales data for 2013 has revealed that the majority of sales have occurred within the Port Macquarie Hastings – Central submarket, accounting for 65% of sales.	The Estimated Resident Population (ERP) for Port Macquarie-Hastings is 75,222 (2011). The latest DPBE estimates predict that the population will grow by 29.7% to 96,800 people by 2031, at an average annual growth rate of 0.9% over the forecast period. Future population growth in Port Macquarie Hastings is expected to be greatest within its aged population, although all age cohorts are expected to experience a gain in population. At present, persons aged over 65 represent 25% of the region's population; however this proportion is expected to increase to 33% by 2031. Working residents are skewed towards lower income earners, with persons in the higher income bracket accounting for 10% of total. Low income earners are most pronounced in dormsizer and retiree age cohorts.	A substantial shift in house price distribution has occurred within the Port Macquarie-Hastings LGA, reflective of increased demand. Over the five years to 2007, 67% of house sales were priced below $350,000, however in the five years to 2013, the majority of sales were priced above $350,000. House sales during 2013 were skewed towards the medium value range with 50% of sales between $350,000 and $550,000. Port Macquarie-Hastings – Central submarket presents as the most expensive submarket in the LGA, with 14% of sales priced above $550,000. Port Macquarie-Hastings – Regional is the most affordable residential submarket, with 85% of sales being priced below $350,000. Over the five years to 2014, rental growth averaged 0.4% per annum for detached houses, with the growth most pronounced within the Port Macquarie-Hastings – Regional submarket (7.8%). Apartment rental growth was lower, averaging 3.1% per annum over the 2009-2014 period.	The continued ageing of the Port Macquarie-Hastings population, along with predicted growth in other age cohorts – both within a context of deteriorating affordability conditions – accentuates the need for a more diverse housing supply across the LGA. Retirees are expected to have the greatest influence on the LGA's housing demand. In this environment, retirement living products in close proximity to key services will provide an important housing choice.

Figure 24 – Extract Mid North Coast Residential Submarket Analysis prepared by MacroPlanDimasi

Age Cohorts

The market has a diverse range in the Port Macquarie region, including:

- First Home Buyers
- Upgraders
- Downsizers
- Retirees

Having regard to the population of the Port Macquarie region, there is a strong demand in all areas of the market and age cohorts.

Employment

There is a strong correlation between employment availability, population growth and housing demand.

Planned Growth

This assessment is based on our full understanding of the significant growth that will occur in Port Macquarie over the next 20 years, and of the ecological values that exist on some land parcels which are already zoned for residential or identified for investigation purposes, which pose some barriers to development on these parcels.

It is fundamental to think beyond the next few years to avoid development occurring in an ad-hoc manner or even resulting in an insufficient supply of suitably zoned, unconstrained land. The UGMS determines that there is 20 years' supply of vacant zoned residential land in the area. However, there is no discussion about whether all this land is suitable for residential development. For example, our experience shows that there are residential parcels of land across the municipality, which are heavily constrained for residential development due to their ecological values. The land at Ascot Park and the land in the investigation area west of Rainbow Beach are two examples of such land. These parcels will have been included in Council's density calculations although it is certain that the zoned allocation of dwellings will not be realised. If this heavily constrained land is taken out of the calculations, we would question the sufficiency of the supply.

Fragmented ownerships are an added constraint to development, impacting on the overall connectedness of the Port Macquarie-Hastings community and often resulting in ad-hoc and disjointed growth outcomes.

A strategic planning approach has been taken in this Planning Proposal for Le Clos Sancrox to be holistic in its consideration for the future demands for land, infrastructure, retail and commercial (without compromising our natural assets and environmental values).

UGMS acknowledges the natural constraints to development to the North and South of Port Macquarie. Therefore, there is a natural constraint to development in those directions and the demand for new housing will be westwards to Sancrox.

Overall Assessment of Demand

Both past (building approvals) and future (population projection) trends indicate an annual demand of around 526 dwellings per year. The overall assessment of demand, as mentioned in the UGMS, is for 10,000 dwellings by 2036. Based on a rough calculation of 526 dwellings being approved over the next 17 years (until 2036), there will be a marginal shortfall of the target. Council's current projections have not taken account of land release in Sancrox and Le Clos Sancrox will contribute approx. 650 lots to meeting this target.

Based on the above average rate of approvals of 526 dwelling per annum for 17 years, leads to a total of 8,942 dwellings being approved. This falls short of the predicted 10,000 dwellings required by an amount of 1,058

dwellings. The current Le Clos Sancrox proposal is for 680 lots, which will assist in meeting the shortfall indicated above in the predicted demand.

A key factor to note with respect to subdivisions in the local government area is that under the now repealed Part 3A of the Environmental Planning & Assessment Act, 1979, coastal subdivisions were granted approval by the State Government. This occurred on a large scale in the LGA around 2009. Many of these consent have been in place for a large number of years and only have been constructed and available in the market in recent years and continuing currently. This however will dry up in the coming years and there is a need to commence the rezoning process now for future areas of housing given the length of time to undertake a rezoning.

Subdivisions are usually staged over a number of years and do not provide this instant boost of land into the economy at one time. Further, land release is often market driven.

A further consideration relates to a large amount of land zoned for residential purposes but being highly constrained due to ecological value and unlikely to result in approval being granted for subdivision. This skews some of the housing projections undertaken by Council as part of the UGMS.

The relative ease of extending services and roads and the lack of available land in Sancrox, the identified land is suitable for rezoning ahead of Council's Structure Plan for the wider area. This additional land will reduce the demand on existing housing and lot stock.

7.3 Years of Supply

With an increase of 1200 people into the region every year there is clearly a need for future residential growth areas.

Port Macquarie, Lake Cathie/Bonny Hills and near Kew in the Camden Haven collectively have the capacity to provide an 18 year housing supply based on current take up and projected demand. The UGMS states, in 2017 the estimated residential supply ready for development to provide a range of housing choice was:

- 16.4 years in Port Macquarie
- 19.7 years in Lake Cathie/Bonny Hills
- Over 30 years in the Camden Haven, and
- 10 years in Wauchope (increasing to around 30 years once planning for the Yippin Creek area has been completed).

Yet it is acknowledged to accommodate future project growth areas of potential long term growth around Port Macquarie could be exhausted by 2070, as demonstrated in Figure 25.

The Planning Proposal does not add significantly to the supply, with 680 residential lots in total. Approx. 500 dwellings per year are provided in the LGA based on recent building approval data, which equates to an additional year of land supply for the LGA. This would be absorbed in the current UGMS figures given the areas within the current residential zoning that are significantly constrained and unlikely to be developed, as discussed in the land supply and demand report. Noting that development of this size is generally staged, the supply of the 650 lots would occur over a number of years (estimated to be 50 per stage based on our experience of other local subdivisions), full development of the site could be 10-15 years away.

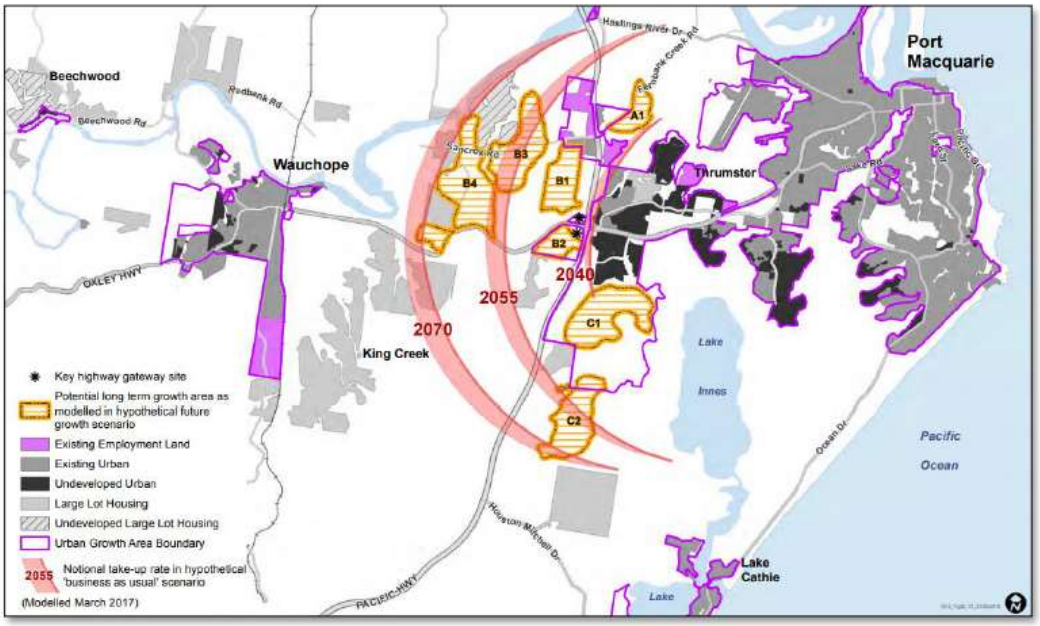


Figure 25 - Hypothetical limits to long term growth Port Macquarie Hastings. Source: UGMS pg. 15

8. CONCLUSION & KEY FINDINGS

This report has considered the future growth of Sancrox, the impact of population growth on dwelling demand (and hence lot demand), the adequacy of land presently zoned or identified for development at Sancrox and the broader state of supply and demand in the Port Macquarie Hastings area.

The key conclusions and findings are:

- Sancrox is an important growth area in the context of the Port Macquarie Hastings market and is identified as an residential investigate area.
- A key factor to note that coastal subdivisions were granted approval by the State Government on a large scale in the LGA around 2009. Many of these consent have been in place for a large number of years and only have been constructed and available in the market in recent years and continuing currently. This however will dry up in the coming years and there is a need to commence the rezoning process now for future areas of housing given the length of time to undertake a rezoning.
- Subdivisions are usually staged over a number of years and do not provide this instant boost of land into the economy at one time. Noting that development of this size is generally staged, the supply of the 650 lots would occur over a number of years (estimated to be 50 per stage based on our experience of other local subdivisions), full development of the site could be 10-15 years away. Further, land release is often market driven.
- A further consideration relates to a large amount of land zoned for residential purposes but being highly constrained due to ecological value and unlikely to result in approval being granted for subdivision. This skews some of the housing projections undertaken by Council as part of the UGMS.
- The relative ease of extending services and roads and the lack of available land in Sancrox, the identified land is suitable for rezoning ahead of Council's Structure Plan for the wider area. This additional land will reduce the demand on existing housing and lot stock.


LandDynamics
AUSTRALIA
Social Impact Assessment
Proposed Rezoning
Le Clos Sancrox
Sancrox Road, Sancrox
On behalf of
LCS Estates Pty Ltd
December 2019

Prepared for:

LCS Estates Pty Ltd

Prepared By:

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	Name	Date
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Disclaimer

This report was prepared in accordance with the scope of works set out in correspondence between the client and Land Dynamics Australia. To the best of Land Dynamics Australia's knowledge, the report presented herein accurately reflects the Client's intentions when the report was printed. However, it is recognised that conditions of approval at time of consent, post development application modification of the proposals design, and the influence of unanticipated future events may modify the outcomes described in this report.

Land Dynamics Australia used information and documentation provided by external persons, companies and authority. Whilst checks were completed by Land Dynamics Australia to ensure that this information and/or documentation was accurate, it has been taken on good faith and has not been independently verified. It is therefore advised that all information and conclusions presented in this report apply to the subject land at the time of assessment, and the subject proposal only.

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1. EXECUTIVE SUMMARY

Background

Land Dynamics was engaged by LCS Estate Pty Ltd to prepare a Social Impact Assessment (SIA) to support and inform a Planning Proposal for land known as Le Clos, in the locality of Sancrox in the Port Macquarie Hastings Local Government Area (LGA). The information contained within and findings of the SIA will be used and updated to accompany the Development Application which will be lodged concurrently or shortly after rezoning. The key issues identified during the community consultation and the recommended mitigations are summarised in the conclusion of this report. It is acknowledged that formal exhibition of the Planning Proposal will occur post Gateway determination and this provides further opportunity for the community to provide feedback.

Purpose

The purpose of this SIA is to assess the potential social impacts (positive, negative and neutral) resulting from the proposal on the exiting population and incoming residents, and mitigation measures that should be applied to enhance or address these. These will be high level recommendations given it relates to a rezoning Planning Proposal.

A Social Impact Assessment is required to predict and address the social impacts of the development or land use change, be it positive or negative. This report represents a Social Impact Assessment (SIA) in accordance with the requirements of Council's Social Impact Assessment Policy 2009 and the provisions of Section 4.15 of the Environmental Planning and Assessment Act 1979. This SIA provides an in-depth analysis of social impacts for the proposal and where any significant impacts are likely to occur. Effective engagement has been undertaken with those individuals and groups potentially affected, and addresses the impacts identified. Consultation with the community, comprised adjoining Sancrox residents & nearby business owners and was essential to understand the impacts, both positive and negative, of the future land use / development in order to prepare this SIA.

This report provides the following information:

- Identification of the scope of the assessment, including description of the site and surrounding area;
- Community /Social Profile;
- Formulation and examination of social impacts;
- Description of the overall net community benefit;
- Community engagement;
- Monitoring and review methodology.

The preparation of this SIA was undertaken in consultation with officers from Port Macquarie - Hastings Council. This report should be read in conjunction with the Planning Proposal and accompanying Appendices.

The Proposal

The Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 to rezone the subject land to enable development for residential purposes; development for local business purposes; and to conserve areas of environmental significance. The Development Application, which will be lodged concurrently or shortly after rezoning, is expected to include:

- Residential – approx.638 lots in R1 zoned land (73.2 ha), 42 lots in R3 zoned land (2.3 ha) and 3 lots in E4 land (existing dwellings on 1.5ha); and

- Business - approx. 1 ha of commercially zoned land.

Indicative layouts have been included in this report but are subject to change prior to lodgement of the Development Application and the SIA will be update accordingly.

Subject Site

The subject land comprises a number of landholdings and is collectively known as Le Clos Sancrox. The site is located on the southern side of Sancrox Road, approximately 1.3km from the Pacific Highway to the east, which links with Brisbane to the north and Sydney to the south. Sancrox Road also links to Port Macquarie to the east and Wauchope to the west. The site is relatively cleared, with vegetation in fingers through the site and around the edges. A number of drainage lines dissect the site falling towards Sancrox Rd. Le Clos Sancrox is part of the previous wider Cassegrain vineyards and has a valid development consent in place being DA 50/87 issued on 8 April 1987 subject to conditions, for the creation of 46 rural home site and viticulture allotments and support allotments.

The subject site is subject of a Moratorium of development on the site, which will be resolved by way of this Planning Proposal. Council has resolved to proceed with a site specific Planning Proposal for the subject site in parallel with the wider Outline Planning for the Fernbank Creek – Sancrox area. The planning undertaken as part of this Planning proposal will inform the greater area planning, whilst allowing the development of the site to occur earlier to resolve the Moratorium issue.

Refer to the Background section of the Planning Proposal for extensive details of the history of the site.

2. INTRODUCTION

What is an SIA?

Social Impact Assessment (SIA) is a method for predicting and assessing the social consequences of a proposed action or initiative on affected groups of people and on their way of life, life chances, health, culture and capacity to sustain thee. This SIA has been completed in accordance with requirements of the Section 4.15 of the Environmental Planning and Assessment Act, 1979 and Council's Social Impact Policy. Social impact assessment is a method for predicting and assessing the consequences of a proposed action or initiative before a decision is made, to assist in providing better outcomes from decisions. A social impact assessment may give rise to recommendations for mitigation if the proposed change proceed.

Assessment Methodology

This study has been undertaken using the following methodology.

- Site visit and photos
- Documentation review of the local, regional and state planning policy and strategy
- Demographic analysis
- Review of community consultation
- Analysis of the social impacts
- Impact assessment
- Conclusion

Table 1 below represents the key steps and tasks which have been undertaken as part of this SIA.

Stage	Key Steps
1	▪ Site and locality assessment. This included a site visit and inspection of the surrounding area, to assess the local context, identify potential impact receptors and understand the scale of the proposed change to the locality. ▪ Review of the proposed development.
2	▪ Documentation review – review of documents relating to the proposed development including technical reports and various policy. ▪ Infrastructure audit – review of other relevant nearby facilities and land uses. ▪ Demographic analysis – identification of the current and future population community profiles.
3	▪ Description and analysis of how key stakeholders are likely to be affected. ▪ A review of the community consultation that was undertaken to determine the community values and concerns.
4	▪ Assessment of the impacts. ▪ Identification of the significance and likelihood of impacts.
5	▪ Identification of appropriate management and mitigation measures to inform the future development.

3. REGIONAL AND LOCAL CONTEXT

Site Context

The subject site is located on the Mid North Coast within the Port Macquarie-Hastings local government area, and forms part of the Greater Sancrox Area, as identified by Council. The subject land comprises a number of landholdings and is collectively known as Le Clos Sancrox. The plan below in Figure 1 details the extent of the boundaries of the properties included and Figure 2 provides the context of Le Clos Sancrox with respect to the greater Sancrox Area, Wauchope and Port Macquarie.



Figure 1 – Location of Extent of Le Clos Sancrox Highlighted Yellow (source: www.sixmaps.nsw.gov.au)

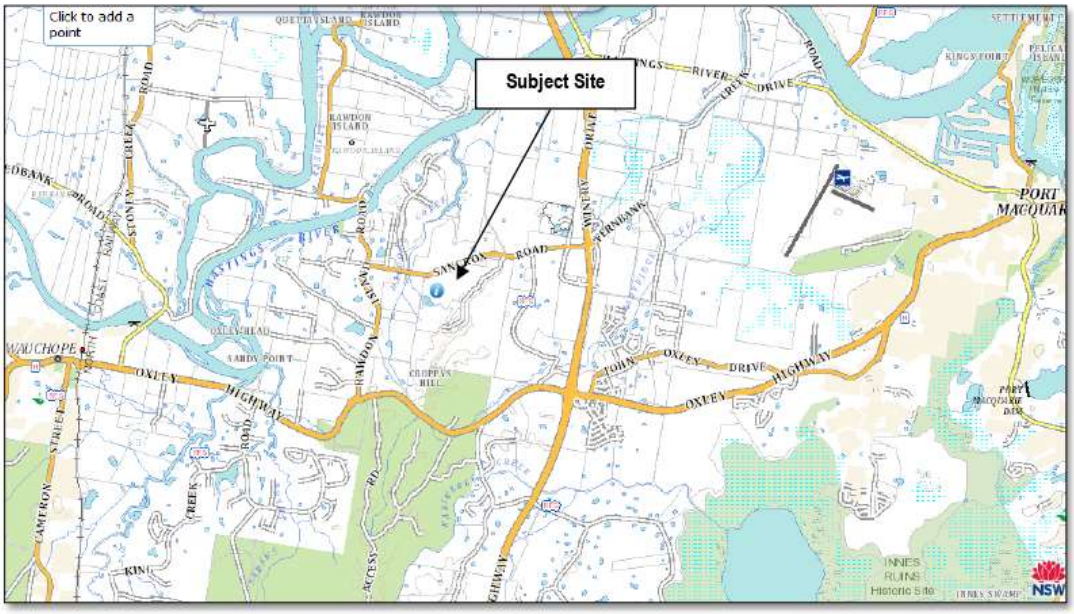


Figure 2 - Contextual Location of the subject land (source: www.sixmaps.nsw.gov.au)



Figure 3 - Close Up Aerial Map of the subject land (source: www.nearmap.com)

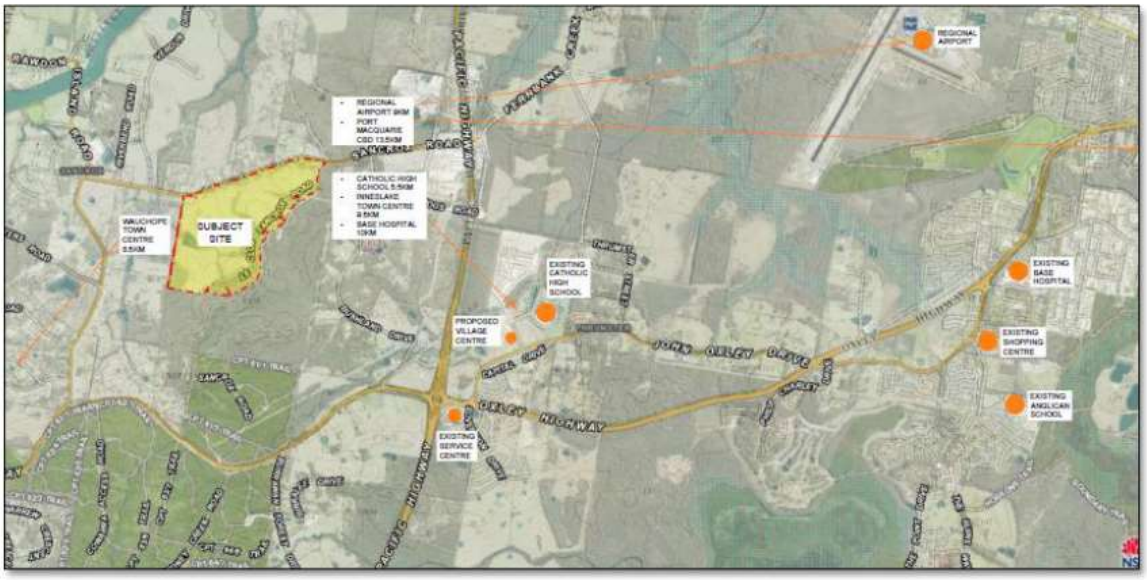


Figure 4 - Broadscale Analysis Extract

Le Clos Sancrox is part of the previous wider Cassegrain vineyards. To the north of the site is Verdun Estate which was also part of the previous vineyard land and has recently been rezoned by Council to large lot residential. To the north is a range of rural-residential dwellings and an animal boarding and breeding establishment. To the north-east of the site is Sancrox Quarry and further along Sancrox Road is Expressway Spares, which is part of a future industrial land investigations area. The site is generally surrounded by rural land, noting that extensive clearing has occurred on the land to the east recently.

The site is located on the southern side of Sancrox Road, approximately 1.3km from the Pacific Highway to the east, which links with Brisbane to the north and Sydney to the south. Sancrox Road also links to Port Macquarie to the east and Wauchope to the west. The site is relatively cleared, with vegetation in fingers through the site and around the edges. A number of drainage lines dissect the site falling towards Sancrox Rd. The Greater Sancrox Area is located approximately 6.4km north east of the Wauchope town centre and 13km west of the Port Macquarie town centre and contains a land area of approximately 1,400 hectares. The region is bound by the Oxley Highway to the south, the Pacific Highway to east and rural lands to the west and the Hastings River to the north. The predominate land use is rural, including agriculture and rural-residential. In general, lot sizes range between 1 to 10ha, with only four lots greater than 50 ha. The majority of small land parcels are located in the areas off Rawdon Island Road and Sancrox Road.

The subject site is subject of a Moratorium of development on the site, which will be resolved by way of this Planning Proposal. Council has resolved to proceed with a site specific Planning Proposal for the subject site in parallel with the wider Outline Planning for the Fernbank Creek – Sancrox area. The planning undertaken as part of this Planning proposal will inform the greater area planning, whilst allowing the development of the site to occur earlier to resolve the Moratorium issue.

The site and surrounding area has been subject of extensive Structure Planning in 2015, which was delayed pending Council's Urban Growth Management Strategy and the change in strategy from rural-residential to residential zoning of the area. The site has been identified as areas subject to Outline Planning in Council's Urban Growth Management Strategy. Rezoning the land is considered the most suitable and transparent way of achieving the objectives of this proposal. The area of Sancrox is the logical next area for development, with Area 13 planning ceasing at the highway. This area of Thrumster is developing at a steady rate, with a good take up of land by purchasers.

Below are photographs of the site, with additional photographs contained within the Planning Proposal document.

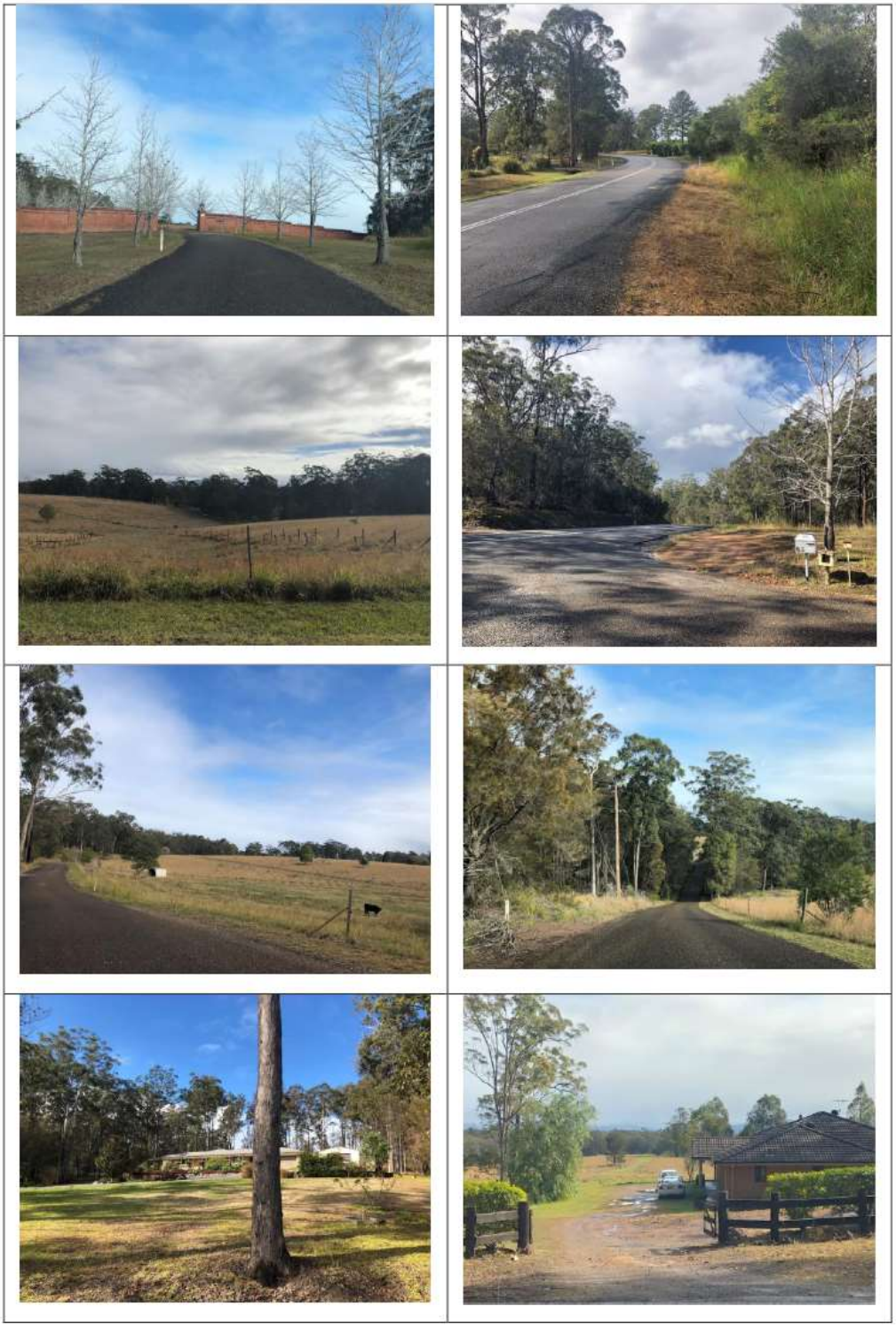


Figure 5 – Photographs of the Site

The site is well located with easy access to the existing universities, schools, hospitals, shopping and other services and facilities within Port Macquarie and Wauchope.

Existing Conditions / Land Uses

The site is currently zoned RU1 Primary Production under the LEP 2011, as too is immediately surrounding land. The site includes the following features:

- Storage building in north-west corner.
- Le Clos Sancrox Road along the eastern boundary.
- 46 residential building blocks with frontage to Le Clos Sancrox Road.
- 46 bush blocks, each connected to a residential building block.
- 3 dwellings on residential building blocks.
- Previous viticulture infrastructure and small outbuildings associated with the rural use of the land.
- The remainder of the site not containing dwellings is primarily cleared and currently utilised for grazing of cattle.

Surrounding Character

The surrounding area is characterised as rural residential along with a mix of hobby farm land, which has evolved with the failed viticulture in the immediate area. To the east and south is a large parcel of land which is heavily treed and has recently approved for a four lot subdivision.

Existing Vehicular Access

Le Clos has access to the Pacific Highway north and south via Sancrox Road onto the upgraded intersection. This intersection provides numerous opportunities for accessing Port Macquarie.

Oxley Highway to the south is accessed from the site via Rawdon Island Road and allows for easy access to King Creek and Wauchope. The intersection of Rawdon Island Road and Oxley Highway has recently been upgraded.

The site has a road along the eastern boundary, being Le Clos Sancrox Road.

Public Transport

A Bus transport service is provided with Busways to Sancrox, which provides connection from Sancrox to Wauchope and Port Macquarie.

Route: 335W

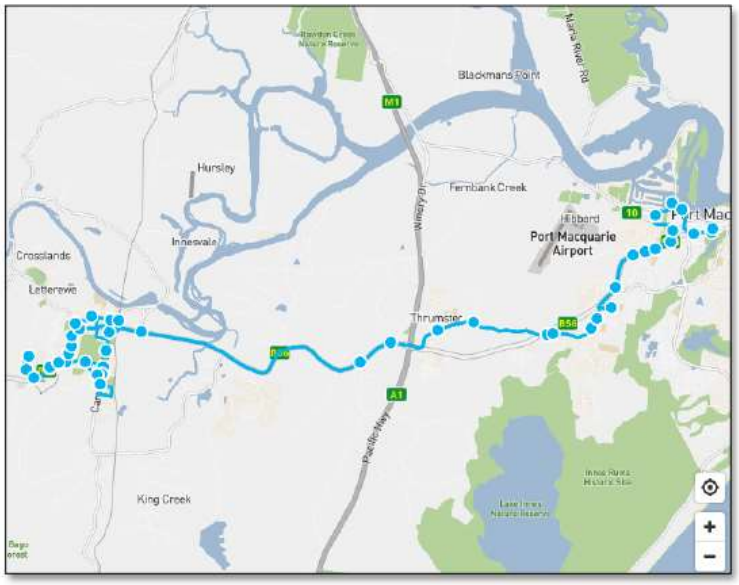


Figure 6 – Existing Busways Route Plan

335W Port Macquarie to Wauchope

Valid from: 01 Jan 2018

Creation date: 23 July 2019
NOTE: Information is correct on date of download.

Monday to Friday									
Day Restrictions			S	H				S	H
Hayward St at Keena La, Port Macquarie	-	-	07:46	07:56	09:24	11:24	13:24	14:24	14:24
Settlement City Shopping Centre, Port Macquarie	06:12	07:02	07:55	08:05	09:37	11:37	13:37	14:37	14:37
Oxley Hwy at Widderson St, Port Macquarie	06:18	07:08	08:01	08:11	09:43	11:43	13:43	14:43	14:43
Port Macquarie Base Hospital, Port Macquarie	06:22	07:12	08:05	08:15	09:47	11:47	13:47	14:47	14:47
John Oxley Dr before Philip Charley Dr, Port Macquarie	06:25	07:15	08:08	08:18	09:51	11:51	13:51	14:51	14:51
John Oxley Dr after Carlie Jane Dr, Thrumster	06:29	07:19	08:12	08:22	09:55	11:55	13:55	14:55	14:55
Wauchope Station, Wauchope	–	–	08:20	08:30	–	12:05	14:05	15:05	15:05
Cameron St opp Young St, Wauchope	06:38	07:28	08:21	08:31	10:06	12:06	14:06	15:06	15:06
Fairmont Dr Ellenborough Cl, Wauchope	06:42	07:32	08:25	08:35	–	12:10	–	15:13	15:10
Colonial Cct at Homestead Dr, Wauchope	06:49	07:41	08:34	08:44	10:14	12:18	14:14	15:21	15:18
Fairmont Dr Ellenborough Cl, Wauchope	–	–	–	–	10:22	–	14:22	–	–
Cameron St opp Young St, Wauchope	–	–	–	–	10:28	–	–	–	–
Wauchope RSL, Young St, Wauchope	06:58	07:52	08:55	08:55	-	12:28	14:28	15:38	15:28

Monday to Friday				
Hayward St at Keena La, Port Macquarie	15:24	16:24	17:24	
Settlement City Shopping Centre, Port Macquarie	15:37	16:37	17:37	
Oxley Hwy at Widderson St, Port Macquarie	15:43	16:43	17:43	
Port Macquarie Base Hospital, Port Macquarie	15:47	16:48	17:48	
John Oxley Dr before Philip Charley Dr, Port Macquarie	15:51	16:52	17:52	
John Oxley Dr after Carlie Jane Dr, Thrumster	15:55	16:57	17:57	
Wauchope Station, Wauchope	16:05	17:07	18:07	
Cameron St opp Young St, Wauchope	16:06	17:08	18:08	
Fairmont Dr Ellenborough Cl, Wauchope	16:10	–	18:13	
Colonial Cct at Homestead Dr, Wauchope	16:18	17:18	18:24	
Fairmont Dr Ellenborough Cl, Wauchope	–	17:29	–	
Cameron St opp Young St, Wauchope	–	17:35	–	
Wauchope RSL, Young St, Wauchope	16:28	-	18:35	

Saturday				
Hayward St at Keena La, Port Macquarie	07:24	09:24	13:24	16:24
Settlement City Shopping Centre, Port Macquarie	07:37	09:37	13:37	16:37
Oxley Hwy at Widderson St, Port Macquarie	07:43	09:43	13:43	16:43
Port Macquarie Base Hospital, Port Macquarie	07:47	09:47	13:47	16:47
John Oxley Dr before Philip Charley Dr, Port Macquarie	07:51	09:51	13:51	16:51
John Oxley Dr after Carlie Jane Dr, Thrumster	07:55	09:55	13:55	16:55
Wauchope Station, Wauchope	08:05	10:05	14:05	17:05
Cameron St opp Young St, Wauchope	08:06	10:06	14:06	17:06
Fairmont Dr Ellenborough Cl, Wauchope	08:10	10:10	14:10	17:10
Colonial Cct at Homestead Dr, Wauchope	08:18	10:18	14:18	17:18
Wauchope RSL, Young St, Wauchope	08:28	10:28	14:28	17:28

Sunday & Public Holidays		
Hayward St at Keena La, Port Macquarie	09:17	15:17
Settlement City Shopping Centre, Port Macquarie	09:50	15:50
Oxley Hwy at Widderson St, Port Macquarie	09:56	15:56
Port Macquarie Base Hospital, Port Macquarie	10:00	16:00
John Oxley Dr before Philip Charley Dr, Port Macquarie	10:04	16:04
John Oxley Dr after Carlie Jane Dr, Thrumster	10:08	16:08
Wauchope Station, Wauchope	10:18	16:18
Cameron St opp Young St, Wauchope	10:19	16:19
Fairmont Dr Ellenborough Cl, Wauchope	10:23	16:23
Colonial Cct at Homestead Dr, Wauchope	10:31	16:31
Wauchope RSL, Young St, Wauchope	10:41	16:41

335W Wauchope to Port Macquarie

Monday to Friday									
Day Restrictions			S	H			S	S	H
Wauchope RSL, Young St, Wauchope	06:38	07:28	08:31	08:31	10:06	12:06	14:06	15:06	15:06
Fairmont Dr Ellenborough Cl, Wauchope	06:42	07:32	08:25	08:35	–	12:10	–	15:13	15:10
Colonial Cct at Homestead Dr, Wauchope	06:49	07:41	08:33	08:44	10:14	12:18	14:14	15:21	15:18
Fairmont Dr Ellenborough Cl, Wauchope	–	–	–	08:51	10:22	–	14:22	–	–
Wauchope RSL, Young St, Wauchope	06:58	07:52	08:43	08:55	10:28	12:28	14:28	15:28	15:28
Wauchope Station, Wauchope	–	–	08:45	–	10:30	–	14:30	15:30	15:30
John Oxley Dr before Chancellor Dr, Thrumster	07:10	08:06	08:56	09:09	10:41	12:41	14:41	15:51	15:41
John Oxley Dr after Philip Charley Dr, Port Macquarie	07:13	08:09	08:59	09:12	10:44	12:44	14:44	15:54	15:44
Oxley Hwy after Widderson St, Port Macquarie	07:20	08:19	09:08	09:22	10:53	12:53	14:53	16:03	15:53
Hayward St after Horton St, Port Macquarie	07:42	08:42	09:25	09:42	11:12	13:12	15:12	16:18	16:12

Monday to Friday			
Wauchope RSL, Young St, Wauchope	16:06	17:08	18:08
Fairmont Dr Ellenborough Cl, Wauchope	16:10	–	18:13
Colonial Cct at Homestead Dr, Wauchope	16:18	17:18	18:24
Fairmont Dr Ellenborough Cl, Wauchope		17:29	
Wauchope RSL, Young St, Wauchope	16:28	17:35	18:35
John Oxley Dr before Chancellor Dr, Thrumster	16:41	17:47	18:47
John Oxley Dr after Philip Charley Dr, Port Macquarie	16:44	17:50	18:50
Oxley Hwy after Widderson St, Port Macquarie	16:53	17:56	18:56
Hayward St after Horton St, Port Macquarie	17:12	18:12	19:21

Saturday				
Wauchope RSL, Young St, Wauchope	08:06	10:06	14:06	17:06
Fairmont Dr Ellenborough Cl, Wauchope	08:10	10:10	14:10	17:10
Colonial Cct at Homestead Dr, Wauchope	08:18	10:18	14:18	17:18
Wauchope RSL, Young St, Wauchope	08:28	10:28	14:28	17:28
Wauchope Station, Wauchope	–	10:30	14:30	–
John Oxley Dr before Chancellor Dr, Thrumster	08:41	10:41	14:41	17:41
John Oxley Dr after Philip Charley Dr, Port Macquarie	08:44	10:44	14:44	17:44
Oxley Hwy after Widderson St, Port Macquarie	08:53	10:53	14:53	17:53
Hayward St after Horton St, Port Macquarie	09:12	11:12	15:12	18:12

Sunday & Public Holidays		
Wauchope RSL, Young St, Wauchope	10:19	16:19
Fairmont Dr Ellenborough Cl, Wauchope	10:23	16:23
Colonial Cct at Homestead Dr, Wauchope	10:31	16:31
Wauchope RSL, Young St, Wauchope	10:41	16:41
Wauchope Station, Wauchope	10:43	–
John Oxley Dr before Chancellor Dr, Thrumster	10:54	16:54
John Oxley Dr after Philip Charley Dr, Port Macquarie	10:57	16:57
Oxley Hwy after Widderson St, Port Macquarie	11:06	17:06
Hayward St after Horton St, Port Macquarie	11:23	17:27

Figure 7 – Route 335W Busways Timetable (source: Busways)

Above is the bus timetable for Route 335W Service Port Macquarie to Wauchope via Sancrox.

Whilst the service does not currently run along Sancrox Road, the service is available for the wider area in the current undeveloped state. The proposed concept layout includes provision for future bus networks, as well as the proposed road, cycle and pedestrian network throughout the Le Clos Sancrox development. Sancrox Road a Collector Road and provision has been made within the draft layout for Collector Roads through the site, with bus stops. Previous discussions with Busways indicates that bus routes will be planned once the development is underway and the customers are in the area to utilise the service.

Business

To the north of the site is an animal boarding and breeding establishment known as "Pet Park", which operates along with a dwelling on the site.

Further to the east is an industrial zone which contained Expressway Spares and other light industrial or business uses. To the north-east of the site is Sancrox Quarry.

Abundance Lifestyle & Garden (Café) and Billabong Zoo are both popular local businesses in vicinity of the site.

4. THE PROPOSED DEVELOPMENT

For the purposes of this Social Impact Assessment, both the proposed zonings and the indicative layout plan have been considered to provide greater certainty as to the expected development following rezoning.

The Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 to rezone the subject land to enable development for residential purposes; development for local business purposes; and to conserve areas of environmental significance.

The Development Application, which will be lodged concurrently or shortly after rezoning, is expected to include:

- Residential – approx.638 lots in R1 zoned land (73.2 ha), 42 lots in R3 zoned land (2.3 ha) and 3 lots in E4 land (existing dwellings on 1.5ha); and
- Business - approx. 1 ha of commercially zoned land.

An opportunity has been identified for a school to be accommodated within the development and these discussions will continue whilst the land is zoned. An educational establishment is a permitted land use in the R1 General Residential zone.



Figure 8 – Proposed Zoning



Figure 9 - Subdivision Concept Layout

Vehicle access to the site will be via two new intersections off Sancrox Road, as shown above.

The proposed western vehicle entrance will be a Collector Road standard and will provide connection to the western boundary, which allows for future expansion at the time of development of the adjoining land. The Collector Road will also make provision for bus stops and the round-about at the western boundary will allow for bus turn around until such time as the road is extended.

A network of pedestrian and cycle pathways will be constructed along the roads.

A Traffic Assessment is an Appendix to the Planning Proposal.

Essential infrastructure currently available to the subject site is water, electricity and telecommunications. A number of the services may need to be upgraded to ensure capacity is met and preliminary investigations and discussions with Council and other service providers have indicated extension of services is possible and the site is unconstrained in relation to servicing.

Vegetation retention and landscape design has been considered in the layout, as well as the Design Guidelines which have been prepared for the development and are an appendix to the Planning Proposal.

5. STRATEGIC POLICY CONTEXT

This section provides a summary of the key policy documents and guidelines relevant to the Subject Site and the proposed development. Many of the policy findings and directions are of key interest to this study and have been considered in the impact assessment outlined in Section 8 below.

Environmental Planning & Assessment Act, 1979

The Environmental Planning & Assessment Act, 1979 and Environmental Planning & Assessment Regulation 2000 establishes the framework for the assessment and approval of development in NSW. The proposal represents 'local development' under the EP&A Act which requires development consent.

Strategies

Urban Growth Management Strategy

Within the previous UGMS 2010-2031, the re-subdivision of the Le Clos farms at Sancrox was mentioned heavily, with immediate timing for investigations which was indicated as commencing in 2010/11.

The recently adopted UGMS 2017-2036, as exhibited did not support investigations at Sancrox, however as a result of public interest, with a large number of submissions to the exhibited documents from landowners of Le Clos Sancrox, the UGMS was amended prior to adoption and Le Clos Sancrox included in the Structure Plan for Sancrox in the adopted UGMS 2017-2036.

The report to Council on 20 June 2018 was detailed with respect to Le Clos Sancrox, as touched on above and indicated that Council could support investigation areas outside of the urban growth boundary in the Regional Plan, such as Le Clos Sancrox, and that Outline plans are to be prepared and submitted to the Department prior to rezoning. The adopted UGMS includes Le Clos Sancrox as part of Outline Plan areas, which Le Clos Sancrox is located within.

The resolutions of Council, with the latest being 20 February 2019, required immediate commencement of Stage 1 planning to prepare an Outline Plan for Sancrox-Fernbank Creek as detailed in the UGMS, and to invite the Le Clos Sancrox landowners to submit a planning proposal in parallel with Stage 1 planning in order to assist in informing the planning process.

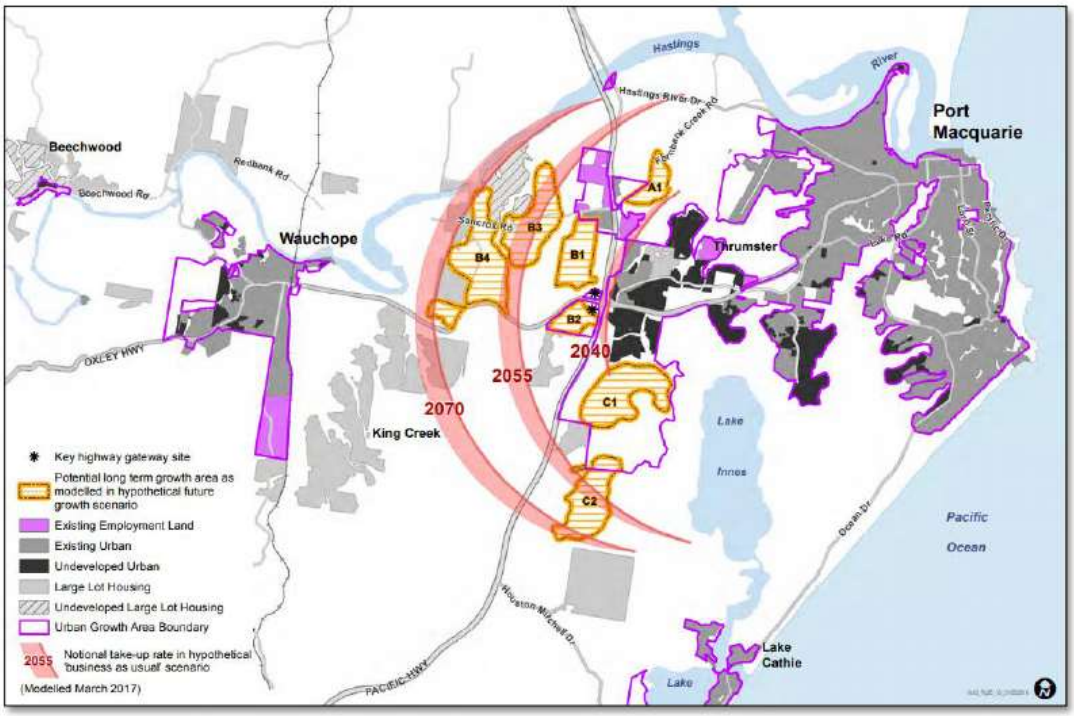


Figure 10 - Hypothetical limits to long term growth – Port Macquarie. Source: UGMS 2017-2036

Greater Sancrox Structure Planning (2015)

In reviewing the Greater Sancrox Structure Plan Issues Paper dated October 2011, it is stated that "*a review of the Le Clos Sancrox subdivision has been identified by Council as a key element in planning for the Sancrox area*" and Le Clos Sancrox is identified on the maps within the document as "*possible future development precincts, coinciding with areas of lower ecological constraint*".

The Structure Planning work did occur to satisfy a key objective of the UGMS in force at that time and was reported to Council for adoption in 2015 and delayed pending the revised UGMS.

Rezoning of the land was invited over 13 years ago, Structure Planning had commenced and finalised in 2015 and the latest UGMS 2017-2036 indicated outline planning could occur on this site.

It is acknowledged that a substantial amount of work has been undertaken by Council is the Greater Sancrox Structure Plan, which would assist in progressing the Outline Planning for Le Clos Sancrox.

The study area is shown below and Le Clos Sancrox is identified as the majority of Sector 5. An extract from the Structure Plan regrading Sector 5 is included which identifies Le Clos Sancrox as a priority.

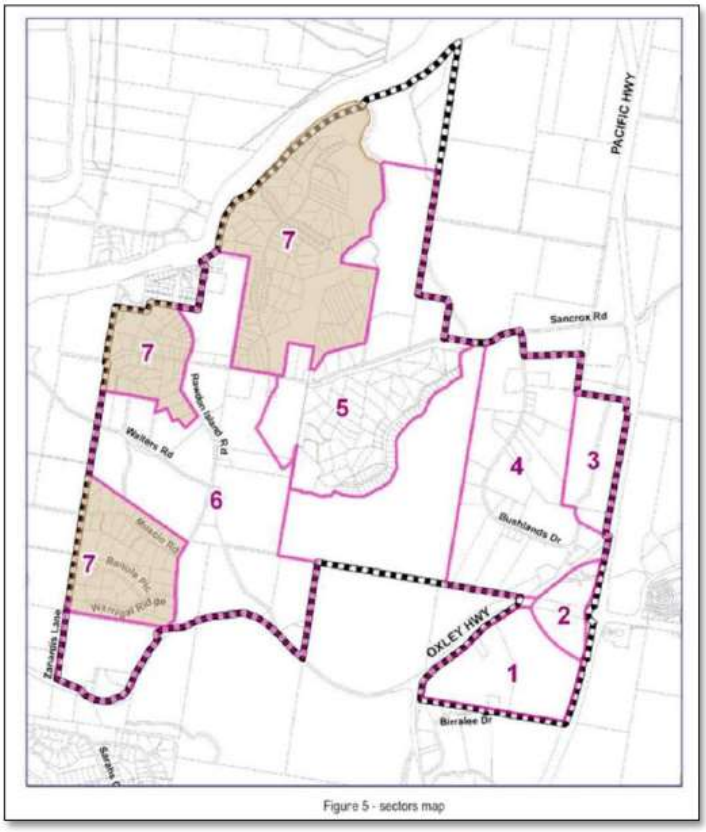


Figure 11 - Study Area (source: Greater Sancrox Structure Plan)

Sector 5 - Central GSA

Sector 5 contains the existing Le Clos Sancrox subdivision and adjoining properties to the north. It also includes a small part of the adjoining property to the west due to the likely reliance on part of that property for access from the Le Clos land.

The Le Clos subdivision has been subject to a moratorium on development because the inadequate size of the existing lots to meet current standards for effluent disposal and bushfire protection when constructing a dwelling. It is proposed that Council resolve this situation as a priority, if possible, having regard to other co-ordination issues in the GSA.

Key issues in preparing a planning proposal for this sector will include:

- the status of the area following the MNCRS and UGMS reviews
- the current poor standard of Sancrox Road
- the need to extend proposed water supply services to the sector
- the provision of co-ordinated road and stormwater infrastructure
- buffer requirements to protect the continued operation of Sancrox quarry
- achievement of the environmental principles described in this Structure Plan, including the retention of existing levels of vegetation cover and co-ordination of suitable environmental offsets for any proposed vegetation clearing
- the potential impact of the proposal on the Rawdon Island Road/Oxley Highway intersection
- bushfire protection.

Investigations for sector 5 could commence in the short-term. The timing of investigations for the sector will depend on the willingness of landowners for the majority of the area, to participate in co-ordinated planning to address the above issues.

Figure 12 – Sector 5 (source: Greater Sancrox Structure Plan)

State Environmental Planning Policies

The Planning Proposal considers the relevant State Environmental Planning Policies including:

- SEPP No. 44 – Koala Habitat Protection
- SEPP (Coastal Management) 2018
- SEPP (Primary Production and Rural Development) 2019
- SEPP No. 55—Remediation of Land
- SEPP (Infrastructure) 2007

The Development Application will be prepared in accordance with these policies.

Local Government

Port Macquarie Hastings Local Environmental Plan 2011

The Planning Proposal addresses the existing and proposed zoning and associated controls under Port Macquarie Hasting LEP 2011, which has the broad function of controlling development throughout the region and provides details on which land uses are permissible and prohibited within each zone. The LEP makes provision for a range of dwelling types and lifestyles in a number of zones, within the urban areas of the towns and villages.

The Planning Proposal includes rezoning of from RU1 Primary Production to:

- R1 General Residential,
- R3 Medium Density,
- B2 Local Centre,
- E2 Environmental Conservation,
- E3 Environmental Management, and
- E4 Environmental Living.

Port Macquarie Hastings Development Control Plan 2013

The role of the Port Macquarie Hastings DCP 2010 is to identify Council's expectations for the future growth/ Although the DCP is not a statutory environmental planning instrument it must be taken into consideration during the assessment process.

Council recognises that every new development impact on and changes the existing environment and so each development proposal must demonstrate a positive contribution, either directly or indirectly, to the objectives and intended outcomes of the Plan.

Development Control Plan 2013 requires the preparation of a Social Impact Assessment for subdivisions of greater than 50 lots / dwellings.

Council's Social Impact Policy 2009 sets out that a full Social Impact Assessment is required, which is to be prepared in accord with that Policy.

6. COMMUNITY PROFILE

This section provides an overview of the socio-economic characteristics of the study area to better understand the underlying and emerging social needs of the community and potential social impacts of the proposed development.

Study Area

The traditional owners of the land are the Birpai Aboriginal people.

The study area is located in statistical area Port Macquarie Hastings Local Government Area.

The analysis uses data from the 2016 Australian Census of Housing and Population as compiled by the Australian Bureau of Statistics (ABS).

For the purpose of this analysis, the area has been defined using Sancrox (State Suburb) (SSC) as defined by the 2016 Australian Census of Housing and Population (ABS). The area is outlined in the figure below. To provide context and highlight the uniqueness of the location, comparisons are made against NSW and Australia as a whole as defined by the 2016 Australian Census of Housing and Population (ABS).

Sancrox Overview

Le Clos Sancrox is located within the locality of Sancrox in the Port Macquarie-Hastings Local Government Area, on the Mid North Coast of NSW, approximately 420 kilometres north of Sydney, and 510 kilometres south of Brisbane. Based on the 2016 Census figures, the population of Sancrox was 572, of this 50.1% were male and 49.9% and Aboriginal and/or Torres Strait Islander people made up 1.2% of the population. The median age for the area was 46 years old. Children aged 0 - 14 years made up 18.4% of the population and people aged 65 years and over made up 19.1% of the population. The median weekly personal income for people aged 15 years and over in Sancrox was $682.

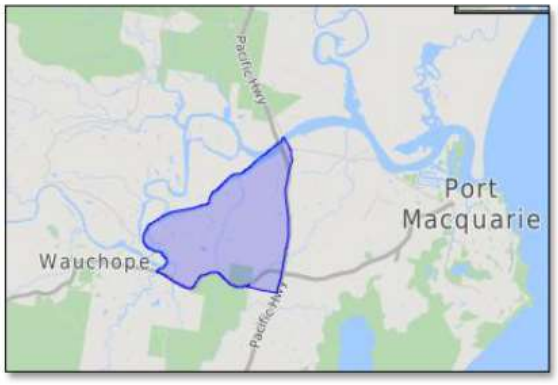


Figure 13 – Profile map (source: ABS, 2019 MapData Services)

Sancrox (SSC) Population Analysis

The statistics and data used to analyse the population trends in the study area have been gathered using the 2016 Australian Bureau of Statistic Census of Population and Housing data. Key statistics are show in graphs and tables.

The total population for Sancrox (State Suburb) in 2016 was 572 and the wider Port Macquarie Hastings area was 78,539. Council's Profile state: "*The Port Macquarie - Hastings Council area Estimated Resident Population for 2018 is 83,131, with a population density of 0.23 persons per hectare.*" Council ID Profile for Kings Creek – Sancrox – Lake Innes – Thrumster states: "*The 2018 Estimated Resident Population for Kings Creek - Sancrox - Lake Innes - Thrumster is 4,008, with a population density of 0.25 persons per hectare.*" This region has an area of 158km² and is bounded by the Hastings River in the north, the locality of Port Macquarie and the Pacific Ocean in the east, the locality of Lake Cathie, Cowarra Creek and the locality of Herons Creek in the south, and Wauchope in the west.

The age and sex structure of the population highlights the level of demand required for essential services and facilities necessary for a community. The age-sex pyramid (below) is a demographic tool which shows patterns of change in the age structure and sex ratio of an area over time; and should be used in conjunction with Household Types and Dwelling Types information to build up a picture of who is living in the area and how it is changing over time.

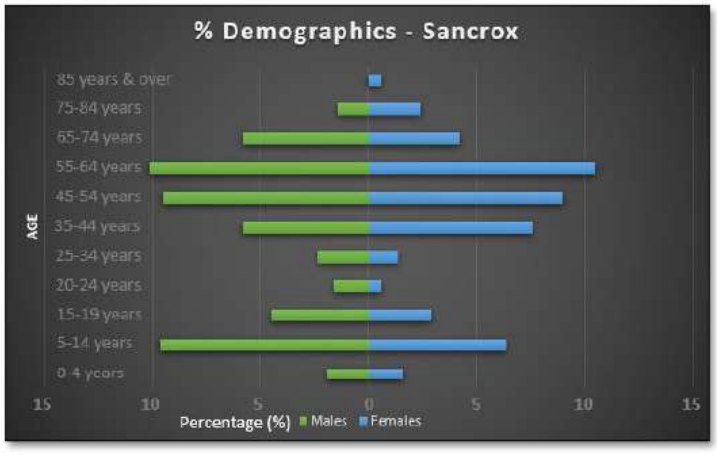


Figure 14 – Age Sex Pyramid Table of Sancrox (Source: profile.id.com.au)

The population graph below demonstrates over a six year period a steady growth in the region.

Analysis of Sancrox (state suburb) profile indicates a large proportion (24.5%) of people in the younger group age of 0 – 19 and also in the older age group of 60+ (27%). There are slightly more males (50.1%) than females (49.9%). Aboriginal and/or Torres Strait Islander people made up 1.2% of the population which reflects similar to New South Wales and Australia as a whole. The median age of people in the Sancrox area (SCC) was 46 years.

People *Persons count based on place of usual residence on Census night*	Sancrox	%	New South Wales	%	Australia	%
Median age	46	-	38	-	38	-
0-4 years	25	4.3	465,135	6.2	1,464,779	6.3
5-9 years	35	6.1	478,184	6.4	1,502,646	6.4
10-14 years	46	8.0	443,009	5.9	1,397,183	6.0
15-19 years	35	6.1	448,425	6.0	1,421,595	6.1
20-24 years	23	4.0	489,673	6.5	1,566,793	6.7
25-29 years	28	4.9	527,161	7.0	1,664,602	7.1
30-34 years	27	4.7	540,360	7.2	1,703,847	7.3
35-39 years	19	3.3	540,360	7.2	1,703,847	7.3
40-44 years	39	6.8	503,469	6.7	1,583,257	6.8
45-49 years	39	6.8	492,440	6.6	1,581,455	6.8
50-54 years	44	7.7	485,546	6.5	1,523,551	6.5
55-59 years	60	10.4	469,726	6.3	1,454,332	6.2
60-64 years	45	7.8	420,044	5.6	1,299,397	5.6
65-69 years	40	7.0	384,470	5.1	1,188,999	5.1
70-74 years	40	7.0	292,556	3.9	887,716	3.8
75-79 years	17	3.0	217,308	2.9	652,657	2.8
80-84 years	10	1.7	155,806	2.1	460,549	2.0
85 years and over	3	0.5	167,506	2.2	486,842	2.1

Overall, within the population of people aged 15 years and over 61.9% were married, and 12.9% were separated, divorced and widowed, while 25.2% were never married. In comparison, the married percentage with NSW is 48.7% and 48.1% overall in Australia.

The below graph illustrates a consistency in population growth over the various age groups during a 5 year period 2013 – 2017 for the Port Macquarie Hastings Area. The largest growth in age structure in the study area between 2013 – 2017 was in the age group 65 – 74 year olds (1% increase); and a 1% decrease in persons 35 - 44. The average growth in the area over the 5 years has been 0.5%.

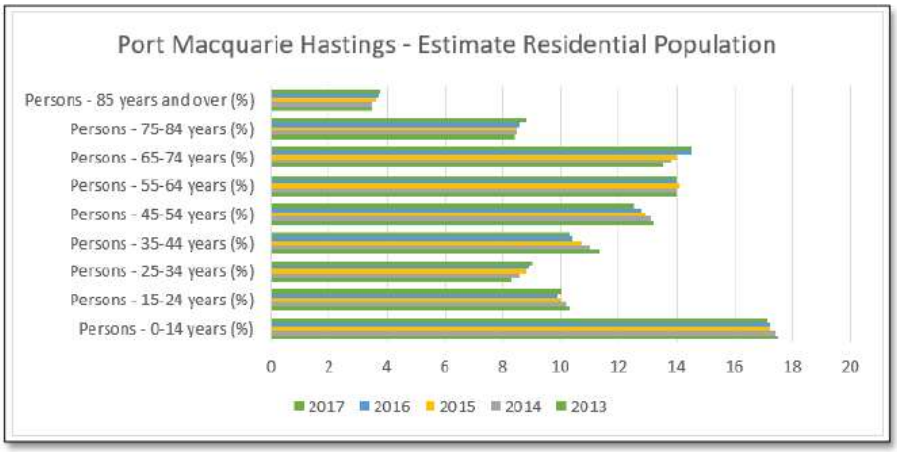


Figure 15 – Population data for 2013 – 2017 in the Port Macquarie Hastings region.

These statistics suggest that whilst Port Macquarie enjoys a greater proportion of the middle working age people, there is a trend towards higher proportions of older adults and seniors citizens.

Density

Population density is the average number of persons per hectare for the Port Macquarie-Hastings region. It is calculated by dividing the population of a geographic region by its land area, measured in this case in hectares. Density figures can be misleading as land included in the calculation may not be used for habitation. Such as, airports, shopping precincts, national parks, industrial estates and so on and are included in the land area even though few, if any actual people live there. As a result, areas with large amounts of residential housing will have higher densities than those where the majority of land is used for industry or open space etc.

In 2016, the population density in Port Macquarie-Hastings area was 0.21 per hectare. This figure was higher compared to Regional NSW, which had a population density of 0.03 persons per hectare (this includes very large areas of non-residential land). It is important to note that this varied across the Council area.

The 2018 Estimated Resident Population for Kings Creek - Sancrox - Lake Innes - Thrumster is 4,008, with a population density of 0.25 persons per hectare. Population density for Sancrox overall is not recorded.

Education

Educational attainment is considered an indicator of socio-economic status, together with occupation, employment and income data. Combined, this data provides an overall evaluation of economic opportunities and the and the socio-economic status of a suburb/region. For individuals, the level of educational qualifications held was a large effect on employment opportunities and future income levels.

Overall, 17.3% of the population hold a tertiary qualification (being a bachelor's degree level and above), with a large percentage (33.9%) of people holding a Certificate Level and/or Advanced Diploma or Diploma. While 11.2% reported having completed Year 12 as their highest level of educational attainment. 32.6% of people were attending an educational institution; of these, 25.9% were in primary school, 21.6% in secondary school and 13.5% in a tertiary or technical institution.

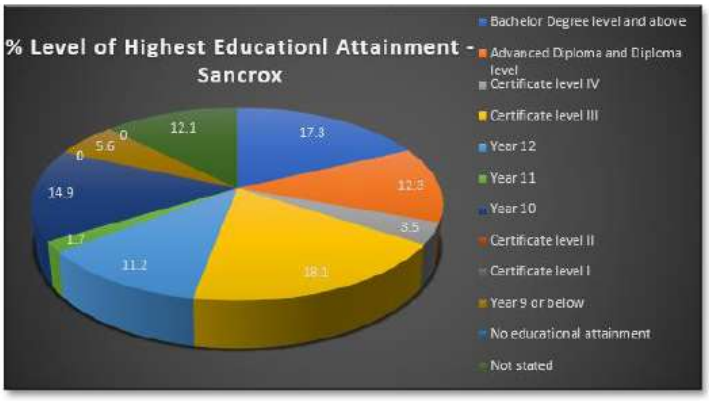


Figure 16 – Education Attainment graph for Sancrox (source: ABS Data)

Level of highest educational attainment *People ages 15 years and over*	Sancrox	%	New South Wales	%	Australia	%
Bachelor Degree level and above	80	17.3	1,424,716	23.4	4,181,406	22.0
Advanced Diploma and Diploma Level	57	12.3	543,142	8.9	1,687,893	8.9
Certificate level IV	16	3.5	167,947	2.8	551,767	2.9
Certificate level III	84	18.1	730,498	12.0	2,442,203	12.8
Year 12	52	11.2	930,654	15.3	2,994,097	15.7
Year 11	8	1.7	203,574	3.3	941,531	4.9
Year 10	69	14.9	702,178	11.5	2,054,331	10.8
Certificate level II	0	0.0	4,849	0.1	13,454	0.1
Certificate level I	0	0.0	625	0.0	2,176	0.0
Year 9 or below	26	5.6	513,209	8.4	1,529,897	8.0
No educational attainment	0	0.0	54,870	0.9	145,844	0.8
Not stated	56	12.1	627,465	10.3	1,974,794	10.4

Cultural & language diversity

The most common ancestries in Sancrox (State Suburbs) were Australian 31.8%, English 31.0%, Scottish 10.5%, Irish 8.0% and German 2.6%, with 83.0% of people born in Australia. The most common countries of birth was England 2.8% and New Zealand 1.8%. In general, 68.9% of people had both parents born in Australia and 11.2% of people had both parents born overseas. While 90.8% of people only spoke English at home, other languages included Thai 1.2% and Hungarian 0.5%.

The most common responses for religion in Sancrox were Catholic 24.9%, Anglican 24.7%, No Religion, so described 24.4%, Not stated 11.7% and Uniting Church 3.6%; with Christianity was the largest religious group reported overall (69.2%).

Ancestry, top responses	Sancrox	%	New South Wales	%	Australia	%
English	247	31.0	2,302,481	23.3	7,852,224	25.0
Australian	254	31.8	2,261,062	22.9	7,298,243	23.3
Irish	64	8.0	741,671	7.5	2,388,058	7.6
Scottish	84	10.5	587,052	5.9	2,023,470	6.4
German	21	2.6	236,143	2.4	982,226	3.1

Country of Birth	Sancrox	%	New South Wales	%	Australia	%
Australia	468	83.0	4,899,090	65.5	15,614,835	66.7
Other top responses						
England	16	2.8	226,564	3.0	907,570	3.9
New Zealand	10	1.8	117,136	1.6	518,466	2.2
France	3	0.5	11,540	0.2	31,120	0.1
Netherlands	3	0.5	16,900	0.2	70,172	0.3
Canada	3	0.5	13,290	0.2	43,053	0.2

Employment, Occupation, Industry of employment

Types of employment throughout a suburb can be an essential indicator of the socio-economic status of the population, regardless of whether people are employed full-time or part-time, or are unemployed. Employment status is often associated with factors of age structure, opportunities and education.

Overall, Sancrox labour force constitutes 295 people who reported being in the labour force, of these 54.9% were employed full time, 36.6% were employed part-time and 3.1% were unemployed. Of employed people 14.7% worked 1 to 15 hours, 9.7% worked 16 to 24 hours and 40.6% worked 40 hours or more.

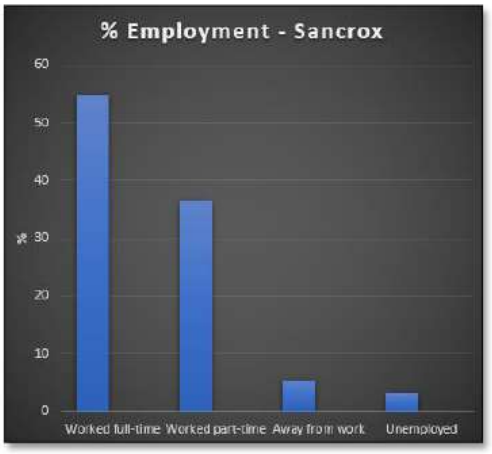


Figure 17 – Employment data graph for Sancrox (source: ABS Data)

Employment	Sancrox	%	New South Wales	%	Australia	%
Worked full-time	162	54.9	2,134,521	59.2	6,623,065	57.7
Worked part-time	108	36.6	1,071,151	29.7	3,491,503	30.4
Away from work	16	5.4	174,654	4.8	569,276	5.0
Unemployed	9	3.1	225,546	6.3	787,452	6.9

The most common occupations included Professionals 20.7%, Technicians and Trades Workers 15.2%, Managers 14.9%, Clerical and Administrative Workers 14.9%, and Community and Personal Service Workers 13.8%. Of the employed people in Sancrox (State Suburbs), 5.9% worked in Primary Education. Other major industries of employment included Hospitals (except Psychiatric Hospitals) 5.4%, Child Care Services 4.9%, Secondary Education 4.4% and Other Social Assistance Services 4.4%.



Figure 18 – Occupation graph for Sancrox (source: ABS Data)

Occupation	Sancrox	%	New South Wales	%	Australia	%
Professionals	57	20.7	798,126	23.6	2,370,966	22.2
Technicians and Trades Workers	42	15.2	429,239	12.7	1,447,414	13.5
Managers	41	14.9	456,084	13.5	1,390,047	13.0
Clerical & Administrative Workers	41	14.9	467,977	13.8	1,449,681	13.6
Community & Personal Service Workers	38	13.8	350,261	10.4	1,157,003	10.8
Labourers	23	8.3	297,887	8.8	1,011,520	9.5
Sales Workers	16	5.8	311,414	9.2	1,000,955	9.4
Machinery Operators & Drivers	15	5.4	206,839	6.1	670,106	6.3

Median Weekly Incomes

The income of a household is a vital indicator of the socio-economic status of an area and assist to analysis the economic opportunities in conjunction with other data such as Occupation and Education Attainment.

The median weekly personal income for people aged 15 years and over in Sancrox was $682.

In comparison, NSW and overall Australia was very similar in medium weekly incomes, however the Family and Household income was slightly lower in Sancrox.

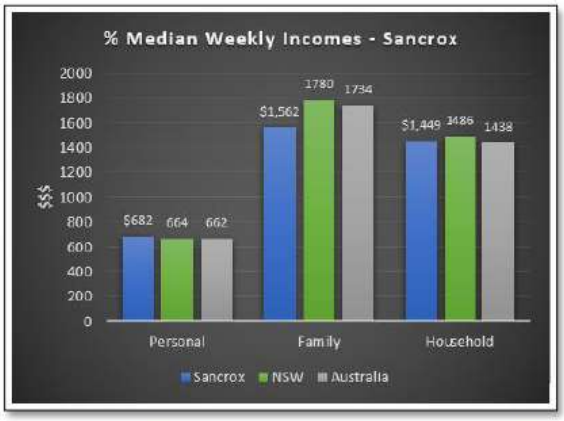


Figure 19 – Median Weekly Incomes graph for Sancrox (source: ABS Data)

Median Weekly Incomes *People aged 15 years and over*	Sancrox	%	New South Wales	%	Australia	%
Personal	682	-	664	-	662	-
Family	1,562	-	1,780	-	1,734	-
Household	1,449	-	1,486	-	1,438	-

Travel to Work

In Sancrox the most common methods of travel to work for employed people were: Car, as driver 73.3%, Car, as passenger 6.2% and Walked only 3.7%. Other common responses were Worked at home 3.3% and Truck 2.9%. On the day, 0.0% of employed people used public transport (bus) as at least one of their methods of travel to work and 79.5% used car (either as driver or as passenger). In comparison, NSW and overall Australia was very similar with the exception of Car, as driver being over 10% greater.

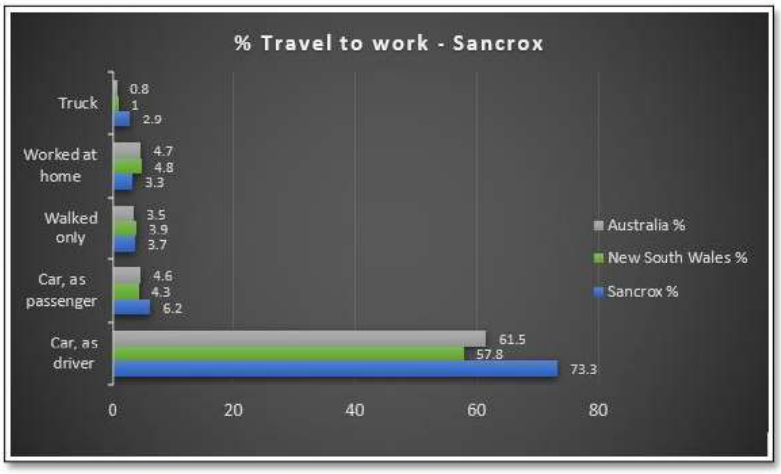


Figure 20 – Data Travel to work graph for Sancrox (source: ABS Data)

Travel to Work, top responses *Employed People aged 15 years and over*	Sancrox %	New South Wales %	Australia %
Car, as driver	73.3	57.8	61.5
Car as passenger	6.2	4.3	4.6
Walked only	3.7	3.9	3.5
Worked at Home	3.3	4.8	4.7
Truck	2.9	1.0	0.8

Families – family composition, employment status of couple families

The structure of Family Composition is an indicator of the residential function and role of an area. This structure generally provides insights for local government into the level of demand for facilities and services required for the community.

The analysis of family composition revealed a larger proportion of couple families without children (53.0%), followed by couple families with children (38.6%) and 8.4% were one parent families. In comparison to NSW, Couple family without children was substantially higher in Sancrox which suggests the population of the area is more empty nesters and or those wanting a rural lifestyle.

Of single parents 33.3% were male and 66.7% were female. Of couple families with children, 27.8% had both partners employed full-time, 9.7% had both employed part-time and 15.3% had one employed full-time and the other part-time.

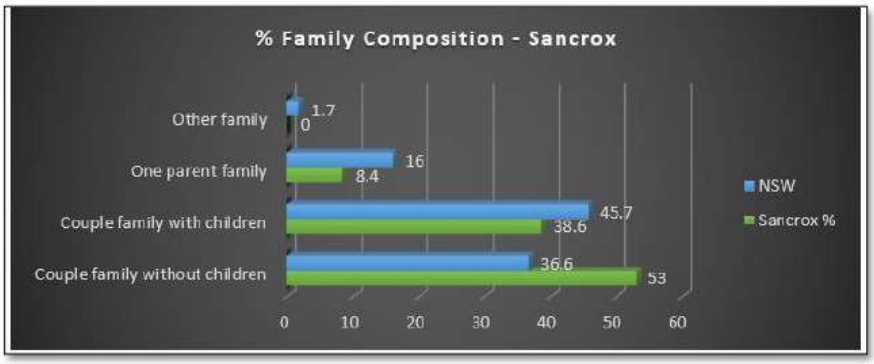


Figure 21 – Family Composition Graph for Sancrox (Source: ABS Data)

Family Composition	Sancrox	%	New South Wales	%	Australia	%
Couple family without children	88	53	709,524	36.6	2,291,987	37.8
Couple Family with children	64	38.6	887,358	45.7	2,716,224	44.7
One Parent Family	14	8.4	310,906	16.0	959,543	15.8
Other Family	0	0	32,438	1.7	102,559	1.7

Dwelling - Structure, Tenure, Household Composition, Number of Motor Vehicles

The Port Macquarie Hastings local government area has grown substantially over the last 10-15 years and many of the older style housing stocks have undergone renovation and transformation. Dwelling stock now comprise 73.4% separate houses, 13.1% semidetached or townhouses, 10.7% flat or apartment and 2.3% being other

dwellings, with 89.6% occupied private dwelling and only 10.4% being unoccupied private dwelling. In comparison, of occupied private dwellings in Sancrox, 94.2% were separate houses, 2.6% were semi-detached, row or terrace houses, townhouses etc, 1.6% were flat or apartments and 0.0% were other dwellings.

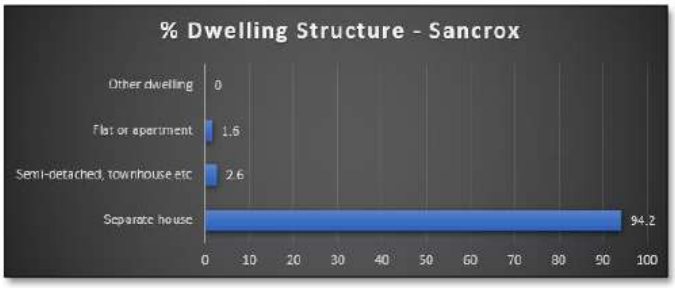


Figure 22 – Dwelling Structure graph for Sancrox (source: ABS Data)

Dwelling Structure	Sancrox	%	New South Wales	%	Australia	%
Separate house	180	94.2	1,729,820	66.4	6,041,788	72.9
Semi-detached, row or terrace house, townhouse etc	5	2.6	317,453	12.2	1,055,016	12.7
Flat or apartment	3	1.6	519,390	19.9	1,087,434	13.1
Other dwelling	0	0.0	23,580	0.9	64,425	0.8

Occupied private dwellings in Sancrox consisted of 92.7% and 7.3% unoccupied private dwellings. These were similar to NSW with 90.1% and 88.8% in Australia overall with occupied dwellings.

Of the occupied private dwellings 49.5% were owned outright, 34.4% were owned with a mortgage and 16.1% were rented (known as Tenure). Dwelling count with Sancrox households, 81.4% were family households, 17.0% were single person households and 1.5% were group households.

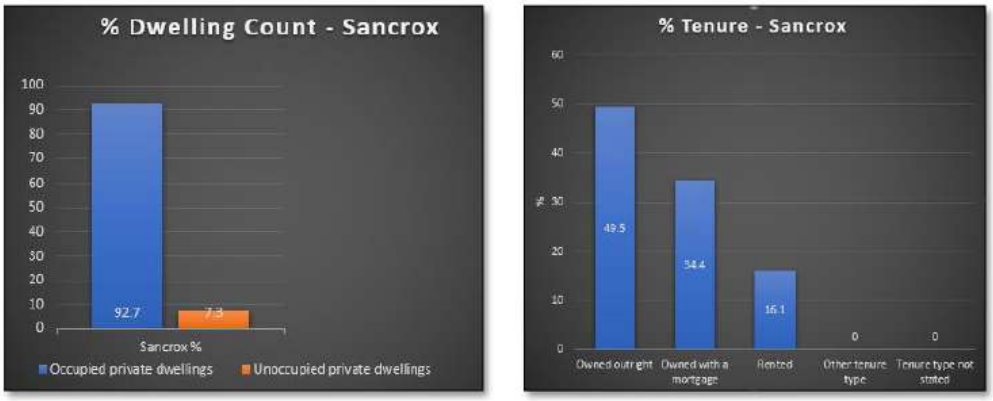


Figure 23 – Dwelling Count & Tenure Graph for Sancrox (Source: ABS Data)

Dwelling Count	Sancrox	%	New South Wales	%	Australia	%
Occupied private dwellings	191	92.7	2,604,320	90.1	8,286,073	88.8
Unoccupied private dwellings	15	7.3	284,741	9.9	1,039,874	11.2

Tenure *Occupied private dwellings*	Sancrox	%	New South Wales	%	Australia	%
Owned outright	13,010	42.2	839,665	32.2	2,565,695	31.0
Owned with a mortgage	8,159	26.4	840,004	32.3	2,855,222	34.5
Rented	8,160	26.4	826,922	31.8	2,561,302	30.9
Other tenure type	577	1.9	23,968	0.9	78,994	1.0
Tenure type not stated	956	3.1	73,763	2.8	224,869	2.7

In Sancrox 20.6% of occupied private dwellings had one registered motor vehicle garaged or parked at their address, 41.8% had two registered motor vehicles and 35.4% had three or more registered motor vehicles.

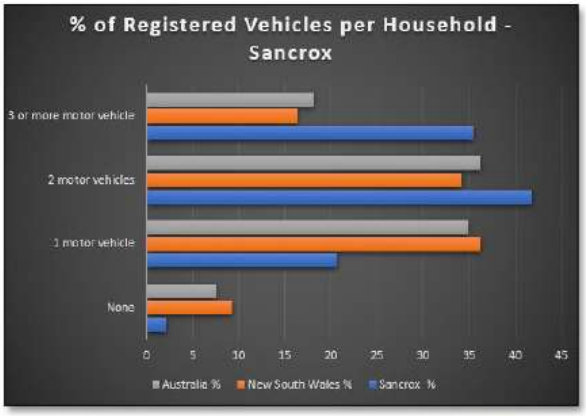


Figure 24 – Registered Vehicles Graph for Sancrox (Source: ABS Data)

Number of registered motor vehicles	Sancrox	%	New South Wales	%	Australia	%
None	4	2.1	239,625	9.2	623,829	7.5
1 motor vehicle	39	20.6	946,159	36.3	2,881,485	34.8
2 motor vehicles	79	41.8	887,849	34.1	2,999,184	36.2
3 or more vehicles	67	35.4	435,053	16.7	1,496,382	18.1
Number of motor vehicles not stated	0	0.0	95,623	3.7	285,197	3.4

Sancrox Services & Facilities / Local Amenities

In considering the adequacy of existing services and facilities in Sancrox area to provide for the needs of new residential area it is relevant to consider what particular services and facilities are available and also what impacts the subdivision may have on these services and facilities.

Numerous services and facilities are available within the Sancrox area (and/or close proximity). These include:

- Abundance Lifestyle & Garden (Café)
- HF Hand Constructors
- Port Bus Charters, Tours & Rentals Pty
- Billabong Zoo: Koala & Wildlife Park
- Pets Park Kennels
- Hanson Construction Materials Pty Ltd
- Cassegrain Wines

Other services within proximity include the following:

Shops:

- Circle of Friends (5.22km) – Gift Shop
- Elements of Design (5.27km) – Ladies Wear, Retail
- Street Smart Clothing (5.28km) – Menswear, Retail
- MidCoast Uniform Solutions (5.28km) – Ladies Wear, Retail
- Three Little Birds (5.29km) – Gift Shop
- ecoWild! Health Food & Organics (5.3km) – Health Food & Organic Products From Nature
- Hastings Co-op Department Store Wauchope (5.31km) – Department Stores
- Hastings Co-op SUPA IGA Liquor Wauchope (5.34km) – Supermarkets & Grocery Stores
- Wauchope One Stop $2 Plus Shop (5.36km) – Discount Stores
- Class-ique (5.36km) – Ladies Wear, Retail
- Gorgeous Fun Paper & Giftware (5.37km) – Gift Shop
- Bargains Galore (5.39km) – Discount Stores
- Design A Candy (5.58km) – Confectionery & Lolly Shop
- Bago Store (5.6km) – Food &/or General Stores
- SPAR (5.96km) – Food &/or General Stores
- Two Worlds Café & Kids Play Centre (5.56km) – Café

Takeaway:

- Wauchope Seafoods (5.26km)
- Fuzzy Ducks Café (5.33km)
- Top Takeaway (5.39km)
- Wauchope Charcoal Chicken Land (5.39km)
- Country Kitchen (6.39km)

Banks:

- Commonwealth Bank (5.39km)
- NAB (5.4km)

National Parks/State Parks:

- Breckenridge Farmstay (7.2km)
- Bago Bluff National Park (27.5km)

Social and Support (Community) Opportunities

Some of the social opportunities available within proximity of Sancrox include the following.

Clubs, Pubs, other:

- Wauchope R.S.L Club (5.18km)
- Hastings Hotel (5.24km)
- Star Hotel Wauchope (5.27km)
- Lions Club of Wauchope (6km)
- Bago Tavern (7.44km)

Recreation:

- Sancrox Reserve
- Evolution Tennis Academy (5.09km)
- Five Star Fitness (5.56km)
- Wauchope memorial Olympic Pool (9.6km)
- Lank Bain Park (12.0km)

Schools:

- St Josephs Primary School (5.52km)
- Wauchope Primary School (5.52km)
- TG's Child Care Wauchope (5.38km)
- Wauchope Pre-School Kindergarten Inc. (6.01km)
- Riverbreeze Pre-School & Child Care Centre (6.9km)
- Timbertown Pre-School & Long Day Care Centre (7.21km)
- Blooming Kids Early Learning & Long Day Care Centre (8.12km)
- Newman Senior Technical College (8.28km)
- St Columba Anglican School (8.91km)
- Westport High School (10.3km)
- St Joseph's Regional College (10.47km)

Churches:

- Wauchope Seventh-day Adventist Church (3.95km)
- Anglican Church of Australia (5.36km)
- Catholic Church (5.52km)
- Uniting Church in Australia (5.65km)

Doctors:

- Hutton C W (5.12km)
- Gayle Kee (5.37km)
- Hastings Medical Centre (5.56km)
- Campbell Street Surgery (5.65km)

- Schuetz B (6.11km)

Hospitals:

- Wauchope Health Campus (5.82km)
- Wauchope District Memorial Hospital (5.82km)

Accommodation:

- Hastings Hotel Wauchope (5.24km)
- Star Hotel Wauchope (5.27km)
- Wauchope Motel (5.73km)
- Timbertown Resort & Motel (7.08km)
- Breckenridge Farmstay (7.2km)

Summary of Key Findings

- The subject site is located in the locality of Sancrox Suburb of the Government Area of Port Macquarie Hastings.
- The median age is 46 with the working population (aged 15-64) being 65.8%, this is marginally higher than NSW and Australia as a whole at 38 years of age.
- Sancrox area is characterised by a low proportion of people aged over 65 (19.2%) compared to NSW (16.2%) and Australia (15.8%) and a lower proportion of people under 30 (33.4%).
- Data indicates a drop in the age group of 20-39, being 16.9% of the population, compared to NSW with 27.4% and Australia overall with 27.8% of the population.
- Family households were the dominate household composition with a large number of family households being couples without children (53% of family households).
- The most common methods of travel to work for employed people was Car, as driver 73.3%.
- Of unpaid work, a high proportion of the population did unpaid domestic work (75.6%), while NSW had 67.7% and Australia 69%.
- The average people per household was 2.6.
- The median weekly household income $1449.
- Median weekly rent $220.
- Average motor vehicles per dwelling 2.3.
- Dwelling diversity in Sancrox is limited with separate houses comprising 94.2% of overall housing stock.

Sancrox would not be considered a diverse and multi-cultural area with the majority of its population born in Australia, and only a small percentage of households having non-English speaking background. Catholic Religion affiliation was the top response of religion within the population.

Sancrox residents have a high level of education, with the majority having tertiary attainment. This has a large bearing on employment opportunities, with more than half the population being employed full-time as a result. The most prevalent occupation type of residents is professionals, followed by Technicians and Trades workers.

7. COMMUNITY ENGAGEMENT

Consultation Outcomes

The Applicant has completed community engagement which they have response to in the Planning Proposal. The objective was to gather feedback from the community and other affected stakeholders to inform the development of its new planning proposal.

Sancrox Community Consultation Feedback

A number of community consultation methods were conducted by Land Dynamics Australia. Two methods were employed, these being:

- Print Communication (hard copy survey)
- Electronic Engagement (survey via Survey Monkey).

A copy of the print communication information is included at Attachment A. The information included a cover letter requesting community feedback on the proposed development, preliminary design, location and a survey.

The community was notified of the survey via:

- Letterbox drop to local residential adjacent to the site; (9 August 2019).
- Online Survey.
- Email

The following residents and local businesses received a copy of the survey.

Address	Survey Distribution	Received Y/N
296 Sancrox Road	Letter Box	
284 Sancrox Road	Letter Box	
282 Sancrox Road	Letter Box	
274 Sancrox Road	Letter Box	Yes (Survey Monkey)
260 Sancrox Road	Letter Box	
258 Sancrox Road	Letter Box	
244 Sancrox Road	Letter Box	
236 Sancrox Road	Letter Box	Yes (Survey Monkey)
204 Sancrox Road	Letter Box	Yes (email)
162 Sancrox Road	Letter Box	
Lot 2, DP 574308 – Hanson Construction	Email – Stephen.kenworthy@hanson.com.au	Yes (email)
Lot 2, DP635110 – Terrance John O'Connor	Email	
Lot 22, DP 884483, 164 Rawdon Island Road – Darren John Burton	Under door – no letter box	
Lot 1, DP1009991, 1418 Oxley Highway, Sancrox	Via Email – 3 Sons Investments Pty Ltd. C/- King & Campbell, Scott Marchant.	
Billabong Zoo	Via Email info@billabongzoo.com.au	

Abundance Café	Via Email sales@abundance.net.au	
Expressway Spares	Via Email sales@expressway.com.au	Yes (email)
Port Bus Charters, Tours and Rentals	Via Email admin@portbus.com.au	
HF Hand Constructers -	Via Email info@hfhand.com.au	
Pets Park Kennels	Via Email info@petsparkkennels.com.au	Yes (email)
RFS – Sancrox Thrumster Fire Station, 164 Bushland Drive	Via Email Strfb10@tpg.com.au	
234 Bushland Drive	Via Email parick.cassegrain@expressway.com.au	Yes (email)

The survey asked opinion questions relevant to the proposed development. The questions being:

1. What is your initial response to the proposed development? For example, are there additional land uses that should be incorporated into the current rezoning proposal?
2. Are you aware of the Moratorium applied to Le Clos Sancrox landowners 12 years ago which restricted dwellings being approved, despite a valid development consent on the site?
3. How best can the proposed rezoning proponent and future residents engage with and actively support the existing Sancrox community including existing groups and organizations?
4. Are there any specific land uses or community facilities or uses which you see as being in need for Sancrox which could be incorporated into the proposal?
5. How long have you lived in the area?
6. The proponent is consulting with all the residents in close proximity of the site, local community groups and business representatives. Can you think of anyone in particular that may be interested to hear of the proposed development and who may like to contribute to the initial consultation stage of the proposed development or ongoing discussions?
7. Do you perceive any issues which may arise from the proposed rezoning and development?
8. Do you have any other questions or comments to make in relation to the proposed re-zoning and do you support the rezoning and development of Le Clos Sancrox?
9. Would you like to be involved in ongoing discussions regarding the proposed rezoning? If yes, please confirm your preferred contact details (Name, Address, Email or Phone).

The consultation project team consisted of:

- Donna Clarke – Town Planner
- Nicole Gillan – Town Planner

A total of nine (9) responses were received to the print communication and online survey.

- 5 via Email
- 3 via Survey Monkey
- 1 via Australia Post

When asked:

- What is your initial response to the proposed development?
    - 6 - fully support the proposed development

- 1 - negative response
- 1 - open minded (both positives & negatives)
- 1 – no response to question

- Are you aware of the Moratorium applied to Le Clos Sancrox
  - 8 replied Yes, with 3 stating unfair to land owners; and
  - 1 replied No

- How best can the proposed rezoning proponent and future residents engage with and actively support the existing Sancrox community including existing groups and organizations
  - Quickly developing; progressing development as soon as possible; development to proceed as soon as possible
  - Lots of promotion and advertising; Keep the local community fully informed; community meetings
  - Supporting the community

- Are there any specific land uses or community facilities or uses which you see as being in need for Sancrox which could be incorporated into the proposal?
  - 2 replied No
  - Community parkland and recreational space; Integrating a bike way within whole Sancrox; open space for children's playgrounds
  - land for a future school and other facilities; maintaining the current lifestyle of the area by creating larger block sizes

- How long have you lived in the area?
  - 2 replied 4 – 5 years
  - 1 replied 18 years
  - 5 replied 20 + years; including 2 respondents 55 years
  - 1 with no reply

- Can you think of anyone in particular that may be interested to hear of the proposed development and who may like to contribute
  - Employees of local businesses (ie Expressway Spares)
  - Lewis Land Group
  - 3 replied No
  - 1 with no reply

- Do you perceive any issues which may arise from the proposed rezoning and development
  - 3 replied Traffic, however overpass has addressed this issue
  - 1 Traffic safety & movement
  - Noise from barking dogs
  - Drainage and flow of water to the northern side of Sancrox Road (flooding)
  - Sewerage & transport

- No effects to current quarry operation and any planned future expansion
- 1 replied No

- Do you have any other questions or comments
  - 4 replied No comment
  - 1 Support the rezoning
  - As long as everyone is aware that the boarding kennels have been operational for 36 years. We will continue to operate
  - I do not support this style of development. I believe a solely rural residential style development without senior living or schooling facilities as these do not fit with the current feel of the Sancrox area.
  - Where has the idea of a school site come from PMHC/Department of School Education?
  - 1 with no reply

- Do you support the rezoning and development of Le Clos Sancrox
  - 5 replied Yes
  - 1 replied No
  - 1 with no reply

- Would you like to be involved in ongoing discussions
  - 2 replied No
  - 7 replied Yes

Summary of Survey Results

A total of 11 local Sancrox residents & local business were invited to participate in the survey. The businesses approached are mentioned above. Nine (9) completed the survey. The respondents were:

Address	Survey Distribution	Received Y/N
274 Sancrox Road	Letter Box	Yes (Survey Monkey)
236 Sancrox Road	Letter Box	Yes (Survey Monkey)
204 Sancrox Road (known also as Pets Park Kennels)	Letter Box and Via Email info@petsparkkennels.com.au	Yes (email)
Lot 2, DP 574308 – Hanson Construction	Email – Stephen.kenworthy@hanson.com.au	Yes (email)
Expressway Spares	Via Email sales@expressway.com.au	Yes (email)
234 Bushland Drive	Via Email parick.cassegrain@expressway.com.au	Yes (email)
Other: Andrew Driver (via Email) Mervyn Bourke (via Australia Post - address not identified) Unknown (via Survey Monkey) Unknown (via Email)		Yes

The main concerns regarding the proposed development were:

- Traffic
- Noise
- Drainage, sewerage
- Transport

Greater Sancrox Structure Plan

The Structure Plan is a framework to guide future planning and development for the Sancrox area and provide a level of overall co-ordination, particularly in relation to land use, environmental management and infrastructure to accommodate future development. As part of the preparation of the Greater Sancrox Structure Plan, community consultation was undertaken, as detailed below.

1.4 Stakeholder consultation

State government and landowners

The *GSA Issues Paper* was presented to State government representatives and landowners for feedback early in the planning process in October 2011.

Reference group

A Reference Group was formed in early 2012 and has been involved throughout preparation of the Structure Plan. Representatives were made up from Council staff, landowners, local development industry and State government agencies - NSW Department of Planning and Environment (DP&E), NSW Roads and Maritime Services (RMS) and NSW Office of Environment and Heritage (OEH).

Council staff meet with the Group several times to identify challenges and opportunities. The outcomes of these meetings and feedback from Group members helped to inform the development of the Structure Plan. Information updates were provided on the PMHC website for all interested persons throughout.

Figure 25 – Structure Plan Stakeholder Consultation (source: Greater Sancrox Structure Plan)

Members of Le Clos Sancrox landowners, as well surrounding landowners and businesses have been involved in the consultation since 2012.

8. IMPACT ANALYSIS

This Chapter details the potential social and economic impacts of the proposed development and mitigation measures designed to minimise negative impacts and maximise positive impacts. This is based on the analysis from the previous chapters.

A number of potential positive and negative social impacts have been identified in this SIA.

Many impacts will be staged due to the likely staging of the development due to its size.

8.1 Positive Social Impact

1. Provision of much needed 'reasonably priced' housing in the Sancrox area;
2. Development site is easily accessible to the highway, Wauchope and Port Macquarie, for commercial, recreation and community services, as well as local Sancrox Reserve and local cafe.
3. Increased economic and social benefits to local businesses from new population;
4. Enrichment of the local community by supporting a diversity of population;
5. Provision of housing stock diversity in Sancrox, consistent with previous Structure Planning;
6. Short Term Construction Opportunities;
7. Long Term Local Employment Opportunities in the local centre;

8. Provision of new services for the area including retail / commercial, parks and walking and cycling networks;
9. Improved existing services in the area, including road upgrades, bus stops and formalising of drainage.

8.2 Negative Social Impacts

1. Impacts on existing social cohesion of the existing community;
2. Risk perception within the existing community (as identified from the community survey);
3. Increased concentration of people in close proximity to each other and other local residents;
4. Increased traffic and impact on road safety in local area;
5. Impact on the existing character/identity of the local area; and
6. Acoustic Impacts for the new residents from the existing animal boarding establishment and the quarry.

8.4 Managing Impacts & Net Benefits to Community

This SIA aims to analyse and manage the intended and unintended social consequences, both positive and negative, of the proposed development. However, this can only occur at a high level; with the rezoning. Further consultation will occur with the exhibition of the Planning Proposal, as well as with the Development Application once lodged.

The initial response was overall supportive of the rezoning, with the exception of concerns raised with respect to the existing animal boarding establishment and the quarry operations. In response to these concerns, the concept layout plan has been amended to increase the vegetated buffer to Sancrox Road and to provide substantial setback of any proposed lots in the vicinity of the animal boarding establishment and the quarry.

The initial acoustic review does not raise issues with respect to the proposed zoning and concept plan with respect to acoustic impacts. At the time of a Development Application, this can be explored in more detail and measures such as fencing or construction standards for dwellings can be recommended.

Urban Design Guidelines have been developed to establish its own character for public spaces and streetscapes ensuring that it ties in with the natural surrounding environment. It is intended to enhance the visual amenity and urban design quality of the estate while providing a broad array of interconnecting public spaces and facilities that benefit all landowners and visitors to the precinct. This will ensure that the character of the area is respected and the new character is established with a strong focus on natural materials such as timber and native species are generally recommended to maintain the bushland feel of Sancrox.

The proposed concept layout provides for large areas of open space in order to prevent development which is a concentration of people in close proximity to each other and other local residents. The resulting design creates precincts connected by bushland, parks, pathways and cycleways, which creates a liveable community.

The traffic upgrades recommended in the traffic assessment will significantly improve Sancrox Road and has been designed to withstand the wider planning which Council is undertaking. This will be a benefit for the existing community and addresses traffic and road safety concerns.

The net benefit to the community in allowing a rezoning which provides for a new residential local or neighbourhood centre within Le Clos Sancrox residential development is the key contribution to provision of a liveable community. The overall development, and wider Sancrox area, makes provision for walkability, public transport, public open space and employment, whilst respecting the environment. The business component, even on the small scale proposed, is a key factor for creating a complete liveable, sustainable and healthy community. This benefit will be experienced beyond Le Clos Sancrox and is expected to inform the wider planning and provide for connections via roads, pathways and cycleways, as indicated on our plans and specialist reports provided for the Planning Proposal.

It is envisaged that the proposed business component of the development will eb utilised by the existing and future residents in the wider community for day to day conveniences.

The traffic upgrades will assist with existing concerns identified by the surrounding properties and will increase the safety of Sancrox Road.

The landscape mounding and vegetation corridors along Sancrox Road will assist with ameliorating potential impacts from the animal boarding establishment and the quarry.

The new estate along a Collector Road will encourage the bus company to provide services to Sancrox Road, which is a positive outcome. The road upgrades and the overall concept design increases the transport options, shops, employment, recreational, social and education facilities for the existing and proposed residents. This also assists greatly with the social cohesion of the proposed residents into the local community.

9. CONCLUSION

This report has assessed the potential positive and negative social impacts arising from the Planning Proposal to rezone the subject land to enable development for residential purposes; development for local business purposes; and to conserve areas of environmental significance. The Development Application, which will be lodged concurrently or shortly after rezoning, is expected to include:

- Residential – approx.638 lots in R1 zoned land (73.2 ha), 42 lots in R3 zoned land (2.3 ha) and 3 lots in E4 land (existing dwellings on 1.5ha); and
- Business - approx. 1 ha of commercially zoned land.

It is concluded that negative impacts associated with the proposed rezoning ton allow for the subdivision can be mitigated as part of the development application design and assessment process, as well as through appropriate ongoing site management and as part of a refinement of certain aspects of the site design.

This Social Impact Assessment has sought to identify any issues relating to the rezoning and corresponding subdivision. Further consultation with the exhibition of the Planning Proposal will allow for any other issues to be identified, with the response to the revised changed to the zoning and concept layout expected to have addressed the main concerns identified in this consultation. Overall, the negative impacts of the proposed development can be successfully managed with the implementation of measures in the detail with the Development Application.

The net benefit to the community from the proposed Planning Proposal to allow the Le Clos Sancrox residential and neighbourhood business development is the key contribution to provision of a liveable community.

In keeping with the strategies, development of Le Clos Sancrox and the wider Sancrox area, along with the identified continued population growth, further strengthens the need for proposed residential land and associated business land and a local or neighbourhood centre.

Overall, a positive social impact is envisaged as a result of the Planning Proposal.

10. REFERENCE MATERIAL AND DATA

The socio economic data used in this report has been extracted from the ABS database and includes the most recently released ABS data issued 2011 & 2016.

Other reference documents include:

- "Urban Growth Management Strategy 2017 -2036", Port Macquarie
- "Social Impact Assessment guidelines" dated September 2017, Department of Planning & Environment
- "Social Impact Assessment Policy" dated 25 February 2009, Port Macquarie Hastings Council
- "Greater Sancrox Structure Plan 2014-2034" dated February 2015, Port Macquarie Hastings Council

ATTACHMENT A

LE CLOS SANCROX COMMUNITY SURVEY

COMMUNITY FEEDBACK REQUEST

Land Dynamics have been engaged to prepare a Social Impact Assessment for a proposed rezoning for low density residential purposes and associated uses at the site known as Le Clos Sancrox.

As a resident living in close proximity to the site, your views and opinions are important, and you are encouraged to participate. Results and comments from this survey will form part of the Social Impact Assessment which has been requested by Port Macquarie Hastings Council.

A feedback survey is attached for you to return to Land Dynamics by post or alternatively you may prefer to email us or complete the online survey.

Your initial feedback is requested by 19 August 2019.





Le Clos Sancrox was previously approved as a vineyard with dwelling lots and comprises approximately 50 owners. It is located on the southern side of Sancrox Road.

Le Clos Sancrox has been subject of a Moratorium imposed by Council 12 years ago which restricted issuing of approvals for dwellings on the lots.







Proposal to Include:

- Masterplanned Community
- Residential Uses
- Complementary Uses could include a school, seniors housing and a small village centre.
- Parks, bushland, waterways, pathways & cycleways.

COMPLETE YOUR SURVEY BY 19 AUGUST 2019

LandDynamics AUSTRALIA

LE CLOS SANCROX COMMUNITY SURVEY

The Survey

This survey has been prepared on behalf of the applicant for a Planning Proposal to rezone the site, based on a resolution of Port Macquarie Hastings Council on 20 February 2019. The information will also be used in the preparation of the Development Application for the overall subdivision of the site which is proposed to occur concurrently to the rezoning. Results and comments from this survey will form part of the Social Impact Assessment which has been requested by Port Macquarie Hastings Council.

The Proposed Development

The proposal is for a site specific rezoning of Le Clos Sancrox and Development Application.

The Site

The development site comprises an existing approved vineyard estate established in the 1980's known as Le Clos Sancrox. The estate is located on the southern side of Sancrox Road and comprises building blocks, each attached to a corresponding viticulture plot.

The Proponent

LCS Estate Pty Ltd is a collective and coordinated legal entity formed by the landowners of Le Clos Sancrox.

Our reasons for community engagement now?

Port Macquarie Hastings Council requires that a Social Impact Assessment be prepared to assess and consider the proposed rezoning, and which includes identification of any likely impacts associated with the development and mitigations to those impacts, if relevant. The Social Impact Assessment will form part of the documentation submitted to Council.

All early engagement on this project with Land Dynamics is voluntary. Council will separately notify all identified relevant stakeholders once a Planning Proposal or Development Application has been lodged with them. Any interested person can make a submission to Council during the Council's formal public notification period.

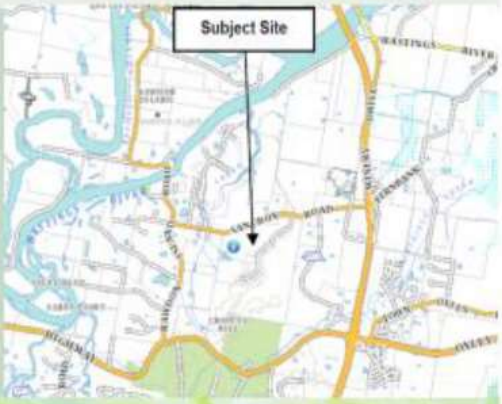
Please return your response by

19 August 2019 to:

By Mail: Land Dynamics Australia,
PO BOX 2459
Port Macquarie NSW 2444

By Email: PM@ldynamics.com.au

Online: https://www.surveymonkey.com/r/HFMMN72



1. What is your initial response to the proposed development? For example, are there additional land uses that should be incorporated into the current rezoning proposal?

_____
_____
_____
_____
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2. Are you aware of the Moratorium applied to Le Clos Sancrox landowners 12 years ago which restricted dwellings being approved, despite a valid development consent on the site?

_____
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3. How best can the proposed rezoning proponent and future residents engage with and actively support the existing Sancrox community including existing groups and organisations?

_____
_____
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4. Are there any specific land uses or community facilities or uses which you see as being in need for Sancrox which could be incorporated into the proposal?

_____
_____
_____
_____
_____

5. How long have you lived in the area?

_____
_____
_____

6. The proponent is consulting with all the residents in close proximity of the site, local community groups and business representatives. Can you think of anyone in particular that may be interested to hear of the proposed development and who may like to contribute to the initial consultation stage of the proposed development or ongoing discussions?

_____
_____
_____
_____
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7. Do you perceive any issues which may arise from the proposed rezoning and development?

_____
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8. Do you have any other questions or comments to make in relation to the proposed rezoning and do you support the rezoning and development of Le Clos Sancrox?

_____
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_____
_____

9. Would you like to be involved in ongoing discussion regarding the proposed rezoning? If Yes, please confirm your preferred contact details (Name, Address, Email or Phone).

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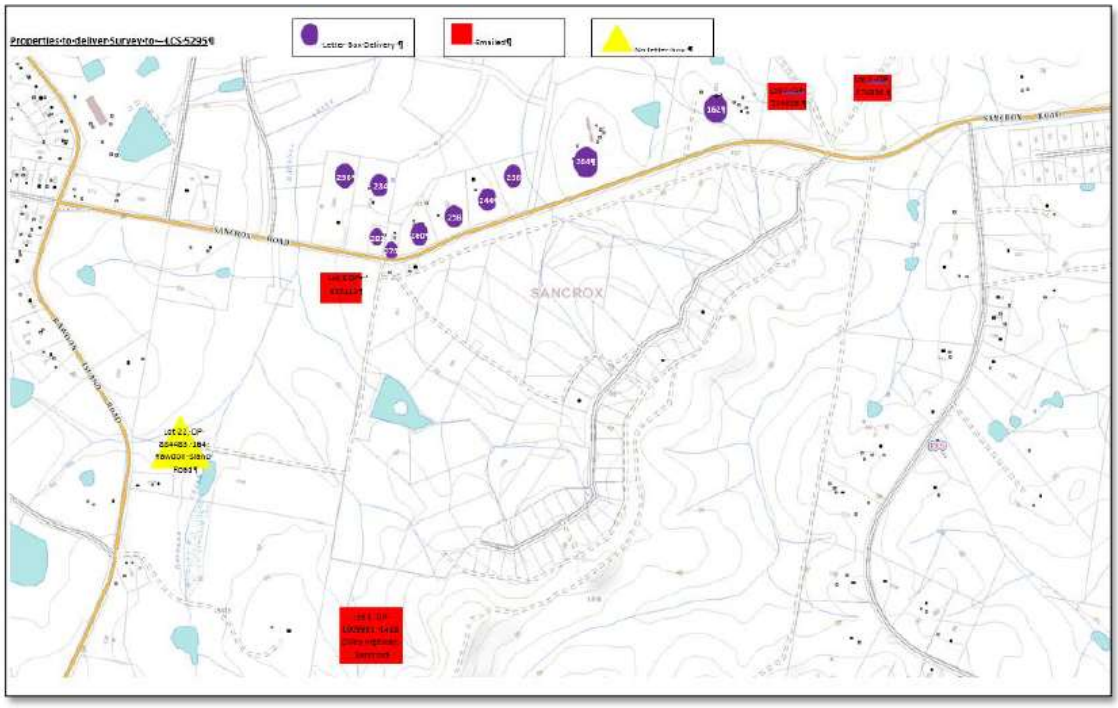
Thank you for your feedback!



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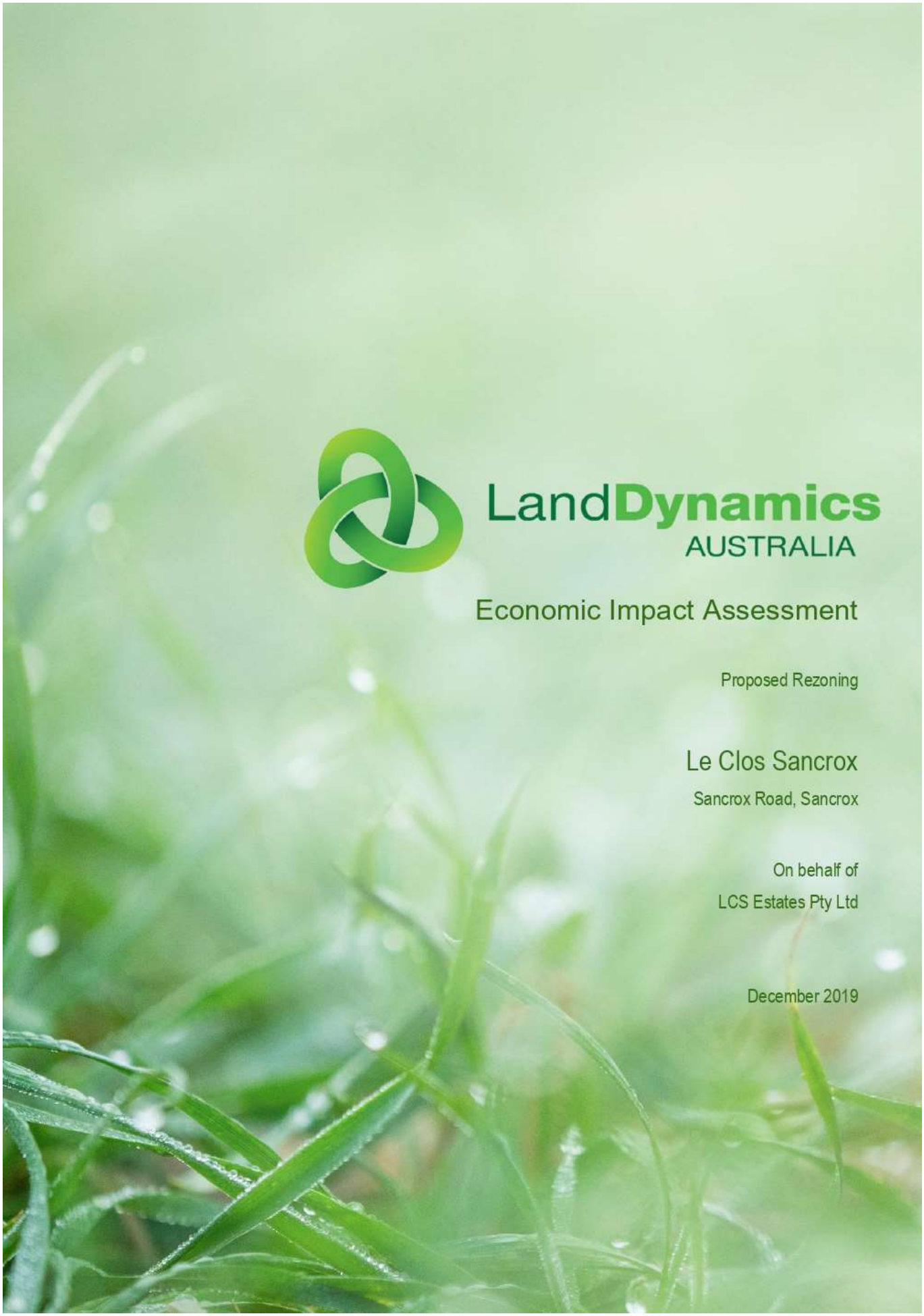
LandDynamics
AUSTRALIA
Economic Impact Assessment
Proposed Rezoning
Le Clos Sancrox
Sancrox Road, Sancrox
On behalf of
LCS Estates Pty Ltd
December 2019

Prepared for:

LCS Estates Pty Ltd

Prepared By:

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Disclaimer

This report was prepared in accordance with the scope of works set out in correspondence between the client and Land Dynamics Australia. To the best of Land Dynamics Australia's knowledge, the report presented herein accurately reflects the Client's intentions when the report was printed. However, it is recognised that conditions of approval at time of consent, post development application modification of the proposals design, and the influence of unanticipated future events may modify the outcomes described in this report.

Land Dynamics Australia used information and documentation provided by external persons, companies and authority. Whilst checks were completed by Land Dynamics Australia to ensure that this information and/or documentation was accurate, it has been taken on good faith and has not been independently verified. It is therefore advised that all information and conclusions presented in this report apply to the subject land at the time of assessment, and the subject proposal only.

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1. EXECUTIVE SUMMARY

1.1 Background

Land Dynamics was engaged by LCS Estate Pty Ltd to prepare an Economic Impact Assessment to support and inform a Planning Proposal for land known as Le Clos, in the locality of Sancrox in the Port Macquarie Hastings Local Government Area (LGA). This report considers the impact of the proposed B2 Local Centre (or alternate business zoning as deemed acceptable by Council) land at Sancrox. The information contained within and findings of the Economic Impact Assessment will be used and updated to accompany the Development Application which will be lodged concurrently or shortly after rezoning.

Any reference to proposed B2 Local Centre could be substituted with an alternate business zoning as deemed acceptable by Council for the purposes of this report.

1.2 Purpose

The primary purpose of this report is to ensure that the proposed B2 Local centre zoning does not impact upon the existing retail / commercial hierarchy of the Port Macquarie area and to demonstrate that there is a need for the business zoned land in Sancrox.

The following report is an Economic Impact Assessment relating to the addition of 1ha of B2 Local Centre land within Sancrox. The assessment:

- The identification of the existing retail / commercial hierarchy.
- Examination of any expected impact from the proposed B2 zoning.
- Examination of the future residential demand to support the B2 zoning.
- The need for the proposed B2 zoning and appropriateness of its location.
- Community benefits.

The preparation of this Economic Impact Assessment was undertaken in consultation with officers from Port Macquarie - Hastings Council.

This report should be read in conjunction with the Planning Proposal and accompanying Appendices, including the draft subdivision concept layout.

1.3 The Proposal

The Planning Proposal seeks to amend the Port Macquarie Hastings Local Environmental Plan 2011 to rezone the subject land to enable development for residential purposes; development for local business purposes; and to conserve areas of environmental significance. The Planning Proposal includes rezoning of from RU1 Primary Production to:

- R1 General Residential,
- R3 Medium Density,
- B2 Local Centre,
- E2 Environmental Conservation,
- E3 Environmental Management, and
- E4 Environmental Living.

The Development Application, which will be lodged concurrently or shortly after rezoning, is expected to include:

- Residential – approx.638 lots in R1 zoned land (73.2 ha), 42 lots in R3 zoned land (2.3 ha) and 3 lots in E4 land (existing dwellings on 1.5ha); and
- Business - approx. 1 ha of commercially zoned land.

Indicative layouts have been included in this report but are subject to change prior to lodgement of the Development Application. The proposed B2 land is proposed to be located on Sancrox Road, as shown below.

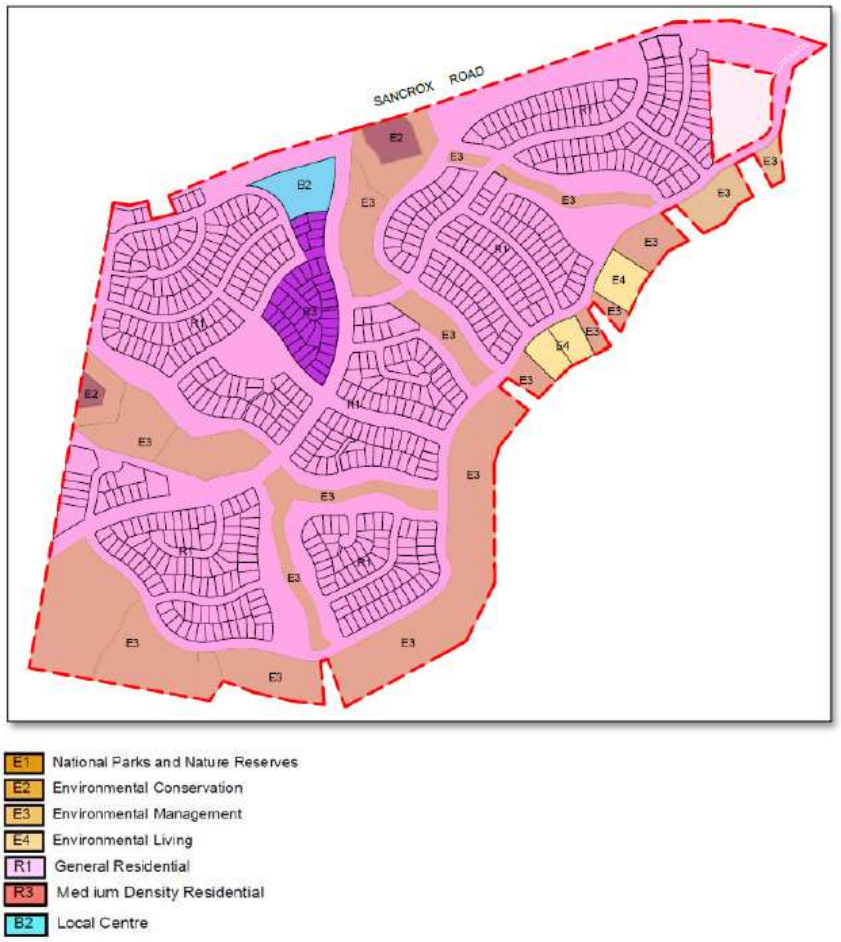

Figure 1 – Proposed Zoning



Figure 2 - Subdivision Concept Layout

Vehicle access to the site will be via two new intersections off Sancrox Road, as shown above.

The proposed western vehicle entrance will be a Collector Road standard and will provide connection to the western boundary, which allows for future expansion at the time of development of the adjoining land. The Collector Road will also make provision for bus stops and the round-about at the western boundary will allow for bus turn around until such time as the road is extended.

A network of pedestrian and cycle pathways will be constructed along the roads and a Traffic Assessment is an Appendix to the Planning Proposal, which details road and intersections, as well as bus stops, pathways and cycleways.

Essential infrastructure currently available to the subject site is water, electricity and telecommunications. A number of the services may need to be upgraded to ensure capacity is met and preliminary investigations and discussions with Council and other service providers have indicated extension of services is possible and the site is unconstrained in relation to servicing.

Vegetation retention and landscape design has been considered in the layout, as well as the Landscape and Design Guidelines which have been prepared for the development and are an appendix to the Planning Proposal.

1.4 Approach & Reports Reviewed

In preparing this report the following approach has been undertaken:

- Review of the Urban Growth Management Report 2017-2036
- Review of the Greater Sancrox Structure Plan 2014 – 2034 (dated 2015 but not adopted)
- Consideration of recent population growth in Sancrox and Greater Port Macquarie and the future outlook for population growth
- Translation of population growth to dwelling demand

- Review of the current status of land supply at Sancrox
- Consideration of additional matters relevant to the efficient and orderly management of residential land supply and the maintenance of a competitive housing market.

In preparing this report the following documents, reports and materials have been considered and taken into account:

- Port Macquarie Hastings LEP 2011
- Port Macquarie Hastings Development Control Plan 2013
- Greater Sancrox Structure Plan 2014 – 2034 (2015), PMHC
- Towards 2030 Community Strategic Plan, PMHC
- North Coast Regional Plan 2036, PMHC
- Urban Growth Management Strategy, PMHC
- Economic Development Strategy, PMHC
- Mid North Coast Housing & Land Monitor (2016), Department of Planning and Environment
- Mid North Coast Residential Submarket Analysis (2014), Department of Planning and Environment
- Australian Bureau of Statistics, 2011 & 2016 Census Data
- Port Macquarie Hastings Retail Strategy Review, Hill PDA, 2015

This study has been undertaken using the following methodology.

- Review of the proposed subdivision concept plan
- Site visit and photos
- Documentation review of the local, regional and state planning policy and strategy
- Demographic analysis including review of draft social impact assessment and draft supply and demand assessment
- Impact assessment
- Conclusion

2. REGIONAL, LOCALITY & SITE CONTEXT

2.1 Port Macquarie Hastings: Regional Context

The Port Macquarie-Hastings region covers an area of 3,686 square kilometres and is located midway between Sydney and Brisbane; 420 kilometres north of Sydney and 510 kilometres south of Brisbane. The area is bisected north to south by the North Coast Rail Line and the Pacific Highway which connects Sydney and Brisbane.

2.2 Sancrox: Locality Context

Sancrox is located on the Mid North Coast within the Port Macquarie-Hastings local government area, and the Greater Sancrox Area (GSA). The GSA is located approximately 6.4km north east of the Wauchope town centre and 13km west of the Port Macquarie town centre and contains a land area of approximately 1,400 hectares (ha). The region is bound by the Oxley Highway to the south, the Pacific Highway to east and rural lands to the west and the Hastings River to the north. The predominate land use is rural, including agriculture and rural-residential. In general, lot sizes range between 1 to 10ha, with only four lots greater than 50 ha. The majority of small land parcels are located in the areas off Rawdon Island Road and Sancrox Road.

2.3 Le Clos Sancrox: Site Context

The subject site is located on the Mid North Coast within the Port Macquarie-Hastings local government area, and forms part of the Greater Sancrox Area, as identified by Council. The subject land comprises a number of landholdings and is collectively known as Le Clos Sancrox. The plan below in Figure 3 details the extent of the boundaries of the properties included and Figure 6 provides the context of Le Clos Sancrox with respect to the greater Sancrox Area, Wauchope and Port Macquarie.

Le Clos Sancrox is part of the previous wider Cassegrain vineyards. To the north of the site is Verdun Estate which was also part of the previous vineyard land and has recently been rezoned by Council to large lot residential. To the north is a range of rural-residential dwellings and an animal boarding and breeding establishment. To the north-east of the site is Sancrox Quarry and further along Sancrox Road is Expressway Spares, which is part of a future industrial land investigations area. The site is generally surrounded by rural land, noting that extensive clearing has occurred on the land to the east recently.

The site is located on the southern side of Sancrox Road, approximately 1.3km from the Pacific Highway to the east, which links with Brisbane to the north and Sydney to the south. Sancrox Road also links to Port Macquarie to the east and Wauchope to the west. The site is relatively cleared, with vegetation in fingers through the site and around the edges. A number of drainage lines dissect the site falling towards Sancrox Rd.

The Greater Sancrox Area is located approximately 6.4km north east of the Wauchope town centre and 13km west of the Port Macquarie town centre and contains a land area of approximately 1,400 hectares. The region is bound by the Oxley Highway to the south, the Pacific Highway to east and rural lands to the west and the Hastings River to the north. The predominate land use is rural, including agriculture and rural-residential. In general, lot sizes range between 1 to 10ha, with only four lots greater than 50 ha. The majority of small land parcels are located in the areas off Rawdon Island Road and Sancrox Road.



Figure 3 – Location of Extent of Le Clos Sancrox Highlighted Yellow (source: www.sixmaps.nsw.gov.au)

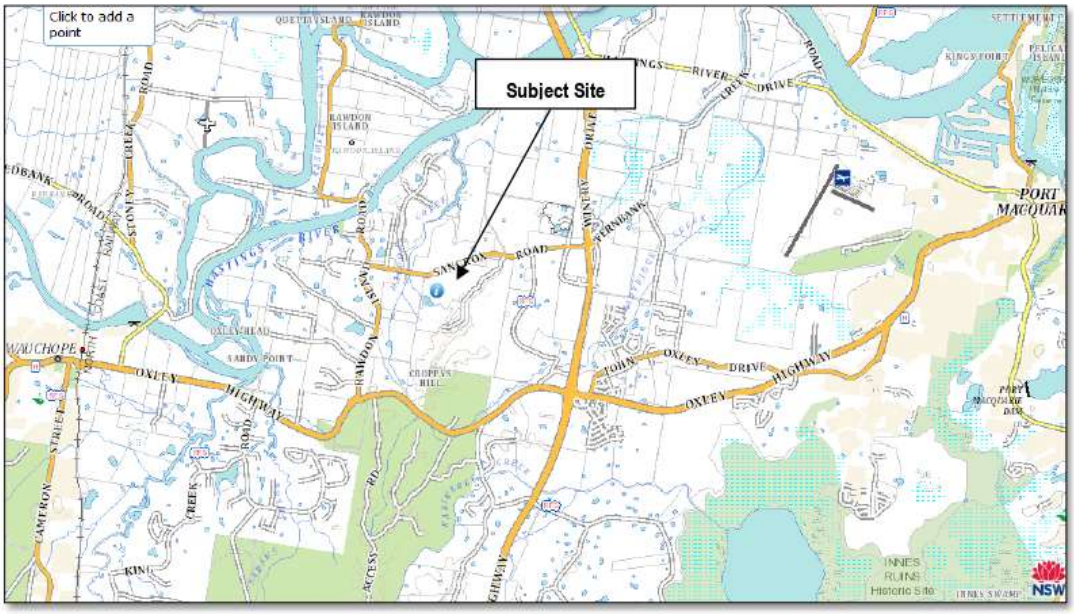

Figure 4 - Contextual Location of the subject land (source: www.sixmaps.nsw.gov.au)



Figure 5 - Close Up Aerial Map of the subject land (source: www.nearmap.com)

The subject site is subject of a Moratorium of development on the site, which will be resolved by way of this Planning Proposal. Council has resolved to proceed with a site specific Planning Proposal for the subject site in parallel with the wider Outline Planning for the Fernbank Creek – Sancrox area. The planning undertaken as part of this Planning proposal will inform the greater area planning, whilst allowing the development of the site to occur earlier to resolve the Moratorium issue.

The site and surrounding area has been subject of extensive Structure Planning in 2015, which was delayed pending Council's Urban Growth Management Strategy and the change in strategy from rural-residential to residential zoning of the area.

The site has been identified as areas subject to Outline Planning in Council's Urban Growth Management Strategy. Rezoning the land is considered the most suitable and transparent way of achieving the objectives of this proposal.

The area of Sancrox is the logical next area for development, with Area 13 planning ceasing at the highway. This area of Thrumster is developing at a steady rate, with a good take up of land by purchasers.

The site is well located with easy access to the existing universities, schools, hospitals, shopping and other services and facilities within Port Macquarie and Wauchope.



Figure 6 - Broadscale Analysis Extract

3. EXISTING RETAIL HIERARCHY & PLANNING

The Regional Plan indicates that new commercial precincts, outside of centres, should be appropriately sized and of scale relative to the area they will be servicing, and demonstrate how they will deliver positive social and economic benefits for the wider community and maintain the strength of the regional economy.

Council's Urban Growth Management Strategy 2017-2036 states:

> *"Port Macquarie is expected to accommodate about 63% of all new population growth in the local government area to 2036. In total, Port Macquarie's population is expected to grow from 48,870 in 2016 to 66,000 in 2036. Generally, this means between 700 and 800 new residents each year."*

Figures 5 and 6 below are extracts from Council's Urban Growth Management Strategy and indicates the existing retail and business hierarchy, noting that Port Macquarie CBD is the main centre.

The subject site is located in the vicinity of the star indicated on the figure.

It is important to note the following with respect to the site distance from these identified existing centres:

- **Main Centre / Regional -** Horton St in Port Macquarie's CBD is 13.5km / 20 minutes' drive by car from the site.
- **Town Centre** – Wauchope is 8.5km / 11 minutes' drive by car from the site, Sovereign Place at Thrumster is 7.5km / 8 minutes' drive by car from the site, and Laurieton is 37km / 29 minutes' drive by car from the site.
- **Neighbourhood Centre** – Lighthouse is 21km / 21 minutes' drive by car from the site, and Lake Innes is 13km / 12 minutes' drive by car from the site.
- **Local Convenience Centre** – Waniora is 19km / 19 minutes' drive by car from the site, Shelly Beach is 19km / 20 minutes' drive by car from the site, and Watonga is 21km / 22 minutes' drive by car from the site.

Looking at Figure 7 below, it is clear that there is un-serviced area with respect to neighbourhood centres in this area, in the area between Wauchope and Thrumster / Lake Innes / Port Macquarie.

The Social Impact Assessment outlines details of the services and facilities are available within the Sancrox area (and/or close proximity), which also highlights the absence of local or neighbourhood centres in the area.

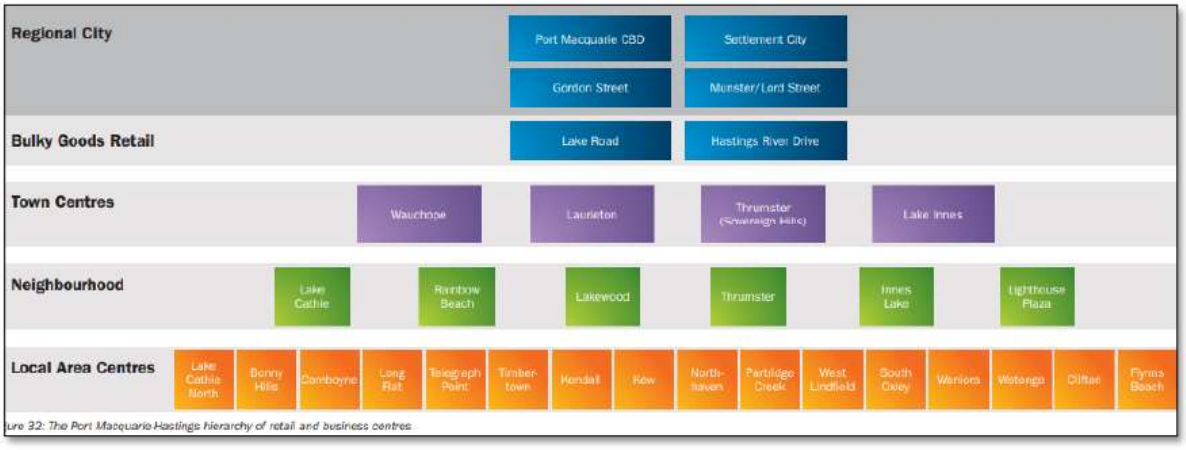

Figure 7 - Extract UGMS Retail Hierarchy and Business Centres Figure 32 (source: www.pmhc.nsw.gov.au)

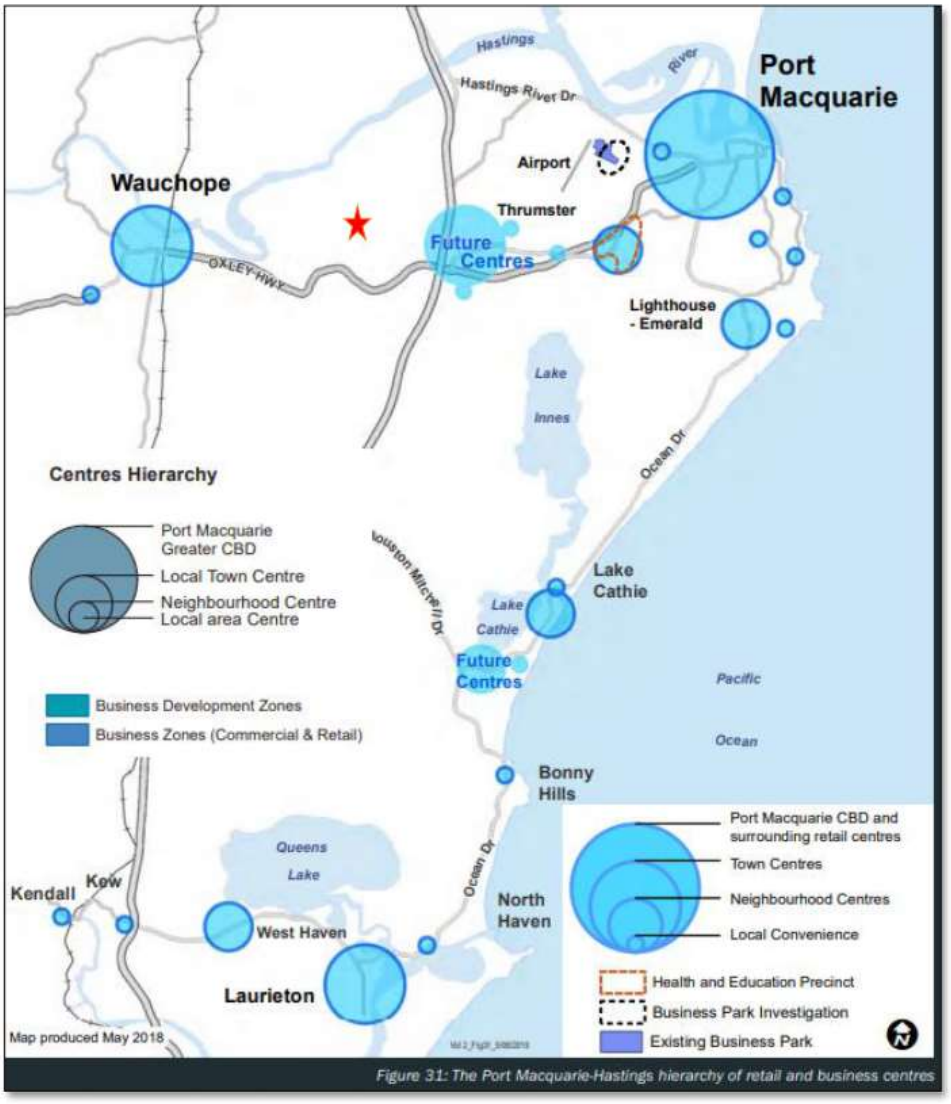

Figure 8 – Extract UGMS Retail Hierarchy and Business Centres Figure 31 (source: www.pmhc.nsw.gov.au)

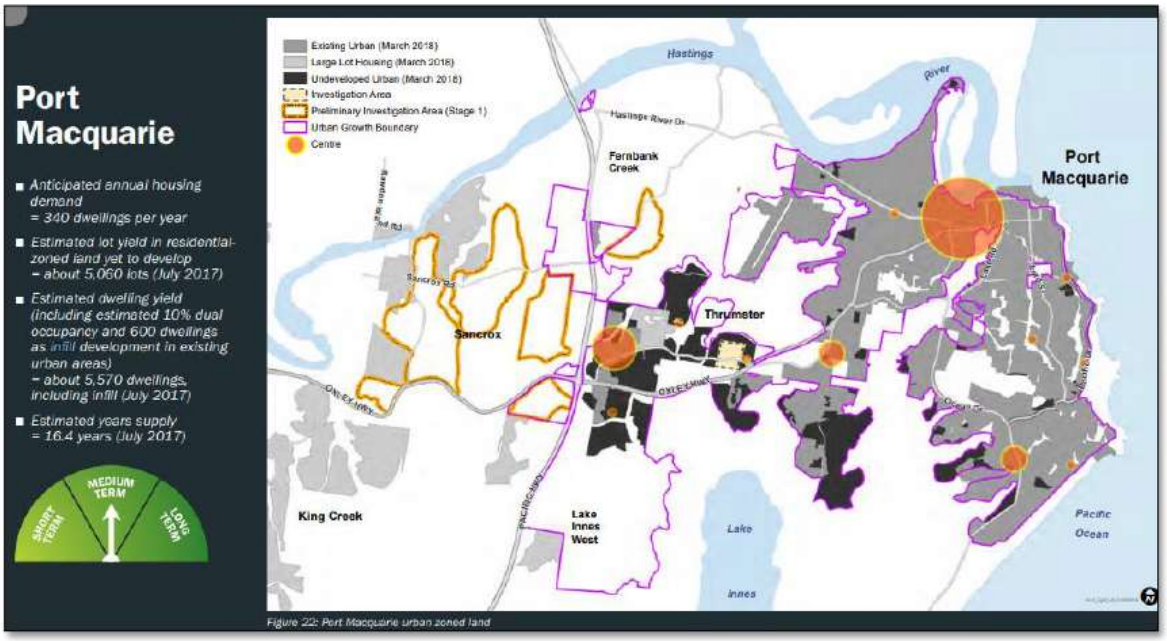

Figure 9 - Extract UGMS Housing Demand Figure 22 (source: www.pmhc.nsw.gov.au)

Figure 9 above identified future development urban areas by way of the yellow circles, with the subject site centrally located in this area.

The LEP map 13B which includes the subject site and surrounding area does not identify and business zones. Therefore, any other businesses operating in this southern area of Port Macquarie in accordance with the limited uses under the residential zoning or existing use rights. The current zoning maps does not allow for any increase in business zoned land, despite the expected level of growth in population in this area projected into the future.

It is key to note that the proposed B2 zoning varies from the main centre of Port Macquarie and due to the size, location and likely nature, is not in competition.

Council has been progressing planning of large scale business precincts including the Airport and Health & Education, however these are not directly comparable with this proposal and those proposals have the ability to significantly alter the business hierarchy and economic characteristics and trends for the wider area. This subject rezoning is proposed to fill a gap identified in the existing hierarchy at local / neighbourhood level, to service residential estates which have emerged and grown in recent years.

Having regard to the absence of existing local and neighbourhood centres in the immediate vicinity reiterates that a new centre in Sancrox is needed.

Within the previous UGMS 2010-2031, the re-subdivision of the Le Clos farms at Sancrox was mentioned heavily, with immediate timing for investigations which was indicated as commencing in 2010/11.

The recently adopted UGMS 2017-2036, as exhibited did not support investigations at Sancrox, however as a result of public interest, with a large number of submissions to the exhibited documents from landowners of Le Clos Sancrox, the UGMS was amended prior to adoption and Le Clos Sancrox included in the Structure Plan for Sancrox in the adopted UGMS 2017-2036.

The report to Council on 20 June 2018 was detailed with respect to Le Clos Sancrox, as touched on above and indicated that Council could support investigation areas outside of the urban growth boundary in the Regional Plan,

such as Le Clos Sancrox, and that Outline plans are to be prepared and submitted to the Department prior to rezoning. The adopted UGMS includes Le Clos Sancrox as part of Outline Plan areas, which Le Clos Sancrox is located within.

The resolutions of Council, with the latest being 20 February 2019, required immediate commencement of Stage 1 planning to prepare an Outline Plan for Sancrox-Fernbank Creek as detailed in the UGMS, and to invite the Le Clos Sancrox landowners to submit a planning proposal in parallel with Stage 1 planning in order to assist in informing the planning process.

North Coast Regional Plan 2036 has been prepared to guide land use planning priorities and decisions to 2036 and has identified "*The regional cities of Tweed Heads, Lismore, Coffs Harbour and Port Macquarie are the primary growth anchors, delivering new jobs, and more diverse housing as well as high quality essential services*".

In response to the need for additional housing stock identified in the Regional Strategy, this site is a prime opportunity to accommodate additional housing without adverse environmental impacts or loss of agricultural land given this site has not been utilized as a vineyard for approximately 30 years. The use of cleared land adopts the sustainable land use principles, rather than utilizing land which is currently used for agricultural purposes or contains ecological features.

4. LIKELY USERS & NEED

Figure 5 above and the distances indicates above indicates a lack of business, commercial or retail centres for the current and future residents of Sancrox and surrounding areas. There is a strong market demand for local centre in this area.

These residents have no neighbour centre within walking distance, or close by, with the closure of the local shop in 2013. The closest facilities are Wauchope Town centre or Lake Innes Coles and specialty shops, which are both larger centres. Wauchope is 8.5km / 11 minutes' drive by car from the site and Lake Innes is 13km / 12 minutes' drive by car from the site.

There is a strong demand from the existing and future residents for this low scale neighbourhood centre. It is expected that employees within the business / enterprise estate to the east may also utilise the village centre for their day to day needs.

There is opportunity for commercial use of this site to appeal to a range of the sector including primarily:

- Residents of Sancrox and nearby estates, which may include standard residential, medium density, seniors living.
- Future residents following wider investigations.
- Users of the nearby Sancrox Reserve.
- Employees within the business / enterprise estate to the east (Expressway Spares etc)
- Small businesses who do not need space in the CBD, in a variety of forms including retail, office space, medical centre, take away food or café etc.
- School community (if the school discussions progress for location within the site).
- Users of services such as child care centre which are commonly located in residential areas.

The site is accessed via existing road infrastructure via private vehicle, bus services and bicycles, or a combination. Sancrox Road is expected to be upgraded as part of the development of the area and as shown on the indicative layout plan, a new intersection is proposed off Sancrox Road, adjacent to the B2 zoned land. The subdivision

concept also provides for excellent pedestrian and cycling network throughout the proposed estate. The connectivity of the site cannot be ignored when considering the likely users of this land.

Given the forecasted growth for the region and the increase in population continuing to arrive in Sancrox, there is a clear need to provide additional local commercial or retail services for their day to day needs, as well as providing employment opportunities. The proposed neighbourhood centre is small in scale, appropriate for the proposed residential estate of Sancrox.

The village centre will have synergy with other sues which could be contained within residential areas such as school or child care centre and would also provide facilities and services for other forms of residential accommodation including seniors living.

5. IMPACTS ON BUSINESS HIERARCHY

Given the small scale of the proposed B2 Centre zone with a total land area of 1 ha a direct conflict with user of the Port Macquarie CBD would not be expected, nor with the established local and neighbourhood centres given their distance from the site and also the size of those facilities being larger and in the instance of the developing Thrumster town centre, housing a supermarket. This planned 25,000m² town centre with retail, commercial and leisure offer, schooling and childcare, recreational facilities, and parklands, has just opened Stage 1 called "Sovereign Place" on 22 November 2019. Stage 1 is, 5,200m² in size and includes IGA, speciality shops, food, service and homewares retailers.

The opportunities for the development of this site would be expected to respond to the needs of the users identified above and as such it would be expected that small scale retail uses, café, office space, medical centre and the like would be accommodated in a future development. The day to day needs of the residents could be met such as milk and bread, a cup of coffee or as discussed above, storage areas.

6. POPULATION GROWTH & ECONOMIC DEVELOPMENT

6.1 North Coast Regional Plan 2036

North Coast Regional Plan 2036 has been prepared to guide land use planning priorities and decisions to 2036 and has identified "*The regional cities of Tweed Heads, Lismore, Coffs Harbour and Port Macquarie are the primary growth anchors, delivering new jobs, and more diverse housing as well as high quality essential services*".

In response to the need for additional housing stock identified in the Regional Strategy, this site is a prime opportunity to accommodate additional housing without adverse environmental impacts or loss of agricultural land given this site has not been utilized as a vineyard for approximately 30 years. The use of cleared land adopts the sustainable land use principles, rather than utilizing land which is currently used for agricultural purposes or contains ecological features.

Port Macquarie-Hastings current population of 79,905 at 2016 is projected to increase by 11,595 people to 91,500 by 2031 under the 2016 NSW State and Local Government Area Population and Household Projections (Main Series) produced by the NSW Planning and Environment. This will add a further 6,100 households and an estimated 9,295 additional vehicles by 2031.

6.2 Urban Growth Management Strategy 2017-2036

Population growth is identified in Figure 21 of the UGMS which indicates that this area of Sancrox and surrounds is expected to accommodate 385 additional dwellings by 2036, yet no additional local or neighbourhood

commercial centres were identified in this area. Hence, there is a demand for the local business zoned land in the Sancrox area.

Having regard to the identied challenges in the UGMS to accommodate the desired population growth, which includes targeted infill development, the subject site is prime for infill development given its lack of constraints with respect to ecology, heritage or servicing and is located within an existing residential area.

Part 4 of the UGMS states:

> *"The goal for Economic Development in this Strategy is:*
>
> *A prosperous and diversified economy*
>
> *Our population is forecast to continue to grow at an average rate of around 1,200 additional residents every year to 2036. This will inevitably create opportunities for new jobs to service a growing population."*

The UGMS also identified growth in the business sector to respond to the population increase, with growth at all levels of the hierarchy.

The proposed local centre would address a gap in the lower end of the hierarchy being local and neighbourhood centres with respect to the existing location of centres, whilst meeting the principles and servicing the current and expected continued population increase. The closest centre is the recently opened Sovereign Place at Thrumster, which is considerably larger than proposed by this rezoning, being 25,000m² in size (at completion), compared to 10,000m². The previous Sancrox corner shop closed down a few years ago and left this gap for the existing residents.

Employment opportunities both on-going and during construction would be an additional benefit, which is important in the Port Macquarie area where employment is often difficult.

The UGMS contains the following planning principles for economic development and employment, which are aimed at generating the right conditions to provide opportunities for economic growth in the Port Macquarie-Hastings area:

> *"**PRINCIPLE 1***
>
> ***Business Centres***
>
> *Plan for retail growth within the established hierarchy of business centres in the Port Macquarie-Hastings to ensure that the scale of development in each centre is appropriate for the catchment population that it is intended to serve.*
>
> ***PRINCIPLE 2***
>
> ***Port Macquarie CBD***
>
> *Maintain and enhance the role of the Port Macquarie CBD as a primary multifunctional business centre in the North Coast region and the primary business centre in the Port Macquarie-Hastings.*
>
> ***PRINCIPLE 3***
>
> ***Bulky goods retail***
>
> *Retain opportunities for bulky goods retail in retail centres and in Business Development zones based on projected demand.*
>
> ***PRINCIPLE 4***
>
> ***Health services and education precincts***
>
> *Establish well-planned, multi-functional health services and education precincts, including opportunities for complementary uses, to drive future growth and innovation in the health and education sectors and to expand the diversity of the local economy.*

PRINCIPLE 5

Connectivity

Promote connectivity between employment centres, accessibility for the users of business and employment areas and take advantage of freight and transport networks.

PRINCIPLE 6

Industry

Provide a generous supply of industrial land to cater for a range of industry types to meet the forecast needs of the Port Macquarie-Hastings community to 2036.

PRINCIPLE 7

Tourism

Promote opportunities for large-scale tourism in prime tourism development areas in Port Macquarie and for a range of small to medium scale sustainable tourism in other areas."

Principle 1 in particular is relevant and it has been demonstrated that the expected population growth from Le Clos Sancrox, as well as the remainder of Sancrox in the future planning, is sufficient to service the proposed B2 Local Centre. Further, this population growth in Sancrox was not anticipated at the time of Thrumster retail planning and as such, there is unlikely to be a reduction in users to the developing Thrumster Town Centre. This centre is of a considerably larger scale and is more of a destination rather than a convenience, as the proposed zone would be envisaged to function.

The impact upon the larger retail centres of Port Macquarie and Wauchope and the emerging Thrumster town centre, is not expected as they will provide a different function to a small neighbourhood / local centre.

Having regard to the future planning identified in the UGMS as shown in Figure 9 above, this B2 zone would be centrally located and easily accessible via Sancrox Road and the future Collector Road being made provision for within the draft layout, to provide further connection to the east and onto the north.

The UGMS states:

"One of the main aims in this Strategy is to ensure that we have a range of high quality centres, providing convenient shopping and business opportunities for residents and for visitors to the Port Macquarie Hastings. We want to create vibrant places for local communities, that are enjoyable and memorable to visit, well connected (e.g. by public transport) and with room for growth to cater for our growing population."

The proposed local centre responds to this aim and will compliment the existing retail and business centres and provide for the existing population and anticipated populations, in a location which is well connected by existing and proposed infrastructure, which includes provision for future bus networks, as well as the proposed road, cycle and pedestrian network throughout the Le Clos Sancrox development. Sancrox Road a Collector Road and provision has been made within the draft layout for Collector Roads through the site, with bus stops. The indicative Corridor Layout Plans accompanying the Planning Proposal clearly indicate the provision of bus stops, cycleways and pedestrian paths along Sancrox Road and within the development to ensure the site integrates into the wider planning or the area and allows for the future residents within and external to Le Clos to easily access the business land. Previous discussions with Busways indicates that bus routes will be planned once the development is underway and the customers are in the area to utilise the service.

Local centres will always be popular with residents in particular forb day to day conveniences who do mot wish to go into the larger centres for just one or two items such as milk and bread and do not require the main street shops and facilities. The proposed centre will have a point of difference from other retail centres.

The UGMS discussed retail and commercial growth and states:

> *"With an additional 23,000 people predicted to reside in the Port Macquarie Hastings by 2036 and growth in retail spend per capita conservatively estimated at 1%, resident spend is forecast to grow significantly during the 20 year period of this Strategy. Demand for retail floorspace is forecast to increase for all categories of retail including food and groceries, take away food, apparel, homewares and manchester, bulky goods and meals in pubs, clubs and restaurants. The predicted demand for retail floor space in the Port Macquarie-Hastings is forecast to grow from approximately 197,000m2 Gross Floor Area (GFA) in 2016 to a projected 274,000m2 GFA in 2036, including demand for specialised retail premises (bulky goods) stores."*

The UGMS identifies industrial economic growth along the western side of the Pacific Highway, but not retail land and in particular not related to local or neighbourhood centres. The figure below clearly identifies Thrumster town centre as the closest retail centre, which is greater in hierarchy than the proposed local centre.

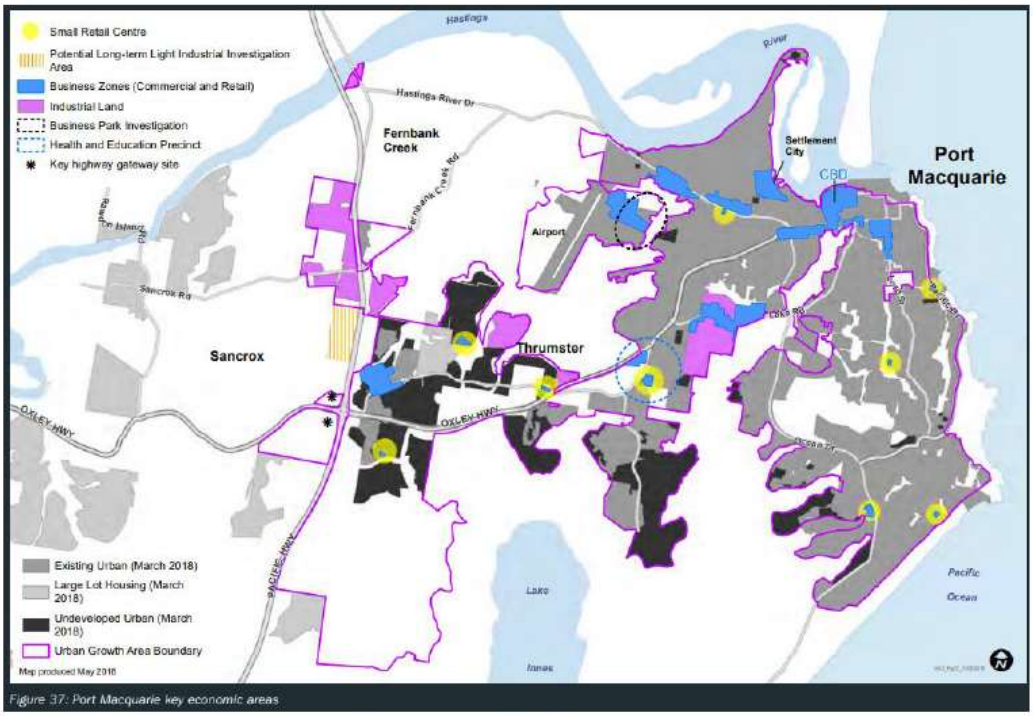

Figure 37: Port Macquarie key economic areas

Figure 10 - Extract UGMS Port Macquarie Key Economic Areas Figure 37 (source: www.pmhc.nsw.gov.au)

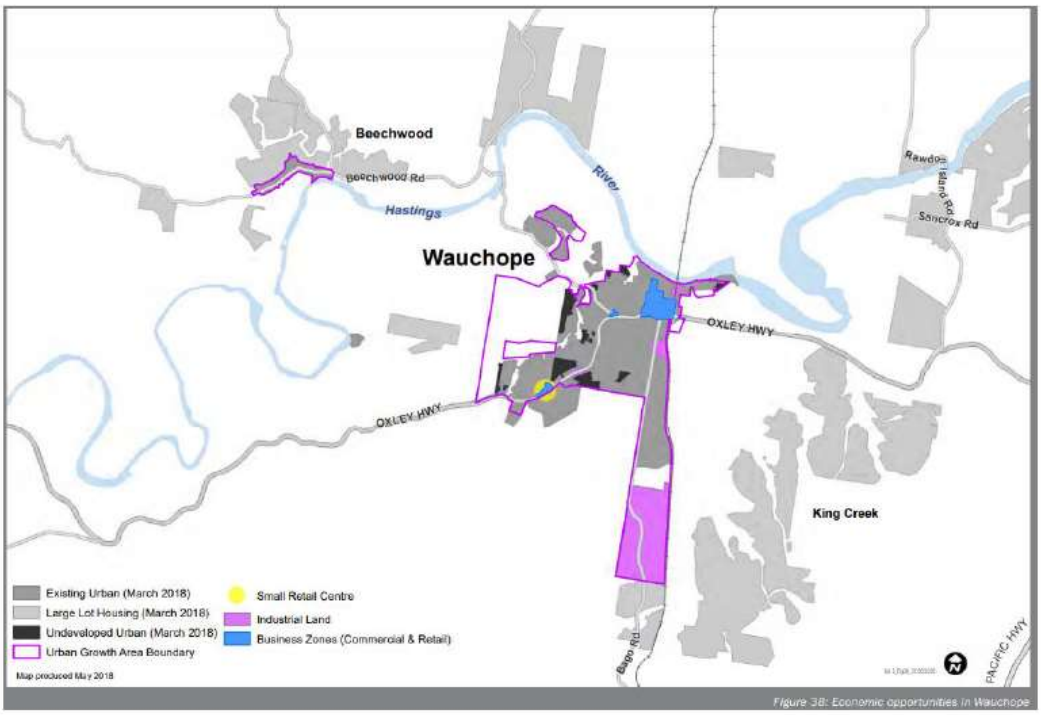

Figure 11 - Extract UGMS Wauchope Key Economic Areas Figure 38 (source: www.pmhc.nsw.gov.au)

The UGMS indicates that Council will continue to consider site specific requests to amend zones and other planning controls, which can be considered independently, without any significant impact on Council's overall planning for urban growth.

6.3 Greater Sancrox Structure Plan 2015

In reviewing the Greater Sancrox Structure Plan Issues Paper dated October 2011, it is stated that "*a review of the Le Clos Sancrox subdivision has been identified by Council as a key element in planning for the Sancrox area*" and Le Clos Sancrox is identified on the maps within the document as "*possible future development precincts, coinciding with areas of lower ecological constraint*".

The Structure Planning work did occur to satisfy a key objective of the UGMS in force at that time and was reported to Council for adoption in 2015 and delayed pending the revised UGMS.

Rezoning of the land was invited over 13 years ago, Structure Planning had commenced and finalised in 2015 and the latest UGMS 2017-2036 indicated outline planning could occur on this site.

It is acknowledged that a substantial amount of work has been undertaken by Council is the Greater Sancrox Structure Plan, which would assist in progressing the Outline Planning for Le Clos Sancrox.

The study area is shown below and Le Clos Sancrox is identified as the majority of Sector 5. An extract from the Structure Plan regrading Sector 5 is included which identifies Le Clos Sancrox as a priority.

The Structure Plan provided limited commentary regarding business conveniences in the area and it acknowledges that there are no neighbourhood or local conveniences for residences, with the general store closing in 2013.

With exception of the King Creek convenience store located at the Oxley Highway/King Creek Road intersection to the west, the nearest shopping facilities are at Wauchope. A general store on Rawdon Island Road, which once serviced the Sancrox area, closed in early 2013. A nursery/café on Sancrox Road, which has been operating for almost two years, has become a popular meeting place for locals and visitors alike.

Figure 12 - Extract from Structure Plan – Business Conveniences (source: www.pmhc.nsw.gov.au)

The Structure Plan also identifies the need for buffers from employment land to existing and future residents in order to avoid future land use conflict. There is ample room available within the B2 zone to incorporate landscape buffers and fencing to the nearby future residential lots to ensure a suitable relationship between the two land uses. Discussions are also advancing regarding the location of a school adjacent to the village centre which would also be complimentary land use.

The Structure Plan did identify future business uses at the intersection of the Pacific Highway and Oxley Highway, on the western side and identified as gateway sites, which are now being advanced by way of a separate Planning Proposal for a service centre. These business uses will be utilised primarily by travellers, rather than the locals who need day to day conveniences. The Structure Plan stated:

- **Employment/industrial**

Council has investigated and rezoned land for industrial development in the Sancrox and Fernbank Park Employment Precincts to the north and north-east of the GSA. These two estates have a collective area of almost 85 to 90 ha in addition to existing industrial areas in the LGA. As a result, there is an estimated supply of vacant industrial land of more than 20 years and the investigation and rezoning of the future employment land in the GSA has not been proposed in the UGMS, being consideration of the area in a Structure Plan.

The future employment land within the GSA was identified in the UGMS (*p68*) due to the site's location adjacent to the Pacific Highway and existing industrial development. It was proposed to investigate the future of the area and the gateway sites in the GSA to provide a framework for compatible land use in the long-term. Development opportunities at the intersection of the Pacific Highway and Oxley Highway may include a highway service centre and tourism uses. The relationship with adjoining uses will be a key consideration.

Council will monitor the take up of industrial land and will review the status of the future employment area in review of the UGMS.

Figure 13 - Extract from Structure Plan – Employment /Industrial (source: www.pmhc.nsw.gov.au)

The proposed village centre and corresponding B2 zone is centrally located in the wider Sancrox precinct and whilst it will be developed as part of the Le Clos Sancrox development, is intended for the existing and future residents of the wider Sancrox area and is easily accessible from Sancrox Road and is adjacent to a new intersection.

7. ECONOMIC PROFILE

7.1 Port Macquarie Hastings Economy Profile

Port Macquarie Hastings LGA is a long established community with regional centre status, with a population over 83,000, over 29,000 jobs and a gross regional product worth $5.028 billion. The regional status comes from its broad-based public and private business sectors, coupled with a dynamic retail and commercial district. Port Macquarie and surrounding areas has also been a thriving centre of tourism for many years.

Greater Port Macquarie has a $6 billion local economy and is a net exporter. "*We sell more products and services to customers outside of the LGA (approx. $2.09 billion) than we import ($1.67 billion). This is considered to be an outstanding performance for a regional economy.*" Source: PMHC Economy profile

The Port Macquarie-Hastings Council area has an increased by 2,030 between 2011 and 2016 for number of employed people.

The largest changes in the jobs held by the resident population between 2011 and 2016 in Port Macquarie-Hastings Council area were for those employed in:

- Health Care and Social Assistance (+778 persons)
- Construction (+624 persons)
- Education and Training (+473 persons)

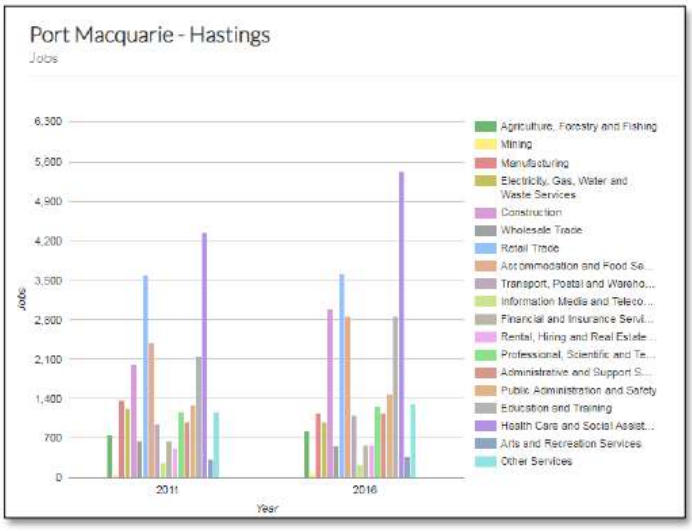

Figure 14 - Industry Employment Sector data for Port Macquarie Hastings. Source: ABS 2016, complied in economyprofile.com

The employment data presented above represents the number of people employed by businesses/organisations in each of the industry sectors in the Port Macquarie Hastings region. The employment data presented is destination of work data; no inference is made as to where people in a defined region reside.

An analysis of industry sector for employment held by the population in Port Macquarie-Hastings LGA in 2016 shows the three most popular industry sectors were, Health Care and Social Assistance (5,192 people or 17.5%), Retail Trade (3,424 people or 11.5%) and Construction (3,153 people or 10.6%). These three industries employed 39.7% of the total employed resident population. In comparison, Regional NSW employed 14.4% in Health Care and Social Assistance; 10.3% in Retail Trade; and 8.7% in Construction.

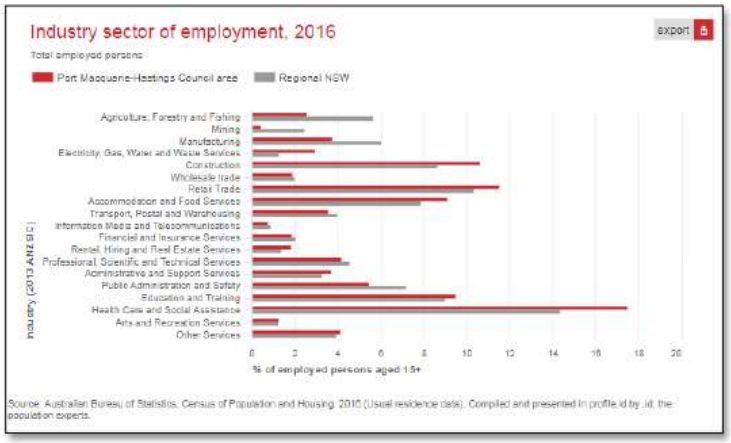

Figure 15 - Industry sector of employ 2016 (comparison with Regional NSW). Source: ABS, compiled in profile.id

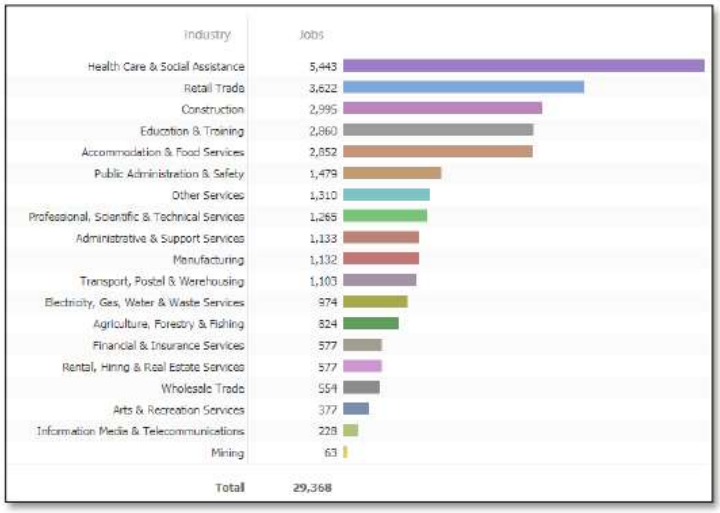

Figure 16 - Latest REMPLAN data incorporating Australian Bureau of Statistics (ABS) 2016 Census Place of Work Employment Data, 2015 / 2016 National Input Output Tables and June 2018 Gross State Product.

The data presented above represents the number of people employed by industry sectors in the Port Macquarie region in 2016. It is estimated that 29,368 people work in Port Macquarie – Hastings and of this 2,995 or 10.20% work in the Construction industry.

8. ECONOMIC ANALYSIS

8.1 Overall Assessment of Demand

Both past (building approvals) and future (population projection) trends indicate an annual demand of around 526 dwellings per year. The overall assessment of demand, as mentioned in the UGMS, is for 10,000 dwellings by 2036. The recent growth in Port Macquarie is expected to continue given the good facilities provided, the lifestyle and education, as well as the recent expansion of the tertiary education sector. The UGMS looks to expand and

grow the health and education precinct and the airport precincts, which will ensure the continued growth of the Port Macquarie area and the need for housing and corresponding local and neighbourhood centres.

8.2 Justification for Demand

There is a clearly identifiable demand for the additional business floorspace (approx. 10,000m² in ground area) within a B2 zone or alternate indicated by Council. The existing centres in proximity to the site, primarily being Thrumster (Sovereign Place) and Wauchope, are of considerably larger sizes and are destination based centres. The future residents of the Le Clos Sancrox subdivision does not have a neighbourhood centre in close proximity to buy the daily conveniences such as bread, milk or newspaper and do not other small scale facilities within walking distance, such as a café or take away. These features, in particular being within walking distance, are major attractors for people to move into the area as it reduces the reliability on cars and allows for the residents to interact to a higher extent, which is beneficial from a social and economic perspective.

Sancrox previously boosted a corner store and since its closure in recent years has left the residents of the wider Sancrox area without a convenience. Further, Sancrox Reserve is an attractor in its own right and users of the reserve would benefit significantly with having a nearby small centre to visit.

A review of Council's retail hierarchy does not reveal any smaller sized centres in the vicinity of this site, whether existing or proposed. As such, there is no existing available floor space within the area, and this rezoning would create the demand for additional floor space (due to both existing residents and proposed development) to justify the need for the location of and the size of the proposed B2 zone. Given its central location and that Le Clos Sancrox is progressing first, it is ideal to provide a local or neighbourhood centre to service not just the site and existing residents, but also other potential urban investigation areas within the Sancrox and Fernbank Creek area as detailed within the UGMS (subject to investigation).

A review of the larger facilities within proximity of the site being Wauchope Town centre and Sovereign Place, revealed the following vacancy for retail / commercial premises as at 10/12/19:

- Wauchope – 10 premises
- Sovereign Hills – Stage 1 – minimal vacancies and expressions of interest being sought for next stage.

These figures indicate that there is not a lot of vacancy being experienced in the nearby town centres. Notwithstanding this, the type of commercial users likely to be attracted to the proposal centre will vary given it is of a smaller scale and will service the residents rather than the wider area as a town centre does.

8.3 Years of Housing Supply & Population Growth

With an increase of 1200 people into the region every year there is clearly a need for future residential growth areas.

Based on the UGMS, Port Macquarie, Lake Cathie/Bonny Hills and near Kew in the Camden Haven collectively have the capacity to provide an 18 year housing supply based on current take up and projected demand. The UGMS states, in 2017 the estimated residential supply ready for development to provide a range of housing choice was:

- 16.4 years in Port Macquarie
- 19.7 years in Lake Cathie/Bonny Hills
- Over 30 years in the Camden Haven, and
- 10 years in Wauchope (increasing to around 30 years once planning for the Yippin Creek area has been completed).

The UGMS acknowledges to accommodate future project growth areas of potential long term growth around Port Macquarie could be exhausted by 2070, as demonstrated in the figure below.

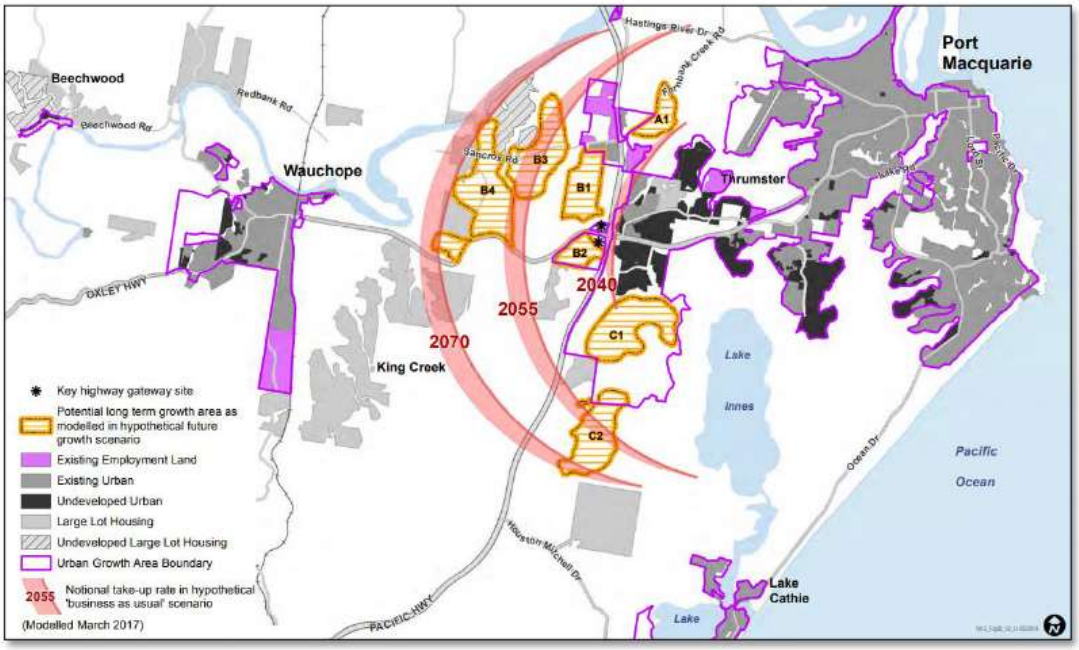

Figure 17 - Hypothetical limits to long term growth Port Macquarie Hastings. Source: UGMS pg. 15

There is a long standing issue in the Port Macquarie local government area whereby current residentially zoned land is so highly constrained from an ecological viewpoint, that it may never be developed. As such, the figures are incorrect and the land supply is in fact considerably less than the figures indicated above. This expected to worsen given the Biodiversity Conservation Act 2016, which requires avoid, minimise and offset principles to be implemented when developing land with ecological value, resulting in reduced developable areas. This can clearly be seen in areas of Innes Lake, which has been zoned R1 for many years but is heavily vegetated and unlikely to be feasible for development under the new legalisation or economically when considering the cost of credits.

A further trend noticed in the wider Port Macquarie area relates to land being rezoned and held by the landowner for a number of years to increase value, rather than being developed at the time of rezoning. This was clearly seen in Lake Cathie where a large residentially zoned parcel within Area 14 owned by a single entity enjoyed a residential zoning prior to 2001 however to date no development of this land has taken place until recently. This land could inadvertently 'regulate the supply' through the lack of competition in the market. If the aforementioned parcel had been omitted from the residentially zoned land then the future land supply horizon was identifed as being relatively short (~5 to 8 years), rather than 22 years as indicated by Council.

This skewing of the availability for residential land and the population statistics incorrectly provides an indication that development at Sancrox will not be needed in the short term and that the corresponding local centre should also be delayed. However, the reality is entirely different and the demand for housing supply to meet the demand targets in both the UGMS and Regional Plan, requires the necessary planning to occur now.

Given this anticipated residential growth, with some 680 lots in Le Clos Sancrox alone, there is a strong need for a local centre to be provided.

9. ALTERNATE SITES

Consideration has been given to locating the B2 Local Centre zone elsewhere within the Sancrox area, however the wider planning is occurring behind this site specific Planning Proposal. As such, the timing for provision of the facility would be unknown and could be delayed. It is a far superior outcome to incorporate the B2 zone into the overall development of Le Clos Sancrox so that it is in close proximity for the incoming residents and the school (if progresses). The location on Sancrox Road and adjacent to the proposed intersection allows for the existing residents in Sancrox to also utilise the facilities.

The proposed centre's location and commercial performance should not impact upon the viability and function of nearby town and regional centres, but rather will meet an identified need for the existing and expanding residents.

10. COMMUNITY BENEFITS

10.1 Positive Impact

The following positive impacts have been identified in terms of economic impacts:

- The retail hierarchy of Port Macquarie and surrounds will be complimented, with the addition of a smaller local or neighbourhood centre not currently accommodated within the area between Thrumster Town Centre and Wauchope Town Centre.
- The location provides for easy vehicular access from proposed western vehicle entrance.
- The Collector Road proposed and upgrade of Sancrox Rd will also make provision for bus stops and a network of pedestrian and cycle pathways will be constructed along the roads and throughout the development and will provide pedestrian and cycle connections outside of the site.
- The subject site is centrally located in the identified future development urban areas by way of the yellow circles within the UGMS.
- The proposed business zone allows for an increase in business zoned land, which is necessary given the expected level of growth in population in this area projected into the future.
- The gap for the existing residents from the closure of the previous Sancrox corner shop will be rectified for daily conveniences.
- Business land being provided within the first development in the wider area allows for this facility to be in place before the full development potential is achieved, providing instant services for the residents as they move into the area.

10.2 Negative Impact

The following negative impacts have been identified in terms of economic impacts:

- Potential impacts upon existing retail centres in the wider locality.
- Loss of land for housing.
- The population for the wider area being longer than expected and the business land may be slow to develop.
- Amenity impacts from the business use adjoining residential uses.

10.3 Managing Impacts

In order to manage the positive and negative impacts identified above, the following measures could be considered for incorporation into the future development application, with many already incorporated into the draft plans:

- Locate the business zoned land near Sancrox Road.
- Provide the business development before the final stage of Le Clos Sancrox.
- Provide good pedestrian and cycle connections to the business land.
- Provide bus stops near the business land.
- Locate medium density adjacent to the business land.
- Provide screening and landscaping in the design of the business development to reduce amenity impacts to the residents.
- Promote the centre to the existing residents within the wider Sancrox area as well as residents of Le Clos Sancrox.

11. COMMUNITY BENEFITS

The net benefit to the community in providing a local or neighbourhood centre within Le Clos Sancrox residential development is the key contribution to provision of a liveable community. The overall development, and wider Sancrox area, makes provision for walkability, public transport, public open space and employment, whilst respecting the environment. The business component, even on the small scale proposed, is a key factor for creating a complete liveable, sustainable and healthy community. This benefit will be experienced beyond Le Clos Sancrox and is expected to inform the wider planning and provide for connections via roads, pathways and cycleways, as indicated on our plans and specialist reports provided for the Planning Proposal.

The economic injection will be experienced by the businesses who operate from the proposed business land and the location and connections ensure easy access.

12. KEY FINDINGS

Below is a summary of the key findings of this Economic Impact Assessment:

- There is unlikely to be an adverse impact upon the retail hierarchy of Port Macquarie given the small scale proposed.
- There is a strong need for a neighbourhood or local centre between Thrumster and Wauchope and the proposed zoning addresses a shortfall of the lower end of the hierarchy since the closure of Sancrox corner store.
- The local or neighbourhood centre will service existing residents, as well as the new population from Le Clos Sancrox and the remainder of the Sancrox area once developed.
- The potential economic impact will not threaten the viability or level of service presently enjoyed by residents and visitors, but will enhance the overall level of service by providing a facility not presently available in the region. Any potential impacts are likely to be in the short term and would be made good through the provision of a new local centre.

- Will reduce car dependency due to its planned integration into the development of the new Le Clos Sancrox estate with good connectivity for walking and cycling and public transport.
- The net benefit to the community in providing a local or neighbourhood centre within Le Clos Sancrox residential development is the key contribution to provision of a liveable community.
- There will be an economic injection will be experienced by the businesses who operate from the proposed business land and the location and connections ensure easy access.

13. CONCLUSION

In most instances, business zoned land is determined at the time of the overall zoning of a growth area and the population would follow. However, in this instance, there is already a demand established from the recent residential growth of Sancrox and neighbouring estates. The development of a new state in Sancrox contributes significantly to the need for business in this area to provide for the day to day conveniences of the existing and proposed residents and visitors and nearby workers.

In keeping with the strategies, development of Le Clos Sancrox and the wider Sancrox area, along with the identified continued population growth, further strengthens the need for business land and a local or neighbourhood centre.

The business growth within Wauchope and Thrumster has considerable need and the subject site is identified as a prime location to accommodate the ever increasing demand and given that Le Clos Sancrox is emerging as the first development within the area.

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MIXED USE DEVELOPMENT

LE CLOS SANCROX

NOISE ASSESSMENT FOR PLANNING PROPOSAL AND ASSOCIATED DA

Report No.	M19131.01 (Revision 1)
Site:	Le Clos Sancrox Road, SANCROX
Prepared by:	Philip Thornton BE(UNSW) MIEAust CPEng NER Acoustic Consultant Matrix Thornton Consulting Engineers
Date:	10 December 2019

SUMMARY

This report discusses acoustic aspects of the proposed mixed-use development at Le Clos Sancrox.

Concerning noise from industrial and transport facilities external to the site:

- Noise from the Quarry and other industrial noise sources do not impose a serious constraint to planning of lots.
- Noise from the proposed high-speed railway is low risk.
- Traffic noise is predicted to comply with assessment criteria at existing and future residences.
- Design of a school may need to consider transportation noise into the school, depending on location.

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1 INTRODUCTION

The report concerns the proposed mixed-use development called Le Clos Sancrox at Sancrox. Council have requested a noise assessment of the development.

This report discusses noise issues and shows that none of those issues could result in significant noise impact to the development, or noise impact from the development to existing properties nearby.

2 DESCRIPTION OF THE DEVELOPMENT

Figure 2-1 shows a preliminary plan of the proposal. Residential lots are laid out on local roads feeding onto a collector road leading to Sancrox Road.

The site context is shown on Figure 2-2 which shows the aspects discussed below.

To the North:

> Currently this is rural-residential and an animal boarding and breeding establishment. This area is likely be rezoned as part of the wider planning been undertaken by Council. The development provides a large treed area separating the development from Sancrox Road and existing residences north of Sancrox Road.
>
> There is an existing quarry to the north-east. It is understood the Quarry may expand in the future. As no progress has been made on any proposed expansion since 2015, and no further information concerning this is available, a large area in the north-east corner has been left undeveloped. This will provide a buffer to the quarry. This will also provide a buffer to the potential development of a high-speed rail east of the development.

To the West:

> Currently rural / grazing etc. This area is likely be rezoned as part of the wider planning being undertaken by Council. There are large separations to the development due to ecology, bushfire and new roads.

To the South & East

> This is one large parcel of land which has currently been approved for a 4-lot subdivision. Heavily treed and in all of Council's planning to date, has identified this as an ecological corridor.

Figure 2-1 Plan of Proposed Development

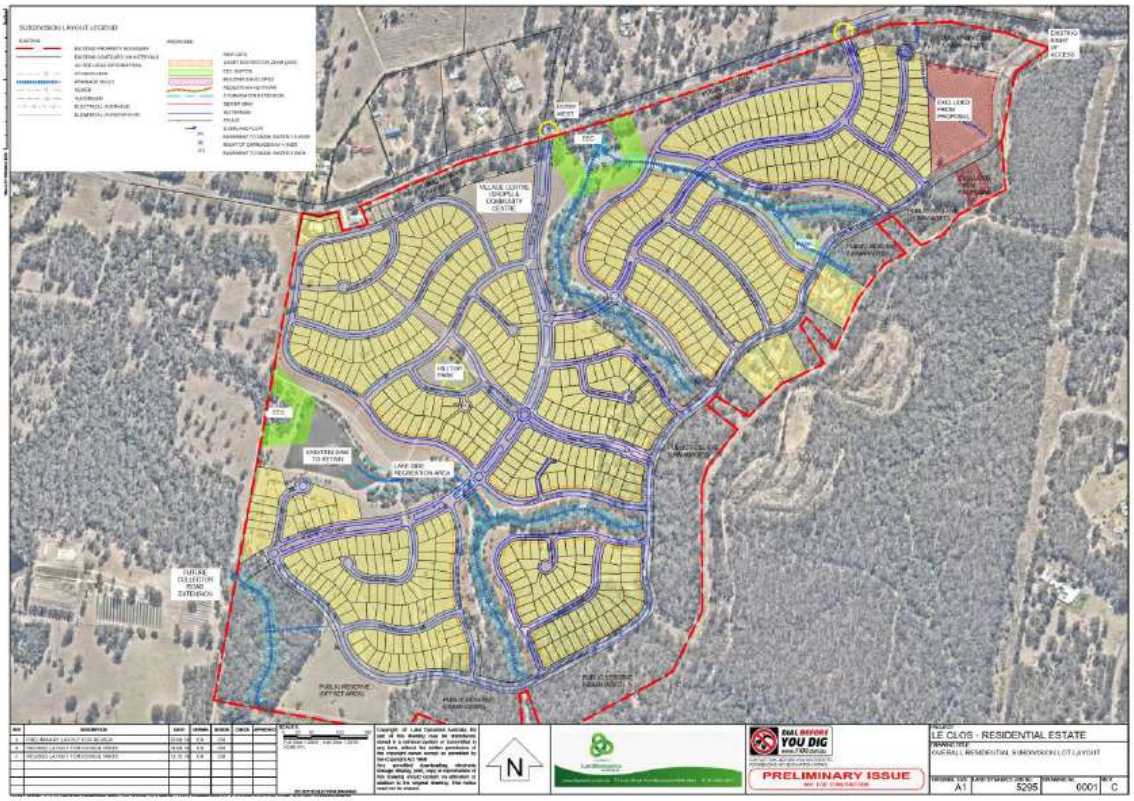


Figure 2-2 Site Context



3 TRAFFIC NOISE

3.1 TRAFFIC NOISE ASSESSMENT CRITERIA

The EPA's Road Noise Policy (RNP) sets out criteria for assessment of noise from vehicles on public roads. The RNP sets out noise criteria for 'arterial', 'sub-arterial' and 'local roads'. The assessment criteria are listed in Table 3-1.

The criteria are the same for existing residences affected by traffic from the development, and for new residences in the development affected by "self – generated" traffic – that is the houses in the development will be affected by traffic noise generated by other houses in the development.

Most of the roads in the development would be considered local roads. The main collector road of the development, as well as Sancrox Road, could be considered sub–arterial roads for noise assessment.

For the existing residences affected by noise from sub-arterial roads (that is the houses north of the development) the *relative increase criteria* also state that the total traffic noise level increase should not be more than 12dBA.

Where predicted noise levels exceed the project-specific noise criteria, an assessment of all feasible and reasonable mitigation options should be considered. The RNP states that an increase of up to 2dB represents a minor impact that is considered barely perceptible to the average person.

Road Category	Assessment Criteria – dBA	
	Day (7am-10pm)	**Night** (10pm-7am)
Freeway / arterial / sub-arterial roads	$L_{Aeq15hr}$, 60 (external)	$L_{Aeq,9hr}$ 55 (external)
Local Roads	L_{Aeq1hr}, 55 (external)	$L_{Aeq,1hr}$ 50 (external)

Table 3-1 *RNP* Criteria for Traffic Noise due to Land Use Development

3.2 EXISTING TRAFFIC NOISE INTO THE SITE

Concerning existing traffic noise, the nearest road that carries a significant amount of traffic is the Pacific Highway, approximately 1500 m from the site. At that distance, noise from the Pacific Highway will be below the noise guidelines from the New South Wales Road Noise Policy (RNP).

3.3 TRAFFIC NOISE GENERATED BY THE DEVELOPMENT

The development itself will generate traffic. The report *High Level Traffic Impact Assessment as part of an overall Planning Proposal DP 776 681 Sancrox Road, Sancrox (Known as Le Clos)* by Streetwise (July 2019) gives existing and predicted traffic volumes.

The traffic report focuses on peak hour, however as Sancrox Road is considered a sub-arterial road, the overall daily traffic volumes are required. Typically, peak hour volumes are 10% of daily volumes, and 85% of the daily volume occurs during the daytime period.

The traffic report gives the predicted daily generation of the site as 10,519 trips. Based on these assumptions, the estimated existing and future (with development) daily volumes are as given in Table 3-2. The table also gives the traffic modelling assumptions concerning heavy vehicles, speed and road surface. It is assumed that Sancrox Road will be redeveloped, and that the future road surface will be upgraded from a chip seal to Dense Graded Asphaltic Concrete.

Traffic noise was modelled using the Calculation of Road Traffic Noise (CoRTN) method. The results for existing and future residences are given in Table 3-3.

In the tables, the periods labelled "future" relate to the future time when the development is hundred percent complete.

Period	Traffic volumes, vehicles per day		Heavy vehicles, %	Speed, km/h	Road Surface
	Day (7am-10pm)	Night (10pm-7am)			
Existing	850 vehicles	150 vehicles	5%	70	Chipseal
Future	8941 vehicles	1577 vehicles	2%	70	Dense Grade Asphaltic Concrete

Table 3-2 Traffic modelling assumptions

Receptor	Period	Noise Levels	
		Day (7am-10pm) $L_{Aeq,15hr}$	Night (10pm-7am) L,Aeq,9hr dBA
North of Sancrox Road (40m setback)	Existing	51	46
	Future	59	54
Within Development, south of Sancrox Road (nominal 50m setback)	Future	58	53

Table 3-3 Predicted Traffic Noise Levels

For the existing residences north of Sancrox Road noise is predicted to increase by 8 dBA due to the development. Based on the assumptions given, modelling shows the future noise level to be 59 dBA daytime and 54 dBA night time. These levels are 1 dBA below the assessment criteria, and the 8dBA increase is less than the 12dBA recommended by the relative increase criterion.

For the future residences at the development site, the predicted levels are 58 dBA daytime and 53 dBA night time. These are 2 dBA below the assessment criteria. It is noted that there is scope to provide some noise mitigation in the form of mounds between the road and the residences if required. Based on the modelling, no further mitigation would be required to meet the base assessment criteria, and that there is a 2 dBA buffer to allow for traffic growth from further development in the area.

4 NOISE INTO THE SITE

4.1 ANIMAL BOARDING

Across the site to the north is an existing animal boarding Business (Pets Park Kennels). There is potential for noise from the kennel to be audible from the site. It would be reasonable for the kennel business to be concerned that new residential developments could be annoyed by noise from the kennel and approach Council with noise complaints.

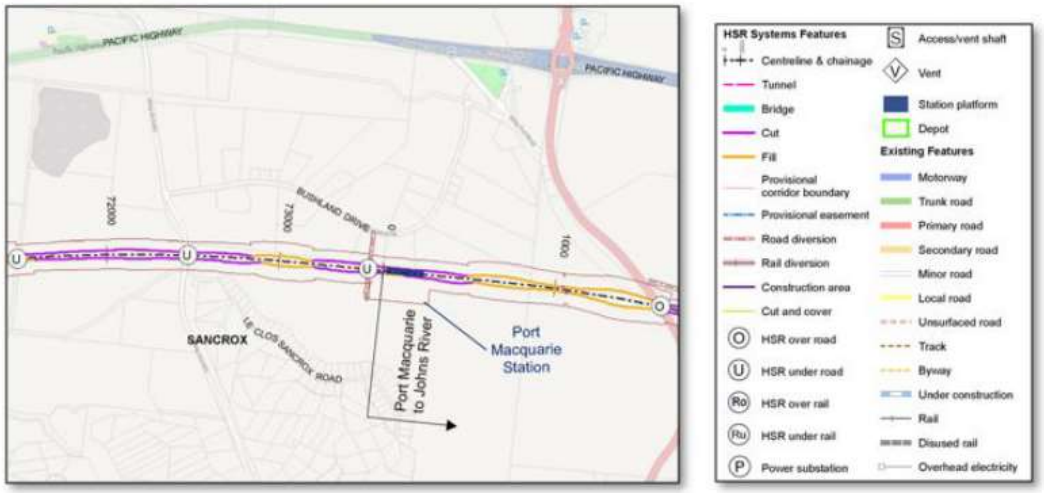
The existing nearest residential neighbour is approximately 200 m from the kennel. In the preliminary design of the development, the nearest residential components are also approximately 200 m from the kennel. If the kennel noise to existing residential neighbours meets the target levels of the New South Wales Noise Policy for Industry, then it will also comply with those targets at future residences.

4.2 HIGH SPEED RAIL

There is a proposal for high-speed rail (HSR) development joining Sydney and Brisbane. The proposed alignment of the track passes the site and is shown on Figure 4-1. The future residences closest to the rail line in the north east of the site would be approximately 150 m from the alignment.

The area at the north east of the site has deliberately been left undeveloped in part to act as a buffer to noise emission from the Quarry and the HSR.

Figure 4-1 High Speed Rail Proposed Alignment (North to left)



The High-Speed Rail Study, Phase 2 Report discussed noise emission from the HSR. It discussed the appropriate noise goal of 60 dBA for daytime noise emission from trains, and set distances from the track alignment where the HSR noise would be below this guideline (called the offset distance). The summary of noise emission findings is contained in Table 3 – 5 of the report, reproduced below. The table shows that to be fully compliant in a rural area, the residences would need to be at least 230 m from the rail alignment.

This assumes no reduction in noise level from noise walls or railway cuttings. With a noise mound of 2 m, the offset is reduced to 70 m. Rail cuttings serve the same acoustic purpose as a noise mound.

As the proposed alignment passes the site it goes through sections of cuttings and fill, the offset distance in this case would be somewhere between 70 and 230 m. As seen in Figure 4-1, the length of track impacting on the site is approximately 50% cutting and 50% fill. Assuming that cuttings are at least 2 m deep, this would lead to a reduction of approximately 3 dBA, implying an offset distance of 150 m.

The nearest residences in the proposal are 150m from the alignment. Based on the above assumptions, it is probable that noise will comply at all proposed lots. Given that it is extremely unlikely that the HSR proposal will ever proceed, and the separation of at least 150 m from the alignment, we consider it a low risk that the Le Clos Sancrox development would need to include any specific noise mitigation measures against emissions of the HSR should it proceed.

Table 3-5 Noise compliance offset distances

Scenario	Compliance offset distance
Rural area	230 m
Transition area with 2 m mounding	70 m
Transition area with 3 m mounding	51 m
Urban area with 2 m noise wall, 7 m from track centreline	25 m
Urban area with 2 m noise wall, 4 m from track centreline	21 m
Urban area on viaduct with 2 m noise barrier	21 m

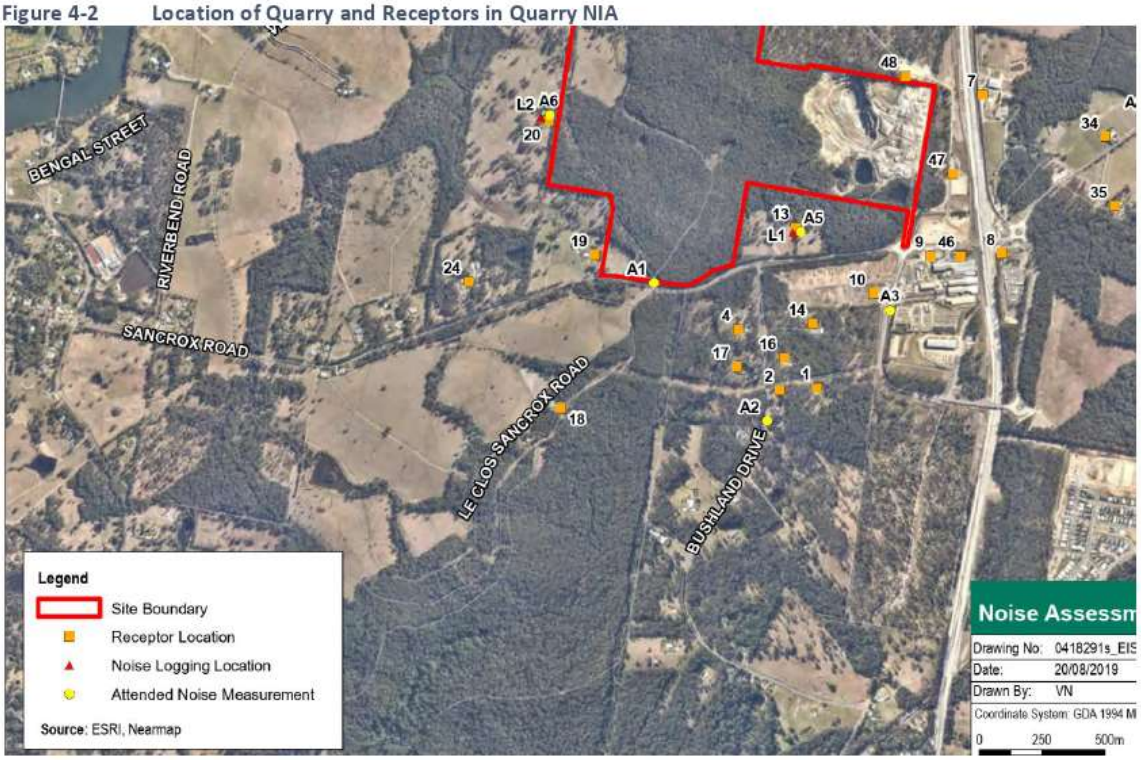
Note 1: Rural areas have been assumed to comprise predominantly single storey receivers (e.g. dwelling, office, school).
Note 2: Urban areas have been assumed to comprise predominantly two storey receivers.
Note 3: Viaduct has been assumed to be predominantly elevated, resulting in a similar height as a second storey receiver.

4.3 QUARRY NOISE

There is an existing quarry to the north-east. The quarry has proposed an expansion and a noise assessment has been published as *Sancrox Quarry Expansion Noise and Vibration Impact Assessment*, August 2019 by ERM (The Quarry NIA). Figure 4-2 shows part of Figure F1 .3 from the Quarry NIA (the full figure is included in Appendix B). This shows the location of the Quarry in relation to the Le Clos Sancrox site. The Quarry NIA assessed noise at residential premises surrounding the Le Clos Sancrox site. The most affected residences are denoted Receptor 18, 19 and 24.

Receptor 18 is located between the Quarry noise sources and the Le Clos Sancrox site. If the Quarry noise complies with appropriate limits at Receptor 18, it will also comply on the Le Clos Sancrox site. Receptors 19 and 24 are at a distance from the Quarry roughly equivalent to the centre of the Le Clos Sancrox site and would reasonably representative of the noise level to be expected on the site.

Figure 4-2 Location of Quarry and Receptors in Quarry NIA



Location	RBL (Day/Evening/Night)	Noise Trigger Levels (Day/Evening/Night)	Predicted Noise Level, Final Stage, NW Wind
Receptor 18	36/36/33	41/41/38	27
Receptor 19	36/36/33	41/41/38	33
Receptor 14	36/36/33	41/41/38	32
Le Clos Sancrox site	36/36/33	41/41/38	< 32

Table 4-1 Predicted Noise Levels from Quarry

The Quarry NIA further notes that maximum noise levels during night time operation will not cause sleep disturbance events at Receptor 19, and that noise and vibration from blasting are within the appropriate limits at Receptor 19. Therefore, maximum noise at night, and noise and vibration from blasting will be within appropriate limits at all locations within the Le Clos Sancrox site.

A large area in the north-east corner has been left undeveloped. This will provide a buffer to the quarry, though based on the Quarry NIA noise predictions, this is not necessary acoustically.

4.4 ORONTES CLOSE INDUSTRIAL SUBDIVISION

This industrial subdivision is approximately 600 m from the north-east corner of the site. The north-east corner of the site includes environmental buffers, and has been embellished to create an ecological corridor, which further increases the distance to the future residential dwellings.

There are many residences between the site and the industrial subdivision. Any noise emission from that subdivision would manifest first at one of the closer residences.

5 PLANNING OPTIONS FOR A SCHOOL

Some options for planning of the site include a school. While no site has been proposed, one of the likely options is in the North East corner of the site.

5.1 INDUSTRIAL NOISE

The most stringent guidelines for noise into school from the INP is that industrial noise level in classrooms should be below 35 dBA. If the classroom had open windows for ventilation, there would typically be a 10 dB reduction in noise from outside to inside. Therefore an appropriate target for industrial noise is 45 dBA outside the classrooms. From the Quarry NIA the industrial noise trigger level for daytime has been set at 38 dBA for residences. Therefore, any industrial noise source at the site which meets the requirements for residences will also meet the noise requirements for schools.

The predicted noise levels from the quarry (see Section 4.3) given in the Quarry NIA are significantly below the trigger levels in the INP.

5.2 TRAFFIC NOISE

The New South Wales Road Noise Policy (RNP) recommends traffic noise levels below $L_{Aeq,1hr}$ 40 dBA in classrooms, corresponding to the level of approximately 50 dBA outside the classrooms. The level of $L_{Aeq,15hr}$ 55 dBA is recommended for playgrounds.

As noted in Section 3, the predicted future level of traffic noise into the site, at a setback of 50 m from Sancrox Road is all 58 dBA.

While the predicted levels are above the recommendations of the RNP, simple design measures can be incorporated into the school to mitigate traffic noise to appropriate levels.

5.3 HIGH SPEED RAIL

Noise guidelines are given in the New South Wales Rail Infrastructure Noise Guideline (RING).

For playgrounds the noise guideline is similar to that for residences (60dBA), hence any playgrounds would ideally be offset from the railway line by more than 230m (See Section 4.2).

For classrooms the noise guideline is 40dBA internal, corresponding to 50 dBA external. School buildings located within approximately 1000 m of the HSR would require consideration of acoustics to mitigate railway noise. In general, appropriate levels in classrooms would be achieved by closing windows, hence appropriate design of classroom ventilation would need to be considered.

All areas of the Le Clos Sancrox site further than the offset distance of 230m from the HSR are considered suitable for location of the school. Depending on the layout of the school and the final alignment of the HSR some buildings may require acoustic treatment, principally including consideration of appropriate ventilation so that windows facing the HSR may be kept closed.

6 CONCLUSION

This report discussed acoustic aspects of the proposed mixed-use development at Le Clos Sancrox.

Concerning traffic noise:

- Noise from existing significant roads will comply at the development due to the large distance. The site is approximately 1500 m from the Pacific Highway.
- Traffic noise generated by the development on Sancrox Road is expected to comply at existing Receptors. Those existing residences are generally setback 40 m from the road.
- Traffic noise generated by the development is expected to comply at future Receptors within the development itself.
- If the school is located on site, traffic noise into the school should be assessed. Depending on the location of the school, minor noise mitigation is may be required.

Concerning noise from industrial facilities external to the site:

- The Sancrox Quarry S Assessment was used to show that noise from the Quarry will comply with appropriate noise trigger levels at all locations and all times. Noise from blasting and vibration will also comply.

- Noise from the existing kennel north of the site may be audible at some lots. It is recommended that noise from the kennel be assessed and if mitigation is necessary and agreement be reached with the operator of the kennel.

Concerning noise from the proposed High Speed Rail:

- Given that the distance from the alignment to the nearest proposed lots, and that the railway line may be in cut at this location, it is probable that noise from the railway will comply with guidelines at residential lots.
- HSR noise to a school, particularly if the school is located in the north-east corner of the site, may need to be considered. While noise to playgrounds will generally be satisfactory, noise to classrooms may require closed windows and therefore consideration of ventilation.

P. Thornton

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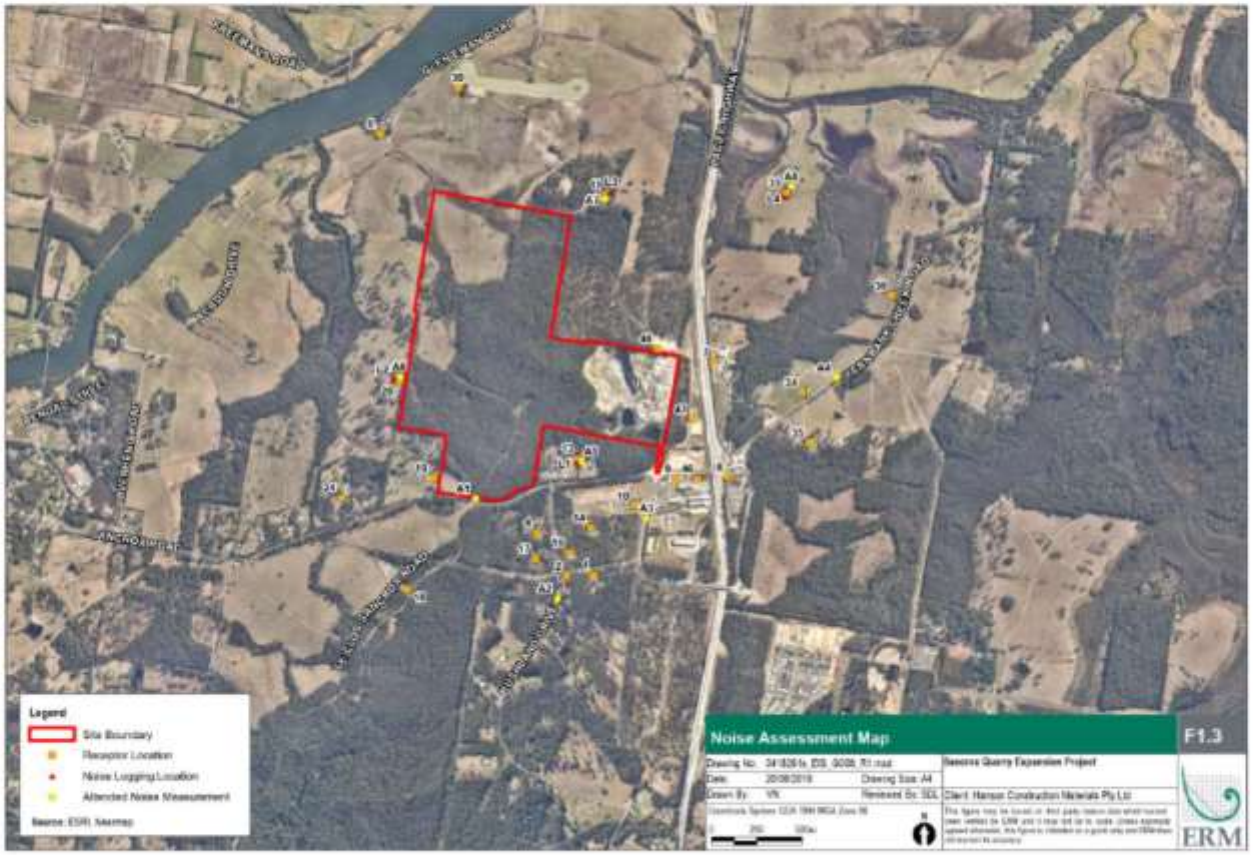
Acoustic Consultant
Chartered Professional Engineer

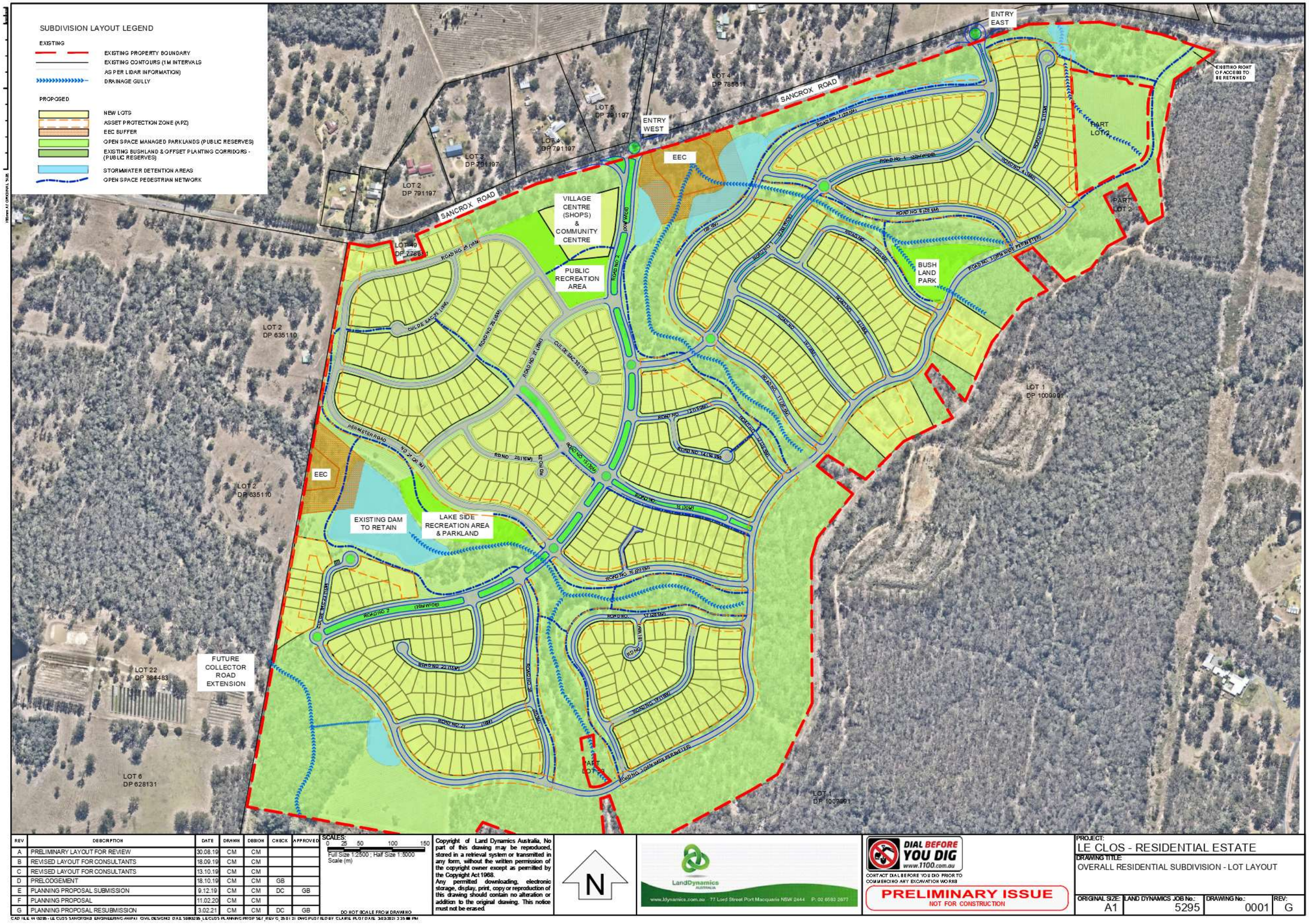


APPENDIX A: GLOSSARY OF ACOUSTIC TERMS

Assessment Period	The period in a day over which assessments are made.
dB(A)	Unit of sound level in A-weighted decibels. The A-weighting approximates the sensitivity of the human ear by filtering these frequencies. The dB(A) measurement is considered representative of average human hearing.
L_{Aeq}	The A-weighted equivalent continuous sound pressure level, used to quantify the average noise level over a time period.
L_{A10}	The A-weighted sound pressure level exceeded for 10% of the measurement period. It is usually used as the descriptor for intrusive noise level.
L_{A90}	The A-weighted sound pressure level exceeded for 90% of the measurement period. It is usually used as the descriptor for background noise level.
$L_{Aeq15min}$	Refers to the A-weighted energy averaged equivalent noise level over a 15 minute time period.
L_{Cpeak}	The highest instantaneous C-weighted sound pressure level over the measurement period. It is usually used for high impulsive noise.
L_{Amax}	The maximum A-weighted sound pressure level for the measurement period.
Loudness	A 3dB(A) change in sound pressure level is just noticeable or perceptible to the average human ear; a 5dB(A) increase is quite noticeable and a 10dB(A) increase is typically perceived as a doubling in loudness.
RBL	The overall single figure background level representing the assessment period over the whole monitoring period. For the short-term method of assessment, the RBL is the measured $L_{A90,\ 15min}$ value, or where a number of measurements have been made, the lowest $L_{A90,\ 15min}$ value.

APPENDIX B: SANCROX QUARRY AND RECEPTORS





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C	REVISED LAYOUT FOR CONSULTANTS	13.10.19	CM	CM		
D	PRELODGEMENT	18.10.19	CM	CM	GB	
E	PLANNING PROPOSAL SUBMISSION	9.12.19	CM	CM	DC	GB
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G	PLANNING PROPOSAL RESUBMISSION	3.02.21	CM	CM	DC	GB

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PROJECT: LE CLOS - RESIDENTIAL ESTATE
DRAWING TITLE: OVERALL RESIDENTIAL SUBDIVISION - LOT LAYOUT

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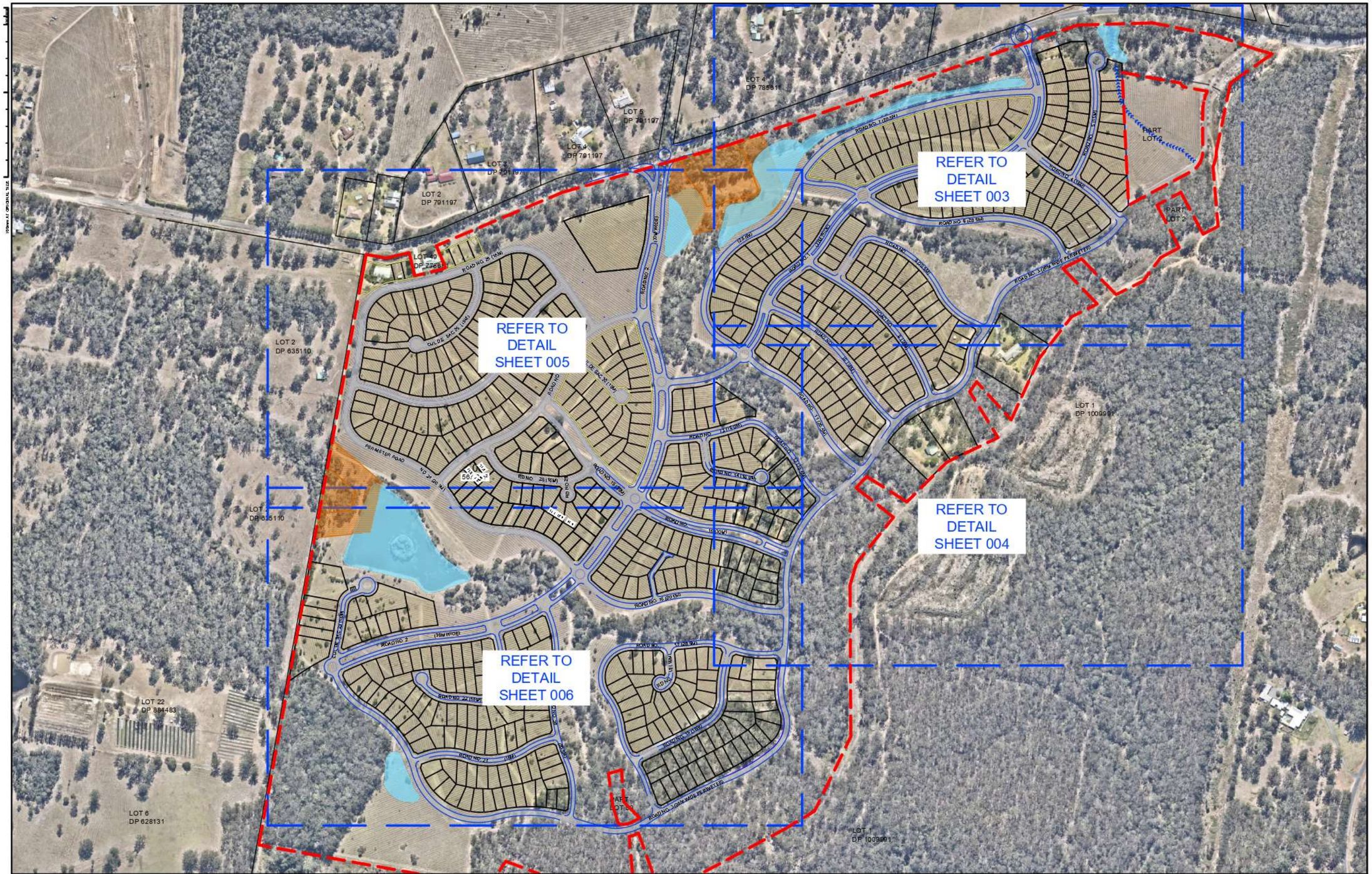
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LOT 3 DP 791197
LOT 2 DP 791197
LOT 1 DP 778681
LOT 2 DP 635110
LOT 1 DP 1003991
LOT 22 DP 884483
LOT 6 DP 628131
PART LOT 2
PART LOT 1
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ROAD NO. 2 (16M WIDE)
ROAD NO. 3 (16M WIDE)
ROAD NO. 4 (20M WIDE)
ROAD NO. 5 (20M WIDE)
ROAD NO. 6 (20.0M)
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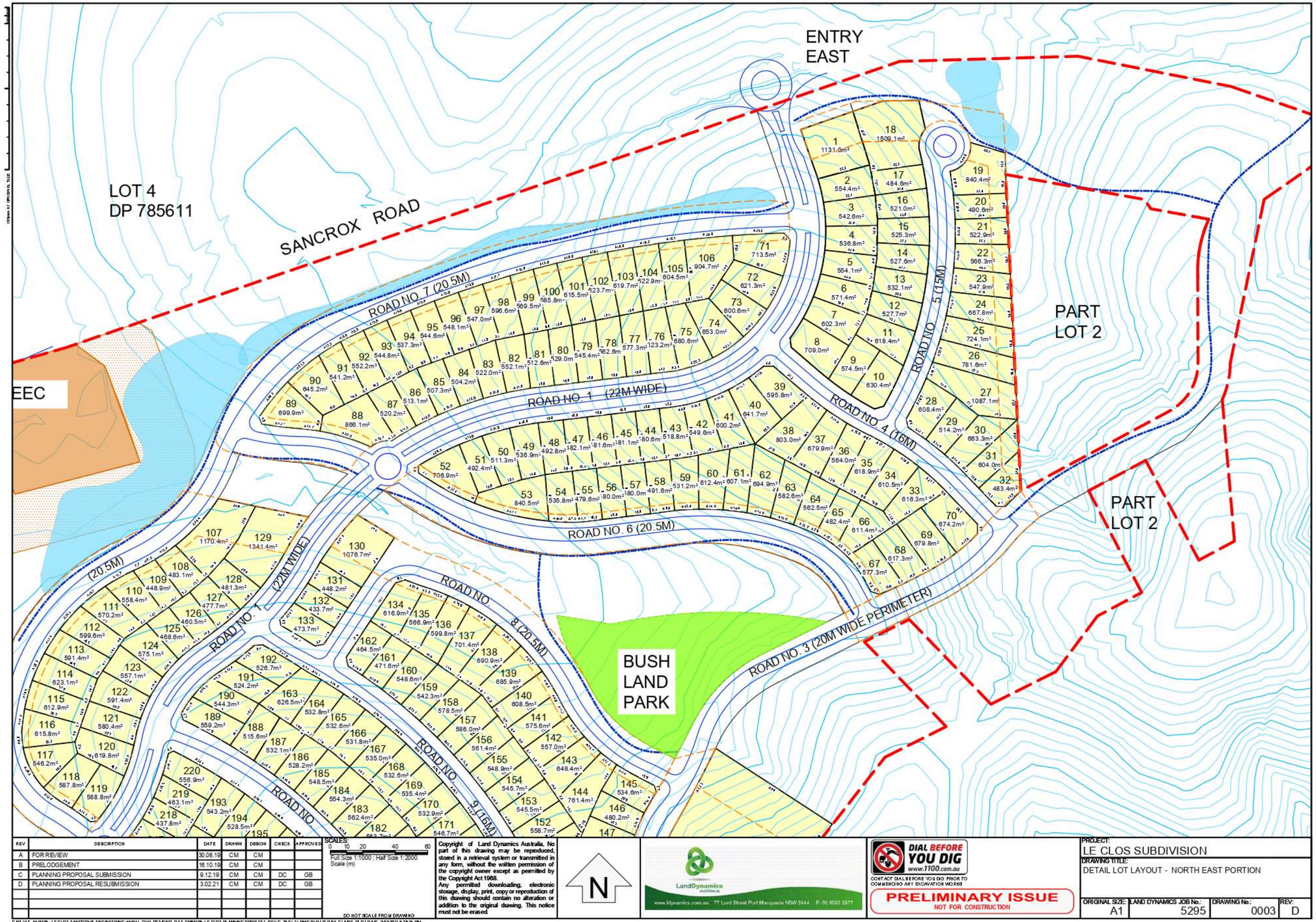

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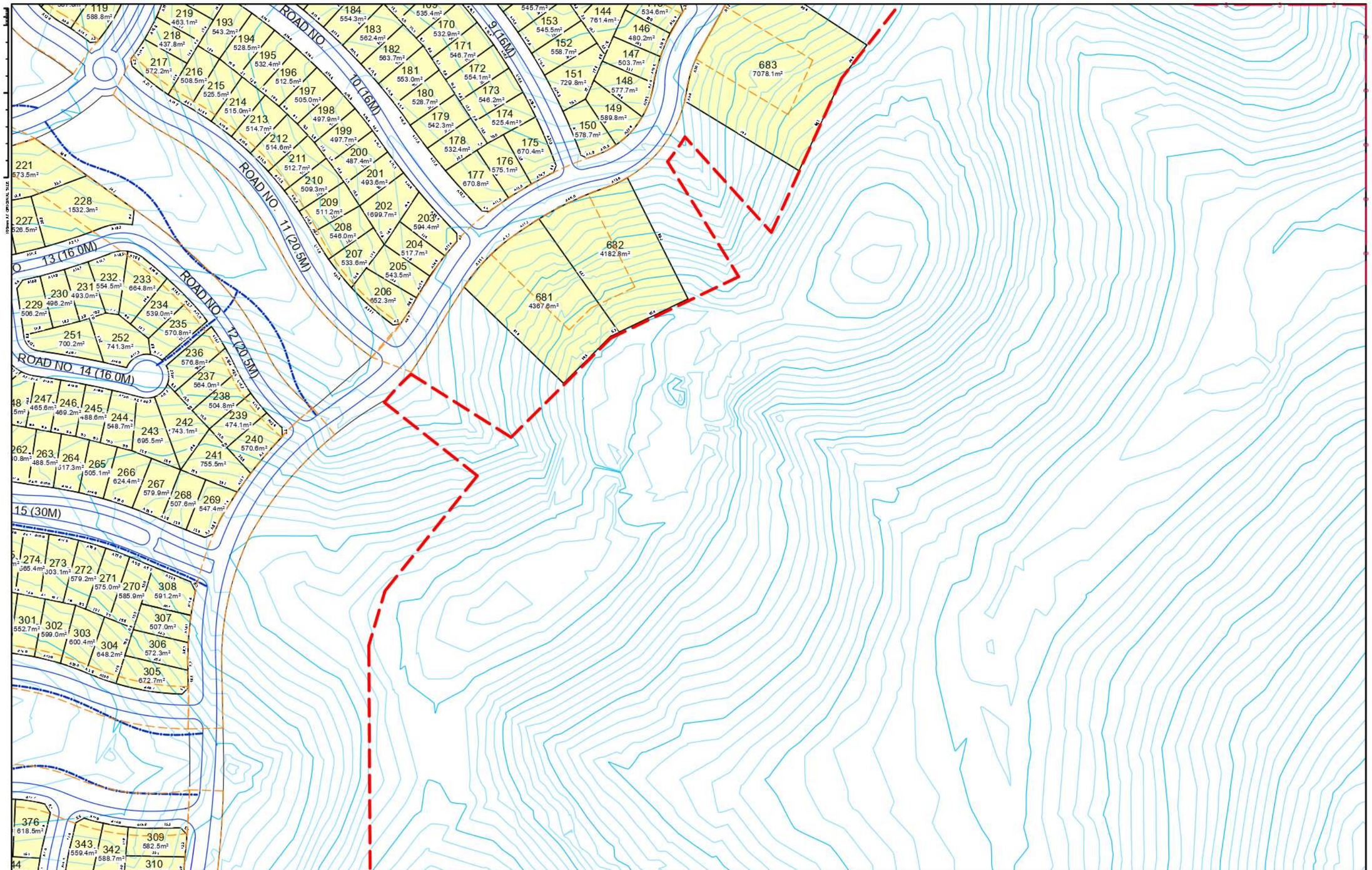

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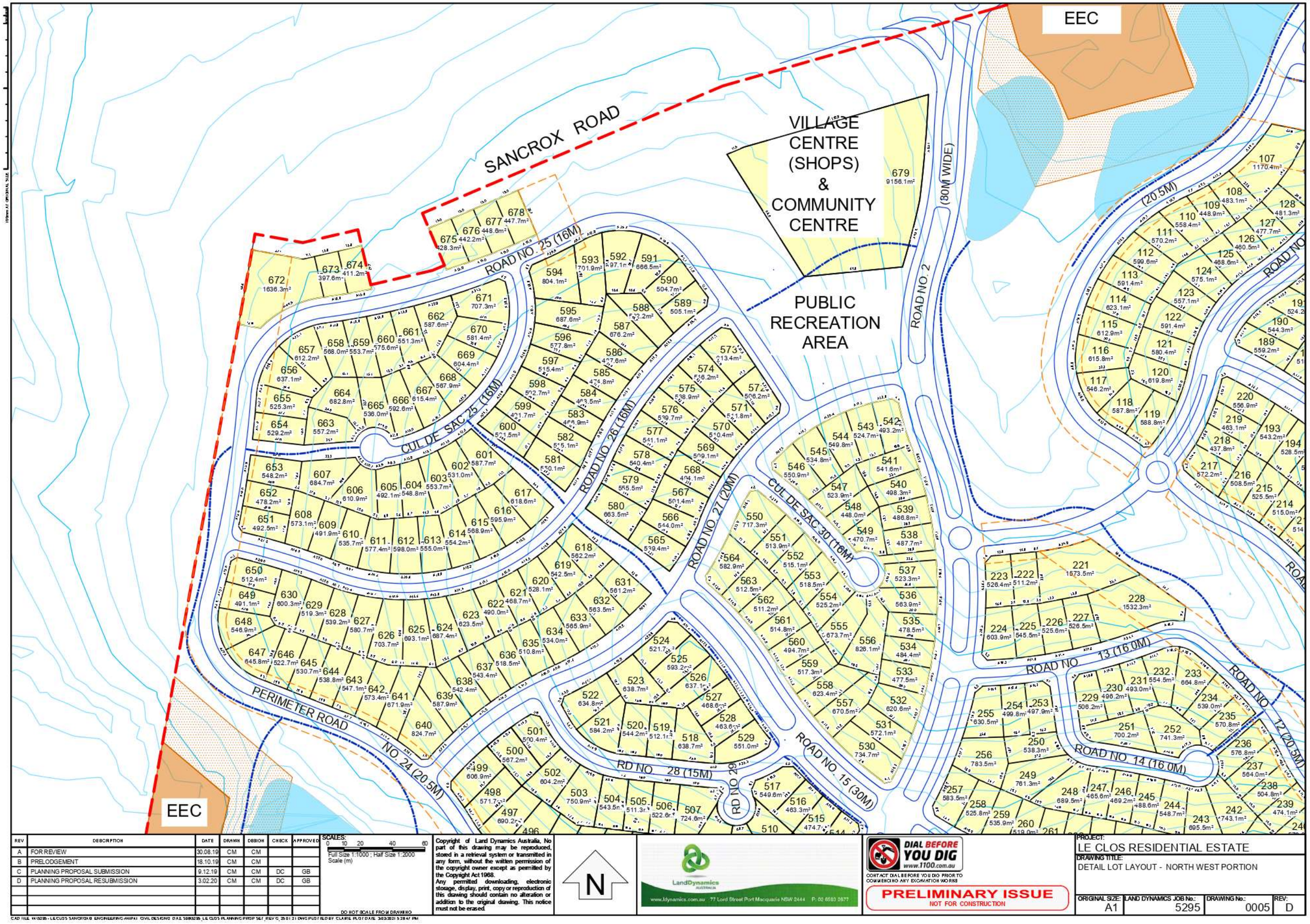

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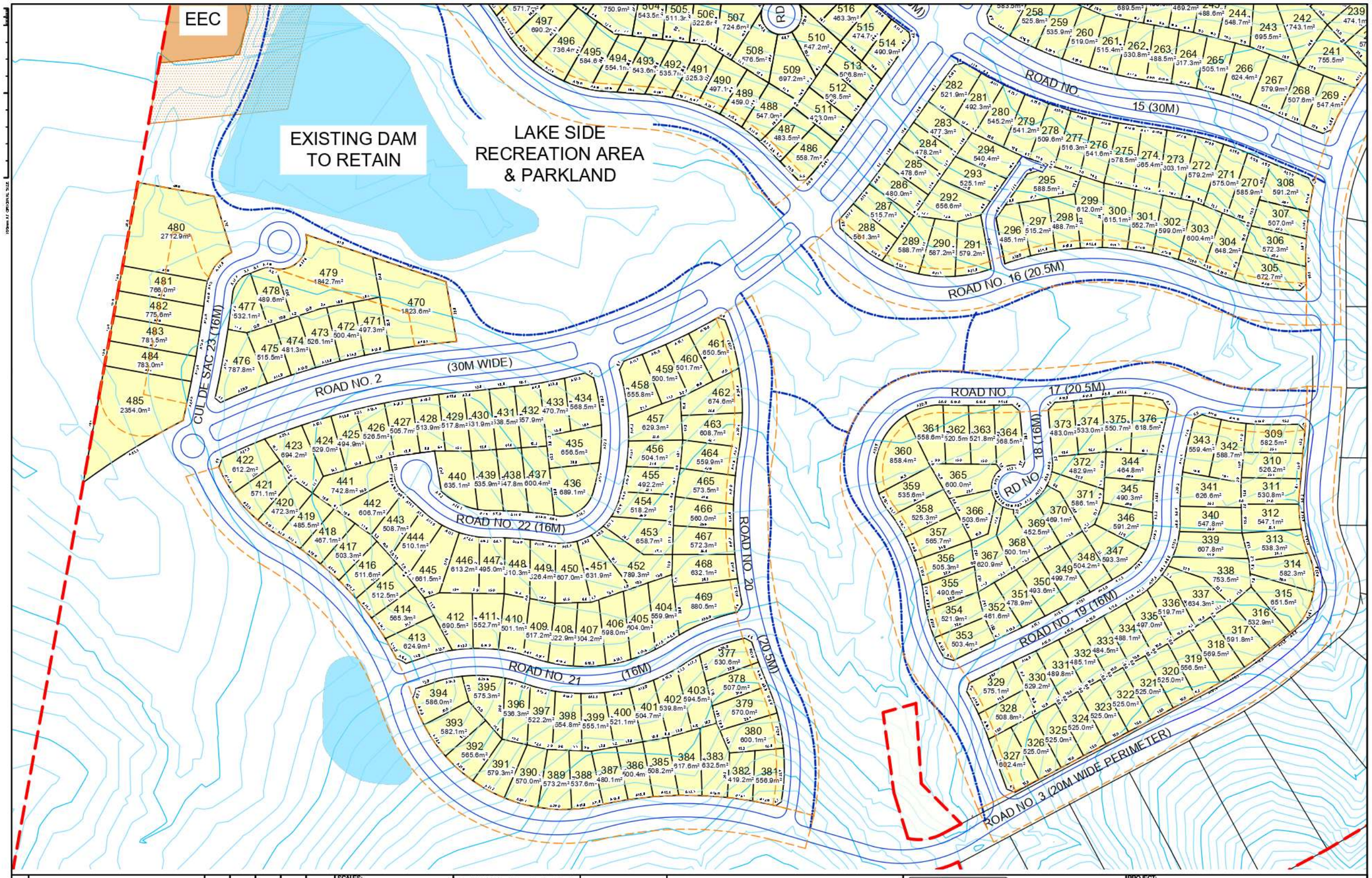

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LE CLOS BUILDING DESIGN GUIDELINES

Le Clos Design Philosophy

Le Clos at Sancrox is the latest premium estate on the Mid North Coast of NSW. Situated at Sancrox and set within a bushland & semi-rural setting, this estate offers affordable living close to all facilities within the Port Macquarie and Wauchope precinct.

Le Clos aims to establish its own character – for homes, their gardens and in the way homes relate to the street, public spaces and tie in with the natural environment.

To retain the value of your investment these design guidelines have been prepared with the intention of ensuring a higher than average level of design in both the streetscape, dwellings and private gardens without the imposition of adding additional cost.

Purpose of Design Guidelines

The purpose of the Le Clos Design Guidelines is twofold.

1. To guide the design requirements within the public realm i.e. including street furniture, materials used, planting themes, maintenance standards
2. to outline design standards of individual houses and their private landscapes by ensuring their integration into the defined character of Le Clos. The guidelines are necessary to ensure that all residential development provides a high quality living environment and provides a high standard of design. In essence these guidelines will maintain, protect and enhance your most valuable asset.









The Approval Process

These guidelines have been written in the form of a Checklist. These guidelines will assist your discussions with your architect or builder and to help gain development approval for your home.

Your home must also meet Australian Standards, requirements of the Building Code of Australia, relevant legislation of the Port Macquarie Hastings Council LEP and DCP along with other relevant legislation relating to homes and neighbouring properties.

Steps to Approval and Construction

The following steps will need to be taken to achieve the necessary approvals and statutory approvals to build your house at Le Clos.

STEP 1	Review Port Macquarie Hastings Council DCP (or complying development) and LEP requirements, Le Clos Design Guideline requirements and the 88B Instrument in your Sales Contract
STEP 2	Submit home and landscape design plans, material and colour selections, Le Clos guideline checklist and application forms to the Le Clos Design Co-coordinator for approval.
STEP 3	Submit Development/Complying Development Application and Construction Certificate to the relevant approval authority/certifier.
STEP 4	Commence construction according to approved plans within 18months of the settlement of your land

LE CLOS BUILDING DESIGN GUIDELINES

The Design Guidelines

DESIGN ELEMENT	DESIGN GUIDELINES	COMPLIANCE (tick to confirm)
Building Setbacks		
	• Building setbacks to the primary road frontage shall be 4.5m from the front property boundary as per PMHC DCP 2011	
	• Varied front setbacks are encouraged resulting in an interesting, articulated façade and streetscape	
	• To downplay the visual dominance of the garage and its impact the garage is to be setback from the building frontage. PMHC DCP 2011 requires minimum garage setbacks but an increased setback is encouraged	
Fencing		
Front Fencing	• Fencing is not permitted to front boundaries or side boundaries in front of the building alignment. Front fencing is not permitted to the boundary on corner splays	
	• Hedging or screen planting is encouraged	
Interalotment Fencing	• All interalotment boundary fencing is to be 1.8m high alternate lapped and capped timber fencing. This fencing shall only commence at the building alignment line	
Fencing to Corner Lots	• Fencing to secondary frontages is not encouraged. If required for security or privacy purposes then a setback of 1m is required from the boundary which is stepped every 6m at a minimum.	
	• Landscaping is required to the street side of the fence.	
	• The fence is to have a minimum of 40% transparency. Approved fencing types include painted or stained timber slat, or powder coated aluminum slats with timber or rendered upright posts or columns.	
	• Colourbond or similar fencing is not permitted	

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LE CLOS BUILDING DESIGN GUIDELINES

Retaining Walls		
	• Retaining walls are not permitted to the front boundary but are to be setback a minimum of 1.0 metre.	
	• Planting is encouraged to soften retaining walls	
	• Retaining walls to be a maximum of 900mm high	
Driveways		
Driveway Crossovers	• Vehicle crossovers (between road kerb and lot boundary) are not to exceed 3.5m in width	
Driveway Materials	• Driveway materials are to include unit paving. exposed aggregate and coloured and stenciled concrete.	
	• Plain concrete is not permitted	
Building Form		
	• All building designs are to address the streetscape and open space reserves	
	• Buildings on corner lots are to address both street frontages	
Design elements	• Buildings are to have well designed elements including:- - a well defined sense of entry with the main entry being clearly recognisable from the street; - the building is to be well proportioned and articulated including any upper storeys (suggested that maximum unarticulated façade length is 5m with a minimum step of 450mm); - incorporates front verandahs, balconies and decks - repetitious or similar facades and colour schemes are discouraged where they can be immediately seen together	
Building materials	• A mixture of external materials and elements is encouraged	
	• Facebrick is to be no more than 30% of the total façade facing the street	
	• Where masonry is proposed for two story dwellings the upper story is to incorporate lightweight materials	
Building colours	• Variations in colour and hue are encouraged	
	• Colour schemes are to be submitted as part of the approval process	
	• Bold colours are only acceptable as minor elements	

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LE CLOS BUILDING DESIGN GUIDELINES

Garages		
	• Garages are to be setback a minimum 1.0m from the front building line	
	• Triple garages or greater are not permitted	
	• Carports are not permitted	
	• Ancillary storage of boats, caravans or additional vehicles must not be visible from the street.	
Roof Form		
Roof Overhangs & Eaves	• Roof overhangs and eaves must be a design features of all homes. • Eaves must project a minimum of 450mm from the building face to provide adequate shelter from the sun and wind-driven rain	
Roof Shape and Pitch	• For skillion roofs a minimum pitch of 10 degrees is required; for hip roofs a minimum 22 degrees is required	
Roof Materials	• Roofs must be colourbond or flat roof tiling.	
	• Highly reflective materials are to be avoided	
External Elements		
Roof mounted fixtures	• Fixtures such as television antennae, satellite dishes, air-conditioning units and solar hot water storage devices must not be visible from the street or open space reserves	
	• Solar panels must be integrated into the roof form	
Hot water systems	• Must be screened from the street and open space reserves	
Air Conditioning	• Air conditioning and heat pump systems must be located to reduce noise to neighbours	
	• Must be screened from the street and open space reserves	
Rainwater tanks	• Must be screened from the street and open space reserves	
	• Colour of the tank must be integrated with the colour scheme of the dwelling	
Garbage Bins	• Must be screened from the street and open space reserves	
Clothes Drying	• Must be screened from the street and open space reserves	
Storage Sheds	• Are not to be located in front gardens	
	• Will not obstruct neighbours views	
Landscape Design		
	• At least 50% of the front garden area is to comprise planted and mulched garden beds. The balance can comprise turf, feature paving, decorative gravel	

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	• Landscape features to compliment the home are encouraged e.g. water features, sculptures	
	• Plant at least two small/ medium trees within the front garden	
	• Retaining walls are to be set back a min 1.0m from front boundary with materials selected to compliment the house	

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LE CLOS BUILDING DESIGN GUIDELINES

Medium Density Developments

Medium Density developments in the form of Residential Flat Buildings will also require compliance with the Apartment Design Guide, which provides design criteria and general guidance to satisfy the principles within SEPP 65 (State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development).

The requirements within these Building Design Guidelines must still be achieved for increased densities to achieve a consistent character for Le Clos, with the Apartment Design Guide prevailing where there is an inconsistency



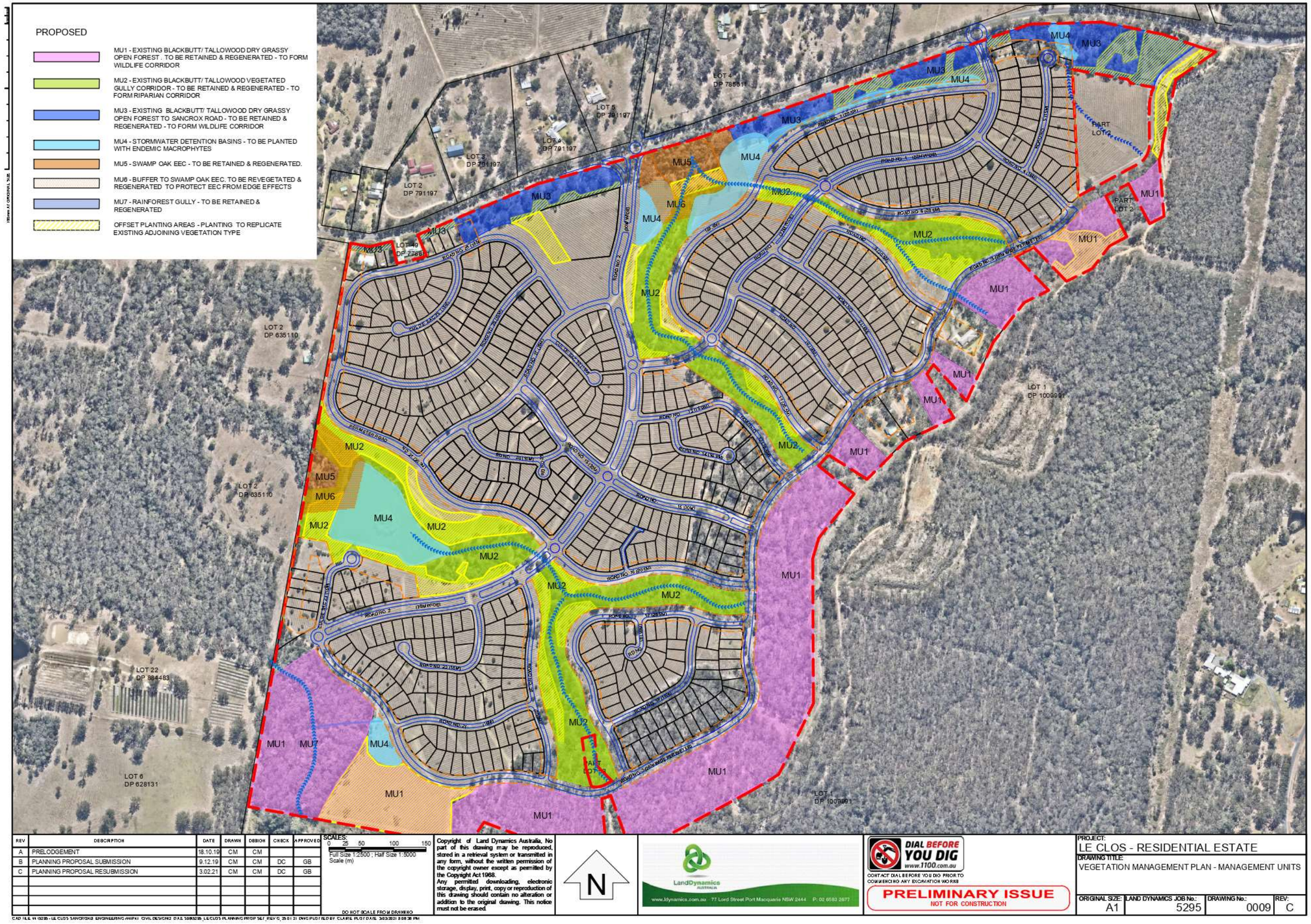
Residential flat buildings and townhouses to be setback from the street to allow landscaping to soften & enhance the streetscape character of the precinct










PROPOSED
MU1 - EXISTING BLACKBUTT/ TALLOWOOD DRY GRASSY OPEN FOREST . TO BE RETAINED & REGENERATED - TO FORM WILDLIFE CORRIDOR
MU2 - EXISTING BLACKBUTT/ TALLOWOOD VEGETATED GULLY CORRIDOR - TO BE RETAINED & REGENERATED - TO FORM RIPARIAN CORRIDOR
MU3 - EXISTING BLACKBUTT/ TALLOWOOD DRY GRASSY OPEN FOREST TO SANCROX ROAD - TO BE RETAINED & REGENERATED - TO FORM WILDLIFE CORRIDOR
MU4 - STORMWATER DETENTION BASINS - TO BE PLANTED WITH ENDEMIC MACROPHYTES
MU5 - SWAMP OAK EEC - TO BE RETAINED & REGENERATED.
MU6 - BUFFER TO SWAMP OAK EEC. TO BE REVEGETATED & REGENERATED TO PROTECT EEC FROM EDGE EFFECTS
MU7 - RAINFOREST GULLY - TO BE RETAINED & REGENERATED
OFFSET PLANTING AREAS - PLANTING TO REPLICATE EXISTING ADJOINING VEGETATION TYPE
LOT 2 DP 791197
LOT 3 DP 791197
LOT 4 DP 791197
LOT 5 DP 791197
LOT 4 DP 785511
LOT 49 DP 7268
LOT 2 DP 635110
LOT 22 DP 864483
LOT 6 DP 628131
LOT 1 DP 1009991
PART LOT 2
ROAD NO. 1 (20M WIDE)
ROAD NO. 2 (18M WIDE)
ROAD NO. 3 (16M WIDE)
ROAD NO. 4 (16M WIDE)
ROAD NO. 5 (16M WIDE)
ROAD NO. 6 (16M WIDE)
ROAD NO. 7 (16M WIDE)
ROAD NO. 8 (16M WIDE)
ROAD NO. 9 (16M WIDE)
ROAD NO. 10 (16M WIDE)
ROAD NO.

LandDynamics AUSTRALIA

10 December 2019

Job No.5295

The General Manager
Port Macquarie Hastings Council
Corner Lord and Burrawan Street
PORT MACQUARIE NSW 2444

Attention: Melissa Watkins / Vanessa Penfold

Dear Melissa & Vanessa,

Re: Voluntary Planning Agreement Request – Planning Proposal – Le Clos Sancrox

Further to early discussions held with Peter Cameron, Council's then Manager – Strategic Planning, we wish to initiate and investigate through the Voluntary planning Agreement process, the ability to meet developer contributions requirements by way of construction or upgrade of Sancrox Road.

We also note that a Sewer Pump Station and rising main will be required to serve not only this development but will cater for other land in the Sancrox area.

Both matters are to form part of negotiations for the VPA.

We have previously requested to meet to determine the Heads of Agreement and look forward to doing so in the near future.

We feel that there is the opportunity for a Sancrox specific material public benefit in a VPA in lieu of standard contributions.

Yours faithfully

Graham Burns
Director – Land Dynamics Australia

Land Dynamics AUSTRALIA
77 Lord Street, Port Macquarie NSW 2444
Ph: 02 6583 2677
www.ldynamics.com.au

ABN 63 137 881942

COORDINATED LEGAL ENTITY (CLE)- FORMED BY LE CLOS SANCROX LOT OWNERS (LCSLO)

Port Macquarie Hasting Council (PMHC) met on 19th September 2018 to consider 'Stage 1' (Outline) Planning investigations for rezoning for Sancrox and Fernbank Creek areas in 2018/19. Resolution 12.03 required the Le Clos Sancrox Lot Owners (LCSLO) to submit a Precinct rezoning and DA proposal in parallel with the "Stage 1" outline plans of the PMHC Planning staff, PROVIDED ONLY that LCSLO re-organize to act as one Coordinated Legal Entity (CLE) in all interactions with Council.

At Meetings conducted 12th and 20th November 2018 the LCSLO have resolved to reorganize as a CLE via a Deed of Participation and Power of Attorney in Representatives to negotiate on their behalf. The LCSLO have also committed to consolidating their land holding on the occurrence of a "Significant" event and to provide funding for necessary legal and planning action.

This report outlines the process followed for CLE formation, the actions arising and stakeholder expectations created as a consequence.

The Process for Formation of the LCSLO's CLE

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Formation of the Le Clos Sancrox Lot Owners (LCSLO) Coordinated Legal Entity (CLE)

Considerations – The PMHC Meeting of 19th September 2018 Item 12.03

Points 1, 2, 3, 4 and 6 of Port Macquarie Hastings Council (PMHC) Resolution 12.3 of 19th September impacting Le Clos Sancrox Landowner's (LCSLO) land (refer Appendix 1) required:

1. The General Manager to commence Stage 1 Planning for the Fernbank Creek and Sancrox areas in 2018/19.
2. The General Manager to review planning for the West Lindfield deferred land in 2018/19, potentially to supplement the supply of residential land in the short term.
3. Confirmation from LCSLO that landowners can act as one CLE (Coordinated Legal Entity).
4. Subject to confirmation of 3, that the Council invite the LCSLO to submit a proposal which can be considered by Council in parallel with their outline planning
6. The submission of an update report to the February 2019 meeting.

First Response by LCSLO Representatives

In response to the PMHC Resolution 12.03 of 19th September 2018 the representative group:

1. Contacted Solicitors Moin, Morris and Schafer and requested they provide an advice in respect of the requirement for a landowner CLE.
2. Requested Land Dynamics Australia (LDA) to provide a likely cost estimate for a response to any "in parallel" planning exercise.
3. Developed a **proposal** for Lot Owner consideration based upon the Moin, Morris Schaefer and LDA advice, and
4. Set up for "Town Hall" type meetings to be conducted in Sydney 12th November 2018 and Port Macquarie 20th November 2018 for discussion and decision making.

The CLE Proposal for LCSLO Consideration

The CLE proposal that LCSLO were asked to consider was:

1. Agreement to prepare and sign a Deed of Participation, and a Power of Attorney, which includes a commitment to transfer land into a new entity (with ownership based on Valuation prices) at the occurrence of a 'Significant Event'
2. The 'Significant Event' to be a committed buyer(s), for either some or all the land, at rezoned / DA approved prices.
3. Agreement to construct a Budget to cover costs of planning for rezoning / DA and ways to fund.
4. Agreement to top up the Contribution Account reserve to cover costs of Solicitors, administration, contingencies etc.
5. When appropriate, the formation of a best ownership structure (new entity) to house Land for Stage 2 (and thereafter) development, and
6. Upon the occurrence of a 'Significant Event' the transfer of all existing Lots into one consolidated Lot owned by the new entity, possibly with Sub-lots, and a staged DA enabling development on each of the possible Sub-lots as market conditions dictate

The Outcome from "Town Hall" Meetings

The objective of the 'Town Hall' meetings was an agreement by all 51 Lot Owners to act as a CLE collective.

The Sydney meeting recognized that there would not be enough time to develop and sign off all necessary documentation both to formalize the proposal and exactly meet Points 3 and 6 of the PMHC resolution by the February 2019 PMHC meeting. As an interim solution Fred Chilton and John Allen (both Le Clos Sancrox Lot owners with legal qualifications) prepared a meetings resolution document which meeting participants were asked to sign. Following the Sydney meeting the Chilton/ Allen document was presented to the Port Macquarie meeting participants and as well on forwarded to any LCSLO not able to attend either meeting, for consideration and sign off as appropriate.

The Chilton/ Allen document stated:

We the under signed agree to the proposed action outlined at meeting on the 12th November 2018, and to Maurice Driscoll, Jim Wade, Tania Magon and Jodie Chapman being our representatives in dealing with Port Macquarie Hasting Council.

By 19th December 2018 there was a sign off on the Chilton/ Allen document by Lot Owner of 49 of the 51 Lots. By 29th January 2019 all issues with one of the Lot owners who had not signed had been resolved while the other has agreed to sell their Lot to existing Lot Owners and the sale process is in hand. The new owners of the 51st Lot are in full agreement with the Chilton/ Allen document.

Therefore, as at the date of this report the Objective of all 51 Lot Owners acting as a CLE collective has been achieved.

Concurrent Actions Arising

The concurrent actions taken since November 2018 are as follows:

1. In December 2018 the Council was informed of the outcome of the Town Hall meetings, initially by phone with follow up correspondence.
2. On 3rd January 2019 a meeting was held with the PMHC Director of Strategy and Growth and PMHC Planning staff, refer minutes attached as Appendix 2
3. In December 2018 Moin Morris and Schafer prepared a first draft Deed of Participation and Power of Attorney. Since then there have been six drafts and reviews by Representatives leading to the draft 7. This draft, Version 7, has been distributed to all Lot Owners for review and signing if approved. Version 7 is attached to this report, refer Appendix 3.
4. Questions raised in respect only of 3 of the provisions of the version 7 Deed have been answered to the satisfaction of respondents. Therefore, the Solicitor has been instructed to proceed with the Deed of Participation and Power of Attorney sign off process.
5. As has been discussed with PMHC planning staff over the past 13 months, confirmation has been provided to the owners of the 3 Lots upon which houses have been constructed that the part A of their land title will be excluded from the LCSLO collective action, but the part B of their land title will be included.
6. A formal budget in respect of the LDA Planning Costs is awaiting feedback from PMHC in respect of the planning work and reports required. Once that feedback is made available

LCSLO Representatives will establish the initial Planning contribution required to fund LDA's "in parallel" involvement with PMHC Stage 1 Planning for the 'Outline Plan' for Sancrox and Fernbank Creek areas in 2018/19.

7. This report was prepared in response to a request made at the meeting as per 2 above (and Appendix 2) that LCSLO Representatives provide a report for the Council as to the process followed to form the CLE.

Expectation Created

The heightened level of LCSLO interaction since September 2018 leading to the formation of the CLE has both renewed enthusiasm within the Lot Owner group for development of their land and as well created a new set of expectations. For example, as identified in Appendix 2, LCSLO are now asking 'why not' in respect of:

1. The goal of Le Clos Sancrox Land rezoned and a DA Approved within 2 years?
2. An acceptance of an offer of assistance to PMHC by LDA (e.g. with mapping) to help Council in any way possible to progress the Outline Plan preparation and ensure the in parallel development of a Le Clos Sancrox proposal remains on track for 2018/19?
3. The PMHC Project plan providing the required investigations/studies and opportunities for input by Le Clos landowner representatives? (This will enable the CLE to develop a Planning Budget and arrange for funding by LCSLO).
4. Correction of the error in part 4 of Council's Sep 2018 resolution (i.e. correcting to reference part 1 instead of part 2)?
5. An immediate 'go ahead' with Items 1 and 4 of Resolution 12.03 of 19th September 2018?
6. The setting of milestone events and deadline dates for both the Le Clos Sancrox proposal development and PMHC Outline Planning for Sancrox and Fernbank areas? (The LCSLO have noted that this was an approach taken by PMHC at both the June and September 2018 Meetings).
7. The setting up of report back requirements to ensure both Le Clos Sancrox and PMHC planning processes remain on track. (i.e. a provision in any February 2019 meeting resolution similar to that of item 6 of Resolution 12.03 of 19th September 2018)?

Appendix 1 – Resolution PMHC 19 September Item 12.03

12.03 STRATEGIC LAND USE PLANNING - FERNBANK CREEK AND SANCROX

Councillor Levido declared a Non-Pecuniary, Significant Interest in this matter and left the room and was out of sight during the Council's consideration, the time being 06:41pm.

Councillor Griffiths declared a Pecuniary Interest in this matter and left the room and was out of sight during the Council's consideration, the time being 06:41pm.

Mr Maurice Driscoll, Le Clos Sancrox Lot Owners, addressed Council in opposition of the recommendation and answered questions from Councillors.

Mr Graham Burns, Land Dynamics Australia, addressed Council in opposition of the recommendation and answered questions from Councillors.

RESOLVED: Hawkins/Turner

That Council:

1. Request that the General Manager commence Stage 1 planning for the Fernbank Creek and Sancrox areas in 2018/19.
2. Request that the General Manager commence a review of planning for the West Lindfield deferred land in 2018/19, to potentially supplement the supply of residential land in the short term.
3. Write to the Le Clos Sancrox landowner representatives seeking confirmation from the landowner group that the landowners can act as one coordinated legal entity.
4. Subject to confirmation of 3 above, invite the landowner group to submit a proposal which can be considered by Council in parallel with, but not before completion of the preparation of the Outline Plan in 2 above.
5. Note the additional resource requirements as a result of recommendations 1 to 4 above and allow the General Manager to resource this increased program appropriately.
6. Submit an update report on all the above actions to the February, 2019 meeting of council

CARRIED: 6/0
FOR: Alley, Dixon, Hawkins, Intemann, Pinson and Turner
AGAINST: Nil

Councillor Griffiths returned to the meeting, the time being 07:02pm.

Councillor Levido returned to the meeting, the time being 07:02pm.

Councillor Alley left the meeting, the time being 07:05pm.

Councillor Alley returned to the meeting, the time being 07:06pm.

Appendix 2 – Minutes of Meeting Representatives and PMHC held 03/01/2019

From: Sandra Bush
To: Maurice Driscoll
Cc: Jeffery Sharp; Carina Gregory; Graham Burns; Donna Clarke
Subject: RE: Sancrox & Fernbank Creek Outline Plan - Le Clos Sancrox landowner representatives meeting 3 Jan 2019
Date: Tuesday, 8 January 2019 9:56:23 AM
Attachments:

Hi Maurice,

Thanks for your latest email. The suggested changes to the meeting notes are agreed (shown in blue) and the revised notes are below for your records:

The key points discussed at your meeting with Jeffery Sharp, Carina Gregory and myself on 3 January 2019 are as follows:

- Maurice provided an update on the consultation that has occurred with Le Clos landowners since Council's Sep 2018 resolution and advised that a Draft Deed and Power of Attorney have been prepared for endorsement by the landowners to create a co- ordinated legal entity. All of the landowners are in agreement, with the exception of two owners with properties on the periphery of the Estate. Jeffery recommended that the Draft Deed include details of the two properties that will not form part of the Deed. Maurice agreed.

- Details of the landowner consultation and copy of the draft documentation to be provided by Maurice for inclusion in the Feb 2019 report. To meet the agenda reporting deadline the documentation is to be submitted by COB 7/2/19. Jeffery noted that the Feb 2019 report will provide an update on the actions taken in response to the Sep 2018 resolution. The report will also need to address an error in part 4 of Council's Sep 2018 resolution (i.e. reference to part 2 instead of part 1).

- Maurice asked for clarification on part 4 of the Sep 2018 resolution and, in particular, what work will be required by Land Dynamics so that project milestones and costs can be estimated. Graham Burns added an anticipation that the planning instruments for Le Clos Sancrox land could be kept straightforward. Graham's input, discussed and noted, was:
  - A road link to the west to Rawdon Island Road
  - The sewer pump station already identified by PMHC on unformed Public Road leading to Geoff Freeman's land
  - Updates to previous planning reports
  - Environmental considerations recently undertaken updated
  - Enquiry by design for community consultation

  Jeffery noted that detail of the planning process, the required investigations/studies and opportunities for input by Le Clos landowner representatives will be provided following completion of a project plan.

- Graham requested clarification on the timing for the Outline Plan preparation. Sandra advised that the Sep 2018 report suggests a timeframe of 18 months to 2 years. Graham suggested a

scheduling goal ought direct Council and LDA/LCSLO planning action. He proposed that the Goal be: "Le Clos Sancrox land Rezoning and DA within 2 years". Jeffery noted that whilst this was the goal, it might not be achieved.

- Graham also wanted to know if a planning proposal to rezone the Le Clos land could be prepared ahead of the Outline Plan. Sandra advised that endorsement of the Outline Plan by the Department of Planning and Environment will be required prior to any rezoning as the land is not mapped in the urban growth area boundary of the Regional Strategy.

- Donna asked if the requirement for an Outline Plan is a new approach by State Government/Council. Sandra advised that the same approach was taken for Areas 13, 14 and 15. The only difference is that once the Outline Plan is prepared, precincts will be identified for detailed rezoning investigations in stages due to the extent of the land involved. As noted in the Sep 2018 Council report, precincts are likely to be identified "based on land supply, infrastructure sequencing, the planning issues that need to be addressed, and the willingness of landowners to cooperate to achieve the intended outcomes."

- Graham was particularly interested in resource requirements and timing and therefore offered assistance from Land Dynamics (e.g. mapping) to help Council in any way possible to progress the Outline Plan preparation.

Kind regards,

Sandra Bush

Senior Strategic Planner Strategy & Growth

p (02) 6581 8025

Appendix 3 – The Participation Deed and Power of Attorney

REFER TO NEXT PAGE

LE CLOS SANCROX DEVELOPMENT

PARTICIPATION DEED

DRAFT

MOIN
MORRIS
SCHAEFER

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THIS DEED dated day of 2019

BETWEEN The representatives set out in Schedule 1 (**Representatives**)

AND The Owners set out in Schedule 2 (**Owners**)

BACKGROUND

A. The Owners each own one or more Lots in the Le Clos Sancrox development at Sancrox Road, Port Macquarie New South Wales, which together form the Land. Each Owner wishes to sell their Lot but recognises that the Land must be dealt with as one parcel and rezoned by the Council prior to it being saleable at an attractive price.

B. Council have indicated that they would prefer to deal with one party representing all of the Owners rather than each Owner individually. It would also be more practical for the Owners to appoint representatives to act on their behalf for selling the Land once is its rezoned.

C. Each Owner recognises the need to co-operate and work together in harmony to achieve the goal referred to in Recital A.

D. The Owners have agreed to appoint the Representatives as their attorneys and representatives for the purpose of:

(a) making an application to Council to rezone the land; and

(b) attempt to identify a property developer or other interested purchaser for all or part of the rezoned Land and when identified

(c) submit a Development Application to Council to enable the re-organisation of existing lots to form new Lots to hold existing lots on which dwellings are located, Lots which have been identified as having potential purchasers and at least one other Lot holding the remainder of the Land

(d) upon approval by Owners to set up a legal entity to effect and finalise any sales and hold any remainder Lot(s).

E. This Deed sets out the terms of that appointment.

AGREEMENT

1. Definitions

1.1 In this Deed:

(a) **Council** means the Port Macquarie-Hastings Council;

(b) **Budget** means the budget for the Project as set out in Schedule 4 or as amended by an Ordinary Resolution;

(c) **Commencement Date** means the date set out in Schedule 1;

(d) **Land** means the land set out in Schedule 1;

(e) **Lot/s** means the lots forming the Land as set out in Schedule 1;

(f) **Moin Morris Schaefer** means the legal firm trading under that name the proprietor of which is Moin Morris Schaefer Pty Ltd;

(g) **Ordinary Resolution** means a resolution of more than 50% of the Owners in accordance with clause 9;

(h) **Ownership Percentage** means the percentage allocated to each Lot as set out in the 5th column of Annexure 1A which corresponds to the documents previously communicated to and accepted by the owners;

(i) **Owner** means the registered proprietor or proprietors for the time being of any Lot;

(j) **Project Account** means the bank account identified in Schedule 1;

(k) **Project** means the development and consolidation of the Land and the marketing and sale of the Land pursuant to this Deed;

(l) **Project Costs** means all costs properly incurred by the Representatives in advancing the Project and includes taxes if assessed on the Representatives in respect of the Land and any claims in any forum against the Representatives acting in accordance with the terms of this deed;

(m) **Project Proceeds** means all assets and income of the Project and includes:

(i) Owners' contributions;

(ii) the sale proceeds for the Land or any part of it; and

(iii) any other income of the Project;

net of Project Costs;

(n) **Related Party** means in relation to a Representative or an Owner:

(i) a relative or spouse or de facto spouse;

(ii) a friend or associate;

(iii) an entity controlled by them; and

(iv) an entity, partnership or trust in which they have shares or any interest including as beneficiary under a discretionary trust;

(o) **Related Party Dealing** means a contract or financial arrangement with a Related Party;

(p) **Resolution** means an Ordinary or Special Resolution as the case may be;

(q) **Sale Contract** includes a contract of sale, a put and/or call option agreement, a right of first refusal or any other contractual or deed document whereby a 3rd party obtains a right to purchase the Land or part of it;

(r) **Services** means the services provided by the Representatives to the Owners under this Deed as more fully described in Schedule 1;

(s) **Special Resolution** means a resolution of 75% or more of the Owners in accordance with clause 9;

(t) **Sunset Date** means the date set out in Schedule 1;

1.2 **Interpretation**

(a) This Deed is governed by the laws of New South Wales and the parties submit to the non-exclusive jurisdiction of the courts of that state.

(b) In the interpretation of this Deed:

(i) References to legislation or provisions of legislation include changes or re-enactments of the legislation and statutory instruments and regulations issued under the legislation;

(ii) Words denoting the singular include the plural and vice versa, words denoting individuals or persons include bodies corporate and vice versa, references to documents or Deeds also mean those documents or Deeds as changed, novated or replaced, and words denoting one gender include all genders;

(iii) Grammatical forms of defined words or phrases have corresponding meanings;

(iv) Parties must perform their obligations on the dates and times fixed by reference to the capital city of New South Wales;

(v) Reference to an amount of money is a reference to the amount in the lawful currency of the Commonwealth of Australia;

(vi) If the day on or by which anything is to be done is a Saturday, a Sunday or a public holiday in the place in which it is to be done, then it must be done on the next business day;

(vii) References to a party as a singular includes reference to all persons which make up that party;

(viii) References to a party are intended to bind their executors, administrators and permitted transferees; and

(ix) Obligations under this Deed affecting more than one party bind them jointly and each of them severally.

2. Appointment

2.1 The Owners appoint the Representatives to provide the Services in accordance with the provisions of this Deed.

2.2 The Representatives accept their appointment and agree collectively and individually to perform the Services in accordance with the provisions of this Deed.

2.3 In order for the Representatives to effectively and appropriately carry out their duties and obligations under this Deed each Owner must:

(a) provide to the Representatives on signing of this Deed as an attachment the following details:

i. the Lot number that they own;

ii. their full names;

iii. their full residential address;

iv. their telephone number;

v. their email address (for the service of notices and reports under this Deed; and

vi. their mortgagee details (if applicable) including the bank's address.

(b) ensure that if any of their details change they notify the Representatives by email of the change or changes to those details.

2.4 The Representatives promise to keep the details received pursuant to clause 2.3 confidential and only use the details for a purpose associated with this Deed and the Project.

3. Provision of the services

3.1 The Representatives will:

(a) Act in all matters promptly, diligently and honestly and exercise all due care, skill and attention in providing the Services;

(b) Ensure that the Services are rendered in compliance with any relevant laws, codes, standards and regulations; and

(c) Comply with all legal requirements as may from time to time apply to the provision of the Services.

4. Funding the Project & the Budget

4.1 It is not anticipated that the Representatives will borrow money on behalf of the Owners but instead all funding will be contributed by the Owners in advance.

4.2 Owners must contribute their share of the Budget to the Project Account according to their Ownership Percentage.

4.3 The Owners may alter the Budget by Special Resolution, and if increased, Owners must contribute their share of the increased Budget to the Project Account.

4.4 The parties intend that all costs of the Project will be paid from the Budget held in the Project Account so that Owners are not required to make multiple separate payments to suppliers or creditors. If the Representatives

consider more funds are necessary than the Budget allows, they must make a request to the Owners to increase the Budget. Therefore, the Representatives must only exceed the Budget (i.e. spend their own funds) in exigent circumstances where a failure to do so may jeopardise the Project.

4.5 Any income arising from the Project or the Land (e.g. rent or lease fees) must be promptly deposited into the Project Account.

4.6 The Representatives may not borrow money on behalf of the Owners except by authority of a Special Resolution.

4.7 For the avoidance of doubt, all funds held in the Project Account are held as attorney for all of the Owners as tenants in common in the proportions determined in accordance with the Owners' Ownership Percentages.

4.8 Funds in the Project Account must only be spent on the Project.

4.9 If an Owner fails to comply with their obligations to contribute to the Budget, or to the Representative's indemnity, the Representatives may offset against such debt any payment of Project Proceeds to such Owner.

5. Representative's Indemnity

5.1 The Owners jointly and severally indemnify the Representatives from and against all Project Costs.

5.2 The Owners jointly and severally acknowledge and agree that as long as the Representatives act in good faith and in accordance with the terms of this Deed then no claims of any nature whatsoever can be brought against them by any Owner.

6. Access to site

The Owners consent to the Representatives, their agents and contractors, accessing and traversing the Land and doing all things necessary on the Land to complete the Project.

7. Work health and safety & risk

The Representatives will ensure that they and any of their contractors or agents comply with the requirements of all relevant work health and safety legislation or regulations in relation to the provision of the Services.

8. Liability for costs & taxes

8.1 The Owners are each independently responsible for any taxes assessed on them in relation to the Land, this Project or this Deed.

8.2 Each party is responsible for their own costs in relation to the administration, accounting costs and legal costs of their respective entities, except as otherwise provided in this Deed.

8.3 The Owners are responsible for usual ownership costs of the Land including rates and insurance.

9. Meetings and Resolutions of the Owners

9.1 The Owners can call a meeting of the Owners by any 5 or more Owners giving written request to the Representatives. The Representatives then must call a meeting to be held within 21 days and give notice of the meeting to all Owners. If the Representatives fail to call the meeting within 7 days, those Owners who made the request may call the meeting and give notice to all Owners. All costs of the meeting are Project Costs.

9.2 The Representatives may call a meeting and give notice.

9.3 The notice of meeting must include:

(a) the date, time and place of the meeting; and

(b) the text (and associated documents, if any) of any Resolutions to be put to the Owners.

9.4 Notwithstanding clause 9.3, an Owner or the Representatives may at a meeting propose a Resolution which was not included in the notice of meeting.

9.5 The Owners at the meeting must first elect by poll a person to chair the meeting.

9.6 Each Owner has 1 vote. For the avoidance of doubt where there is more than one registered proprietor of a Lot then the Owners of that Lot collectively only have one vote.

9.7 On a show of hands, the chair's decision is conclusive evidence of the result of the vote. The chair's decision on any matter of procedure is final.

9.8 A Resolution may be passed by the Owners:

(a) voting on a show of hands or poll at an Owners meeting, provided that for determining whether a vote is passed, Owners who have not attended the meeting or voted by email or proxy are taken to have abstained from the vote; or

(b) in accordance with clause 10.

9.9 A poll must be held if 5 or more Owners request.

9.10 An Owner may appoint another person (including an Owner) as their proxy for a meeting. There is no specified form for the appointment of a proxy, but it must be in writing, and must state how the proxy must vote on proposed Resolutions. A proxy may not speak at the meeting. The proxy must vote in accordance with the proxy form, and may vote on a show of hands or in a poll. A proxy who is also an Owner, may vote as the Owner and also as proxy for another Owner.

9.11 Meetings may be held by use of technology and persons attending by technology may participate in a poll by directing the chair how they wish to vote.

10. Resolutions by email

10.1 A Resolution of any kind may be passed by email as follows:

(a) a proposed Resolution must be supported by at least 5 Owners (unless the Resolution is proposed by the Representatives, in which case no supporters are required);

(b) the proposer of the resolution must email the proposed Resolution to the Representatives, nominating the 5 supporters, and the Representatives must as soon as possible forward the Resolution to
all Owners, including in such email:

(i) the text and relevant documents (if any) for the proposed Resolution;

(ii) a statement that the Owners have a specified number of days (minimum of 3 days) to respond and vote on the Resolution (**voting period**); and

(iii) a copy of this clause 10;

(c) Owners may reply to the email and vote on the Resolution within the voting period;

(d) emails or votes outside the voting period are not counted; and

(e) the Representatives will at the conclusion of the voting period, notify the Owners of the outcome of the Resolution.

10.2 In communicating with the Owners the Representatives must use the email address as provided to them by the Owners pursuant to clause 2.3.

10.3 An Owner may authorise another person (e.g. their solicitor, accountant or a real estate agent) to communicate their votes on Resolutions on their behalf.

10.4 A failure to:

(a) receive notice of a proposed Resolution or meeting; or

(b) to vote or reply to an email from the Representatives or Owners;

because of internet or hardware failure by an Owner does not invalidate the results of the Resolution or meeting.

11. Dismissing or appointing Representatives

The Owners may dismiss a Representative or Representatives, or appoint a Representative or Representatives, by an Ordinary Resolution.

12. Prohibited dealings & activities

The Owners or appointed representatives or occupiers of a Lot must not enter into any act or dealing in relation to the Land which frustrates or hinders the Project without the prior agreement of the Representatives. Examples of prohibited acts or dealings may include:

(a) selling a Lot or any part of the Land other than in accordance with this Deed;

(b) leasing a Lot;

(c) mortgaging a lot after the date of this Deed;

(d) registering a caveat over a Lot without approval of an Ordinary Resolution;

(e) dumping or abandoning rubbish or anything else on the Land;

(f) constructing anything on the Land; or

(g) doing anything which may discourage a purchaser of the Land or delay a Council approval.

13. Reports

The Representatives must provide to the Owners the reports set out in Schedule 1.

14. Identification of Potential Purchaser for some or all of Land.

14.1 The owners authorise the Representatives to seek purchasers for some or all of the Land.

14.2 If purchasers are identified the Representatives shall propose a Special Resolution to seek the Owners approval for the sale.

14.3 If the Owners approve the Resolution, the Representatives shall do all that is necessary to ensure that the sale can proceed including:

(a) Finalising any rezoning necessary;

(b) Set up a legal entity in accordance with clause 15 which will consolidate the Land and effect the sale to the potential purchaser identified;

(c) Submitting to, and seeking to obtain, any necessary Development Applications to Council to create the Lots necessary to affect the sale and produce the other Lot or Lots from the remainder of the land.

15. The entity

15.1 If the Representatives determine at any time, including but not limited to the circumstances set out in clause 14, that the Project may be best advanced by the creation of a new legal entity, or use of an entity previously created by the Representatives, to hold the Land, then they may propose this to the Owners.

15.2 If the Owners by way of Special Resolution approve the creation of a new legal entity or use of a previously created entity to hold the Land, then each Owner must comply with the terms of the Special Resolution.

15.3 In any entity approved in accordance with clause 15.1, each Owner will have an interest (ie shareholding) in that entity in proportion to their Ownership Percentage. To avoid doubt, if an entity that has been previously created by the Representatives is used to hold the Land then they must ensure that their shareholding in that entity is reflective of their Ownership Percentage.

15.4 The Representatives with be the initial directors of the new entity until a Special General Meeting is called to endorse or elect other directors.

15.5 To avoid doubt:

(a) The Representatives may have previously set up a legal entity for ease of administration of the Project and in which case they would each be directors and shareholders of that entity;

(b) the Special Resolution referred to in this clause may contain provisions dealing with among other things, time frames regarding transfer of lots to the approved entity and the transfer could be of nominal consideration.

16. Value of Land

The Representatives will engage a registered valuer to determine the total value of the Land at the time of consolidation and will inform the Owners once the valuation has been received.

17. Mortgages

17.1 The Owners acknowledge the Project will be simpler and more efficient if there are as few as possible mortgages registered over the Lots. The Owners agree to use their best endeavours to pay out and discharge any mortgages secured over their Lots as soon as possible after the Commencement Date.

17.2 The Owners must not during the Project:

(a) grant any charges or mortgages of any kind over their Lots; or

(b) cause or allow the registration of any mortgage over their Lots.

18. Management of the Project vested in the Representatives

18.1 The Owners have appointed the Representatives to carry out the Project and the Owners may not interfere in the management of the Project except to the extent allowed by this Deed.

18.2 The Owners are not entitled to direct the Representatives on any matter, except by Special Resolution or as otherwise authorised by this Deed.

18.3 The Owners primary source of information for the Project will be the Reports. However, the Representatives will respond promptly to all reasonable requests for information relating to the Project.

18.4 The Owners are entitled to information which is expressed to be confidential as the Representatives are entering into agreements on behalf of the Owners, unless confidentiality is required by law.

18.5 The Owners acknowledge that the Representatives may alter the Project after the date of this Deed if necessary to improve the marketability or profitability of the Project. The Representatives may alter such things as:

(a) the timing of the Project (but not the Sunset Date or payment timeframes under this Deed);

(b) shape or other characteristics of the consolidated lot or lots; or

(c) other aspects of the Project.

18.6 The Representatives will notify the Owners of all major alterations to the Project in the Reports.

19. Decision making by the Representatives

19.1 The Representatives must act unanimously wherever possible.

19.2 If the Representatives cannot agree on a unanimous basis, they can act by majority to make a decision, and such decision will bind the Representatives and the Owners.

20. Related party dealings

The Representatives must obtain the approval of a Special Resolution prior to entering into a Related Party Dealing.

21. Parties warranties

21.1 The Representatives severally warrant at all times during the term of this Deed that:

(a) they will act in good faith in relation to their management of the Project and their dealings with Owners and third parties;

(b) they are not in default of any professional obligations from any professional society or organisation;

(c) they are not banned from being a director of a company by the Australian Securities and Investments Commission and have not been censured by any other government department or authority;

(d) they are solvent and not a bankrupt or a former bankrupt,

(e) there are no present claims demands or legal proceedings against them; and

(f) they do not expect to become insolvent during the Project.

21.2 The Owners severally warrant at all times during the term of this Deed that:

(a) each Owner owns the Land legally and beneficially and is able to provide their Lot for the purposes of this Deed;

(b) no other party has any claim on the Land or any rights to the Land which might hinder or prevent the development of the Land or the purposes of the Project except as disclosed on the title at the Commencement Date;

(c) they will at all times use their best endeavours to keep their lots neat and tidy and free from rubbish; and

(d) the Owner is solvent and there is no reason to expect the Owner will not be solvent for the term of this Deed.

21.3 If an Owner owns their Lot/s as trustee, the Owner warrants at all times during the term of this Deed that:

(a) it has entered into this Deed in its capacity as a trustee of the trust which owns the Lot/s, but also in their personal capacity;

(b) it is not aware of any action to remove it or any other joint Trustee as trustee of the trust;

(c) it has power under the trust deed to enter into and perform its obligations under this Deed;

(d) it is not in default under the trust deed, the trust has not been terminated and no vesting of the trust's property has occurred and it is not aware of any action proposed to terminate, or vest the property of, the trust; and

(e) the trust's property has not been resettled, set aside or transferred to any other trust.

21.4 Each of the Owners and Representatives agree to immediately notify the other parties to this deed if any of the warranties become false or misleading and will provide full disclosure to the other parties under this Deed.

22. Commercial feasibility

21.5 Each party is responsible for its own due diligence and analysis of the commercial and economic feasibility of the Project and their obligations under this Deed. No party may rely on any forecasts, budgets, studies, targets or sales figures (**Outcome Representations**) represented by another before or after this Deed is entered into. Each party acknowledges that any such Outcome Representations which were made by one party to another:

(a) should not be relied upon;

(b) are an aspirational goal subject to the variabilities and vicissitudes of property development; and

(c) may not be achieved.

23. Power of attorney

23.1 The Owners will appoint the Representatives as their enduring attorneys using the form of document found in Schedule 5 within 60 days of the Commencement Date. An Owner which is a body corporate will appoint the Representatives as its attorney using a general power of attorney but otherwise on the same terms as the form of document found in Schedule 5.

23.2 The appointment is irrevocable except upon termination or expiry of this Deed.

23.3 The Owners agree not to revoke the appointment of the Representatives as their attorneys outside the terms of this Deed.

23.4 An Owner will be in breach of this Deed if they revoke an appointment of the Representatives as attorney, or purport to do so, outside the terms of this Deed.

24. Exit & assignment

24.1 The Owners acknowledge that for the Project to achieve the highest financial result for all Owners, the Land must be treated as a single parcel. Therefore, an Owner who wishes to exit may be causing financial detriment to the remaining Owners if they do exit. For this purpose, each Owner acknowledges that they have limited rights to exit this Deed.

24.2 An Owner may exit this Deed by selling their Lot/s to another Owner.

24.3 An Owner may only sell their interest in their Lot/s to a person who is not party to this Deed if they cause the purchaser, prior to settlement of the sale of the Lot/s to:

(a) enter into the Accession Deed in Schedule 3; and

(b) appoint the Representatives as their attorneys pursuant to the enduring power of attorney in Schedule 5.

25. Death or Impairment

24.4 In the event of death or permanent disability of a party to this Deed, the legal personal representative and/or successor in title of the deceased/incapacitated Owner shall be bound to complete this Deed.

24.5 The enduring attorney of an incapacitated Owner, or the executor or administrator of a deceased Owner, may vote on resolutions and otherwise enjoy the rights and obligations of the Owner they represent under this Deed.

24.6 In the event of death of an Owner, their appointment of the Representatives as attorneys will lapse. Therefore, the executor or administrator of the deceased must promptly sign any Sale Contract or titles document presented to them in accordance with this Deed and or enter into a power of attorney appointing the Representatives pursuant to the enduring power of attorney in Schedule 5.

26. Sunset

This Deed will expire on the Sunset Date, unless extended prior to the Sunset Date by a Special Resolution.

27. Termination

27.1 The Owners may terminate this Deed by a Special Resolution, provided that the Resolution must nominate the effective date of the termination.

27.2 Upon termination or expiry of this Deed:

(a) the Representatives will have no authority to act on behalf of the Owners, except to the minimum extent necessary to finalise any arrangements under this Deed; and

(b) the Representatives will as soon as possible distribute the Project Proceeds to the Owners in accordance with Ownership Percentages.

28. Confidentiality

28.1 The parties promise on behalf of themselves and their financial, legal and other advisors that they will keep confidential and not divulge either directly or indirectly to any person any information relating to the Project which is of a confidential nature or which is not otherwise in the public domain, including the terms of this Deed, save to the extent that the disclosure may be required by statute or may reasonably be required for the purpose of enabling the parties to fulfil their respective obligations under this Deed or as may otherwise be required by law.

28.2 The operation of this provision will continue beyond the expiration or termination of this Deed.

29. Independent Advice

Each party is encouraged to, and is responsible for obtaining their own independent advice as to:

(a) their legal rights and obligations under this Deed; and

(b) the financial and taxation consequences of entering into this Deed.

30. Insurance

30.1 The Representatives will after a new entity is formed obtain public liability insurance over the Land with a policy amount of at least $20,000,000.

30.2 The Representatives will cause the names of the Owners to be noted on any public liability insurance obtained by the new entity.

30.3 Each Owner acknowledges that not having their own public liability insurance over their Lot carries with it risks of being sued if an accident occurred on their land.

30.4 The Representatives make no warranty that the public liability insurance policy that the new entity will obtain will indemnify any or all Owners against any risk or event that may occur on their Lots during the term of the Project or this Deed.

30.5 For abundant caution the Representatives recommend that all Owners keep and maintain public liability insurance over their Lots until such time as they no longer own it.

31. No assignment by Representatives

Representatives must not assign their interest under this Deed.

32. Subcontracting

The Representatives may engage subcontractors as they determine appropriate to perform any of their obligations under this Deed.

33. Consents

It is anticipated that Representatives will be able to act as attorneys for the Owners and sign all necessary documents on their behalf. However, if required by Council or any other authority or government department, the Owners will promptly and thoroughly provide their assistance as necessary to advance the Project and this may include using the Power of Attorney, signing as applicant, or consenting to development applications and any other applications for government approvals, licences, permits or the like.

34. Dispute resolution

33.1 Unless a party has complied with this clause, that party may not commence court proceedings relating to any dispute arising from this Deed or the Project, except where that party seeks urgent interlocutory relief.

33.2 Any party claiming that a dispute has arisen under this Deed between any of the parties to the Deed shall be given written notice to the other party designating as its representative in negotiations relating to the dispute, a person with authority to settle the dispute and the other party shall promptly give notice in writing to the first mentioned party designating as its representative in negotiations relating to the dispute a person with similar authority.

33.3 The designated persons shall, within 10 days of the last designation required by clause 34.2 following whatever investigations each deems appropriate, seek to resolve the dispute.

33.4 If the dispute is not resolved within the following 10 days, (or within such further period as the representatives may agree is appropriate) the parties shall within a further 10 days (or within such further period as the representatives may agree is appropriate) seek to agree on a process for resolving the whole or part of the dispute through means of mediation (using a person nominated by the President for the time being of the Law Society of New South Wales as the mediator) and on the procedure and timetable as nominated by the said mediator.

33.5 The parties acknowledge that the purposes of any exchange of information or documents or the making of any offer of settlement pursuant to this clause is to settle the dispute between the parties. No party may use any information or documents obtained through the dispute resolution process established by this clause for any purpose other than in an attempt to settle a dispute.

33.6 After the expiration of the time established or agreed by this clause or Deed on a dispute resolution process, any party which has complied with the provisions of this clause may then refer the dispute to arbitration or commence court proceedings.

33.7 Neither party may publish any disparaging comment or remark in relation to the other, unless the processes of this clause 34 have been fully exhausted. For the avoidance of doubt, this subclause 34.7 does not authorise defamation or limit any party's rights to respond to disparaging comments or remarks after the processes of this clause have been followed.

35. Notices

34.1 All notices between Representatives and Owners must be delivered by email but may also be concurrently delivered in any of the ways set out below:

(a) Delivered personally; or

(b) Posted to their address when it will be treated as having been received on the third business day after posting; or

(c) Sent by email to their email address when it will be treated as received when it enters the recipient's information system.

34.2 The Representatives' email address for notices is set out in Schedule 1.

34.3 The Owner's email address for notices is as provided to the Representatives in accordance with clause 2.3.

36. Relationship of the parties

The parties acknowledge that this Deed is intended as the appointment of Representatives and not any other relationship and, in particular, not the relationship of employer and employee, or the relationship of partnership. The Representatives are authorised to bind the Owner only to the extent expressed in this Deed.

37. Variation

An amendment or variation to this Deed is not effective unless it is in writing and signed by the parties, provided that a number of clauses of this Deed allow variation of the terms by a resolution of the Owners.

38. Counterparts

This Deed may be executed in any number of counterparts each of which will be an original but such counterparts together will constitute one and the same instrument and the date of the Deed will be the date on which it is executed by the last party.

39. GST

38.1 For the purposes of this Clause:

(a) GST means any tax imposed on the supply of goods or services which is imposed or assessed under GST Law.

(b) GST Law - means A New Tax System (Goods and Services Tax) Act 1999 (as amended) and all related or replacement or amending legislation or regulations which provides for a broad-based consumption tax on the supply of Goods and Services which becomes operative in respect of the provisions of this Deed.

38.2 Any entity set up by the Representatives will be registered for GST.

38.3 If any supply made under or in relation to this Deed is subject to GST, the parties agree that the amount payable for any supply shall include the GST.

38.4 Each party agrees to do all things, including providing invoices, that may be necessary to assist the other parties to claim an input tax credit, set off, rebate or refund in relation to any GST payable under this Deed.

40. Costs of this Deed

39.1 The preparation of this Deed and related documents will be a Project Cost.

39.2 The Owners' costs in reviewing or negotiating this Deed and related documents are their own costs.

SCHEDULE 1

Commencement Date	20 December 2018
Sunset Date	The 3rd anniversary of the Commencement Date
The Land	Lots:
Project Account details	Bank: BSB: Acc:

Reports

The Representatives will provide the Owners with a quarterly report of the progress of the Project. The report will include:

- an update of the progress of rezoning and/or consolidating the Land;
- an update on the signing of any material contracts relating to the Project;
- an update of any purchase offers or negotiations (excepting negotiations being conducted on a commercial-in-confidence basis);
- report on Project Costs, the current bank account balance for the Budget Bank Account, and a copy of the current Project Account bank statement;
- any financial statements prepared by the Project Accountants which have not yet been provided to the Owners; and
- copies of all Resolutions passed since the last quarterly report.

The quarterly reports will be provided on or before the following dates each year:

- 1 February, 1 May, 1 August, 1 November

Representatives details

Representative's full name	email & Telephone number

The Services:

The Representatives will provide the following services:

- Cause the Land to be rezoned and if necessary put in place a mechanism to consolidate it;
- Liaise with Council and other authorities and any other person deemed appropriate in relation to the rezoning and consolidation of the Land;
- Identify Potential Purchasers for all or parts of the land
- Any other service incidental to achieving and/or advancing the Project.

SCHEDULE 1A

Lot No.	Land component of lot value	Value of Council contribution held	Total current value of Lot	% of total
1	$30,020	$44,541	$74,561	1.85
2	$41,060	$44,541	$85,601	2.12
3	$29,680	$44,541	$74,221	1.84
4	$49,432	$44,541	$93,973	2.33
5	$47,630	$44,541	$92,171	2.29
6	$50,212	$44,541	$94,753	2.35
7	$36,908	$44,541	$81,449	2.02
8	$37,284	$44,541	$81,825	2.03
9	$44,340	$0	$44,340	1.10
10	$26,988	$44,541	$71,529	1.77
11	$32,142	$44,541	$76,683	1.90
12	$31,338	$44,541	$75,879	1.88
13	$20,740	$0	$20,740	0.51
14	$43,282	$44,541	$87,823	2.18
15	$34,360	$44,541	$78,901	1.96
16	$28,888	$44,541	$73,429	1.82
17	$36,926	$44,541	$81,467	2.02
18	$32,320	$44,541	$76,861	1.91
19	$31,856	$44,541	$76,397	1.90
20	$37,488	$44,541	$82,029	2.04
21	$34,652	$44,541	$79,193	1.97
22	$40,788	$44,541	$85,329	2.12
23	$46,656	$44,541	$91,197	2.26
24	$40,076	$44,541	$84,617	2.10
25	$38,688	$44,541	$83,229	2.07
26	$37,524	$44,541	$82,065	2.04
27	$33,920	$44,541	$78,461	1.95
28	$33,640	$44,541	$78,181	1.94
29	$30,260	$44,541	$74,801	1.86
30	$34,860	$44,541	$79,401	1.97
31	$35,928	$44,541	$80,469	2.00
32	$34,820	$44,541	$79,361	1.97
33	$38,296	$44,541	$82,837	2.06
34	$33,002	$44,541	$77,543	1.92
35	$137,110	$44,541	$181,651	4.51
36	$38,276	$44,541	$82,817	2.05
37	$42,904	$44,541	$87,445	2.17
38	$39,492	$44,541	$84,033	2.09
39	$49,310	$44,541	$93,851	2.33
40	$42,528	$44,541	$87,069	2.16
41	$33,512	$44,541	$78,053	1.94
42	$40,468	$44,541	$85,009	2.11
43	$41,778	$44,541	$86,319	2.14
44	$27,540	$0	$27,540	0.68
45	$36,376	$44,541	$80,917	2.01
46	$50,356	$44,541	$94,897	2.35
47	$3,350	$44,541	$47,891	1.19
48	$109,140	$0	$109,140	2.71
50	$4,636	$0	$4,636	0.12
51	$108,080	$0	$108,080	2.68
52	$29,420	$0	$29,420	0.73
Total	**$2,070,280**	**$1,959,817**	**$4,030,084**	**100.00**

SCHEDULE 2 – Owners names

Name of each owner

SCHEDULE 3 – ACCESSION DEED

Deed of accession

This **deed of accession** is dated [*date*]

Between:
[*names of parties to the Participants Deed*] (**Parties**)
And:
[*name of new owner* ([*ACN*]) of [*address*] (**New Owner**),

in relation to the Participation Deed dated [*specify date of Participation Deed*] (**Participation Deed**).

OPERATIVE PROVISIONS

A [insert new owner] (**Acceding Party**) confirms it has been given a copy of the Participants Deed.

B The Acceding Party covenants with the parties to the Participation Deed (whether original or by accession) to observe, perform and be bound by the terms of the Participation Deed to the intent and effect that the Acceding Party is taken from the date on which the Acceding Party is registered as an Owner of a Lot to be a party to the Participation Deed.

C It is agreed that a word or words commencing with a capital letter in this Deed will have the same meaning as that word when used with capital letters in the Participation Deed.

D This deed is governed by the laws of NSW.

DRAFT

Execution page

EXECUTED AS A DEED

SIGNED SEALED & DELIVERED BY)) in the presence of:	
..... Signature of witness	..... Signature
..... Print name of witness	

SIGNED SEALED & DELIVERED BY)) in the presence of:	
..... Signature of witness	..... Signature
..... Print name of witness	

SIGNED SEALED & DELIVERED BY)) in the presence of:	
..... Signature of witness	..... Signature
..... Print name of witness	

SCHEDULE 4 – Budget

SCHEDULE 5 – Enduring power of attorney

ENDURING POWER OF ATTORNEY

Background Information

A general power of attorney is a legal document that allows you (the principal) to nominate one or more persons (referred to as attorneys) to act on your behalf. A general power of attorney gives the attorney the authority, if you choose, to manage your legal and financial affairs, including buying and selling real estate, shares and other assets for you, operating your bank accounts, and spending money on your behalf.

A general power of attorney ceases if you lose your mental capacity after its execution. If you wish the power of attorney to continue if you lose your mental capacity, use the enduring power of attorney prescribed form. An attorney under a general power of attorney cannot make decisions about your lifestyle or health. These decisions can only be made by a guardian (whether an enduring guardian appointed by you or a guardian appointed by the Civil and Administrative Tribunal or the Supreme Court).

You may set whatever conditions and limitations on your attorney that you choose. An attorney must always act in your best interest. If your attorney does not follow your directions or does not act in your best interest, you should revoke the power of attorney. You or someone on your behalf should inform the attorney of the revocation, preferably in writing. The attorney must then immediately cease to act as your attorney. If anyone else, such as a bank, has been advised about the power of attorney, that person or entity should also be informed of the revocation.

The Important information set out at the end of this form includes notes to assist in completing this form and more fully explains the role and responsibilities of an attorney.

1. Appointment of attorney by the principal

I, participant name of participant address, appoint:

- **Attorney 1** of Attorney 1 Address
- **Attorney 2** of Attorney 2 Address
- **Attorney 3** of Attorney 3 Address
- **Attorney 4** of Attorney 4 Address

to be my attorneys. Any 3 of my attorneys may act together, or the attorneys may act jointly.

2. Powers

My attorney may exercise the authority conferred on my attorney by Part 2 of the Powers of Attorney Act 2003 to do anything on my behalf I may lawfully authorise an attorney to do.

I give this power of attorney with the intention that it will continue to be effective if I lack the capacity through loss of mental capacity after its execution.

Additional powers

[Optional – Delete or edit as required]

~~(a) I authorise my attorney to give reasonable gifts as provided by section 11(2) of the Powers of Attorney Act 2003.~~

~~(b) I authorise my attorney to confer benefits on the attorney to meet their reasonable living and medical expenses as provided by section 12(2) of the Powers of Attorney Act 2003.~~

~~(c) I authorise my attorney to confer benefits on of to meet their reasonable living and medical expenses as provided by section 13(2) of the Powers of Attorney Act 2003.~~

3. Conditions and limitations

I place the following limits and/or conditions on the authority of my attorneys:

[Optional – Delete or edit as required.]

The attorneys' authority under this power of attorney is limited to any of the following matters relating to the land that I own described as Lot ___ in Deposited Plan _____ being all of the land in folio identifier _____ (**Land**):

(a) making applications for and obtaining any government approvals, licences or permits necessary for or conducive to

  (i) consolidating the Land;

  (ii) developing the Land; or

  (iii) rezoning the Land;

(b) dealing with surveyors, town planners engineers and other consultants, professionals or tradespersons in relation to the Land;

(c) liaising and dealing with other developers or builders in relation to the Land;

(d) liaising and dealing with mortgagees for the Land on my behalf;

(e) for the marketing of the Land, including retaining and dealing with real estate agents;

(f) negotiating and signing contracts for the sale of the Land;

(g) signing transfers or other NSW Land Registry Services documents relating to the Land; and

(h) anything incidental to the above or contemplated by the Participation Deed entered into on or about the date of this document between the Principal and the attorneys.

[You can limit the attorney's power to only carry out certain tasks. For example, you can specify that the attorney may only act to sell your house, or that the attorney can only act to deal with your shares. You can also place any conditions on how those tasks are to be carried out. For example, you can require that the attorney must submit accounts to a nominated accountant every year for audit. If you do not want to have any conditions or limitations placed on your attorney, write "NIL".]

4. Commencement

This power of attorney operates once the attorneys have accepted their appointment by signing this document.

5. Signing by principal to give effect to the appointment of the attorney

SIGNED by **participant name**)
on the day of)
2019 in the presence of:)

_____
Principal's signature

_____
Prescribed witness's signature

_____
Prescribed witness's name

_____
Prescribed witness's address

6. Certificate under section 19 of the Powers of Attorney Act 2003

I solicitor,

of

certify the following:

(a) I explained the effect of this power of attorney to the principal before it was signed;

(b) The principal appeared to understand the effect of this power of attorney;

(c) I am a prescribed witness;

(d) I am not an attorney under this power of attorney; and

(e) I have witnessed the signature of this power of attorney by the principal.

_____

Dated: of 2019

Qualification:

[Prescribed witness includes an Australian legal practitioner or a Registrar of the Local Court; a Licensed Conveyancer, NSW Trustee and Guardian employee or trustee company employee who has successfully completed a course of study approved by the Minister; a Legal Practitioner qualified in a country other than Australia who is instructed and employed independently of any legal practitioner appointed as an attorney under this power of attorney.]

7. Acceptance by attorney

(a) I accept that I must always act in the principal's best interests.

(b) I accept that as attorney I must keep my own money and property separate from the principal's money and property.

(c) I accept that I should keep reasonable accounts and records of the principal's money and property.

(d) I accept that, unless expressly authorised, I cannot gain a benefit from being an attorney.

(e) I accept that I must act honestly in all matters concerning the principal's legal and financial affairs.

Failure to do any of the above may incur civil and/or criminal penalties.

_____

Attorney 1

Dated:

8. Acceptance by attorney

(a) I accept that I must always act in the principal's best interests.

(b) I accept that as attorney I must keep my own money and property separate from the principal's money and property.

(c) I accept that I should keep reasonable accounts and records of the principal's money and property.

(d) I accept that, unless expressly authorised, I cannot gain a benefit from being an attorney.

(e) I accept that I must act honestly in all matters concerning the principal's legal and financial affairs.

Failure to do any of the above may incur civil and/or criminal penalties.

_____

Attorney 2

Dated:

9. Acceptance by attorney

(a) I accept that I must always act in the principal's best interests.

(b) I accept that as attorney I must keep my own money and property separate from the principal's money and property.

(c) I accept that I should keep reasonable accounts and records of the principal's money and property.

(d) I accept that, unless expressly authorised, I cannot gain a benefit from being an attorney.

(e) I accept that I must act honestly in all matters concerning the principal's legal and financial affairs.

Failure to do any of the above may incur civil and/or criminal penalties.

_____

Attorney 3

Dated:

10. Acceptance by attorney

(f) I accept that I must always act in the principal's best interests.

(g) I accept that as attorney I must keep my own money and property separate from the principal's money and property.

(h) I accept that I should keep reasonable accounts and records of the principal's money and property.

(i) I accept that, unless expressly authorised, I cannot gain a benefit from being an attorney.

(j) I accept that I must act honestly in all matters concerning the principal's legal and financial affairs.

Failure to do any of the above may incur civil and/or criminal penalties.

_____

Attorney 4

Dated:

NSW LRS OFFICE USE ONLY

IMPORTANT INFORMATION

- A power of attorney is an important and powerful legal document. You should get legal advice before you sign it.
- It is important that you trust the person you are appointing as attorney to make financial decisions on your behalf. Your attorney must be over 18 years old and must not be bankrupt or insolvent. If your financial affairs are complicated, you should appoint an attorney who has the skills to deal with complex financial arrangements.
- A power of attorney cannot be used for health or lifestyle decisions. You should appoint an enduring guardian under the Guardianship Act 1987 if you want a particular person to make these decisions. For further information, contact the New South Wales Civil and Administrative Tribunal or New South Wales Trustee and Guardian.
- Clause 2 of the power of attorney contains powers which will permit your attorney to use your money and assets for the attorney or anyone else as provided. You should only include those provisions in clause 2 if you want your attorney to have those powers.
- This power of attorney is for use in New South Wales only. If you need a power of attorney for interstate or overseas, you may need to make a power of attorney under their laws. The laws of some other states and territories in Australia may give effect to this power of attorney. However, you should not assume this will be the case. You should confirm whether the laws of the state or territory concerned will in fact recognise this power of attorney.
- Your attorney must keep the attorney's own money and property separate from your money and property, unless you are joint owners, or operate joint bank accounts. Your attorney should keep reasonable accounts and records about your money and property. The cost of providing and maintaining these records by the attorney may be recoverable from you.
- If your attorney is signing certain documents that affect real estate, the power of attorney must be registered at NSW Land Registry Services. Please contact NSW LRS on 1300 052 637 to see whether the power of attorney must be registered.
- An attorney must always act in your best interest. If your attorney does not follow your directions or does not act in your best interest, you should consider revoking the power of attorney. You will only be able to do so whilst you retain your mental capacity. If you revoke the power of attorney you should notify the attorney, preferably in writing, that they are no longer your attorney. The attorney must stop acting immediately once they have knowledge of the revocation.
- This power of attorney does not automatically revoke earlier powers of attorney made by you. If you have made an earlier power of attorney that you do not want to continue, you must revoke the earlier power of attorney. It is advisable that you notify the attorney, preferably in writing, of the revocation, if you have not already done so. You should also give notice of the revocation to anyone who is aware of the earlier power of attorney, such as a bank.

NOTES FOR COMPLETION

Joint attorneys

If you appoint more than one attorney, you should indicate whether the attorneys are to act jointly or jointly and severally. Attorneys who are appointed jointly are only able to act and make decisions together.

Attorneys who are appointed jointly and severally – that is, together or separately – are able to act and make decisions independently of each other. However, you can specify that a simple majority, if you appoint 3 or more attorneys, must agree before they can act.

Substitute attorney/s

If you appoint a substitute attorney, the substitute attorney will only have authority to act as your attorney if the first appointed attorney dies, resigns or vacates their position.

You can specify for whom the substitute is to act – for example, if you appoint A and B as attorneys and X and Y as substitutes, you can specify that X takes A's place if A vacates office.

Attorney vacates office

Section 5 of the Powers of Attorney Act 2003 states that there is a vacancy in the office of attorney if the attorney dies, resigns, becomes bankrupt, loses mental capacity or the authority to act is revoked.

If you have appointed a substitute attorney, it may be helpful that some sort of documentation evidencing the vacation of the original attorney is attached to this power of attorney when that vacancy happens. This will assist to satisfy a third party that the substitute attorney is entitled to act for you.

Further information

For information on powers of attorney, the attorney's duties and registration, contact NSW Land Registry Services www.nswlrs.com.au, the New South Wales Trustee and Guardian www.tag.nsw.gov.au, a solicitor or a trustee company.

The New South Wales Government's Planning Ahead Tools website www.planningaheadtools.com.au provides up-to-date information and resources about powers of attorney, enduring guardianship, wills and advanced care planning.

Execution pages

SIGNED AS AN DEED

EXECUTED BY in accordance with s127(1) of the Corporations Act:	))	
..... Director		..... Director
Name:		Name:

SIGNED BY in the presence of:	))	
		..... Signature
..... Signature of witness		
..... Print name of witness		

SIGNED BY in the presence of:	))	
		..... Signature
..... Signature of witness		
..... Print name of witness		