

# **ORDINARY COUNCIL**

**Wednesday 23 September 2020**



# Ordinary Council Meeting

Wednesday, 23 September 2020

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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 effective 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



**NOMINATION PAPER**  
**for the**  
**ELECTION OF DEPUTY MAYOR**

We the undersigned, hereby nominate

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for the position of DEPUTY MAYOR for the ensuing term  
(requires two (2) or more Councillors to sign nomination)

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I, the undersigned, hereby consent to the above nomination of myself to the  
position of Deputy Mayor

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## AUDIT, RISK & IMPROVEMENT COMMITTEE ANNUAL REPORT 2019-2020

Following the Council elections held on 10 September 2016 the Council at its meeting held on 16 November resolved to establish the Audit, Risk & Improvement Committee, to replace the Audit Committee. The Council at its meeting held on 21 June 2017 adopted a revised Charter for the Committee and Clause 3.1 Member (voting) provides that the Committee shall comprise:

- Appointed Councillors of the Finance, Corporate Services and Information Technology Portfolio.
- Three (3) Independent external members (not a member of Council) one of which shall be appointed as Chairperson of the Committee.

The Committee therefore currently comprises:

- Councillor Lisa Intemann
- Councillor Geoffrey Hawkins
- Grahame Marchant (Chairperson)
- Stephen O'Rourke
- Michael Parkinson

The Committee members bring a unique range of skills and experience to matters considered by the Committee and has worked together as a cohesive team. It is considered that the Committee has provided valuable advice and recommendations to Council and management on a wide range of issues.

The Committee has met on three occasions during the period to which this report refers:

- 13 August 2019
- 24 October 2019
- 3 February 2020

The Committee was scheduled to also meet on 7 May 2020 however, in response to the COVID 19 pandemic council resolved to cancel all committee meetings. In terms of continuing the work of the committee various matters have been considered by committee members on an out of session basis during the period.

All Committee members have attended all meetings. The General Manager has also attended meetings when available and Senior Staff have attended various meetings during consideration of matters that are related to their areas of responsibility. The Committee considers that the General Manager and Senior Staff value the role of the Committee and have been very responsive in providing reports and other information to the Committee.

In terms of the overall governance of the council, the committee has noted that the council has expressed concern that the Local Government elections have been postponed until September 2021 and it has been noted that Councillor Levado has now resigned. The council has requested the General Manager provide access to appropriate external professional advice and support for Council's elected representatives, to ensure optimum performance in these extenuating and unexpected circumstances. The committee has also noted that Craig Swift-McNair has resigned from his role as General Manager after six and a half years. Council has now commenced a process to fill this key role.

Council has provided the Committee with a comprehensive Charter that specifies its scope, responsibilities, authority and relationships with other Council activities and of course its independence.

The Key Functions of the Committee as detailed in the Charter include:

- Compliance
- Risk Management
- Fraud Control
- Financial Management
- Governance
- Implementation of the Community Strategic Plan, Delivery Program and Strategies.
- Service reviews and Performance Management
- Performance of Council Functions
- Internal Audit
- External Audit

In order to address its Key Functions, the Committee has developed a Forward Plan and has undertaken the following work:

## COMPLIANCE

Compliance with relevant laws, regulations and associated government and council determined policies is a fundamental governance function.

**In determining whether management has appropriately considered legal and compliance risks as part of risk assessment and management arrangements the committee has:**

This aspect is considered as part of the review of the Corporate Risk Register. The Committee will further consider this aspect at future meetings.

**In reviewing the effectiveness of the system for monitoring compliance with relevant laws, regulations and associated government policies the committee has:**

A Legislative Compliance Register has been established and contains details of the key legislative requirements and enables monitoring and reporting on compliance. The Committee has previously supported the mechanisms to monitor legislative compliance, which incorporates a monthly and quarterly reporting cycle. The Committee was provided with the Legislative Compliance 2018-2019 Report which provided a review of the status of compliance for matters contained within the Legislative Compliance Register. Management is giving further consideration to how best to report key legislative compliance requirements on a risk based approach. The committee has also recommended that consideration be given to developing and implementing a compliance management framework in accordance with ISO 19600 as applied to council.

A Major Non Compliance Exceptions Report has also now been developed and is provided to the committee on a regular basis. This Report makes the committee aware of major non-compliance events and what actions are proposed to ensure that the risk of these events occurring again are appropriately managed. Internal audit reviews considered by the committee also often address compliance issues.

## RISK MANAGEMENT

The identification and control of risks is fundamental to Council being able to achieve the objectives that it has determined for provision of services to the community.

**In reviewing whether management has in place a current and comprehensive risk management framework, and associated procedures for the effective identification and management of business and financial risks the committee has considered the following:**

- **Risk Management Framework**

The Committee had previously reviewed a report on the framework architecture. The report detailed that the risk management framework includes all the people, systems, policies and processes that identify, assess, mitigate and monitor all material internal and external sources of risks.

Some of the key elements of the framework were reviewed and a revised Risk Management Policy was adopted by council at its meeting held on 20<sup>th</sup> February 2019. This Policy sets the tone for Council's risk management approach and establishes the risk management responsibilities of councillors, management and staff. It is envisaged that supporting the policy will be a Procedure (to be approved by the General Manager), Risk Matrix (approved by the General Manager) and supporting tools.

The Committee considers that the completion, adoption and implementation of these key elements of the framework are essential to imbedding a more mature risk management culture within the organisation. The Committee will be pursuing this matter as part of its work in the coming year. Also, the Committee is intending to then review the implementation and effectiveness of the other key elements of the framework.

- **Corporate Risk Register**

The Corporate Risk Register details the high level corporate wide risks, existing controls, current risk rating, changes proposed to controls and revised risk ratings.

The Register has been reviewed at each meeting and the Committee is aware that management have reviewed and updated the Register on a quarterly basis. The Committee has also been provided with reporting on improvements in the implementation of further controls in relation to the management of Corporate Risks (high residual only that are considered ALARP).

The committee has also raised various matters that may need consideration in relation to managing risks that could result in an adverse impact on the council. The Committee now receives a regular report on Material Litigation Matters which provides details on how risks involved with these matters are being managed.

- **Risk Management Working Group**

The objective of the Risk Management Working Group is to assist Council in the fulfilment of its risk management responsibilities by developing, implementing, monitoring and reviewing Council policies, plans and processes associated with risk management that are relevant to the day-to-day operation of Council.

Reports from the meetings of the RMWG have been considered by the Committee. The Committee recommended that management review the ongoing need for the RMWG and management advise that further consideration will be given to aligning the group to the proposed OLG Risk Management and Internal Audit Framework in respect of a senior management group to report to the GM on risk management issues.



**In reviewing whether a sound and effective approach has been followed in developing strategic risk management plans for major projects or undertakings the committee has considered the following:**

- **Project Management Framework**

The Project Management Policy was adopted by Council on 15 February 2017.

The Institute of Project Management were tasked with providing a report that gives Council information to develop a plan for continuous improvement of Council's project management capability. The report developed by IPM, acknowledged that: *Overall PHMC must be congratulated for the delivery of a common project management framework (PMF) that is robust, appropriate and ready to be employed across the whole of Council.*

One of the most significant risks for Council in achieving Strategic Objectives is the performance of the organisation in delivering projects. Following a review of the report the Committee considers that a maturity level of 3 is the minimum acceptable. The maturity level rating is a score out of 5 in respect of groups of related processes and concepts bundled together under seven headings. These are:

- Organisational governance
- Management control
- Benefits management
- Stakeholder management
- Risk management
- Financial management
- Resource management

The committee has received a briefing on the current Project Delivery performance reporting and has requested management to give consideration to presenting a regular report to the committee showing projects/programs status in a summarised way which indicates progress made in delivery.

- **Contract Management**

A key element for the successful delivery of projects is the management of contractors engaged to deliver works or services. For contracts valued at more than one million dollars (\$1,000,000), the Infrastructure Delivery section is utilising the industry standard general conditions of contract, GC 21 (edition 2). In May 2017 NSW Public Works Advisory Procurement Consultant Stuart Wood was engaged to prepare an Independent Audit of Council's use of GC21 General Conditions of Contract: Contract Documentation and Contract Management..

The audit found a high level of compliance with the principles, practices and procedures required for the documentation and management of the GC21 due to the sound level of knowledge, skills and experience in the use of GC21 by the Infrastructure Delivery section. The Committee considered an Internal Audit Review of Outsourced Contract Management and will be reviewing the organisations performance in this area in future reviews.

**In reviewing the impact of the risk management framework on its control environment and insurance arrangements the committee has considered the following:**

- **WH&S Framework**

The Committee had previously considered a Report on the current status of the WH & S Framework. The Report indicated that a WHS Strategy 2018 – 2021 and the committee has

been advised that this is still being developed however, a Safety Audit has recently been undertaken. This will be provided to the Committee after finalisation.

The committee has also requested that management give consideration to developing a quarterly WHS performance report for consideration by the Committee. The Committee will be reviewing performance in this area in the future. The committee has also requested that Management prepare a report on how employee remuneration risk is being managed.

- **General Insurances Performance Statistic**

The Committee has previously been provided with details of Council's portfolio of insurance policies and the coverage provided. The Committee was satisfied that the portfolio was comprehensive and the report contained trend data on settled claims and premium cost comparisons to previous years. The Committee will further review this area in the future.

**In reviewing whether a sound and effective approach has been followed in establishing business continuity planning arrangements, including whether plans have been periodically tested the committee has considered the following:**

- **Business Continuity Planning**

Council engaged with Echelon Risk Management services to develop the Business Continuity Framework. This includes the Business Continuity Plan- Manual, Business Procedure and Divisional Plans. This information is available on the internal website of Council.

The committee will be reviewing the results of this project as concerns were previously expressed as to the adequacy of planning in relation to critical functions/processes.

The COVID 19 pandemic has required council to implement significant changes to its operations and service delivery. At this stage the committee is not aware of any areas that have not been appropriately managed to minimise the impact on the community.

## **FRAUD CONTROL**

In order to effectively manage fraud risks, adequate internal controls need to be in place and complied with and that these are periodically reviewed and updated.

**In reviewing whether management has in place a current and comprehensive fraud control framework and associated procedures for effective identification and management of fraud risks.**

The current Fraud Management Policy was reviewed in 2018 and no changes were considered necessary. So as to support the policy an external consultant had been engaged to:

- Review and assess the current Fraud Control Framework.
- Develop the Fraud Control Framework.

The Committee has not yet been provided with details of the outcome of the consultant's review and assessing the adequacy of the Fraud Control Framework. This matter will be pursued by the committee in the ensuing period.

This review will take into account the NSW Auditor-General's Report on Fraud Controls in local councils. This is a Performance Audit and contains Key Findings and Recommendations.

**In reviewing whether management has taken steps to embed a culture which is committed to ethical and lawful behaviour the committee has considered the following:**

The Committee has requested that management advise the Committee of any enquiry or investigation being carried out. This will ensure that the Committee is abreast of issues as they arise and, if necessary, the Committee may request information on the actions being taken to address any underlying governance issues that may be reflected in these inquiries or investigations.

The Committee has also requested that the General Manager report back annually to the Committee on the number and type of enquiries and investigations that were required to be undertaken within Council for the period 1 July to 30 June.

## FINANCIAL MANAGEMENT

The Council must be able to demonstrate to all stakeholders that it is continually meeting its legislative requirements and that the information it provides is in accordance with the standards required for external reporting.

**In satisfying itself that the annual financial reports comply with applicable Australian Accounting Standards and any other relevant legislation or departmental guidelines and supported by appropriate management sign-off on the statements and the adequacy of internal controls and reviewing the external audit opinion, including whether appropriate action has been taken in response to audit recommendations and adjustments the committee has considered the following:**

The Annual Financial Report and Audit Report for the year ended 30 June 2019 were reviewed by the Committee. The reports provided statements by management and the External Auditor that the financial reports complied with applicable Australian Accounting Standards. The External Audit opinion indicated that adequate internal controls were in place and that the financial reports accurately reported the financial performance and financial position of Council for the period.

The Committee was satisfied that management has taken appropriate action in response to audit recommendations.

**In considering contentious financial reporting matters in conjunction with council's management and external auditors the committee has:**

The Committee has been regularly updated by management as to the capability of the organisation to meet financial reporting requirements, particularly in relation to assets and has been satisfied that appropriate actions are being taken to ensure that Council is able to meet these requirements. It has been significant to note the progress being made to establish the required data to effectively manage and report on the wide ranging portfolio of assets controlled by Council.

In order to adequately meet the accountability of the Committee in this area a Report has been requested that would provide a framework and timetable to enable the Committee to consider the basis of construction of the Financial Reports, Accounting Policies applicable and Disclosures required in relation to the impact and applicability of Accounting Standards. It is expected that the Committee would be able to review this information prior to the end of financial year ensuring that any input from the Committee would be taken into account in the final preparation of the Financial Reports.

The committee received a comprehensive report from management on the application of new standards applicable to the preparation of future financial reports.

The following new Accounting Standards apply in current or future periods:

- AASB 1058 Income of Not-for-Profit Entities: applicable for reporting periods beginning on or after 1 January 2019;
  - AASB 15 Revenue from Contracts with Customers: applicable for reporting periods beginning on or after 1 January 2019;
  - AASB 16 Leases: applicable for reporting periods beginning on or after 1 January 2019; and
  - AASB 9 Financial Instruments: applicable for reporting periods beginning on or after 1 January 2018.
- The committee was satisfied that appropriate action was being undertaken to ensure compliance with these new standards.

**In reviewing the processes in place designed to ensure financial information included in the annual report is consistent with the signed financial statements the committee has considered the following:**

The Annual Report for 2019 was reviewed and as far as the Committee are aware it met all the requirements for annual reporting.

## GOVERNANCE

The Mayor and Councillors have the overall accountability for the governance of Council. The Council appears to be functioning effectively. The Committee is not aware of any reviews or investigations into the conduct of Council generally, Councillors or staff.

**In reviewing whether management has in place relevant policies and procedures, and these are periodically reviewed and updated the committee has considered the following;**

The Committee has previously been provided with a detailed schedule of all Council Policies and their status in terms of when the Policy was established and the scheduled date for review. The Committee will undertake a further review of the progress of these reviews during the next period.

**In progressively reviewing whether appropriate processes are in place to assess whether policies and procedures are complied with and whether appropriate policies and procedures are in place for the management and exercise of delegations the committee has considered the following;**

The current and future Internal Audit Plans include a review of compliance with Council Policies and procedures in various areas. The Committee will also review what systems are in place in regard to compliance with Policies and procedures and management of delegations.

## IMPLEMENTATION OF THE COMMUNITY STRATEGIC PLAN, DELIVERY PROGRAM AND STRATEGIES

**In progressively reviewing whether management has in place current and comprehensive processes to support the implementation of the Community Strategic Plan, Delivery Program and Strategies the committee has:**

During the period covered by this Report the Committee has been provided with the following Reports:

- Quarterly budget review statement and investment reports
- Operational Plan quarterly progress report
- Six monthly Delivery Program 2017 - 2021
- Draft Delivery Program (revised) 2017-2021
- Operational Plan 2019-2020

The committee has noted these reports and has provided various recommendations to management regarding additional information that if provided would improve disclosure of performance of council in achieving objectives detailed in these plans.

The Committee has recommended to management that future reporting should be progressively improved to incorporate more information on actual performance against targets and trends over time.

## **SERVICE REVIEWS and PERFORMANCE MEASUREMENT**

**In reviewing whether management has in place a current and comprehensive service review process the committee has:**

### **Business Improvement Strategy**

A Business Improvement Strategy has been adopted and focuses on creating a framework for the Business Improvement Office (BIO) to implement a culture of continuous improvement.

BIO is currently focusing on four improvement initiatives as follows:

- DA Internal Referral
- Asset Management
- Rural Roads
- DA Lodgement and Referral

The Committee has received regular quarterly reporting on the progress made and what work is envisaged for future periods.

The last report indicates that these activities are on target and targets for the ensuing period have been determined.

The Committee has received an update on the Customer Experience Project. The project is to help Council focus on creating an organisation where customers are at the heart of what we do and to work with staff and the community to find out the best way to do that. A series of priorities were developed and some progress has been made against these. The projects undertaken were:

- Public Online Mapping
- Staff Mobile Mapping
- Mobile Mapping Data Collection
- Online Certificates
- Process Mapping
- Snap, Send Solve Replacement (App to be named)

Significant progress has been made on delivering the benefits of these projects.

**In satisfying itself there are appropriate mechanisms in place to review and implement, where appropriate, relevant State Government reports and recommendations and**

**satisfying itself that there is a performance management framework linked to organisational objectives and outcomes the Committee has:**

Progressively reviewed with management any relevant State Government reports and recommendations.

Section 421B of the Local Government Act gives the Auditor-General the mandate to conduct performance audits. The Auditor-General decides the local government performance audit topics and the councils to be audited. The Auditor-General released the following Performance Audit Reports in 2018/2019:

- Development assessment: pre-lodgement & lodgement in Camden Council & Randwick City Council.
- Domestic Waste Management in Campbelltown City Council & Fairfield City Council.
- Workplace reform in three amalgamated councils.

The performance audits have resulted in recommendations for improvement that will be applicable to the whole local government sector. The Committee requested information on the extent to which this Council has looked at the findings of performance audits conducted by the Audit Office in terms of the impacts of any recommendations applicable to PMHC. The committee was satisfied that appropriate systems and processes were in place to address the recommendations. The Auditor-General has indicated that the progress of individual councils in implementing these recommendations will be monitored through Audit, Risk & Improvement Committees.

The committee also gave consideration to the Discussion Paper for a New Risk Management and Internal Audit Framework for Local Councils in NSW released by the Office of Local Government. The OLG requested submissions from councils and other relevant stakeholders and the committee resolved to support the personal submission prepared by Independent Member Michael Parkinson which covered relevant issues of concern to the committee.

## **PERFORMANCE OF COUNCIL FUNCTIONS**

**In providing information to the council for the purpose of improving the council's performance of its functions the Committee has:**

As previously mentioned the committee has reviewed reports on the development and implementation of the suite of documents that comprise the Integrated Planning & Reporting (IP&R) framework. The committee considers that the objectives are well defined but have suggested that council continue to improve the reporting on actual outcomes achieved against the outcomes and objectives contained within the plans.

In this regard the Committee noted that the Office of Local Government has been working on defining measures of performance which can be utilised across local government for some considerable time but are yet to release any guidelines for use by councils.

## **INTERNAL AUDIT**

The internal audit function provides a level of assurance that the Policies, procedures and processes developed and implemented are effective in managing and controlling the risks that are inherent across all the operations of Council.

**In reviewing the internal audit coverage and internal audit plan, whether the plan has considered the Risk Management Plan and approving the plan the committee has considered the following:**

- **Strategic Internal Audit Plan 2018-2020**

The Strategic Internal Audit Plan 2018 – 2020 has been adopted by the committee. The plan identified a considerable number of auditable areas and listed them based on the assessed level of risk inherent in each area.

The committee considered an update on the Strategic Internal Audit Plan 2018 – 2020 implementation and has requested management to commence a process for reviewing the Plan with a view to having the new plan applicable from July 2020. The committee has been advised that this process has commenced however, the committee will need to pursue this matter as soon as possible in 2020/2021.

**In considering the adequacy of internal audit resources to carry out its responsibilities, including completion of the approved Internal Audit Plan the committee has considered the following:**

- **Internal Audit Function**

The Committee is aware that there is not a separate internal audit function or human resource dedicated to this function. Internal audit is a part of the responsibility of the Group Manager Governance and Procurement. As far as the committee is aware a budget allocation of \$100,000 has continued to be provided in the 2019-2020 Budget for the operation of the Audit Committee and to fund external resources to undertake specific internal audit projects. This is considered a very positive step in appropriately recognising the importance of and adequately resourcing the internal audit function.

**In reviewing all audit reports and considering significant issues identified in audit reports and action taken on issues raised, including identification and dissemination of better practices the committee has considered the following:**

- **Internal Audit Reports**

In accordance with the Strategic Audit Plan 2018-2020 the following reviews were finalised in the period:

- Currency and adequacy of the VPA Policy and process.
- Outsourced management contracts – contractual form, assignment of risk between Council and Contractor, term, performance and compliance
- Houston Mitchell Drive Upgrade Project

The Committee has considered and noted these reports and the actions were added to the Outstanding Audit Recommendations listing. It was suggested by the committee that in outsourcing future reviews consideration be given to engaging providers that have more specialist knowledge in the areas proposed to be reviewed which would improve the usefulness of the reviews in improving the performance of council in these areas.

The Committee is provided with a report on the status of all outstanding audit report recommendations in order for it to be satisfied that appropriate action is being taken.

The Committee now receives a summary report which indicates the progress that the organisation has made in dealing with the recommendations coming from the various audits. A total of fifteen (18) recommendations have been completed for the 2019-2020 financial year to date. Fifty-eight (58) audit recommendations remain outstanding, fourteen (14) of which are overdue by 18 months or greater from the original completion due date.

The actions required to deal with the recommendations would appear to be a matter of competing priorities and the Committee has recommended that consideration be given to using Council's risk matrix to determine the risk rating on internal audit actions in future and higher risk matters be dealt with as a priority.

- **Internal Audit Scopes**

The Committee is invited to provide input to the Internal Audit Scope as they are developed for the various review projects.

**In periodically reviewing the performance of Internal Audit the committee has considered the following:**

- **Internal Audit Key Performance Indicators**

The Committee has endorsed a number of Key Performance Indicators to provide measures of the progress of completion and the effectiveness of the internal audit function. These indicators are as follows:

- Number of audits scheduled
- Number of audits completed by agreed due date
- Percentage of audit plan delivered during the year
- Cost of audits completed against budget allocated (%)
- Number of audit recommendations accepted
- Number of audit recommendations outstanding
- Number of audit recommendations past due date
- Percentage of the audit plan aligned to major corporate risks.

The progress reporting against these indicators has been delayed and the committee will need to re-establish the methodology for determining the performance of internal audit as part of the finalisation of the Internal Audit Strategic Plan.

## **EXTERNAL AUDIT**

**In providing input and feedback on the financial statement and performance audit coverage proposed by external audit, and providing feedback on the external audit services provided the committee has considered the following:**

- **Annual Financial Report and Audit Report for year ended 30 June 2019**

The Committee reviewed the Draft Annual Financial Reports and for the year ended 30 June 2019 at its October 2019 meeting. A representative of the Audit Office of NSW and Kevin Franey of Thomas Noble Russell addressed the meeting and provided further information on the reports to the Committee. The completed Annual Financial Reports and Audit Report were circulated to members

The Management Letter on the Final Phase of the Audit for the Year Ended 30<sup>th</sup> June 2019 issued by the Audit Office was considered by the committee at its February meeting. The Management letter lists matters identified throughout the course of their audit with recommendations provided by the Auditor for improvement. These recommendations were responded to by Management and will be addressed as per timeframes noted in the letter. The Committee is satisfied that the issues raised in the Audit Report and Management Letter are being addressed by management.

**In reviewing all external plans and reports in respect of planned or completed external audits and monitoring the implementation of audit recommendations by management the committee has considered the following:**



- **Audit Office – Annual Engagement Plan 2020**

The Audit Office – Annual Engagement Plan for the year ending 30<sup>th</sup> June 2020 was circulated to the Committee out of session. The Plan is comprehensive and clearly sets out the role of the external auditor and Council in the preparation and certification of the Annual Financial Reports.

The Annual Engagement Plan identified a number of significant entity level issues and risks that may impact on the audit as follows:

- New Accounting Standards
- Revaluation of Infrastructure Property Plant & Equipment (IPPE)
- Assessing the Fair Value of Infrastructure Property, Plant & Equipment
- Quality & timeliness of financial reporting
- Information Technology General Controls

Other key issues are:

- Capital expenditure
- Capital grants & contributions
- Developer Contributions
- Natural Disaster

Management has confirmed to the Committee that planning and actions have been undertaken to ensure that these risks are addressed and the financial statements will be prepared in compliance with the relevant Accounting Standards.

## **SUMMARY**

The Committee is confident that it is progressively addressing its role and responsibilities as defined in the Charter and has been effective in providing advice and assistance to Council and management in order to improve the governance of Council and its capacity to deliver on its objectives for service provision to the community. The Committee has endorsed a Forward Plan which is aimed at supporting the committee in completing their responsibilities (as per the charter) and to enable Council to plan resources effectively relating to the committee.

The committee considers that the performance of PMHC in the areas relevant to the charter of the AR & I Committee is of a high standard.

Grahame Marchant  
Chairman

For and on behalf of the Members of the Audit, Risk & Improvement Committee  
2 July 2020

Compliance Item	Legislation/ Regulation/ Clause or Section	Due date	Frequency	Responsible Section	Target	Achieved	Comment
Noxious weeds grant application to Department of Primary Industry with regional weeds plan - 30 April	Biosecurity Act	30/06/2020	Annually (Fin Year)	Environmental Services 2019 - 2020	100%	100%	Achieved. Submitted 23/7.
Details of Council's native title managers to be provided to Minister of Lands	Pursuant to section 8.8 the Crown Land Management Act 2016.	31/10/2019	Annually (Fin Year)	Recreation, Property and Buildings 2019 - 2020	100%	100%	Details provided 16 October 2019.
Crown Reserve Reporting (Annual reporting for Crown Trust Managers)	Crown Lands Act 1989; section 122	30/06/2020	Annually (Fin Year)	Recreation and Buildings 2019 - 2020	100%	N/A	This reporting is no longer required by DPIE - Crown Lands following changes to legislation associated with Crown Land management.
Gravel Tip Road EPBC Act referral annual monitoring and reporting	Federal legislation, due to road location vicinity to koalas in eastern swamp region	30/06/2020	Annually (Fin Year)	Environmental Services 2019 - 2020	100%	100%	Achieved
GIPA Annual Report information to be included in Council's Annual Report	GIPA Act 2009 (s125(1))	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. The annual GIPA Report was included in Council's 2018-2019 Annual Report. Statistics will be compiled and provided in the 2019-2020 Annual Report as it is developed.
GIPA Annual Report to be lodged with the OLG (the Minister) and the Information Commissioner within 4 months of EOFY	GIPA Act 2009 (s125(1)) □	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Information is collected and entered in to the online Information and Privacy Commission (IPC) database on a monthly basis. The 2018-2019 Annual Report was submitted to the IPC in August 2019. It is expected that the due date will be met for the 2019-2020 year
Maintain a register of contracts \$150,000 or more	Local Govt General Regulation (cl217)(1)(a2)	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Register maintained and publicly available on Council's website.
Maintain a register of the open access information (if any) that is not publicly available	GIPA Act 2009 (s.6(5))	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Information available on Council's external GIPA web page.

Maintain a register that records information about formal access applications (Disclosure Log)	GIPA Act 2009 (s.27)	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Disclosure register updated and made available on Council's external GIPA web page.
Maintain a register of graffiti removal work	Graffiti Control Act 2008 (s.13)	30/06/2020	Annually (Fin Year)	Community Place 2019 - 2020	100%	90%	Partially Achieved. Council has a register for graffiti removal work which is publicly available upon request. However, gaps have been identified and Council continue to improve the register to ensure the information captured is compliant.
Report suspected corrupt conduct to ICAC	ICAC Act (s.11)	30/06/2020	Annually (Fin Year)	General Manager's Office 2019 - 2020	100%	100%	Corrupt conduct reported to ICAC as required
All registration fees received during the month must be entered into the Companion Animals Register in that month, Registration fees must be remitted to the OLG as detailed on monthly invoices issued	Calendar of Compliance and Reporting Requirements	30/06/2020	Monthly	Regulatory Services 2019 - 2020	100%	90%	Partially Achieved. Register has been unavailable for a few weeks so data entry delayed. All invoices approved for processing
Annual Report to be furnished to the Minister (by submitting to the Division of Local Government) and posted on Council's website	Local Govt Act 1993 (s428(5))	30/06/2020	Annually (Fin Year)	Organisational Performance 2019 - 2020	100%	100%	Achieved. The 18/19 Annual Report was presented to the November 2019 Ordinary Council Meeting and published on Councils website in line with legislation.
Asset Management Planning (Asset Management Policy, Asset Management Strategy and Asset Management Plan)	Local Govt Act 1993 (s403) - Resourcing Strategy - Asset Management Planning	30/06/2019	Annually (Fin Year)	Assets and Property Investments 2019 - 2020	100%	100%	Achieved.
Audited financial statements & Financial Data Return (FDR) to be lodged	Local Govt Act 1993 OLG Circular 13-38	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Lodged by 31 October 2019 deadline
Audited Reports to be presented to the public	Local Govt Act 1993 (s418)	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Audited financial statements presented to the Ordinary Council Meeting in November
Auditors Report and Audited Financial Statements to be forwarded to Director General	Local Govt Act 1993 (s417(5))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Lodged by 31 October 2019 deadline
Closing date for Pensioner Concession subsidies claims	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Claim lodged by due date

Community Strategic Plan (to 2023 min) Delivery Program, Operational Plan and Resourcing Strategy	Local Govt Act 1993 (s402) - Community Strategic Plan Local Govt Act 1993 (s404) - Delivery Program and Operational Plan Local Govt Act 1993 (s403) - Resourcing Strategy □	30/06/2020	Annually (Fin Year)	Organisational Performance 2019 - 2020	100%	50%	Partially Achieved. Delayed due to re-scheduling of Local Government elections in response to COVID-19. Current Integrated Planning & Reporting (IPR) suite of documents remain. Operational Plan for 2019/20 was adopted as per legislative requirements in June 2019.
Council is required to report on any dog attacks they are made aware of to the OLG within 72 hours of being notified via the Animal Companion Register	Companion Animals Regulation 2008 (cl33A(3))	30/06/2020	Monthly	Regulatory Services 2019 - 2020	100%	90%	Partially Achieved. Register has been unavailable for a few weeks so data entry delayed.
Council must have swimming inspection program developed and adopted.	Swimming Pools Act 1992 (s22B)	30/06/2020	Annually (Fin Year)	Regulatory Services 2019 - 2020	100%	100%	Achieved. Swimming pool inspection program dated 26/08/2019.
Council must review all its delegations during the first 12 months of each term of office	Local Govt Act 1993 (s380)	-	4 Yearly	Governance 2019 - 2020	100%	100%	Achieved. Council reviewed delegations in August 2017. A further review will occur within 12 months of the next local government elections in September 2021.
Council must review its Publication information guide and adopt a new Publication Information guide at intervals of not more than 12 months	GIPA Act 2009 (s21)	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	0%	Not complete. Delayed due to recruitment of Group Manager Governance. Group Manager to complete review shortly.
Councils should notify the OLG of any senior staff or address changes via e-mail to enable updating of the directory	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. OLG notified as required.
Delivery Program progress report provided to Council at least every 6 months - presented to September Council meeting	Local Govt Act 1993 (s404(5))	30/06/2020	Annually (Fin Year)	Organisational Performance 2019 - 2020	100%	100%	Achieved.
Electronic lodgement of Grants Commission General Data Returned	Local Govt Act 1993 (s613)	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Return lodged by due date

End of Term Report to be tabled at last meeting of outgoing Council - 31 Aug	Local Govt Act 1993 (s404(5))	31/08/2019	Annually (Fin Year)	Organisational Performance 2019 - 2020	100%	0%	Delayed due to re-scheduling of Local Government elections in response to COVID-19.
Financial Report to be audited within 4 months (reminder) (s.416(1))	Local Govt Act (s.416(1))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Independent auditors report included in financial statements
First quarterly rates instalment due by 31 August	Local Govt Act 1993 (s562(3)(b))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Noted. This is due date for instalments to be received by Council. No action is required by Council for this item
Fourth quarterly rates instalment due 31 May	Local Govt Act 1993 (s562(3)(b))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Noted. This is due date for instalments to be received by Council. No action is required by Council for this item
Fourth quarterly rates instalment notice to be sent 30 April	Local Govt Act 1993 (s562(5))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Instalments sent by due date
GST Certificate to be submitted to OLG	Local Govt Act 1993	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Certificate lodged by due date
Income adjustment for newly rateable Crown Land to be lodged	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	N/A	Not required
Last date for Councils to resolve who is conducting their next Ordinary Election (18 months before next election)	Local Govt Act 1993 (s.296(3)(a))	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved.
Last date to enter into an arrangement with the NSW Electoral Commission for Council's next Ordinary Election (15 months before next election)	Local Govt Act 1993 (s.296(3)(b))	30/06/2020	4 Yearly	Governance 2019 - 2020	100%	100%	Achieved.
Last day for making rates - 31 July	Local Govt Act 1993 (s533)	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Rates levied by due date
Last day for Valuer General to provide increase/decrease in values of rateable land - 30 June	Local Govt Act 1993 (s513(2))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. New valuations received and inputted into the system by January 2020
Ledger balances to be prepared for six monthly inspection by Auditor - 31 January	Local Govt General Regulation (cl228(2)(a))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Ledger balances were prepared and appropriately reconciled
LIRS claim period for all projects approved for funding	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Lodged as required
LIRS claim period open for all projects approved for funding	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Lodged as required

Lodge completed Pecuniary Interest returns for Councillors & designated persons who held office at 30 June	Local Govt Act 1993 (s449(3))	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved.
Lodgement of Audited Statement of Compliance with OLG	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Lodged by 31 October 2019 deadline
Lodgement of Pecuniary Interest returns for newly elected Councillors	Local Govt Act 1993 (s449(1))	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	N/A	No newly elected councillors during 2019/2020 year
Long Term Financial Plan must be updated as part of the development of the Operational Plan - 30 June	Local Govt Act 1993 (s406(2)) IPR Guidelines [March 2013] LTFP 2.4	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Long term financial plan reviewed as part of Operational Plan development.
Notice of presentation of audited Financial Reports due by 28 November	Local Govt Act 1993 (s418(2))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Notice published by required due date
Objections to the inclusion of land to be vested in public bodies lodged - 30 June	Local Govt Act 1993 (s600(6))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	N/A	Not required
Operational Plan adopted	Local Govt Act 1993 (s405(1))	30/06/2020	Annually (Fin Year)	Organisational Performance 2019 - 2020	100%	100%	Achieved - adopted June 2019.
Ordinary Local Government Elections	Local Govt Act	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	0%	Not Achieved. Elections postponed until September 2021 as a result of COVID-19 Pandemic.
Policy on payment of expenses and provisions of facilities for Mayors & Councillors to be adopted	Local Govt Act 1993 (s252)	30/09/2019	Within 12 months of ordinary election	Governance 2019 - 2020	100%	N/A	Delayed due to re-scheduling of Local Government Election. Shall be reviewed within 12 months of the next election in September 2021.
Proposed Loan Borrowings Return to be submitted to OLG	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Return submitted by the required due date
Public bodies to provide Council with a list of parcels of land to which rate rebate applies - 30 April	Local Govt Act 1993 (s600(5))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	N/A	Not required
QBRS reported to Council by 28 Feb	Local Govt General Regulation (cl203(1))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Reported to February 2020 Council meeting
QBRS reported to Council by 30 Nov	Local Govt General Regulation (cl203(1))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Reported to November 2019 Council meeting



QBRs reported to Council by 31 May	Local Govt General Regulation (cl203(1))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Reported to May 2020 Council meeting
Rates levied by service of rates and charges notice by 1 August	Local Govt Act 1993 (s546)	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Rates levied by due date
Report to Council (cl12.1) and the OLG (cl12.2) on the complaint statistics	Procedures for the Administration of the Model Code of Conduct for Local Councils in NSW	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Reported to Council and OLG in December 2019
Request for extension to lodge financial statements to be submitted in writing to OLG (if required)	Local Govt Act 1993 - (s416)	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	N/A	Not required
Requests to Valuer General for estimates of changes in value of land for supplementary valuations by 31 May	Local Govt Act 1993 (s513(1))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	N/A	Not required. Actual valuations processed by 30 June
Responsible Accounting Officer (RAO) to prepare a written report monthly for Council on money invested under s.625 of the LG Act	Local Govt General Regulation (cl212)	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Monthly reports submitted to Council
Responsible Accounting Officer (RAO) to report material budget variances from the budget to the following Council meeting	Local Govt General Regulation (cl202(b))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Monthly reports submitted to Council
Review Council adopted Code of Conduct	Local Govt Act 1993 (s.440(7))	-	4 Yearly	Governance 2019 - 2020	100%	100%	Achieved. Code of Conduct adopted by Council 15 May 2019
Review of General Manager's and other senior staff performance, undertake contact renewal process subject to the terms of the relevant contract/s	Local Govt Act 1993 (s338)	30/06/2020	Annually (Fin Year)	General Manager's Office 2019 - 2020	100%	100%	Undertaken as part of annual performance review
Review of Local Approval Policies (other than a local policy adopted since the last general election) as they are revoked	Local Govt Act 1993 (s165(4))	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	N/A	Local policies revoked 12 months after declaration of poll for election. The next election not to be conducted until September 2021
Second quarterly rates instalment due by 30 November	Local Govt Act 1993 (s562(3)(b))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Noted. This is due date for instalments to be received by Council. No action is required by Council for this item

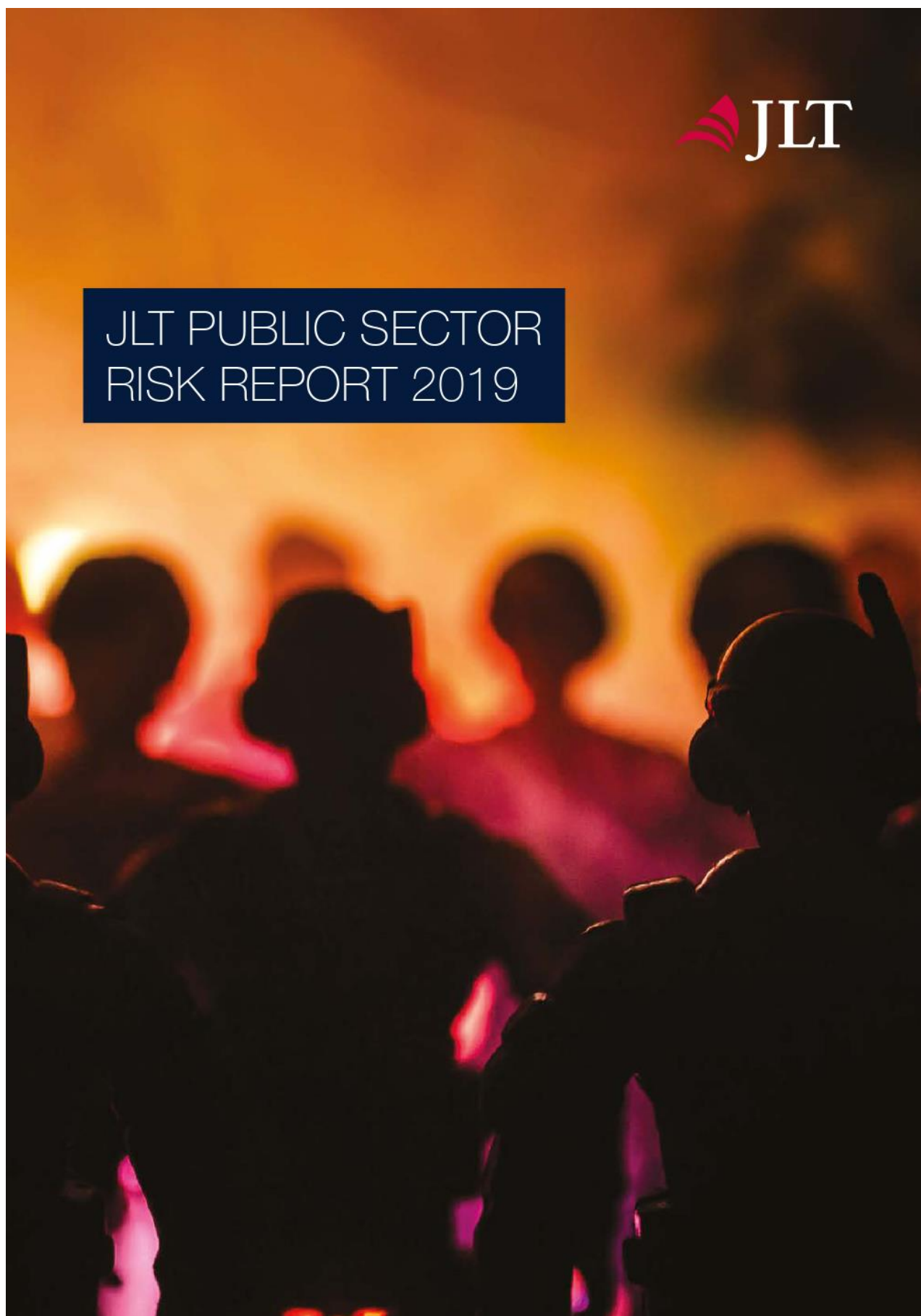
Second quarterly rates instalment notice to be sent 31 October	Local Govt Act 1993 (s562(5))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Instalments sent by due date
Survey of seizures of cats and dogs due	Calendar of Compliance and Reporting Requirements	30/06/2020	Annually (Fin Year)	Regulatory Services 2019 - 2020	100%	90%	Partially Achieved. Register has been unavailable for a few weeks and data entry delayed.
Third quarterly rates instalment due by 28 February	Local Govt Act 1993 (s562(3)(b))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Noted. This is due date for instalments to be received by Council. No action is required by Council for this item
Third quarterly rates instalment notice to be sent 31 January	Local Govt Act 1993 (s562(5))	30/06/2020	Annually (Fin Year)	Financial Services 2019 - 2020	100%	100%	Achieved. Instalments sent by due date
Training plan required under the Local Govt (State) Award following consultation with the Consultative Committee. Action arising to be included in the Workforce Mgmt. Plan & DP & OP. as appropriate	Local Govt (State) Award 2014 (cl31(iii)(a)) Local Govt Act 1993 (s403(2))	30/06/2020	Annually (Fin Year)	Organisational Performance 2019 - 2020	100%	100%	Achieved. Training Plan in place which is reported against at each Consultative Committee throughout the year.
Cairncross Organic Resource Recovery Facility (ORRF) Environment Protection License (EPL) return to the EPA	Protection of the Environment Operations Act 1997 (s.63) (Conditions of License)	30/06/2020	Annually (Fin Year)	Commercial Business Units 2019 - 2020	100%	100%	Achieved. Reporting period 24/07 - 23/07 Completed 01/10/19 (late).
Cairncross Waste Management Facility (Landfill) Environment Protection License (EPL) return to the EPA	Protection of the Environment Operations Act 1997 (s.63) (Conditions of License)	30/06/2020	Annually (Fin Year)	Commercial Business Units 2019 - 2020	100%	100%	Achieved. Reporting period 23/10 - 22/10 Completed 17/12/2019
Camden Haven Sewerage Treatment Plant EPL 805	Protection of the Environment Operations Act 1997 (s.63) (Conditions of License)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved Annual Return submitted to EPA 31-03-2020 Council have substantially compliant with licence conditions



Dunbogan Environment Protection Licence (EPL) return to the EPA	Protection of the Environment Operations Act 1997 (s.63) (Conditions of Licence)	30/06/2020	Annually (Fin Year)	Commercial Business Units 2019 - 2020	100%	100%	Achieved. Reporting period 13/10 - 12/10 Completed 22/11/19.
Kew-Kendall Sewerage Treatment Plant EPL 10339	Protection of the Environment Operations Act 1997 (s.63) (Conditions of Licence)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved Annual Return submitted to EPA 07-08-2019 Council have substantially compliant with licence conditions
Kingfisher Environment Protection Licence (EPL) return to the EPA	Protection of the Environment Operations Act 1997 (s.63) (Conditions of Licence)	30/06/2020	Annually (Fin Year)	Commercial Business Units 2019 - 2020	100%	100%	Achieved. Reporting period 22/04 - 21/04 Completed 08/05/20.
Lake Cathie/Bonny Hills Sewerage Treatment Plant EPL 594	Protection of the Environment Operations Act 1997 (s.63) (Conditions of Licence)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved Annual Return submitted to EPA 30-12-2019 Council have substantially compliant with licence conditions
Maintain a public register in accordance with section 308 of the POEO Act	Protection of the Environment Operations Act 1997 (s.308)	30/06/2020	Annually (Fin Year)	Regulatory Services 2019 - 2020	100%	100%	Achieved. Orders Register maintained in Authority.













NSW local government waste and resource recovery data survey - June	Protection of the Environment Operations (Waste) Regulation 2005, (cl.14)	30/06/2020	Annually (Fin Year)	Commercial Business Units 2019 - 2020	100%	100%	Achieved 29/08/2019.
Port Macquarie Sewerage Treatment Plant EPL 589	Protection of the Environment Operations Act 1997 (s.63) (Conditions of License)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved Annual Return submitted to EPA 30-12-2019 Council have substantially compliant with licence conditions
Waste and Environment Levy return to the EPA	Protection of the Environment Operations Act 1997 (s.88(2)) Protection of the Environment Operations (Waste) Regulation 2005, (cl.5 & 13)	30/06/2020	Annually (Fin Year)	Commercial Business Units 2019 - 2020	100%	100%	Achieved.
Wauchope Sewerage Treatment Plant EPL 804	Protection of the Environment Operations Act 1997 (s.63) (Conditions of License)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved Annual Return submitted to EPA 31-03-2020 Council have substantially compliant with licence conditions
PID Annual Report of obligations to be lodged with the OLG (the Minister) and Ombudsman	Public Interest Disclosures Act (s31)	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Regular returns lodged with Ombudsman and annual report lodged with OLG through Council's annual report.
PID first half yearly report lodged with the NSW Ombudsman	Public Interest Disclosures Act (s6CA)	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Report from 1 July 2019 to 31 December 2019 submitted 2 February 2020

PID second half yearly report lodged with the NSW Ombudsman	Public Interest Disclosures Act (s6CA)	30/06/2020	Annually (Fin Year)	Governance 2019 - 2020	100%	100%	Achieved. Report from 1 January 2020 to 30 June 2020 submitted 24 July 2020
Koree Pump Station 1 - Water Supply river extraction licence	Water Act 1912 (s.12) Extracted Amounts (Conditions of License)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved. Council have been compliant with licence conditions. Department have not forwarded request for extraction details as yet
Koree Pump Station 2 - Water Supply river extraction licence	Water Act 1912 (s.12) Extracted Amounts (Conditions of License)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved. Council have been compliant with licence conditions. Department have not forwarded request for extraction details as yet
Koree Pump Station 3 - Water Supply river extraction licence	Water Act 1912 (s.12) Extracted Amounts (Conditions of License)	30/06/2020	Annually (Fin Year)	Water and Sewer 2019 - 2020	100%	100%	Achieved. Council have been compliant with licence conditions. Department have not forwarded request for extraction details as yet



## 2019 KEY RISK RANKINGS IN ORDER

	1. Financial Sustainability		8. Business continuity and community disruption
	2. Cyber incidents/IT infrastructure		9. Effective HR and/or WHS management
	3. Reputation Risk		10. Environmental management
	4. Natural catastrophes/Climate change		11. Errors, omissions or civil liability exposure
	5. Property & infrastructure management		12. Theft, fraud and/or crime
	6. Increased statutory and/or regulatory requirements		13. Terrorism
	7. Ineffective governance		

2019	2018
1  Financial sustainability	Financial sustainability
2  Cyber incidents/IT infrastructure	Theft, fraud and crime
3  Reputation risk	Reputation risk
4  Natural catastrophe/Climate change	Increased statutory and/or regulatory requirements
5  Property and Infrastructure management	Environmental Management
6  Increased statutory and/or regulatory requirements	Property and Infrastructure management
7  Ineffective governance	Natural catastrophe/Climate change
8  Business continuity and community disruption	Cyber incidents/IT infrastructure
9  Effective HR and/or WHS management	Business continuity and community disruption
10  Environmental Management	Ineffective governance
11  Errors, omissions or civil liability	Effective HR and/or WHS management
12  Theft, fraud and crime	Errors, omissions or civil liability
13  Terrorism	Terrorism

## A NOTE FROM GARY OKELY

In our second edition of the JLT Risk Report, we take an in depth look at the risk information provided by CEO's and General Managers and share the key risks faced by Councils with the entire Local Government community. With the complexity and variety of risks changing at a rapid rate, Local Government finds itself in a central role for many of these due to their multi-faceted business and community focused operation. Management of these risks creates both opportunities and challenges for Local Government as they look to lead economic stability, climate change, cyber security and community safety.

The JLT Risk Report showcases the sensitivity and risk challenges that are faced by councils.

This report reflects the information that General Managers and CEO's of Local Government see as their key risks. Underpinning these results is the analysis of this data benchmarked against our claims data. This provides the broadest and most significant risk report of Local Government information across Australia and is able to provide industry insights and alignment of real scenarios that impact Councils. We can confidently say this because responses to the survey came from Metropolitan, Regional City, Regional and Rural/ Remote councils and from every Australian State and Territory.

Thank you to all General Managers and CEOs who participated in the survey. I am sure you find the JLT Risk Report informative and will valuable.



**GARY OKELY**  
Head of JLT Public Sector, Pacific

A stylized, handwritten signature in white ink, appearing to read 'Gary Okely'.

## OVERVIEW

The JLT Risk Report analyses the feedback from Local Government CEOs and General Managers on the key risks they view as a potential impact on councils. These risks are benchmarked against our 2018 Risk Report as well as claims and risk data from over 500 councils nationally.

This year's findings once again highlight the complexity of Local Government operations.

This report examines the claims and risk environment within Local Government and highlight the top risks identified by Local Government CEOs and General Managers.

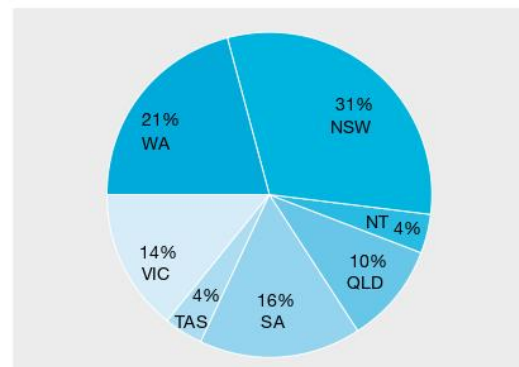
### Risk Rankings

1. Financial sustainability
2. Cyber incidents/IT infrastructure
3. Reputation risk
4. Natural catastrophe/Climate change
5. Property and Infrastructure management
6. Increased statutory and/or regulatory requirements
7. Ineffective governance
8. Business continuity and community disruption
9. Effective HR and/or WHS management
10. Environmental management
11. Errors, omissions or civil liability
12. Theft, fraud and crime
13. Terrorism

The report highlights the continued importance of financial sustainability with its ranking as the leading risk for the second year. The greater awareness and activity in Cyber incidents brought this risk down to the number 2 position followed by Reputational Risks which maintained the number 3 position from 2018.

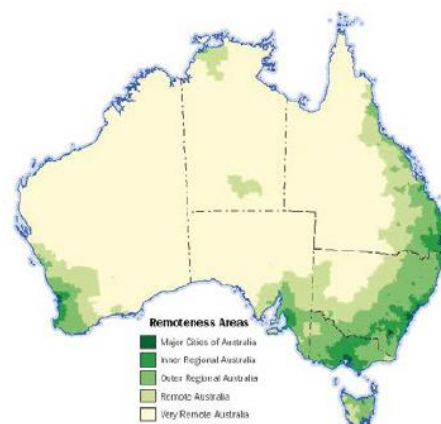
### Survey Respondents

The responses received across Australia to the Risk Survey were well balanced with a cross section of Metropolitan, Regional City, Regional and Remote/Rural Councils spread across the states.



Metro/Regional City / Regional/Rural & Remote	Response Percent
Rural/remote	40.0%
Regional Council	29.0%
Metropolitan Council	21.0%
Regional City	10.0%

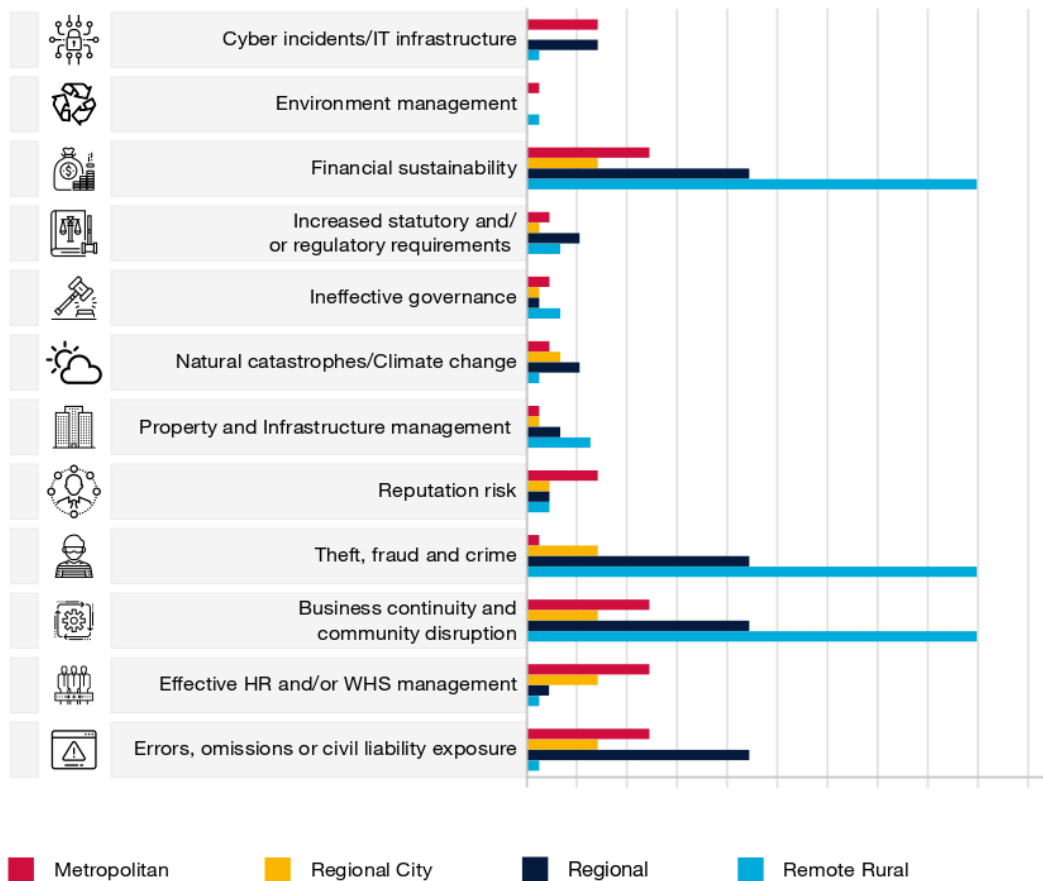
It is important to recognise the representation of responses. Remoteness is based on the level of access to services and the following map by the ABS shows these levels from rural/remote to metropolitan. The significant response from rural/remote council indicates the impact of risks as the sustainability of these councils.





The following chart showcases the vast thoughts across metropolitan, regional city, regional and rural and remote councils on the risks.

Sample: Metro/Regional City/Regional/Remote Rural



As new risks evolve or existing risks become more complex, the mitigation of these are paramount in reducing the impact on Local Government and the community.

Tailored programmes and risk protection methods enables Councils to feel assured they are protected against loss and disruption, reducing the impact on services to their communities.



## 2019 OUTCOMES



## RISK 1. FINANCIAL SUSTAINABILITY

The leading risk Councils are facing continues to be Financial Sustainability. The major driver continues to be limitation of revenue growth, operations, rate capping along with cost shifting from State and Federal Government to Local Government. As the shift of asset and infrastructure costs continue, Councils are required to be more resourceful so that they manage their existing operations along with new activities.

With an 8% increase on the 2018 survey in selecting this as the leading risk, this demonstrates the increasing concerns Councils have in this space.

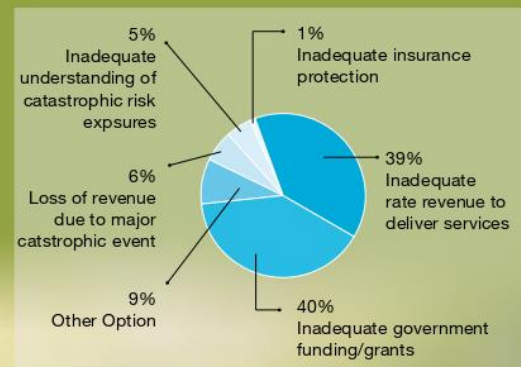
Of the respondents who rated financial stability as their primary concern as a risk, 52% were from rural councils, followed by 26% being regional councils. Regional city and metropolitan councils made up the remaining 22% concerns.

Local Government employs over 190,000 people and owns and manages \$410B in assets. With controls from Federal and State Budgets affecting their funding and management of rates, it is no surprise that Financial Sustainability maintains its number one ranking.

The above figures link with the leading concerns regarding financial sustainability that inadequate rate revenue to deliver services and inadequate government funding grants leads to pressures for councils.

JLT has compared the cost of risk against Council revenues and asset values for many years. In recognising the financial pressure on Councils, our objective is to provide long term price stability beyond the traditional

cyclical nature of insurance markets. Recent weather events in northern Australia and planning related matters have created challenges in some areas however Local Government's investment in risk activity has had very positive impacts on the outcomes that are achieved.





## RISK 2. CYBER INCIDENTS/IT INFRASTRUCTURE

As a continually growing and evolving issue globally, this demonstrates Local Government's recognition of this risk and the potential for current and future exposures.

As more and more councils become smart cities, improving the liveability, productivity and sustainability of their communities, they are, or are going to embrace the Internet of Things (IoT) to deliver services.

Digital technology coupled with data is beneficial in delivering efficient services, however the technological infrastructure needs to be maintained to manage the fast pace changes of the digital world and ensure it is protected so the community is not impacted.

Moving from 8th position in 2018, respondents said that the second highest concern facing Local Government was Cyber Incidents and IT Fraud. Regional and metropolitan Councils primarily voiced this concern at 93%.

The leading concern in the Cyber space was the emergence of cyber-attacks with 22% of respondents identifying this as their biggest cyber risk. This was closely following by Council IT infrastructure being unable to keep pace with cyber changes with the third cyber concern being Data fraud and security risks.

To highlight the continual evolution of cyber risks, the insurance market is adapting to identify non-affirmative or silent cyber risks and how protection is now being provided. Lloyds of London have already detailed that all property damage policies will have to specify if Cyber coverage is included or specifically excluded in the policy wording.

In 2018, there was an increase of 350% in ransomware attacks, 250% in email compromise attacks and 70% of phishing attacks. This aligns with the increase in the ranking of cyber to being the second highest risk Councils see they face.

As digital technologies evolve and become a significant driver of business, this report indicates Local Government will see this as a leading concern now and into the future.

As Councils rely increasingly on internet connectivity to carry out business operations, they are more vulnerable to cyber risks.

Network intrusion, hacking, phishing, cyber extortion and social engineering are just some of the ways that today's organisations can have their information assets compromised. As the frequency of cyber-attack incidents increases and are publicised, so is the appetite for Councils to invest in the mitigation of their cyber risks.

In South Australia, LGRS introduced the Cyber Vulnerability and Risk Profiling service as a "Whole-Of-Business" approach to help Councils to manage their cyber risks. In order for Members to understand their cyber risk profile, it was crucial for participating Councils to be aware of the value and information assets and the repercussions should there be a cyber breach. To date, the common issues identified for Local Government include:

1. Business Continuity and Disaster Recovery not tested/ lacking documented processes
2. Mobile Device Management (MDM) with the potential for lost or stolen device being used to access Council email system.
3. Multi-factor authentication for external services to protect services such as email accounts and other logins to external systems.
4. Lack of utilising auditing and logging functions to capture events to raise visibility of possible malicious activity





### RISK 3. REPUTATION RISK

Reputational risks maintained the third highest risk ranking that Council's and the CEO/General Managers face. The loss of community trust in Council was the biggest concern with 74% of Councils raising this, followed by losing trust in Council staff and then loss of trust in Councils with failure to undertake legislative requirements their third concern. 10% of respondents were concerned about investigations by ICAC and other governing bodies.

In the past 12 months, claims data for Councillors & Officers insurance has had an upward trend of 11.24% across Australia, with a 26% increase in claims in the past two years. In addition to the claim numbers reported, costs of defending these matters have increased dramatically due to the sensitive and emotive nature of these claims. The most common causes reported arise

from elected member conflicts, increased regulatory activity and employment disputes. Claim reports also increase following election cycles.

Council CEO's are very aware that the Council's reputation is paramount in maintaining community trust and the emergence of Audit Committee's requiring consideration of "risk" issues is a positive move.



### RISK 4. NATURAL CATASTROPHES/CLIMATE CHANGE

Moving up the ranks is the risk and impact of natural catastrophes and climate change. With 32% of respondents noting their major concern surrounding damage to Council assets and infrastructure, followed closely by 29% stating bushfire, flood and cyclones as a contributor to this risk rating.

Disaster Assist has stated that in 2018 there were 55 Australian disasters incorporating 29 Bushfires, 6 cyclones along with 19 floods and/or storms and 1 monsoon. This is an increase of 12 events on 2017. With a 28% increase in one year and a 34% increase in five years of natural disasters in Australia, this underpins the reason Local Government have this concern.

In 2017, IAG estimated the cost of natural disasters to reach \$39 Billion by 2050. This continual increase in catastrophes and climate change being a contributor to this, respondents have again highlighted the seriousness of these events on councils. CEOs and General Managers noted in responses real concern regarding the uncertainty and severity of events. As events increase, 17% of respondents further noted that the impact and disruption of the community was a concern.

The financial impacts from significant events is very expansive and while insurance of assets can provide significant protection, in reality, a number of community assets remain uninsured. The Federal Government continues to review funding mechanisms for Natural Disasters and there have been changes to the National Disaster Fund Programme (NDFFP) during the last 12 months that will impact Local Government. From a risk management perspective Local Government and the insurance industry have been lobbying the Federal Government to invest more funds in risk mitigation and the recent Federal Budget showed some promising signs with the Morrison Government announcing \$3.9 Billion to fund disasters, including funding for risk mitigation.





## RISK 5. PROPERTY AND INFRASTRUCTURE MANAGEMENT

Local Government has substantial ownership of property and infrastructure. Moving up from the ranking of #6 in 2018, 35% of Councils' responses to this question noted once again, natural catastrophe damage to infrastructure and equally inadequate capacity to finance their asset base as the leading concerns regarding this risk.

These concerns were followed by 26% of Council having the concern of State and Federal Government transferring the responsibility of assets to Local Government. In a catastrophic event, damage impacts infrastructure assets and the financial loss from disasters can be significant.

Since 2014, the top 10 catastrophes in Australia have been at a cost of \$8,430,203,933.

Year	Catastrophe	Normalised Loss
2019	Townsville Floods	Over \$1,000,000,000*
2019	NSW Hail Storm	Over \$670,000,000*
2018	Cyclone Trevor	Not yet disclosed
2017	Cyclone Debbie	\$1,781,599,484
2014	Brisbane Hailstorm	\$1,535,440,024
2015	East Coast Low	\$1,059,849,563
2018	NSW Metro & Regions Hailstorm	\$1,038,704,566
2016	November Hailstorm	\$621,470,779
2015	Severe Tropical Cyclone Marcia	\$573,653,503
2017	Sydney Storm	\$529,694,379
2015	Anzac Day Sydney Hailstorm	\$470,819,649
2016	East Coast Low	\$431,566,695
2015	SEQ Extreme Weather	\$387,405,291

\*Accurate data has not yet been released, these are estimated figures.

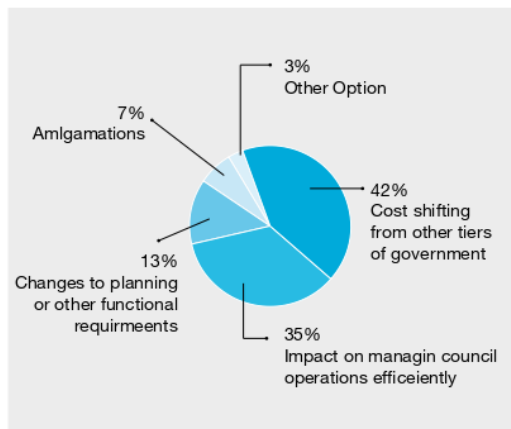
The number of property damage claims by councils arising from cyclones, storms, floods and bushfires since 2014 equate to 19.64%.







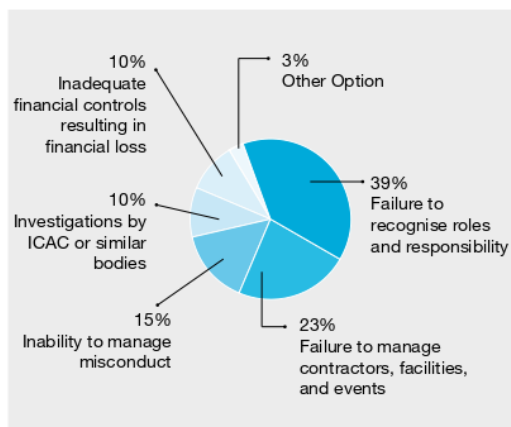
## RISK 6. INCREASED STATUTORY AND REGULATORY REQUIREMENTS



The increasing focus of compliance and transparency, cost shifting from other tiers of Government and the impact on Councils continued in the 2019 response rate. This links with 35% of responses stating their concern that increased statutory and regulatory requirements reduce capacity to deliver effectively and efficiently to their communities.



## RISK 7. INEFFECTIVE GOVERNANCE



Risks arise from ineffective governance which often leads to reputational damage with Council's communities and other stakeholders. This risk has moved up from 10th place in 2018.

Again the key concern highlighted by councils was the failure to recognise roles and responsibilities within the organisation at 38% followed by 23% identifying a failure to manage contractors, facilities and events as a concern. 15% noted an inability to manage misconduct as a series issue and 20% of respondents shared concerns with investigations by ICAC or similar bodies or inadequate financial controls resulting in financial loss.





## RISK 8. BUSINESS CONTINUITY AND COMMUNITY DISRUPTION

Moving up one spot, responses to this question again showcased the diverse exposures that can lead to the need for business continuity management plans in order to minimise community disruption. Natural catastrophes such as bushfire, flood and storm were the highest concerns with 33% of CEOs and General Managers seeing this as a contributor. This links strongly with the concerns of risk 4 linking with natural disasters and climate change.

Having unplanned outage of IT or telecommunications was followed closely by 31% of respondents stating this as a serious issue, yet only 18% noted cyber threats as a contributing concern to business continuity and community disruption – even though Cyber Incidents and IT infrastructure ranked as the second highest risk overall in the Risk Survey.





## RISK 9. EFFECTIVE HR AND/OR WHS MANAGEMENT

Effective HR and/or WHS Management saw 39% of respondents noting health, safety and wellbeing of all employees was the high concern within this risk. This was followed closely with 31% concerned with Councils' limited capacity to attract and retain professional staff.

Maintaining the health, wellbeing and safety of employees within Local Government is a continuing challenge. This is none more so prevalent now with an ever increasing ageing workforce, which brings about additional challenges and risks to the workplace. Indeed, Australians are intending to work longer than ever before. ABS research released in 2016 revealed that 23% of Australians aged 45 and over intend to work to age 70, compared to only 8% in 2004-2005. Research suggests that many workplaces are failing to actively address their increasingly ageing workforce, with only one in three organisations taking measures to do so. This is despite ample evidence to support the financial proposition that investing in supporting an ageing workforce is a good idea. For example, based on some of our Mutual Scheme's workers compensation data over a 20 year period we have seen an average cost of a claim for a 55-64 year old incur in excess of 240% higher costs when compared to a 25-34 year old. Unfortunately, the sad reality is that as we age our body's capacity to recover, rehabilitate and return to work following injury or illness declines.

That being said, older employees can safely and productively remain at work, if policy and practices supportive of employee needs are in place. In South Australia, where the median age is the second highest in the country, we have run a 2 year pilot project charged with identifying and implementing such supportive policies and practices within Local Government. The pilot considered a whole of employment approach, with particular focus and attention on health, wellbeing, financial security, flexible age and retirement options. Deliverables such as a mentoring program, stretching program, financial health and wellbeing education headlined the pilot with Council employees participating reporting higher levels of engagement, self-reporting of future employment needs and improved overall physical, wellbeing and cognitive function. Whilst addressing the needs of an ageing workforce is not a simple fix and is multifactorial, it is important that Local Government considers this continuing long term risk and implements strategies aimed at mitigating potential future losses.

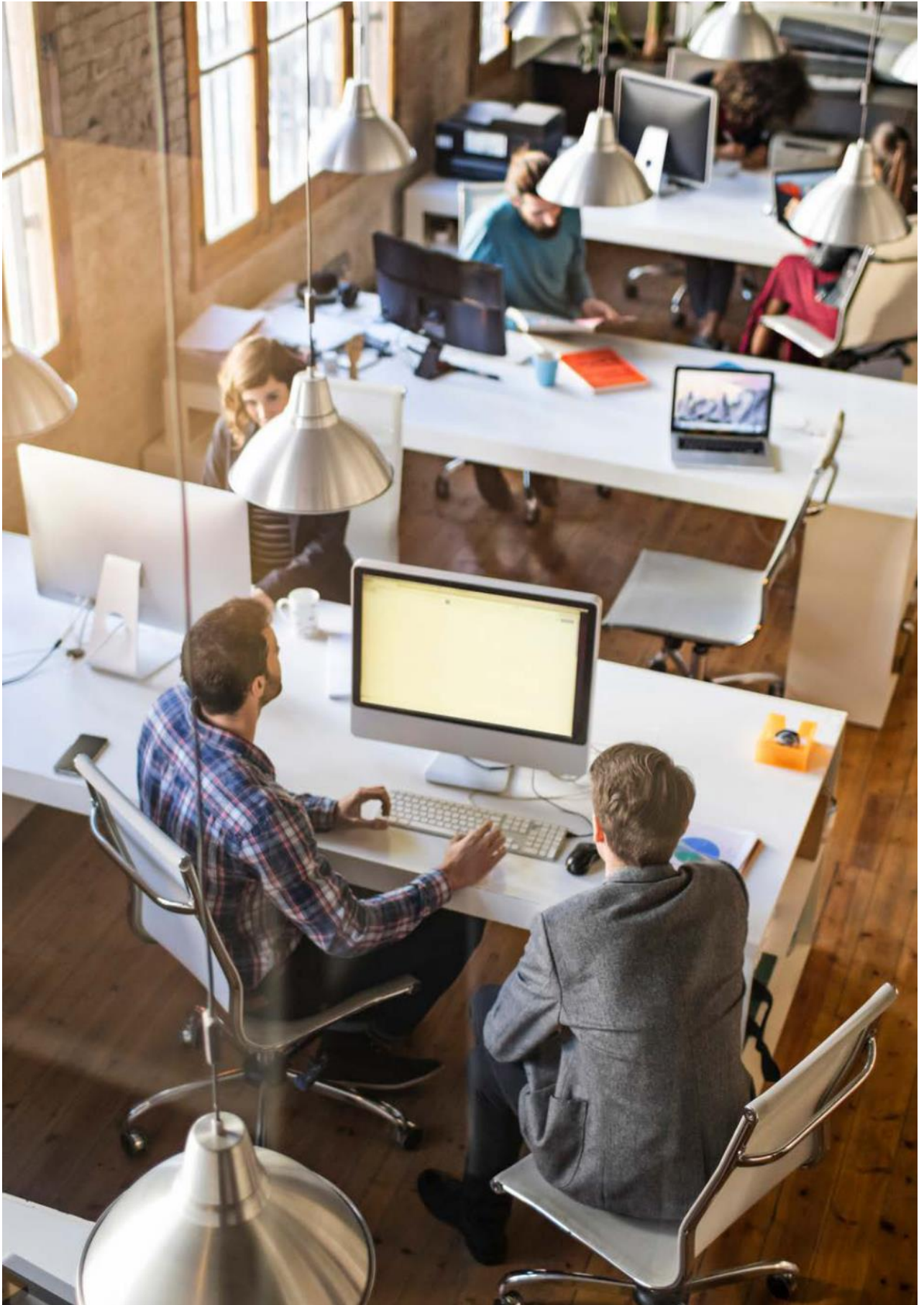
Related to the Ageing Workforce our survey identified that employee remuneration, training and development as a risk with 23% reporting this as a concern. Training and development is a critical investment area and in terms of managing an ageing workforce it is important to consider how a Council may transition an employee completing heavy, manual tasks into employment that can be sustained into the latter years of their working life. Fitness for work is a common risk for Local Government and where addressed in a proactive, positive manner it can contribute towards building workforce capability, productivity and safety. More often, we see fitness for work becoming an industrial avenue or a workers compensation matter, however with forward planning, identification of employment pathways and open and transparent communication with the entire workforce does not mean it has to be an adversarial process.

These results and concerns solidify Local Government commitment to providing a safe working environment and having health and wellbeing programmes to support employees.

With 23% noting employee remuneration, training and development as their third concerns within this risk, links with our knowledge of Councils looking for solutions for an ageing workforce, providing suitable employment those but also attracting and retaining young professionals.











## RISK 10. ENVIRONMENTAL MANAGEMENT

Moving five ranks down from 5th position is Environmental Management. South Australia and Western Australia were the primary states that recognised this risk, being represented by metropolitan and rural councils.

However, in breaking down the concerns within this risk, 69% of respondents recognised the impacts of climate change on future Council activities being the key contributed. This was followed by 25% noting risks of harm to people or the environment arising from waste facilities.



## OTHER IDENTIFIED RISKS

### ERRORS, OMISSIONS OR CIVIL LIABILITY EXPOSURE

Potential errors from Councils failing to adequately undertake regulatory roles create liability issues that result in financial loss, property damage or injury to others. Every year hundreds of professional indemnity claims are made against Local Government and these arise from simple planning matters to complex and large property developments. While the frequency of events are lower than general liability incidents, the complexity and severity of professional indemnity losses are quite significant.



### THEFT, FRAUD AND CRIME

A dramatic change from the 2018 survey was the placement of theft and fraud moving from second position to 8th. This demonstrates there is a shift in Local Governments view of theft from physical asset loss to electronic.



### TERRORISM

Terrorism was rated as a very minor risk to Local Government across Australia. While the risk of terrorism events are extremely rare in Australia, the consequences can obviously be extreme. The recent lone wolf attack in New Zealand demonstrates the challenges of identifying the potential of such events; and when such an event occurs, the effect on the local and global community is devastating and polarising. Having such events on Council's risk radar is important and developing and putting in place disaster response plans that can address terror related events is essential.





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Authorised by: <authority>  
Authorised date: DD/MM/YYYY  
Effective date: DD/MM/YYYY  
Next review date: DD/MM/YYYY  
File Number: #####

## Petitions

### 1. INTRODUCTION

The purpose of this policy is to determine a consistent approach to the accepting and consideration of petitions received by Council from members of the public.

### 2. POLICY STATEMENT AND SCOPE

A petition is a request made to Council seeking a particular action. Any person with a direct interest in Port Macquarie-Hastings Council such as residents, land owners, business people or in some other capacity may ask Council to change an existing Policy, a decision of Council or take action for a certain purpose or for the benefit of particular persons.

The subject of a petition must be a matter on which the Council has the power to act.

Care is to be taken in the wording of petitions as Council imposes certain requirements on their form and content. The petition should follow the guidelines detailed below.

- Be enclosed in a sealed envelope and addressed to "the General Manager" of Port Macquarie-Hastings Council.
- Contain the names and addresses of the petitioners and their own original signatures. Any additional requests for information, such as telephone numbers or e-mails, should be clearly listed as optional.
- State the facts which the petitioners wish to bring to the notice of the Council (this is the 'grievance').
- Conclude with a request that the Council do, or do not do, something or take some course of action. Each page of a petition seeking signatures must be headed with the words of the request.
- Be clearly written, typed or printed and not have anything attached to it
- Be respectful, decorous and temperate in its language.
- Be in English, or be accompanied by a translation certified to be correct.
- Be in an original document format, not a postcard, leaflet or the like.

A petition must not:

- Contain irrelevant statements or information, including logos, photos, slogans etc
- Include headings that refer to an individual Councillor or staff member, or which contain photographs of a Councillor or staff member or similar information judged as 'additional' to the subject of the petition.
- Contain material of a political campaigning nature.
- Be altered in any way from the petition as signed by the petitioners.

#### Signatures

- A petition must contain at least one signature
- Every signature must be original hand-writing, and signatures must not be pasted on, photocopied or transferred in any way.
- Every person signing a petition must write their full address after their signature.

#### Lodgement

- Petitions must be lodged in the format as specified in **Appendix 1** of the Petitions Policy
- Petitions may be lodged at the Public Forum section of a Council meeting if there is a speaker registered to speak on the petition however they are not to be considered or debated unless a resolution of Council is passed to transact the business of the meeting and the chairperson rules it as a matter of urgency in accordance with the Code of Meeting Practice.

- Petitions lodged with Council, either personally through a Councillor or staff member, will be presented to Council for consideration at the next available Ordinary meeting of Council where the agenda has not already been determined.
- Once a petition has been received and registered by Council, an acknowledgement letter will be sent to the person who initiated the petition.

#### Electronic Petitions

Electronic petitions, such as change.org petitions will not be considered by Council directly. These petitions do not represent valid data for consideration as many signatures to these petitions could be from people at locations with no reasonable interest in a local matter, ie internationally or interstate. Electronic petitions will be circulated to Councillors by email for their information and possible action should a Councillor wish to lodge a Notice of Motion to Council to respond to the petition. It is noted that there is no obligation upon Councillors to react to electronic petitions.

What will happen next?

Where the petition meets the requirements of a petition as listed in the guidelines:

- Petitions lodged with Council, **containing 100 signatures or more**, will be included on the agenda of the next available Ordinary meeting of Council where the agenda has not already been determined with a recommendation for notation.
- Petitions lodged with Council, **with less than 100 signatures**, will **not** be placed on a Council meeting agenda and will be managed internally by staff. Councillors will be provided with a copy of these petitions informally for their information.
- Council shall consider the petition and a Councillor will need to move a motion, which will be required to be seconded, to either note the petition as recommended or to act on the petition in some way.
- Petitions lodged as part of a public consultation or exhibition process shall be accepted as a submission to that process and will not be dealt with separately.
- Only the person who has lodged the petition and has included their contact details on the lodgement form will be advised of the outcome of Council's deliberations.

Signatories on a petition must be made aware that their details provided could be a public record should the petition form part of a public Council document.

### 3. RESPONSIBILITIES AND AUTHORITIES

Group Manager Governance

### 4. REFERENCES

This policy is based on the procedures and practices of the NSW Parliament in dealing with petitions. An extract from NSW Legislative Assembly - Standing Orders - Petitions is included as Appendix 2.

### 5. DEFINITIONS

Petition: A petition is a request made to Council seeking a particular action

### 6. PROCESS OWNER

Group Manager Governance

### 7. AMENDMENTS

Nil

**APPENDIX 1 - PETITION****To the Councillors of Port Macquarie-Hastings Council**

The Petition of the residents of the Port Macquarie-Hastings Council

Brings to the attention of the Council .....

.....  
*[Briefly state the circumstances of the issue that the petitioners wish to bring to the notice of the Council.]*

The undersigned petitioners therefore ask the Council to .....

.....  
*[Outline the action that the Council should, or should not, take.]*

Lodged by: ..... Contact Phone .....

Address: .....

Email: .....

*You acknowledge that any information provided below may be a public record when considered by Council.*

<i>Name</i>	<i>Address</i>	<i>Signature</i>

The undersigned petitioners ask the Council to.....

*You acknowledge that any information provided below may be a public record when considered by Council.*

[illegible]

## APPENDIX 2 - STANDING ORDERS - NSW LEGISLATIVE ASSEMBLY - PETITIONS - as at July 2020

Standing Orders—New South Wales Legislative Assembly

	CHAPTER 9  PETITIONS	
Lodgement of petitions	<b>119.</b> A petition must be lodged with the Clerk by 12 noon on the day it is to be reported to the House.	
Clerk's certificate	<b>120.</b> A petition must bear the Clerk's certification that it is in conformity with the Standing Orders.	
Contents of petition	<b>121.</b> A petition must: <ol style="list-style-type: none"> <li>(1) Be legible and contain no alterations.</li> <li>(2) Be in English or be accompanied by a translation certified to be correct by the lodging Member.</li> <li>(3) Contain the request of the petitioner(s).</li> <li>(4) Contain the names and addresses of the petitioner(s) and their own original signatures on sheets containing the petition or the request and they must not be pasted on or otherwise transferred to the petition. A petitioner unable to write may affix their mark in the presence of a witness who shall list their own name and address as well as the name and address of the petitioner.</li> <li>(5) Contain at least one signature on the same sheet as the request.</li> <li>(6) Be respectful, decorous, and temperate in its language, and not contain irrelevant statements.</li> <li>(7) If from a corporation, be made under its common seal.</li> <li>(8) Be received only as the petition of the parties signing the same.</li> </ol>	
Petitions must not contain	<b>122.</b> A petition must not: <ol style="list-style-type: none"> <li>(1) Have letters, affidavits, or other documents attached to it, except if it is a petition for a private bill.</li> <li>(2) Make reference to any debate in Parliament.</li> <li>(3) Be lodged by a Member who has signed the petition as a petitioner.</li> <li>(4) Contain language disrespectful to either House or the Governor.</li> </ol>	



Procedure for lodgement and presentation	<p><b>123.</b> The procedure for the lodging and presentation of a petition is as follows:</p> <ol style="list-style-type: none"> <li>(1) The Member must be acquainted with the contents of the petition.</li> <li>(2) The Member must ensure that the petition is in conformity with the Standing Orders.</li> <li>(3) The Member must sign the front sheet and, if applicable, certify that the petition has been signed by 500 or more persons.</li> <li>(4) The petition may be lodged for presentation with the Clerk.</li> <li>(5) In the House the Clerk shall announce that petitions have been received.</li> <li>(6) The terms of the petition presented shall be printed in Hansard and in the Votes and Proceedings.</li> <li>(7) No discussion upon the subject matter of a petition shall be allowed, except by way of substantive motion.</li> </ol>	3 July 2009
Petitions deemed to have been received	<p><b>124.</b> Petitions shall be deemed to be received by the House unless a motion, moved on the next sitting day (not being a Friday), is agreed to, without debate or amendment, that a petition be not received.</p>	
Referral to Minister and response	<p><b>125.</b></p> <ol style="list-style-type: none"> <li>(1) A copy of every petition lodged with the Clerk and received by the House shall be referred by the Clerk to the Minister responsible for the administration of the matter which is the subject of the petition.</li> <li>(2) The Minister must lodge a response with the Clerk within 35 calendar days of a petition being received by the House if that petition has been signed by 500 or more persons.</li> <li>(3) The receipt of the response shall be reported to the House by the Clerk and a copy of the response sent to the Member who lodged the petition. The response shall also be published.</li> </ol>	3 July 2009

### Petitioning the Parliament

The following link provided details regarding petitions in the Legislative Assembly and Legislative Council. Both have similar requirements and both require a petition in writing.

<https://www.parliament.nsw.gov.au/about/getinvolved/Pages/Petition-the-Parliament.aspx>



# **DRAFT CODE OF MEETING PRACTICE**

**September 2020**

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## 1 INTRODUCTION

This Code of Meeting Practice is made under section 360 of the *Local Government Act 1993* (the Act) and the *Local Government (General) Regulation 2005* (the Regulation).

This Code incorporates:

- the mandatory provisions of the Model Code of Meeting Practice prescribed by the Regulation on 14 December 2018 (Model Code),
- some non-mandatory provisions of the Model Code, and
- supplementary provisions prepared by Council, which must not be inconsistent with the mandatory provisions of the Model Code.

This code and all its provisions applies to all meetings of Port Macquarie-Hastings Council (Council) and committees of Council of which all the members are Councillors.

The Council and such committees must conduct meetings in accordance with this Code.

Council committees whose members include persons other than Councillors may adopt their own rules for meetings unless Council determines otherwise.

## 2 MEETING PRINCIPLES

2.1 Council and committee meetings should be:

- Transparent:* Decisions are made in a way that is open and accountable.
- Informed:* Decisions are made based on relevant, quality information.
- Inclusive:* Decisions respect the diverse needs and interests of the local community.
- Principled:* Decisions are informed by the principles prescribed under Chapter 3 of the Act.
- Trusted:* The community has confidence that Councillors and staff act ethically and make decisions in the interests of the whole community.
- Respectful:* Councillors, staff and meeting attendees treat each other with respect.
- Effective:* Meetings are well organised, effectively run and skilfully chaired.
- Orderly:* Councillors, staff and meeting attendees behave in a way that contributes to the orderly conduct of the meeting.

NOTE: A point of order cannot be made by a Councillor with respect to adherence to the meeting principles: see clause 15.2.

## 3 BEFORE THE MEETING

Timing of Ordinary Council Meetings

3.1 [DELETED]

3.2 The Council shall, by resolution, set the frequency, time, date and place of its Ordinary

meetings.

NOTE: Under section 365 of the Act, Councils are required to meet at least ten (10) times each year, each time in a different month unless the Minister for Local Government has approved a reduction in the number of times that a Council is required to meet each year under section 365A.

#### Extraordinary meetings

- 3.3 If the Mayor receives a request in writing, signed by at least two (2) Councillors, the Mayor must call an extraordinary meeting of the Council to be held as soon as practicable, but in any event, no more than fourteen (14) days after receipt of the request. The Mayor can be one of the two Councillors requesting the meeting.

NOTE: Clause 3.3 reflects section 366 of the Act.

#### Notice to the public of Council meetings

- 3.4 The Council must give notice to the public of the time, date and place of each of its meetings, including extraordinary meetings and of each meeting of committees of the Council.

NOTE: Clause 3.4 reflects section 9(1) of the Act.

- 3.5 For the purposes of clause 3.4, notice of a meeting of the Council and of a committee of Council is to be published before the meeting takes place. The notice must be published on Council's website, and in such other manner that Council is satisfied is likely to bring notice of the meeting to the attention of as many people as possible.

- 3.6 For the purposes of clause 3.4, notice of more than one (1) meeting may be given in the same notice.

#### Notice to Councillors of Ordinary Council meetings

- 3.7 The General Manager must send to each Councillor, at least three (3) days before each meeting of the Council, a notice specifying the time, date and place at which the meeting is to be held, and the business proposed to be considered at the meeting.

NOTE: Clause 3.7 reflects section 367(1) of the Act.

- 3.8 The notice and the agenda for, and the business papers relating to, the meeting may be given to Councillors in electronic form, but only if all Councillors have facilities to access the notice, agenda and business papers in that form.

NOTE: Clause 3.8 reflects section 367(3) of the Act.

Notice to Councillors of extraordinary meetings

- 3.9 Notice of less than three (3) days may be given to Councillors of an extraordinary meeting of the Council in cases of emergency.

NOTES: Clause 3.9 reflects section 367(2) of the Act.

Notices of motion will only be dealt with at an Ordinary meeting of Council unless they are the subject on which an extraordinary meeting of Council is called.

Giving notice of business to be considered at Council meetings

- 3.10 A Councillor may give notice of any business they wish to be considered by the Council at its next Ordinary meeting by way of a notice of motion. To be included on the agenda of the meeting, the notice of motion must be in writing and must be submitted by 5:00pm on the Monday that is not less than seven (7) business days before the meeting is to be held.

- 3.11 A Councillor may, in writing to the General Manager, request the withdrawal of a notice of motion submitted by them prior to its inclusion in the agenda and business paper for the meeting at which it is to be considered.

**NOTE: A Councillor who submitted a notice of motion may request the withdrawal of the motion when it is before the Council: see clause 10.3.**

- 3.12 If the General Manager considers that a notice of motion submitted by a Councillor for consideration at an ordinary meeting of the Council has legal, strategic, financial or policy implications which should be taken into consideration by the meeting, the General Manager may prepare a report in relation to the notice of motion for inclusion with the business papers for the meeting at which the notice of motion is to be considered by the Council.

- 3.13 A notice of motion for the expenditure of funds on works and/or services other than those already provided for in the Council's current adopted operational plan must identify the source of funding for the expenditure that is the subject of the notice of motion. If the notice of motion does not identify a funding source, the General Manager must either:

- (a) prepare a report on the availability of funds for implementing the motion if adopted for inclusion in the business papers for the meeting at which the notice of motion is to be considered by the Council, or
- (b) by written notice sent to all Councillors with the business papers for the meeting for which the notice of motion has been submitted, defer consideration of the matter by the Council to such a date specified in the notice, pending the preparation of such a report.

Questions with notice

- 3.14 A Councillor may, by way of a notice submitted under clause 3.10, ask a question for response by the General Manager about the performance or operations of the Council.

- 3.15 A Councillor is not permitted to ask a question with notice under clause 3.14 that comprises a complaint against the General Manager or a member of staff of the Council, or a question that implies wrongdoing by the General Manager or a member of staff of the Council.

- 3.16 The General Manager or their nominee may respond to a question with notice submitted under clause 3.14 by way of a report included in the business papers for the relevant meeting of the Council or orally at the meeting.

NOTE: Nothing here prevents an initial answer being provided orally at the meeting and formally by way of a later report in writing.

3.16A Questions with Notice submitted under 3.10 are required to be in accordance with the following conditions:

- i. The question is to be a single sentence of a single question commencing "That the General Manager be requested to respond to the following question with notice...";
- ii. Be capable of being finalised by directly utilising no more than 20 minutes of Council resources or as deemed reasonable by the General Manager; and
- iii. Results in a "response" component of not more than one (1) A4 page;
- iv. Determines that a Councillor shall be limited to a maximum of two (2) Questions with Notice at any Ordinary Council Meeting

Note: Nothing here prevents an initial answer being provided orally at the meeting and formally by way of a later report in writing.

Note: Clause 3.10 of the Code of Meeting Practice relates to submitting Notices of Motion and a question on Notice is regarded as a Notice of Motion

#### Agenda and business papers for Ordinary meetings

- 3.17 The General Manager must cause the agenda for a meeting of the Council or a committee of the Council to be prepared as soon as practicable before the meeting.
- 3.18 The General Manager must ensure that the agenda for an Ordinary meeting of the Council states:
  - (a) all matters to be dealt with arising out of the proceedings of previous meetings of the Council, and
  - (b) if the Mayor is the chairperson – any matter or topic that the chairperson proposes, at the time when the agenda is prepared, to put to the meeting, and
  - (c) all matters, including matters that are the subject of staff reports and reports of committees, to be considered at the meeting, and
  - (d) any business of which due notice has been given under clause 3.10.
- 3.19 Nothing in clause 3.18 limits the powers of the Mayor to put a Mayoral Minute to a meeting under clause 9.6.
- 3.20 The General Manager must not include in the agenda for a meeting of the Council any business of which due notice has been given if, in the opinion of the General Manager, the business is, or the implementation of the business would be, unlawful. The General Manager must report, without giving details of the item of business, any such exclusion to the next meeting of the Council.
- 3.21 Where the agenda includes the receipt of information or discussion of other matters that, in the opinion of the General Manager, is likely to take place when the meeting is closed to the public, the General Manager must ensure that the agenda of the meeting:
  - (a) identifies the relevant item of business and indicates that it is of such a nature (without disclosing details of the information to be considered when the meeting is closed to the public), and
  - (b) states the grounds under section 10A(2) of the Act relevant to the item of business.

NOTE: Clause 3.21 reflects section 9(2A)(a) of the Act.



- 3.22 The General Manager must ensure that the details of any item of business which, in the opinion of the General Manager, is likely to be considered when the meeting is closed to the public, are included in a business paper provided to Councillors for the meeting concerned. Such details must not be included in the business papers made available to the public, and must not be disclosed by a Councillor or by any other person to another person who is not authorised to have that information.

Availability of the agenda and business papers to the public

- 3.23 Copies of the agenda and the associated business papers, such as correspondence and reports for meetings of the Council and committees of Council, are to be published on the Council's website, and must be made available to the public for inspection, or for taking away by any person free of charge at the offices of the Council, at the relevant meeting and at such other venues determined by the Council.

NOTE: Clause 3.23 reflects section 9(2) and (4) of the Act.

- 3.24 Clause 3.23 does not apply to the business papers for items of business that the General Manager has identified under clause 3.21 as being likely to be considered when the meeting is closed to the public.

NOTE: Clause 3.24 reflects section 9(2A)(b) of the Act.

- 3.25 For the purposes of clause 3.23, copies of agendas and business papers must be published on the Council's website and made available to the public at a time that is as close as possible to the time they are available to Councillors.

NOTE: Clause 3.25 reflects section 9(3) of the Act.

- 3.26 A copy of an agenda, or of an associated business paper made available under clause 3.23, may in addition be given or made available in electronic form.

NOTE: Clause 3.26 reflects section 9(5) of the Act.

Agenda and business papers for extraordinary meetings

- 3.27 The General Manager must ensure that the agenda for an extraordinary meeting of the Council deals only with the matters stated in the notice of the meeting.

- 3.28 Despite clause 3.27, business may be considered at an extraordinary meeting of the Council, even though due notice of the business has not been given, if:

- (a) a motion is passed to have the business considered at the meeting, and
- (b) the business to be considered is ruled by the chairperson to be of great urgency on the grounds that it requires a decision by the Council before the next scheduled ordinary meeting of the Council.

NOTE: The procedure in relation to 3.28 requires:

1. A Councillor to move a motion to for the item to be dealt with as it is **urgent a matter of great urgency**.
2. Chairperson calls for a seconder.
3. If there is a seconder, then the mover of the motion can speak as to why they believe it should be considered and the urgent nature. **In accordance with clause 3.30, only the mover of the motion can speak to the motion before it is put.**
4. Council votes on considering it as an item of business.
5. The chairperson makes a decision as to whether it should be considered due to its urgent nature.
6. **In accordance with clause 3.31, a motion of dissent cannot be moved against a ruling of the chairperson on whether a matter is of great urgency.**



- 3.29 A motion moved under clause 3.28(a) can be moved without notice but only after the business notified in the agenda for the extraordinary meeting has been dealt with.
- 3.30 Despite clauses 10.20–10.30, only the mover of a motion moved under clause 3.28(b) can speak to the motion before it is put.
- 3.31 A motion of dissent cannot be moved against a ruling of the chairperson under clause 3.28(a) on whether a matter is of great urgency.

Pre-meeting briefing sessions

- 3.32 Prior to each Ordinary meeting of the Council, the General Manager may arrange a pre-meeting briefing session to brief Councillors on business to be considered at the meeting. Pre-meeting briefing sessions may also be held for extraordinary meetings of the Council and meetings of committees of the Council.
- 3.33 Pre-meeting briefing sessions are to be held in the absence of the public.
- 3.34 The General Manager or a member of staff nominated by the General Manager is to preside at pre-meeting briefing sessions.
- 3.36 Councillors must not use pre-meeting briefing sessions to debate or make preliminary decisions on items of business they are being briefed on, and any debate and decision-making must be left to the formal Council or committee meeting at which the item of business is to be considered.
- 3.37 Councillors (including the Mayor) must declare and manage any conflicts of interest they may have in relation to any item of business that is the subject of a briefing at a pre-meeting briefing session, in the same way that they are required to do so at a Council or committee meeting. The Council is to maintain a written record of all conflict of interest declarations made at pre-meeting briefing sessions and how the conflict of interest was managed by the Councillor who made the declaration.
- 3.38 A record of minutes will be recorded in the pre-meeting briefing including the items discussed, attendees of the briefing, timings and conflicts as detailed in clause 3.37.

#### 4 PUBLIC FORUMS

- 4.1 The Council may hold a public forum prior to each ordinary meeting of the Council for the purpose of hearing oral submissions from members of the public on items of business to be considered at the meeting. Public forums may also be held prior to Extraordinary Council meetings and meetings of Committees of the Council.
- 4.1A Public forums relating to Ordinary Council meetings are to commence immediately prior to the pre-meeting briefing with Councillors at 5pm. Public forums relating to Extraordinary Council meetings will be held at a time agreed to by the Mayor and General Manager.
- 4.1B The maximum time for public forum will be 60 minutes with an option to extend public forum by 30 minutes following consensus by all Councillors present.
- 4.2 Public forums are to be chaired by the Mayor, the Deputy Mayor in the absence of the Mayor, or a Councillor selected by those Councillors in attendance in the event the Mayor and Deputy Mayor are absent.
- 4.3 To speak at a public forum, a person must first make an application to the council in the approved form. Applications to speak at the public forum must be received by 4.30pm on the last business day before the date on which the public forum is to be held, and must identify the item of business on the agenda of the council meeting the person wishes to speak on, and whether they wish to speak 'for' or 'against' the item.
- 4.4 A person may apply to speak on no more than two (2) items of business on the agenda of the Council meeting.
- 4.5 Legal representatives acting on behalf of others are not to be permitted to speak at a public forum unless they identify their status as a legal representative when applying to speak at the public forum.
- 4.6 The General Manager or their delegate may refuse an application to speak at a public forum. The General Manager or their delegate must give reasons in writing for a decision to refuse an application.
- 4.7 No more than two (2) speakers are to be permitted to speak 'for' or 'against' each item of business on the agenda for the council meeting.
- 4.8 If more than the permitted number of speakers apply to speak 'for' or 'against' any item of business, the General Manager or their delegate may:
- request the speakers to nominate from among themselves the persons who are to address the council on the item of business. If the speakers are not able to agree on whom to nominate to address the Council, the General Manager or their delegate is to determine who will address the council at the public forum.
  - Councillors may determine to increase the number of speakers permitted to speak on an item of business, where they are satisfied that it is necessary to do so to allow the Council to hear a fuller range of views on the relevant item of business. Additional speakers may only speak following the completion of all speakers being heard and subject to time constraints as detailed in 4.1B above
- 4.9 Approved speakers at the public forum are to register with the Council any written, visual or audio material to be presented in support of their address to the Council at the public forum, and to identify any equipment needs, by 4:30pm on the last business day before the date of the public forum. The General Manager or their delegate may refuse to allow such material to be presented should the request be unreasonable, equipment not being readily available or insufficient notice has been provided by the speaker.

- 4.10 The General Manager or their delegate is to determine the order of speakers at the public forum with speakers wishing to speak to matters on the agenda being given priority.
- 4.11 Each speaker will be allowed five (5) minutes to address the Council. This time is to be strictly enforced by the chairperson.
- 4.12 Speakers at public forums must not digress from the item on the agenda of the Council meeting they have applied to address the Council on. If a speaker digresses to irrelevant matters, the chairperson is to direct the speaker not to do so. If a speaker fails to observe a direction from the chairperson, the speaker will not be further heard.
- 4.13 A Councillor (including the chairperson) may, through the chairperson, ask questions of a speaker following their address at a public forum. Questions put to a speaker must be direct, succinct and without argument.
- 4.14 Speakers at public forums cannot ask questions of the Council, Councillors or Council staff.
- 4.15 The General Manager or their nominee may, with the concurrence of the chairperson, address the forum for up to two (2) minutes in response to an address at a public forum after the address and any subsequent questions and answers have been finalised.
- 4.16 Where an address made at a public forum raises matters that require further consideration by Council staff, the General Manager may recommend that the Council defer consideration of the matter pending the preparation of a further report on the matters.
- 4.17 When addressing the public forum, speakers at public forums must comply with this code and all other relevant Council codes, policies and procedures. Speakers must refrain from engaging in disorderly conduct, publicly alleging breaches of the Council's Code of Conduct or making other potentially defamatory statements.
- 4.18 If the chairperson considers that a speaker at a public forum has engaged in conduct of the type referred to in clause 4.17, the chairperson may request the person to refrain from the inappropriate behaviour and to withdraw and unreservedly apologise for any inappropriate comments. Where the speaker fails to comply with the chairperson's request, the chairperson may immediately require the person to stop speaking.
- 4.19 Clause 4.18 does not limit the ability of the chairperson to deal with disorderly conduct by speakers at public forums in accordance with the provisions of Part 15 of this code.
- 4.20 Where a speaker engages in conduct of the type referred to in clause 4.17, the General Manager or their delegate may refuse further applications from that person to speak at public forums for such a period as the General Manager or their delegate considers appropriate.
- 4.21 Councillors (including the Mayor) must declare and manage any conflicts of interest they may have in relation to any item of business that is the subject of an address at a public forum, in the same way that they are required to do so at a Council or Committee meeting. The Council is to maintain a written record of all conflict of interest declarations made at public forums and how the conflict of interest was managed by the Councillor who made the declaration.
- 4.22 The following submissions may **not** be made at an open forum:
- a. a submission on a proposed or pending planning proposal, development application, application to modify a development consent, application to review a determination or any related matter,

- b. a submission by an applicant or objector in respect of development who made an oral submission at an on-site inspection,
- c. a submission by a person on a matter on which they have made submissions at two (2) previous open forums in the same calendar year, unless otherwise approved in writing by the General Manager,
- d. a submission relating to a current or pending procurement, contract negotiation or dispute resolution involving the Council,
- e. a submission on any matter which the General Manager or their delegate considers is inappropriate to be made at an open forum.

4.23 Attendance by Councillors at public forums is optional.

5 COMING TOGETHER

Attendance by Councillors at meetings

- 5.1 All Councillors must make reasonable efforts to attend meetings of the Council and of committees of the Council of which they are members.

NOTE: A Councillor may not attend a meeting as a Councillor (other than the first meeting of the Council after the Councillor is elected or a meeting at which the Councillor takes an oath or makes an affirmation of office) until they have taken an oath or made an affirmation of office in the form prescribed under section 233A of the Act.

- 5.2 A Councillor cannot participate in a meeting of the Council or of a committee of the Council unless personally present at the meeting.

- 5.3 Seating order for Councillors at Council meetings shall be determined by resolution of the Council.

- 5.4 Where a Councillor is unable to attend one or more ordinary meetings of the Council, the Councillor should request that the Council grant them a leave of absence from those meetings. This clause does not prevent a Councillor from making an apology if they are unable to attend a meeting. However the acceptance of such an apology does not constitute the granting of a leave of absence for the purposes of this code and the Act.

- 5.5 A Councillor's request for leave of absence from Council meetings should, if practicable, identify (by date) the meetings from which the Councillor intends to be absent and the grounds upon which the leave of absence is being sought.

- 5.6 The Council must act reasonably when considering whether to grant a Councillor's request for a leave of absence.

- 5.7 A Councillor's civic office will become vacant if the Councillor is absent from three (3) consecutive ordinary meetings of the Council without prior leave of the Council, or leave granted by the Council at any of the meetings concerned, unless the holder is absent because they have been suspended from office under the Act, or because the Council has been suspended under the Act, or as a consequence of a compliance order under section 438HA.

NOTE: Clause 5.7 reflects section 234(1)(d) of the Act.

- 5.8 A Councillor who intends to attend a meeting of the Council despite having been granted a leave of absence should, if practicable, give the General Manager at least two (2) days' notice of their intention to attend.

The quorum for a meeting

- 5.9 The quorum for a meeting of the Council is a majority of the Councillors of the Council who hold office at that time and are not suspended from office.

NOTES: Clause 5.9 reflects section 368(1) of the Act.

If an even number of Councillors holds office at the time, a majority is half that number plus one.

- 5.10 Clause 5.9 does not apply if the quorum is required to be determined in accordance with directions of the Minister in a performance improvement order issued in respect of the Council.

NOTE: Clause 5.10 reflects section 368(2) of the Act.

- 5.11 A meeting of the Council must be adjourned if a quorum is not present:

- (a) at the commencement of the meeting where the number of apologies received for the meeting indicates that there will not be a quorum for the meeting, or
- (b) within half an hour after the time designated for the holding of the meeting, or
- (c) at any time during the meeting.

NOTES: A Councillor who has been granted leave of absence for a meeting by the Council is an apology for the meeting for the purposes of clause 5.11(a). A Councillor can be an apology for a meeting without having been granted a leave of absence by the Council.

A Councillor who leaves the meeting room during a meeting is absent from the meeting for the purpose of determining whether a quorum is present.

Refer to the Code of Conduct in the event that a majority of Councillors are precluded from consideration of a matter, by reason of having disclosed a pecuniary or non-pecuniary significant interest or in the case where a Councillor has deliberately left the meeting for the purpose of losing a quorum.

- 5.12 In either case, the meeting must be adjourned to a time, date and place fixed:

- (a) by the chairperson, or
- (b) in the chairperson's absence, by the majority of the Councillors present, or
- (c) failing that, by the General Manager.

- 5.13 The General Manager must record in the Council's minutes the circumstances relating to the absence of a quorum (including the reasons for the absence of a quorum) at or arising during a meeting of the Council, together with the names of the Councillors present.

- 5.14 Where, prior to the commencement of a meeting, it becomes apparent that a quorum may not be present at the meeting, or that the safety and welfare of Councillors, Council staff and members of the public may be put at risk by attending the meeting because of a natural disaster (such as, but not limited to flood or bushfire), the Mayor may, in consultation with the General Manager and, as far as is practicable with each Councillor, cancel the meeting. Where a meeting is cancelled, notice of the cancellation must be published on the Council's website and in such other manner that the Council is satisfied is likely to bring notice of the cancellation to the attention of as many people as possible.

- 5.15 Where a meeting is cancelled under clause 5.14, the business to be considered at the meeting may instead be considered, where practicable, at the next Ordinary meeting of the Council or at an extraordinary meeting called under clause 3.3.



Entitlement of the public to attend Council meetings

- 5.16 Everyone is entitled to attend a meeting of the Council and committees of the Council. The Council must ensure that all meetings of the Council and committees of the Council are open to the public.

NOTE: Clause 5.16 reflects section 10(1) of the Act.

- 5.17 Clause 5.16 does not apply to parts of meetings that have been closed to the public under section 10A of the Act.

- 5.18 A person (whether a Councillor or another person) is not entitled to be present at a meeting of the Council or a committee of the Council if expelled from the meeting:

- (a) by a resolution of the meeting, or
- (b) by the person presiding at the meeting if the Council has, by resolution, authorised the person presiding to exercise the power of expulsion.

NOTES: Clause 5.18 reflects section 10(2) of the Act.

Part 15 specifies powers to expel persons from a meeting.

Webcasting of meetings

- 5.19 All meetings of the Council and committees of the Council (as defined in the Local Government Act) are to be webcast on the Council's website. Council will livestream its Ordinary and Extraordinary Council meetings when held in the Port Macquarie Council Chamber, where that section of the meeting is not closed to the public, and from other locations where facilities permit.

NOTES: Council will make an audio-visual recording of the meeting and will make this recording available through the Council website as soon as practicable after the completion of the meeting.

Due to technical limitations when Council meetings are held outside the Council Chamber in the Port Macquarie Administration Offices, the minimum of an audio recording of the meeting will be made available through the Council website as soon as practicable after the completion of the meeting. Video recordings may be provided if facilities allow.

It is also noted that, although it is unexpected, technical difficulties may arise which may result in no recording of the meeting being available. Should this occur a report will be presented to the following Council meeting indicating reasons for the inability to record (if known) and a note will be placed on Council's website indicating that no recording for that meeting is available due to technical difficulties experienced at that time.

No editing of these recordings is permitted other than for formatting or presentation purposes.

- 5.20 Clause 5.19 does not apply to parts of a meeting that have been closed to the public under section 10A of the Act.
- 5.21 At the start of each meeting the chairperson is to make a statement informing those in attendance that the meeting is being webcast and that those in attendance should refrain from making any defamatory statements.
- 5.22 A recording of each meeting of the Council and committee of the Council is to be retained on the Council's website for no less than twelve (12) months. Recordings of meetings may be disposed of in accordance with the State Records Act 1998.



Attendance of the General Manager and other staff at meetings

- 5.23 The General Manager is entitled to attend, but not to vote at, a meeting of the Council or a meeting of a committee of the Council of which all of the members are Councillors.

NOTE: Clause 5.23 reflects section 376(1) of the Act.

- 5.24 The General Manager is entitled to attend a meeting of any other committee of the Council and may, if a member of the committee, exercise a vote.

NOTE: Clause 5.24 reflects section 376(2) of the Act.

- 5.25 The General Manager may be excluded from a meeting of the Council or a committee while the Council or committee deals with a matter relating to the standard of performance of the General Manager or the terms of employment of the General Manager.

NOTE: Clause 5.25 reflects section 376(3) of the Act.

- 5.26 The attendance of other Council staff at a meeting, (other than as members of the public) shall be with the approval of the General Manager.

## 6 THE CHAIRPERSON

The chairperson at meetings

- 6.1 The Mayor, or at the request of or in the absence of the Mayor, the Deputy Mayor (if any) presides at meetings of the Council.

NOTE: Clause 6.1 reflects section 369(1) of the Act.

- 6.2 If the Mayor and the Deputy Mayor (if any) are absent, a Councillor elected to chair the meeting by the Councillors present presides at a meeting of the Council.

NOTE: Clause 6.2 reflects section 369(2) of the Act.

Election of the chairperson in the absence of the Mayor and Deputy Mayor

- 6.3 If no chairperson is present at a meeting of the Council at the time designated for the holding of the meeting, the first business of the meeting must be the election of a chairperson to preside at the meeting.

- 6.4 The election of a chairperson must be conducted:

- (a) by the General Manager or, in their absence, an employee of the Council designated by the General Manager to conduct the election, or
- (b) by the person who called the meeting or a person acting on their behalf if neither the General Manager nor a designated employee is present at the meeting, or if there is no General Manager or designated employee.

- 6.5 If, at an election of a chairperson, two (2) or more candidates receive the same number of votes and no other candidate receives a greater number of votes, the chairperson is to be the candidate whose name is chosen by lot.

- 6.6 For the purposes of clause 6.5, the person conducting the election must:
- (a) arrange for the names of the candidates who have equal numbers of votes to be written on similar slips, and
  - (b) then fold the slips so as to prevent the names from being seen, mix the slips and draw one of the slips at random.
- 6.7 The candidate whose name is on the drawn slip is the candidate who is to be the chairperson.
- 6.8 Any election conducted under clause 6.3, and the outcome of the vote, are to be recorded in the minutes of the meeting.

Chairperson to have precedence

- 6.9 When the chairperson rises or speaks during a meeting of the Council:
- (a) any Councillor then speaking or seeking to speak must cease speaking and, if standing, immediately resume their seat, and
  - (b) every Councillor present must be silent to enable the chairperson to be heard without interruption.

**7 MODES OF ADDRESS**

- 7.1 If the chairperson is the Mayor, they are to be addressed as 'Mr Mayor' or 'Madam Mayor'.
- 7.1A If the chairperson is the Deputy Mayor, they are to be addressed as 'Mr Deputy Mayor' or 'Madam Deputy Mayor'.
- 7.2 Where the chairperson is not the Mayor, they are to be addressed as either 'Mr Chairperson' or 'Mr Chair' or 'Madam Chairperson' or 'Madam Chair'.
- 7.3 A Councillor is to be addressed as 'Councillor [surname]'.
- 7.4 A Council officer is to be addressed by their official designation or as Mr/Ms [surname].
- 7.5 During a meeting of Council, all Councillors with the exception of the chairperson, or any Councillor prevented by physical impairment, shall stand when speaking.

**8 ORDER OF BUSINESS FOR ORDINARY COUNCIL MEETINGS**

- 8.1 [DELETED]

8.2 The general order of business for an Ordinary meeting of the Council shall be:

- Open meeting
- 01 Acknowledgement of country
- 02 Local Government Prayer
- 03 Apologies
- 04 Confirmation of minutes
- 05 Disclosures of interests
- 06 Mayoral minute(s)
- 07 Confidential attachments to Ordinary Council meeting
- ~~08 Public forum matters not on the agenda~~
- ~~09 Public forum matters on the agenda~~
- 08 Leadership and Governance
- 09 Your Community Life
- 10 Your Business and Industry
- 11 Your Natural and Built Environment
- 12 Items to be dealt with by exception
- 13 Confidential matters
- Close of meeting

NOTE: Notices of motion/Questions with notice will be included in the focus areas of the agenda.

8.2A The Acknowledgement of Country shall be delivered in accordance with advice/guidelines issued by the Australian Government at that time. This also applies to all Committees of Council, sub-committees and groups.

8.3 The order of business as fixed under clause 8.2 may be altered for a particular meeting of the Council if a motion to that effect is passed at that meeting. Such a motion can be moved without notice.

8.4 Despite clauses 10.20–10.30, only the mover of a motion referred to in clause 8.3 may speak to the motion before it is put.

## 9 CONSIDERATION OF BUSINESS AT COUNCIL MEETINGS

### Business that can be dealt with at a Council meeting

9.1 The Council must not consider business at a meeting of the Council:

- (a) unless a Councillor has given notice of the business, as required by clause 3.10, and
- (b) unless notice of the business has been sent to the Councillors in accordance with clause 3.7 in the case of an ordinary meeting or clause 3.9 in the case of an extraordinary meeting called in an emergency.

9.2 Clause 9.1 does not apply to the consideration of business at a meeting, if the business:

- (a) is already before, or directly relates to, a matter that is already before the Council, or
- (b) is the election of a chairperson to preside at the meeting, or
- (c) subject to clause 9.9, is a matter or topic put to the meeting by way of a Mayoral minute, or
- (d) is a motion for the adoption of recommendations of a committee, including, but not limited to, a committee of the Council.

9.3 Despite clause 9.1, business may be considered at a meeting of the Council even though due notice of the business has not been given to the Councillors if:

- (a) a motion is passed to have the business considered at the meeting, and
- (b) the business to be considered is ruled by the chairperson to be of great urgency on the grounds that it requires a decision by the Council before the next scheduled ordinary meeting of the Council.

NOTE: The procedure in relation to 9.3 requires:

1. A Councillor to move a motion to for the item to be dealt with as it is urgent **a matter of great urgency.**
2. Chairperson calls for a seconder.
3. If there is a seconder, then the mover of the motion can speak as to why they believe it should be considered and the urgent nature. **In accordance with clause 9.4, only the mover of the motion can speak to the motion before it is put.**
4. Council votes on considering it as an item of business.
5. The chairperson makes a decision as to whether it should be considered due to its urgent nature.
6. **In accordance with clause 9.3(b), a motion of dissent cannot be moved against a ruling of the chairperson on whether a matter is of great urgency.**

9.4 A motion moved under clause 9.3(a) can be moved without notice. Despite clauses 10.20–10.30, only the mover of a motion referred to in clause 9.3(a) can speak to the motion before it is put.

9.5 A motion of dissent cannot be moved against a ruling by the chairperson under clause 9.3(b).

#### Mayoral Minutes

9.6 Subject to clause 9.9, if the Mayor is the chairperson at a meeting of the Council, the Mayor may, by minute signed by the Mayor, put to the meeting without notice any matter or topic that is within the jurisdiction of the Council, or of which the Council has official knowledge.

9.7 A Mayoral Minute, when put to a meeting, takes precedence over all business on the Council's agenda for the meeting. The chairperson (but only if the chairperson is the Mayor) may move the adoption of a Mayoral Minute without the motion being seconded.

NOTE: A motion to adopt a Mayoral Minute can be debated and amended as with any other substantive motion.

9.8 A recommendation made in a Mayoral Minute put by the Mayor is, so far as it is adopted by the Council, a resolution of the Council.

9.9 A Mayoral Minute must not be used to put without notice matters that are routine and not urgent, or matters for which proper notice should be given because of their complexity. For the purpose of this clause, a matter will be urgent where it requires a decision by the Council before the next scheduled ordinary meeting of the Council.

9.10 Where a Mayoral Minute makes a recommendation which, if adopted, would require the expenditure of funds on works and/or services other than those already provided for in the Council's current adopted operational plan, it must identify the source of funding for the expenditure that is the subject of the recommendation. If the Mayoral Minute does not identify a funding source, the Council must defer consideration of the matter, pending a report from the General Manager on the availability of funds for implementing the recommendation if adopted.

Staff reports

- 9.11 A recommendation made in a staff report is, so far as it is adopted by the Council, a resolution of the Council.

Reports of committees of Council

- 9.12 The recommendations of a committee of the Council are, so far as they are adopted by the Council, resolutions of the Council.
- 9.13 If in a report of a committee of the Council distinct recommendations are made, the Council may make separate decisions on each recommendation.

Adopting recommendations in reports

- 9.13A If in any report (other than the report of a committee) distinct recommendations are made, the Council may make separate decisions on each recommendation (splitting recommendations).

Questions

- 9.14 A question must not be asked at a meeting of the Council unless it concerns a matter on the agenda of the meeting or notice has been given of the question in accordance with clauses 3.10 and 3.14.
- 9.15 A Councillor may, through the chairperson, put a question to another Councillor about a matter on the agenda.
- 9.16 A Councillor may, through the General Manager, put a question to a Council employee about a matter on the agenda. Council employees are only obliged to answer a question put to them through the General Manager at the direction of the General Manager.

NOTES: It is considered that all Councillors have the opportunity to, through the General Manager, put a question to a Council employee.

The effect of clause 9.16 also applies to questions to staff arising in the open forum.

- 9.17 A Councillor or Council employee to whom a question is put is entitled to be given reasonable notice of the question and, in particular, sufficient notice to enable reference to be made to other persons or to documents. Where a Councillor or Council employee to whom a question is put is unable to respond to the question at the meeting at which it is put, they may take it on notice and report the response to the next meeting of the Council.

NOTE: Councillors are encouraged to provide the General Manager with advance notice of significant questions intended to be asked by a Councillor during the meeting regarding any item on the agenda.

- 9.18 Councillors must put questions directly, succinctly, respectfully and without argument.
- 9.19 The chairperson must not permit discussion on any reply to, or refusal to reply to, a question put to a Councillor or Council employee.

## 10 RULES OF DEBATE

### Motions to be seconded

- 10.1 Unless otherwise specified in this code, a motion or an amendment cannot be debated unless or until it has been seconded.
- 10.1A The mover of a substantive motion that has been seconded will be given the opportunity to speak for the motion before any amendment to the motion will be accepted.

### Notices of motion

- 10.2 A Councillor who has submitted a notice of motion under clause 3.10 is to move the motion the subject of the notice of motion at the meeting at which it is to be considered.
- 10.3 If a Councillor who has submitted a notice of motion under clause 3.10 wishes to withdraw it after the agenda and business paper for the meeting at which it is to be considered have been sent to Councillors, the Councillor may request the withdrawal of the motion when it is before the Council.
- 10.4 In the absence of a Councillor who has placed a notice of motion on the agenda for a meeting of the Council:
- (a) any other Councillor may, with the leave of the chairperson, move the motion at the meeting, or
  - (b) the chairperson may defer consideration of the motion until the next meeting of the Council.

### Chairperson's duties with respect to motions

- 10.5 It is the duty of the chairperson at a meeting of the Council to receive and put to the meeting any lawful motion that is brought before the meeting.
- 10.6 The chairperson must rule out of order any motion or amendment to a motion that is unlawful or the implementation of which would be unlawful.
- 10.6A Before ruling out of order a motion or an amendment to a motion under clause 10.6, the chairperson must explain to the mover of the motion the reason or reasons why the chairperson proposes to do so.
- 10.7 Before ruling out of order a motion or an amendment to a motion under clause 10.6, the chairperson is to give the mover an opportunity to clarify or amend the motion or amendment.
- 10.8 Any motion, amendment or other matter that the chairperson has ruled out of order is taken to have been lost.

### Motions requiring the expenditure of funds

- 10.9 A motion or an amendment to a motion which if passed would require the expenditure of funds on works and/or services other than those already provided for in the Council's current adopted operational plan must identify the source of funding for the expenditure that is the subject of the motion. If the motion does not identify a funding source, the Council must defer consideration of the matter, pending a report from the General Manager on the availability of funds for implementing the motion if adopted.



Amendments to motions

- 10.10 An amendment to a motion must be moved and seconded before it can be debated.
- 10.11 An amendment to a motion must relate to the matter being dealt with in the original motion before the Council and must not be a direct negative of the original motion. An amendment to a motion which does not relate to the matter being dealt with in the original motion, or which is a direct negative of the original motion, must be ruled out of order by the chairperson.
- 10.12 The mover of an amendment is to be given the opportunity to explain any uncertainties in the proposed amendment before a seconder is called for.
- 10.13 If an amendment has been lost, a further amendment can be moved to the motion to which the lost amendment was moved, and so on, but no more than one (1) motion and one (1) proposed amendment can be before Council at any one time.
- 10.14 While an amendment is being considered, debate must only occur in relation to the amendment and not the original motion. Debate on the original motion is to be suspended while the amendment to the original motion is being debated.
- 10.15 If an amendment is carried, it becomes the motion and is to be debated. If the amendment is lost, debate is to resume on the original motion.
- 10.16 An amendment may become the motion without debate or a vote where it is accepted by the Councillor who moved the original motion and the Councillor who seconded the motion.

NOTES: If an amendment is accepted by the mover of the original motion, the amended motion becomes the motion with the same original mover, and debate is continued until a vote.

Where a motion or amendment is developed by Councillors as a consequence of debate during the meeting, the General Manager will cause the draft motion or amendment to be displayed on screens to provide Councillors with the opportunity to review the motion or amendment prior to voting, to ensure the intent of the motion or amendment is accurately reflected.

Councillors are encouraged to provide the General Manager and Councillors with advance notice of significant variations to the staff recommendations.

Foreshadowed motions

- 10.17 A Councillor may propose a foreshadowed motion in relation to the matter the subject of an original motion before the Council, without a seconder during debate on the original motion. The foreshadowed motion is only to be considered if the original motion is lost or withdrawn and the moved foreshadowed motion is then seconded. If an original motion is carried, the foreshadowed motion lapses.
- 10.18 Where an amendment has been moved and seconded, a Councillor may, without a seconder, foreshadow a further amendment that they propose to move after the first amendment has been dealt with. There is no limit to the number of foreshadowed amendments that may be put before the Council at any time. However, no discussion can take place on foreshadowed amendments until the previous amendment has been dealt with and the foreshadowed amendment has been moved and seconded.
- 10.19 Foreshadowed motions and foreshadowed amendments are to be considered in the order in which they are proposed. However, foreshadowed motions cannot be considered until all foreshadowed amendments have been dealt with.

Limitations on the number and duration of speeches

- 10.20 A Councillor who, during a debate at a meeting of the Council, moves an original motion, has the right to speak on each amendment to the motion and a right of general reply to all observations that are made during the debate in relation to the motion, and any amendment to it at the conclusion of the debate before the motion (whether amended or not) is finally put.

NOTE: If an amendment is carried then it becomes a motion, and can be debated before a vote. If it is debated, then its mover shall be given the right of reply which will then close the debate.

- 10.21 A Councillor, other than the mover of an original motion, has the right to speak once on the motion and once on each amendment to it.
- 10.22 A Councillor must not, without the consent of the Council, speak more than once on a motion or an amendment, or for longer than five (5) minutes at any one time.
- 10.23 Despite clause 10.22, the chairperson may permit a Councillor who claims to have been misrepresented or misunderstood to speak more than once on a motion or an amendment, and for longer than five (5) minutes on that motion or amendment to enable the Councillor to make a statement limited to explaining the misrepresentation or misunderstanding.
- 10.24 Despite clause 10.22, the Council may resolve to shorten the duration of speeches to expedite the consideration of business at a meeting.
- 10.25 Despite clauses 10.20 and 10.21, a Councillor may move that a motion or an amendment be now put:
- (a) if the mover of the motion or amendment has spoken in favour of it and no Councillor expresses an intention to speak against it, or
  - (b) if at least two (2) Councillors have spoken in favour of the motion or amendment and at least two (2) Councillors have spoken against it.
- 10.26 The chairperson must immediately put to the vote, without debate, a motion moved under clause 10.25. A seconder is not required for such a motion.
- 10.27 If a motion that the original motion or an amendment be now put is passed, the chairperson must, without further debate, put the original motion or amendment to the vote immediately after the mover of the original motion has exercised their right of reply under clause 10.20.
- 10.28 If a motion that the original motion or an amendment be now put is lost, the chairperson must allow the debate on the original motion or the amendment to be resumed.
- 10.29 All Councillors must be heard without interruption and all other Councillors must, unless otherwise permitted under this code, remain silent while another Councillor is speaking.
- 10.30 Once the debate on a matter has concluded and a matter has been dealt with, the chairperson must not allow further debate on the matter.
- 10.31 [DELETED]

## 11 VOTING

### Voting entitlements of Councillors

- 11.1 Each Councillor is entitled to one (1) vote.

NOTE: Clause 11.1 reflects section 370(1) of the Act.

- 11.2 The person presiding at a meeting of the Council has, in the event of an equality of votes, a second or casting vote.

NOTE: Clause 11.2 reflects section 370(2) of the Act.

- 11.3 Where the chairperson declines to exercise, or fails to exercise, their second or casting vote, in the event of an equality of votes, the motion being voted upon is lost.

- 11.4 [DELETED]

### Voting at Council meetings

- 11.5 A Councillor who is present at a meeting of the Council but who fails to vote on a motion put to the meeting is taken to have voted against the motion.

- 11.6 [DELETED]

- 11.7 [DELETED]

- 11.8 [DELETED]

- 11.9 [DELETED]

- 11.10 Voting at a meeting, including voting in an election at a meeting, is to be by open means (such as on the voices, by show of hands or by a visible electronic voting system). However, the Council may resolve that the voting in any election by Councillors for Mayor or Deputy Mayor is to be by secret ballot.

- 11.11 All voting at Council meetings, (including meetings that are closed to the public), must be recorded in the minutes of meetings with the names of Councillors who voted for and against each motion or amendment, (including the use of the casting vote), being recorded.

### Voting on planning decisions

- 11.12 The General Manager must keep a register containing, for each planning decision made at a meeting of the Council or a Council committee (including, but not limited to a committee of the Council), the names of the Councillors who supported the decision and the names of any Councillors who opposed (or are taken to have opposed) the decision.

- 11.13 [DELETED]

- 11.14 Each decision recorded in the register is to be described in the register or identified in a manner that enables the description to be obtained from another publicly available document.

- 11.15 Clauses 11.12 and 11.14 apply also to meetings that are closed to the public.

NOTES: Clauses 11.12–11.15 reflect section 375A of the Act.

The requirements of clause 11.12 may be satisfied by maintaining a register of the minutes of each planning decision.

## 12 COMMITTEE OF THE WHOLE

- 12.1 The Council may resolve itself into a committee to consider any matter before the Council.

NOTE: Clause 12.1 reflects section 373 of the Act.

- 12.2 All the provisions of this code relating to meetings of the Council, so far as they are applicable, extend to and govern the proceedings of the Council when in committee of the whole, except the provisions limiting the number and duration of speeches.

NOTE: Clauses 10.20–10.30 limit the number and duration of speeches.

- 12.3 The General Manager or, in the absence of the General Manager, an employee of the Council designated by the General Manager, is responsible for reporting to the Council the proceedings of the committee of the whole. It is not necessary to report the proceedings in full but any recommendations of the committee must be reported.

- 12.4 The Council must ensure that a report of the proceedings (including any recommendations of the committee) is recorded in the Council's minutes. However, the Council is not taken to have adopted the report until a motion for adoption has been made and passed.

## 13 DEALING WITH ITEMS BY EXCEPTION

- 13.1 The Council or a committee of Council may, at any time, resolve to adopt multiple items of business on the agenda together by way of a single resolution.

- 13.2 Before the Council or committee resolves to adopt multiple items of business on the agenda together under clause 13.1, the chairperson must list the items of business to be adopted and ask Councillors to identify any individual items of business listed by the chairperson that they intend to vote against the recommendation made in the business paper or that they wish to speak on.

- 13.3 The Council or committee must not resolve to adopt any item of business under clause 13.1 that a Councillor has identified as being one they intend to vote against the recommendation made in the business paper or to speak on or in respect of which a Councillor has declared a pecuniary interest or a significant conflict of interest under the Council's adopted code of conduct.

- 13.4 Where the consideration of multiple items of business together under clause 13.1 involves a variation to the order of business for the meeting, the Council or committee must resolve to alter the order of business in accordance with clause 8.3.

- 13.5 A motion to adopt multiple items of business together under clause 13.1 must identify each of the items of business to be adopted and state that they are to be adopted as recommended in the business paper.

- 13.6 Items of business adopted under clause 13.1 are to be taken to have been adopted unanimously.

- 13.7 Councillors must ensure that they declare and manage any conflicts of interest they may have in relation to items of business considered together under clause 13.1 in accordance with the requirements of the Council's code of conduct.

#### 14 CLOSURE OF COUNCIL MEETINGS TO THE PUBLIC

##### Grounds on which meetings can be closed to the public

- 14.1 The Council or a committee of the Council may close to the public so much of its meeting as comprises the discussion or the receipt of any of the following types of matters:

- (a) personnel matters concerning particular individuals (other than Councillors),
- (b) the personal hardship of any resident or ratepayer,
- (c) information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business,
- (d) commercial information of a confidential nature that would, if disclosed:
  - (i) prejudice the commercial position of the person who supplied it, or
  - (ii) confer a commercial advantage on a competitor of the Council, or
  - (iii) reveal a trade secret,
- (e) information that would, if disclosed, prejudice the maintenance of law,
- (f) matters affecting the security of the Council, Councillors, Council staff or Council property,
- (g) advice concerning litigation, or advice that would otherwise be privileged from production in legal proceedings on the ground of legal professional privilege,
- (h) information concerning the nature and location of a place or an item of Aboriginal significance on community land,
- (i) alleged contraventions of the Council's code of conduct.

NOTE: Clause 14.1 reflects section 10A(1) and (2) of the Act.

- 14.2 The Council or a committee of the Council may also close to the public so much of its meeting as comprises a motion to close another part of the meeting to the public.

NOTE: Clause 14.2 reflects section 10A(3) of the Act.

##### Matters to be considered when closing meetings to the public

- 14.3 A meeting is not to remain closed during the discussion of anything referred to in clause 14.1:

- (a) except for so much of the discussion as is necessary to preserve the relevant confidentiality, privilege or security, and
- (b) if the matter concerned is a matter other than a personnel matter concerning particular individuals, the personal hardship of a resident or ratepayer or a trade secret – unless the Council or committee concerned is satisfied that discussion of the matter in an open meeting would, on balance, be contrary to the public interest.

NOTE: Clause 14.3 reflects section 10B(1) of the Act.

- 14.4 A meeting is not to be closed during the receipt and consideration of information or advice referred to in clause 14.1(g) unless the advice concerns legal matters that:

- (a) are substantial issues relating to a matter in which the Council or committee is involved, and
- (b) are clearly identified in the advice, and
- (c) are fully discussed in that advice.

NOTE: Clause 14.4 reflects section 10B(2) of the Act.

- 14.5 If a meeting is closed during the discussion of a motion to close another part of the meeting to the public (as referred to in clause 14.2), the consideration of the motion must not include any consideration of the matter or information to be discussed in that other part of the meeting other than consideration of whether the matter concerned is a matter referred to in clause 14.1.

NOTE: Clause 14.5 reflects section 10B(3) of the Act.

- 14.6 For the purpose of determining whether the discussion of a matter in an open meeting would be contrary to the public interest, it is irrelevant that:

- (a) a person may misinterpret or misunderstand the discussion, or
- (b) the discussion of the matter may:
  - (i) cause embarrassment to the Council or committee concerned, or to Councillors or to employees of the Council, or
  - (ii) cause a loss of confidence in the Council or committee.

NOTE: Clause 14.6 reflects section 10B(4) of the Act.

- 14.7 In deciding whether part of a meeting is to be closed to the public, the Council or committee concerned must consider any relevant guidelines issued by the Chief Executive of the Office of Local Government.

NOTE: Clause 14.7 reflects section 10B(5) of the Act.

Notice of likelihood of closure not required in urgent cases

- 14.8 Part of a meeting of the Council, or of a committee of the Council, may be closed to the public while the Council or committee considers a matter that has not been identified in the agenda for the meeting under clause 3.21 as a matter that is likely to be considered when the meeting is closed, but only if:

- (a) it becomes apparent during the discussion of a particular matter that the matter is a matter referred to in clause 14.1, and
- (b) the Council or committee, after considering any representations made under clause 14.9, resolves that further discussion of the matter:
  - (i) should not be deferred (because of the urgency of the matter), and
  - (ii) should take place in a part of the meeting that is closed to the public.

NOTE: Clause 14.8 reflects section 10C of the Act.

Representations by members of the public

- 14.9 The Council, or a committee of the Council, may allow members of the public to make representations to or at a meeting, before any part of the meeting is closed to the public, as to whether that part of the meeting should be closed.

NOTE: Clause 14.9 reflects section 10A(4) of the Act.

- 14.10 A representation under clause 14.9 is to be made after the motion to close the part of the meeting is moved and seconded.

- 14.11 Where the matter has been identified in the agenda of the meeting under clause 3.21 as a matter that is likely to be considered when the meeting is closed to the public, in order to make representations under clause 14.9, members of the public must first make an application to the Council in the approved form. Applications must be received by 4:30PM the last day before the date of the meeting at which the matter is to be considered.



- 14.12 The General Manager (or their delegate) may refuse an application made under clause 14.11. The General Manager or their delegate must give reasons in writing for a decision to refuse an application.
- 14.13 No more than two (2) speakers are to be permitted to make representations under clause 14.9.
- 14.14 If more than the permitted number of speakers apply to make representations under clause 14.9, the General Manager or their delegate may request the speakers to nominate from among themselves the persons who are to make representations to the Council. If the speakers are not able to agree on whom to nominate to make representations under clause 14.9, the General Manager or their delegate is to determine who will make representations to the Council.
- 14.15 The General Manager (or their delegate) is to determine the order of speakers.
- 14.16 Where the Council or a committee of the Council proposes to close a meeting or part of a meeting to the public in circumstances where the matter has not been identified in the agenda for the meeting under clause 3.21 as a matter that is likely to be considered when the meeting is closed to the public, the chairperson is to invite representations from the public under clause 14.9 after the motion to close the part of the meeting is moved and seconded. The chairperson is to permit no more than two (2) speakers to make representations in such order as determined by the chairperson.
- 14.17 Each speaker will be allowed five (5) minutes to make representations, and this time limit is to be strictly enforced by the chairperson. Speakers must confine their representations to whether the meeting should be closed to the public. If a speaker digresses to irrelevant matters, the chairperson is to direct the speaker not to do so. If a speaker fails to observe a direction from the chairperson, the speaker will not be further heard.

Expulsion of non-Councillors from meetings closed to the public

- 14.18 If a meeting or part of a meeting of the Council or a committee of the Council is closed to the public in accordance with section 10A of the Act and this code, any person who is not a Councillor and who fails to leave the meeting when requested, may be expelled from the meeting as provided by section 10(2)(a) or (b) of the Act.
- 14.19 If any such person, after being notified of a resolution or direction expelling them from the meeting, fails to leave the place where the meeting is being held, a police officer, or any person authorised for the purpose by the Council or person presiding, may, by using only such force as is necessary, remove the first-mentioned person from that place and, if necessary restrain that person from re-entering that place for the remainder of the meeting.

Information to be disclosed in resolutions closing meetings to the public

- 14.20 The grounds on which part of a meeting is closed must be stated in the decision to close that part of the meeting and must be recorded in the minutes of the meeting. The grounds must specify the following:
- (a) the relevant provision of section 10A(2) of the Act,
  - (b) the matter that is to be discussed during the closed part of the meeting,
  - (c) the reasons why the part of the meeting is being closed, including (if the matter concerned is a matter other than a personnel matter concerning particular individuals, the personal hardship of a resident or ratepayer or a trade secret) an explanation of the way in which discussion of the matter in an open meeting would be, on balance, contrary to the public interest.

NOTE: Clause 14.20 reflects section 10D of the Act.

Resolutions passed at closed meetings to be made public

- 14.21 If the Council passes a resolution during a meeting, or a part of a meeting, that is closed to the public, the chairperson must make the resolution public as soon as practicable after the meeting, or the relevant part of the meeting, has ended, and the resolution must be recorded in the publicly available minutes of the meeting.
- 14.22 Resolutions passed during a meeting, or a part of a meeting that is closed to the public must be made public by the chairperson under clause 14.21 during a part of the meeting that is webcast.
- 14.23 Resolutions passed during a meeting, or a part of a meeting that is closed to the public, will have the names of the Councillors who voted for and against the resolutions (including any casting votes), made public by the chairperson, or a person requested to by the chairperson, under clause 20.20 during a part of the meeting that is open to the public and shall be recorded in the minutes.

## 15 KEEPING ORDER AT MEETINGS

Points of order

- 15.1 A Councillor may draw the attention of the chairperson to an alleged breach of this code by raising a point of order. A point of order does not require a seconder.
- 15.2 A point of order cannot be made with respect to adherence to the principles contained in clause 2.1.
- 15.3 A point of order must be taken immediately it is raised. The chairperson must suspend the business before the meeting and permit the Councillor raising the point of order to state the provision of this code they believe has been breached. The chairperson must then rule on the point of order – either by upholding it or by overruling it.

Questions of order

- 15.4 The chairperson, without the intervention of any other Councillor, may call any Councillor to order whenever, in the opinion of the chairperson, it is necessary to do so.
- 15.5 A Councillor who claims that another Councillor has committed an act of disorder, or is out of order, may call the attention of the chairperson to the matter.
- 15.6 The chairperson must rule on a question of order immediately after it is raised but, before doing so, may invite the opinion of the Council.
- 15.7 The chairperson's ruling must be obeyed unless a motion dissenting from the ruling is passed.

Motions of dissent

- 15.8 A Councillor can, without notice, move to dissent from a ruling of the chairperson on a point of order or a question of order. If that happens, the chairperson must suspend the business before the meeting until a decision is made on the motion of dissent.

- 15.9 If a motion of dissent is passed, the chairperson must proceed with the suspended business as though the ruling dissented from had not been given. If, as a result of the ruling, any motion or business has been rejected as out of order, the chairperson must restore the motion or business to the agenda and proceed with it in due course.
- 15.10 Despite any other provision of this code, only the mover of a motion of dissent and the chairperson can speak to the motion before it is put. The mover of the motion does not have a right of general reply.

#### Acts of disorder

- 15.11 A Councillor commits an act of disorder if the Councillor, at a meeting of the Council or a committee of the Council:
- (a) contravenes the Act or any regulation in force under the Act or this code, or
  - (b) assaults or threatens to assault another Councillor or person present at the meeting, or
  - (c) moves or attempts to move a motion or an amendment that has an unlawful purpose or that deals with a matter that is outside the jurisdiction of the Council or the committee, or addresses or attempts to address the Council or the committee on such a motion, amendment or matter, or
  - (d) insults or makes personal reflections on or imputes improper motives to any other Council official, or alleges a breach of the Council's code of conduct, or
  - (e) says or does anything that is inconsistent with maintaining order at the meeting or is likely to bring the Council or the committee into disrepute.
- 15.12 The chairperson may require a Councillor:
- (a) to apologise without reservation for an act of disorder referred to in clauses 15.11(a) or (b), or
  - (b) to withdraw a motion or an amendment referred to in clause 15.11(c) and, where appropriate, to apologise without reservation, or
  - (c) to retract and apologise without reservation for an act of disorder referred to in clauses 15.11(d) and (e).

NOTE: Acts of disorder committed by Councillors during Council or committee meetings may constitute a breach of clause 3.22 of the Council's Code of Conduct and is Councillor misconduct for the purposes of s440F of the Local Government Act 1993.

#### How disorder at a meeting may be dealt with

- 15.13 If disorder occurs at a meeting of the Council, the chairperson may adjourn the meeting for a period of not more than fifteen (15) minutes and leave the chair. The Council, on reassembling, must, on a question put from the chairperson, decide without debate whether the business is to be proceeded with or not. This clause applies to disorder arising from the conduct of members of the public as well as disorder arising from the conduct of Councillors.
- 15.14 [DELETED]

#### Expulsion from meetings

- 15.15 All chairpersons of meetings of the Council and committees of the Council are authorised under this code to expel any person other than a Councillor, from a Council or committee meeting, for the purposes of section 10(2)(b) of the Act. Councillors may only be expelled by resolution of the Council or the committee of the Council.

- 15.16 Clause 15.15 does not limit the ability of the Council or a committee of the Council to resolve to expel a person, including a Councillor, from a Council or committee meeting, under section 10(2)(a) of the Act.
- 15.17 A Councillor may, as provided by section 10(2)(a) or (b) of the Act, be expelled from a meeting of the Council for having failed to comply with a requirement under clause 15.12. The expulsion of a Councillor from the meeting for that reason does not prevent any other action from being taken against the Councillor for the act of disorder concerned.
- 15.18 A member of the public may, as provided by section 10(2)(a) or (b) of the Act, be expelled from a meeting of the Council for engaging in or having engaged in disorderly conduct at the meeting.
- 15.19 Where a Councillor or a member of the public is expelled from a meeting, the expulsion and the name of the person expelled, if known, are to be recorded in the minutes of the meeting.
- 15.20 If a Councillor or a member of the public fails to leave the place where a meeting of the Council is being held immediately after they have been expelled, a police officer, or any person authorised for the purpose by the Council or person presiding, may, by using only such force as is necessary, remove the Councillor or member of the public from that place and, if necessary, restrain the Councillor or member of the public from re-entering that place for the remainder of the meeting.

#### Use of mobile phones and the unauthorised recording of meetings

- 15.21 Councillors, Council staff and members of the public must ensure that mobile phones are turned to silent during meetings of the Council and committees of the Council.
- 15.22 A person must not live stream or use an audio recorder, video camera, mobile phone or any other device to make a recording of the proceedings of a meeting of the Council or a committee of the Council without the prior authorisation of the Council or the committee.
- ~~15.22A The proceedings of a meeting that is open to the public may be recorded and broadcast by television broadcasters licensed by the Australian Communications and Media Authority (ACMA) provided that the broadcaster has made application to the General Manager or their delegate to do so before the meeting and the application has been approved by the General Manager.~~
- 15.23 Any person who contravenes or attempts to contravene clause 15.22, may be expelled from the meeting as provided for under section 10(2) of the Act.
- 15.24 If any such person, after being notified of a resolution or direction expelling them from the meeting, fails to leave the place where the meeting is being held, a police officer, or any person authorised for the purpose by the Council or person presiding, may, by using only such force as is necessary, remove the first-mentioned person from that place and, if necessary, restrain that person from re-entering that place for the remainder of the meeting.

## 16 CONFLICTS OF INTEREST

- 16.1 All Councillors and, where applicable, all other persons, must declare and manage any conflicts of interest they may have in matters being considered at meetings of the Council and committees of the Council in accordance with the Council's Code of Conduct. All declarations of conflicts of interest and how the conflict of interest was managed by the person who made the declaration must be recorded in the minutes of the meeting at which the declaration was made.

**17 DECISIONS OF THE COUNCIL**Council decisions

- 17.1 A decision supported by a majority of the votes at a meeting of the Council at which a quorum is present is a decision of the Council.

NOTE: Clause 17.1 reflects section 371 of the Act.

- 17.2 Decisions made by the Council must be accurately recorded in the minutes of the meeting at which the decision is made.

Rescinding or altering Council decisions

- 17.3 A resolution passed by the Council may not be altered or rescinded except by a motion to that effect of which notice has been given under clause 3.10.

NOTE: Clause 17.3 reflects section 372(1) of the Act.

- 17.4 If a notice of motion to rescind a resolution is given at the meeting at which the resolution is carried, the resolution must not be carried into effect until the motion of rescission has been dealt with.

NOTE: Clause 17.4 reflects section 372(2) of the Act.

- 17.5 If a motion has been lost, a motion having the same effect must not be considered unless notice of it has been duly given in accordance with clause 3.10.

NOTE: Clause 17.5 reflects section 372(3) of the Act.

- 17.6 A notice of motion to alter or rescind a resolution, and a notice of motion which has the same effect as a motion which has been lost, must be signed by three (3) Councillors if less than three (3) months has elapsed since the resolution was passed, or the motion was lost.

NOTE: Clause 17.6 reflects section 372(4) of the Act.

- 17.7 If a motion to alter or rescind a resolution has been lost, or if a motion which has the same effect as a previously lost motion is lost, no similar motion may be brought forward within three (3) months of the meeting at which it was lost. This clause may not be evaded by substituting a motion differently worded, but in principle the same.

NOTE: Clause 17.7 reflects section 372(5) of the Act.

- 17.8 The provisions of clauses 17.5–17.7 concerning lost motions do not apply to motions of adjournment.

NOTE: Clause 17.8 reflects section 372(7) of the Act.

- 17.9 A notice of motion submitted in accordance with clause 17.6 may only be withdrawn under clause 3.11 with the consent of all signatories to the notice of motion.

- 17.10 A notice of motion to alter or rescind a resolution relating to a development application must be submitted to the General Manager no later than 12:00PM on the next business day after the meeting at which the resolution was adopted.

- 17.11 A motion to alter or rescind a resolution of the Council may be moved on the report of a committee of the Council and any such report must be recorded in the minutes of the meeting of the Council.

NOTE: Clause 17.11 reflects section 372(6) of the Act.

- 17.12 Subject to clause 17.7, in cases of urgency, a motion to alter or rescind a resolution of the Council may be moved at the same meeting at which the resolution was adopted, where:
- (a) a notice of motion signed by three Councillors is submitted to the chairperson, and
  - (b) a motion to have the motion considered at the meeting is passed, and
  - (c) the chairperson rules the business that is the subject of the motion is of great urgency on the grounds that it requires a decision by the Council before the next scheduled ordinary meeting of the Council.
- 17.13 A motion moved under clause 17.12(b) can be moved without notice. Despite clauses 10.20–10.30, only the mover of a motion referred to in clause 17.12(b) can speak to the motion before it is put.
- 17.14 A motion of dissent cannot be moved against a ruling by the chairperson under clause 17.12(c).

Recommitting resolutions to correct an error

- 17.15 Despite the provisions of this Part, a Councillor may, with the leave of the chairperson, move to recommit a resolution adopted at the same meeting to correct any error, ambiguity or imprecision in the Council's resolution.
- 17.16 In seeking the leave of the chairperson to move to recommit a resolution for the purposes of clause 17.15, the Councillor is to propose alternative wording for the resolution.
- 17.17 The chairperson must not grant leave to recommit a resolution for the purposes of clause 17.15, unless they are satisfied that the proposed alternative wording of the resolution would not alter the substance of the resolution previously adopted at the meeting.
- 17.18 A motion moved under clause 17.15 can be moved without notice. Despite clauses 10.20–10.30, only the mover of a motion referred to in clause 17.15 can speak to the motion before it is put.
- 17.19 A motion of dissent cannot be moved against a ruling by the chairperson under clause 17.15.
- 17.20 A motion moved under clause 17.15 with the leave of the chairperson cannot be voted on unless or until it has been seconded.

~~18 — TIME LIMITS ON COUNCIL MEETINGS~~

- ~~18.1 — Meetings of the Council and committees of the Council are to conclude no later than 10:00PM.~~
- ~~18.2 — If the business of the meeting is unfinished at 10:00PM, the Council or the committee may, by resolution, extend the time of the meeting.~~
- ~~18.3 — If the business of the meeting is unfinished at 10:00PM, and the Council does not resolve to extend the meeting, the chairperson must either:~~
- ~~(a) — defer consideration of the remaining items of business on the agenda to the next ordinary meeting of the Council, or~~
  - ~~(b) — adjourn the meeting to a time, date and place fixed by the chairperson.~~

- ~~18.4 — Clause 18.3 does not limit the ability of the Council or a committee of the Council to~~



~~resolve to adjourn a meeting at any time. The resolution adjourning the meeting must fix the time, date and place that the meeting is to be adjourned to.~~

~~18.5 — Where a meeting is adjourned under clause 18.3 or 18.4, the General Manager must:~~

- ~~(a) — individually notify each Councillor of the time, date and place at which the meeting will reconvene, and~~
- ~~(b) — publish the time, date and place at which the meeting will reconvene on the Council's website and in such other manner that the General Manager is satisfied is likely to bring notice of the time, date and place of the reconvened meeting to the attention of as many people as possible.~~

## 19 AFTER THE MEETING

### Minutes of meetings

- 19.1 The Council is to keep full and accurate minutes of the proceedings of meetings of the Council.

NOTE: Clause 19.1 reflects section 375(1) of the Act.

- 19.2 At a minimum, the General Manager must ensure that the following matters are recorded in the Council's minutes:

- (a) details of each motion moved at a Council meeting and of any amendments moved to it,
- (b) the names of the mover and seconder of the motion or amendment,
- (c) whether the motion or amendment was passed or lost, and
- (d) such other matters specifically required under this code.

- 19.3 The minutes of a Council meeting must be confirmed at a subsequent meeting of the Council.

NOTE: Clause 19.3 reflects section 375(2) of the Act.

- 19.4 Any debate on the confirmation of the minutes is to be confined to whether the minutes are a full and accurate record of the meeting they relate to.

- 19.5 When the minutes have been confirmed, they are to be signed by the person presiding at the subsequent meeting.

NOTE: Clause 19.5 reflects section 375(2) of the Act.

- 19.6 The confirmed minutes of a meeting may be amended to correct typographical or administrative errors after they have been confirmed. Any amendment made under this clause must not alter the substance of any decision made at the meeting.

- 19.7 The confirmed minutes of a Council meeting must be published on the Council's website. This clause does not prevent the Council from also publishing unconfirmed minutes of its meetings on its website prior to their confirmation.

### Access to correspondence and reports laid on the table at, or submitted to, a meeting

- 19.8 The Council and committees of the Council must, during or at the close of a meeting, or during the business day following the meeting, give reasonable access to any person to inspect correspondence and reports laid on the table at, or submitted to, the meeting.

NOTE: Clause 19.8 reflects section 11(1) of the Act.

- 19.9 Clause 19.8 does not apply if the correspondence or reports relate to a matter that was received or discussed or laid on the table at, or submitted to, the meeting when the meeting was closed to the public.

NOTE: Clause 19.9 reflects section 11(2) of the Act.

- 19.10 Clause 19.8 does not apply if the Council or the committee resolves at the meeting, when open to the public, that the correspondence or reports are to be treated as confidential because they relate to a matter specified in section 10A(2) of the Act.

NOTE: Clause 19.10 reflects section 11(3) of the Act.

- 19.11 Correspondence or reports to which clauses 19.9 and 19.10 apply are to be marked with the relevant provision of section 10A(2) of the Act that applies to the correspondence or report.

#### Implementation of decisions of the Council

- 19.12 The General Manager is to implement, without undue delay, lawful decisions of the Council.

NOTE: Clause 19.12 reflects section 335(b) of the Act.

## 20 COUNCIL COMMITTEES

#### Application of this Part

- 20.1 This Part only applies to committees of the Council whose members are all Councillors.

#### Council committees whose members are all Councillors

- 20.2 The Council may, by resolution, establish such committees as it considers necessary.
- 20.3 A committee of the Council is to consist of the Mayor and such other Councillors as are elected by the Councillors or appointed by the Council.
- 20.4 The quorum for a meeting of a committee of the Council is to be:
- (a) such number of members as the Council decides, or
  - (b) if the Council has not decided a number – a majority of the members of the committee.

#### Functions of committees

- 20.5 The Council must specify the functions of each of its committees when the committee is established, but may from time to time amend those functions.

#### Notice of committee meetings

- 20.6 The General Manager must send to each Councillor, regardless of whether they are a committee member, at least three (3) days before each meeting of the committee, a notice specifying:
- (a) the time, date and place of the meeting, and
  - (b) the business proposed to be considered at the meeting.

- 20.7 Notice of less than three (3) days may be given of a committee meeting called in an emergency.

Attendance at committee meetings

- 20.8 A committee member (other than the Mayor) ceases to be a member of a committee if the committee member:

- (a) has been absent from three (3) consecutive meetings of the committee without having given reasons acceptable to the committee for the member's absences, or
- (b) has been absent from at least half of the meetings of the committee held during the immediately preceding year without having given to the committee acceptable reasons for the member's absences.

- 20.9 Clause 20.8 does not apply if all of the members of the Council are members of the committee.

Non-members entitled to attend committee meetings

- 20.10 A Councillor who is not a member of a committee of the Council is entitled to attend, and to speak at a meeting of the committee. However, the Councillor is not entitled:

- (a) to give notice of business for inclusion in the agenda for the meeting, or
- (b) to move or second a motion at the meeting, or
- (c) to vote at the meeting.

Chairperson and deputy chairperson of Council committees

- 20.11 The chairperson of each committee of the Council must be:

- (a) the Mayor, or
- (b) if the Mayor does not wish to be the chairperson of a committee, a member of the committee elected by the Council, or
- (c) if the Council does not elect such a member, a member of the committee elected by the committee.

- 20.12 The Council may elect a member of a committee of the Council as deputy chairperson of the committee. If the Council does not elect a deputy chairperson of such a committee, the committee may elect a deputy chairperson.

- 20.13 If neither the chairperson nor the deputy chairperson of a committee of the Council is able or willing to preside at a meeting of the committee, the committee must elect a member of the committee to be acting chairperson of the committee.

- 20.14 The chairperson is to preside at a meeting of a committee of the Council. If the chairperson is unable or unwilling to preside, the deputy chairperson (if any) is to preside at the meeting, but if neither the chairperson nor the deputy chairperson is able or willing to preside, the acting chairperson is to preside at the meeting.

Procedure in committee meetings

- 20.15 Subject to any specific requirements of this code, each committee of the Council may regulate its own procedure. The provisions of this code are to be taken to apply to all committees of the Council unless the Council or the committee determines otherwise in accordance with this clause.

20.16 Whenever the voting on a motion put to a meeting of the committee is equal, the chairperson of the committee is to have a casting vote as well as an original vote unless the Council or the committee determines otherwise in accordance with clause 20.15.

20.17 [DELETED]

20.18 Voting at a Council committee meeting is to be by open means (such as on the voices, by show of hands or by a visible electronic voting system).

Closure of committee meetings to the public

20.19 The provisions of the Act and Part 14 of this code apply to the closure of meetings of committees of the Council to the public in the same way they apply to the closure of meetings of the Council to the public.

20.20 If a committee of the Council passes a resolution, or makes a recommendation, during a meeting, or a part of a meeting that is closed to the public, the chairperson must make the resolution or recommendation public as soon as practicable after the meeting or part of the meeting has ended, and report the resolution or recommendation to the next meeting of the Council. The resolution or recommendation must also be recorded in the publicly available minutes of the meeting.

20.21 Resolutions passed during a meeting, or a part of a meeting that is closed to the public must be made public by the chairperson under clause 20.20 during a part of the meeting that is webcast.

Disorder in committee meetings

20.22 The provisions of the Act and this code relating to the maintenance of order in Council meetings apply to meetings of committees of the Council in the same way as they apply to meetings of the Council.

Minutes of Council committee meetings

20.23 Each committee of the Council is to keep full and accurate minutes of the proceedings of its meetings. At a minimum, a committee must ensure that the following matters are recorded in the committee's minutes:

- (a) details of each motion moved at a meeting and of any amendments moved to it,
- (b) the names of the mover and seconder of the motion or amendment,
- (c) whether the motion or amendment was passed or lost, and
- (d) such other matters specifically required under this code.

20.24 All voting at meetings of committees of the Council (including meetings that are closed to the public), must be recorded in the minutes of meetings with the names of Councillors who voted for and against each motion or amendment, (including the use of the casting vote), being recorded.

20.25 The minutes of meetings of each committee of the Council must be confirmed at a subsequent meeting of the committee.

20.26 Any debate on the confirmation of the minutes is to be confined to whether the minutes are a full and accurate record of the meeting they relate to.

20.27 When the minutes have been confirmed, they are to be signed by the person presiding at that subsequent meeting.

- 20.28 The confirmed minutes of a meeting may be amended to correct typographical or administrative errors after they have been confirmed. Any amendment made under this clause must not alter the substance of any decision made at the meeting.
- 20.29 The confirmed minutes of a meeting of a committee of the Council must be published on the Council's website. This clause does not prevent the Council from also publishing unconfirmed minutes of meetings of committees of the Council on its website prior to their confirmation.

## 21 IRREGULARITIES

- 21.1 Proceedings at a meeting of a Council or a Council committee are not invalidated because of:

- (a) a vacancy in a civic office, or
- (b) a failure to give notice of the meeting to any Councillor or committee member, or
- (c) any defect in the election or appointment of a Councillor or committee member, or
- (d) a failure of a Councillor or a committee member to declare a conflict of interest, or to refrain from the consideration or discussion of, or vote on, the relevant matter, at a Council or committee meeting in accordance with the Council's code of conduct, or
- (e) a failure to comply with this code.

NOTE: Clause 21.1 reflects section 374 of the Act.

## 22 DEFINITIONS

the Act	means the <i>Local Government Act 1993</i>
act of disorder	means an act of disorder as defined in clause 15.11 of this code
amendment	in relation to an original motion, means a motion moving an amendment to that motion
audio recorder	any device capable of recording speech
business day	means any day except Saturday or Sunday or any other day the whole or part of which is observed as a public holiday throughout New South Wales
chairperson	in relation to a meeting of the Council – means the person presiding at the meeting as provided by section 369 of the Act and clauses 6.1 and 6.2 of this code, and in relation to a meeting of a committee – means the person presiding at the meeting as provided by clause 20.11 of this code
this code	means the Council's adopted code of meeting practice
committee of the Council	means a committee established by the Council in accordance with clause 20.2 of this code (being a committee consisting only of Councillors) or the Council when it has resolved itself into committee of the whole under clause 12.1
Council official	has the same meaning it has in the Model Code of Conduct for Local Councils in NSW
day	means calendar day
division	means a request by two Councillors under clause 11.7 of this code requiring the recording of the names of the Councillors who voted both for and against a motion
foreshadowed amendment	means a proposed amendment foreshadowed by a Councillor under clause 10.18 of this code during debate on the first amendment
foreshadowed motion	means a motion foreshadowed by a Councillor under clause 10.17 of this code during debate on an original motion
open voting	means voting on the voices or by a show of hands or by a visible electronic voting system or similar means
planning decision	means a decision made in the exercise of a function of a Council under the <i>Environmental Planning and Assessment Act 1979</i> including any decision relating to a development application, an environmental planning instrument, a development control plan or a development contribution plan under that Act, but not including the making of an order under Division 9.3 of Part 9 of that Act
performance improvement order	means an order issued under section 438A of the Act
quorum	means the minimum number of Councillors or committee members necessary to conduct a meeting
the Regulation	means the <i>Local Government (General) Regulation 2005</i>
webcast	a video or audio broadcast of a meeting transmitted across the internet either concurrently with the meeting or at a later time
year	means the period beginning 1 July and ending the following 30 June



## Version Control

Version	Description	Approval	Approval Date
20.0	Revised Draft		
19.0	Revised	Council	19 June 2019
18.0	Removed Question on Notice section.	Council	20 July 2016
17.0	Code rewritten from scratch Reviewed against current legislation and associated guidance - including Office of Local Government circulars and Meeting Notes	Council	16 March 2016
16/12/09	Amendment(s)	Council	16 December 2009
22/10/08	Amendment(s)	Council	22 October 2008
26/03/08	Amendment(s)	Council	26 March 2008
27/08/07	Amendment(s)	Council	27 August 2007
22/01/07	Amendment(s)	Council	22 January 2007
27/03/06	Amendment(s)	Council	27 March 2006
13/02/06	Amendment(s)	Council	13 February 2006
29/03/05	Amendment(s)	Council	29 March 2005
11/12/00	Amendment(s)	Council	11 December 2000
27/9/99	Amendment(s)	Council	27 September 1999
19/7/99	Amendment(s)	Council	19 July 1999
6/7/98	Amendment(s)	Council	6 July 1998
11/5/98	Amendment(s)	Council	11 May 1998
1/4/98	Amendment(s)	AD	1 April 1998
6/1/97	Amendment(s)	Policy	6 January 1997
7/3/94	Adopted	Council	7 March 1994

BUDGET VARIATIONS - August 2020											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Movement	Funding Source	EFFECT ON FUNDING POSITION
Adjustments which impact Council's Budget Position											
Current Award increase budgeted at 2.5%, final Award increase of 1.5% advised.											
Various	Various	Salaries & Wages	Operating	Various					-224,514	Revenue	- 224,514
Insurance premiums for 2020/21 above budget											
Insurance	272	Insurance - Public Risk and Professional Indemnity	Operating	Corporate Performance	614,724	614,724	678,136	678,136	63,412	Revenue	63,412
Meeting Room Hire and Computer Income forecast to be lower than budget due to Covid 19											
Library	10600	Meeting Room Hire	Operating	Strategy & Growth	-12,996	-12,996	0	-2,996	10,000	Revenue	10,000
Total adjustments which impact Council's Budget Position									151,102	151,102	
Grant Funding											
Council has received a Grant from the Department of Planning Industry & Environment for the GPT Audit & Maintenance Planning											
Drainage	42020	Gross Pollutant Trap Audit & Maintenance Planning	Operating	Infrastructure	0	0	0	30,000	-30,000	Grant	0
Drainage	19391	Operating Grants - Drainage	Operating		0	0	0	-30,000	30,000	Grant	0
Council received a \$1.8M Federal Local Roads & Community Infrastructure Grant											
Economic & Cultural Development	43000	Port Macquarie Lumiere Night time installation - infrastructure component	Operational	Strategy & Growth	0	0	0	65,000	-65,000	Grant	0
Infrastructure Planning	43001	Footpath - The Parade: Ocean St to Surf Club car park (NW side); 260m	Capital		0	0	0	100,000	-100,000	Grant	0
Infrastructure Planning	43002	Footpath -Lake Street: Tunis St to Seymour St (W side); missing links; 120m	Capital		0	0	0	60,000	-60,000	Grant	0
Infrastructure Planning	43003	Footpath -Comboyne St to Graham St connection at Kendall Services Club	Capital		0	0	0	80,000	-80,000	Grant	0
Infrastructure Planning	43004	Footpath -Hill Street: Pioneer Park to Main Street (W side); 180m	Capital		0	0	0	90,000	-90,000	Grant	0
Infrastructure Planning	43005	Footpath -Parker Street: Wauchope High School to Bain Street (W side); 160m	Capital		0	0	0	70,000	-70,000	Grant	0

BUDGET VARIATIONS - August 2020											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Movement	Funding Source	EFFECT ON FUNDING POSITION
Infrastructure Planning	43006	Footpath -Rushcutter Way: Moondara Tee to Bangalay Dr (SE side), 200m	Capital	Infrastructure	0	0	0	100,000	-100,000	Grant	0
	43007	Footpath -Major Innes Road: Braeroy Dr to The Ruins Way (E side), 320m	Capital		0	0	0	130,000	-130,000	Grant	0
	43008	Footpath -Watonga Street: Connection to Matthew Flinders Dr, 35m	Capital		0	0	0	50,000	-50,000	Grant	0
Infrastructure Planning	43009	Rural Road Safety Improvements - linemarking, signs.	Capital		0	0	0	100,000	-100,000	Grant	0
Infrastructure Planning	43010	New bus shelters (3 or 4) & landing pads	Operational		0	0	0	45,000	-45,000	Grant	0
Infrastructure Planning	43011	Hay Street Resurfacing - Port Macquarie	Capital		0	0	0	280,000	-280,000	Grant	0
Rec Property & Buildings	43012	Lake Cathie Foreshore Reserve Master Plan - Stage 2 works	Capital		0	0	0	280,000	-280,000	Grant	0
Rec Property & Buildings	43013	Wauchope Stadium Cladding Replacement	Capital		0	0	0	20,000	-20,000	Grant	0
Rec Property & Buildings	43014	Install seating beside Anzac Memorial	Capital	Development & Environment	0	0	0	10,000	-10,000	Grant	0
Rec Property & Buildings	43015	Install a sheltered seating area, picnic table and rubbish bins at Kendall Park	Capital		0	0	0	25,000	-25,000	Grant	0
Rec Property & Buildings	43016	Increased seating and shade at Charlie Watt Reserve	Capital		0	0	0	26,618	-26,618	Grant	0
Rec Property & Buildings	43017	Jubilee Hall - external repaint	Operational		0	0	0	20,000	-20,000	Grant	0
Rec Property & Buildings	43018	North Shore Fish Cleaning table	Capital		0	0	0	30,000	-30,000	Grant	0
Rec Property & Buildings	43019	Laurieton Sports Complex - installation of multi-purpose court (part funding)	Capital		0	0	0	105,000	-105,000	Grant	0
Airport	43020	Solar PV airport	Capital	Corporate Performance	0	0	0	140,000	-140,000	Grant	0
Corporate	19342	Grant Funding	Capital		0	0	0	-1,826,618	1,826,618	Grant	0
Council received a Grant for the Annual Program Funding of a Regional Gallery											
Glasshouse	42017	2020 Annual Program Funding for Regional Gallery	Operational	Corporate Performance	0	0	0	42,917	-42,917	Grant	0
Glasshouse	19501	Operating Grants - Glasshouse	Operational		0	0	0	-42,917	42,917	Grant	0
2020/21 Portion of Bushfire Community Resilience & Economic Recovery Grant											

BUDGET VARIATIONS - August 2020											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Movement	Funding Source	EFFECT ON FUNDING POSITION
Economic & Cultural Development	42019	Bushfire Community Resilience & Recovery	Operational	Strategy & Growth	0	0	9,244	149,890	-149,890	Grant	0
	19051	Grant Funding	Operational		0	0	0	-149,890	149,890	Grant	0
NSW Boating Now Program - Project construction complete, no further grant funding to be received											
Parks & Recreation	19282	Grant Funding	Capital	Development & Environment	-89,971	-89,971	0	0	-89,971	Grant	0
Parks & Recreation	41750	Camden Haven Recreational Boating Improvements	Capital		180,077	180,077	0	90,106	89,971	Grant	0
Flood Study Grants terminated											
Natural Resources	19231	Grant Funding	Operational	Development & Environment	-258,015	-258,015	0	0	-258,015	Grant	0
Natural Resources	41426	Hibbard Floodway Investigation	Operational		70,000	70,000	0	0	70,000	Grant	0
Natural Resources	41575	Wrights Creek Flood Risk Study	Operational		188,015	188,015	0	0	188,015	Grant	0
Total Grant Funding									1,701,440		0
Reserve Movements											
Covid Relief Reserve Funding Projects Endorsed at 12 August Council Meeting											
Community Engagement	42085	PMH Cares	Operational		0	0	0	7,870	-7,870	Reserve	0
Community Engagement	42097	Maps "Comboyne Plateau" Pioneer Park	Capital		0	0	0	10,000	-10,000	Reserve	0
Community Engagement	42099	Pappinbarra Community Fire-Safety Plan.	Operational		0	0	0	25,000	-25,000	Reserve	0
Customer Experience	42082	Covid Relief Funding Communication	Operational		0	0	0	10,000	-10,000	Reserve	0
Economic & Cultural Development	42080	Tourism product & trade market development Stage 2	Operational		0	0	0	80,000	-80,000	Reserve	0
Economic & Cultural Development	42081	Additional Investment in tourism PR and Marketing	Operational		0	0	0	140,000	-140,000	Reserve	0
Economic & Cultural Development	42083	Tourism - Visiting Friends & Relatives Program development	Operational		0	0	0	25,000	-25,000	Reserve	0
Economic & Cultural Development	42084	Website Food & Wine Trail Development	Operational		0	0	0	30,000	-30,000	Reserve	0

BUDGET VARIATIONS - August 2020											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Movement	Funding Source	EFFECT ON FUNDING POSITION
Economic & Cultural Development	42086	Reboot, Refresh, Restart COVID Careers Pop-ups	Operational	Strategy & Growth	0	0	0	15,000	-15,000	Reserve	0
Economic & Cultural Development	42087	Grant writing workshops	Operational		0	0	0	15,000	-15,000	Reserve	0
Economic & Cultural Development	42088	Arts, Culture & Creative Industries content development and marketing	Operational		0	0	0	80,000	-80,000	Reserve	0
Economic & Cultural Development	42089	Cultural Industries - Networking and mentoring	Operational		0	0	0	50,000	-50,000	Reserve	0
Economic & Cultural Development	42090	Creative and Arts Trails development	Operational	Infrastructure	0	0	0	45,000	-45,000	Reserve	0
Economic & Cultural Development	42091	Program to encourage use of vacant commercial spaces	Operational		0	0	0	80,000	-80,000	Reserve	0
Economic & Cultural Development	42093	Artwalk delivery	Operational		0	0	0	40,000	-40,000	Reserve	0
Economic & Cultural Development	42094	CBD Wifi (Wauchope, Laurieton, expand Port)	Capital		0	0	0	40,000	-40,000	Reserve	0
Economic & Cultural Development	42095	Tourism & Cultural Development Project Officer (temporary)	Operational	Development & Environment	0	0	0	100,000	-100,000	Reserve	0
Economic & Cultural Development	42096	Public Spaces Interpretation Strategy and Guidelines	Operational		0	0	0	60,000	-60,000	Reserve	0
Economic & Cultural Development	42104	Towns Gateway entrance strategy	Capital		0	0	0	50,000	-50,000	Reserve	0
Economic & Cultural Development	42106	Port Macquarie Lumiere night time installation	Capital		0	0	0	55,000	-55,000	Reserve	0
Infrastructure Planning	42098	Develop a Laurieton Main Street Master Plan	Operational	Corporate Performance	0	0	0	100,000	-100,000	Reserve	0
Infrastructure Planning	42100	Install signage - Pappinbarra Road	Capital		0	0	0	10,000	-10,000	Reserve	0
Infrastructure Planning	42103	Kendall Bridge Rehabilitation	Capital		0	0	0	40,000	-40,000	Reserve	0
Infrastructure Planning	42105	CSU-Google Connection Consultancies	Capital		0	0	0	150,000	-150,000	Reserve	0
Rec Property & Buildings	42092	Contribution to Creek to Creek Trail Development	Operational	Corporate Performance	0	0	0	60,000	-60,000	Reserve	0
Rec Property & Buildings	42101	Wauchope Rotary Youth Hall external repaint western side	Capital		0	0	0	40,000	-40,000	Reserve	0
Rec Property & Buildings	42102	Stuart Park Building Beautification	Capital		0	0	0	20,000	-20,000	Reserve	0
Rec Property & Buildings	42107	Laurieton Sports Complex - installation of multi-purpose court (part funding)	Capital		0	0	0	115,000	-115,000	Reserve	0
Corporate	19349	COVID Relief Reserve Funding	Capital		0	0	0	-1,492,870	1,492,870	Reserve	0

BUDGET VARIATIONS - August 2020											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Movement	Funding Source	EFFECT ON FUNDING POSITION
Consultancy Costs - Option Analysis MRF											
Waste Disposal	736	Waste Management - Option Analysis MRF	Operational	Corporate Performance	0	0	0	100,000	-100,000	Reserve	0
Waste Disposal	9400	Transfer to/from Reserve	Operational		2,771,614	2,771,614	0	2,671,614	100,000	Reserve	0
Transfer proceeds on sale of Innes Gardens Memorial Park											
Crematorium & Cemeteries	10095	Sale of Innes Gardens Memorial Park	Capital	Corporate Performance	0	0	-1,499,615	-1,499,615	1,499,615	Reserve	0
Crematorium & Cemeteries	9003	Transfer to/from Reserve	Capital		0	0	0	1,499,615	-1,499,615	Reserve	0
Total Reserve Movements									93,255		0
Movement between Projects											
Transfer revenue funding from Blackbutt Park to Kew Community Park											
Parks & Recreation	41899	Kew Community Park	Capital	Development & Environment	0	0	0	14,000	-14,000	Revenue	-14,000
Parks & Recreation	41851	Blackbutt Park - Facilities Upgrade	Capital		0	55,213	0	41,213	14,000	Revenue	14,000
Transfer budget to Mobile Device Upgrades											
Digital Technology	41484	Mobile Phone Upgrades	Capital	Corporate Performance	0	0	0	100,000	-100,000	Reserve	0
Digital Technology	41470	Computer Capital Projects	Capital		1,590,000	1,590,000	94,761	1,490,000	100,000	Reserve	0
Allocate budgets to Artwalk per resolution 11.06											
Economic & Cultural Development	43050	Art Walk 2020	Operational	Strategy & Growth	0	43,000	0	54,763	-11,763	Reserve	0
Economic & Cultural Development	43051	Art Walk 2021	Operational		0	43,000	0	54,763	-11,763	Reserve	
Economic & Cultural Development	41826	Bicentenary Activities	Capital		0	147,036	0	123,509	23,527	Reserve	0
Transfer of budget between projects to cover shortfall on the Dunbogan Bridge handrail.											
Transport & Traffic	42037	Lake Cathie Bridge	Capital		150,000	150,000	0	63,000	87,000	Revenue	87,000



BUDGET VARIATIONS - August 2020											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Movement	Funding Source	EFFECT ON FUNDING POSITION
Transport & Traffic	42037	Lake Cathie Bridge	Capital	Infrastructure	63,000	63,000	0	0	63,000	\$7.11	0
Transport & Traffic	41770	Dunbogan Bridge	Capital		563,342	563,342	41,475	813,342	-250,000	Revenue	-250,000
Transport & Traffic	42065	Limeburners Bridge	Capital		100,000	100,000	0	15,000	85,000	Revenue	85,000
Transport & Traffic	42065	Limeburners Bridge	Capital		15,000	15,000	0	0	15,000	\$7.11	0
Transport & Traffic	666	Bridges & Culverts - Operational	Operational		1,060,016	1,060,016	167,169	982,016	78,000	Revenue	78,000
Transport & Traffic	19346	\$7.11 Funding	Capital		-4,249,607	-4,064,663		-3,986,663	-78,000	\$7.11	0
Total Movements between Projects									387,527		0
2019-2020 Works Program Finalisation and adjustments to 2021 Works Program											
Project movement between financial years											
Parks & Recreation	41859	Stuart Park - Regional Sporting Precinct	Capital	Development & Environment	0	40,418	164,969	6,416	34,002	Reserve	0
Parks & Recreation	19280	Reserve Funding	Capital		-1,373,469	-2,684,776	0	-2,650,774	-34,002	Reserve	0
Sewerage	30159	Reclaimed Water - Area 14 Trunk Main	Capital		0	132,658	29,312	124,596	8,062	Reserve	0
Sewerage	19219	Reserve Funding	Capital		-14,420,000	-15,909,496	0	-15,901,434	-8,062	Reserve	0
Drainage	41764	Black Swan Terrace - Stormwater Detention Facility	Capital	Infrastructure	200,000	250,730	2,051	246,555	4,175	Reserve	0
Drainage	41861	Stormwater Remediation - Bellbowrie/Bay St Catchment	Capital		0	37,707	0	9,485	28,222	Reserve	0
Drainage	19399	Reserve Funding	Capital		-657,501	-1,089,267	0	-1,056,870	-32,397	Reserve	0
Transport & Traffic	41769	Bold St Pedestrian Crossing	Capital		0	61,850	3,127	60,884	966	Reserve	0
Transport & Traffic	19349	Reserve Funding	Capital		-7,939,471	-9,282,410	0	-9,271,986	-10,424	Reserve	0
Transport & Traffic	41486	John Oxley Drive Upgrade - Detailed Design	Capital		0	147,119	24,543	134,649	12,470	\$7.11	0
Transport & Traffic	19346	\$7.11 Funding	Capital		-4,249,607	-4,064,663	0	-4,052,193	-12,470	\$7.11	0


BUDGET VARIATIONS - August 2020											
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Movement	Funding Source	EFFECT ON FUNDING POSITION
Transport & Traffic	41970	Rawdon Island - Safety Improvements	Capital		0	78,594	11,863	75,860	2,734	Grant	0
	41993	Shared Pathway Ocean Drive - Brotheglen Drive	Capital		0	57,270	2,071	29,590	27,680	Grant/Reserve	0
	41996	Construct 17 Kerb Ramps in PM and Wauchope	Capital		0	6,365	15,342	15,129	-8,764	Grant/Reserve	0
	19342	Grant Funding	Capital		-6,119,089	-6,422,535	-1,013,857	-6,410,343	-12,192	Grant/Reserve	0
MPM Town Centre Masterplan	41471	TCMP - Port Macquarie Foreshore Walkway	Capital		0	233,995	8,431	196,075	37,920	Reserve	0
	19359	Reserve Funding	Capital	Development & Environment	0	-233,995	0	-196,075	-37,920	Reserve	0
Natural Resources	41807	Lakeside Woods Environmental - VPA	Operational		0	1,044	0	0	1,044	\$7.11	0
Natural Resources	19236	S 7.11 Funding	Operational		0	-12,223	0	0	-11,179	-1,044	\$7.11
Waste Disposal	50095	Kingfisher Waste Depot - Upgrade & Expansion	Capital	Corporate Performance	300,000	203,536	260,716	194,587	8,949	Reserve	0
	19309	Reserve Funding	Capital		-6,320,000	-6,586,559	0	-6,577,610	-8,949	Reserve	0
157,460											
ORGANISATIONAL TOTAL - THIS REVIEW											
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		151,102				
					FORECAST FOR 30 JUNE 2021	Shortfall	-525,628				
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.									

BUDGET VARIATIONS - August 2020										
Section	Project	Project Description	Capital/ Operating	Division	Full Year Original Budget	Full Year Current Budget	Actuals to August 2020	New Yearly Proposed Budget - August 2020	Funding Source	EFFECT ON FUNDING POSITION
		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.								



## Monthly Investment Report

### August 2020

 <b>IMPERIUM MARKETS</b>	<p>Imperium Markets Pty Ltd ABN: 87 616 579 527 Authorised Representative of Libertas Financial Planning Pty Ltd AFSL 429 718 Phone: +61 2 9053 2987 Email: <a href="mailto:michael.chandra@imperium.markets">michael.chandra@imperium.markets</a> Level 13, 333 George Street, Sydney NSW 2000</p>
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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 31/08/2020	1m (actual)	1m (% p.a.)	FYTD (actual)	FYTD (% p.a.)
AusBond Bank Bill Index	0.01%	0.11%	0.02%	0.11%
<b>Council's Portfolio<sup>^</sup></b>	<b>0.20%</b>	<b>2.35%</b>	<b>0.40%</b>	<b>2.36%</b>
Outperformance	0.19%	2.24%	0.38%	2.25%

<sup>^</sup>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 a record low of 0.25%. Shares (equities) experienced a significant correction in March but have since recovered most of their losses due to the unprecedented fiscal and monetary policy support from global central banks and governments.

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 0.25% until its objectives of full employment and inflation are reached;
2. RBA Governor Lowe has commented that he has not seen any signs of stress in the financial system from this crisis because unlike the GFC, the banks have cash and are well capitalised. He also suggested that Australia had "*fantastic fundamentals*" and had so far been effective at containing the virus and providing policy stimulus;
3. The RBA Board expects rates would be low "*for a very long period of time*" and has recently suggested they **could cut official rates down to 0.10% (from 0.25%), if required**.

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 ~95% of Council's total investment, and cash (~4% 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 2.31% p.a. at month-end, with a weighted average duration of around 506 days or 1.4 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 0.75%-1.05% p.a. (depending on term);
- The highest deposit rates amongst the "A" rated ADIs was yielding between 1.00%-1.50% p.a. (depending on term);
- The highest deposit rates amongst the "BBB" and unrated ADIs was yielding between 1.00%-1.40% 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 0.75%-1.00% 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 (95.41%). The remainder of the portfolio is directed to the overnight cash account with Westpac (3.60%) and the single FRN with Bendigo-Adelaide (0.99%).

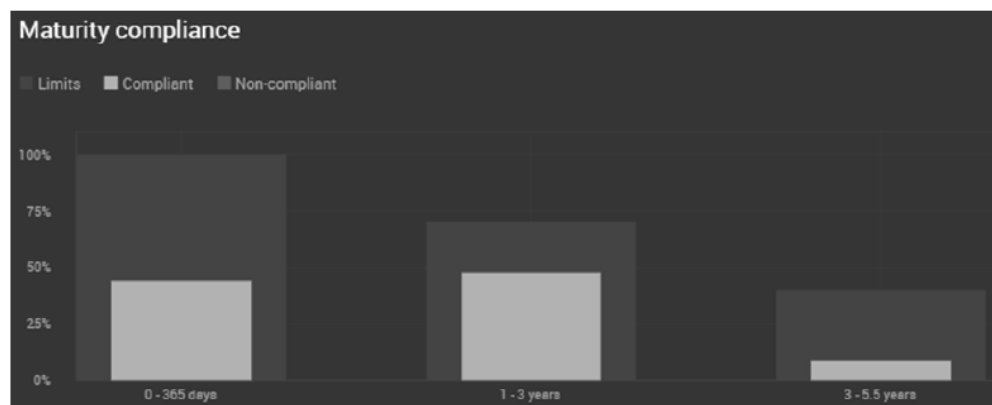
We would consider increasing the allocation to liquid senior floating rate notes (FRNs), if there are any remaining attractive securities in the primary or secondary market. This will not only offer additional upside with regards to the portfolio's investment returns, but also provide additional liquidity (FRNs are saleable – generally accessible within 2 business days). FRNs are also dominated by the higher rated ADIs which allows Council to maintain a bias towards the higher rated banks.

With official interest rates now at the RBA's effective lower bound, the priority should be to lock in any attractive medium-longer dated fixed deposits that may still be available to address reinvestment risk.



### Term to Maturity

All maturity limits (minimum and maximum) comply with the Investment Policy. Medium-Term (3-5½ years) assets account for around 8.62% of the total investment portfolio, with capacity of around \$94.79m 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 (refer to respective sections below).

Compliant	Horizon	Invested (\$)	Invested (%)	Min. Limit (%)	Max. Limit (%)	Available (\$)
✓	0 - 365 days	\$134,528,254	43.96%	0%	100%	\$171,532,418
✓	1 - 3 years	\$145,500,000	47.54%	0%	60%	\$68,742,471
✓	3 - 5.5 years	\$26,032,418	8.51%	0%	40%	\$96,391,851
✓	5.5 - 10 years	\$0	0.00%	0%	20%	\$30,606,067
		<b>\$306,060,672</b>	<b>100.00%</b>			

#### Counterparty

As at the end of August, 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-	\$52,000,000	16.99%	30.00%	\$39,818,202
✓	WBC (St George)	AA-	\$65,528,254	21.41%	30.00%	\$26,289,947
✓	Rabobank	A+	\$13,000,000	4.25%	20.00%	\$48,212,134
✓	ICBC Sydney	A	\$59,500,000	19.44%	20.00%	\$1,712,134
✓	ING Bank Aus.	A	\$25,500,000	8.33%	20.00%	\$35,712,134
✓	AMP Bank	BBB+	\$9,000,000	2.94%	10.00%	\$21,606,067
✓	Aus Military Bank	BBB+	\$7,500,000	2.45%	10.00%	\$23,106,067
✓	BOQ	BBB+	\$30,000,000	9.80%	10.00%	\$606,067
✓	Bendigo	BBB+	\$3,032,418	0.99%	10.00%	\$27,573,649
✓	Auswide	BBB	\$24,000,000	7.84%	10.00%	\$6,606,067
✓	Newcastle PBS	BBB	\$17,000,000	5.55%	10.00%	\$13,606,067
			<b>\$306,060,672</b>	<b>100.00%</b>		

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.

APRA's Chairman affirmed that the banks had satisfactorily moved towards an '*unquestionably strong*' capital position and that bank's stress testing contingency plans were now far better positioned than was previously the case years ago. ***RBA Governor Lowe has recently commented that they have not seen any signs of stress in the financial system and that unlike during the GFC, the banks 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 than 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 0.25% and could potentially drop to 0.10% if economic conditions deteriorate further.**





### 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 31/08/2020 (\$306.06m), 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 actually 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
AMP Bank	BBB+	Yes
Australian Military	BBB+	No
BoQ	BBB+	Yes
Bendigo-Adelaide	BBB+	No
Auswide	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	\$182,028,254	59%
No	\$124,032,418	41%
	<b>\$306,060,672</b>	<b>100%</b>



### 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 in August 2019, 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 (~\$16.6m remaining at month-end), although most ADIs in this sector are currently full on liquidity due to the combination of negative credit growth (no loans being written) and the term funding facility (TFF) provided by the RBA (access to cheap funding at 0.25% for 3 years).

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	\$117,528,254	38.40%	100%	\$188,532,418
✓	A Category	\$98,000,000	32.02%	60%	\$85,636,403
✓	BBB Category	\$90,532,418	29.58%	35%	\$16,588,817
✓	Unrated ADIs	\$0	0.00%	5%	\$15,303,034
		<b>\$306,060,672</b>	<b>100.00%</b>		





### Performance

Council's performance for the month ending 31 August 2020 is summarised as follows:

Performance	1 month	3 months	6 months	FYTD	1 year
Official Cash Rate	0.02%	0.06%	0.13%	0.04%	0.52%
AusBond Bank Bill Index	0.01%	0.03%	0.18%	0.02%	0.66%
Council's T/D Portfolio	0.20%	0.60%	1.24%	0.40%	2.60%
Council's FRN Portfolio	0.09%	0.28%	0.67%	0.18%	-
<b>Council's Portfolio<sup>^</sup></b>	<b>0.20%</b>	<b>0.60%</b>	<b>1.23%</b>	<b>0.40%</b>	<b>2.59%</b>
<b>Outperformance</b>	<b>0.19%</b>	<b>0.57%</b>	<b>1.05%</b>	<b>0.38%</b>	<b>1.93%</b>

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

For the month of August, the portfolio (excluding cash) provided a solid return of +0.20% (actual), outperforming the benchmark AusBond Bank Bill Index return by +0.19% (actual). 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 +2.59% p.a., outperforming bank bills by 1.93% p.a.** and around five 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, more than \$1,700,000 in additional interest income compared to its peers (refer to our June 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 75 individual deposits PMHC held, 24 are still yielding higher than 3.00% p.a. That is, nearly one-third of outstanding deposits held is earning an interest rate that is twelve times the prevailing cash rate of 0.25%.

Investors using the Imperium Markets platform have reduced the invisible costs associated with brokerage, and thereby lift client portfolio returns as investors are able to deal in deposits directly with the ADIs and execute at the best price possible. Council has experienced this over the past few years, receiving on average, 2-4bp higher for every deposit dealt on the platform.



### Council's Term Deposit Portfolio & Recommendation

As at the end of August 2020, Council's deposit portfolio was yielding 2.31% p.a. (down 6bp from the previous month), with an average duration of ~1.4 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 0.25%.

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	1.30% p.a.
BoQ	BBB+	5 years	1.25% p.a.
BoQ	BBB+	4 years	1.15% p.a.
ICBC, Sydney	A	3 years	1.10% p.a.
BoQ	BBB+	3 years	1.05% p.a.
ICBC, Sydney	A	2 years	1.00% p.a.
AMP Bank	BBB+	18m - 2 years	^1.00% p.a.
BoQ	BBB+	2 years	0.95% p.a.

<sup>^</sup> 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 regional ADIs (dependent on daily funding requirements):



ADI	LT Credit Rating	Term	T/D Rate
Judo Bank	Unrated ADI	9, 12 months	1.05% p.a.
Judo Bank	Unrated ADI	6 months	1.00% p.a.
AMP	BBB+	6-12 months	^1.00% p.a.
Bank of Sydney	Unrated ADI	3-12 months	0.90% p.a.
BoQ	BBB+	12 months	0.80% p.a.
BoQ	BBB+	6-9 months	0.75% p.a.

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

Amongst the higher rated ADIs ("A" rated or higher), the following deposits remain attractive for terms under 12 months:

ADI	LT Credit Rating	Term	T/D Rate
ICBC, Sydney	A	12 months	~0.85% p.a.
ICBC, Sydney	A	6-9 months	~0.75% p.a.
NAB	AA-	9-12 months	0.75% p.a.
Westpac	AA-	12 months	~0.73% p.a.
NAB	AA-	3-8 months	0.70% p.a.



### Senior FRNs & Recommendations

Margins have tightened significantly over the past few months given the lack of volume and supply from primary issuances. Global credit assets have also tightened on the back of the US Fed's intervention in the secondary market, which included buying investment grade corporate securities.

Over August, amongst the senior major bank FRNs, physical credit securities remained relatively flat at the loner-end of the curve. Bid-ask spreads have normalised to pre-COVID levels on the back of excess liquidity and short supply. Those investors that require liquidity with a domestic major bank (highly rated) and can roll down the curve should invest in 5 year terms over 3 year terms (or shorter), given the ability to lock in capital gains in subsequent years.

**A new 5 year senior major bank FRN would now be issued around +55bp, appearing relatively expensive.** We expect minimal primary issuance from the domestic banks in the immediate future given the RBA's \$150bn term funding facility (TFF) to the ADIs, offering a rate of 0.25% for 3 years. The lack of supply from new (primary) issuances has played a major role with the rally in credit markets over recent months.

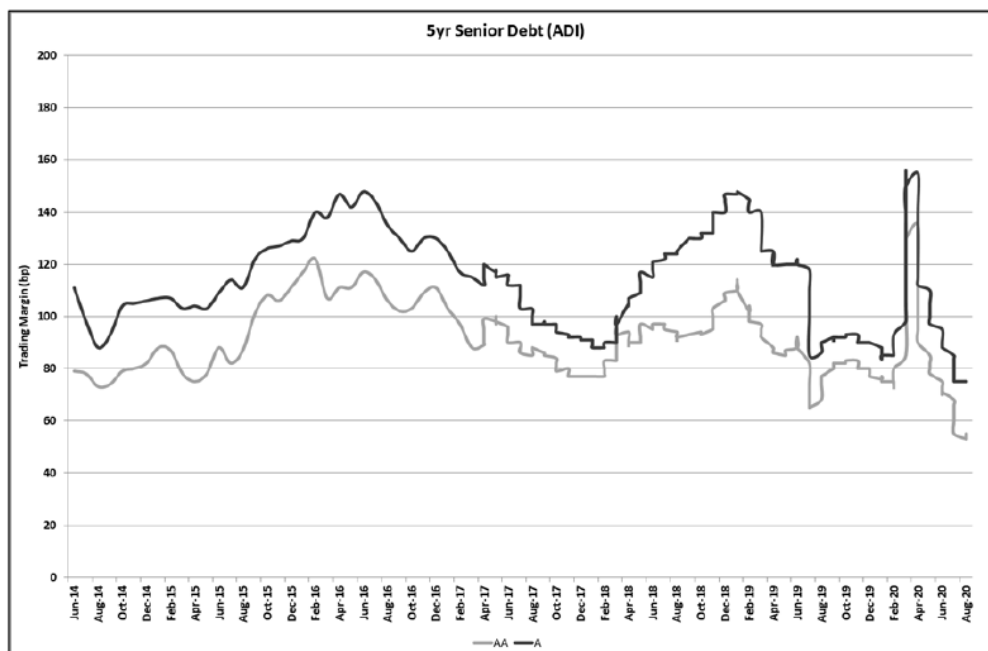
Amongst the "A" and "BBB" rated sector, the senior securities were also marked relatively flat over August. During the month, UBS AG (A) issued a 3 year deal at +80bp, tightening from initial guidance of +87bp, printing \$600m.

While turnover in the secondary market is still predominately dominated by the major banks, 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.

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)	31/08/2020	31/07/2020
"AA" rated – 5yrs	+55bp	+55bp
"AA" rated – 3yrs	+34bp	+35bp
"A" rated – 5yrs	+75bp	+75bp
"A" rated – 3yrs	+50bp	+50bp
"BBB" rated – 3yrs	+80bp	+75bp

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 2023 for the "AA" rated ADIs (domestic major banks);
- On or before mid-2021 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. 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 +74bp (from +103bp the previous month) or a capital price ~\$100.92 at month-end. We recommend Council holds this FRN.*



## Economic Commentary

### International Market

Ongoing vaccine hopes continued to provide a safety net for risk markets. In the US, **the S&P 500 gained +7.01%, while the NASDAQ surged +7.57%, with both indices surpassing their previous all-time highs**. Across the main European markets, Germany's DAX gained +5.13%, while France's CAC rose +3.42% and UK's FTSE finished the month up +1.12%.

**The US unemployment rate fell to 10.2% in July** (from 11.1% in June), with nearly 1.8m jobs added.

Credit rating agency Fitch placed the US government's AAA rating on negative outlook due to the deterioration in the fiscal outlook.

**US headline CPI came in at +1.0% in July** from +0.6% in June, while core CPI came in at +1.6% from +1.2%.

**Hopes that an interim US fiscal package could be agreed were re-ignited** after House Speaker Pelosi indicated a willingness to cut their proposals in order to seal a deal with the US Administration and then provide more stimulus in January following the November elections.

**US Fed Chair Powell revised the Fed's inflation mandate that "will seek to achieve inflation that averages 2% over time"**, noting that if inflation was running below 2%, *"appropriate monetary policy would likely aim to achieve inflation moderately above 2% for some time"*.

Eurozone Q2 GDP fell more than -12%, led by an -18.5% fall in Spanish GDP.

**The UK economy shrank by -20.4% in Q2**, more than any other major economy and symptomatic of the UK's very high service sector concentration (around 80%). UK core CPI lifted to +1.8% from +1.4%, well above consensus.

Canada's average of its three core CPI measures came in softer than expected at +1.6%, down from +1.7%.

**Auckland moved to Level 3 restrictions** during the month for an initial three days, following a handful of positive COVID-19 community transmissions. New Zealand had previously reported more than 100 days without the virus.

The MSCI World ex-Aus Index gained +6.57% for the month of August:

Index	1m	3m	1yr	3yr	5yr	10yr
S&P 500 Index	+7.01%	+14.98%	+19.61%	+12.30%	+12.16%	+12.80%
MSCI World ex-AUS	+6.57%	+14.26%	+15.23%	+8.04%	+8.46%	+8.79%
S&P ASX 200 Accum. Index	+2.83%	+6.04%	-5.08%	+6.10%	+7.47%	+7.81%

Source: S&P, MSCI



### Domestic Market

**The Victorian government declared a state of disaster at the start of August**, placing “stage 4” restrictions across Melbourne, including an 8pm-5am curfew, 5km travel limits, and remote learning for all students.

**The RBA kept its policy unchanged at its August meeting as widely expected** (cash rate and a 3 year government bond yield target of 0.25%). The Board revised its forecast for the unemployment rate to peak at 10% in December 2020, up from 9% in its May statement, largely driven by the stage 4 lockdown in Melbourne. The RBA August Minutes reaffirmed that the Board saw **no need to adjust their current policy settings but remains willing to do more if required**. This included **lowering the official cash rate down to 0.10%** (from 0.25%) and tweak existing measures of yield curve control and the term funding facility (TFF).

**RBA Governor Philp Lowe said the states and territories need to inject another \$40bn** (~2% of GDP) into job creating infrastructure, warning that unemployment was forecast to stay above 7% for the next two years.

**Real retail sales fell -3.4% over Q2**, slightly weaker than the -3.0% expected by markets, with retail sales set to detract -0.6% from Q2 GDP.

June’s trade balance revealed a surplus of \$8.2bn, the 30<sup>th</sup> consecutive month of the trade account being in surplus. China’s share of Australian exports rose despite political headwinds. Exports to China reached a record \$14.6bn with goods exported to China comprising 48.8% of all goods exported, well up from 33% in February.

**Annual wages growth is now +1.8% y/y, the lowest recorded annual rate in the 22-year history of the index.**

**The unemployment rate rose again in July, to 7.5% from 7.4%**, a reflection that more people restarted their job search rather than people who gained work. The participation rate rose to 64.7% from 64.1%.

APRA released new figures showing a material increase in the volume of loans exiting deferrals (from \$2bn in May to \$18bn in June).

**The AUD reached an 18 month high, finishing another +2% higher at US73.54 cents** (from US72.13 cents the previous month).

### Credit Market

The main global credit indices tightened again over August as risk markets continued their rally since the selloff earlier this year. The indices now trade back to their levels of mid-2019:

Index	August 2020	July 2020
CDX North American 5yr CDS	65bp	69bp
iTraxx Europe 5yr CDS	54bp	60bp
iTraxx Australia 5yr CDS	64bp	76bp

Source: Markit





## Fixed Interest Review

### Benchmark Index Returns

Index	August 2020	July 2020
Bloomberg AusBond Bank Bill Index (0+YR)	+0.01%	+0.01%
Bloomberg AusBond Composite Bond Index (0+YR)	-0.42%	+0.37%
Bloomberg AusBond Credit FRN Index (0+YR)	+0.10%	+0.42%
Bloomberg AusBond Credit Index (0+YR)	+0.12%	+0.91%
Bloomberg AusBond Treasury Index (0+YR)	-0.81%	+0.32%
Bloomberg AusBond Inflation Gov't Index (0+YR)	-1.01%	+3.24%

Source: Bloomberg

### Other Key Rates

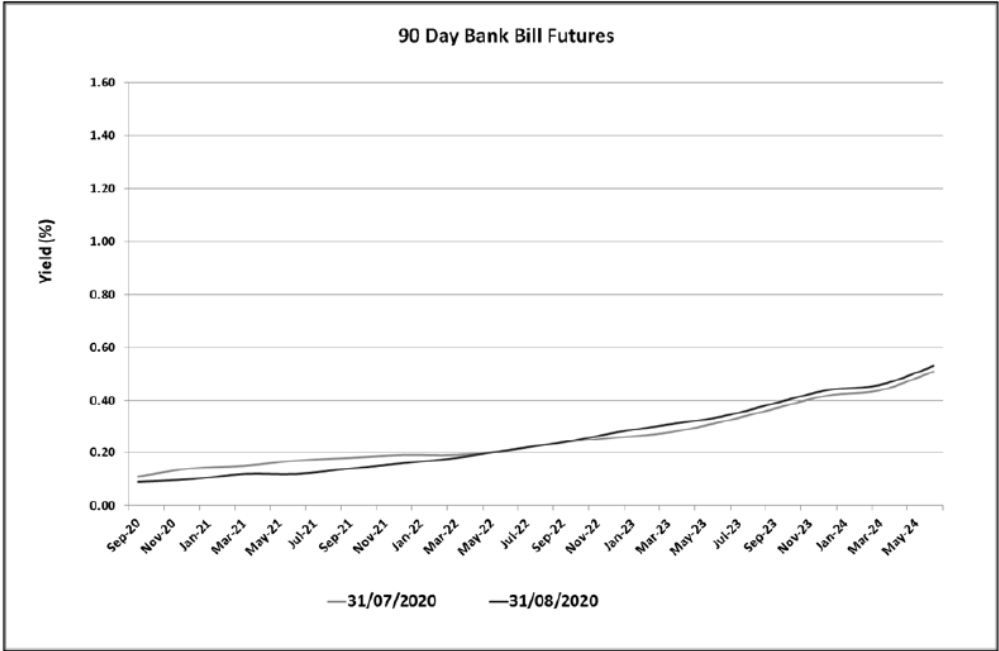
Index	August 2020	July 2020
RBA Official Cash Rate	0.25%	0.25%
90 Day (3 month) BBSW Rate	0.09%	0.10%
3yr Australian Government Bonds	0.28%	0.27%
10yr Australian Government Bonds	0.98%	0.82%
US Fed Funds Rate	0.00%-0.25%	0.00%-0.25%
10yr US Treasury Bonds	0.72%	0.55%

Source: RBA, AFMA, US Department of Treasury



**90 Day Bill Futures**

Over August, bill futures rose at the long-end of the curve, consistent with the movement in the bond market. With the RBA suggesting they will keep rates unchanged for the foreseeable future, bill futures are likely to trade in a relatively narrow range, particularly for terms out to 3 years given the RBA’s target to keep the 3 year bond rate at 0.25%.



Source: ASX



## Fixed Interest Outlook

There is growing pressure for policymakers to provide additional support to revive the global economic recovery, particularly as further lockdowns are renewed or being considered. Ongoing hopes of an imminent vaccine have provided a safety net for risk markets.

The US Fed has reiterated it is committed to *"using its full range of tools to support the US economy"* and has signalled it is not considering raising interest rates at least until 2022.

The futures market is currently not pricing in a Fed rate rise until about four years after announcing the change to its inflation mandate to an *"average (rate of) 2% over time"*. The futures market does however continue to price in the possibility that the US Fed may need to take rates into negative territory by the end of the calendar year (around 18%, although the Fed officially remains adamant this is not required).

**Domestically, with official interest rates at the RBA's "effective lower bound" of 0.25%, their forward guidance is to keep committing the official cash rate unchanged until there is a sustainable recovery and its economic objectives of full employment (unemployment rate of 4.5%-5.0%) and target inflation (2-3%) are on track.**

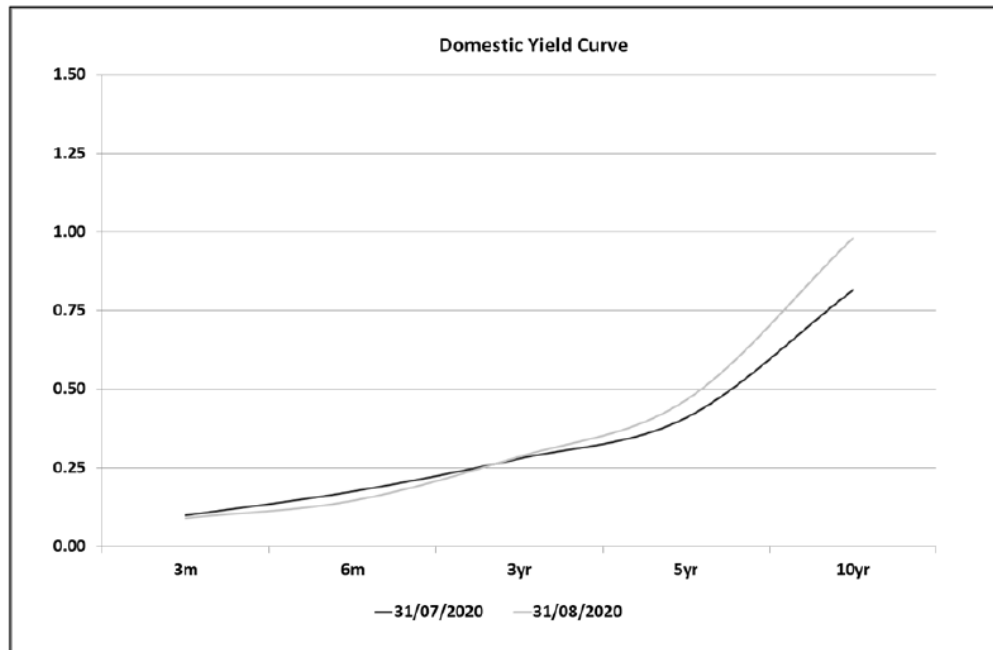
RBA Governor Lowe has commented that unlike during GFC, **the banks have cash and are well capitalised**, and that they are **not seeing any signs of stress in the financial system**. Although the pandemic was still a shock to the economy, Lowe has also commented that Australia had *"fantastic fundamentals"*.

The outlook for wages growth remains weak with the RBA's latest forecasts seeing annual wages growth slowing to 1¼% in 2021, well below the post-inflation targeting average of 3.2% annual wages growth. Weak wages growth will weigh on inflation outcomes for some years.

**Governor Lowe has repeatedly indicated that rates would be low *"for a very long period of time"* as the RBA needed to be confident inflation would be back in the 2 – 3% target range before considering lifting official rates. He has also indicated that if needed, the bank could lower the cash rate to a still-positive 0.10% (from 0.25%), buy more bonds and tweak the term funding facility (TFF).**

For now, the RBA is not contemplating adopting negative rates, indicating this would be *"extraordinarily unlikely"*, citing the minimal benefits from those central banks that have undertaken such policies in recent years (e.g. Japan and Europe). With the Australian dollar appreciating significantly over recent months, they RBA also dismissed the idea of intervening in the foreign exchange market.

The domestic bond market continues to suggest a 'lower-for-longer' period of interest rates. Over the month, yields rose up to 17bp at the long-end, with 10-year government bond yields closing in on the 1% barrier:



Source: AFMA, ASX, RBA

### Disclaimer

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# Monthly Investment Report

01/08/2020 to 31/08/2020



## Portfolio Valuation

as at 31/08/2020

Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
ING Direct	A	TD	GENERAL	Annual	13/09/2018	08/09/2020	2.8700	4,000,000.00	111,340.27	9,750.14
Westpac	AA-	TD	LOCAL BRANCH	Annual	13/09/2017	14/09/2020	3.1700	3,000,000.00	92,233.97	8,076.99
ING Direct	A	TD	GENERAL	Annual	13/09/2018	22/09/2020	2.8700	4,000,000.00	111,340.27	9,750.14
NAB	AA-	TD	GENERAL	Annual	17/10/2018	13/10/2020	2.7800	4,000,000.00	97,490.41	9,444.38
ICBC Sydney Branch	A	TD	GENERAL	Annual	31/10/2018	27/10/2020	2.9300	6,000,000.00	147,383.01	14,930.96
ICBC Sydney Branch	A	TD	GENERAL	Annual	13/11/2018	10/11/2020	2.9300	5,000,000.00	117,601.37	12,442.47
ICBC Sydney Branch	A	TD	GENERAL	Annual	05/12/2018	08/12/2020	2.8600	2,000,000.00	42,469.04	4,858.08
ICBC Sydney Branch	A	TD	GENERAL	Annual	14/12/2018	15/12/2020	2.8900	6,000,000.00	123,517.81	14,727.12
Westpac	AA-	TD	GENERAL	Quarterly	17/12/2019	17/12/2020	1.4600	6,000,000.00	18,240.00	7,440.00
BOQ	BBB+	TD	GENERAL	Annual	24/01/2017	25/01/2021	3.6500	2,000,000.00	44,200.00	6,200.00
Westpac	AA-	TD	LOCAL BRANCH	Annual	21/02/2017	22/02/2021	3.3900	2,000,000.00	35,850.41	5,758.36
ICBC Sydney Branch	A	TD	GENERAL	Annual	27/02/2020	26/02/2021	1.3900	2,500,000.00	17,803.42	2,951.37
BOQ	BBB+	TD	GENERAL	Annual	10/03/2016	10/03/2021	3.8000	3,000,000.00	54,657.53	9,882.19
ING Direct	A	TD	GENERAL	Annual	20/02/2019	16/03/2021	2.8200	2,000,000.00	29,976.99	4,790.14
Westpac	AA-	TD	GENERAL	Quarterly	22/03/2018	23/03/2021	3.0200	4,000,000.00	23,498.08	10,259.73
Westpac	AA-	TD	GENERAL	Quarterly	22/05/2018	25/05/2021	3.1000	4,000,000.00	2,717.81	2,717.81
AMP Bank	BBB+	TD	GENERAL	Annual	25/11/2019	25/05/2021	1.6000	5,000,000.00	61,589.04	6,794.52
AMP Bank	BBB+	TD	GENERAL	Annual	29/11/2019	27/05/2021	1.6000	4,000,000.00	48,569.86	5,435.62



Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
BOQ	BBB+	TD	GENERAL	Annual	29/05/2019	31/05/2021	2.3000	3,000,000.00	17,958.90	5,860.27
Rabobank Australia Branch	A+	TD	GENERAL	Annual	08/06/2017	07/06/2021	3.0200	5,000,000.00	34,750.68	12,824.66
Westpac	AA-	TD	GENERAL	Quarterly	06/06/2018	15/06/2021	3.1000	3,000,000.00	21,402.74	7,898.63
NAB	AA-	TD	GENERAL	At Maturity	19/06/2020	21/06/2021	1.0000	4,000,000.00	8,109.59	3,397.26
NAB	AA-	TD	GENERAL	Annual	03/07/2018	22/06/2021	3.0000	4,000,000.00	19,726.03	10,191.78
NAB	AA-	TD	GENERAL	Annual	03/07/2018	06/07/2021	3.0000	3,000,000.00	14,794.52	7,643.84
Westpac	AA-	TD	GENERAL	Quarterly	17/07/2018	13/07/2021	3.0400	5,000,000.00	19,156.16	12,909.59
NAB	AA-	TD	GENERAL	Annual	26/07/2018	20/07/2021	3.0400	4,000,000.00	11,993.42	10,327.67
Westpac	AA-	TD	LOCAL BRANCH	Annual	24/07/2019	23/07/2021	1.7500	4,000,000.00	7,479.45	5,945.21
NAB	AA-	TD	GENERAL	Annual	02/08/2018	03/08/2021	3.0700	5,000,000.00	11,775.34	11,775.34
ICBC Sydney Branch	A	TD	GENERAL	Annual	30/08/2019	30/08/2021	1.6200	5,000,000.00	221.92	221.92
NAB	AA-	TD	GENERAL	At Maturity	31/08/2020	31/08/2021	0.8000	5,000,000.00	109.59	109.59
NAB	AA-	TD	GENERAL	Annual	31/08/2020	31/08/2021	0.8000	5,000,000.00	109.59	109.59
Westpac	AA-	TD	GENERAL	Quarterly	13/09/2018	14/09/2021	2.8800	5,000,000.00	30,772.60	12,230.14
NAB	AA-	TD	GENERAL	Annual	27/09/2018	28/09/2021	3.0500	5,000,000.00	142,054.79	12,952.05
Auswide Bank	BBB	TD	GENERAL	Annual	30/09/2019	30/09/2021	1.7500	4,000,000.00	64,630.14	5,945.21
Westpac	AA-	TD	GENERAL	Quarterly	13/09/2018	12/10/2021	2.8900	5,000,000.00	30,879.45	12,272.60
Auswide Bank	BBB	TD	GENERAL	Annual	23/10/2019	25/10/2021	1.6500	5,000,000.00	70,972.60	7,006.85
Auswide Bank	BBB	TD	GENERAL	At Maturity	25/11/2019	25/11/2021	1.7000	5,000,000.00	65,438.36	7,219.18
ICBC Sydney Branch	A	TD	GENERAL	Annual	05/12/2018	07/12/2021	3.0100	4,000,000.00	89,392.88	10,225.75





Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
ICBC Sydney Branch	A	TD	GENERAL	Annual	16/12/2019	16/12/2021	1.5700	4,000,000.00	44,734.25	5,333.70
ING Direct	A	TD	GENERAL	Annual	30/01/2020	31/01/2022	1.6500	5,000,000.00	48,595.89	7,006.85
Newcastle Permanent	BBB	TD	GENERAL	Quarterly	07/02/2019	08/02/2022	3.0500	4,000,000.00	8,356.16	8,356.16
Westpac	AA-	TD	GENERAL	Annual	21/02/2017	21/02/2022	3.6100	2,000,000.00	38,176.99	6,132.05
NAB	AA-	TD	GENERAL	Annual	21/02/2017	21/02/2022	3.4600	5,000,000.00	91,476.71	14,693.15
ING Direct	A	TD	GENERAL	Annual	02/03/2020	02/03/2022	1.5000	5,000,000.00	37,602.74	6,369.86
BOQ	BBB+	TD	GENERAL	Annual	15/03/2017	15/03/2022	3.8000	2,000,000.00	35,189.04	6,454.79
Newcastle Permanent	BBB	TD	GENERAL	Quarterly	12/03/2019	22/03/2022	2.9000	4,000,000.00	25,742.47	9,852.05
Newcastle Permanent	BBB	TD	GENERAL	Annual	27/03/2019	29/03/2022	2.8000	5,000,000.00	60,602.74	11,890.41
Newcastle Permanent	BBB	TD	GENERAL	Quarterly	18/04/2019	19/04/2022	2.7000	4,000,000.00	12,723.29	9,172.60
BOQ	BBB+	TD	GENERAL	Annual	28/05/2019	30/05/2022	2.4000	4,000,000.00	25,249.32	8,153.42
Rabobank Australia Branch	A+	TD	GENERAL	Annual	08/06/2017	07/06/2022	3.2200	5,000,000.00	37,052.05	13,673.97
Australian Military Bank	BBB+	TD	GENERAL	Annual	19/06/2020	20/06/2022	1.1500	2,000,000.00	4,663.01	1,953.42
Australian Military Bank	BBB+	TD	GENERAL	Annual	19/06/2020	20/06/2022	1.1500	2,000,000.00	4,663.01	1,953.42
Australian Military Bank	BBB+	TD	GENERAL	Annual	23/06/2020	23/06/2022	1.0500	3,500,000.00	7,047.95	3,121.23
Westpac	AA-	TD	GENERAL	Quarterly	23/06/2020	23/06/2022	1.0100	3,500,000.00	6,779.45	3,002.33
Westpac	AA-	TD	GENERAL	Quarterly	24/06/2020	24/06/2022	1.0200	5,000,000.00	9,641.10	4,331.51
NAB	AA-	TD	GENERAL	Annual	02/08/2018	02/08/2022	3.2200	4,000,000.00	9,880.55	9,880.55
NAB	AA-	TD	GENERAL	Annual	16/08/2018	16/08/2022	3.0500	4,000,000.00	5,013.70	5,013.70
ICBC Sydney Branch	A	TD	GENERAL	Annual	28/08/2019	29/08/2022	1.6400	5,000,000.00	898.63	898.63



Issuer	Rating	Type	Alloc	Interest	Purchase	Maturity	Rate	Value	Accrued	Accrued MTD
Auswide Bank	BBB	TD	GENERAL	At Maturity	06/09/2019	06/09/2022	1.8000	3,000,000.00	53,408.22	4,586.30
Rabobank Australia Branch	A+	TD	GENERAL	Annual	13/09/2017	13/09/2022	3.3800	3,000,000.00	98,344.11	8,612.05
Westpac	AA-	TD	LOCAL BRANCH	Annual	13/09/2017	13/09/2022	3.4100	3,000,000.00	99,216.99	8,688.49
Auswide Bank	BBB	TD	GENERAL	Annual	30/09/2019	30/09/2022	1.7500	4,000,000.00	64,630.14	5,945.21
ICBC Sydney Branch	A	TD	GENERAL	Annual	23/10/2019	24/10/2022	1.7000	3,000,000.00	43,873.97	4,331.51
ICBC Sydney Branch	A	TD	GENERAL	Annual	31/10/2019	31/10/2022	1.7300	5,000,000.00	72,517.81	7,346.58
ING Direct	A	TD	GENERAL	Annual	27/02/2020	27/02/2023	1.6000	2,500,000.00	20,493.15	3,397.26
BOQ	BBB+	TD	GENERAL	Annual	28/05/2019	29/05/2023	2.5500	4,000,000.00	26,827.40	8,663.01
BOQ	BBB+	TD	GENERAL	Annual	19/06/2020	19/06/2023	1.3500	2,000,000.00	5,473.97	2,293.15
BOQ	BBB+	TD	GENERAL	Annual	27/06/2019	27/06/2023	2.2000	5,000,000.00	19,287.67	9,342.47
ICBC Sydney Branch	A	TD	GENERAL	Annual	27/11/2019	27/11/2023	1.7600	6,000,000.00	80,718.90	8,968.77
ICBC Sydney Branch	A	TD	GENERAL	Annual	16/12/2019	18/12/2023	1.8100	4,000,000.00	51,572.60	6,149.04
Auswide Bank	BBB	TD	GENERAL	Annual	02/03/2020	04/03/2024	1.7500	3,000,000.00	26,321.92	4,458.90
BOQ	BBB+	TD	GENERAL	Annual	18/06/2020	18/06/2024	1.4500	3,000,000.00	8,938.36	3,694.52
ING Direct	A	TD	GENERAL	Annual	23/06/2020	24/06/2024	1.2500	3,000,000.00	7,191.78	3,184.93
Bendigo and Adelaide	BBB+	FRN	GENERAL	Quarterly	06/09/2019	06/09/2024	1.0706	3,032,418.00	7,391.54	2,727.83
BOQ	BBB+	TD	GENERAL	Annual	27/09/2019	27/09/2024	2.0000	2,000,000.00	37,260.27	3,397.26
ICBC Sydney Branch	A	TD	GENERAL	Annual	18/06/2020	18/06/2025	1.7500	2,000,000.00	7,191.78	2,972.60
Westpac	AA-	CASH	GENERAL	Monthly	31/08/2020	31/08/2020	0.5000	11,028,254.23	6,201.22	6,201.22
<b>TOTALS</b>								<b>306,060,672.23</b>	<b>3,093,158.92</b>	<b>545,282.06</b>





PORT MACQUARIE-HASTINGS  
COUNCIL

**Attachment 1**

**SCHEDULE OF FEES AND CHARGES  
2020-2021**





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## Schedule of Fees and Charges 2020 – 2021

### Pricing Policy

In determining the appropriate fees to be charged for Council services and facilities in 2020-2021, 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.

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

## Schedule of Fees and Charges 2020 – 2021

### Goods and Services Tax

#### Introduction

The Goods and Services Tax (GST) passed through legislation on 30 June 1999 and received Royal Assent 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:

- **Fee (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.
- **Fee (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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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## Port Macquarie-Hastings Council

### Leadership & Governance

### Financial Management

#### Certificates

Section 603 Certificate	\$85.00	\$0.00	\$85.00	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	\$63.25	\$0.00	\$63.25	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	\$10.20	\$0.00	\$10.20	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	\$614.30	\$0.00	\$614.30	Per Annum
Business – Other	\$514.30	\$0.00	\$514.30	Per Annum
Business – Port Macquarie CBD	\$614.30	\$0.00	\$614.30	Per Annum
Farmland	\$634.60	\$0.00	\$634.60	Per Annum
Residential – Defined Urban Centres	\$614.30	\$0.00	\$614.30	Per Annum
Residential – Other	\$514.30	\$0.00	\$514.30	Per Annum

Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Rate in \$ by Category**

Business – Defined Urban Centres			0.53477c	Per \$ Valuation
Business – Other			0.46687c	Per \$ Valuation
Business – Port Macquarie CBD			2.36132c	Per \$ Valuation
Farmland			0.27527c	Per \$ Valuation
Residential – Defined Urban Centres			0.24678c	Per \$ Valuation
Residential – Other			0.27600c	Per \$ Valuation
Sanctuary Springs Special Rate			0.13120c	Per \$ Valuation
Broadwater Special Rate			0.06154c	Per \$ Valuation

**Lease Fees – Council Land****Lease Application**

Administration Fee – Not elsewhere indicated – No Report to Council	\$200.00	\$20.00	\$220.00	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	\$763.64	\$76.36	\$840.00	Each
Application and Administration Fee				
Commercial Leases over 5 Years	\$1,054.55	\$105.45	\$1,160.00	Each
Application and Administration Fee				
Commercial – Renewal or Assignment of Lease Not Requiring Amendment	\$327.27	\$32.73	\$360.00	Each
Application and Administration Fee				
Community – Application and Administration Fee	\$681.82	\$68.18	\$750.00	Each
Application and Administration Fee				
Community – Renewal or Assignment of Lease Not Requiring Amendment	\$281.82	\$28.18	\$310.00	Each
Application and Administration Fee				
Survey Fee			At Cost	Each
Valuation Fees			At Cost	Each
Legal Fees			At Cost	Each

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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	\$500.00	\$50.00	\$550.00	Each
Administration Fee – Sales of land with a value of between \$20,001 and \$100,000	\$963.64	\$96.36	\$1,060.00	Each
Non-refundable				
Administration Fee – Sale of land with a value of over \$100,000	\$1,436.36	\$143.64	\$1,580.00	Each
Non-refundable				
Based on administration time to co-ordinate, report etc				
Administration Fee – Not elsewhere indicated	\$200.00	\$20.00	\$220.00	Each
No report to Council, Non-refundable				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Property Management** [continued]

Administration Fee – Not elsewhere indicated	\$290.91	\$29.09	\$320.00	Each
Report to Council, Non-refundable				
Investigation Fee, Search Fee	\$336.36	\$33.64	\$370.00	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	\$109.09	\$10.91	\$120.00	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	\$740.00	\$0.00	\$740.00	Each
Application Fee - Non-refundable				
Naming / Renaming of a Crown Reserve	\$900.00	\$0.00	\$900.00	Each
Application Fee - non-refundable				

**Road Closing Application Fees**

Council Road Closure – Investigation Fee	\$650.00	\$0.00	\$650.00	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	\$1,200.00	\$0.00	\$1,200.00	Each
Non-refundable				
Council Road Closure Stage 2 – Administration Fee	\$1,700.00	\$0.00	\$1,700.00	Each
Non-refundable				
Survey, Valuation, Legal			At Cost	Each
Fees to Other Authorities, Government Departments			At Cost	Each
Non-refundable				

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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
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**Administrative Fees**

Credit Card Surcharge			0.5%	Per Transaction
Cheque Dishonour Administration Fee	\$35.00	\$0.00	\$35.00	Each
Direct Debit Dishonour Administration Fee	\$25.00	\$0.00	\$25.00	Each
New Owners Administration Fee	\$50.00	\$0.00	\$50.00	Each
Rates/Water Overpayment Refund Fee	\$25.00	\$0.00	\$25.00	Each

**Document Sales****Other Documents****Refer Appendix 1**

Council's Drainage Code	\$47.00	\$0.00	\$47.00	Each
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**Reports & Studies****Refer Appendix 1**

Various Reports & Studies	Calculated according to printing and / or photocopying costs			Each
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**Government Information (Public Access) Act 2009 (GIPA)****Subpoena to produce documents****Access to Records****Personal Records**

Application Fee	\$30.00	\$0.00	\$30.00	Each
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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Personal Records** [continued]

Processing Charge – hourly rate after first 20 hours	\$30.00	\$0.00	\$30.00	Per Hour
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	\$16.50	\$0.00	\$16.50	Each
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**Subpoenas – Conduct Money**

Where Council is not a party to the proceedings

**Subpoena to produce documents**

Conduct Money	\$67.95	\$0.00	\$67.95	Each
Conduct Money for subpoenas served under seven (7) days	\$136.00	\$0.00	\$136.00	Each
Searching and compiling documents – per 15 mins	\$22.00	\$0.00	\$22.00	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	\$69.00	\$0.00	\$69.00	Each
Staff attendance and travel time – Hourly rate			At Cost	Per Hour
Travel, accommodation and meal expenses			At Cost	

Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**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	\$1.00	\$0.10	\$1.10	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	\$3.80	\$0.38	\$4.18	Each
51 – 100 pages	\$4.41	\$0.44	\$4.85	Each
101 – 150 pages	\$5.14	\$0.51	\$5.65	Each

**Laminating**

A4 sheet	\$2.82	\$0.28	\$3.10	Per Sheet
A3 sheet	\$5.55	\$0.55	\$6.10	Per Sheet

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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## 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
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### 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	\$727.27	\$72.73	\$800.00	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	\$363.64	\$36.36	\$400.00	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 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Airport****Port Macquarie Airport**

Refer Appendix 2

**Regular Public Transport (RPT) Services**

Passenger Landing Fee	\$20.50	\$2.05	\$22.55	Per Passenger
Applies to RPT and Charter aircraft (including helicopters) using RPT apron				
Passenger Departure Fee	\$20.50	\$2.05	\$22.55	Per Passenger
Applies to RPT and Charter aircraft (including helicopters) using RPT apron				
Security Screening Fee	POA - per departing passenger			POA – per departing passenger
Applies to RPT and Charter aircraft (including helicopters) using RPT apron during the operational period				
Operational period defined as per Govt Reg's for Aviation Security				

**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	\$1,214.73	\$121.47	\$1,336.20	Per Annum per Aircraft
Applies to airport based commercial operators with less than five (5) aircraft				
Excludes RPT and freight aircraft operators				
Airport Usage Charge (Annual) – For Commercial Purposes	\$1,214.73	\$121.47	\$1,336.20	Per Annum per Aircraft
Applies to Helicopter / Microlight / Ultralight aircraft operators with less than five (5) aircraft				
Hangar lessee will be charged the annual fee for a commercial ultralight, microlight or similar, per aircraft				
Airport Usage Charge (Annual) – For Private Purposes	\$607.36	\$60.74	\$668.10	Per Annum per Aircraft
Applies to airport based private operators.				
Airport Usage Charge (Annual) – For Private Purposes	\$607.36	\$60.74	\$668.10	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				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**General Aviation (GA) Services** [continued]

Airport Usage Charge – Weight Based Movement Charge	\$11.45	\$1.15	\$12.60	Per Tonne pro rata
Applies to all aircraft per landing. Not covered by the annual usage charges listed above.				
Minimum charge \$12.00 per landing. RPT aircraft exempt.				
Airport Usage Charge – Training Circuits	\$11.45	\$1.15	\$12.60	Per 20 minute interval (i.e. 3 charged per hour)
Applies to all aircraft per landing. Not covered by the annual usage charges listed above.				
Minimum charge \$12.00 per landing. RPT aircraft exempt.				
Airport Usage Charge – Training Circuits (out of hours operations – refer Appendix 2)	\$17.18	\$1.72	\$18.90	
Applies to all aircraft per landing. Not covered by the annual usage charges listed above.				
RPT aircraft exempt.				
Aircraft Parking – RPT Apron	\$61.36	\$6.14	\$67.50	Per hour
Applies to aircraft parked on RPT apron				
RPT aircraft exempt				
Aircraft Parking – GA Apron	\$9.32	\$0.93	\$10.25	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	\$12.73	\$1.27	\$14.00	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				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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	\$59.55	\$5.95	\$65.50	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 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Airport Parking Fees** [continued]

Car Parking Charges – Credit Card Service Fee	2.5% Charge applies to payments made by credit card			Each
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**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	\$116.55	\$11.65	\$128.20	each
UV Absorbance/UV Transmission	\$13.45	\$1.35	\$14.80	each
Administration Fee	\$37.27	\$3.73	\$41.00	per sample batch
Extensive Report Fee	\$73.64	\$7.36	\$81.00	per sample batch
Re-issue of Reports	\$37.27	\$3.73	\$41.00	per sample batch
Sample Preparation Fee For Complex Matrix	\$27.73	\$2.77	\$30.50	each
Urgent Analysis (if possible) Incurs a Surcharge	Price on Application			POA
Weekend Analysis Incurs a Surcharge	Price on Application			POA
Alkalinity	\$23.00	\$2.30	\$25.30	each
Ammonia (includes filtration charge)	\$23.00	\$2.30	\$25.30	each
Total BOD5	\$65.00	\$6.50	\$71.50	each
Biovolume (literature and or historical values only)	\$27.73	\$2.77	\$30.50	each
Biovolume (literature and or historical + measurement)	\$55.45	\$5.55	\$61.00	each
Chlorophyll – a	\$59.27	\$5.93	\$65.20	each
Colour (apparent)	\$14.36	\$1.44	\$15.80	each
Colour (true)	\$16.27	\$1.63	\$17.90	each
Dissolved Oxygen	\$13.45	\$1.35	\$14.80	each
Electrical Conductivity	\$13.45	\$1.35	\$14.80	each
Enterococci (confirmed)	\$45.82	\$4.58	\$50.40	each
Thermotolerant Coliforms (presumptive)	\$45.82	\$4.58	\$50.40	each
Thermotolerant Coliforms (confirmed)	\$59.27	\$5.93	\$65.20	each
Fluoride	\$27.73	\$2.77	\$30.50	each
Microscopic Identification	\$52.55	\$5.25	\$57.80	each
Nitrite – N (includes filtration charge)	\$23.00	\$2.30	\$25.30	each
Nitrate – N (calculated from NOx and Nitrite)	\$34.45	\$3.45	\$37.90	each
NOx – N (includes filtration charge)	\$34.45	\$3.45	\$37.90	each
Nitrate (if NOx and Nitrite also reported)	\$5.82	\$0.58	\$6.40	each
Total Suspended Solids	\$23.00	\$2.30	\$25.30	each
Filterable Reactive Phosphorus (includes filtration charge)	\$23.00	\$2.30	\$25.30	each
Other Services	By quotation			each
pH	\$13.45	\$1.35	\$14.80	each
Redox	\$17.27	\$1.73	\$19.00	each

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Water Analysis** [continued]

Salinity	\$13.45	\$1.35	\$14.80	each
Sample Collection (water)	\$137.55	\$13.75	\$151.30	per hour
1 person on run				
Sample Collection (gas)	\$110.82	\$11.08	\$121.90	per hour
1 person on run				
Sample Containers	Included in testing fees			
Total Chlorine	\$20.09	\$2.01	\$22.10	each
Free Chlorine	\$20.09	\$2.01	\$22.10	each
Total Dissolved Solids (Calculation)	\$13.45	\$1.35	\$14.80	each
Total Kjeldahl Nitrogen – N	\$74.55	\$7.45	\$82.00	each
Total Kjeldahl Nitrogen – N (Calculated if TN and NOx also reported)	\$5.82	\$0.58	\$6.40	each
Total Organic Nitrogen – N (Calculated TKN – NH3)	\$27.73	\$2.77	\$30.50	each
Total Phosphorous (persulphate digestion)	\$34.45	\$3.45	\$37.90	each
Total Nitrogen (persulphate digestion)	\$40.18	\$4.02	\$44.20	each
Turbidity	\$13.45	\$1.35	\$14.80	each
Cyanobacteria Identification & Enumeration	\$116.55	\$11.65	\$128.20	each
Potentially Toxic Cyanobacteria Identification & Enumeration	\$78.36	\$7.84	\$86.20	each
Total Phytoplankton Identification & Enumeration	\$169.09	\$16.91	\$186.00	each
Total Coliforms & E. coli (MPN)	\$65.00	\$6.50	\$71.50	each
Chemical Oxygen Demand	\$44.91	\$4.49	\$49.40	each
Heterotrophic Plate Count (HPC)	\$35.45	\$3.55	\$39.00	each

**The Glasshouse****Glasshouse Port Macquarie**

Refer also to Conditions of Hire (available on website [www.glasshouse.org.au](http://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				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**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 3 Day Hire – Performance Hire on 3 consecutive days for up to 7 hours* per day. Includes A/C, cleaning, access to standard in-house lighting and sound rig, and Venue Supervisor.	\$1,363.64	\$136.36	\$1,500.00	Per Hire
Additional hours required on any day charged at \$90/hour				
Studio 5 Day Hire – Performance Hire on 5 consecutive days for up to 7 hours* per day. Includes A/C, cleaning, access to standard in-house lighting and sound rig, and Venue Supervisor.	\$2,045.45	\$204.55	\$2,250.00	Per Hire
Additional hours required on any day charged at \$90/hour				
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).				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Performance Spaces** [continued]

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				

**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				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Conference Spaces** [continued]

Boardroom 1 Hire (Level 2) – 1/2 Day 16 people maximum. Includes electricity, A/C, cleaning, tables, chairs Max 4 hours	\$100.00	\$10.00	\$110.00	1/2 Day
Boardroom 1 Hire (Level 2) – Full Day 16 people maximum. Includes electricity, A/C, cleaning, tables, chairs 8 hours	\$145.45	\$14.55	\$160.00	Full Day
Boardroom 2 (Level 2) – 1/2 Day 10 people maximum. Includes electricity, A/C, cleaning, tables, chairs Max 4 hours	\$90.91	\$9.09	\$100.00	1/2 Day
Boardroom 2 (Level 2) – Full Day 10 people maximum. Includes electricity, A/C, cleaning, tables, chairs 8 hours	\$136.36	\$13.64	\$150.00	Full Day
Boardroom 3 (Level 2) – Full Day 6 people maximum, Includes electricity, A/C, cleaning, tables, chairs, WI-FI 8 hours	\$54.55	\$5.45	\$60.00	Full Day
Boardroom 3 (Level 2) – Weekly Hire 6 people maximum, Includes electricity, A/C, cleaning, tables, chairs, WI-FI Monday to Friday, max 8 hours per day	\$200.00	\$20.00	\$220.00	Per Week
Regional Gallery Hire (Top Floor OR Ground Floor) 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	\$90.91	\$9.09	\$100.00	Per Hour
Foyer Hire (for event) Access to floor space - any set up required will be charged at applicable staff and equipment rates 3 hour minimum hire	\$90.91	\$9.09	\$100.00	Per Hour
Foyer Hire (for set up by Hirer) Access to floor space by Hirer - any equipment set up required will be charged at applicable staff and equipment rates 1 hour minimum hire	\$45.45	\$4.55	\$50.00	Per Hour
AV Package (Mezzanine Foyer) 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)	\$309.09	\$30.91	\$340.00	Per Day
Whole of Venue: Includes access to Theatre, Studio, Meeting Room 1 & 2, Small Function Room, Mezzanine Foyer, 3 x staff Subject to availability	By quotation			Per Day
Additional dressing room activation	\$181.82	\$18.18	\$200.00	Per Hire/Event

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Conference Spaces** [continued]

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.

Venue Supervisor / Technician / Duty Manager / Gallery 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.

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**1/2 Day** [continued]

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.

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				

**Audio Visual Conference Packages**

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

Package A	\$500.00	\$50.00	\$550.00	Per Day
Includes equipment, set-up, testing, data allowance and operator for duration				
Package B	\$1,045.45	\$104.55	\$1,150.00	Per Day
Includes Package A plus live screen shots from other venues, plus additional staff, cameras and leads				
Package C	\$340.91	\$34.09	\$375.00	Per Event
Includes recording of live event and web feeds, 3 hours of editing, media and equipment. (Staff/operator not included)				

**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				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Venue Set Up Items** [continued]

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
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
240v Power (Podium)	\$36.36	\$3.64	\$40.00	Per Day
Requires Technician to provide access. All leads must be tested and tagged.				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Venue Set Up Items** [continued]

3-Phase Power (Loading Dock)	\$72.73	\$7.27	\$80.00	Per Day
Requires Technician to provide access. All leads must be tested and tagged.				

**Video Recording Packages**

Event/Show Recording for Archival Purposes	\$227.27	\$22.73	\$250.00	Per Event/Show
1 x camera and audio feed, no editing				
Event/Show Recording for Full Show Quality	\$272.73	\$27.27	\$300.00	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.				
Recording for a Conference or Symposium	\$318.18	\$31.82	\$350.00	Per Day/Session
3 x cameras, including Go Pro on lectern, audio feed, no editing. This service requires an operator for the event duration 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.				
Editing Services (for Recordings Produced by Glasshouse)	\$50.00	\$5.00	\$55.00	Per Hour
DVD Production (for recordings produced by the Glasshouse)		Price on Application		Per DVD

**Transaction Fees**

Glasshouse Membership Program Fee – Adult	\$44.55	\$4.45	\$49.00	Each
Glasshouse Membership Program Fee – Adult Couple	\$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				
Glasshouse Membership Program Fee – Concession/Under 21/Student – Couple	\$67.27	\$6.73	\$74.00	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.				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Transaction Fees** [continued]

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
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				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Booking Fees** [continued]

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
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*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

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
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**Minor LEP Amendments and Reclassifications**

No significant support studies for Council review

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Minor LEP Amendments and Reclassifications** [continued]

Minor LEP amendments and reclassifications	\$12,730.00	\$0.00	\$12,730.00	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	\$15,920.00	\$0.00	\$15,920.00	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	\$10,610.00	\$0.00	\$10,610.00	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
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**Public Hearing**

Where required or requested

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

**Section 64 Development Servicing Plans 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.

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Section 64 Development Servicing Plans Fees & Charges** [continued]

Fees & Charges defined as of 1 May 2020.

**Development Servicing Plan for Water and Supply and Sewerage 2014**

Water Supply Headworks Charge	\$10,322.00	\$0.00	\$10,322.00	Per ET
Sewerage Services Headworks Charge	\$3,916.00	\$0.00	\$3,916.00	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 May 2020.

**Port Macquarie-Hastings Administration Building Contributions Plan 2007**

All Areas	\$921.00	\$0.00	\$921.00	Per ET
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**Port Macquarie-Hastings Administration Levy Contribution Plan**

All Areas		2.20%	% of s7.11 charges
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**Port Macquarie-Hastings Community Cultural and Emergency Services Facilities 2005**

Port Macquarie	\$4,681.00	\$0.00	\$4,681.00	Per ET
Innes Peninsula	\$4,681.00	\$0.00	\$4,681.00	Per ET
Sancroix Thrumster	\$5,284.00	\$0.00	\$5,284.00	Per ET
Wauchope	\$4,795.00	\$0.00	\$4,795.00	Per ET
King Creek	\$4,795.00	\$0.00	\$4,795.00	Per ET
Lake Cathie / Bonny Hills	\$5,329.00	\$0.00	\$5,329.00	Per ET
Camden Haven	\$4,507.00	\$0.00	\$4,507.00	Per ET
Rural (Not included in other areas)	\$4,507.00	\$0.00	\$4,507.00	Per ET
Bushfire (All Areas)	\$511.00	\$0.00	\$511.00	Per ET

**Kings Creek Contribution Plan Version 2.5**

Kings Creek Area	\$9,505.00	\$0.00	\$9,505.00	Per ET
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**Port Macquarie-Hastings Major Roads Contributions Plan**

Port Macquarie	\$7,737.00	\$0.00	\$7,737.00	Per ET
Innes Peninsula (Includes Local Innes Peninsula Plan)	\$9,532.00	\$0.00	\$9,532.00	Per ET
Sancroix Thrumster	\$8,217.00	\$0.00	\$8,217.00	Per ET
Thrumster Area 13 (Includes Area 13, 14 & 15 Local Roads Plan)	\$13,953.00	\$0.00	\$13,953.00	Per ET

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Port Macquarie-Hastings Major Roads Contributions Plan** [continued]

Camden Haven	\$8,558.00	\$0.00	\$8,558.00	Per ET
Camden Haven Area 15 (Includes Area 13, 14 & 15 Local Roads Plan)	\$16,175.00	\$0.00	\$16,175.00	Per Lot
Lake Cathie/Bonny Hills	\$5,951.00	\$0.00	\$5,951.00	Per ET
Lake Cathie/Bonny Hills Area 14 (Includes Area 13, 14 & 15 Local Roads Plan)	\$13,422.00	\$0.00	\$13,422.00	Per ET
Wauchope	\$7,231.00	\$0.00	\$7,231.00	Per ET
Remaining Rural Areas	\$5,843.00	\$0.00	\$5,843.00	Per ET
Regional Component	\$5,843.00	\$0.00	\$5,843.00	Per ET

**Port Macquarie-Hastings Open Space Contributions Plan 2018**

Port Macquarie	\$5,701.00	\$0.00	\$5,701.00	Per ET
Innes Peninsula	\$6,376.00	\$0.00	\$6,376.00	Per ET
Sancroix Thrumster	\$6,749.00	\$0.00	\$6,749.00	Per ET
Camden Haven	\$6,081.00	\$0.00	\$6,081.00	Per ET
Lake Cathie/Bonny Hills	\$6,826.00	\$0.00	\$6,826.00	Per ET
Wauchope	\$5,304.00	\$0.00	\$5,304.00	Per ET
Yippin Creek (Hastings S.94 Open Space Contributions Plan – Version 2.2 applies)	\$5,052.00	\$0.00	\$5,052.00	Per ET
Remaining Rural Areas	\$4,905.00	\$0.00	\$4,905.00	Per ET
Regional Component	\$4,905.00	\$0.00	\$4,905.00	Per ET

**Port Macquarie-Hastings Contributions Plan 1993 (Part C – Car Parking)**

Port Macquarie	\$23,058.00	\$0.00	\$23,058.00	Per Space
Gordon Street	\$9,847.00	\$0.00	\$9,847.00	Per Space
Wauchope	\$6,451.00	\$0.00	\$6,451.00	Per Space
Laurieton	\$9,086.00	\$0.00	\$9,086.00	Per Space
North Haven	\$10,783.00	\$0.00	\$10,783.00	Per Space

**North Haven Neighbourhood Business Precinct Contribution Plan V1.2**

North Haven	\$99.55	\$0.00	\$99.55	Per m2
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**Hastings River Drive Contribution Plan for Traffic Facility Works V1.2**

Hastings River Drive3(s) Area	\$24.56	\$0.00	\$24.56	Per sqm developed for
Hastings River Drive4(t) Area	\$7.57	\$0.00	\$7.57	Per sqm developed for

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**The Bain Dairy Contributions Plan V1.4**

Bain's Dairy Local Transport	\$2,428.00	\$0.00	\$2,428.00	Per ET
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**Innes Peninsula Contributions Plan – Road Works V1.3**

Innes Peninsula Road Works	\$3,689.00	\$0.00	\$3,689.00	Per ET
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**Section 94 Settlement City Precinct Roads Contributions Plan**

Settlement City Road Works	\$498.00	\$0.00	\$498.00	Per Trip
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**Port Macquarie-Hastings Section 94 Local Roads Contributions Plan Areas 13, 14 and 15 2014**

Thrumster (Area 13)	\$8,110.00	\$0.00	\$8,110.00	Per ET
Lake Cathie/Bonny Hills (Area 14)	\$7,579.00	\$0.00	\$7,579.00	Per ET
Camden Haven (Area 15)	\$10,332.00	\$0.00	\$10,332.00	Per ET

**s7.12 Development Contributions Fees & Charges**

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

Notes: Fees & Charges defined as of 1 May 2020.

**Port Macquarie-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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Your Community Life****Community Participation****Halls/Community Centres****Alderman CC "Mac" Adams Music Centre***Miscellaneous*

Hastings Municipal Band	\$842.73	\$84.27	\$927.00	Per Annum
General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

*Main Hall*

Commercial & Other	\$20.00	\$2.00	\$22.00	Per Hour
Private Functions			Not Available	
Not for Profit	\$13.64	\$1.36	\$15.00	Per Hour

*Practice Rooms*

Commercial & Other	\$12.73	\$1.27	\$14.00	Per Hour
Private Functions			Not Available	
Not for Profit	\$7.27	\$0.73	\$8.00	Per Hour

**Beechwood School of Arts**

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$9.09	\$0.91	\$10.00	Per Hour
General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Bonny Hills Community Hall**

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.00	\$1.00	\$11.00	Per Hour
General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Bonny Hills Community Hall** [continued]

Council Activities & Elections			No Charge	
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**Dunbogan Jubilee Hall**

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.00	\$1.00	\$11.00	Per Hour
General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Emerald Downs Community Centre***Hall*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.91	\$1.09	\$12.00	Per Hour

*Meeting Room***Alcohol Not Permitted**

Commercial & Other	\$14.55	\$1.45	\$16.00	Per Hour
Private Functions	\$10.91	\$1.09	\$12.00	Per Hour
Not for Profit	\$8.18	\$0.82	\$9.00	Per Hour
General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election

**Lake Cathie Community Hall***Hall*

Commercial & Other	\$21.82	\$2.18	\$24.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.00	\$1.00	\$11.00	Per Hour

*Meeting Room*

Commercial & Other	\$17.27	\$1.73	\$19.00	Per Hour
Private Functions	\$12.73	\$1.27	\$14.00	Per Hour
Not for Profit	\$8.18	\$0.82	\$9.00	Per Hour

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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*Other Fees*

General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Laurieton School of Arts Hall***Hall*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.00	\$1.00	\$11.00	Per Hour

*Other Fees*

General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Lorne Recreation Centre***Hall*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$9.09	\$0.91	\$10.00	Per Hour

*Other Fees*

General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**North Haven Community Hall***Hall*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.00	\$1.00	\$11.00	Per Hour

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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*Other Fees*

General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Pappinbarra Recreation Reserve***Tennis Court & Facilities*

Commercial & Other	\$10.91	\$1.09	\$12.00	Per Hour
Private Functions	\$6.36	\$0.64	\$7.00	Per Hour
Not for Profit	\$6.36	\$0.64	\$7.00	Per Hour
General Bond	\$214.00	\$0.00	\$214.00	Each

**Pembroke Hall***Hall*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$9.09	\$0.91	\$10.00	Per Hour

*Other Fees*

General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Port Macquarie Seniors' Facility***Les Crisp Auditorium*

Commercial & Other	\$31.82	\$3.18	\$35.00	Per Hour
Private Functions	\$23.64	\$2.36	\$26.00	Per Hour
Not for Profit	\$17.27	\$1.73	\$19.00	Per Hour

*The Pioneer Room*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.91	\$1.09	\$12.00	Per Hour

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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*Marjorie "Nikki" Adams Lounge*

Commercial & Other	\$16.36	\$1.64	\$18.00	Per Hour
Private Functions			Not Available	Per Hour
Not for Profit	\$9.09	\$0.91	\$10.00	Per Hour

*Other Fees*

Use of Tea Making Facilities	\$8.18	\$0.82	\$9.00	Per Function
Kitchen (use of facilities)	\$16.36	\$1.64	\$18.00	Per Function
Stove, fridge, bain-marie				
PMQ Senior's Club	\$1,042.73	\$104.27	\$1,147.00	Per Month
General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Wauchope Community Arts Hall***Hall*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$10.00	\$1.00	\$11.00	Per Hour

*Other Fees*

General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election
Council Activities & Elections			No Charge	

**Wauchope Rotary Youth Centre***Hall*

Commercial & Other	\$20.91	\$2.09	\$23.00	Per Hour
Private Functions	\$16.36	\$1.64	\$18.00	Per Hour
Not for Profit	\$9.09	\$0.91	\$10.00	Per Hour

*Other Fees*

General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	Per Election

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Other Fees** [continued]

Council Activities & Elections			No Charge	
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**Historic Court House****Courtroom**

Other	\$30.00	\$3.00	\$33.00	Per Hour
Commercial not permitted				
Private Functions	\$22.73	\$2.27	\$25.00	Per Hour
Not for Profit	\$10.00	\$1.00	\$11.00	Per Hour
General Admission – Adult	\$2.73	\$0.27	\$3.00	Each
General Admission – Pensioners and School Children (including School Excursions)	\$1.82	\$0.18	\$2.00	Each

**Hire of Grounds**

Other	\$293.64	\$29.36	\$323.00	Per Day
Commercial not permitted				
Private Functions	\$194.55	\$19.45	\$214.00	Per Day
Not for Profit	\$107.27	\$10.73	\$118.00	Per Day
General Bond	\$214.00	\$0.00	\$214.00	Each
State & Federal Elections	\$312.73	\$31.27	\$344.00	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
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**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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Technology Training Room** [continued]

Library / Council			No Charge	
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**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	\$1.82	\$0.18	\$2.00	Per 2 Hours

**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				
Reservations	\$0.50	\$0.00	\$0.50	Per Item
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

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Other** [continued]

Commercial Reference Service	\$72.73	\$7.27	\$80.00	Per Hour or Part Thereof
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**Sports & Recreation****Beach & Boating**

Beach Driving Permit – 4WD Vehicles – Visitor	\$33.00	\$0.00	\$33.00	Each
Beach Driving Permit Yearly – 4WD Vehicles	\$66.00	\$0.00	\$66.00	Per Annum
Beach Driving Permit – 4WD Vehicles – Pensioner	\$33.00	\$0.00	\$33.00	Per Annum
Use of Wharves by Commercial Operators	\$16.36	\$1.64	\$18.00	Per Day
Private Works on Canals – Maintenance Permit	\$156.00	\$0.00	\$156.00	Each
Boating Structure Licence Fee	\$135.00	\$0.00	\$135.00	Per Annum

**Commercial Activities on Council Managed Land****Parks, Reserves, Sports Fields and Beaches**

New Application Fee	\$155.00	\$0.00	\$155.00	Per Annum
Application Renewal Fee	\$80.00	\$0.00	\$80.00	Per Annum
Temporary Licence (up to 2 nominated locations)	\$490.00	\$0.00	\$490.00	Per Annum
Temporary Licence (per additional location)	\$110.00	\$0.00	\$110.00	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)	\$55.00	\$0.00	\$55.00	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	\$109.09	\$10.91	\$120.00	Each
Bonny Hills Cricket Club	\$209.09	\$20.91	\$230.00	Each
Camden Haven Cricket	\$209.09	\$20.91	\$230.00	Each
Camden Haven Bombers Junior AFL Club	\$209.09	\$20.91	\$230.00	Each
Netball	\$140.91	\$14.09	\$155.00	Each

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Ground Levy** [continued]

Junior Rugby League	\$209.09	\$20.91	\$230.00	Each
Soccer	\$209.09	\$20.91	\$230.00	Each
Tennis	\$140.91	\$14.09	\$155.00	Each
Touch Football	\$209.09	\$20.91	\$230.00	Each

**Lights**

Soccer Field (each pole)	\$5.36	\$0.54	\$5.90	Per Hour
Support Field (each pole)	\$5.36	\$0.54	\$5.90	Per Hour
Oval	\$22.73	\$2.27	\$25.00	Per Hour

**Canteen Fee**

Outside groups	\$24.55	\$2.45	\$27.00	Per Day
Plus Bond				
Outside groups – Bond	\$60.00	\$0.00	\$60.00	Each
Refundable if left clean and undamaged				
Casual users – Per Day	\$6.36	\$0.64	\$7.00	Per Day
Casual users – Per Season	\$54.55	\$5.45	\$60.00	Per Season

**Lank Bain Sporting Complex**

Group 2 Competition Matches	\$1,072.73	\$107.27	\$1,180.00	Per Year
Hastings League Club Use – Field 1	\$645.45	\$64.55	\$710.00	Per Year
Hastings League Club Use – Field 2	\$372.73	\$37.27	\$410.00	Per Year
High School Use	\$272.73	\$27.27	\$300.00	Per Year
Primary School Use	\$272.73	\$27.27	\$300.00	Per Year
Cricket Club Use	\$272.73	\$27.27	\$300.00	Per Year
Hastings League Controlled Fixtures	\$107.27	\$10.73	\$118.00	Per Day
Junior Cricket	\$272.73	\$27.27	\$300.00	Per Year
Lighting	\$6.00	\$0.60	\$6.60	Per Pole Per Hour

**Other Sporting Fields**

Lighting	\$6.09	\$0.61	\$6.70	Per Pole Per Hour
Amenity Use – 1 canteen + 2 changerooms	\$41.82	\$4.18	\$46.00	Per Day
Amenity Use – 1 canteen + 2 changerooms – 4 hours	\$20.91	\$2.09	\$23.00	Half Day
Lighting reprogramming fee	\$60.00	\$6.00	\$66.00	Each
Ground Fee – Commercial	\$409.09	\$40.91	\$450.00	Per Day
Ground Fee – Commercial	\$81.82	\$8.18	\$90.00	Per Hour
Unlock/Lock facilities fee	\$60.00	\$6.00	\$66.00	Each



Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Wauchope Sporting Fields**

Blackbutt Reserve – Lighting – 8 lights on pole	\$8.45	\$0.85	\$9.30	Per Pole Per Hour
Blackbutt Reserve – Lighting – 4 lights on pole	\$5.91	\$0.59	\$6.50	Per Pole Per Hour
Landrigan Park – Lighting	\$6.09	\$0.61	\$6.70	Per Pole Per Hour
Fairmont Gardens – Lighting	\$6.09	\$0.61	\$6.70	Per Pole Per Hour

**Parks & Reserves****Circuses, Carnivals & Major Events****Ground Fee – Non Holidays**

Performance Days	\$409.09	\$40.91	\$450.00	Per Day
Bump in/Bump out	\$359.09	\$35.91	\$395.00	Per Day

**Ground Hire Fees – School & Public Holidays**

Performance Days	\$563.64	\$56.36	\$620.00	Per Day
Bump in/Bump out	\$454.55	\$45.45	\$500.00	Per Day

**Bonds**

Performance Bond	\$6,000.00	\$0.00	\$6,000.00	Each
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**Power****Power Use**

At Cost			At Cost	Per Day
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**Power – Access Fee**

Single Phase	\$38.18	\$3.82	\$42.00	Per Day/Per Outlet
Three Phase	\$76.36	\$7.64	\$84.00	Per Day/Per Outlet

**General Use**

Application for Private Ceremony	\$114.55	\$11.45	\$126.00	Per Application
2 hours maximum				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**General Use** [continued]

Ground Fee – General Use	\$163.64	\$16.36	\$180.00	Per Day
Ground Fee – Commercial Use	\$409.09	\$40.91	\$450.00	Per Day
Ground Fee – Charitable			No Charge	Per Day
Performance Bond	\$2,000 - \$6,000 Determined according to event			Per Event
Application to Stage an Event – All Applicants	\$126.00	\$0.00	\$126.00	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
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*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	\$2.73	\$0.27	\$3.00	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

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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*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

*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
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*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
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*Multi Sport Competition*

Nomination	\$145.45	\$14.55	\$160.00	Per Team
18 Weeks				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Multi Sport Competition** [continued]

Plus Weekly Game Fee	\$52.73	\$5.27	\$58.00	Per Team
18 Weeks				

**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)	\$81.82	\$8.18	\$90.00	Per Day
Junior Sporting Groups	\$118.18	\$11.82	\$130.00	Per Use
Hastings League	\$118.18	\$11.82	\$130.00	Per Use
Group 2 / 3 Rugby League	\$227.27	\$22.73	\$250.00	Per Use
Casual Users	\$427.27	\$42.73	\$470.00	Per Day
Lighting	\$37.27	\$3.73	\$41.00	Per Hour

Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Refundable Bonds and Deposits**

Cleaning			\$500-\$5,000	Each
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	\$700.00	\$0.00	\$700.00	Each
Regular users – Key Deposits	\$67.00	\$0.00	\$67.00	Each
Regular users – Schools/Charity	\$28.00	\$0.00	\$28.00	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	\$44.55	\$4.45	\$49.00	Per Hour
Not for profit, sporting groups, community groups	\$22.73	\$2.27	\$25.00	Per Hour

**Downstairs Studio**

Commercial, private or other	\$15.00	\$1.50	\$16.50	Per Hour
Not for profit, sporting groups, community groups	\$7.55	\$0.75	\$8.30	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	\$104.55	\$10.45	\$115.00	Per Hour
Per Day	\$809.09	\$80.91	\$890.00	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	\$69.00	\$0.00	\$69.00	Each

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Swimming Pools****Kendall, Laurieton and Wauchope**

Spectator Admission	\$1.55	\$0.15	\$1.70	Each
General Admission	\$4.09	\$0.41	\$4.50	Each
Concession Admission	\$3.64	\$0.36	\$4.00	Each
Book of 20 Tickets	\$70.00	\$7.00	\$77.00	Each
Book of 50 Tickets	\$151.36	\$15.14	\$166.50	Each
School Groups	\$3.73	\$0.37	\$4.10	Per Person
Teachers and carers free. No lane hire				
School Carnivals	\$4.09	\$0.41	\$4.50	Per Person
Teachers and carers free. No lane hire				
Daycare and Disability Groups	\$4.09	\$0.41	\$4.50	Per Person
Carers free. No lane hire				
Swim Club	\$4.09	\$0.41	\$4.50	Per Person
No Lane Hire Fees				
Lane Hire	\$29.09	\$2.91	\$32.00	Per Hour/per 50 metres of lane space
Per 50 Metres of Lane Space - Per Hour				

**Port Macquarie**

Spectator Admission	\$1.55	\$0.15	\$1.70	Each
General Admission	\$4.55	\$0.45	\$5.00	Each
Concession Admission	\$4.09	\$0.41	\$4.50	Each
Book of 20 Tickets	\$76.36	\$7.64	\$84.00	Each
Book of 50 Tickets	\$177.27	\$17.73	\$195.00	Each
School Groups	\$4.18	\$0.42	\$4.60	Per Person
Teachers and carer free. No lane hire				
School Carnivals	\$4.55	\$0.45	\$5.00	Per Person
Teachers and carers free. No lane hire				
Daycare and Disability Groups	\$4.55	\$0.45	\$5.00	Per Person
Carers Free. No lane hire				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Port Macquarie** [continued]

Swim Club	\$4.55	\$0.45	\$5.00	Per Person
No lane hire fees				
Masters Swim Club	\$5.73	\$0.57	\$6.30	Per Person
Out of hours. No lane hire fees.				
Lane Hire – 1x lane of 50m pool	\$29.09	\$2.91	\$32.00	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	\$1,278.18	\$127.82	\$1,406.00	Each
Wall Niche Reservation	\$743.64	\$74.36	\$818.00	Each
Plaques for above	\$533.64	\$53.36	\$587.00	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	\$134.00	\$0.00	\$134.00	Each
Ash Removal and Packaging	\$187.27	\$18.73	\$206.00	Each
Late Fee	\$150.00	\$15.00	\$165.00	Each
Applies to services which cannot be completed within normal business hours (9am to 3pm Monday to Friday)				
Application for Exhumation	\$2,965.45	\$296.55	\$3,262.00	Each
Saturday Surcharge	\$446.36	\$44.64	\$491.00	Each

**Burial****All General Cemeteries**

Port Macquarie General Digging Fee	\$1,812.73	\$181.27	\$1,994.00	Each
Grave Digging Fee	\$1,375.45	\$137.55	\$1,513.00	Each
Grave Digging Fee – Child up to 12 years	\$907.27	\$90.73	\$998.00	Each

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**All General Cemeteries** [continued]

Open General Cemeteries – Site only or Reservation Fee	\$2,219.09	\$221.91	\$2,441.00	Each
Open General Cemeteries – Site only (Child up to 12 years)	\$791.82	\$79.18	\$871.00	Each
Single Headstone Application	\$122.00	\$0.00	\$122.00	Each
Double Headstone Application	\$178.50	\$0.00	\$178.50	per application

**Ash Replacement****All General Cemeteries**

Placement fee per lot of ash in an occupied gravesite (up to 4) – Open cemeteries	\$591.82	\$59.18	\$651.00	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	\$591.82	\$59.18	\$651.00	Each
New Site – Right of Burial Site Fee	\$2,219.09	\$221.91	\$2,441.00	Each

**Communications****CBD Flags**

CBD Flags – Installation (42 Flags)	\$1,090.91	\$109.09	\$1,200.00	Per Installation
CBD Flags – Installation (21 Flags)	\$545.45	\$54.55	\$600.00	Per Installation



Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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## 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)	\$276.36	\$27.64	\$304.00	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	\$276.36	\$27.64	\$304.00	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	\$276.36	\$27.64	\$304.00	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	\$116.36	\$11.64	\$128.00	Each
Base administration fee for additional amendment				
First amendment included in initial application				
Engineering Review Fees – Dual Occupancy (Torrens)	\$738.18	\$73.82	\$812.00	Each
Engineering review fees for dual occupancy Works Certificate (Infrastructure) applications				
Engineering Review Fees – Dual Occupancy (Strata)	\$492.73	\$49.27	\$542.00	Each
Engineering review fees for dual occupancy Works Certificate (Infrastructure) applications				
Engineering Review Fees – Minor Works	\$247.27	\$24.73	\$272.00	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	\$352.73	\$35.27	\$388.00	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)	\$261.82	\$26.18	\$288.00	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 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Subdivision Works Certificate** [continued]

Engineering Review Fees – Amendments	\$53.64	\$5.36	\$59.00	Review Area
Engineering review fees for additional amendments, excludes first amendment				
Minimum fee \$94				
Development Inspection Fees – Dual Occupancy (Torrens)	\$358.18	\$35.82	\$394.00	Each
Development inspection fees for dual occupancy Works Certificate (Infrastructure) applications				
Development Inspection Fees – Dual Occupancy (Strata)	\$240.00	\$24.00	\$264.00	Each
Development inspection fees for dual occupancy certificate Works Certificate (Infrastructure) applications				
Development Inspection Fees – Minor Works	\$120.91	\$12.09	\$133.00	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	\$230.00	\$23.00	\$253.00	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	\$120.91	\$12.09	\$133.00	Per Hour
For infrastructure works associated with building developments (non refundable)				
Minimum 1 hour				
Works Certificate (Infrastructure) Modification – Minor Works	\$120.91	\$12.09	\$133.00	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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Subdivision Works Certificate** [continued]

Works Certificate (Infrastructure) Modification – Major Works	\$190.18	\$19.02	\$209.20	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)	\$363.00	\$0.00	\$363.00	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)	\$304.00	\$0.00	\$304.00	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)	\$304.00	\$0.00	\$304.00	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)	\$304.00	\$0.00	\$304.00	Each
Base administration fee (applies to all Section 138 applications other than residential driveway applications)				
Roads Act Application Amendments	\$127.00	\$0.00	\$127.00	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)	\$541.00	\$0.00	\$541.00	Each
Engineering review fees for Dual Occupancy without Subdivision applications				
Engineering Review Fees – Industrial Driveway (All works on Public Road Reserve)	\$542.00	\$0.00	\$542.00	Each
Engineering review fees for Industrial Driveway applications				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Section 138 Application** [continued]

Engineering Review Fees – Minor Works	\$272.00	\$0.00	\$272.00	Review Area
Engineering review fees for Roads Act applications with minor infrastructure works on public roads				
Minimum fee \$405				
Engineering Review Fees – Major Works	\$388.00	\$0.00	\$388.00	Review Area
Engineering review fees for Roads Act applications with major infrastructure works on public roads				
Minimum fee \$623				
Engineering Review Fees – Amendments	\$59.00	\$0.00	\$59.00	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)	\$265.00	\$0.00	\$265.00	Each
Development Inspection fees for Dual Occupancy without Subdivision applications				
Development Inspection Fees – Industrial Driveway (All works on Public Road Reserve)	\$265.00	\$0.00	\$265.00	Each
Development Inspection fees for Industrial Driveway				
Development Inspection Fees – Minor Works	\$133.00	\$0.00	\$133.00	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	\$253.00	\$0.00	\$253.00	Review Area
Development inspection fees for Roads Act applications with major infrastructure and road works on public roads				
Minimum fee \$353				
Additional Inspection Fee	\$133.00	\$0.00	\$133.00	Per Hour
For infrastructure works associated with building developments (non refundable)				
Minimum 1 hour				
Roads Act Approval Modification – Minor Works	\$134.00	\$0.00	\$134.00	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	\$191.00	\$0.00	\$191.00	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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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	\$165.00	\$0.00	\$165.00	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	\$471.00	\$0.00	\$471.00	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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Archive Fee**

Electronic Application	\$42.00	\$0.00	\$42.00	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)	\$426.36	\$42.64	\$469.00	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	\$334.55	\$33.45	\$368.00	Each
VOW \$10,001 – \$20,000	\$471.82	\$47.18	\$519.00	Each
VOW \$20,001 – \$50,000	\$645.45	\$64.55	\$710.00	Each

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Subdivision Works Certificate – Earthworks & Clearing ONLY – Engineering Plan Checking**

[continued]

VOW \$50,001 – \$100,000	\$1,283.64	\$128.36	\$1,412.00	Each
VOW \$100,001 – \$150,000	\$1,540.00	\$154.00	\$1,694.00	Each
VOW \$150,001 – \$300,000	\$2,070.91	\$207.09	\$2,278.00	Each
VOW \$300,001 – \$800,000 PLUS per \$1,000 above \$800,000 fee (as below)	\$2,871.82	\$287.18	\$3,159.00	Each
Per \$1,000 above \$800,000 fee	\$5.45	\$0.55	\$6.00	Each

**Compliance Certificates for Subdivision Works**

Compliance Certificate Application – Subdivision Development	\$304.00	\$0.00	\$304.00	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	\$59.00	\$0.00	\$59.00	Per Lot
Compliance Certificate review fees for one Council review area (i.e landscaping)				
Minimum Fee \$134				
Water Authority Review – Subdivision Development	\$116.00	\$0.00	\$116.00	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	\$279.00	\$0.00	\$279.00	Each
Base Administration Fee (applicable to ALL bonds)				
Non Refundable				

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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
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**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
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**Council Accreditation Charges**

Authorised Contractors Annual Registration Fee	\$166.00	\$0.00	\$166.00	Each
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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Subdivisions****Subdivision Certificates (Torrens)**

Application for Subdivision Certificate (Torrens)	\$232.00	\$0.00	\$232.00	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	\$207.00	\$0.00	\$207.00	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	\$412.00	\$0.00	\$412.00	Each
Under Council seal following report to Council				
Modification of real property instruments				
Re-signing of Subdivision Plans/Post Cadastral Correction	\$207.00	\$0.00	\$207.00	Each
Endorsement of Plans (For Example: S88B Instruments, Transfers, etc) – Council's Legal Costs are in Addition to This Fee	\$207.00	\$0.00	\$207.00	Each
Lighting – Non Standard – "Prestige"		Levy - see Policy R5		Each

**Subdivision Certificates (Torrens) and Occupation Certificates (Strata)**

Work as Executed – Strata and Torrens Title	\$646.00	\$0.00	\$646.00	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	\$62.00	\$0.00	\$62.00	Per Hour
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**Aus-spec #1**

Refer Appendix 1

**Construction Specification**

Design specifications one off hard copy	\$286.00	\$0.00	\$286.00	Per Set
Construction specifications one off hard copy	\$353.00	\$0.00	\$353.00	Per Set
Hard copy individual specifications	\$31.00	\$0.00	\$31.00	Each

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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	\$153.64	\$15.36	\$169.00	Per Lot
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***Bushfire Attack Level***

Bushfire Attack Level (BAL) Certificate	\$346.36	\$34.64	\$381.00	Each
Bushfire Attack Level (BAL) Certificate Associated With Complying Development Certificate Lodged With PMHC	\$198.18	\$19.82	\$218.00	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	\$4.10	\$0.00	\$4.10	Per Sheet
A2 Sheet	\$13.00	\$0.00	\$13.00	Per Sheet
A1 Sheet	\$15.00	\$0.00	\$15.00	Per Sheet
A0 Sheet	\$19.00	\$0.00	\$19.00	Per Sheet
Over Size (Sewer Plans)	\$21.00	\$0.00	\$21.00	Per Sheet
Or per Lineal Metre	\$17.00	\$0.00	\$17.00	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	\$173.00	\$0.00	\$173.00	Each
Plus \$80.00 inspection fee if required				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Development Records** [continued]

Urgent (Response in 5 Days) – Written Report on Dwelling Entitlement or Zoning Matter	\$288.00	\$0.00	\$288.00	Each
Copy of Application Documents (i.e. Consent, Plan, Submission or Supporting Report)	\$43.00	\$0.00	\$43.00	Each

Before making a request check [www.pmhc.nsw.gov.au/applicationtracker](http://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	\$402.00	\$0.00	\$402.00	Per Annum
Standard service – 240 Litre fortnightly general waste	\$459.00	\$0.00	\$459.00	Per Annum
Excess service – 240 Litre weekly general waste	\$678.00	\$0.00	\$678.00	Per Annum
Half minimiser service – 140 Litre fortnightly general waste	\$225.00	\$0.00	\$225.00	Per Annum
Multi-unit dwellings only				
Half standard service – 240 Litre fortnightly general waste (Shared)	\$252.00	\$0.00	\$252.00	Per Annum
Multi-unit dwellings only				
Half excess service – 240 Litre weekly general waste (Shared)	\$363.00	\$0.00	\$363.00	Per Annum
Multi-unit dwellings only				
On application only special weekly service – 140 Litre weekly general waste	\$567.00	\$0.00	\$567.00	Per Annum
Half special weekly service (shared)	\$308.00	\$0.00	\$308.00	Per Annum
Multi-unit dwellings only				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Annual Charge** [continued]

Additional weekly garbage service – 240 Litre general waste	\$356.00	\$0.00	\$356.00	Per Annum
Additional weekly garbage service – 140 Litre general waste	\$271.00	\$0.00	\$271.00	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	\$67.00	\$0.00	\$67.00	Per Annum
Minimum Waste Charge – Single Dwelling	\$402.00	\$0.00	\$402.00	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	\$567.00	\$0.00	\$567.00	Per Annum
Commercial excess service – 240 Litre weekly general waste	\$678.00	\$0.00	\$678.00	Per Annum
Commercial half weekly service – 140 Litre general waste (Shared)	\$308.00	\$0.00	\$308.00	Per Annum
Commercial half excess service – 240 Litre weekly general waste (Shared)	\$363.00	\$0.00	\$363.00	Per Annum
Commercial additional weekly garbage service – 240 Litre general waste	\$356.00	\$0.00	\$356.00	Per Annum
Commercial additional weekly garbage service – 140 Litre general waste	\$271.00	\$0.00	\$271.00	Per Annum
Commercial additional organics service – 240 Litre weekly	\$98.00	\$0.00	\$98.00	Per Annum
Commercial additional recycling service – 240 Litre fortnightly	\$67.00	\$0.00	\$67.00	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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Other Services**

On Request Kerbside Collection	\$38.00	\$0.00	\$38.00	Per Service
Replacement Bin	\$58.00	\$0.00	\$58.00	Per Unit
Supply of Bins – New Service	\$146.00	\$0.00	\$146.00	Per Service
Stolen Bin – First Replacement Only			No Charge	Per Unit
Stolen Bin – Subsequent Replacements	\$58.00	\$0.00	\$58.00	Per Unit
Bin Size Adjustment Fee	\$58.00	\$0.00	\$58.00	Per Unit
Red or yellow bin				
Bin Reinstatement Fee	\$58.00	\$0.00	\$58.00	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 Administration Fee (Unpaid Waste Fees)	\$20.00	\$2.00	\$22.00	Each

**Waste Depot Charges****Cairncross Waste Depot****General Waste****Calculated by Nett Weight**

Transfer Station Waste	\$218.18	\$21.82	\$240.00	Per Tonne
Minimum Charge - \$10				
All Mattresses or Mattress Bases	\$25.45	\$2.55	\$28.00	Each
Building Waste (Land Fill)	\$218.18	\$21.82	\$240.00	Per Tonne
Includes contaminated soil classified as general solid waste				
Asbestos	\$338.18	\$33.82	\$372.00	Per Tonne
Mixed Solid Waste	\$218.18	\$21.82	\$240.00	Per Tonne
Clean fill / VENM	\$100.00	\$10.00	\$110.00	Per Tonne
Bricks / Concrete	\$27.27	\$2.73	\$30.00	Per Tonne
Green / Wood Waste	\$59.09	\$5.91	\$65.00	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				

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Tyres**

Motorcycle	\$2.73	\$0.27	\$3.00	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	\$9.09	\$0.91	\$10.00	Each
Small Livestock (sheep, goat, calf, etc)	\$37.27	\$3.73	\$41.00	Each
Large Livestock (cattle, horses, etc)	\$60.00	\$6.00	\$66.00	Each

**Recovered Aggregate**

Crushed Concrete (Select Fill)	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.

**General Waste**

Transfer Station Waste	\$218.18	\$21.82	\$240.00	Per Tonne
Minimum Charge - \$10				
All Mattresses or Mattress Bases	\$25.45	\$2.55	\$28.00	Each
Green / Wood Waste	\$59.09	\$5.91	\$65.00	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				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**General Waste** [continued]

Special Wastes	By Negotiation
Subject to nature of the material & ability to receive	

**Tyres**

Motorcycle	\$2.73	\$0.27	\$3.00	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	\$9.09	\$0.91	\$10.00	Per Load
Passenger Vans, Utilities, Small Trailers up to 8' x 5' size with no side extensions	\$16.36	\$1.64	\$18.00	Per Load
Large trailers and all trailers with side extensions, Vans & 1 Ton Utilities	\$27.27	\$2.73	\$30.00	Per Load

**Commercial**

Cars/Station Wagons	\$71.82	\$7.18	\$79.00	Each
Passenger Vans, Utilities, Small Trailers up to 8' x 5' size with no side extensions	\$71.82	\$7.18	\$79.00	Per Load

**Greenwaste****Domestic**

Cars/Station Wagons	\$9.09	\$0.91	\$10.00	Per Load
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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Domestic** [continued]

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	\$2.73	\$0.27	\$3.00	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				

**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	

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Domestic (> 20 lt or kg) and Commercial (any amount)** [continued]

Fluorescent Tubes and Lighting Fittings	\$0.45	\$0.05	\$0.50	Each
Smoke Detectors	\$0.91	\$0.09	\$1.00	Each
Paint	\$1.82	\$0.18	\$2.00	Per Kg
Hazardous By-Catch Materials	\$5.45	\$0.55	\$6.00	Per Kg
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 Mobile Bin – per bin	\$9.09	\$0.91	\$10.00	Each Service
Commercial Premises – 660 Litre Mobile Bin – per bin	\$30.00	\$3.00	\$33.00	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				

**ALS 2005 Height Data**

ALS 2005 Height Data Extraction Costs	\$100.00	\$0.00	\$100.00	Per Hour
Minimum 1/2 hour				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**ALS 2005 Height Data** [continued]

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
Non – Desexed Animal – Recognised Breeder	As per statutory scale of fees from the Companion Animals Act	Each

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Registration Fees** [continued]

Animal Registration Fees – 28 Day Late Fee	\$15.00	\$0.00	\$15.00	As per statutory scale of fees
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**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	\$62.00	\$0.00	\$62.00	Each
Plus maintenance				
Contact of dog/cat owner from registration service of notice	\$46.00	\$0.00	\$46.00	Each
Disposal of dog/cat surrendered to the pound by owner	\$87.00	\$0.00	\$87.00	Each
Hire of feral animal trap	\$14.55	\$1.45	\$16.00	Per Week
Hire of vermin traps	\$12.73	\$1.27	\$14.00	Per Week
Maintenance fee for dogs/cats	\$48.00	\$0.00	\$48.00	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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Impounding****Animals**

Sustenance Fee	\$48.00	\$0.00	\$48.00	Refer Comments
Per head, per day or part thereof				
Conveyance Fee	\$48.00	\$0.00	\$48.00	Each
Administration Fee (Plus Actual Cost)				
Conveyance Fee			At Cost	Estimate
Lost or Damaged Fee	\$48.00	\$0.00	\$48.00	Each
Administration Fee (Plus Actual Cost)				
Lost or Damaged Fee			At Cost	Estimate
Notice of Impounding – Administration Fee	\$43.00	\$0.00	\$43.00	Each
Impounding Fee	\$63.00	\$0.00	\$63.00	Each
Administration Fee (Plus Actual Cost)				
Impounding Fee			At Cost	Estimate
Actual Cost of Impounding Item				

**Other Articles**

Storage Fee	\$48.00	\$0.00	\$48.00	Refer Comments
Per article, per week or part thereof				
Conveyance Fee	\$48.00	\$0.00	\$48.00	Each
Administration Fee (Plus Actual Cost)				
Conveyance Fee			Cost + 10%	Estimate
Lost or Damaged Fee	\$48.00	\$0.00	\$48.00	Each
Administration Fee (Plus Actual Cost)				
Lost or Damaged Fee			Cost + 10%	Estimate + 10%
Notice of Impounding – Administration Fee	\$43.00	\$0.00	\$43.00	Each
Impounding Fee	\$63.00	\$0.00	\$63.00	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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Section 68**

Approval for septic to sewer conversions for small town sewerage schemes	\$252.00	\$0.00	\$252.00	Each
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**Part A – Structures or places of public entertainment**

Notice of completion of a manufactured home, removable dwelling or associated structure on land – inspection fee.	\$183.60	\$0.00	\$183.60	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	\$236.00	\$0.00	\$236.00	Each
\$15,001 – \$50,000	\$471.00	\$0.00	\$471.00	Each
\$50,001 – \$200,000	\$619.00	\$0.00	\$619.00	Each
\$200,001 – \$500,000	\$1,109.00	\$0.00	\$1,109.00	Each
\$500,001 – \$1,000,000	\$1,636.00	\$0.00	\$1,636.00	Each
\$1,000,001 – \$5,000,000	\$4,232.00	\$0.00	\$4,232.00	Each
\$5,000,001 – \$10,000,000	\$6,746.00	\$0.00	\$6,746.00	Each
> \$10,000,001	\$8,803.00	\$0.00	\$8,803.00	Each

**Other**

Maximum water and stormwater fee for dwellings not on reticulated sewerage – on-site sewage management fee still applicable where relevant	\$471.00	\$0.00	\$471.00	Each
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**Part B – 2. Section 68 Application**

Approval to undertake private storm water works only

**Estimated cost of building work**

Up to \$50,000	\$178.00	\$0.00	\$178.00	Each
\$50,000 – \$200,000	\$236.00	\$0.00	\$236.00	Each
> \$200,000	\$350.00	\$0.00	\$350.00	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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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	\$689.00	\$0.00	\$689.00	Each
\$50,001 – \$100,000	\$881.00	\$0.00	\$881.00	Each
\$100,001 – \$150,000	\$1,146.00	\$0.00	\$1,146.00	Each
\$150,001 – \$200,000	\$1,409.00	\$0.00	\$1,409.00	Each
\$200,001 – \$500,000	\$2,461.00	\$0.00	\$2,461.00	Each
\$500,001 – \$1,000,000	\$3,317.00	\$0.00	\$3,317.00	Each
\$1,000,001 – \$5,000,000	\$4,232.00	\$0.00	\$4,232.00	Each
\$5,000,001 – \$10,000,000	\$6,746.00	\$0.00	\$6,746.00	Each
> \$10,000,000	\$8,803.00	\$0.00	\$8,803.00	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	\$498.00	\$0.00	\$498.00	Each

**Part B – 10. Other Services Fees and Charges**

Pre-Purchase Inspection – Onsite Sewage Management Facility: Domestic – Standard Service	\$280.00	\$0.00	\$280.00	Each
Includes approval to operate if sale proceeds				
Pre-Purchase Inspection – Onsite Sewage Management Facility: Domestic – Urgent Service	\$420.00	\$0.00	\$420.00	Each
Includes approval to operate if sale proceeds				
Pre-Purchase Inspection – Onsite Sewage Management Facility: Commercial / Industrial – Standard Service	\$428.00	\$0.00	\$428.00	Each
Includes approval to operate if sale proceeds				
Pre-Purchase Inspection – Onsite Sewage Management Facility: Commercial / Industrial – Urgent Service	\$628.00	\$0.00	\$628.00	Each
Includes approval to operate if sale proceeds				
Follow-Up Inspection – Onsite Sewage Management Facility: Domestic	\$150.00	\$0.00	\$150.00	Each
Follow-Up Inspection – Onsite Sewage Management Facility: Commercial / Industrial	\$175.00	\$0.00	\$175.00	Each
Written Report – Septic System Registration	\$50.00	\$0.00	\$50.00	Each
Septic to Sewer Conversion	\$276.00	\$0.00	\$276.00	Each
Consultancy / Advisory Services	\$119.00	\$0.00	\$119.00	Per Hour

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Part B – Section 68 Application – Manhole Adjustment**

Engineering Review & Inspection Fees (Manhole Adjustment)	\$272.00	\$0.00	\$272.00	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)	\$556.00	\$0.00	\$556.00	Each
Includes assessment, 3 x inspections, 1st approval to operate				
Alter an existing sewage management facility (Domestic premises)	\$270.00	\$0.00	\$270.00	Each
Amend or upgrade an existing approval for sewage management facility				
Includes reassessment and 1 extra inspection				
Operate sewage management facility (Domestic premises)	\$166.00	\$0.00	\$166.00	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)	\$779.00	\$0.00	\$779.00	Each
Includes assessment, 3 x inspections, 1st approval to operate				
Alter an existing sewage management facility (Commercial / Industrial premises)	\$390.00	\$0.00	\$390.00	Each
Amend or upgrade an existing approval for sewage management facility				
Includes reassessment and 1 extra inspection				
Operate sewage management facility (Commercial / industrial premises)	\$206.00	\$0.00	\$206.00	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	\$122.00	\$0.00	\$122.00	Each
Application for A-Frame Sign – 1 Year Licence	\$117.00	\$0.00	\$117.00	Each
Application for A-Frame Sign – 3 Year Licence	\$231.00	\$0.00	\$231.00	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)			
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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Part F – Other Activities**

Register a caravan park or manufactured home estate – Minimum Fee PLUS per site	\$114.00	\$0.00	\$114.00	Each
Register a caravan park or manufactured home estate – Per site	\$7.00	\$0.00	\$7.00	Each
Amended application to register a Caravan Park or manufactured home estate – Minimum fee plus per amended/alterd site fee	\$124.00	\$0.00	\$124.00	Each
Amended application to register a Caravan Park or manufactured home estate – Per amended/alterd site – PLUS:	\$5.00	\$0.00	\$5.00	Each
Caravan Park – Annual Inspection	\$177.00	\$0.00	\$177.00	Each
Inspection of amusement devices	\$51.00	\$0.00	\$51.00	Each
Charitable/Non-Profit Organisations excluded				
Application to burn under POEO	\$150.00	\$0.00	\$150.00	Each
Application – other miscellaneous Section 68 activities	\$124.00	\$0.00	\$124.00	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	\$158.18	\$15.82	\$174.00	Each
Certificate of Compliance – sewer connection per site	\$175.00	\$0.00	\$175.00	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
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**Class 2 – 9**

All Values	Quotation as per fee calculator			Each
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**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	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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	\$156.36	\$15.64	\$172.00	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
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**Building Certificates**

Cancelled / withdrawn with no inspection	\$41.00	\$0.00	\$41.00	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	\$68.00	\$0.00	\$68.00	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)	\$14.00	\$0.00	\$14.00	Each

**Food Businesses**

Low Risk Premises	\$135.00	\$0.00	\$135.00	Each
Proprietor will be notified of risk assessment and methodology (determined by Council's adopted risk assessment methodology)				
Medium Risk Premises	\$201.00	\$0.00	\$201.00	Each
Proprietor will be notified of risk assessment and methodology (determined by Council's adopted risk assessment methodology)				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Food Businesses** [continued]

High Risk Premises	\$268.00	\$0.00	\$268.00	Each
Proprietor will be notified of risk assessment and methodology (determined by Council's adopted risk assessment methodology)				
Large Commercial Premises	\$390.00	\$0.00	\$390.00	Each
Reinspection	Charge is 50% of original inspection fee based upon the property risk rating (low, medium or high)			Each
Pre-Registration Fee	\$214.00	\$0.00	\$214.00	Each
Professional advice and progress inspections of new businesses				
Includes assessment and site inspections				
Pre-Purchase Inspection Report for Food Handling Business	\$324.00	\$0.00	\$324.00	Each
Written application and current owner consent				
Temporary Event Involving Food (1-3 days p.a maximum)	\$66.00	\$0.00	\$66.00	Per Event
Charities and non-profit organisations exempt unless certificate is required				
Temporary Event Food Premises (4-50 events p.a)	\$160.00	\$0.00	\$160.00	Per Calendar Year
Mobile Food Vending Vehicle – Annual Approval	\$231.00	\$0.00	\$231.00	Per Calendar Year
Registration of Food Handling Premises	\$66.00	\$0.00	\$66.00	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	\$100.00	\$0.00	\$100.00	each
Notification of Cooling Tower/Warm Water System	\$115.00	\$0.00	\$115.00	per notification
Pre-Purchase Public Health Inspection	\$338.00	\$0.00	\$338.00	Each
Written application and current owners consent				
Notification / Registration of Public Health Business	\$100.00	\$0.00	\$100.00	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 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**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
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**Public Health Inspection**

Proprietor will be notified of risk assessment and methodology.

Low Risk Premises	\$188.00	\$0.00	\$188.00	Each
Plus relevant laboratory testing costs				
Medium Risk Premises	\$250.00	\$0.00	\$250.00	Each
Plus relevant laboratory testing costs				
High Risk Premises	\$302.00	\$0.00	\$302.00	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	\$225.45	\$22.55	\$248.00	Each
Minimum				
Annual Fire Safety Inspection	\$140.91	\$14.09	\$155.00	Per Hour
Preparation of fire safety report			Calculate	Each
Assessment of fire safety report – Minimum	\$90.91	\$9.09	\$100.00	Each
Assessment of fire safety report	\$90.91	\$9.09	\$100.00	Per Hour
Fire Safety Statement	\$72.73	\$7.27	\$80.00	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)	\$135.00	\$0.00	\$135.00	Each
Administration fee PLUS Clearing of land by contractor (where applicable)				

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Environment** [continued]

Overgrown Land			Cost + 10%	Each
Clearing of land by contractor (where applicable)				
Issue of Environmental Protection Notices	\$577.00	\$0.00	\$577.00	As per statutory scale of fees
Protection of the Environment Operations (General) Regulation 2009				
As per statutory scale of fees				

**Certificates**

Outstanding notices	\$142.00	\$0.00	\$142.00	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	\$94.00	\$0.00	\$94.00	Each
In accordance with Clause 260 of the Environmental Planning & Assessment Regulation (2000)				
Copy of Building Certificate	\$15.00	\$0.00	\$15.00	Each
Refer EPA Reg 2000 cl 261				

**Development Records**

House Drainage Plan	\$37.00	\$0.00	\$37.00	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	\$89.00	\$0.00	\$89.00	Per Application
1 - 5 trees				
Application for permit to remove or prune trees – accompanied by qualified Arborist's report	\$36.00	\$0.00	\$36.00	Per Application
Application for permit to remove or prune trees in conjunction with erection of a building	\$108.00	\$0.00	\$108.00	Per Application
Combination Tree Pruning / Removal				
Compensatory Tree Offset Planting – Residential Zones	\$28.50	\$0.00	\$28.50	Per Tree
Tree replacement on public lands				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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 Green****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	\$3.64	\$0.36	\$4.00	Per Square Metre Per Day
Hire cost per square metre of space used for events in the Glasshouse Forecourt (Hay Street Road Reserve).				

**REF for Works within Council Public Road**

Section 138 REF in Relation to Works within Council Public Road(s)	\$430.00	\$0.00	\$430.00	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	\$493.00	\$0.00	\$493.00	Per Application
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**Traffic Management**

Refer Appendix 9

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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*Application Fees*

Base application fee (plus calculated additional occupancy fees)	\$189.00	\$0.00	\$189.00	Each
All Occupancies				
Minimum				
Road occupancy / opening < 1 week	\$189.00	\$0.00	\$189.00	Each
Road occupancy / opening > 1 week	\$422.00	\$0.00	\$422.00	Each
Standing plant < 1 week	\$189.00	\$0.00	\$189.00	Each
Standing plant > 1 week	\$422.00	\$0.00	\$422.00	Each
Work zone	\$422.00	\$0.00	\$422.00	Each
Occupancy of Car Park	\$189.00	\$0.00	\$189.00	Each

*Occupancy Fees*

## Minimum 1 Day

Footpath / Nature Strip (Other Than for Vehicle Crossing)	\$2.50	\$0.00	\$2.50	Per Metre Per Day
Non residential zone (more than 3 days) Minimum 6 metres				
Parking Lane – Residential Zone (Other Than Vehicle Crossing)	\$2.50	\$0.00	\$2.50	Per Metre Per Day
With no parking restriction (more than 1 week) Minimum 6 metres				
Parking Lane – Residential Zone (Other Than Vehicle Crossing)	\$2.50	\$0.00	\$2.50	Per Metre Per Day
With parking restrictions Minimum 6 metres				
Parking Lane – Industrial and CBD Areas	\$2.55	\$0.00	\$2.55	Per Metre Per Day
No parking restrictions (less than 3 days) Minimum 6 metres				
Parking Lane – Industrial and CBD Areas	\$4.80	\$0.00	\$4.80	Per Metre Per Day
No parking restrictions (more than 3 days) Minimum 6 metres				
Parking Lane – Industrial and CBD Areas	\$4.80	\$0.00	\$4.80	Per Metre Per Day
With parking restriction Minimum 6 metres				
Trafficable Lane Occupancy	\$10.20	\$0.00	\$10.20	Per Metre Per Day
Minimum 6 metres				
Standing Plant (Skips, Concrete Pumps, Cranes, etc)	\$2.55	\$0.00	\$2.55	Per Metre Length of Plant Per Day
Minimum 5 metres				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Occupancy Fees** [continued]

Work Zone (CBD and Shopping Precincts)	\$26.80	\$0.00	\$26.80	Per Metre Per Day
Standing plant fees additional				
Work Zone (Others Area)	\$13.80	\$0.00	\$13.80	Per Metre Per Day
Standing plant fees additional				

**Security Bonds**

Traffic Management Bond Administration Fee	\$274.00	\$0.00	\$274.00	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	\$68.00	\$0.00	\$68.00	per banner
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**Directions Signage****Community, Service & Tourism Signage****Application and Sign Fee for New Community, Service and Tourism Signage**

One sign	\$206.36	\$20.64	\$227.00	Per Application
Includes application fee and supply & installation of one sign				
Two or three signs	\$349.09	\$34.91	\$384.00	Per Application
Includes application fee and supply & installation of two or three signs				

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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### 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	\$493.00	\$0.00	\$493.00	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	\$418.70	\$0.00	\$418.70	Per m2
Tar and bituminous surfaces on all classes of base other than cement concrete	\$155.10	\$0.00	\$155.10	Per m2
Earth and gravel, waterbound macadam and all other classes of unsealed pavement or shoulders	\$65.00	\$0.00	\$65.00	Per m2

### Kerbing, Guttering Construction

#### Contribution from land owners for Kerb & Guttering

Frontage	\$82.00	\$0.00	\$82.00	Per Lineal Metre
Side and/or Rear	\$50.00	\$0.00	\$50.00	Per Lineal Metre

### Street Stalls

Street Stalls	No Charge	Per Day
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### 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 Ihumanire (Light) as per Design	Essential Energy + 10%			Each
Note this is where no approved glare shield is applicable.				



Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**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				

**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				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Resident/Ratepayer Concession Holders** [continued]

Concession Annual Pass – Trucks > 4t GVM Approx. 2t Payload Unlimited use Includes cost for annual concession sticker	\$954.55	\$95.45	\$1,050.00	Annually
Concession Annual Pass – Semi-Trailer, Dog-Trailer, Articulated Vehicle Unlimited use Includes cost for annual concession sticker	\$1,272.73	\$127.27	\$1,400.00	Annually
Concession Monthly Ticket – Cars/Utilities Unlimited use Ticket is issued for the calendar month	\$27.27	\$2.73	\$30.00	Monthly
Concession Monthly Ticket – Trucks > 4t GVM Approx. 2t Payload Unlimited use Ticket is issued for the calendar month	\$81.82	\$8.18	\$90.00	Monthly
Concession Monthly Ticket – Semi-Trailer, Dog-Trailer, Articulated Vehicle Unlimited use Ticket is issued for the calendar month	\$109.09	\$10.91	\$120.00	Monthly
Concession Monthly Ticket – Motorcycles Unlimited use Ticket is issued for the calendar month	\$13.64	\$1.36	\$15.00	Monthly
Concession Weekly Ticket – Cars/Utilities Unlimited use Ticket is issued for the week, Monday to Sunday	\$9.09	\$0.91	\$10.00	Weekly
Concession Weekly Ticket – Trucks > 4t GVM Approx. 2t Payload Unlimited use Ticket is issued for the week, Monday to Sunday	\$27.27	\$2.73	\$30.00	Weekly
Concession Weekly Ticket – Semi-Trailer, Dog-Trailer, Articulated Vehicle Unlimited use Ticket is issued for the week, Monday to Sunday	\$36.36	\$3.64	\$40.00	Weekly
Concession Weekly Ticket – Motorcycles Unlimited use Ticket is issued for the week, Monday to Sunday	\$4.55	\$0.45	\$5.00	Weekly
Concession Pre-Paid Booklets – 25 Tickets per booklet Per Booklet	\$18.18	\$1.82	\$20.00	Per Booklet

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Resident/Ratepayer Concession Holders** [continued]

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

**General Fund****Emergency Works**

Emergency Works	Actual Costs + 25%
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**Private Works (pre-paid)**

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

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**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 &amp; 608 Local Government Act, 1993

**Annual Charges**

Connected or available other than churches and halls	\$905.60	\$0.00	\$905.60	Per Annum
Non Rateable – Section 555 churches & halls	\$581.20	\$0.00	\$581.20	Per Annum
Non Rateable – Section 555 Other than churches and halls	\$721.00	\$0.00	\$721.00	Per Annum
Non Rateable – Section 556	\$905.60	\$0.00	\$905.60	Per Annum
Unconnected – Section 548A	\$581.20	\$0.00	\$581.20	Per Annum
Pressure Sewer	\$875.60	\$0.00	\$875.60	Per Annum

**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	\$1.35	\$0.00	\$1.35	C per kl
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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**On-site Sewerage Management System****Annual Charges***Operate on-site sewage management system**Residential*

Low Risk System	\$39.00	\$0.00	\$39.00	Each
Medium Risk System	\$77.00	\$0.00	\$77.00	Each
High Risk System	\$110.00	\$0.00	\$110.00	Each

*Commercial*

Small	\$220.00	\$0.00	\$220.00	Each
Large	\$274.00	\$0.00	\$274.00	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

*Usage Charges*

Total of Both Meters

**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	\$578.00	\$0.00	\$578.00	Each
Application not requiring State Government concurrence	\$316.00	\$0.00	\$316.00	Each

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Septic Sewage Fees**

Pans & Effluent	\$2.50	\$0.00	\$2.50	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	\$204.00	\$0.00	\$204.00	Each
Annual Inspection Charge Category 3	\$628.00	\$0.00	\$628.00	Each
Biochemical Oxygen Demand (BOD)	\$0.82	\$0.00	\$0.82	Per kg
Total Dissolved Solids (TDS)	\$1.10	\$0.00	\$1.10	Per kg
Total Suspended Solids (TSS)	\$0.95	\$0.00	\$0.95	Per kg
Oil & Grease	\$1.38	\$0.00	\$1.38	Per kg
Re-inspection Fee	\$109.00	\$0.00	\$109.00	Each
Operating Trade Waste Charge – Volume with Pre-Treatment	\$1.81	\$0.00	\$1.81	Per kl
Operating Trade Waste Charge – Volume with No Treatment	\$16.55	\$0.00	\$16.55	Per kl
pH Coefficient	\$0.46	\$0.00	\$0.46	Constant
refer to PMHC Trade Waste Policy				

**Private Works – Sewer Fund****Emergency Works**

Emergency Works	Actual Costs + 25%	
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**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 Sewerage Fees and Charges**

Sewerage Pumping Station Commissioning	\$366.00	\$0.00	\$366.00	Per pump station
Effluent Reuse	\$0.15	\$0.00	\$0.15	Per kl
Not recycled quality				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Miscellaneous Sewerage Fees and Charges** [continued]

Camera investigation – of sewer drainage	\$189.00	\$0.00	\$189.00	Per Hour
Minimum 2 Hours				
Sewer Main Pressure Testing	\$143.00	\$0.00	\$143.00	Per Hour
Hourly rate for all time spent setting up and pressure testing main.				
Sewer Junction Location – Mailed	\$37.00	\$0.00	\$37.00	Each
Sewer Junction Location – Letter to Customer Advising not Available	\$37.00	\$0.00	\$37.00	Each
Sewer Junction Location – Expedition Charge – Response Required for 24 Hour Pick Up	\$50.00	\$0.00	\$50.00	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
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

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Business** [continued]

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
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**Residential**

Residential	\$25.00	\$0.00	\$25.00	Per Annum
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**Residential Strata**

Residential Strata	\$12.50	\$0.00	\$12.50	Per Annum
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**Stormwater Asset Investigations**

Camera Investigation of Stormwater Drainage Assets	\$15.91	\$1.59	\$17.50	Per Lineal Metre
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**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		



Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Water Charges & Fees****Annual Availability Charge**

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

Community Service Organisations	No Charge			Per Annum
Section 555				
Equivalent Tenements	\$178.00	\$0.00	\$178.00	Per Annum
Strata Units	\$178.00	\$0.00	\$178.00	Per Annum
Not individually metered				
Vacant Land	\$178.00	\$0.00	\$178.00	Per Annum
Other than land that complies with Section 548A				
20 mm Meter	\$178.00	\$0.00	\$178.00	Per Annum
25 mm Meter	\$283.00	\$0.00	\$283.00	Per Annum
32 mm Meter	\$473.00	\$0.00	\$473.00	Per Annum
40 mm Meter	\$745.00	\$0.00	\$745.00	Per Annum
50 mm Meter	\$1,173.00	\$0.00	\$1,173.00	Per Annum
80 mm Meter	\$3,013.00	\$0.00	\$3,013.00	Per Annum
100 mm Meter	\$4,711.00	\$0.00	\$4,711.00	Per Annum
150 mm Meter	\$10,623.00	\$0.00	\$10,623.00	Per Annum
200 mm Meter	\$18,888.00	\$0.00	\$18,888.00	Per Annum

**Usage Fees**

Refer Appendix 6 for Usage Allowance

Consumption below usage allowance

Water Consumption – Tier 1	\$3.31	\$0.00	\$3.31	Per kl
Water Consumption – Tier 2	\$6.62	\$0.00	\$6.62	Per kl

**Fire Service Levy****Annual Charges**

Charge per Meter Size

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Annual Charges** [continued]

50% of the potable water charge

32 mm Meter	\$236.50	\$0.00	\$236.50	Per Annum
40 mm Meter	\$372.50	\$0.00	\$372.50	Per Annum
50 mm Meter	\$586.50	\$0.00	\$586.50	Per Annum
80 mm Meter	\$1,506.50	\$0.00	\$1,506.50	Per Annum
100 mm Meter	\$2,355.50	\$0.00	\$2,355.50	Per Annum
150 mm Meter	\$5,311.50	\$0.00	\$5,311.50	Per Annum
200mm Meter	\$9,444.00	\$0.00	\$9,444.00	Per Annum

**Recycled Water Charges**

Port Macquarie Urban Area Business/Commercial/Council Facilities Only

**Annual Availability Charge**

20 mm Meter	\$89.00	\$0.00	\$89.00	Per Annum
25 mm Meter	\$141.50	\$0.00	\$141.50	Per Annum
32 mm Meter	\$236.50	\$0.00	\$236.50	Per Annum
40 mm Meter	\$372.50	\$0.00	\$372.50	Per Annum
50 mm Meter	\$586.50	\$0.00	\$586.50	Per Annum
80 mm Meter	\$1,506.50	\$0.00	\$1,506.50	Per Annum
100 mm Meter	\$2,355.50	\$0.00	\$2,355.50	Per Annum
150 mm Meter	\$5,311.50	\$0.00	\$5,311.50	Per Annum
200 mm Meter	\$9,444.00	\$0.00	\$9,444.00	Per Annum

**Usage Fees**

Refer to Appendix 7

Recycled Water Consumption – Tier 1	\$1.66	\$0.00	\$1.66	Per kl
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**Residential Properties to be Serviced by Recycled Water**

i.e. Dual Scheme with Two Meters per Property

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Name	Year 20/21 Fee (excl. GST)	GST	Fee (incl. GST)	Unit
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**Residential Properties to be Serviced by Recycled Water** [continued]

Included in Annual Water Charge	No Additional Charge			
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**Private Works – Water Fund****Emergency Works**

Emergency Works	Actual Costs + 25%			
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**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	\$63.00	\$0.00	\$63.00	Each
Disconnection/Reconnection of Water Supply	\$125.00	\$0.00	\$125.00	Each
Supervision of Interconnection to existing main or Supervision of Pressure Testing	\$125.00	\$0.00	\$125.00	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	\$143.00	\$0.00	\$143.00	Per Hour
Hourly rate for all time spent setting up and pressure testing main.				
Sale of in-house water meters	\$99.09	\$9.91	\$109.00	Each
Remote water meter transmitter hire	\$118.00	\$0.00	\$118.00	Each
Available areas only				
Consultancy – Investigation and Design	\$175.45	\$17.55	\$193.00	Per Hour
Vacuum Excavation Truck	\$221.82	\$22.18	\$244.00	Per Hour
Includes Plant & Operator cost				
Tanker Truck	\$102.73	\$10.27	\$113.00	Per Hour
Includes Plant and Operator cost				
Water Usage Printout – Standard Delivery	\$39.00	\$0.00	\$39.00	Each
Water Usage Printout – Urgent Delivery	\$39.00	\$0.00	\$39.00	Each

Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Disinfection of Water Mains**

Minimum Fee	\$918.00	\$0.00	\$918.00	Each
Lineal Metre rate	\$7.00	\$0.00	\$7.00	Lineal Metre
Re-establishment fee	\$461.00	\$0.00	\$461.00	Each
Fee to be applied if site not available within 1/2 hour of agreed time				
Tanker Hire for Disinfection of Water Mains	\$113.00	\$0.00	\$113.00	Per Hour

**Leakages**

Water Leakage Investigations	\$124.55	\$12.45	\$137.00	Per Hour
Hire of equipment plus operator				
Minimum 1 hour				

**Swimming Pools**

Water directly from main to fill Residential Swimming Pool	\$646.00	\$0.00	\$646.00	
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**Testing of Water Meters**

20 mm	\$390.00	\$0.00	\$390.00	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	\$131.00	\$0.00	\$131.00	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

**Water from Mains**

Water Carter's Licence Fee – Potable	\$1,005.00	\$0.00	\$1,005.00	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	\$509.00	\$0.00	\$509.00	per service
Replacement of a Stolen 20mm Water Meter	\$141.00	\$0.00	\$141.00	per meter
New single 20 mm Potable Water Meter	\$527.70	\$0.00	\$527.70	Each

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Water Meter Installation** [continued]

New single 20mm Recycled Water Meter	\$527.70	\$0.00	\$527.70	Each
20mm Short Service Additional – Potable/Recycled	\$662.59	\$0.00	\$662.59	Each
All services terminate prior to 90 bend to raise out of ground.				
20mm Long Service Additional – Potable/Recycled	\$2,298.57	\$0.00	\$2,298.57	Each
All services terminate prior to 90 bend to raise out of ground.				
20mm RPZ Backflow Prevention Device	\$324.34	\$0.00	\$324.34	Each
Does not include labour.				
20mm DCV Backflow Prevention Device	\$278.91	\$0.00	\$278.91	Each
Does not include labour.				
25mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	\$747.90	\$0.00	\$747.90	Each
All services terminate prior to 90 bend to raise out of ground.				
25mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	\$2,622.22	\$0.00	\$2,622.22	Each
All services terminate prior to 90 bend to raise out of ground.				
25mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	\$638.60	\$0.00	\$638.60	Each
All meters include cost of meter frame beginning at the 90 bend.				
25mm RPZ Backflow Prevention Device	\$360.94	\$0.00	\$360.94	Each
Does not include labour.				
25mm DCV Backflow Prevention Device	\$296.57	\$0.00	\$296.57	Each
Does not include labour.				
32mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	\$863.75	\$0.00	\$863.75	Each
All services terminate prior to 90 bend to raise out of ground.				
32mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	\$2,759.59	\$0.00	\$2,759.59	Each
All services terminate prior to 90 bend to raise out of ground.				
32mm Water Meter– Potable/Recycled (Hydraulic Plans to Support)	\$1,270.78	\$0.00	\$1,270.78	Each
All meters include cost of meter frame beginning at the 90 bend.				
32mm RPZ Backflow Prevention Device	\$536.36	\$0.00	\$536.36	Each
Does not include labour.				
32mm DCV Backflow Prevention Device	\$465.69	\$0.00	\$465.69	Each
Does not include labour.				
40mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	\$918.87	\$0.00	\$918.87	Each
All services terminate prior to 90 bend to raise out of ground.				
40mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	\$2,869.22	\$0.00	\$2,869.22	Each
All services terminate prior to 90 bend to raise out of ground.				
40mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	\$1,374.80	\$0.00	\$1,374.80	Each
All meters include cost of meter frame beginning at the 90 bend.				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Water Meter Installation** [continued]

40mm RPZ Backflow Prevention Device	\$590.53	\$0.00	\$590.53	Each
Does not include labour.				
40mm DCV Backflow Prevention Device	\$516.17	\$0.00	\$516.17	Each
Does not include labour.				
50mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	\$1,300.75	\$0.00	\$1,300.75	Each
All services terminate prior to 90 bend to raise out of ground.				
50mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	\$3,431.08	\$0.00	\$3,431.08	Each
All services terminate prior to 90 bend to raise out of ground.				
50mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	\$3,229.52	\$0.00	\$3,229.52	Each
All meters include cost of meter frame beginning at the 90 bend.				
50mm RPZ Backflow Prevention Device	\$676.45	\$0.00	\$676.45	Each
Does not include labour.				
50mm DCV Backflow Prevention Device	\$576.75	\$0.00	\$576.75	Each
Does not include labour.				
80mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	\$2,028.12	\$0.00	\$2,028.12	Each
All services terminate prior to 90 bend to raise out of ground.				
80mm Water Meter – Potable/Recycled (Hydraulic Plans to Support)	\$4,094.05	\$0.00	\$4,094.05	Each
All meters include cost of meter frame beginning at the 90 bend.				
80mm RPZ Backflow Prevention Device	\$3,909.57	\$0.00	\$3,909.57	Each
Does not include labour.				
80mm DCV Backflow Prevention Device	\$2,640.14	\$0.00	\$2,640.14	Each
Does not include labour.				
100mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	\$2,622.44	\$0.00	\$2,622.44	Each
All services terminate prior to 90 bend to raise out of ground.				
100mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	\$4,698.00	\$0.00	\$4,698.00	Each
All services terminate prior to 90 bend to raise out of ground.				
100mm Water Meter (Hydraulic Plans to Support)	\$4,824.01	\$0.00	\$4,824.01	Each
All meters include cost of meter frame beginning at the 90 bend.				
100mm SDC with Bypass Meter + 2 x Rising Spindle Valves	\$4,051.90	\$0.00	\$4,051.90	Each
Includes cost to raise service up from end of service.				
100mm RPZ Backflow Prevention Device	\$4,244.46	\$0.00	\$4,244.46	Each
Does not include labour.				
100mm DCV Backflow Prevention Device	\$3,263.17	\$0.00	\$3,263.17	Each
Does not include labour.				

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Name	Fee (excl. GST)	Year 20/21 GST	Fee (incl. GST)	Unit
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**Water Meter Installation** [continued]

150mm Short Service – Potable/Recycled (Hydraulic Plans to Support)	\$3,451.58	\$0.00	\$3,451.58	Each
All services terminate prior to 90 bend to raise out of ground.				
150mm Long Service – Potable/Recycled (Hydraulic Plans to Support)	\$5,670.91	\$0.00	\$5,670.91	Each
All services terminate prior to 90 bend to raise out of ground.				
150mm Water Meter (Hydraulic Plans to Support)	\$10,028.64	\$0.00	\$10,028.64	Each
All meters include cost of meter frame beginning at the 90 bend.				
150mm SDC with Bypass Meter + 2 x Rising Spindle Valves	\$7,426.12	\$0.00	\$7,426.12	Each
Includes cost to raise service up from end of services.				
150mm RPZ Backflow Prevention Device	\$6,744.41	\$0.00	\$6,744.41	Each
Does not include labour.				
150mm DCV Backflow Prevention Device	\$5,202.38	\$0.00	\$5,202.38	Each
Does not include labour.				
Hydrant Relocation up to 150mm Water Main	\$2,677.32	\$0.00	\$2,677.32	Each
Valve Relocation up to 150mm Water Main	\$2,826.00	\$0.00	\$2,826.00	Each
Single Panel Footpath Removal and Restoration to Access Water Main	\$907.67	\$0.00	\$907.67	Each

**Water Pressure Certificates**

Hose reel installation	\$97.00	\$0.00	\$97.00	Each
Fire hydrant installation	\$193.00	\$0.00	\$193.00	Each
Fire sprinkler and / or wall drencher installation	\$280.00	\$0.00	\$280.00	Each

## Schedule of Fees and Charges 2020 – 2021

### Appendices

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#### 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.



## Schedule of Fees and Charges 2020 – 2021

### Appendices *(continued)*

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#### 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 – used primarily for pilot training, charter or other operations where income is received by the operator, excluding regular passenger / commercial services
  - 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 such aircraft, or the 'private fee' where the lessee declares such machine as a private aircraft (describing any external markings for identification).

Charges to increase by the annual CPI figure as at December plus provision for maintenance project costs and items identified in the Business Plan. In the event of negative CPI, the fees remain constant from the previous year. Charges are to be rounded up to the nearest five (5) cents.

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

## Schedule of Fees and Charges 2020 – 2021

### Appendices *(continued)*

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#### Appendix 2 – Port Macquarie Airport (continued)

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.

## Schedule of Fees and Charges 2020 – 2021

### Appendices *(continued)*

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#### 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.

## Schedule of Fees and Charges 2020 – 2021

### Appendices *(continued)*

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#### 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 m<sup>2</sup> is to be interpreted as meaning a minimum charge / deposit on final cost.
- (b) The rate per m<sup>2</sup> is a minimum charge for restoration of road openings up to 10m<sup>2</sup>.
- (c) Where actual restoration costs exceed, by more than \$200, the charge calculated by applying the appropriate rate per m<sup>2</sup>, 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 10m<sup>2</sup>.
- (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.

## Schedule of Fees and Charges 2020 – 2021

### Appendices *(continued)*

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#### 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.

## Schedule of Fees and Charges 2020 – 2021

### Appendices *(continued)*

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#### 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)* where 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.

## Schedule of Fees and Charges 2020 – 2021

### 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 programs. 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.

## **Schedule of Fees and Charges 2020 – 2021**

### **Appendices** *(continued)*

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#### **Appendix 10 – Glasshouse (continued)**

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



## Schedule of Fees and Charges 2020 – 2021

### Appendices *(continued)*

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#### 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.

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## Y

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2017-2021 Delivery Program and 2019-2020 Operational Plan Exception Report as at 30 June 2020			Comment on Progress 30 June 20	
Operational Plan Activity 2019-2020	Lead Responsibility	Success Measures	Target	Actual
Theme: Leadership and Governance				
1.1.2.4 Develop Local Strategic Planning Statement	Community Engagement	Complete Local Strategic Planning Statement for presentation to the NSW Department of Planning and Environment by 30 June 2020	100%	80%
1.3.4.4 CW Construct new works depot in Port Macquarie (multi-year project in 2017-18 linked to 1.3.4.5 CW)	Strategy	Deliver project according to approved project plan (Works Depot in Port Macquarie)	100%	0%
1.3.4.5 CW Works Depot relocation - preconstruction/design (multi-year project in 2017-18 linked to 1.3.4.4 CW)	Strategy	Deliver project according to approved project plan (Works Depot relocation)	100%	0%
1.3.5.1 Continue the development of a highly engaged workforce who are solutions focused	Organisational Performance	Deliver annual Employee Engagement Days	100%	50%
1.3.5.3 Implement the Human Resource Information System (HRIS)	Organisational Performance	Project plan developed	100%	85%
1.4.1.5 Develop asset design and as constructed templates as part of the Asset Data Standards Review	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 2019	100%	80%
1.4.3.2 Provide up to date information for our community through a single source of truth	Customer Experience and Communications Strategy	Develop Council Knowledge Base by 30 June 2020	100%	80%
1.5.1.06 Progress Partridge Creek residential development planning	Strategy	Provide a report to Council outlining Partridge Creek residential development options upon receipt of updated land valuation	100%	85%
1.5.1.07 Progress Greenmeadows Drive residential development planning	Strategy	Develop concept plan for Greenmeadows Drive development	100%	0%
1.5.1.07 Progress Greenmeadows Drive residential development planning	Strategy	Lodge Development Approval application for Greenmeadows Drive development	100%	0%
1.5.1.08 Conduct Asset Revaluation for Transport assets (Roads, Bridges, Footpaths, Airport Runway)	Infrastructure Planning	Complete asset revaluation by 30 June 2020	100%	95%

Attachment A

2017-2021 Delivery Program and 2019-2020 Operational Plan Exception Report as at 30 June 2020					
Operational Plan Activity 2019-2020	Lead Responsibility	Success Measures	Target	Actual	Comment on Progress 30 June 20
1.5.1.09 Progress Emily Avenue residential development planning	Strategy	Develop concept plan for Emily Avenue development	100%	0%	Behind schedule. There has not been progression to the "concept plan" to be able to meet the definition of the OP Item. There has however been a DA approval for the project on 6 May 2020, as a result the progress has been excellent given the impact of COVID-19 response and recovery. The present status is a contamination assessment to support the future subdivision of the site. This information will help inform Council's appetite to develop or sale of the approved subdivision to a third party. Emily Avenue will be resolved in the 2020/21 year
1.5.1.10 Implement Asset Designed As Constructed (ADAC) computerised	Infrastructure Planning	Complete implementation of ADAC within Council operations by 30 June 2020	100%	90%	Behind schedule. Undertaking the ADAC implementation is underway and will continue into 2020-2021.
1.5.2.2 CW Ensure plant purchases are in line with the plant replacement program (Plant Purchases and Disposals - multi-year project)	Infrastructure Operations	Plant replacement program delivered according to approved schedule	100%	80%	Behind schedule. Plant replacement finished at 80% due to recent events and work bad priorities creating difficulties in procuring plant. The recent situation with COVID created difficulty in the process for tendering and evaluation. A shortage of truck cab/chassis with limitations to imports was also experienced.
1.5.3.1 Increase operating revenue at the Airport, the Glasshouse, the Crematorium and Cemetery and the Environmental Laboratory	Commercial Business Units	Increase operating revenue by 3% per annum per business unit (Airport)	3%	-20%	Behind target. Operating income down 19.8% on 2018-19 due to the impact of COVID-19 and the suspension of airline services.
1.5.3.1 Increase operating revenue at the Airport, the Glasshouse, the Crematorium and Cemetery and the Environmental Laboratory	Commercial Business Units	Increase operating revenue by 3% per annum per business unit (Crematorium)	3%	-9%	Behind target. Income has decreased by 8.6% on 2018-19. The Imes Gardens Memorial Park Crematorium and Lawn Cemetery was sold to the Walker Funeral Group on 1 July 2020.
1.5.3.1 Increase operating revenue at the Airport, the Glasshouse, the Crematorium and Cemetery and the Environmental Laboratory	Commercial Business Units	Increase operating revenue by 3% per annum per business unit (Glasshouse)	3%	-35%	Behind target. The Glasshouse was closed to the public on Monday 23 March 2020 due to the Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020. This resulted in the cancellation of all activities including a significant number of events and all commercial operations such as venue hire, box office sales, catering and retail income.
<b>Theme: Your Community Life</b>					
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	Environment and Regulatory Services	Undertake 90% of on-site sewerage management systems inspections within set customer service standards	90%	43%	Behind target. An increase in S88 Plumbing and Drainage development applications resulted in fewer programmed on-site sewer inspections being undertaken. Additionally unplanned staff leave also impacted service capacity.
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	Environment and Regulatory Services	Undertake 90% of swimming pool inspections within set customer service standards	90%	72%	Behind target. Extended unplanned staff leave has impacted service performance.
2.3.2.4 Undertake regional master planning for recreational facilities	Recreation, Property and Buildings	Complete Master Planning for Bain Park, Wauchope	100%	80%	Behind schedule. Draft master plan completed and included for consideration at the July 1st Council meeting. Delays as further clarification requested from Executive around staging plan, costings and funding.



2017-2021 Delivery Program and 2019-2020 Operational Plan Exception Report as at 30 June 2020					
Operational Plan Activity 2019-2020	Lead Responsibility	Success Measures	Target	Actual	Comment on Progress 30 June 20
2.3.3.06 CW Carry out playground equipment replacement program	Recreation, Property and Buildings	Deliver the Playground Equipment Replacement program according to approved schedule	100%	85%	Behind schedule. Delays experienced on playground delivery due to contractor availability (having to limit staff on site due to COVID-19 restrictions and loss of staff due to home schooling). Significant rainfall has also caused further delays. Playground equipment is largely sourced from overseas. COVID-19 restrictions ceased manufacture for a lengthy period delaying procurement. Behind schedule. Riverview Reserve - not yet commenced. Land tenure issue to be resolved. Council to request to be appointed as Council Crown Land Manager of the site. Project will continue into 2021. Town Beach Park - detailed plan finalised, procurement commenced. Delay to finalisation of detailed design due to Council applying for and securing grant funding to expand scope of works to include water play area. Significant delay to equipment being procured from NZ due to COVID shutdowns. Construction scheduled for second quarter of 2021 upon delivery of play equipment. Blair Reserve - detailed plan finalised, construction nearing completion. Completion impacted by contractor delays due to wet weather and COVID. Expected completion first quarter 2021 Rocks Ferry Reserve - community engagement finalised. Concept plan and procurement completed. Construction scheduled for first quarter of 2021. Achieved. Reservoir Park - project complete, Scribbly Bark - project complete and Settlement Point Reserve - project complete.
2.3.3.08 CW Deliver recreational walkway replacement program across the local government area	Recreation, Property and Buildings	Deliver Recreational walkway program according to approved project plan	100%	85%	Behind schedule. North Haven to Bonny Hills Walkway - planning commenced, delays experienced due to COVID as Work for the Dole (Contractor) services placed on hold, expected to be completed first quarter of 2021. Blair/Sandhurst reserves has construction commenced however delays experienced due to COVID as Work for the Dole (Contractor) services placed on hold, works to continue into 2021. Harry's Lookout Walkway replacement complete.
2.3.3.12 CW Sancroft/Thrumster Sports Fields - Detailed design and approvals - multi-year project	Recreation, Property and Buildings, (Project Delivery)	Deliver project according to approved project plan (Sancroft/Thrumster Sports Fields - design and approvals)	100%	85%	Behind schedule. This project continues from 2017/18 FY. This project was placed on hold pending the outcomes of the site selection for the Port Macquarie Aquatic Facility and confirmation from Football NSW on their preferred site location. These two items have now been confirmed and the design is expected to commence during 2020 with completion forecast for late 2020/21 FY. Engagement of Detailed Design expected by late 2020.
2.3.3.14 CW Undertake the Public Amenities Renewals Program	Recreation, Property and Buildings	Deliver project according to approved project plan (Public Amenities Renewals program)	100%	85%	Behind schedule. COVID-19 pandemic impacting on delivery of this project. Pilot Beach Amenities are planned for installation June 2020 there has been a delay in ordering kit due to a change in supplier management which will be resolved by the end of March. Supplier has informed possible delay in manufacturing due to COVID-19 pandemic. Work to continue into 2020-2021 with completion of this project now set for September 2020.
2.3.3.17 CW Carry out improvement and expansion works at Innes Garden Memorial Park, Wauchope and Laureston cemeteries	Commercial Business Units	Deliver projects according to approved project plan (improvement and expansion works at cemeteries)	100%	75%	Behind schedule. Project Charter developed as the basis for future work to prepare a new Master Plan for the proposed expansion of Wauchope Cemetery. Project delayed due to sale processes associated with Innes Gardens Memorial Park. Project will continue through 2020-21.
2.3.3.18 Administration of public roads, public spaces, events and customer engagement: Section 138 Road Applications, Road Encroachments, Customer Enquiries, Statutory Road Functions, Road Policies	Infrastructure Planning	Deliver works in accordance with Council's Policies and Procedures	100%	90%	Behind schedule. Level of service for responding to applications and enquiries has slightly increased due to staff being approved to work additional hours.
2.3.4.03 CW Wayne Richards Park — Stage 3 and 4 detailed design and approvals	Recreation, Property and Buildings, (Project Delivery)	Deliver project according to approved project plan (Wayne Richards Park — Stage 3 and 4 detailed design and approvals)	100%	90%	Behind schedule. (multi year project) Design underway for this multi year project which has been delayed due to complex environmental constraints. The construction phase would then be subject to depot relocation and budget allocation. The project is currently on hold.
2.3.4.07 CW Google Track - construct shared walkway/cycleway, Stage 2 - multi-year project - Adopted 2017-18 - \$75,696	Recreation, Property and Buildings	Deliver project according to approved project plan (Google Track - construct shared walkway/cycleway, Stage 2)	100%	50%	Behind schedule. National Parks staff have been significantly impacted by bushfires and COVID-19 during the current financial year which has impacted on their ability to undertake Google Track construction works.
2.3.4.16 CW Continue installation of Town Village Entry Signage	Community Engagement	Deliver project according to approved project plan (Continue installation of Town Village Entry Signage)	100%	80%	Behind schedule. The final two Tier 2 & 3 signs will be installed by mid July and the existing old signs will be removed by the following week.



2017-2021 Delivery Program and 2019-2020 Operational Plan Exception Report as at 30 June 2020					
Operational Plan Activity 2019-2020	Lead Responsibility	Success Measures	Target	Actual	Comment on Progress 30 June 20
2.3.4.19 CW Red Ochre Park - Develop new park facilities - Local Facilities	Recreation, Property and Buildings	Deliver project according to approved project plan (Red Ochre Park - Develop new park facilities - Local Facilities)	100%	80%	Behind schedule. Construction plans completed Procurement completed. Lengthy delays experienced in procuring equipment due to COVID shutdowns in NZ where equipment is sourced. Project to be completed in first quarter of 2021.
2.3.4.20 CW Ruins Way Park - Develop new park facilities - Local Facilities	Recreation, Property and Buildings	Deliver project according to approved project plan (Ruins Way Park - Develop new park facilities - Local Facilities)	100%	80%	Behind schedule. Community engagement delayed due to resourcing constraints. Contractor availability also highlighted as an issue due to bushfires, weather and COVID-19. It is expected that construction will start in the first half of 2021.
2.3.4.23 CW Port Macquarie Town Signage - Installation of Signage in the Port Macquarie area	Community Engagement	Deliver project according to approved project plan (Port Macquarie Town Signage)	100%	80%	Behind schedule. The Port Macquarie Entry Signage has been fabricated and the contractor is ready to proceed. Installation is pending finalisation of the risk assessments being undertaken.
2.3.5.4 Adopt and implement the Library Strategic Plan	Community Engagement	Implement actions as per the Library Strategic Plan	100%	75%	Behind schedule. COVID-19 restrictions have delayed the review library hours and consideration of additional hours (particularly on the weekend). Similar delays have been experienced with the planning for potential new libraries.
2.3.5.6 CW Purchase and fit out new Community Van to provide services such as Library outreach, arts and cultural program and community engagement	Community Engagement	Service delivery program developed and implementation commenced by 30 June 2020	100%	75%	Behind schedule. Van fit-out delayed due to delivery problems caused by the COVID crisis.
2.3.5.6 CW Purchase and fit out new Community Van to provide services such as Library outreach, arts and cultural program and community engagement	Community Engagement	Van purchased and fit out complete by 1 March 2020	100%	75%	Behind schedule. Van delivery and parts required for fit-out delayed due to COVID-19. Completion anticipated in second quarter 2020/21. Fit out behind schedule because of delivery problems due to COVID.
2.3.6.3 Finalise and implement the Port Macquarie Hastings Events Plan	Community Engagement	Implement actions relating to Community Events	100%	75%	Behind schedule. Due to the COVID-19 Pandemic, no events were able to be held from mid March 2020. However, new ways of connecting digitally through live Facebook and Zoom activities have been developed, but no events were held. From July 2019 to February 2020, events included Countdown to Xmas, the Hastings Sports Awards, Mayor's Sporting Fund Golf Day, New Years Eve fireworks, Australia Day celebrations and Seniors Week delivered with over 1,200 seniors attending to view the 80+ stalls at Port Panthers in early February 2020.
2.4.1.2 Prioritise and commence implementation of agreed actions from the Customer Experience project	Customer Experience and Communications	Implement the agreed Customer Experience priorities for 2019-2020	100%	80%	Behind schedule. Project delayed due to impact of COVID recovery work across the business. Steering Committee reviewing revised timelines.
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 Cultural Plan	Commercial Business Units	Deliver the exhibition program as per the annual gallery program (20 exhibitions)	100%	80%	Behind schedule. The Glasshouse was closed to the public on Monday 23 March 2020 due to the Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020. This resulted in the suspension of the gallery program until the gallery was able to reopen on 30 June.
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 Cultural Plan	Commercial Business Units	Deliver the performing arts program as per the annual season launch (15 events)	100%	63%	Behind schedule. The Glasshouse was closed to the public on Monday 23 March 2020 due to the Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020. This resulted in the cancellation of performances planned as part of the Glasshouse Theatre Program 2020.
<b>Theme: Your Business and Industry</b>					
3.1.2.1 Finalise Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments in relation to a business park near Port Macquarie Airport (UGMS Action 15)	Development Assessment (Land Use Planning)	Final report to Council re Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments by 30 December 2019	100%	95%	Behind schedule. At the 20 May 2020 Ordinary Council Meeting, Council endorsed the post exhibition Planning Proposal for forwarding to the Department of Planning Industry and Environment for approval. It is anticipated that the amended Local Environment Plan (LEP) enabling the development of a business park near the Airport will be published on the NSW Legislation website during August 2020. Council adopted the Development Control Plan (DCP) at the same meeting and it will take effect upon publication of the LEP amendment.

2017-2021 Delivery Program and 2019-2020 Operational Plan Exception Report as at 30 June 2020					
Operational Plan Activity 2019-2020	Lead Responsibility	Success Measures	Target	Actual	Comment on Progress 30 June 20
3.1.3.2 Finalise and implement a new Port Macquarie-Hastings Events Plan	Economic and Cultural Development	Successful distribution of Events Grants and Sponsorships	100%	10%	Behind schedule. Due to the pandemic and COVID restrictions, Council was unable to support any major events during the April - June 2020 quarter. Before COVID we had seven supported events planned to go ahead. These events would have resulted in a combined economic impact of approximately \$18.4 million for our community. The event staff have been supporting events to find dates in the latter half of the year so some originally unplanned economic impact may be felt in the next quarter. In spite of the COVID-19 impact on this quarter, Council has supported a total of 16 events during the 2019/20 financial year which has resulted in a \$19.1 economic impact.
3.1.4.1 Work with stakeholders to implement actions from the Destination Management Plan in accordance with the identified strategic outcomes	Economic and Cultural Development	Increase new monthly visits to the website by more than 15% in 12 months	100%	60%	Behind schedule. Visits to the destination website for the financial year end show an increase of 7.10% year on year. This represents an increase in users from 361,161 to 386,813. Noting bushfire and COVID-19 impacts, this increase is a positive outcome of the strategy deployed initially to maintain destination awareness without encouraging travel and more recently to send the message that the region is open for business. The annual target has not been achieved for this financial year however any increase during these unprecedented times should be seen as a successful outcome and testament to a focused and strategic approach by Council.
3.3.1.2 Support, facilitate and advocate for regular public transport (RPT) airline services at Port Macquarie Airport	Commercial Business Units	Increase in passenger numbers compared to previous year	100%	74%	Behind schedule. Annual passenger numbers down 26.3% on 2018-19 due to the impact of COVID-19 and the suspension of airline services.
3.3.2.1 Promote local growth and opportunities within and outside the region	Economic and Cultural Development	Deliver investment attraction messaging and collateral	100%	75%	Behind schedule. Key investment attraction exhibitions postponed as a result of COVID-19 from Mid March 2020, planning underway for attendance at future exhibition opportunities. Further videos in the relocation attraction series completed and actively promoting the opportunity to live, work and invest in the Port Macquarie-Hastings region.
3.4.3.2 Prioritise, advocate and implement projects that enhance the local digital environment.	Economic and Cultural Development	Engagement with local business, entrepreneurs and co-workers via The Hub pop-up co-working space	100%	80%	Behind schedule. The Hub Business and Co-working Centre was closed from Mid March 2020 due to COVID-19 restrictions. Engagement with Hub members and broader business and industry (including Chambers of Commerce etc.) has continued digitally over the period.
3.4.3.2 Prioritise, advocate and implement projects that enhance the local digital environment.	Economic and Cultural Development	Smart City Strategy developed by 30 June 2020	100%	80%	Behind schedule. COVID-19 and change in engagement approach for this and Community Strategic Plan project (with which this project was aligned) has required adjustment to the project scope. At 30 June 2020, the Smart Community Roadmap (re-scoped project) was in draft form, with further internal engagement and review to occur before presentation to Council and public exhibition in August 2020.
<b>Theme: Your Natural and Built Environment</b>					
4.1.1.01 CW Commencement of the construction of the Sancroft Reservoir to Area 13 Thumster trunk main (DN750)	Infrastructure Operations, (Project Delivery)	Deliver project according to approved project plan (Sancroft Reservoir to Area 13)	100%	90%	Behind schedule. The design phase for this project is complete however, the project has been placed on hold pending a development application for a new service centre which being lodged on one of the lots that the pipeline is proposed to pass through. Given the uncertain timeframe to resolve the issues pertaining to the lot with the proposed service centre, Council will look into alternative options to traverse this portion of land. If an alternative is variable, stakeholder consultation will need to be undertaken prior to moving into the tender phase. The re-commencement of the project will be subject to negotiations with the landowner to ensure that unnecessary re-work is not undertaken. These works are now expected to be complete in the 2020/21 FY.
4.1.1.26 CW Construction of the Southern Arm Trunk Main (DN750) - Pacific Hwy to Bonny Hills	Infrastructure Operations, (Project Delivery)	Deliver programs according to approved schedule (Construction of the Southern Arm Trunk Main)	100%	85%	Behind schedule. Project pre-construction phase on hold awaiting the completion of property acquisitions along Houston Mitchell Drive. Council is currently negotiating with National Parks and Wildlife Services (NPWS) regarding land acquisition required to install the pipeline in the proposed easement. Project not expected to be re-commenced until late 2020 with construction expected to span over future FY's subject to future funding allocations.
4.1.3.18 CW Preconstruction of Thumster Sewerage treatment Plant (Area 13) - Phase 1 - 20000EP	Infrastructure Operations	Deliver project according to approved project plan (Preconstruction of Thumster Sewerage Treatment Plant (Area 13))	100%	50%	Behind schedule. This project has been included as a high priority with Integrated Water Cycle Management (IWM) project engagement with Public Works Advisory and includes Environmental Impact Statement and feasibility assessment of different options for Thumster and the Port Macquarie Sewer Treatment Plant that can cater for growth in the Port Macquarie area. Sewerage Strategy work in progress in IWM project.
4.1.3.24 CW Inlet Works Replacement for Port Macquarie Sewer Treatment Plants (STP)	Infrastructure Operations	Deliver project according to approved project plan (Inlet Works Replacement for Port Macquarie Sewer Treatment Plants)	100%	50%	Behind schedule. Scope reduced for 19/20FY. Major refurbishment will commence in first quarter of 20/21 FY.

2017-2021 Delivery Program and 2019-2020 Operational Plan Exception Report as at 30 June 2020					
Operational Plan Activity 2019-2020	Lead Responsibility	Success Measures	Target	Actual	Comment on Progress 30 June 20
4.1.5.06 CW Continue design and construction for Black Swan Terrace - Stormwater detention facility (multi-year project)	Infrastructure Planning	Deliver project according to approved project plan (Black Swan Terrace - Stormwater detention facility)	100%	50%	Behind schedule. Final design being finished, however is behind schedule. Consultant failing to meet milestones. An additional consultant has been engaged via a RFQ process to deliver Stage 2 of the design in order to progress this project while discussion with the initial consultant regarding a lack of delivery are ongoing. Completion of design and commencement of construction included in 2020/21 Operational Plan. Design work completed to date will be used as a preliminary design for commencing detailed designs.
4.1.5.09 CW Investigation of Stormwater Remediation Options - Belbowrie/Bay Street Catchment	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan (Investigation of Stormwater Remediation Options - Belbowrie/Bay Street Catchment)	100%	85%	Behind schedule. This design only project is underway and progressing towards completion in first quarter of 2021 FY. The design has been more complex than initially expected with multiple options required to be tested to develop a preferred solution.
4.1.7.03 Develop Pre-school waste education program	Commercial Business Units	Pre-school waste education program delivered by 30 June 2020	100%	90%	Behind schedule. (noting COVID-19 constraints). Pre-school waste education program developed. Implementation pending COVID-19 restrictions.
4.2.1.01 Deliver annual bushfire risk mitigation works on Council land in accordance with the Bush Fire Risk Management Plan (adopted by NSW Rural Fire Service)	Environment and Regulatory Services	Two strategic fire advantage zone (SFAZ) burns planned and implemented	100%	90%	Behind schedule. Planning was completed for two strategic fire advantage zone burns with one of these burning in unplanned wildfire west of Port Macquarie airport. Implementation of second burn not achievable due to lack of suitable burning window and fuel prescriptions. Resourcing was also limited due to ongoing emergency bushfire operations.
4.2.1.11 CW Continue to implement Strategies of Lake Cathie Coastal Zone Management Plan (CZMP) - Stormwater Redirection (Illaroo Rd to Lake Cathie)	Environment and Regulatory Services	Completion of redirection of stormwater infrastructure from Illaroo to Lake Cathie as per Lake Cathie Coastal Zone Management Plan	100%	40%	Behind schedule. Work to complete the Aboriginal Archaeological Heritage Assessment is ongoing. This work has been included in the 2021 operational plan.
4.2.1.12 Undertake a review of the existing Lake Cathie Opening Strategy in consultation with the NPWS; the OEH, NSW Fisheries, DPI, and community incl Revive Lake Cathie Community Group	Environment and Regulatory Services	Consultation undertaken with stakeholders and report provided to Council by 30 June 2020	100%	50%	Behind schedule. A review of the Lake Cathie Entrance Opening Strategy will be undertaken as part of the 2020-2021 Operational Plan under the Coastal Management Program. This information was provided to Council at the May Ordinary Council Meeting in full detail.
4.4.1.02 Develop a Regional Integrated Transport Strategy - multi-year project	Infrastructure Planning	Deliver project according to approved project plan (Develop a Regional Integrated Transport Strategy)	100%	80%	Behind schedule. Project has been delayed due to other priority projects. Continuing to work with Transport for NSW around funding options to outsource resourcing. Project planning for delivery is anticipated to be complete in August 2020. Programme impacted by COVID-19 since last quarter.
4.4.1.10 CW Lake Road - continuation of detailed design of dual lanes - Jindalee to Fernhill intersections and Chestnut Road to Ocean Drive - multi-year project	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan (Lake Road - continuation of detailed design of dual lanes)	100%	75%	Behind schedule. This design only project continues from 2017/18 FY. Design is now progressing towards anticipated completion in the first quarter of 2020-2021 due to additional traffic study investigations required to inform the detailed designs.
4.4.1.12 CW Beechwood Road - continue the design for Stages 5 and 6 of Beechwood Road reconstruction - Riverbreeze to Waugh Street - multi-year project	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan (Beechwood Road - continue the design for Stages 5 and 6 of Beechwood Road reconstruction (Riverbreeze to Waugh Street))	100%	90%	Behind schedule. Stage 5 designs completed during the reporting period. Stage 6 is limited to concept designs only, including higher level crossing of Yippen Creek to improve flood access. Concept designs to continue into 2021 FY.
4.4.1.13 CW Hastings River Drive - Hughes Place to Boundary Street upgrade - multi-year project	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan (Hastings River Drive - Hughes Place to Boundary Street upgrade)	100%	85%	Behind schedule. This project continues from 2017/18 FY. AT&L engaged to undertake detailed design and environmental approvals. Detailed designs are now nearing completion. The contractor has experienced some delays in meeting scheduled progress with completion now expected in Sept 2020. The construction of this segment of Hastings River Dr is subject to additional funding being allocated/secured
4.4.1.45 CW Ocean Drive duplication - Matthew Flinders Drive to Greenmeadows - multi-year project	Infrastructure Planning	Deliver project according to approved project plan (Ocean Drive duplication - Matthew Flinders Drive to Greenmeadows)	100%	0%	Behind schedule. Delayed as project delivery methodology and funding arrangements have not been determined with Transport for NSW (TfNSW). Discussions are ongoing with TfNSW around finalising the Business Case and discussion with the Federal Government regarding funding assistance, noting there is a significant funding gap between available budget and the TfNSW estimated project cost.

2017-2021 Delivery Program and 2019-2020 Operational Plan Exception Report as at 30 June 2020					
Operational Plan Activity 2019-2020	Lead Responsibility	Success Measures	Target	Actual	Comment on Progress 30 June 20
4.4.1.52 AUS-SPEC Review - Undertake a comprehensive review of Councils full suite of design and construction specifications - multi-year project	Infrastructure Planning	Deliver project according to approved project plan (AUS-SPEC Review)	100%	40%	Behind schedule. Implementation of revised specifications have been delayed by other higher priority projects. The re-initiation of this project is pending the successful appointment of the Transport and Stormwater Planning Manager within the Infra Planning Group, occurred 6 July 2020. Once re-initiated the new specifications would be completed in approximately six months.
4.4.1.63 CW Pembroke Road - Stoney Creek Bridge Upgrade - Detailed Design	Infrastructure planning	Deliver project according to approved project plan (Pembroke Road - Stoney Creek Bridge Upgrade - Detailed Design)	100%	85%	Behind schedule. Detailed design component of project deferred to 2020/21 Operational Plan due to other higher priority projects. Strategic alignment and options study underway. Consultation with property owners delayed due to COVID-19.
4.4.1.66 CW Kindee Bridge Upgrade - Detailed Design	Infrastructure Planning, (Project Delivery)	Deliver project according to approved project plan (Kindee Bridge Upgrade - Detailed Design)	100%	75%	Behind schedule. Kindee bridge maintenance and repair works have been prioritised ahead of the initiation of this broader bridge replacement project. Project initiation now expected in the first quarter of 2021 FY.
4.4.1.71 Work with National Parks and Wildlife Services to adjust road boundaries	Infrastructure Planning	Boundary adjustments commenced	100%	0%	Behind schedule. Discussion have been initiated with NPWS for the adjustment of road boundaries, however still no response. Follow up with relevant NPWS staff occur in April 2020 with email and voice message sent. Some progress has been made on adjustments for Houston Mitchell Drive, however no progress has been achieved for the broader boundary interface issue due a lack of response from NPWS Land Information Reserve Establishment Team.
4.4.1.72 Revise and update the Transport Asset Management Plan	Infrastructure Planning	Updated Transport Asset Management Plan	100%	0%	Behind schedule. Commencement delayed due to the need to complete the Service Review for Asset Management and Rural Roads. This project will be deferred to commence following the completion of the services reviews in the 2021 FY.
4.5.1.07 Review Local Environmental Plan (LEP) and Development Control Plan (DCP) provisions to promote development of the Yipin Creek Urban Release Area (UGMS)	Strategy	Report to Council regarding draft planning outcomes by 30 June 2020	100%	85%	Behind schedule. Flood free access and flood evacuation are critical issues with the Planning Proposal. A Councillor Briefing on the link between Beechwood Road and flood free evacuation of the Yipin Creek Planning Proposal will be held on 8 July 2020. It is intended to go to the 12 August 2020 Ordinary Council Meeting with a status update subject to the Councillor Briefing.
4.5.1.11 Investigate the capacity of land at Ocean Dr/Houston Mitchell Dr for light industrial use and at Ocean Dr/Bonny View Dr for light industrial development or for use as a school (UGMS Act 17)	Land Use Planning	Final report to Council re Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments by 30 June 2020	100%	90%	Behind schedule. Public exhibition of the Planning Proposal and draft Development Control Plan provisions for land at the intersection of Ocean Drive and Houston Mitchell Drive, Bonny Hills was completed in late 2019. Submissions are under consideration and the Proponent to provide additional information to Council. Anticipated a report will be presented to Council in Quarter 1 2020/21.
4.5.1.14 Review the Port Macquarie-Hastings Heritage Inventory (UGMS Action 31)	Strategy	Complete Stage 2 of the Heritage Inventory review and report to Council by 30 June 2020	100%	0%	Behind schedule. The Stage 1 review is complete. Stage 2 has not commenced as it needs to respond to the Housing Strategy which is a work in progress. The Housing strategy is a predecessor to completion of the Heritage inventory. This work is forecast to be completed in 2020/21.
4.5.1.16 Undertake a review of the current Development Contributions Deferral Scheme	Strategy	Review of the current Development Contributions Deferral Scheme commenced and reported to Council by 30 June 2020	100%	70%	Behind schedule. The Scope of the Deferral Review has been determined. It needs to be reported to the Executive and potentially to Council.
4.5.2.2 Continue the review of the Major Roads Contributions Plan for completion in 2020-2021 (UGMS Action 23)	Strategy	Complete review of draft works program for review of the Major Roads Contributions Plan by 30 June 2020	100%	0%	Behind schedule. A review of the Major Roads Contributions Plan will be based on a works program to be provided by Council's Transport and Stormwater Network Team. The works program has been delayed due to resource constraints and higher priority projects. Following this works program the costs and priorities will be used to inform the Major Roads Contributions Plan review. Refer to OP action 4.4.4.48.
4.6.1.06 Inform and educate residents, industry and community groups about Council's tree management requirements within the Port Macquarie-Hastings 2013 Development Control Plan (DCP)	Recreation, Property and Buildings	Provide advice in accordance with service standards and industry best practice	100%	97%	Behind schedule. For the period from 1 July 2019 to 30 June 2020 the total number of CRMs received was 1,281. 760 (Public), 228 (Storm), and 106 (illegal tree removal/pruning). 5 CRMs currently exceed the 60 day service standard, with 5 CRMs still to be actioned. Additional information: 477 enquiries (270 public phone and 207 private phone and email enquiries). This does not include calls transferred from call centre to mobile or landline. In addition, there were 230 internal enquiries.
4.6.1.09 Complete preparation of a Comprehensive Koala Plan of Management (CKPoM) for coastal areas in the Port Macquarie-Hastings	Strategy	Report CKPoM to Council for adoption by 31 December 2019	100%	70%	Behind schedule. Report went to the November 2019 Ordinary Council Meeting. A new State Environmental Planning Policy (SEPP) has been issued subsequently. The State Government then much later provided guidance paper on the SEPP. The implications are not clear and puts this item at risk. A report will go to the 15 July Ordinary Council Meeting detailing the impact of the new SEPP and guidance papers on the production schedule for the CKPoM.
4.7.1.06 CW install solar energy systems at selected existing Council facilities	Recreation, Property and Buildings	Install solar energy systems at identified Council facilities	100%	90%	Behind schedule. Due to COVID-19 there is a medium possibility due to stock and staff availability that these projects could carry into first quarter of 2020-2021. All three sites are planned to have practical completion by the end of August 2020.





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**2017-2021 DELIVERY PROGRAM and  
2019-2020 OPERATIONAL PLAN**

**SIX MONTHLY PROGRESS REPORT AS AT 30 JUNE 2020.**

## COMMUNITY THEME 1 Leadership and Governance

### 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.

**Delivery Program 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 Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.1.1 Engage with the community using a range of methods to facilitate community involvement in decision making	Community Engagement	1. Capture the number of engagement activities undertaken and number of participant including online	1. 100%	1. 100%	Achieved. Since the COVID-19 Pandemic, Council has been looking at innovative ways to stay connected with our community. The Library delivered digital events, Author talks and an annual 'One Book One Community' Panel discussion, with excess of 35,000 views. Youth Week events delivered digitally. New social media platforms including Snap Chat, TikTok, Instagram, as well as Facebook, direct emails and Webpage were used. Over 121,000 impressions, a reach of over 7,800 and direct engagement with 1,000 of the local community. Community engagement on the Operational Plan was normally undertaken face to face, however, a new approach of engagement was trailed with a Live Facebook Q & A. Over 10,000 people viewed via their news feed and 2,600 people viewed the video. Other community engagement sessions undertaken on the Coastal Management Program with a Live Q & A session, estimated reach of over 2,000. An Invasive Weed Q & A session, with an estimated reach of 1,279 and Flying Fox Engagement - Zoom Meeting with 17 attendees.

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

**Delivery Program 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 Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Increased community participation on Council's Have your Say online portal	2. 100%	2. 100%	Achieved. Total registrations increased from 4,221 to 4,367. Have your Say is an important tool to connect with our community. Council continued to engage on a number of projects, some of which included: Developing a Community Plan for Rollo's Plains, Draft Investment Policy 2020, Pilot Training and Aircraft Noise Airport, Draft Coastal Management Program - Scoping Study, Draft Roadside Vegetation Management Policy, Imagine our future as a smart community, Ruins Way playground upgrade, Bonny Hills Reserves Master Plan, Community Strategic Plan - Think 2050 and the Draft 2017-2021 (Revised 2020) Delivery Program and 2020-2021 Operational Plan. Quarterly statistics are: Number of new projects: 8 New registrations: 146 Total page views: 6,247 Total visitors: 2,608 Engaged visitors: 740 Informed visitors: 2,484 Aware visitors: 3,086 The top project on Have Your Say this quarter was Pilot training and Aircraft Noise with 573 submissions. A drop of 5,500 letters to residents in the local area was undertaken. The Orbital Road project is still of interest with documents and video still being accessed, with 8 of the top 10 documents accessed being related to this project.



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

**Delivery Program 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 Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.1.4 Implement strategic communications priorities in accordance with Council's Working Together Framework	Customer Experience and Communications	1. Deliver regular, positive and engaging media messaging	1. 100%	1. 100%	Achieved. 839 media releases, statements, events, alerts, announcements and responses were actioned from July 2019 to June 2020. Additionally, council commenced a weekly newsletter throughout the COVID period to keep the community informed of available services. These appeared through a mix of different channels - newspapers, TV and radio and included a combination of driving positive messaging on Council services and projects, Mayoral messages and managing media enquiries. During this period, the following were most topical - COVID-19, Lake Cathie Opening Strategy and Council decision making.
		2. Increase community engagement with Council's digital channels	2. 100%	2. 100%	Achieved. Strategic communication priorities continue to be updated through the communications, governance and community relations portfolio under the Working Together Framework. Communications planning and delivery around these priorities is ongoing with positive increases in digital engagement demonstrated as per commentary for 1.1.5.3.
1.1.1.5 Implement strategic education priorities in accordance with Council's Working Together Framework	Customer Experience and Communications	1. Education messaging program implemented in accordance with identified priorities	1. 100%	1. 100%	Achieved. The team have developed an Education Framework and supporting procedures to work with the organisation to deliver a holistic education program.

**Community Strategic Plan:** 1.1 Inform and engage with the community about what Council does using varied communication channels  
**Delivery Program Objective:** 1.1.2 Support community involvement in decision making through education around Council matters and services

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.2.1 Engage the community on developing the 2021 Community Strategic plan to drive council projects and programs into the future	Community Engagement	1. Engagement commenced for the Community Strategic Plan by 1 February 2020	1. 100%	1. 100%	Achieved. The engagement program for the Community Strategic Plan commenced in December 2019 and continued with the community in a number of ways including Q & A's with Ambassadors for the project. An open survey on Have Your Say remains live and is continuing to receive comments. However, due to the impact of the COVID-19 Pandemic, the original engagement timeline has been extended, with a re-launch of the engagement program expected in July 2020. The youth aspect of the Think 2050 campaign continued, with the launch of the Minecraft competition for schools.
1.1.2.3 Undertake the Community Planning Program	Community Engagement	1. Community plans developed by 30 June 2020	1. 100%	1. 100%	Achieved. Community Plans have been developed and endorsed for: Bonny Hills, Comboyne Byabarra, Lake Cathie, Telegraph Point and Pappinbarra and surrounds. Plans that have been on exhibition and will go to a Council meeting in August 2020 include: Camden Haven, Kew, Kendall, Lorne and Herons Creek, Wauchope and Rolland Plains. Plans that are in draft and with their Community Council Action Teams (CCAT) and will go to the September 2020 Council meeting for endorsement are: Beechwood and Pembroke, Hastings Hinterland and North Shore. Port Macquarie plans will be developed after the Think 2050 Engagement.

**Community Strategic Plan:** 1.1 Inform and engage with the community about what Council does using varied communication channels  
**Delivery Program Objective:** 1.1.2 Support community involvement in decision making through education around Council matters and services

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Facilitate Community Council Action teams	2. 100%	2. 100%	Achieved. Council continued to work with Community Council Action Teams, albeit via digital means due to the impacts of COVID-19. 12 community plans have now been developed and are either endorsed, in final review or out with community for further comment.
		3. Implement Community Plans	3. 100%	3. 100%	Achieved. Council continue to work with communities to develop community plans with five plans endorsed and seven more are currently underway. Work on key actions within the plans include the Bonny Hills Masterplan engagement, Kew Main Street, Bain Park Masterplan and Beach to Beach Riverwalk.
		1. Complete Local Strategic Planning Statement (LSPS) for presentation to the NSW Department of Planning and Environment by 30 June 2020	1. 100%	1. 80%	Behind schedule. Council have been corresponding with the Department Primary Industry and Environment (DPIE) regarding the progress of the LSPS and Council's intention to progress with the preparation of the LSPS and review in line with the new Community Strategic Plan (CSP) as the deadline for this has been extended to 2022 due to COVID-19. The DPIE however, have directed that Council need to submit the adopted LSPS by 30 September 2020 and the draft document will go on public exhibition in August 2020.

**Community Strategic Plan:** 1.1 Inform and engage with the community about what Council does using varied communication channels  
**Delivery Program Objective:** 1.1.3 Engage with the community on impacts and changes to services.

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.3.2 Develop a Community Engagement program to enable community involvement in decision making in line with the Working Together Framework	Community Engagement	1. The Community Engagement program is developed and implementation of actions commenced by 30 June 2020	1. 100%	1. 100%	Achieved. Over the past three months we have had to learn to do engagement in new and innovative ways. We created a new Engagement platform on Facebook - Engage PMH, undertook live Facebook Q and As and held Zoom meetings with communities of interest on Flying Foxes and Weeds. Key projects included; - Developing a Community Plan for Rolloads Plains - Draft Investment Policy 2020 - Pilot Training and Aircraft Noise Airport - Draft Coastal Management Program - Scoping Study - Draft Roadside Vegetation Management Policy - Imagine our future as a smart community - Ruins Way playground upgrade - Bonny Hills Reserves Master Plan - Community Strategic Plan - Think 2050 - Draft 2017-2021 (Revised 2020) Delivery Program and 2020-2021 Operational Plan.

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

**Delivery Program Objective:** 1.1.3 Engage with the community on impacts and changes to services.

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.3.3 Undertake the Community Satisfaction Survey	Community Engagement	1. Undertaken a community satisfaction survey by 31 December 2019	1. 100%	1. 100%	Achieved. Community Satisfaction Survey was completed in April 2020. We surveyed 605 community members across the region between 2-8 April 2020. Overall satisfaction was 90% which is up from the 2017 survey of 87%. 45 out of the 48 services had a T3B satisfaction rating of 70% or higher and 88% of residents rated Councils current level of communication as somewhat satisfied to very satisfied. The top drivers of overall satisfaction are: The level of communication Council currently has with the community Strategic Planning of the LGA Providing Strong leadership and opportunity to engage with Council Most valued aspects of Port Macquarie Hastings are; Natural Environment Central location Community Feel and Lifestyle the area provides.

**Delivery Program Objective:** 1.1.4 Provide easy to understand and accessible community reporting.

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.4.1 Produce and submit the annual report in accordance with Local Government Act requirements	Organisational Performance	1. Have annual report adopted by Council and submitted to the Office of Local Government (OLG) by 30 November	1. 100%	1. 100%	Achieved. The 2018-2019 Annual Report was presented and adopted at the 20 November 2019 Ordinary Council Meeting. It was submitted to the Office of Local Government by 30 November 2019 in line with legislation requirements.

**Community Strategic Plan:** 1.1 Inform and engage with the community about what Council does using varied communication channels  
**Delivery Program Objective:** 1.1.4 Provide easy to understand and accessible community reporting.

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Publish community report card (Part A); statutory report (Part B); and financial statements (Part C) for distribution	2. 100%	2. 100%	Achieved. The 2018-2019 Annual Report including the Community Report Card was adopted at the 20 November 2019 Ordinary Council Meeting. The report is available on Council's website and in hard copy at Customer Service Offices and Library Branches in Laurieton, Port Macquarie and Wauchope.
1.1.4.2 Provide progress reports on implementation of the Delivery Program in accordance with Local Government Act requirements	Organisational Performance	1. Provide Delivery Program progress report to Council on a six monthly basis	1. 100%	1. 100%	Achieved. Six monthly Delivery Program Progress Reports for the periods, January to June 2019 and July to December 2019, were presented to the Ordinary Council Meetings in September 2019 and February 2020 respectively. The next progress report is scheduled to be presented to the September 2020 Ordinary Council Meeting.
1.1.4.3 Undertake development of the one year Operational Plan in accordance with Local Government Act requirements	Organisational Performance	1. Have an annual operational plan adopted by 30 June	1. 100%	1. 100%	Achieved. The documents were placed on public exhibition from 19 March 2020 to 17 April 2020. Over 170 submissions were received which helped inform the final development of the documents. The 2017-2022 Delivery Program and 2020-2021 Operational Plan were adopted at the 17 June 2020 Ordinary Council Meeting.
1.1.4.4 Review the current corporate reporting tool to ensure continuous improvement of functionality to meet the needs of the business	Organisational Performance	1. Performance reporting tool reviewed to identify continuous improvement opportunities	1. 100%	1. 100%	Achieved. Review of corporate reporting tool completed. Implementation of a new corporate reporting tool is planned in the new financial year.

**Community Strategic Plan:** 1.1 Inform and engage with the community about what Council does using varied communication channels  
**Delivery Program Objective:** 1.1.4 Provide easy to understand and accessible community reporting.

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.4.5 Undertake review of Resourcing Strategy in accordance with Local Government Act requirements	Organisational Performance	1. Organised Resourcing Strategy working group to deliver reviewed Resourcing Strategy	1. 100%	1. 100%	Achieved. Resourcing Strategy Working Group has initially conducted the Long Term Financial Plan (LTFP) review in conjunction with the development for the Delivery Program (revised 2020) and Operational Plan 2020-2021. A desktop review of the Workforce Planning Plan and Asset Management Plan has been completed.

**Delivery Program Objective:** 1.1.5 Develop an effective and coordinated community focused Communications Strategy

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.5.3 Use a variety of communication channels to ensure the community are well-informed, involved in Council decision making and understanding of Council priorities	Customer Experience and Communications	1. Deliver regular and engaging communications utilising a range of communication channels	1. 100%	1. 100%	Achieved. Throughout the year, Council used a broad range of communication channels to ensure the community was well-informed of Council initiatives, projects and related matters. This included delivering a quarterly rates newsletter, regular media exposure, utilising community newsletters, radio and television advertising, Facebook and website content. Other communication channels included project signage, bus shelters, digital billboard and letter box drops.

**Community Strategic Plan:** 1.1 Inform and engage with the community about what Council does using varied communication channels  
**Delivery Program Objective:** 1.1.5 Develop an effective and coordinated community focused Communications Strategy

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Increase community engagement with Council's digital channels	2. 100%	2. 100%	Achieved. Likes for the corporate Facebook page increased by 3.93% from 10,905 to 11,334. During the fourth quarter, we reached 771,232 people and 92,369 people engaged with our Facebook page. Page engagement increased by 80% on the same period from the previous year. Page reach increased by 5.55% on the same period from the previous year. YouTube received 15.7K video views during the fourth quarter with an average watch time of 4 minutes, 49 seconds. This is an increase in views of 86.9% and watch time has increased by 319.62% on the same period last year. This can be attributed to YouTube being more actively used during this fourth quarter, with Council meetings now live streamed twice a month, and the Mayor's video updates loaded up weekly. The impact of COVID-19 meant that we commenced more Facebook live sessions and established a Facebook group, activated Instagram and commenced sharing messages and information via TikTok.
1.1.5.4 Ensure communication and education channel use is informed by research and understanding of preferred community communication methods	Customer Experience and Communications	1. Communications priorities and methods are informed by insights from the 2019 communications research	1. 100%	1. 100%	Achieved. During the fourth quarter, there were 83,717 users of the website, 149,258 sessions and 337,437 page views on the website. The number of pages accessed per session has increased by 43% from 1.5 pages to 2.2 pages per session. Overall, in the past year: 2019-2020, our website received 479,471 users, 799,405 sessions and 1,514,344 page views.



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

**Delivery Program Objective:** 1.1.6 Continue to promote access by the community to Councillors

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.1.6.1 Manage Councillor development program	Governance	1. Manage Councillor development	1. 100%	1. 100%	Achieved. The Councillor Professional Development Program has been managed as needs are identified and as per the adopted policy.
1.1.6.2 Deliver the Take the Council to the Community program	Governance	1. Hold two off-site Council meetings during the year (March Wauchope, October Laurieton)	1. 100%	1. 100%	Achieved. The October 2019 Ordinary Council meeting was held in Laurieton and the Ordinary Council meeting for March 2020 was held in Wauchope.

**Community Strategic Plan:** 1.2 Maintain strong partnerships between all stakeholders — local, state and federal — so that they are effective advocates for the community

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.2.1.1 Convene meetings with local business chambers for the Mayor and Senior Staff	Strategy and Growth	1. Schedule meetings throughout the year (with local business chambers for the Mayor and Senior Staff)	1. 100%	1. 100%	Achieved. Regular meetings held with Port Macquarie, Camden Haven and Wauchope Chambers, Northside and Lake Cathie Progress Associations with the Mayor and senior staff in attendance.
1.2.1.2 Convene meetings with State and Federal Members for the Mayor and Senior Staff	General Manager's Office	1. Schedule meetings throughout the year (with State and Federal Members for the Mayor and Senior Staff)	1. 100%	1. 100%	Achieved. Acting GM met with State Member on the 26th June for a grant funding update. State Member also due to meet with the Mayor on 2 July regarding the opening of Stuart Park.

**Community Strategic Plan:** 1.3 Demonstrate leadership**Delivery Program Objective:** 1.3.1 Provide effective leadership and equity

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.3.1.1 Participate in the Mid North Coast Joint Organisation (MNCJO)	General Manager's Office	1. Attendance at the Regional Joint Organisation meetings by the Mayor and General Manager	1. 100%	1. 100%	Achieved. GM attended Regional JO's Chair's forum on 28 May, GMAC on 12 June and the MNCJO Board Meeting is scheduled for Friday 3 July which the Mayor is attending in person along with a representative from the Executive Team.

**Delivery Program Objective:** 1.3.2 Build trust and improve Council's reputation through transparency, good decision making and living Council's Values

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.3.2.1 Manage the Legislative Compliance Register	Governance	1. Undertake annual review of the Legislative Compliance Register and report on it and consider improvements to the Legislative Compliance process	1. 100%	1. 100%	Achieved. The Legislative Compliance review for 2018-2019 was presented to the August 2019 Audit, Risk and Improvement Committee Meeting and then adopted at the September 2019 Ordinary Council Meeting.
1.3.2.2 Produce and submit the annual Code of Conduct complaints report in accordance with Office of Local Government requirements	Governance	1. Report prepared annually and presented to Council no later than 31 December	1. 100%	1. 100%	Achieved. The annual report on Code of Conduct complaints has been adopted at the Ordinary Council Meeting in December 2019.
1.3.2.3 Produce and submit the annual Government Information Public Access (GIPA) Report in accordance with the GIPA Act requirements	Governance	1. Submit GIPA annual report to Information and Privacy Commission no later than 31 October	1. 100%	1. 100%	Achieved. The 2019-2020 GIPA Annual Report was submitted to the IPC in line with required timeframes.
1.3.2.4 Coordinate lodgement of annual Disclosure of Interest Returns	Governance	1. Annually update Disclosure Register by 30 September	1. 100%	1. 100%	Achieved. Disclosure register updated and a report adopted at the October 2019 Ordinary Council meeting.

**Community Strategic Plan:** 1.3 Demonstrate leadership**Delivery Program Objective:** 1.3.2 Build trust and improve Council's reputation through transparency, good decision making and living Council's Values

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.3.2.6 Report on Public Interest Disclosures (PID)	Governance	1. Report biannually in July and February on any Public Interest Disclosures (PIDs)  2. Submit PID annual report to NSW Ombudsman by 31 October	1. 100%  2. 100%	1. 100%  2. 100%	Achieved. The PID online reporting tool was used to submit the biannual statistical reports to the NSW Ombudsman on 16 July 2019. It is expected that the reporting for 2019-2020 will be achieved in accordance with deadlines.  Achieved. The PID Annual report to NSW Ombudsman was submitted on 8 October 2019.
1.3.2.7 Submit annual performance reporting for the water and sewer business to NSW Office of Water for benchmarking comparisons	Infrastructure Planning	1. Collate and forward performance reporting data to NSW Office of Water annually	1. 100%	1. 100%	Achieved. Annual report submitted 10 October 2019. Additional compliance audit being undertaken this year as part of 4-year cycle.

**Delivery Program Objective:** 1.3.3 Ensure there is appropriate management of risk to mitigate impact for Council and the community

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.3.3.2 Manage the Risk Management Action Plan, as part of the state wide continuous improvement program	Governance	1. Review and implement the Risk Management Action Plan on a quarterly basis and report to Executive	1. 100%	1. 100%	Achieved. The Insurance Risk Management Action Plan (IRMAP) has been developed.
1.3.3.5 Improve the Risk Management Framework	Governance	1. Improve the Risk Management Framework in line with project milestones	1. 100%	1. 100%	Achieved. The Risk Management Framework has had a review of the Risk Culture for Council's insurers completed and a Safety Audit undertaken. Improvement to the framework is ongoing annually.
1.3.3.6 Capture high risk electrical assets in Council's asset management system	Infrastructure Planning	1. Complete electrical asset data survey for Council owned assets by 30 June	1. 100%	1. 100%	Achieved. All high risk electrical assets have been captured with future assets being picked up as part of the project completion reporting process.

**Community Strategic Plan:** 1.3 Demonstrate leadership**Delivery Program Objective:** 1.3.3 Ensure there is appropriate management of risk to mitigate impact for Council and the community

<b>Operational Plan Activity 2019 - 2020</b>	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>	<b>Comment on Progress</b>
1.3.3.7 Manage the Delegation Framework	Governance	1. Manage and consider improvements to the Delegation framework	1. 100%	1. 100%	Achieved. A review of Director delegations has been undertaken. This Operational Plan action will continue into 2020-2021 and will be informed by the recruitment of a new General Manager, who may wish to review and or amend the delegation framework.
1.3.3.8 Respond to formal information requests within required timeframes	Governance	1. Respond to formal GIPA requests within the required timeframes	1. 100%	1. 100%	Achieved. All requests managed within the legislative time frames for the December 2019 to June 2020 reporting period.

**Delivery Program Objective:** 1.3.4 Manage our workforce to deliver community outcomes

<b>Operational Plan Activity 2019 - 2020</b>	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>	<b>Comment on Progress</b>
1.3.4.1 Implement workplace strategies and processes to continue to improve Human Resources	Organisational Performance	1. Implementation of Workforce Management Strategy actions	1. 100%	1. 100%	Achieved. The Workforce Management Strategy includes 17 action items to be delivered during the period 2017-2021. The majority of these actions have been delivered or are underway. Recent actions delivered include development and adoption of an Equity and Diversity Strategy, review of a large number of Human Resources policies, and a trial of a Knowledge Sharing program. Work will continue into 2020-2021.

**Community Strategic Plan:** 1.3 Demonstrate leadership**Delivery Program Objective:** 1.3.4 Manage our workforce to deliver community outcomes

<b>Operational Plan Activity 2019 - 2020</b>	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>	<b>Comment on Progress</b>
1.3.4.2 Implement workplace strategies and processes to continue to improve Work, Health and Safety.	Organisational Performance	1. Implementation of Work, Health Safety Strategy actions	1. 100%	1. 100%	Achieved. An audit was completed in 2019 which identified actions to be completed that are currently in progress. Achievements include the review and update of a number of key policies and procedures, the commencement of increased safety communications to better inform and educate the organisation with respect to safety and growing and the commencement of the Vault system implementation to support and further develop Councils approach to managing safety in the workplace.
1.3.4.3 Implement workplace strategies and processes to continue to improve Learning and Development	Organisational Performance	1. Implementation of Learning and Development Strategy actions	1. 100%	1. 100%	Achieved. Council has delivered a number of learning and development initiatives including compliance training and personal development and leadership programs. A new Educational assistance Policy has been implemented to support staff with further education and qualifications. In response to COVID-19 we adapted the way in which training was delivered including facilitating more online and Microsoft Teams based learning and information sessions which has proven to be a success and an improvement that can continue to be utilised in the future.
1.3.4.4 CW Construct new works depot in Port Macquarie (multi-year project in 2017-18 linked to 1.3.4.5 CW)	Strategy	1. Deliver project according to approved project plan (Works Depot in Port Macquarie)	1. 100%	1. 0%	Behind schedule. The Depot Strategy needs to be reconsidered as a holistic study. The Port Macquarie and Wauchope needs and opportunities emerging may inform the execution of this item. The Works Depot relocation described at OP 1.3.4.5 is a predecessor to this work and before progressing will be subject to the holistic study of needs and opportunities.

**Community Strategic Plan:** 1.3 Demonstrate leadership**Delivery Program Objective:** 1.3.4 Manage our workforce to deliver community outcomes

<b>Operational Plan Activity 2019 - 2020</b>	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>	<b>Comment on Progress</b>
1.3.4.5 CW Works Depot relocation - preconstruction/design (multi-year project in 2017-18 linked to 1.3.4.4 CW)	Strategy	1. Deliver project according to approved project plan (Works Depot relocation)	1. 100%	1. 0%	Behind schedule. The project was at risk from March as a result of the COVID-19 recovery response work. The project has not been delivered but the Planning work is complete and as a result Kingfisher Road now has a lawfully established use as a depot site. This element of the project was complete at 30 June 2020. The next steps are to establish a working party of end users and plan and manage the transition to and operations from the new site. This is subject to a holistic review of depot operations across the portfolio and the needs and opportunities.

**Delivery Program Objective:** 1.3.5 Build an engaged workforce

<b>Operational Plan Activity 2019 - 2020</b>	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>	<b>Comment on Progress</b>
1.3.5.1 Continue the development of a highly engaged workforce who are solutions focused	Organisational Performance	1. Deliver annual Employee Engagement Days	1. 100%	1. 50%	Behind schedule. Planning for the 2020 Employee Engagement Days commenced by the working group and was well advanced for the days to take place in May 2020, however, in response to COVID-19 the decision was made to postpone the Employee Engagement Days. At this stage they will be rescheduled to later in 2020 or early 2021. The working group still continue to plan for the days so that they can take place once a rescheduled date is confirmed.

**Community Strategic Plan:** 1.3 Demonstrate leadership  
**Delivery Program Objective:** 1.3.5 Build an engaged workforce

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Embed, streamline and measure Employee Engagement Process (EEP) and implement identified areas of improvement	2. 100%	2. 100%	Achieved. Over the past 12 months, there has been a strong focus to embed Employee Engagement through the organisation, providing support to people leaders, process improvements and education sessions on several topics. The work will continue to embed and improve the Employee Engagement Process.
		3. Identify and implement new employee engagement opportunities	3. 100%	3. 100%	Achieved. Opportunities for new ways to engage with employees are consistently being identified. There has been a strong focus on up skilling our people leaders through providing a range of formal and informal education opportunities and resources and tools.
		4. Implement actions from the 2019 and 2020 Employee Engagement Surveys	4. 100%	4. 100%	Achieved. The 2020 Annual Employee Engagement Survey was completed in February 2020. Teams are now tasked with meeting to discuss Q12 Action Planning. This has been followed up in several SLT meeting and support and education is being provided to any People Leaders new to the organisation.
		1. Implementation of project plan commenced	1. 100%	1. 100%	Achieved. Project plan implementation has commenced and will continue to progress throughout 2020-2021.
1.3.5.3 Implement the Human Resource Information System (HRIS)	Organisational Performance				

**Community Strategic Plan:** 1.3 Demonstrate leadership**Delivery Program Objective:** 1.3.5 Build an engaged workforce

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Project plan developed	2. 100%	2. 85%	Behind schedule. Project plan under development however, COVID-19 has caused a delay in the ability to view potential system demonstrations which are to be rescheduled. This in turn will cause a delay in the procurement of a new Human Resources Information System (HRIS). Implementation will continue into 2020-2021.

**Community Strategic Plan:** 1.4 Use innovative, efficient and sustainable practices**Delivery Program Objective:** 1.4.1 Provide efficient technology and inclusive digital systems that are easy to use and easy to access

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.4.1.1 CW Undertake delivery of Digital Technology projects (DT - Roadmap Program - multi-year projects) including continued implementation of Authority Asset Management System	Digital Technology	1. Deliver project according to approved project plan (ICT - Projects)	1. 100%	1. 100%	Achieved. The Digital Technology project work has continued throughout the COVID period. The projects remain on track for delivery. Work will continue into 2020-2021.
1.4.1.2 CW Undertake delivery of ICT projects (ICT - Renewals - multi-year project)	Digital Technology	1. Deliver project according to approved project plan (ICT - Renewals)	1. 100%	1. 100%	Achieved. The Digital Technology project work has continued throughout the COVID period. The projects remain on track for delivery.
1.4.1.5 Develop asset design and as constructed templates as part of the Asset Data Standards Review	Infrastructure Planning	1. Develop an Auto CAD file template for asset design and as-constructed plans that meets Asset Design As Constructed (ADAC) standards by 30 June 2019	1. 100%	1. 80%	Behind schedule. Project being developed as part of Asset Designed As Constructed (ADAC) and Asset Data Standards review. Work between the Assets Team, GIS and Asset Planning Engineers has commenced and will continue into 2020-2021 and completion is expected by 30 June 2022.



**Community Strategic Plan:** 1.4 Use innovative, efficient and sustainable practices

**Delivery Program Objective:** 1.4.2 Deliver agreed services at the agreed service level at best value

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.4.2.1 Work across the organisation to facilitate the implementation of the Business Improvement Strategy	Organisational Performance	1. Facilitate process improvements	1. 100%	1. 100%	Achieved. The Business Improvement Office (BIO) worked across various service areas to facilitate process improvement initiatives. Over the past year, BIO have developed a number success story templates to help share some of the process improvements being made across the Council, the intent of developing these stories highlight the continuous improvement culture at PMHC. BIO assisted the Finance Team to map the current bonds release process to understand the steps required and timing of the activities involved. BIO also worked with the Development and Environment Administration Team to help progress process improvements to improve productivity as well as advice and support the Project Delivery Team on creating a central knowledge bank for their high value processes. Finally, BIO have been able to successfully design, test and implement a number of online forms designed to improve the employee experience and reduce approval times.

**Community Strategic Plan:** 1.4 Use innovative, efficient and sustainable practices

**Delivery Program Objective:** 1.4.2 Deliver agreed services at the agreed service level at best value

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Facilitate service reviews	2. 100%	2. 100%	Achieved. The Business Improvement Office (BIO) identified and commenced a program of 5 service reviews in the 2019/2020 year. The Development Application Internal Referral review been completed with the new process operational in the test environment. The new process will go live once the workforce as transitioned back to workplace post COVID-19 restrictions. A review of the Stormwater Asset Condition Collection process has been completed, with mobile data capture and an inspection plan drafted. BIO have facilitated the initial scoping of Regional Integrated Transport Strategy and transferred the development of the document to the Strategy team for completion. A review of the Development Application Lodge and Allocation process has commenced, although on hold until Internal Referral review has been completed. Finally, a high level review into Council's on call management practices began in the final quarter of the 2019/20 Financial Year, which will present key insights on how Council currently manages on call activities across the business.

**Community Strategic Plan:** 1.4 Use innovative, efficient and sustainable practices

**Delivery Program Objective:** 1.4.3 Deliver a customer focused service that provides the community a consistent experience of Council

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.4.3.1 Deliver high quality and valued customer experiences that place the customer at the Centre of what Council does	Customer Experience and Communications	1. Community sentiment data is used to inform how we design and provide services to our customers 2. Develop a Community Satisfaction survey tool to measure customer satisfaction 3. Improved percentage (greater than 75%) of first contact resolution of customer enquiries (less calls transferred)	1. 100%  2. 100%  3. 75%	1. 100%  2. 100%  3. 93%	Achieved. Feedback from residents receiving weekly newsletter drove content for social and other channels.  Achieved. Micromex survey conducted April 2020.  Achieved. Service standard set target of 75% achieved 93%. Stats for the 2019/2020 FY: Number of calls = 78,449 Number of counter enquiries = 76,435 Number of emails received = 34,685 The reduced number of counter enquiries was due to the offices being closed for 51 working days.
1.4.3.2 Provide up to date information for our community through a single source of truth	Customer Experience and Communications	1. Develop Council Knowledge Base by 30 June 2020	1. 100%	1. 80%	Behind schedule. Impact of COVID-19 has delayed the establishment of the new Teams environment through which the knowledge base will be implemented.

**Community Strategic Plan:** 1.5 Ensure strong corporate and financial management that is transparent and accountable

**Delivery Program Objective:** 1.5.1 Manage Council's financial assets and provide accurate, timely and reliable information

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.5.1.01 Monitor and accurately report on Council's financial position in accordance with Local Government Act requirements	Financial Services	1. Lodge audited financial statements with Office of Local Government by 31 October	1. 100%	1. 100%	Achieved. Council's audited financial statements for the year ended 30 June 2019 were lodged with the Office of Local Government by the required deadline of 31 October 2019, with an unqualified audit opinion.

**Community Strategic Plan:** 1.5 Ensure strong corporate and financial management that is transparent and accountable  
**Delivery Program Objective:** 1.5.1 Manage Council's financial assets and provide accurate, timely and reliable information

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Submit three quarterly budget review statements and an annual report submitted to Council	2. 100%	2. 100%	Achieved. All three quarterly budget reviews were submitted and adopted by Council in relation to the 2019-2020 budget. The 2018-2019 Annual Report was also adopted by Council.
1.5.1.02 Manage Council's investment portfolio to optimise investment returns within the constraints of the policy, the Local Government Act and Regulations	Financial Services	1. Exceed benchmark for investment return 2. Table report to Council monthly	1. 100% 2. 100%	1. 100% 2. 100%	Achieved. Investment return has exceeded the benchmark for each month in isolation and for the financial year to date. Achieved. Reports have been presented to Council within the required timeframes.
1.5.1.03 Develop annual Operational Plan budget and review the Long Term Financial Plan	Financial Services	1. Develop the draft annual budget in line with Integrated Planning and Reporting time frames 2. Have final budget adopted by Council by 30 June 3. Review the Long Term Financial Plan in line with the budget	1. 100% 2. 100% 3. 100%	1. 100% 2. 100% 3. 100%	Achieved. The 2020-2021 annual budget was adopted by Council in June 2020 in accordance with the required timeframes. Achieved. The 2020-2021 annual budget was adopted by Council in June 2020 in accordance with the required timeframes. Achieved. The Long Term Financial Plan was reviewed as part of the development of the 2020-2021 Operational Plan and Budget.
1.5.1.04 Prepare monthly financial reports for Council	Financial Services	1. Present financial reports to Council as required	1. 100%	1. 100%	Achieved. Monthly financial reports have been presented to Council as required.
1.5.1.06 Progress Partridge Creek residential development planning	Strategy	1. Provide a report to Council outlining Partridge Creek residential development options upon receipt of updated land valuation	1. 100%	1. 85%	Behind schedule. Progress is sound. Bushfire and ecology have been incorporated into the revised location of B1 zone. There are some road design issues being managed to receive Gateway approval. There are some issues with the Tree Protection Zone in the B1 zone which will need to be resolved before completion.

**Community Strategic Plan:** 1.5 Ensure strong corporate and financial management that is transparent and accountable  
**Delivery Program Objective:** 1.5.1 Manage Council's financial assets and provide accurate, timely and reliable information

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.5.1.07 Progress Greenmeadows Drive residential development planning	Strategy	1. Develop concept plan for Greenmeadows Drive development  2. Lodge Development Approval application for Greenmeadows Drive development	1. 100%  2. 100%	1. 0%  2. 0%	Behind schedule. Development Planning was placed on hold pending a decision on broader facility ownership and usage in the precinct. The risks around a community facility in the precinct needs to be mitigated before proceeding with a residential development to ensure the community do not lose community facilities.  Behind schedule. Development Planning was placed on hold pending a decision on broader facility ownership and usage in the precinct. The risks around a community facility in the precinct needs to be mitigated before proceeding with a residential development to ensure the community do not lose community facilities.
1.5.1.08 Conduct Asset Revaluation for Transport assets (Roads, Bridges, Footpaths, Airport Runway)	Infrastructure Planning	1. Complete asset revaluation by 30 June 2020	1. 100%	1. 95%	Behind schedule. Asset Revaluation for Stormwater, Flood and Foreshore Assets is yet to be completed, pending CCTV condition analysis of Stormwater network, which is underway. Work will continue into 2020-2021 with completion planned for September 2020.

**Community Strategic Plan:** 1.5 Ensure strong corporate and financial management that is transparent and accountable

**Delivery Program Objective:** 1.5.1 Manage Council's financial assets and provide accurate, timely and reliable information

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.5.1.09 Progress Emily Avenue residential development planning	Strategy	1. Develop concept plan for Emily Avenue development	1. 100%	1. 0%	Behind schedule. There has not been progression to the "concept plan" to be able to meet the definition of the OP item. There has however been a DA approval for the project on 6 May 2020. as a result the progress has been excellent given the impact of COVID-19 response and recovery. The present status is a contamination assessment to support the future subdivision of the site. This information will help inform Council's appetite to develop or sale of the approved subdivision to a third party. Emily Avenue will be resolved in the 2020/21 year.
1.5.1.10 Implement Asset Designed As Constructed (ADAC) computerised automated process system	Infrastructure Planning	2. Lodge Development Approval application for Emily Avenue development  1. Complete implementation of ADAC within Council operations by 30 June 2020	2. 100%	2. 100%	Achieved. DA for residential subdivision approved at the Ordinary Council Meeting on 20 May 2020 subject to planning and development conditions.
			1. 100%	1. 90%	Behind schedule. Undertaking the ADAC implementation is underway and will continue into 2020-2021.

**Delivery Program Objective:** 1.5.2 Use procurement, tendering, purchasing and contract management approaches that are transparent and equitable

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.5.2.1 Continue to implement and monitor the procurement strategy action items	Financial Services	1. Completion of Procurement Strategy Implementation Plan actions within agreed timeframes	1. 100%	1. 100%	Achieved. The procurement strategy action items have been completed within the required timeframes.

**Community Strategic Plan:** 1.5 Ensure strong corporate and financial management that is transparent and accountable

**Delivery Program Objective:** 1.5.2 Use procurement, tendering, purchasing and contract management approaches that are transparent and equitable

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.5.2.2 CW Ensure plant purchases are in line with the plant replacement program (Plant Purchases and Disposals - multi-year project)	Infrastructure Operations	1. Plant replacement program delivered according to approved schedule	1. 100%	1. 80%	Behind schedule. Plant replacement finished at 80% due to recent events and work load priorities creating difficulties in procuring plant. The recent situation with COVID created difficulty in the process for tendering and evaluation. A shortage of truck cab/chassis with limitations to imports was also experienced.
1.5.2.3 Manage and maintain Council's Plant and Fleet to support the operational activities of Council	Infrastructure Operations	1. Plant and Fleet managed and maintained in accordance with adopted program and budget	1. 100%	1. 100%	Achieved. Plant and Fleet has been managed throughout the year in accordance with the adopted program.
1.5.2.5 Undertake procurement activities in accordance with legislative requirements and that are transparent	Financial Services	1. Capture contracts awarded with a value of \$150,000 (excluding GST) or more	1. 100%	1. 100%	Achieved. All contracts above \$150,000 have been captured as required.

**Delivery Program Objective:** 1.5.3 Develop, manage and maintain Council Business Units through effective commercial management

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.5.3.1 Increase operating revenue at the Airport, the Glasshouse, the Crematorium and Cemetery and the Environmental Laboratory	Commercial Business Units	1. Increase operating revenue by 3% per annum per business unit (Airport) 2. Increase operating revenue by 3% per annum per business unit (Crematorium)	1. 3% 2. 3%	1. -20% 2. -9%	Behind target. Operating income down 19.8% on 2018-19 due to the impact of COVID-19 and the suspension of airline services. Behind target. Income has decreased by 8.6% on 2018-19. The Innes Gardens Memorial Park Crematorium and Lawn Cemetery was sold to the Walker Funeral Group on 1 July 2020.

**Community Strategic Plan:** 1.5 Ensure strong corporate and financial management that is transparent and accountable

**Delivery Program Objective:** 1.5.3 Develop, manage and maintain Council Business Units through effective commercial management

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		3. Increase operating revenue by 3% per annum per business unit (Environmental Laboratory) 4. Increase operating revenue by 3% per annum per business unit (Glasshouse)	3. 3% 4. 3%	3. 16% 4. -35%	Achieved. Laboratory income has increased by 15.7% compared to last financial year as a result of increased sampling, analysis and reporting activities.  Behind target. The Glasshouse was closed to the public on Monday 23 March 2020 due to the Public Health (COVID-19) Restrictions on Gathering and Movement Order 2020. This resulted in the cancellation of all activities including a significant number of events and all commercial operations such as venue hire, box office sales, catering and retail income.
1.5.3.2 Implement the Glasshouse Strategic Plan 2019-2022 in consideration of Council's Cultural Plan	Commercial Business Units	1. Deliver actions according to adopted Glasshouse Strategic Plan  2. Present biannual reports to Council	1. 100%  2. 100%	1. 100%  2. 100%	Achieved (noting impacts associated with COVID-19). Actions delivered in accordance with the Glasshouse Strategic Plan, and draft Glasshouse Plan 2020 - 2022. The Glasshouse Plan 2020 - 2022 will be presented to the Council meeting in July 2020 for adoption in consideration of submissions received during the public exhibition period earlier this year.  Achieved. Biannual reports providing updates on progress against the Glasshouse Plan, key performance measures and financial information for the previous financial year, were presented to the Council meetings held in August 2019 and February 2020.
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	Recreation, Property and Buildings	1. Deliver statutory property projects according to approved project plan	1. 100%	1. 100%	Achieved. All land matters progressed as required.



**Community Strategic Plan:** 1.5 Ensure strong corporate and financial management that is transparent and accountable

**Delivery Program Objective:** 1.5.3 Develop, manage and maintain Council Business Units through effective commercial management

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Manage Council's lease and licence portfolio to ensure the most appropriate return to Council and the community	2. 100%	2. 100%	Achieved. Commercial Leases (including airport, residential, Temporary Licences, Outdoor Dining and Outdoor Trading) - 138 and Community Leases - 70.
1.5.3.7 Continue to implement and monitor the property investment strategy	Strategy	1. Provide six monthly update reports to Council on the status of the Property Investment Portfolio	1. 100%	1. 100%	Achieved. The report is now due annually and will be reported to the November 2020 Ordinary Council Meeting.
1.5.3.8 CW Land Acquisitions for Council Roads - Survey, Valuation and Land Transactions	Recreation, Property and Buildings	1. Deliver projects according to approved project plan (Land Acquisitions for Council Roads - Survey, Valuation and Land Transactions)	1. 100%	1. 100%	Achieved. All land matters progressed as required.

**Delivery Program Objective:** 1.5.4 Identify new commercially viable revenue sources

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
1.5.4.1 Review current revenue sources and investigate the commercial viability of identified new revenue sources	Commercial Business Units	1. Identify new revenue sources	1. 100%	1. 100%	Achieved. New revenue sources identified as part of the development of the 2020 - 2021 Schedule of Fees and Charges, including Airport Terminal Building Meeting Room hire, new hire options for the Glasshouse Studio and Podium, and new recovered aggregate (crushed concrete) product for sale via the Cairncross Waste Management Facility.



**Community Strategic Plan:** 2.1 Create a community that feels safe

**Delivery Program Objective:** 2.1.1 Support Community Safety initiatives

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.1.1.1 Manage the contract for approved lifeguard services	Recreation, Property and Buildings	1. Deliver approved lifeguard services	1. 100%	1. 100%	Achieved. Lifeguard patrols continued at Town, Flynns, Lighthouse, Lake Cathie, Rainbow and North Haven beaches until the 27th of March when volunteer patrols were suspended as a result of COVID-19. Surveillance patrols continued at Town, Flynns, Lake Cathie and Rainbow Beach until the conclusion of the season on 25 April 2020.
		2. Deliver lifeguard education programs to schools and community groups (target 2,500 students)	2. 100%	2. 100%	Achieved. The lifeguard education program was undertaken in Term 4 in schools across our LGA. Presentations were delivered to 3,868 students participating in the program.

**Delivery Program Objective:** 2.1.2 Advocate for, support and coordinate emergency services

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.1.2.1 CW Council supports Emergency Management Operations and Agencies	Infrastructure	1. Provide coordination and support to emergency service units as required	1. 100%	1. 100%	Achieved. Working with Emergency Service units has been undertaken throughout the year as required.

**Community Strategic Plan:** 2.1 Create a community that feels safe

**Delivery Program Objective:** 2.1.3 Conduct regulatory and educational activities which safeguard public and environmental health, and ensures compliance with planning and building standards

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
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	Environment and Regulatory Services	1. Respond to 80% of Regulatory Services customer requests within set customer service standards	1. 80%	1. 86%	Achieved.
		2. Undertake 90% of fire safety inspections within set customer service standards	2. 90%	2. 98%	Achieved.
		3. Undertake 90% of on-site sewerage management systems inspections within set customer service standards	3. 90%	3. 43%	Behind target. An increase in S68 Plumbing and Drainage development applications resulted in fewer programmed on-site sewer inspections being undertaken. Additionally unplanned staff leave also impacted service capacity.
		4. Undertake 90% of public health inspections within set customer service standards	4. 90%	4. 92%	Achieved.
		5. Undertake 90% of swimming pool inspections within set customer service standards	5. 90%	5. 72%	Behind target. Extended unplanned staff leave has impacted service performance.
2.1.3.3 Provide ranger & law enforcement services to ensure compliance relating to parking, beach patrols, illegal signage, sale of goods on roads, building site sediment control & companion animals	Environment and Regulatory Services	1. Monitor the number of companion animal incidents	1. 100%	1. 100%	Achieved.
		2. Monitor the number of offences detected during proactive patrols	2. 100%	2. 100%	Achieved.

**Community Strategic Plan:** 2.1 Create a community that feels safe

**Delivery Program Objective:** 2.1.3 Conduct regulatory and educational activities which safeguard public and environmental health, and ensures compliance with planning and building standards

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		3. Respond to 80% of Regulatory Services customer requests regarding compliance with parking, beach patrols, illegal signage, sale of goods on roads, building site sediment control and companion animals	3. 80%	3. 83%	Achieved.
2.1.3.4 Manage Council's Environmental Laboratory and provide sampling, analysis, reporting & advice of water quality analysis to internal & external customers on an approved fee for service basis	Commercial Business Units	1. Complete all sampling, analysis and reporting of operational and regulatory requests in accordance with the required service standards 2. Maintain National Association of Testing Authorities (NATA) corporate accreditation 3. Undertake all sampling, analysis and reporting of operational and regulatory requests in accordance with approved budgets	1. 90% 2. 100% 3. 100%	1. 95% 2. 100% 3. 100%	Achieved. 94.7% of finalised reports met the required service standard. All reports for urgent request and non compliant results were met within the agreed service standard.  Achieved. NATA accreditation maintained.  Achieved. All sampling, analysis and reporting conducted within budget.
2.1.3.5 Provide a safe water supply in accordance with Australian Drinking Water Quality Guidelines	Infrastructure Planning	1. Have nil reportable incidents in accordance with NSW Health agreed protocols	1. 0#	1. 0#	Achieved. No reportable incidents recorded during the reporting period.

**Community Strategic Plan:** 2.2 Advocate for social inclusion and fairness

**Delivery Program Objective:** 2.2.1 Support and advocate for all community sectors

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.2.1.1 Involve youth for a better Council	Community Engagement	1. Deliver Youth focused activities	1. 100%	1. 100%	Achieved. The COVID-19 Pandemic impacted on proposed Youth Week activities scheduled for April 2020, however, a piloted digital campaign was successful. Council promoted competitions through a range of social media platforms including Facebook, Snapchat, Instagram and Tiktok, enabling a wide reach to the target audience. The Youth Program also launched a Minecraft competition in June, in partnership with the Department of Education and CSU and will run over two terms. The Youth Thinkers program has a group of 11 young people, aged between 14 and 25, from across the Hastings region. The current youth represent a diverse range of backgrounds, members already represent youth groups within the Hastings region and beyond, including Dyslexia Youth Ambassadors, Headspace, Rotaract and CSU student committees. It will continue through to the end of July with some Key workshops to finalise an approach to Youth Leadership & Council.

**Community Strategic Plan:** 2.2 Advocate for social inclusion and fairness  
**Delivery Program Objective:** 2.2.1 Support and advocate for all community sectors

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Re-establish and manage a Youth Advisory Council	2. 100%	2. 100%	Achieved. The Youth Thinkers program has a group of 11 young people, aged between 14 and 25, from across the Hastings region. The current youth members already represent youth groups representing a diverse range of backgrounds, within the Hastings region and beyond, including Dyslexia Youth Ambassadors, Headspace, Rotaract and CSU student committees. It will continue through to the end of July with some Key workshops to finalise an approach to Youth Leadership and Council.
2.2.1.3 Coordinate the grants program to assist the community to deliver projects that contribute to a sense of place	Community Engagement	1. Deliver Community Grants Program through two rounds per year  2. Implement the new Community Grants program to meet the needs of a changing community	1. 100%  2. 100%	1. 100%  2. 100%	Achieved. Two successful rounds of Community Grants undertaken in 2019/20 year. The second Round had over 26 applications and provided \$76,464 to 16 successful community groups across the region and was once again over subscribed.  Achieved. Two successful rounds of Community Grants undertaken in 2019/20 Financial year. The second Round had over 26 applications and provided \$76,464 to 16 successful community groups across the region and was once again over subscribed. A review of the approach to community grants has been developed and will be presented to the August 2020 Ordinary Council meeting.

**Community Strategic Plan:** 2.2 Advocate for social inclusion and fairness

**Delivery Program Objective:** 2.2.1 Support and advocate for all community sectors

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.2.1.7 Adopt and implement the Community Inclusion Plan	Community Engagement	1. Adopt the Community Inclusion Plan by 31 October 2019	1. 100%	1. 100%	Achieved. The Community Inclusion Plan was adopted in May 2020. A key inclusion project that was linked to the actions for Community resilience was working with the COVID-19 Sub-Working Group - Community Wellbeing and the launch of the PMH Cares initiative, which was launched in early June.
		2. Implement the Community Inclusion Plan actions	2. 100%	2. 100%	Achieved. The Community Inclusion Plan was adopted in May 2020. A key inclusion project that was linked to the actions for Community resilience was working with the COVID-19 Sub-Working Group - Community Wellbeing and the launch of the PMH Cares initiative, which was launched in early June 2020.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.1 Ensure access to community facilities and activities: including access to natural environment

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.1.1 CW Deliver the Disability Inclusion Action Plan in accordance with State Legislation	Community Engagement	1. Implement the actions as per the Disability Inclusion Action Plan	1. 100%	1. 100%	Achieved. Identified projects within the Disability Inclusion Action Plan completed in this 2019/20 FY.
2.3.1.2 Manage Community Halls	Community Engagement	1. Manage Community Halls to current service standards	1. 100%	1. 100%	Achieved. Community Halls continue to be managed, however, due to the COVID-19 Pandemic, they have been closed for the majority of the past three months with reopening commencing on 17 June 2020. Work is ongoing with Hall Managers to monitor safe usage.

<b>Delivery Program Objective:</b> 2.3.2 Provide a range of inclusive sporting and recreational opportunities and facilities to encourage a healthy and active lifestyle				
<b>Operational Plan Activity</b> 2019 - 2020	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>
<b>Comment on Progress</b>				



**Delivery Program Objective:** 2.3.2 Provide a range of inclusive sporting and recreational opportunities and facilities to encourage a healthy and active lifestyle

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.2.1 Continue implementation of the Recreation Action Plan 2015-2025 (including Town Green Central and West - Preconstruction)	Recreation, Property and Buildings, (Project Delivery)	1. Implement the identified actions from the Recreation Action Plan	1. 100%	1. 100%	Achieved. Implementation of actions from the Recreation Action Plan are ongoing, they include: Hastings Regional Sporting Facility - Stage 1 development: Finalisation of detailed design for the facility is scheduled for October 2020. Sancroft/Thrumster Sports Fields: A working group has been formed to progress this project. A tender for detailed design of the facility will be advertised shortly. Hastings River, PMQ: Detailed design and approvals for new recreational boating facility: Detailed concept plans have been developed. Land acquisition discussions with adjacent land owners have not progressed and this project has been placed on hold to allow staff to focus on other priority projects. PMQ Coastal Walk upgrade: Project has been delayed as a result of COVID-19 supply chain issues. Completion is currently scheduled for August 2020. PMQ Dog Off-leash Park: Complete North Haven to Bonny Hills Coastal Walk upgrade: Quotations currently being sought. PMQ Aquatic Facility: Site selection process is complete with Macquarie Park being reconfirmed as the preferred site. Project planning for detailed design process has commenced. Steering Group has been established for this project. Wayne Richards Park Stages 3 and 4 - detailed design and approvals: Environmental issues may prevent all facilities identified in adopted Master Plan from being able to be provided. Project deferred to allow for further engagement with sporting stakeholder groups. Implementation of these actions will continue into 2020-2021.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.2 Provide a range of inclusive sporting and recreational opportunities and facilities to encourage a healthy and active lifestyle

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Town Green Central and West - Preconstruction	2. 100%	2. 100%	On target, against revised milestones. Multi year project. Design phase ongoing including extensive heritage and cultural assessments. Civil and landscape designs have now commenced with completion forecast prior to the end of the 2019/20 FY. Construction phase of this project is expected to commence in July 2020 as part of the 20/21 OP with target completion prior to the busy summer holiday period.
2.3.2.2 CW Deliver sporting facility renewal and upgrades program across the LGA	Recreation, Property and Buildings	1. Deliver renewal and upgrades as per schedule and reported according to seasonal sports	1. 100%	1. 100%	Achieved. The sporting facility renewal and upgrade program included: Oxley Oval, Port Macquarie - sporting infrastructure upgrade: lighting upgrade complete. Clubhouse construction is nearing completion, Port Macquarie Hockey Facility - install lighting to field 2: complete, Port Macquarie Regional Stadium - new training field and lighting: complete, Charlie Watt Reserve, Telegraph Point - upgrade: lighting upgrades complete. Contractor engaged to install field drainage in September 2020, Andrews Park, Wauchope - lighting upgrade complete, Lake Cathie Sports Field - field surface upgrade and install irrigation: complete, Blackbutt Park, Wauchope - complete and Kendall Sports Ground - reserve upgrade: complete. Work will continue into 2020-2021.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.2 Provide a range of inclusive sporting and recreational opportunities and facilities to encourage a healthy and active lifestyle

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.2.3 Manage the Mayor's Sporting Fund	Economic and Cultural Development	1. Distribute funds as required and coordinate fundraising events	1. 100%	1. 100%	Achieved. Mayor's Sporting Fund Sub-Committee meetings continued to be held throughout year. Scheduled sponsored fund raising event for May 2020 cancelled due to COVID19 restrictions. Proposed fund raising event for July also postponed with a view to reschedule event once ease of restrictions permit.
2.3.2.4 Undertake regional master planning for recreational facilities	Recreation, Property and Buildings	1. Commence review of Bonny Hills Reserves Master Plan 2. Complete Master Planning for Bain Park, Wauchope	1. 100% 2. 100%	1. 100% 2. 80%	Achieved. Bonny Hills Reserves Master Planning commenced Community Engagement underway. Behind schedule. Draft master plan completed and included for consideration at the July 1st Council meeting. Delays as further clarification requested from Executive around staging plan, costings and funding.
2.3.2.6 CW Hastings River recreational boating improvements - Undertake design/pre-construction for provision of new facility as per Boating Needs Investigation	Recreation, Property and Buildings, (Project Delivery)	1. Continue to deliver project according to approved project plan (Hastings River recreational boating improvements)	1. 100%	1. 0%	Deferred. This project remains in the initiation phase. Design phase commencement is pending negotiations re land acquisition and traffic/intersection planning. No construction is proposed on this project during the 2019/20 FY, this project has been deferred from the 2019/20 program and is currently on hold.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.3 Develop and implement management of operational and maintenance programs for open space, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.3.01 CW Undertake the maintenance program for parks, reserves, sporting fields and beaches including parks signage	Recreation, Property and Buildings	1. Deliver maintenance program including beach cleaning and playground inspections according to approved maintenance schedules	1. 100%	1. 100%	Achieved. During the year, a range of activities have been undertaken, some of which included: Mowing parks and reserves across the LGA, Sports field Maintenance, Mowing of all cemeteries for Easter, Garden maintenance in the Port Macquarie CBD area including pruning, watering, weed treatment and mulching, Formal inspection of all playgrounds with required maintenance and repairs, Green waste removals, Cleaning of bin hides across the local government area, Inspections for customer requests, Bubblers, BBQ's, Playgrounds and other various spaces closed/ turned off in response to COVID-19 restrictions. This included installation of signage and safety fencing, Winter works program, mulching of trees and Gardens throughout the LGA, Repairing of parks furnishings e.g. Jonathon Dickson Reserve deck, Installation of parks ordinance signage and Boardwalk maintenance at Kooloonbung Creek Nature Park.
2.3.3.02 CW Undertake scheduled and reactive maintenance programs of all Council-owned buildings including office furniture replacement	Recreation, Property and Buildings	1. Deliver projects according to facilities works program	1. 100%	1. 100%	Achieved. Works have been carried out as per our current maintenance schedules and reporting mechanisms
2.3.3.03 CW Undertake building rectification works in line with Council Asset Management - multi-year project	Recreation, Property and Buildings	1. Deliver project according to approved project plan (building rectification works)	1. 100%	1. 100%	Achieved. The majority of works have been carried out as per the Building Asset Management Plan's (BAMP) program. \$30k will be carried over to the new financial year for the Beechwood Rural Fire Service crossover due to delays in S138 application, this will be completed in August 2020.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.3 Develop and implement management of operational and maintenance programs for open space, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.3.04 CW Provide, maintain and manage public aquatic facilities	Recreation, Property and Buildings	1. Oversee the management of Council's public aquatic facilities in accordance with lease obligation checklist	1. 100%	1. 100%	Achieved. All four aquatic facilities were operational from 28 September until COB 23 March when they were required to be closed as a result of COVID-19 management directives. Following the easing of restrictions under the NSW Public Health Order the Wauchope Pool reopened in a restricted capacity from 18 May for the remainder of the contracted season until COB 3 June. The Port Macquarie Pool reopened on 15 May and continues to operate in accordance with NSW Government COVID-19 restrictions.
		2. Undertake annual off-season facility maintenance in accordance with approved program	2. 100%	2. 100%	Achieved. Off-season maintenance was bought forward to coincide with closure of facilities as a result of COVID-19 restrictions.
2.3.3.05 Deliver park furniture renewals across the local government area, including donated seats program	Recreation, Property and Buildings	1. Deliver Park furniture replacement program according to approved schedule	1. 100%	1. 100%	Achieved. Park furniture renewals completed.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.3 Develop and implement management of operational and maintenance programs for open space, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.3.06 CW Carry out playground equipment replacement program	Recreation, Property and Buildings	1. Deliver the Playground Equipment Replacement program according to approved schedule	1. 100%	1. 85%	Behind schedule. Delays experienced on playground delivery due to contractor availability (having to limit staff on site due to COVID-19 restrictions and loss of staff due to home schooling). Significant rainfall has also cause further delays. Playground equipment is largely sourced from overseas, COVID-19 restrictions ceased manufacture for a lengthy period delaying procurement. Behind schedule. Riverview Reserve - not yet commenced. Land tenure issue to be resolved. Council to request to be appointed as Council Crown Land Manager of the site. Project will continue into 20/21. Town Beach Park - detailed plan finalised, procurement commenced. Delay to finalisation of detailed design due to Council applying for and securing grant funding to expand scope of works to include water play area. Significant delay to equipment being procured from NZ due to COVID shutdowns. Construction scheduled for second quarter of 20/21 upon delivery of play equipment. Blair Reserve - detailed plan finalised, construction nearing completion. Completion impacted by contractor delays due to wet weather and COVID. Expected completion first quarter 20/21. Rocks Ferry Reserve - community engagement finalised. Concept plan and procurement completed. Construction scheduled for first quarter of 20/21. Achieved. Reservoir Park - project complete, Scribbly Bark - project complete and Settlement Point Reserve - project complete.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.3 Develop and implement management of operational and maintenance programs for open space, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.3.08 CW Deliver recreational walkway replacement program across the local government area	Recreation, Property and Buildings	1. Deliver Recreational walkway program according to approved project plan	1. 100%	1. 85%	Behind schedule. North Haven to Bonny Hills Walkway - planning commenced, delays experienced due to COVID as Work for the Dole (Contractor) services placed on hold, expected to be completed first quarter of 20/21. Blair/Sandhurst reserves has construction commenced however delays experienced due to COVID as Work for the Dole (Contractor) services placed on hold, works to continue into 20/21. Harry's Lookout Walkway replacement complete.
2.3.3.09 Implement maintenance programs for boat ramps, wharves and jetties	Recreation, Property and Buildings (Infrastructure Operations)	1. Deliver programs according to approved maintenance and schedule (for boat ramps, wharves and jetties)	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.
2.3.3.10 Undertake the maintenance program for beaches	Recreation, Property and Buildings	1. Undertake beach and beach access maintenance as per program 2. Undertake inspections of beach access signs	1. 100% 2. 100%	1. 100% 2. 100%	Achieved. Beach accesses maintained and cleaned as required. Detailed beach grooming undertaken at all high profile beaches. Achieved. Signs inspected, repaired and replaced as required.
2.3.3.11 CW Rocks Ferry Reserve - Riverbank revetment extension	Recreation, Property and Buildings (Project Delivery)	1. Deliver project according to approved project plan (Rocks Ferry Reserve)	1. 100%	1. 100%	Achieved. This project continues from 2017/18 FY. Construction practically complete during Oct 2018 within anticipated budget. Additional scope of works to extend rock armouring has been agreed to take advantage of remaining budget was completed in June 2020.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.3 Develop and implement management of operational and maintenance programs for open space, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.3.12 CW Sancroix/Thrumster Sports Fields - Detailed design and approvals - multi-year project	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Sancroix/Thrumster Sports Fields - design and approvals)	1. 100%	1. 85%	Behind schedule. This project continues from 2017/18 FY. This project was placed on hold pending the outcomes of the site selection for the Port Macquarie Aquatic Facility and confirmation from Football NSW on their preferred site location. These two items have now been confirmed and the design is expected to commence during 2020 with completion forecast for late 2020/21 FY. Engagement of Detailed Design expected by late 2020.
2.3.3.14 CW Undertake the Public Amenities Renewals Program	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Public Amenities Renewals program)	1. 100%	1. 85%	Behind schedule. COVID-19 pandemic impacting on delivery of this project. Pilot Beach Amenities are planned for installation June 2020 there has been a delay in ordering kit due to a change in supplier management which will be resolved by the end of March. Supplier has informed possible delay in manufacturing due to COVID-19 pandemic. Work to continue into 2020-2021 with completion of this project now set for September 2020.
2.3.3.15 CW Kendall Skatepark – renewal of facility at end of useful life – Design and construct	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Kendall Skatepark renewal)	1. 100%	1. 0%	Deferred. This project is yet to commence and is awaiting removal of the existing tennis courts by the tennis club to provide a site for the skatepark. This project has been deferred from the 19/20 works program during this reporting period.
2.3.3.16 Manage burial, cremation and memorialisation services at Innes Garden Memorial Park, Wauchope, Laurieton and other outlying cemeteries	Commercial Business Units	1. Carry out services in accordance with legislative and customer requirements	1. 100%	1. 100%	Achieved. All burial, cremation and memorialisation services carried out in accordance with legislative and customer requirements.



**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.3 Develop and implement management of operational and maintenance programs for open space, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.3.17 CW Carry out improvement and expansion works at Innes Garden Memorial Park, Wauchope and Laurieton cemeteries	Commercial Business Units	1. Deliver projects according to approved project plan (improvement and expansion works at cemeteries)	1. 100%	1. 75%	Behind schedule. Project Charter developed as the basis for future work to prepare a new Master Plan for the proposed expansion of Wauchope Cemetery. Project delayed due to sale processes associated with Innes Gardens Memorial Park. Project will continue through 2020-21.
2.3.3.18 Administration of public roads, public spaces, events and customer engagement: Section 138 Road Applications, Road Encroachments, Customer Enquiries, Statutory Road Functions, Road Policies	Infrastructure Planning	1. Deliver works in accordance with Council's Policies and Procedures	1. 100%	1. 90%	Behind schedule. Level of service for responding to applications and enquiries has slightly increased due to staff being approved to work additional hours.
2.3.3.20 Develop Plans of Management for Council Crown Reserve Sites - Undertake plans of management as required under the Crown Lands Management Act	Recreation, Property and Buildings	1. Plans of Management for Council Crown Reserve Sites undertaken as required	1. 100%	1. 100%	Achieved. Land categorisations were finalised and endorsed at the December 2019 Council Meeting and will be submitted to the Minister for Housing, Property and Water for approval as the next stage of the project.
2.3.3.21 CW Kew Community Park - Construct new park	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Kew Community Park - Construct new park)	1. 100%	1. 100%	Achieved. Project complete.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.4 Plan, investigate, design and construct open spaces, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.4.02 CW Port Macquarie Coastal Walk — upgrade as per adopted master plan - Allocated Amount 2018-19 - \$1,265,000	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Port Macquarie Coastal Walk)	1. 100%	1. 100%	On target. Works impacted by COVID-19 and delivery milestones were revised. Construction underway on Stage 2 of Charlie Uptin and Doctor's Walk sections of walk. Completion of these sections is scheduled for August 2020. The Kennys Walk section is due to be completed in July 2020. Works will continue into 2020-2021.
2.3.4.03 CW Wayne Richards Park — Stage 3 and 4 detailed design and approvals	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Wayne Richards Park — Stage 3 and 4 detailed design and approvals)	1. 100%	1. 90%	Behind schedule. (multi year project) Design underway for this multi year project which has been delayed due to complex environmental constraints. The construction phase would then be subject to depot relocation and budget allocation. The project is currently on hold.
2.3.4.06 CW Flynn's Beach — upgrade seawall - seawall replacement - Stage 1 (multi-year project)	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Flynn's Beach — upgrade seawall - seawall replacement - Stage 1)	1. 100%	1. 100%	Achieved. Construction of this project commenced in early May 2019 with completion achieved in Dec 2019.
2.3.4.07 CW Googik Track - construct shared walkway/cycleway, Stage 2 - multi-year project - Adopted 2017-18 - \$75,696	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Googik Track - construct shared walkway/cycleway, Stage 2)	1. 100%	1. 50%	Behind schedule. National Parks staff have been significantly impacted by bushfires and COVID-19 during the current financial year which has impacted on their ability to undertake Googik Track construction works.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.4 Plan, investigate, design and construct open spaces, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.4.08 CW Hastings Regional Sporting Complex Construction (multi-year project)	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Hastings Regional Sporting Complex Construction)	1. 100%	1. 100%	On target. This project continues from the 2017-2018 FY. Design works are progressing towards an anticipated design completion in the third quarter of 2020. Construction works planning and associated phasing are currently being developed. This is a multi year project and will continue into 2020-2021 reporting period for the construction phase (pending funding).
2.3.4.12 CW Port Macquarie Town Centre Master Plan (TCMP) improvements	Recreation, Property and Buildings	1. Deliver project according to approved project plan (PMQ TCMP Improvements)	1. 100%	1. 100%	On target. Foreshore walkway priority projects. Detailed design complete. Environmental and Crown Land Approvals to continue 20/21. Gordon Street underpass. Preparation of Environmental Impact Statement underway and will continue into 20/21.
2.3.4.14 CW Port Macquarie Pool - Design Finalisation	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Port Macquarie Pool - Design Finalisation)	1. 100%	1. 100%	On target, against revised milestones. This project has been delayed due to extensive community consultation that was undertaken to determine the preferred location of the Pool. With the pool site at Macquarie Park now confirmed the project planning of the aquatic facility project has now commenced with the establishment of a project steering group during Dec 2019. Project Plan (concept design phase) has been approved and endorsed by the Steering Group. This concept design phase will continue into the 20/21FY and reporting period.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.4 Plan, investigate, design and construct open spaces, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.4.15 CW Mrs Yorks Garden – Concept Plan development	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Mrs Yorks Garden – Concept Plan development)	1. 100%	1. 100%	Achieved. Concept plan finalised. Works to now be implemented by Friends of Mrs York's Garden.
2.3.4.16 CW Continue installation of Town Village Entry Signage	Community Engagement	1. Deliver project according to approved project plan (Continue installation of Town Village Entry Signage)	1. 100%	1. 80%	Behind schedule. The final two Tier 2 & 3 signs will be installed by mid July and the existing old signs will be removed by the following week.
2.3.4.17 CW Lake Cathie Foreshore Reserve - Master plan implementation - Construction of Skate Facility	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Lake Cathie Foreshore Reserve - Construction of Skate Facility)	1. 100%	1. 100%	On target. The Lake Cathie Skate and Recreation Group application for funding has been successful. Tenders have been advertised and the outcome of the process will be reported to the 15 July 2020 Council Meeting. The project will be completed in early 2021.
2.3.4.18 CW Rainbow Beach Sports Fields	Recreation, Property and Buildings, (Project Delivery)	1. Deliver project according to approved project plan (Rainbow Beach Sports Fields)	1. 100%	1. 100%	On target, against revised milestones. Design of the sports fields underway by outsourced consultancy. Design is expected to be completed early 2021 with construction commencing mid 2021.
2.3.4.19 CW Red Ochre Park - Develop new park facilities - Local Facilities	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Red Ochre Park - Develop new park facilities - Local Facilities)	1. 100%	1. 80%	Behind schedule. Construction plans completed. Procurement completed. Lengthy delays experienced in procuring equipment due to COVID shutdowns in NZ where equipment is sourced. Project to be completed in first quarter of 2021.
2.3.4.20 CW Ruins Way Park - Develop new park facilities - Local Facilities	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Ruins Way Park - Develop new park facilities - Local Facilities)	1. 100%	1. 80%	Behind schedule. Community engagement delayed due to resourcing constraints. Contractor availability also highlighted as an issue due to bushfires, and COVID-19. Expected construction start will be in the first half of 2021.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.4 Plan, investigate, design and construct open spaces, recreational and community facilities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.4.21 CW Stuart Park – Regional Sporting Precinct - Stuart Park and Wood Street Upgrades	Recreation, Property and Buildings, (Infrastructure Delivery)	1. Deliver project according to approved project plan (Stuart Park – Regional Sporting Precinct) 2. Deliver project according to approved project plan (Wood Street Road upgrade)	1. 100%  2. 100%	1. 100%  2. 100%	Achieved. Official facility opening scheduled for 2 July 2020.  Achieved. Construction successfully completed in June 2020.
2.3.4.22 CW Parks and Gardens Future Designs - Preparation of engineering designs in advance of construction programmes for Parks and Gardens	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Parks and Gardens Future Design)	1. 100%	1. 100%	Achieved.
2.3.4.23 CW Port Macquarie Town Signage - Installation of Signage in the Port Macquarie area	Community Engagement	1. Deliver project according to approved project plan (Port Macquarie Town Signage)	1. 100%	1. 80%	Behind schedule. The Port Macquarie Entry Signage has been fabricated and the contractor is ready to proceed. Installation is pending finalisation of the risk assessments being undertaken.
2.3.4.24 CW Beechwood Tennis Courts - Upgrade Tennis Facility	Recreation, Property and Buildings	1. Deliver project according to approved project plan (Beechwood Tennis Courts - Upgrade Tennis Facility)	1. 100%	1. 100%	On target. Works commenced in June 2020 following a delayed start due to weather conditions and issues arising from COVID-19. Works are due for completion in early July.

**Delivery Program Objective:** 2.3.5 Plan and deliver innovative Library Services which cater for new technology and growing population

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.5.1 CW Provide a range of library programs and lending services across the local government area (including Library Furnishings, Fittings and Equip; Library Local Priority Grant)	Community Engagement	1. Annual library events program delivered	1. 100%	1. 100%	Achieved. Switched to on-line program delivery due to COVID restrictions including the delivery of live story times - children and adult. Zoom Author talks and workshops with the community.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.5 Plan and deliver innovative Library Services which cater for new technology and growing population

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.5.2 CW Purchase of Library Books - multi-year project	Community Engagement	2. Increase Library membership 1. Complete book purchases	2. 100% 1. 100%	2. 100% 1. 100%	Achieved. Membership up from 32000 in June 2019 to 35000 at end of 2019/20 FY. Achieved. Over 90% of the budget committed.
2.3.5.4 Adopt and implement the Library Strategic Plan	Community Engagement	1. Adopt the Library Strategic Plan by 30 October 2019 2. Implement actions as per the Library Strategic Plan	1. 100% 2. 100%	1. 100% 2. 75%	Achieved. Behind schedule. COVID-19 restrictions have delayed the review of library hours and consideration of additional hours (particularly on the weekend). Similar delays experienced with the planning for potential new libraries.
2.3.5.5 CW Implement Library Website Upgrade	Community Engagement	1. Library Website upgrades complete by December 2019	1. 100%	1. 100%	Achieved. Upgraded website is up and running.
2.3.5.6 CW Purchase and fit out new Community Van to provide services such as Library outreach, arts and cultural program and community engagement	Community Engagement	1. Service delivery program developed and implemented by 30 June 2020 2. Van purchased and fit out complete by 1 March 2020	1. 100% 2. 100%	1. 75% 2. 75%	Behind schedule. Funding is used to support Library Events and Group activities, however these were impacted by COVID-19. Behind schedule. The Library Van arrived May 2020 (originally due Feb) and is still being fitted out and awaiting parts - these have been delayed due to COVID and delivery delays.
2.3.5.7 CW Deliver Special Library Projects to enhance library delivery program	Community Engagement	1. Special Library Projects planned, approved and implemented by 30 June 2020	1. 100%	1. 100%	Achieved. In response to the COVID-19 crisis, money was spent on re-carpeting Port Library and developing a Library App.

**Community Strategic Plan:** 2.3 Provide quality programs, community facilities and public spaces, e.g. for example, Community community halls, parks and vibrant town centres

**Delivery Program Objective:** 2.3.6 Support a range of inclusive community activities and programs

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.3.6.3 Finalise and implement the Port Macquarie Hastings Events Plan	Community Engagement	1. Implement actions relating to Community Events	1. 100%	1. 75%	Behind schedule. Due to the COVID-19 Pandemic, no events were able to be held from mid March 2020. However, new ways of connecting digitally through live Facebook and Zoom activities have been developed, but no events were held. From July 2019 to February 2020, events included Countdown to Xmas, the Hastings Sports Awards, Mayor's Sporting Fund Golf Day, New Years Eve fireworks, Australia Day celebrations and Seniors Week delivered with over 1,200 seniors attending to view the 80+ stalls at Port Panthers in early February 2020.

**Community Strategic Plan:** 2.4 Empower the community through encouraging active involvement in projects, volunteering and events

**Delivery Program Objective:** 2.4.1 Work with the community to identify and address community needs, to inform Council processes, services and projects

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.4.1.1 Support and promote the Volunteer Program including the Graffiti Blaster Program	Community Engagement	1. Plan and coordinate a volunteer program across the LGA	1. 100%	1. 100%	Achieved. Prior to the pandemic, support was provided for community-led volunteer programs and projects across the local area, including the Graffiti Blasters Program. However, due to the COVID-19, no volunteer activities occurred during March to June 2020. The aim is to recommence in August 2020. New volunteer programs and project starting within the local are primarily environmental focused, with reserve maintenance programs and a GIS Digital Koala Food Tree program aimed at capturing and cataloguing historic (and recently) planted koala food trees. Within the Laurieton, Dunbogan and Kendall region, the shared pathways projects saw significant construction with future planning and environmental studies being undertaken. In the Wauchope region, a volunteer group, Blazead assisted in re-building fences that were damaged in the recent fires. This program is continuing with high registrations for skilled volunteers and increasing rapidly, however, work was suspended due to COVID-19.
2.4.1.2 Prioritise and commence implementation of agreed actions from the Customer Experience project	Customer Experience and Communications	1. Implement the agreed Customer Experience priorities for 2019-2020	1. 100%	1. 80%	Behind schedule. Project delayed due to impact of COVID recovery work across the business. Steering Committee reviewing revised timelines.



**Community Strategic Plan:** 2.5 Promote a creative and culturally rich community  
**Delivery Program Objective:** 2.5.1 Support cultural activities within the community

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
2.5.1.1 Implement the Cultural Plan	Economic and Cultural Development	1. Implement Cultural Plan actions	1. 100%	1. 100%	Achieved. * Three Local Heritage Assistance Grants were finalised and acquitted. * ArtWalk 2020 was successful for two funding applications, a new format "World's Longest footpath Gallery" launched on the 1 July with a call for registrations. The COVID safe event will now run over an extended period 1-8 October 2020, across three town centres. * The Cultural Economy Project has been finalised and presented to the Cultural Steering Group. This document will now be used to inform review of the Cultural Plan and provides valuable benchmark data for the region. * Bicentenary celebration planning continues, a report went to Council on 1 July 2020 outlining current plans for endorsement. * The Wauchope Bicentennial Riverside Sculptural Trail project continues to gain momentum with the formation of a Reference Group, Expressions of Interest opening in June and site visits held for potential artists.
2.5.1.2 CW Undertake Glasshouse back of house maintenance	Commercial Business Units	1. Undertake Glasshouse back of house maintenance as required	1. 100%	1. 100%	Achieved. Planned preventative maintenance on the building and equipment completed, including: Theatre seats removed, floor repaired and painted; Archaeology display touch screens replaced and software reloaded; LED lighting installed to the archaeology display; Studio doors and fire doors painted; Stage painted; Workstation installed in stage area; Air conditioning system maintenance; Front of House and Back of House lifts serviced.

**Community Strategic Plan:** 2.5 Promote a creative and culturally rich community  
**Delivery Program Objective:** 2.5.1 Support cultural activities within the community

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
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 Cultural Plan	Commercial Business Units	1. Deliver the exhibition program as per the annual gallery program (20 exhibitions)	1. 100%	1. 80%	Behind schedule. The Glasshouse was closed to the public on Monday 23 March 2020 due to the Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020. This resulted in the suspension of the gallery program until the gallery was able to reopen on 30 June.
		2. Deliver the performing arts program as per the annual season launch (15 events)	2. 100%	2. 63%	Behind schedule. The Glasshouse was closed to the public on Monday 23 March 2020 due to the Public Health (COVID-19 Restrictions on Gathering and Movement) Order 2020. This resulted in the cancellation of performances planned as part of the Glasshouse Theatre Program 2020.



**Community Strategic Plan:** 3.1 Embrace business and a stronger economy

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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
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 and Cultural Development	1. Implement actions from the Economic Development Strategy	1. 100%	1. 100%	Achieved. Smart Community Roadmap project nearing completion. Maintained connection to The Hub Business and Coworking Centre community during temporary COVID-19 closure, continued collaboration with CSU to develop the Port Macquarie Innovation Centre as part of CSU Stage 2, ongoing support to opening of non-Council co-working centres across PMH region.
		2. Undertake and report on an annual business confidence survey	2. 100%	2. 100%	Achieved. Business Confidence Survey completed in August 2019 with over 400 survey responses. Results published in October 2019 and shared with the Economic Development Steering Group, the Construction Industry Action Group, and local business networks.

**Community Strategic Plan:** 3.1 Embrace business and a stronger economy

**Delivery Program Objective:** 3.1.2 Optimise the use of appropriately zoned land for business uses

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.1.2.1 Finalise Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments in relation to a business park near Port Macquarie Airport (UGMS Action 15)	Development Assessment	1. Final report to Council re Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments by 30 December 2019	1. 100%	1. 95%	Behind schedule. At the 20 May 2020 Ordinary Council Meeting, Council endorsed the post exhibition Planning Proposal for forwarding to the Department of Planning Industry and Environment for approval. It is anticipated that the amended Local Environment Plan (LEP) enabling the development of a business park near the Airport will be published on the NSW Legislation website during August 2020. Council adopted the Development Control Plan (DCP) at the same meeting and it will take effect upon publication of the LEP amendment.
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	Land Use Planning (Development Assessment)	1. Report to Council bi-annually on progress of the progress and status of site specific amendments	1. 100%	1. 100%	Achieved. Progress report presented to Council in June 2020 on the status of site specific Planning Proposal requests to amend the Local Environmental Plan. The next report due to Council in December 2020.

**Delivery Program Objective:** 3.1.3 Implement Major Events Strategy

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.1.3.2 Finalise and implement a new Port Macquarie-Hastings Events Plan	Economic and Cultural Development	1. Implementation of Events Plan actions relating to 'Major Events'	1. 100%	1. 100%	Achieved. Priority actions from the Events Plan have been completed including the review of community events surveys and updating the event toolkit and web page. We have also started a process to review and then streamline the event owners experience when interacting with Council.

**Community Strategic Plan:** 3.1 Embrace business and a stronger economy  
**Delivery Program Objective:** 3.1.3 Implement Major Events Strategy

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Successful distribution of Events Grants and Sponsorships	2. 100%	2. 10%	Behind schedule. Due to the pandemic and COVID restrictions, Council was unable to support any major events during the April - June 2020 quarter. Before COVID we had seven supported events planned to go ahead. These events would have resulted in a combined economic impact of approximately \$18.4 million for our community. The event staff have been supporting events to find dates in the latter half of the year so some originally unplanned economic impact may be felt in the next quarter. In spite of the COVID-19 impact on this quarter, Council has supported a total of 16 events during the 2019/20 financial year which has resulted in a \$19.1 economic impact.

**Community Strategic Plan:** 3.1 Embrace business and a stronger economy

**Delivery Program Objective:** 3.1.4 Implement the Destination Management Plan

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.1.4.1 Work with stakeholders to implement actions from the Destination Management Plan in accordance with the identified strategic outcomes	Economic and Cultural Development	1. Implement actions within the Destination Management Plan (DMP)	1. 100%	1. 100%	Achieved. Delivery of DMP actions was ongoing some of which include: Development and implementation of the Summer Spring destination strategic marketing campaign. The annual Public Relations Programme wrapped up its first 12 month delivery with new contractors Gate 7 with trying circumstances due to the bushfires and COVID-19 were noted. Key highlights included : a total reach of 41,198,245 people, total value exceeded target by almost 3 times, total advertising value target of \$1 million and a delivery of \$2.99 million. Bushfire funding was used to target a new Tourism Development campaign for industry delivered by Gate 7. This initiative is designed to assist local operators to improve their distribution channels and also promote the Port Macquarie-Hastings region to consumer and trade audiences in both Australia and New Zealand. Ongoing communication to industry to keep abreast of the fast moving situation and Council response. This included the development of a Tourism COVID Recovery sub-group (as part of the broader COVID-19 Recovery Working Group. The revised Destination Management Plan was adopted by Council in May 2020.

**Community Strategic Plan:** 3.1 Embrace business and a stronger economy

**Delivery Program Objective:** 3.1.4 Implement the Destination Management Plan

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Increase new monthly visits to the website by more than 15% in 12 months	2. 100%	2. 60%	Behind schedule. Visits to the destination website for the financial year end show an increase of 7.10% year on year. This represents an increase in users from 361,161 to 386,813. Noting bushfire and COVID-19 impacts, this increase is a positive outcome of the strategy deployed initially to maintain destination awareness without encouraging travel and more recently to send the message that the region is open for business. The annual target has not been achieved for this financial year however any increase during these unprecedented times should be seen as a successful outcome and testament to a focused and strategic approach by Council.

**Community Strategic Plan:** 3.2 Create vibrant and desirable places

**Delivery Program Objective:** 3.2.1 Support vibrant commercial, tourism, recreational and or community hubs across the region

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.2.1.2 Support towns and villages initiatives that will provide activation and economic return	Economic and Cultural Development	1. Identify initiatives and implement (or support implementation) with stakeholder support	1. 100%	1. 100%	Achieved. Bushfire and COVID-19 recovery initiatives prioritised, including a partnered approach to accessing bushfire recovery funding, developing the #supportlocalpmh brand, communications approach and collateral and advocating for industry support. Developed the Council Business Support Program, and promoted key funding opportunities to the business community.

**Community Strategic Plan:** 3.2 Create vibrant and desirable places

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
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	Commercial Business Units	1. Deliver identified actions from the Airport Master Plan according to approved project plan	1. 100%	1. 100%	Achieved. Terminal Building Upgrade - completed in November 2019. Terminal Car Park second exit lane - completed in November 2019. Parallel Taxiway - concept design finalised. Tender for environmental impact assessment (EIS) and DA awarded, project continuing. \$3.53 million funding awarded for Stage 1 in June 2020, under the Australian Government Regional Airport Program. Biodiversity Certification Agreement - implementation continuing post approval. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Referral - Preliminary Documentation finalised for Department of Agriculture, Water and Environment approval. Approval and draft conditions of consent expected July 2020. Airport Business and Technology Park - Planning Proposal and Draft Development Control Plan (DCP) endorsed by Council in May 2020 and submitted to NSW Department Planning, Industry and Environment to finalise the Local Environmental Plan (LEP).
3.3.1.2 Support, facilitate and advocate for regular public transport (RPT) airline services at Port Macquarie Airport	Commercial Business Units	1. Increase in passenger numbers compared to previous year	1. 100%	1. 74%	Behind schedule. Annual passenger numbers down 26.3% on 2018-19 due to the impact of COVID-19 and the suspension of airline services.
3.3.1.3 CW Port Macquarie Airport Terminal Upgrade - finalise construction - multi-year project	Commercial Business Units, (Project Delivery)	1. Finalise construction of Airport Terminal Upgrade	1. 100%	1. 100%	Achieved. Terminal Building Upgrade completed in November 2019.



**Community Strategic Plan:** 3.2 Create vibrant and desirable places**Delivery Program 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

<b>Operational Plan Activity 2019 - 2020</b>	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>	<b>Comment on Progress</b>
3.3.1.4 CW Port Macquarie Airport Parallel Taxiway Stage 1 and General Aviation pavement renewal – finalise detailed design	Commercial Business Units (Project Delivery)	1. Finalise detailed design of Airport Parallel Taxiway Stage 1 and General Aviation pavement renewal	1. 100%	1. 100%	On target. Parallel Taxiway - concept design finalised. Tender for environmental impact assessment (EIS) and DA awarded, project continuing. \$3.53 million funding awarded for Stage 1 in June 2020, under the Australian Government Regional Airport Program. Project to continue into 2020-2021.
3.3.1.5 Continue to monitor, plan and implement the Port Macquarie Airport Biodiversity Certification Strategy and related environmental approvals - (multi-year project)	Commercial Business Units, Environment and Regulatory Services	1. Deliver identified actions from the Biodiversity Certification Strategy and related environmental approvals according to approved project plan	1. 100%	1. 100%	Achieved. Biodiversity Certification Agreement - implementation continuing post approval. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Referral - Preliminary Documentation finalised for Department of Agriculture, Water and Environment approval. Approval and draft conditions of consent expected July 2020.
3.3.1.6 CW Operate and maintain Port Macquarie Airport in accordance with regulatory and safety requirements	Commercial Business Units	1. Carry out daily aerodrome inspections according to regulatory requirements 2. Carry out maintenance / refurbishment of Council-owned hangars according to approved project plan 3. Ensure airport operational manuals are reviewed by 30 June	1. 100% 2. 100% 3. 100%	1. 100% 2. 100% 3. 100%	Achieved. All inspections carried out in accordance with regulatory requirements.  Achieved. Hangar maintenance undertaken as required.  Achieved. Airport Operations Manual and Transport Security Program updated progressively throughout the year as required.

**Community Strategic Plan:** 3.2 Create vibrant and desirable places

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.3.1.7 Finalise development planning for the Airport Business Park	Strategy, (Commercial Business Units)	1. Finalise development planning by 31 December 2019 according to approved project plan	1. 100%	1. 100%	Achieved. The project is complete and was reported to the 20 May 2020 Ordinary Council Meeting. The outcomes, LEP amendments and mapping were provided to NSW DPI&E on the 17 June 2020 for adoption.

**Community Strategic Plan:** 3.3 Embrace opportunity and attract investment to support the wealth and growth of the community

**Delivery Program Objective:** 3.3.2 Promote investment, education and lifestyle opportunities

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.3.2.1 Promote local growth and opportunities within and outside the region	Economic and Cultural Development	1. Deliver investment attraction messaging and collateral  2. Include broader place opportunity messaging through marketing channels	1. 100%  2. 100%	1. 50%  2. 100%	Behind schedule. Key investment attraction exhibitions postponed due to COVID-19, planning underway for attendance at future exhibition opportunities. Further videos in the relocation attraction series completed and actively promoting the opportunity to live, work and invest in the Port Macquarie-Hastings region.  Achieved. #SupportLocalPMH bushfire and COVID recovery campaign developed and being delivered. Further videos in the relocation attraction series completed and actively promoting the opportunity to live, work and invest in the Port Macquarie-Hastings region.

**Community Strategic Plan:** 3.4 Partner for success with key stakeholders in business, industry, government, education and the community

**Delivery Program Objective:** 3.4.1 Foster partnerships with higher education institutions through research and development, innovation and local skills development

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.4.1.1 Partner with local education institutions on initiatives that will support local economic and skills growth	Economic and Cultural Development	1. Identify initiatives and implement (or support implementation) with stakeholder support	1. 100%	1. 100%	Achieved. Port Macquarie Health and Education Precinct Masterplan implementation work progressing; engagement with local Education and Skills Forum and support for pilot program funding application continues; support for CSU Innovation Hub development and business plan; support for Sovereign Hills Co-lab. Further initiatives and partnerships have been developed under the COVID Recovery Working Group (Learning Sub-Group). Some roll-out of these has commenced, with more planned for early in the next financial year.

**Delivery Program Objective:** 3.4.2 Support local business networks

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.4.2.1 Work closely with local business networks and organisations to build their capacity and facilitate the growth of existing enterprises.	Economic and Cultural Development	1. Ongoing engagement with, and support for local business networks individually and collectively	1. 100%	1. 100%	Achieved. The Business Hub is meeting regularly, and engagement with local Chambers of Commerce and other industry representative groups is ongoing.

**Delivery Program Objective:** 3.4.3 Encourage innovation that will support our growth as a regional city including smart community technology

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
3.4.3.2 Prioritise, advocate and implement projects that enhance the local digital environment.	Economic and Cultural Development	1. Engagement with local business, entrepreneurs and co-workers via The Hub pop-up co-working space	1. 100%	1. 40%	Behind schedule. The Hub Business and Co-working Centre was closed for the quarter due to COVID-19 restrictions. Engagement with Hub members and broader business and industry (including Chambers of Commerce etc) has continued digitally over the period.

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**Community Strategic Plan:** 3.4 Partner for success with key stakeholders in business, industry, government, education and the community

**Delivery Program Objective:** 3.4.3 Encourage innovation that will support our growth as a regional city including smart community technology

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		2. Smart City Strategy developed by 30 June 2020	2. 100%	2. 80%	Behind schedule. COVID-19 and change in engagement approach for this and Community Strategic Plan project (with which this project was aligned) has required adjustment to the project scope. At 30 June 2020, the Smart Community Roadmap (re-scoped project) was in draft form, with further internal engagement and review to occur before presentation to Council and public exhibition in August 2020.
		3. Support the delivery of projects which enhance local digital engagement, smart work hubs and 'smart' technology roll out	3. 100%	3. 100%	Achieved. Business Planning support for CSU Innovation Hub as part of Stage 2B campus development continues; planning for re-opening of the Hub Business and Co-working Centre (when COVID-19 restrictions are eased to allow this); promotion of free public wifi options; Smart Community Roadmap development well progressed.



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

**Delivery Program 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 Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.1.01 CW Commencement of the construction of the Sancroix Reservoir to Area 13 Thrumster trunk main (DN750)	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Sancroix Reservoir to Area 13)	1. 100%	1. 90%	Behind schedule. The design phase for this project is complete however, the project has been placed on hold pending a development application for a new service centre which being lodged on one of the lots that the pipeline is proposed to pass through. Given the uncertain timeframe to resolve the issues pertaining to the lot with the proposed service centre, Council will look into alternative options to traverse this portion of land. If an alternative is variable, stakeholder consultation will need to be undertaken prior to moving into the tender phase. The re-commencement of the project will be subject to negotiations with the landowner to ensure that unnecessary re-work is not undertaken. These works are now expected to be complete in the 2020/21 FY.
4.1.1.04 CW Installation of new water supply services to residential and business premises to cater for new development	Infrastructure Operations	1. Deliver project according to approved project plan (new water supply services to residential and business premises)	1. 100%	1. 100%	Achieved. Installation of new water supply services being carried out in response to development applications.

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

**Delivery Program 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 Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.1.13 CW Commence construction of Area 14 reclaimed outlet trunk main (DN250), Bonny Hills	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Area 14 Reclaimed trunk main)	1. 100%	1. 100%	Achieved. Construction commenced in early 2019 on this multi year project. This project comprises both the inlet and outlet mains for the reclaimed water network connection between the Grants Head reservoir and the Bonny Hills development Area 14. This project was completed in Dec 2019.
4.1.1.16 CW Thrumster Reclaimed Water Interim Supply - Rising Main to Thrumster Reservoir - undertake construction	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Thrumster Reclaimed Water Interim Supply)	1. 100%	1. 100%	On target, against revised milestones. Construction now underway via contract, works to continue into 2020-2021 and are due for completion in early 2021.
4.1.1.17 CW Beechwood Rosewood Reservoir - Beechwood connection - Undertake Construction/Delivery of Voluntary Planning Agreement (VPA) Council funded works	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Beechwood Rosewood Reservoir)	1. 100%	1. 100%	Achieved. This project was completed in Dec 2019.
4.1.1.18 CW Water Trunkmain Augmentation - Between Sancrox Reservoir and Wauchope	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Water Trunkmain Augmentation - Between Sancrox Reservoir and Wauchope)	1. 100%	1. 100%	On target, against revised milestones. This project has reached the finalisation of the design phase during Dec 2019. During the previous reporting period the environmental assessment pathway for the proposed watermain was reviewed and the need for an Environmental Impact Statement (EIS) and Development Application (DA) was confirmed to be required for a portion of the propose route. Construction tender awarded Mar 2020. Works commenced in April 2020 and scheduled for completion in late 2020. This project will continue into the 2020/21FY.

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

**Delivery Program 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 Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.1.26 CW Construction of the Southern Arm Trunk Main (DN750) - Pacific Hwy to Bonny Hills	Infrastructure Operations, (Project Delivery)	1. Deliver programs according to approved schedule (Construction of the Southern Arm Trunk Main)	1. 100%	1. 85%	Behind schedule. Project pre-construction phase on hold awaiting the completion of property acquisitions along Houston Mitchell Drive. Council is currently negotiating with National Parks and Wildlife Services (NPWS) regarding land acquisition required to install the pipeline in the proposed easement. Project not expected to be re-commenced until late 2020 with construction expected to span over future FY's subject to future funding allocation(s).
4.1.1.27 CW Preconstruction of a Water treatment/Filtration Plant at Cowarra Dam	Infrastructure Planning	1. Deliver programs according to approved schedule (Preconstruction of a Water treatment/Filtration Plant at Cowarra Dam)	1. 100%	1. 100%	On target. Public Works Advisory engaged to undertake technical scoping study for the treatment plant. Program was delayed due to waiting on outputs from the Integrated Water Cycle Management (IWCIM) project. Outputs being completed with work on scoping study recommencing. Scoping study completion expected by the end of 2020. Work will continue into 2020-2021.
4.1.1.28 CW Pre-Construction Works - Trunk Main from Bonny Hills to Kew (Area 12) Reservoir - Stage 1	Infrastructure Operations, (Project Delivery)	1. Deliver programs according to approved schedule (Pre-Construction Works - Trunk Main from Bonny Hills to Kew (Area 12) Reservoir - Stage 1)	1. 100%	1. 100%	On target. Planning works forecast to commence in mid 2020 with works expected to carry over into future FY's. Works to continue into 2020-2021.
4.1.1.29 CW Marbuk Motorised Valve - Relocation	Infrastructure Operations	1. Deliver programs according to approved schedule (Marbuk Motorised Valve - Relocation)	1. 100%	1. 0%	Deferred. Planning works forecast to commence in mid 2020 with works expected to carry over into future financial years. Project has been moved into the 2020/2021 Operational Plan.

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

**Delivery Program 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 Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.1.31 CW Water SCADA - Replacement	Infrastructure Operations	1. Deliver programs according to approved schedule (Water SCADA - Replacement)	1. 100%	1. 100%	On target. Detailed Project plan draft completed and submitted for approval. Works to continue in 20/21 FY.

**Delivery Program Objective:** 4.1.2 Develop and implement annual maintenance and preventative works program for water supply assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.2.1 CW Conduct water asset replacement and renewal programs for live water mains, water meters, renewals and minor works and switchboards	Infrastructure Operations	1. Deliver programs according to approved schedule (Live water mains, water meters, renewals and minor works, pumps, switchboards and flow meters)	1. 100%	1. 100%	Achieved. Water Supply infrastructure renewals being carried out as required.
4.1.2.2 CW Annual Chemical Dosing Systems Upgrades	Infrastructure Operations	1. Deliver project according to approved project plan (Annual Chemical Dosing Systems Upgrades)	1. 100%	1. 100%	Achieved. Additional options for in-house delivery are being explored for 2020-2021.



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

**Delivery Program Objective:** 4.1.3 Plan, investigate, design and construct sewerage assets ensuring health, safety, environmental protection and the future growth of the region

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.3.01 CW Commence construction of the Port Macquarie Sewer rising main (PMSP71), Port Macquarie	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Port Macquarie Sewer Pump Station 71)	1. 100%	1. 100%	On target, against revised milestones. This project continues from 2017/18 FY and is a multi year project. Detailed design phase has reached completion and construction phase has commenced with the advertisement of a construction tender in Dec 2019. Construction contract awarded in Feb 2020 with construction continuing into 20/21 FY.
4.1.3.03 CW Small Towns Sewerage Scheme Construction - Long Flat, Comboyne, Telegraph Point (multi-year project)	Infrastructure Operations, (Project Delivery)	1. Deliver project for Comboyne Sewerage Scheme according to approved project plan	1. 100%	1. 100%	On target. This project continues from previous FY's. Ledonne were engaged to undertake the works in August 2018 and have progressed with installation of pipework and are nearing completion with construction of the STP. Construction completion of the Comboyne scheme is expected in August 2020.
		2. Deliver project for Long Flat Sewerage Scheme according to approved project plan	2. 100%	2. 100%	On target. This project continues from previous FY's. Ledonne were engaged to undertake the works in August 2018 and have progressed with installation of pipework and commenced early works for the construction of the STP. Construction completion of the Long Flat scheme is expected in October 2020.
		3. Deliver project for Telegraph Point Sewerage Scheme according to approved project plan	3. 100%	3. 100%	On target. This project continues from previous FY's. Ledonne were engaged to undertake the works in August 2018 and have progressed with installation of pipework and are nearing completion with construction of the STP. Construction completion of the Telegraph Point scheme is expected in July 2020.

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

**Delivery Program Objective:** 4.1.3 Plan, investigate, design and construct sewerage assets ensuring health, safety, environmental protection and the future growth of the region

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.3.06 CW Area 15 (Lakewood/Kew) - sewerage upgrade to provide for future development - multi-year project	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Area 15 (Lakewood/Kew) - sewerage upgrade)	1. 100%	1. 100%	On target. (to continue through into 2020/21) PMHC partnering with NSW Public Works Advisory for the delivery of this project. NSW Public Works Advisory progressing with project management for the detailed design and delivery of this STP upgrade. The construction phase of this project is estimated to commence not before 2021 based on current project status.
4.1.3.15 CW Commencement of the construction of the Area 14 reclaimed Inlet trunk main (DN250), Bonny Hills	Infrastructure Operation, (Project Delivery)	1. Deliver project according to approved project plan (Reclaimed Water - Area 14 Reclaimed Trunk Main)	1. 100%	1. 100%	Achieved. Project complete. Construction works have been progressing well with the project reaching completion ahead of schedule in December 2019.
4.1.3.17 CW Construction of Sewer Rising Main from Camden Haven Sewer Pump Station #1 to Dunbogan Bridge and Sewer Rising Main Extension to Dunbogan Sewer Treatment Plant Inlet	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Sewer Rising Main from Camden Haven Sewer Pump Station #1)	1. 100%	1. 100%	Achieved. This project incorporated the upgrade to the sewer rising main and water main servicing the Dunbogan STP. Completion ahead of program in May 2019.
4.1.3.18 CW Preconstruction of Thrumster Sewerage treatment Plant (Area 13) - Phase 1 - 20000EP	Infrastructure Operations	1. Deliver project according to approved project plan (Preconstruction of Thrumster Sewerage Treatment Plant (Area 13))	1. 100%	1. 50%	Behind schedule. This project has been included as a high priority with Integrated Water Cycle Management (IWCM) project engagement with Public Works Advisory and includes Environmental Impact Statement and feasibility assessment of different options for Thrumster and the Port Macquarie Sewer Treatment Plant that can cater for growth in the Port Macquarie area. Sewerage Strategy work in progress in IWCM project.

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

**Delivery Program Objective:** 4.1.3 Plan, investigate, design and construct sewerage assets ensuring health, safety, environmental protection and the future growth of the region

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.3.21 Commence Port Macquarie Sewerage Pumping Station (SPS) #64 Electrical upgrade works	Infrastructure Operations	1. Deliver project to approved project plan (Port Macquarie Sewerage Pumping Station (SPS) #64 Electrical upgrade works)	1. 100%	1. 100%	Achieved. Upgrade works complete.
4.1.3.22 CW Construction of Kew Sewer Treatment Plant (STP) Upgrade	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Construction of Kew Sewer Treatment Plant (STP) Upgrade)	1. 100%	1. 100%	On target, against revised milestones, project to continue through into 2020/21. Port Macquarie-Hastings Council partnering with NSW Public Works Advisory for the delivery of this project. NSW Public Works Advisory progressing with project management for the detailed design and delivery of this Sewer Treatment Plant upgrade. The construction phase of this project is estimated to commence not before 2021 based on current project status.
4.1.3.23 CW Annual Energy Efficiency Initiatives allocation	Infrastructure Operations	1. Deliver project according to approved project plan (Annual Energy Efficiency Initiatives allocation)	1. 100%	1. 100%	On target. Planning, scoping and procurement has been complete. Installations commenced and ongoing and will continue into 2020-2021 for finalisation of delivery.
4.1.3.24 CW Inlet Works Replacement for Port Macquarie Sewer Treatment Plants (STP)	Infrastructure Operations	1. Deliver project according to approved project plan (Inlet Works Replacement for Port Macquarie Sewer Treatment Plants)	1. 100%	1. 50%	Behind schedule. Scope reduced for 19/20FY. Major refurbishment will commence in first quarter of 20/21 FY.

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

**Delivery Program Objective:** 4.1.3 Plan, investigate, design and construct sewerage assets ensuring health, safety, environmental protection and the future growth of the region

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.3.25 CW Long Term Asset Management Systems - Stage 1 - Strategic Asset Data and System Review	Infrastructure Planning	1. Deliver project according to approved project plan (Long Term Asset Management Systems - Stage 1 - Strategic Asset Data and System Review)	1. 100%	1. 100%	On target. Scoped had to be revised to meet NSW Government Safe and Secure Funding criteria to maximise grant funding allocation. Funding deed has been signed by Department Primary Industry and Environment (DPIE). Public Works Authority has been engaged and is underway. Water Strategy analysis complete.
4.1.3.26 CW Preconstruction works for upgrade of Lake Innes Sewerage Pump Station #71 (PMSPS71)	Infrastructure Operations, (Project Delivery)	1. Deliver project according to approved project plan (Preconstruction works for upgrade of Lake Innes Sewerage Pump Station #71 (PMSPS71))	1. 100%	1. 100%	On target, against revised milestones. Project planning underway for this pumps station upgrade. This is a multi-year project and will continue into 2020/21 FY.

**Delivery Program Objective:** 4.1.4 Develop and implement annual maintenance and preventative works program for sewerage assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.4.1 CW Programmed replacement of Sewer Pumps and Electrical switchboards at Sewage Pump Stations	Infrastructure Operations	1. Deliver project according to approved project plan (Programmed replacement of Sewer Pumps and Electrical switchboards at Sewage Pump Stations)	1. 100%	1. 100%	Achieved. Renewal programs being carried out in accordance with plans.

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

**Delivery Program Objective:** 4.1.4 Develop and implement annual maintenance and preventative works program for sewerage assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.4.4 CW Carry out programmed replacement of Sewer Treatment Plant (STP) electrical and mechanical assets	Infrastructure Operations	1. Deliver project according to approved project plan (Carry out programmed replacement of Sewer Treatment Plant electrical and mechanical assets)	1. 100%	1. 100%	Achieved. Electrical and mechanical asset replacement was undertaken as required.
4.1.4.5 CW Conduct sewer assets replacement and maintenance programs for Sewer Rehabilitation and Relining Works	Infrastructure Operations	1. Deliver project according to approved project plan (Conduct sewer assets replacement and maintenance program)	1. 100%	1. 100%	Achieved. Infrastructure rehabilitation carried out as required.

**Delivery Program Objective:** 4.1.5 Work towards planning, investigation, design, construction of stormwater assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.5.06 CW Continue design and construction for Black Swan Terrace - Stormwater detention facility (multi-year project)	Infrastructure Planning	1. Deliver project according to approved project plan (Black Swan Terrace - Stormwater detention facility)	1. 100%	1. 50%	Behind schedule. Final design being finished, however is behind schedule. Consultant failing to meet milestones. An additional consultant has been engaged via a request for quotation (RFQ) process to deliver Stage 2 of the design order to progress this project while discussion with the initial consultant regarding a lack of delivery are ongoing. Completion of design and commencement of construction included in 2020/21 Operational Plan. Design work completed to date will be used as a preliminary design for commencing detailed designs.

**Community Strategic Plan:** 4.1 Provide (appropriate) infrastructure and services including water cycle management, waste management, and sewer management  
**Delivery Program Objective:** 4.1.5 Work towards planning, investigation, design, construction of stormwater assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.5.08 CW Stormwater Remediation Panorama Drive Bonny Hills - Detailed Designs of remedial options	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Stormwater Remediation Panorama Drive Bonny Hills)	1. 100%	1. 100%	Achieved. This project involves the development of a concept design only to address stormwater issues at this location. Design phase complete.
4.1.5.09 CW Investigation of Stormwater Remediation Options - Bellbowrie/Bay Street Catchment	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Investigation of Stormwater Remediation Options - Bellbowrie/Bay Street Catchment)	1. 100%	1. 85%	Behind schedule. This design only project is underway and progressing towards completion in first quarter of 20/21FY. The design has been more complex than initially expected with multiple options required to be tested to develop a preferred solution.
4.1.5.10 CW Stormwater Remediation Designs –Design of drainage improvement works	Infrastructure Planning	1. Deliver project according to approved project plan (Stormwater Remediation Designs –Design of drainage improvement works)	1. 100%	1. 100%	Achieved. Design works undertaken when required.
4.1.5.11 CW Detailed Designs of Stormwater Remediation measures identified in the Westport Stormwater Management Plan including Gordon Street to Buller Street Port Macquarie works	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Detailed Designs of Stormwater Remediation measures identified in the Westport Stormwater Management Plan)	1. 100%	1. 100%	On target. Multi year project. Consultant engaged to undertake detailed stormwater catchment analysis and detailed designs. Designs are progressing well and project is on track and will continue into 2020-2021 and is scheduled for completion in August 2020.
4.1.5.12 CW Stormwater Remediation - 35 Hart Street - Investigation of stormwater remediation - Planning and Designs	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Stormwater Remediation - 35 Hart Street)	1. 100%	1. 0%	Deferred. Planning and design for this project has been deferred into the 20/21 FY.

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

**Delivery Program Objective:** 4.1.5 Work towards planning, investigation, design, construction of stormwater assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.5.13 CW Stormwater Remediation - 31 Calwalla and Dilladerry Cres - Overflow swale plus system augmentation	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Stormwater Remediation - 31 Calwalla & Dilladerry Cres)	1. 100%	1. 100%	Achieved. Calwalla Crescent works achieved along with revised scope for Dilladerry Crescent. Additional scope to be considered in future operational plans.
4.1.5.14 CW Stormwater Remedial Works - 741 Beechwood Road	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Stormwater Remedial Works - 741 Beechwood Road)	1. 100%	1. 100%	On target. All planning complete. Contractors engaged, works commenced and ongoing.

**Delivery Program Objective:** 4.1.6 Develop and implement annual maintenance and renewal programs for stormwater assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.6.02 Undertake annual canal maintenance for Settlement Shores and Broadwater canals as required	Infrastructure Planning, (Project Delivery)	1. Undertake canal maintenance works in accordance with the rolling priority program and risk management processes	1. 100%	1. 100%	Achieved. Reactive maintenance undertaken as required.
4.1.6.05 Settlement Shores canals - Major Maintenance and Dredging	Infrastructure Planning, (Project Delivery)	1. Deliver project to approved project plan (Settlement Shores Canals Major Maintenance and Dredging)	1. 100%	1. 100%	On target. Public Works Advisory (PWA) have been engaged to manage the project on behalf of Council. PWA have engaged Birdon to undertake the works and have commenced in Dec 2019 following community consultation process. The works are forecast to be complete by mid 2020.

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

**Delivery Program Objective:** 4.1.6 Develop and implement annual maintenance and renewal programs for stormwater assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.6.07 CW Carry out the Stormwater Renewal Program	Infrastructure Operations	1. Deliver program according to approved schedule (Stormwater Renewal)	1. 100%	1. 100%	Achieved. The 2019-2020 Stormwater Renewal Programme has been completed: * Stormwater Relining Completed Works: * Fairmont Gardens, Wauchope * 122 Hibbard Dr, Port Macquarie * Longworth Rd, Dunbogan * Black Swan Terrace, West Haven
4.1.6.09 CW Construction of Stormwater Flooding Mitigation measures - Rodley Street Bonny Hills	Infrastructure Planning, (Project Delivery)	1. Deliver project to approved project plan (Stormwater Flooding Mitigation measures - Rodley Street Bonny Hills)	1. 100%	1. 100%	Achieved.
4.1.6.18 Carry-out stormwater maintenance program including inspections, monitoring and repair works	Infrastructure Operations	1. Deliver project to approved project plan (Stormwater maintenance program)	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.
4.1.6.19 Carry-out stormwater engineering investigations in response to identified issues from both reactive and proactive inspections	Infrastructure Planning	1. Engineering Investigations completed for all complex issues raised	1. 100%	1. 100%	Achieved. Investigations undertaken on reactive basis only. Decrease in resources in the Stormwater Section due to the Emergency Water Security project. Stormwater Engineer assistance concluded at 30 June 2020.
4.1.6.20 Stormwater Asset Management Condition Rating of stormwater assets via CCTV inspections, including of newly constructed works	Infrastructure Operations	1. In accordance with adopted programs and proactive maintenance requirements based on risk	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.



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

**Delivery Program Objective:** 4.1.6 Develop and implement annual maintenance and renewal programs for stormwater assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.6.21 Develop Urban Stormwater Catchment Management Plans for each of the 62 sub-catchments	Infrastructure Planning	1. Deliver project according to approved project plan (Develop Urban Stormwater Catchment Management Plans)	1. 100%	1. 0%	Deferred. Project fully carried forward to 2020/21 Operational Plan due to other higher priority projects.

**Delivery Program Objective:** 4.1.7 Develop and implement effective waste management strategies

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.7.01 CW Kingfisher Waste Depot - Commence construction for expansion - multi-year project	Commercial Business Units, (Project Delivery)	1. Deliver project according to approved project plan (Kingfisher Waste Depot - Commence construction for expansion)	1. 100%	1. 100%	On target. Works commenced late 2019 following issue of the Construction Certificate. Works are forecast to be completed in Sept 2020 (subject to weather). Works to continue into 2020-2021.
4.1.7.02 Deliver primary school waste education program	Commercial Business Units	1. Primary school education Program delivered by 30 June 2020	1. 100%	1. 100%	Achieved. Primary school waste education program delivered.
4.1.7.03 Develop Pre-school waste education program	Commercial Business Units	1. Pre-school waste education program delivered by 30 June 2020	1. 100%	1. 90%	Behind schedule. (noting COVID-19 constraints). Pre-school waste education program developed. Implementation pending COVID-19 restrictions.
4.1.7.04 Develop Event Waste Management Guidelines	Commercial Business Units	1. Event Waste Management Guidelines developed by 30 June 2020	1. 100%	1. 100%	Achieved. The Developments, Public Place and Events Waste Minimisation and Management Policy was adopted by Council at the Council meeting held on 3 June 2020.
4.1.7.05 Deliver efficient domestic waste collection services	Commercial Business Units	1. Domestic waste collection services delivered as required	1. 100%	1. 100%	Achieved. Domestic waste collection services delivered as required.

**Community Strategic Plan:** 4.1 Provide (appropriate) infrastructure and services including water cycle management, waste management, and sewer management  
**Delivery Program Objective:** 4.1.7 Develop and implement effective waste management strategies

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.7.06 Ensure effective recycling & recovery of domestic waste through Material Recovery Facility (MRF)	Commercial Business Units	1. Recovery of domestic waste through Organic Recovery Facility complete by 30 June 2020	1. 100%	1. 100%	Achieved. Recovery (recycling) of domestic waste through MRF delivered as required.
4.1.7.07 Ensure effective recycling & recovery of organic waste through Organic Recovery Facility (ORF)	Commercial Business Units	1. Recovery of domestic waste through Organic Recovery Facility complete by 30 June 2020	1. 100%	1. 100%	Achieved. Recovery of domestic waste through the Organics Resource Recovery Facility (ORRF) delivered as required.
4.1.7.08 Deliver efficient commercial waste collection services	Commercial Business Units	1. Delivery commercial waste collection services as required	1. 100%	1. 100%	Achieved. Commercial waste collection services delivered as required.
4.1.7.09 Ensure effective operation of all Waste Transfer Stations	Commercial Business Units	1. Operation of all Waste Transfer Stations undertaken as required	1. 100%	1. 100%	Achieved. Waste Transfer Stations operations undertaken as required.
4.1.7.10 Ensure effective disposal of waste to landfill	Commercial Business Units	1. Capture the tonnage of waste to landfill for environmental reporting	1. 100%	1. 100%	Achieved. Reporting completed as required.
4.1.7.11 Ensure effective operation of Cairncross waste management facility	Commercial Business Units	1. Operation of Cairncross waste management facility undertaken as required	1. 100%	1. 100%	Achieved. Cairncross waste management facility operations undertaken as required.
4.1.7.12 Deliver efficient public place waste collection services	Commercial Business Units	1. Public place waste collection services undertaken as required	1. 100%	1. 100%	Achieved. Public place waste collection services undertaken as required.
4.1.7.13 Address illegal dumping and provide clean up programs	Commercial Business Units	1. Illegal dumping and clean up programs delivered by 30 June 2020	1. 100%	1. 100%	Achieved. Illegal dumping and clean up programs delivered as required.

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

**Delivery Program Objective:** 4.1.7 Develop and implement effective waste management strategies

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.7.14 Commence Multi Unit Dwelling Organics Recovery Project	Commercial Business Units	1. Deliver project according to approved project plan (Multi Unit Dwelling Organics Recovery Project)	1. 100%	1. 100%	Achieved. Project Milestone 2 completed on 15 May 2020. Milestone 3 due on 31 August 2020.
4.1.7.15 Kingfisher Waste Transfer Station - Gas Investigation Risk Analysis (CSU Rezoning)	Commercial Business Units	1. Deliver projects according to approved Office of Environment and Heritage (OEH) project plans	1. 100%	1. 100%	Achieved. Final gas investigation study issued to the Environmental Protection Agency (EPA).
4.1.7.16 Dunbogan Landfill Site - Gas Investigation Risk Analysis (Subdivision)	Commercial Business Units	1. Deliver projects according to approved Office of Environment and Heritage (OEH) project plans	1. 100%	1. 100%	Achieved. Gas bores installed and 12 month monitoring program commenced.
4.1.7.17 Cairncross Trial Gas Extraction System - Finalisation of Trial	Commercial Business Units	1. Deliver projects according to approved Office of Environment and Heritage (OEH) project plans	1. 100%	1. 100%	Achieved (noting COVID-19 constraints). Contractor engaged - commencement pending COVID-19 restrictions.
4.1.7.18 Undertake Waste Education and Marketing campaigns	Commercial Business Units	1. Waste Education and Marketing campaigns delivered according to approved programs	1. 100%	1. 100%	Achieved. Annual waste education and marketing program delivered.
4.1.7.19 Kingfisher Community Recycling Centre - Stage 1 - Scoping Study	Commercial Business Units	1. Deliver projects according to approved Office of Environment and Heritage (OEH) project plans	1. 100%	1. 0%	Deferred. Project deferred in 2019-2020 (see February 2020 Monthly Budget adjustment). Project to be rescheduled in consideration of Council's Waste Strategy objectives / priorities.
4.1.7.20 Deliver "Better Waste and Recycling" Initiatives (Office of Environment and Heritage)	Commercial Business Units	1. Deliver projects according to approved Office of Environment and Heritage (OEH) project plans	1. 100%	1. 100%	Achieved. Projects identified for 2019-20 delivered as required.

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

**Delivery Program Objective:** 4.1.7 Develop and implement effective waste management strategies

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.7.21 CW Cairncross Waste Management Facility (WMF) Improvements - Stage 1 - Lunchroom Facilities & Amenities	Commercial Business Units	1. Deliver project according to approved project plan (Cairncross Waste Management Facility (WMF) Improvements)	1. 100%	1. 0%	Deferred. Project deferred in 2019-2020 (see February 2020 Monthly Budget adjustment), and included in the 2020-2021 Operational Plan.
4.1.7.22 CW Cairncross Landfill Covers - Transportable light weight covers to temporarily cover landfill on a daily basis	Commercial Business Units	1. Deliver project according to approved project plan (Cairncross Landfill Covers)	1. 100%	1. 0%	Deferred. Project deferred in 2019-2020 (see February 2020 Monthly Budget adjustment). Project to be rescheduled if required in consideration of Council's Waste Strategy objectives / priorities.
4.1.7.23 CW Cairncross Recycling Industrial Zone Improvements - Concrete Processing Facility Establishment Stage 1 - EIS, Design, Planning & Approvals	Commercial Business Units	1. Deliver project according to approved project plan (Cairncross Recycling Industrial Zone Improvements - Concrete Processing Facility Establishment Stage 1)	1. 100%	1. 0%	Deferred. Project deferred in 2019-2020 (see February 2020 Monthly Budget adjustment), and included in the 2020-2021 Operational Plan.
4.1.7.24 CW Cairncross Recycling Industrial Zone Improvements - Electricity distribution, metering and DA amendments	Commercial Business Units	1. Deliver project according to approved project plan (Cairncross Recycling Industrial Zone Improvements - Electricity distribution, metering and DA amendments)	1. 100%	1. 100%	Achieved. Project completed in June 2020.
4.1.7.25 Obtain carbon credits for Waste Diversion to Organic Recycling Facility	Commercial Business Units	1. Capture carbon credit data for reporting purposes	1. 100%	1. 100%	Achieved. Audit undertaken. Works ongoing for submission of carbon credits and expected to be finalised by October 2020.

**Community Strategic Plan:** 4.1 Provide (appropriate) infrastructure and services including water cycle management, waste management, and sewer management  
**Delivery Program Objective:** 4.1.7 Develop and implement effective waste management strategies

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.1.7.26 CW Cairncross Waste Depot - Facility Upgrade and Expansion Approvals	Commercial Business Unit	1. Deliver project according to approved project plan (Cairncross Waste Depot - Facility Upgrade and Expansion Approvals)	1. 100%	1. 100%	On target. Landfill Expansion Detailed Design expected to be completed by September 2020. Work to continue into 2020-2021.

**Community Strategic Plan:** 4.2 Aim to minimise the impact of natural events and climate change, for example, floods, bushfires and coastal erosion

**Delivery Program Objective:** 4.2.1 Develop and implement Coastal, Estuary, Floodplain, and Bushfire management plans

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.2.1.01 Deliver annual bushfire risk mitigation works on Council land in accordance with the Bush Fire Risk Management Plan (adopted by NSW Rural Fire Service)	Environment and Regulatory Services	1. 100% of fire trails on Council land inspected as per legislation (annually) 2. 100% of on-ground works completed	1. 100% 2. 100%	1. 100% 2. 100%	Achieved. Inspections completed Xmas Bells Plains, Lake Cathie and Laureton for planning FY 2020-21. Draft Fire access and fire trail plan yet to be adopted and legislative requirements linked to this plan. Achieved. Draft Bush Fire Risk Management Plan will provide annual works program for implementation. Current program from Bushfire Risk Information Management System and previous annual works program. On ground works completed in accordance with BFRMP inspect and maintain APZ. Planning and preparation underway for implementation of burning program on council land.
		3. 12 Asset Protection Zones (APZ's) inspected per month	3. 100%	3. 100%	Achieved for the twelve month period a total of 240 APZ inspections related to pre season planning, contractor works inspections and CRM. APZ's inspected in Laureton, Lake Cathie, Bonny Hills, Wauchope and Port Macquarie in the March-June quarter totaled 22.

**Community Strategic Plan:** 4.2 Aim to minimise the impact of natural events and climate change, for example, floods, bushfires and coastal erosion

**Delivery Program Objective:** 4.2.1 Develop and implement Coastal, Estuary, Floodplain, and Bushfire management plans

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		4. Grant applications lodged and acquitted annually 5. Two strategic fire advantage zone (SFAZ) burns planned and implemented	4. 100% 5. 100%	4. 100% 5. 90%	Achieved. Rural Fire Fighting Fund (RFFF) reimbursable grant acquitted within budget and on time. Behind schedule. Planning was completed for two strategic fire advantage zone burns with one of these burning in unplanned wildfire west of Port Macquarie airport. Implementation of second burn not achievable due to lack of suitable burning window and fuel prescriptions. Resourcing was also limited due to ongoing emergency bushfire operations.
4.2.1.02 Complete Flying Fox Camp Management Plan for Kooloonbung Creek in consultation with community & commence implementation of actions within the management plan	Environment and Regulatory Services	1. Flying Fox Management Plan complete	1. 100%	1. 100%	Achieved. Completed targets for 2019/20.
4.2.1.03 Implement mitigation actions from Hastings River Flood Plain Risk Management Plan: Stage 1: Hibbard Floodway Investigation Area - develop a specific Flood Study	Environment and Regulatory Services	1. Hibbard Flood Study developed	1. 100%	1. 0%	Deferred. Work will not be completed this financial year. Changes to due Council resolution to alter flood levels based on climate change has altered delivery of the project.
4.2.1.04 Implementation of flood mapping updates associated with Hastings River Flood Study	Environment and Regulatory Services	1. GIS flood mapping completed & available to community	1. 100%	1. 0%	Deferred. Work will not be completed this financial year. Changes to due Council resolution to alter flood levels based on climate change has altered delivery of the project.
4.2.1.05 Continue to ensure development compliance to achieve sound environmental outcomes - Vegetation Management Plans, Koala Plans of Management developed, registered, implemented and monitored	Environment and Regulatory Services	1. Establish a centralised compliance register for environmental outcomes associated with development	1. 100%	1. 100%	Achieved. Works completed.
4.2.1.06 Development of environmental program of works (registration, implementation, monitoring) to ensure compliance to Airport biocertification	Environment and Regulatory Services	1. Implementation of Airport biocertification works commenced	1. 100%	1. 100%	Achieved. Completed actions for 2019/20.

**Community Strategic Plan:** 4.2 Aim to minimise the impact of natural events and climate change, for example, floods, bushfires and coastal erosion

**Delivery Program Objective:** 4.2.1 Develop and implement Coastal, Estuary, Floodplain, and Bushfire management plans

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.2.1.07 Continue to provide environmental impact or conditions advice on proposed development or proposed construction works	Environment and Regulatory Services	1. Number of REFs and DAs environmental advice has been provided	1. 100%	1. 100%	Achieved. Works are ongoing annually.
4.2.1.08 Continue to implement the Floodplain Risk Management Process for the Wrights and Yarranabee Creeks - develop a Floodplain Risk Management Study	Environment and Regulatory Services	1. Floodplain Risk Management Study is developed	1. 100%	1. 0%	Deferred. Work will not be completed this financial year. Changes to due Council resolution to alter flood levels based on climate change has altered delivery of the project
4.2.1.09 Continue to develop a Flood Study for the North Brother Local Catchments - facilitation of stormwater remediation	Environment and Regulatory Services, (Infrastructure Planning)	1. Development of a North Brother Flood Study underway to facilitate future stormwater remediation	1. 100%	1. 100%	On target. Draft Options Report complete and being placed on public exhibition. The last stages have been combined to streamline the completion of the Flood Plain Risk Management Plan and Plan implementation actions
4.2.1.10 Undertake development of Coastal Management Program for the LGA - STAGE 1 Develop a Scoping Study to enable state funding for coastal & estuarine management	Environment and Regulatory Services	1. Development of a Scoping Study for Coastal Management Program	1. 100%	1. 100%	On target. The first draft of the scoping study has been completed. Community consultation has been completed. Government stakeholder consultation is due for completion in early July 2020. The scoping study is to be presented to Council in August 2020. Works will continue into 2020-2021.
4.2.1.11 CW Continue to implement Strategies of Lake Cathie Coastal Zone Management Plan (CZMP) - Stormwater Redirection (Illaroo Rd to Lake Cathie)	Environment and Regulatory Services	1. Completion of redirection of stormwater infrastructure from Illaroo to Lake Cathie as per Lake Cathie Coastal Zone Management Plan	1. 100%	1. 40%	Behind schedule. Work to complete the Aboriginal Archaeological Heritage Assessment is ongoing. This work has been included in the 20/21 operational plan.

**Community Strategic Plan:** 4.2 Aim to minimise the impact of natural events and climate change, for example, floods, bushfires and coastal erosion

**Delivery Program Objective:** 4.2.1 Develop and implement Coastal, Estuary, Floodplain, and Bushfire management plans

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.2.1.12 Undertake a review of the existing Lake Cathie Opening Strategy in consultation with the NPWS; the OEH; NSW Fisheries, DPI, and community incl Revive Lake Cathie Community Group	Environment and Regulatory Services	1. Consultation undertaken with stakeholders and report provided to Council by 30 June 2020	1. 100%	1. 50%	Behind schedule. A review of the Lake Cathie Entrance Opening Strategy will be undertaken as part of the 2020-2021 Operational Plan under the Coastal Management Program. This information was provided to Council at the May Ordinary Council Meeting in full detail.

**Community Strategic Plan:** 4.3 Facilitate development that is compatible with the natural and built environment

**Delivery Program Objective:** 4.3.1 Undertake transparent and efficient development assessment in accordance with relevant legislation

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.3.1.1 Ensure development assessment, building certification and subdivision certification activities are completed efficiently and in accordance with legislation	Development Assessment	1. Capture the number of applications and processing times, together with a commentary on development trends and report to Council quarterly	1. 100%	1. 100%	Achieved. Determined applications for July to June period include: 906 Development Applications with an average processing time of 44 days, 141 s96 Modifications with an average processing time of 41 days, 476 Building Construction Certificates with an average processing time of 10 days and 81 Complying Development Certificates with an average processing time of 13 days.
4.3.1.2 Ensure the Development Assessment Panel operates in accordance with their charter and all applications are accurately determined	Development Assessment	1. Have no successful legal appeals relating to process errors	1. 100%	1. 100%	Achieved. No legal appeals have been received from July 2019 to 30 June 2020.



**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.02 Develop a Regional Integrated Transport Strategy - multi-year project	Infrastructure Planning	1. Deliver project according to approved project plan (Develop a Regional Integrated Transport Strategy)	1. 100%	1. 80%	Behind schedule. Project has been delayed due to other priority projects. Continuing to work with Transport for NSW around funding options to outsource resourcing. Project planning for delivery is anticipated to be complete in August 2020. Programme impacted by COVID-19 since last quarter.
4.4.1.03 CW Footpath, Cycleway and Pedestrian works	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Footpath, Cycleway and Pedestrian works)	1. 100%	1. 100%	Achieved. Footpath construction program completed in June 2020. The 20/21 FY footpath program has commenced with works underway at Central Rd, Highfields Circuit and Bain St.
4.4.1.05 CW Wauchope Main Street, Improvements to pedestrian amenity - Stage 1 Construction - multi-year project	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Wauchope Main Street- Improvements to pedestrian amenity)	1. 100%	1. 100%	Achieved. Construction works have reached completion with the official opening held November 2019 following completion of the RMS pavement rehabilitation works throughout the Wauchope main street.
4.4.1.10 CW Lake Road - continuation of detailed design of dual lanes - Jindalee to Fernhill intersections and Chestnut Road to Ocean Drive - multi-year project	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Lake Road - continuation of detailed design of dual lanes)	1. 100%	1. 75%	Behind schedule. This design only project continues from 2017/18 FY. Design is now progressing towards anticipated completion in the first quarter of 2020-2021 due to additional traffic study investigations required to inform the detailed designs.
4.4.1.12 CW Beechwood Road - continue the design for Stages 5 and 6 of Beechwood Road reconstruction - Riverbreeze to Waugh Street - multi-year project	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Beechwood Road - continue the design for Stages 5 and 6 of Beechwood Road reconstruction (Riverbreeze to Waugh Street))	1. 100%	1. 90%	Behind schedule. Stage 5 designs completed during the reporting period. Stage 6 is limited to concept designs only, including higher level crossing of Yippen Creek to improve flood access. Concept designs to continue into 20/21 FY.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.13 CW Hastings River Drive - Hughes Place to Boundary Street upgrade - multi-year project	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Hastings River Drive - Hughes Place to Boundary Street upgrade)	1. 100%	1. 85%	Behind schedule. This project continues from 2017/18 FY. AT&L engaged to undertake detailed design and environmental approvals. Detailed designs are now nearing completion. The contractor has experienced some delays in meeting scheduled progress with completion now expected in Sept 2020. The construction of this segment of Hastings River Dr is subject to additional funding being allocated/secured
4.4.1.21 CW Dunbogan Bridge - Reid Street - undertake substructure rehabilitation - multi-year project	Infrastructure Planning	1. Deliver project according to approved project plan (Dunbogan Bridge - Reid Street)	1. 100%	1. 100%	On target. Construction works complete. Project closure reporting underway with project complete by end May 2020. Additional works identified to replace the handrailing within existing budget. Request for tender planning currently underway. Works to continue into 2020-2021.
4.4.1.22 CW Kindee Bridge - structural repairs and Bridge Replacement optioneering - multi-year project	Infrastructure Planning	1. Deliver project according to approved project plan (Kindee Bridge - structural repairs and bridge replacement optioneering)	1. 100%	1. 100%	On target. Initial repairs and detailed investigations complete. Stage 2 works planned to commence in fourth quarter of 2019-2020. Programme impacted by recent fires and floods. Replacement Options complete, except community consultation, which has been impacted by COVID-19. Project to continue into 2020-2021.
4.4.1.29 CW Diamond Head Rd/The Boulevard Flood Access Stage 1A	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Diamond Head Rd/The Boulevard Flood Access Stage 1A)	1. 100%	1. 100%	Achieved. This multi year project continues from 2017/18 FY and had grant funding for construction announced in early 2019. Project completed in June 2020.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.31 CW Deliver Bold Street Pedestrian Crossing Laurieton	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Bold Street - Pedestrian Crossing Laurieton)	1. 100%	1. 100%	Achieved. Project completed in June 2020
4.4.1.32 Continue corridor planning - Kendall Road - Ocean Drive - Hastings River Drive regional road corridor (MR538 /MR600) - multi-year project	Infrastructure Planning	1. Corridor planning - Kendall Road - Ocean Drive- Hastings River Drive regional road corridor commenced	1. 100%	1. 100%	On target. Request for quote issued in March 2020. Bitzios appointed as successful contractor in June 2020. Project to continue into 2020-2021.
4.4.1.33 CW Continue detailed designs - north of Miala Street to Orana Drive Lake Cathie	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Detailed designs - north of Miala Street to Orana Drive Lake Cathie)	1. 100%	1. 100%	Achieved. The detailed concept designs are complete (pending construction funding allocation). This design only project continues from 2017/18 FY. The Council at the December 2018 Ordinary Meeting resolved to revise the concept design to include on-street parking. Following this the detailed concept design has since been finalised with a community update also distributed in Feb 2020. Further project progression is pending construction funding source confirmation.
4.4.1.34 CW Kew Main Street Upgrade	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Kew Main Street Upgrade)	1. 100%	1. 100%	On target. This project continued from the 2017/18 FY following the announcement of funding from the Federal Government. The project is currently in the design phase with community consultation being undertaken on the initial concept design. The detailed design and environmental approvals will commence following completion of community consultation and are forecast to be completed in late 2020 with construction works to be completed by the end of the 2020/21 FY.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.37 CW Local Roads Proactive Transport Program	Infrastructure Planning	1. In accordance with adopted programs and preventative maintenance requirements (Local Roads Proactive Transport Program)	1. 100%	1. 100%	Achieved. The 2019-20 Road Rehabilitation and Resealing Programme has been completed. Road Resurfacing and Rehabilitation Completed Works: * Ocean Dr, Laurieton (Kew Rd to Henry Kendall) * Kew Rd, Laurieton (Ocean Dr to Tunis St) * Widderson St, Port Macquarie (Oxley Hwy to Hastings River Dr) * Comboyne Rd, Byabarra (Oxley Hwy to Hartys Creek) * High St, Wauchope (Beechwood Rd to Cameron St) Road Resealing Completed Works: * Matthew Flinders Dr, Port Macquarie * Bago Rd, Herons Creek (Milligans to Pacific Hwy) * Lighthouse Beach Local Streets, Port Macquarie * Long Flat Local Roads, Long Flat, Kindee, Forbes River * Captain Cook Bicentennial Dr, Laurieton (April 2020) * Ocean Dr, North Haven to Bonny Hills (April 2020)
4.4.1.42 CW John Oxley Drive Upgrade – Detailed Design – The Ruins Way to Wrights Road (Oxley Highway)	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (John Oxley Drive Upgrade)	1. 100%	1. 100%	On target (multi year project) Hopkins Consulting have been engaged to undertake the detailed design and environmental approvals works for the project and have been progressing the field investigations and traffic studies in accordance with the approved program. The design phase is expected to extend into the 20/21 Financial Year.
4.4.1.44 Conduct sealed road network condition survey	Infrastructure Planning	1. Undertake condition rating of Council's transport assets by 30 June 2020	1. 100%	1. 100%	On target. Falling Weight Deflectometer (FWD) strength testing complete. Results currently being inputted into Pavement Management System.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.45 CW Ocean Drive duplication - Matthew Flinders Drive to Greenmeadows - multi-year project	Infrastructure Planning	1. Deliver project according to approved project plan (Ocean Drive duplication - Matthew Flinders Drive to Greenmeadows)	1. 100%	1. 0%	Behind schedule. Delayed as project delivery methodology and funding arrangements have not been determined with Transport for NSW (TfNSW). Discussions are ongoing with TfNSW around finalising the Business Case and discussion with the Federal Government regarding funding assistance, noting there is a significant funding gap between available budget and the TfNSW estimated project cost.
4.4.1.46 CW Design and investigations for Gordon Street Pavement Reconstruction and Service Relocations - between Ocean Drive and Horton Street	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Design and investigations for Gordon Street Pavement Reconstruction)	1. 100%	1. 100%	On target. (multi-year project) Design progressing well. Construction phase of the project funded across 2020/21 and 2021/22.
4.4.1.48 Development Contribution Plan (Roads) Review and Update	Infrastructure Planning	1. Deliver project according to approved project plan (Development Contribution Plan (Roads) Review and Update)	1. 100%	1. 0%	Deferred. Project scoping has been deferred to other higher priority program activities. Planning commenced on producing interim contributions plan, which is currently being reviewed by the Contributions Planning Team. The re-initiation of this project is pending the successful appointment of the Transport and Stormwater Planning Manager within the Infra Planning Group, which occurred as 6 July 2020. Once re-initiated project planning with the Strategy Group will be completed within three months.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.49 CW Transport and Traffic various design works - additional Transport and Stormwater Designs	Infrastructure Planning	1. Deliver project according to approved project plan (Transport and Traffic various design works - additional Transport and Stormwater Designs)	1. 100%	1. 100%	Achieved. Included design works for Kew Main Street and various intersection across the LGA .
4.4.1.51 CW Installation of new bus shelters as per the Community Passenger Transport Infrastructure Grant Scheme (CPTIGS) Program	Infrastructure Operations	1. Bus shelter installations completed as per the program	1. 100%	1. 100%	Achieved. The CPTIGS Programme is complete. New shelters installed at Ron Banks Road (at Bago Road) Herons Creek, Cameron St Wauchope, Ocean Dr (Links Cr) Port Macquarie, Laurie St (Bold St) Laurieton and The Jib (Doncaster Ave) Port Macquarie. Bus stop hardstand areas installed at Home St Port Macquarie, Home St (Cross St) Port Macquarie, Savoy St Port Macquarie and Savoy St (Narani Cr) Port Macquarie
4.4.1.52 AUS-SPEC Review - Undertake a comprehensive review of Councils full suite of design and construction specifications - multi-year project	Infrastructure Planning	1. Deliver project according to approved project plan (AUS-SPEC Review)	1. 100%	1. 40%	Behind schedule. Implementation of revised specifications have been delayed by other higher priority projects. The re-initiation of this project is pending the successful appointment of the Transport and Stormwater Planning Manager within the Infra Planning Group, occurred 6 July 2020. Once re-initiated the new specifications would be completed in approximately six months.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.53 Settlement Point Ferry and Hibbard Ferry - upgrade to ferry access and the installation of extra signage	Infrastructure Operations	1. Deliver project according to approved project plan (Settlement Point Ferry and Hibbard Ferry - upgrade to ferry access and the installation of extra signage)	1. 100%	1. 100%	Achieved. Program has been completed.
4.4.1.55 CW Beach to Beach - shared path project at Camden Haven	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Beach to Beach - shared path project at Camden Haven)	1. 100%	1. 100%	Achieved. Final section of D9 path installation is now complete.
4.4.1.57 CW Lighthouse Road Tourism Connectivity Project - Commence Lighthouse road east upgrades - Matthew Flinders Drive to The Lighthouse	Infrastructure Planning	1. Deliver project according to approved project plan (Commence Lighthouse Road east upgrades - Matthew Flinders Drive to The Lighthouse)	1. 100%	1. 100%	Achieved.
4.4.1.59 CW Gordon/Horton Street - intersection upgrade - details designs	Infrastructure Planning	1. Deliver project according to approved project plan (Gordon/Horton Street - intersection upgrade - details designs)	1. 100%	1. 100%	On target. Design consultant has been appointed and design is now underway. Project to continue into 2020-2021, with completion of the design phase planned for November 2020.
4.4.1.60 Ferry Management - Slipping Settlement Point Ferry (21 Vehicle)	Infrastructure Operations	1. Undertake slipping of Settlement Point Ferry	1. 100%	1. 100%	Achieved. Slipping program finalised with in the estimated period and under budget by 10%.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.61 CW Continuation of Bago Road Rehabilitation (Milligan's Rd to Bluewater Cres)	Infrastructure Planning	1. Deliver project according to approved project plan (Bago Road Rehabilitation - Milligan's Rd to Bluewater Cres)	1. 100%	1. 100%	Achieved. Works Complete.
4.4.1.62 CW Reconstruction of The Ruins Way (Major Innes Road to Sitella St)	Infrastructure Planning	1. Deliver project according to approved project plan (Reconstruction of The Ruins Way (Major Innes Road to Sitella St))	1. 100%	1. 100%	On target. Design review and finalisation nearing completion. Scope has increased with additional Federal Grant funding being available to resurface Major Innes Drive and more of The Ruins Way. Resurfacing works planned to commence in April with reconstruction works commencing in July/August 2020.
4.4.1.63 CW Pembroke Road - Stoney Creek Bridge Upgrade - Detailed Design	Infrastructure planning	1. Deliver project according to approved project plan (Pembroke Road - Stoney Creek Bridge Upgrade - Detailed Design)	1. 100%	1. 85%	Behind schedule. Detailed design component of project deferred to 2020/21 Operational Plan due to other higher priority projects. Strategic alignment and options study underway. Consultation with property owners delayed due to COVID-19.
4.4.1.64 CW Koala Street Upgrade - Concept Design	Infrastructure Planning	1. Deliver project according to approved project plan (Koala Street Upgrade - Concept Design)	1. 100%	1. 0%	Deferred. Works deferred to outer years
4.4.1.65 CW Scrubby Creek Bridge - Detailed Design	Infrastructure Planning	1. Deliver project according to approved project plan (Scrubby Creek Bridge - Detailed Design)	1. 100%	1. 100%	On target. Design works underway, geotechnical investigation has been completed. Procurement of major bridge components is underway. Construction works planned to commence in July 2020.



**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.66 CW Kindee Bridge Upgrade Detailed Design	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Kindee Bridge Upgrade - Detailed Design)	1. 100%	1. 75%	Behind schedule. Kindee bridge maintenance and repair works have been prioritised ahead of the initiation of this broader bridge replacement project. Project initiation now expected in the first quarter of 20/21FY.
4.4.1.67 Orbital Strategic Business Case	Infrastructure Planning	1. Deliver project according to approved project plan (Orbital Strategic Business Case)	1. 100%	1. 100%	On target. Traffic analysis stage underway and on programme and will continue into 2020-2021.
4.4.1.68 CW Pedestrian Refuge - Hayward Street - West of Horton Street - Construction	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Pedestrian Refuge - Hayward Street - West of Horton Street - Construction)	1. 100%	1. 100%	Achieved. Project complete. Works commenced and successfully finalised during Nov 2019.
4.4.1.69 CW Pedestrian Refuge - Gordon Street & Hollingworth Street - West of Horton Street - Construction	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Pedestrian Refuge - Gordon Street & Hollingworth Street - West of Horton Street - Construction)	1. 100%	1. 100%	Achieved. This project was completed during the reporting period.
4.4.1.70 CW Pedestrian Refuge - Horton Street - Clarence Street and William Street - Detailed Design and Construction	Infrastructure Planning, (Project Delivery)	1. Deliver project according to approved project plan (Pedestrian Refuge - Horton Street - Clarence Street and William Street - Detailed Design and Construction)	1. 100%	1. 0%	Deferred. This project has been deferred from the current 2019-2020 program and will be undertaken as part of a future Operational Plan.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program 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

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.1.71 Work with National Parks and Wildlife Services to adjust road boundaries	Infrastructure Planning	1. Boundary adjustments commenced	1. 100%	1. 0%	Behind schedule. Discussion have been initiated with NPWS for the adjustment of road boundaries, however still no response. Follow up with relevant NPWS staff occur in April 2020 with email and voice message sent. Some progress has been made on adjustments for Houston Mitchell Drive, however no progress has been achieved for the broader boundary interface issue due a lack of response from NPWS Land information Reserve Establishment Team.
4.4.1.72 Revise and update the Transport Asset Management Plan	Infrastructure Planning	1. Updated Transport Asset Management Plan	1. 100%	1. 0%	Behind schedule. Commencement delayed due to the need to complete the Service Review for Asset Management and Rural Roads. This project will be deferred to commence following the completion of the services reviews in the 2021 FY.
4.4.1.73 CW Telegraph Point - Pedestrian Safety Upgrades	Infrastructure Planning	1. Deliver project according to approved project plan (Telegraph Point - Pedestrian Safety Upgrades)	1. 100%	1. 100%	Achieved. All major works complete. Remaining funding will be used for further road improvement works.
4.4.1.75 CW Pembroke Road - Safety Improvements	Infrastructure Planning	1. Deliver project according to approved project plan (Pembroke Road - Safety Improvements)	1. 100%	1. 100%	Achieved. All major works complete. Some signage is still outstanding as COVID-19 impacted supply issues.
4.4.1.76 CW Rawdon Island - Safety Improvements	Infrastructure Planning	1. Deliver project according to approved project plan (Rawdon Island - Safety Improvements)	1. 100%	1. 100%	Achieved. Main construction works complete.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities  
**Delivery Program Objective:** 4.4.2 Develop and implement annual maintenance and renewal programs for transport assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.2.1 CW Undertake road resurfacing and rehabilitation works throughout the local government area in accordance with the rolling priority program and roads maintenance hierarchy	Infrastructure Operations	1. In accordance with adopted programs and preventative maintenance requirements (Road resurfacing works)	1. 100%	1. 100%	Achieved. The 2019-20 Road Rehabilitation and Resealing Programme has been completed. Road Resurfacing and Rehabilitation Completed Works: * Ocean Dr, Laurieton (Kew Rd to Henry Kendall) * Kew Rd, Laurieton (Ocean Dr to Tunis St) * Widderson St, Port Macquarie (Oxley Hwy to Hastings River Dr) * Comboyne Rd, Byabarra (Oxley Hwy to Hartys Creek) * High St, Wauchope (Beechwood Rd to Cameron St) Road Resealing Completed Works: * Matthew Flinders Dr, Port Macquarie * Bago Rd, Herons Creek (Milligans to Pacific Hwy) * Lighthouse Beach Local Streets, Port Macquarie * Long Flat Local Roads, Long Flat, Kindee, Forbes River * Captain Cook Bicentennial Dr, Laurieton (April 2020) * Ocean Dr, North Haven to Bonny Hills (April 2020)
4.4.2.2 Carry out annual unsealed road maintenance program including resheeting, grading, drainage and vegetation and rural roadside vegetation clearing	Infrastructure Operations	1. In accordance with adopted programs and preventative maintenance requirements (annual unsealed road maintenance program)	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.
4.4.2.3 Carry out annual sealed road maintenance program including resurfacing, jetpatching, heavy patching and installation of roadside furnishings	Infrastructure Operations	1. In accordance with adopted programs and reactive maintenance requirements based on risk (annual sealed road network maintenance program)	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.

**Community Strategic Plan:** 4.4 Plan for integrated transport systems that helps people get around and link our communities

**Delivery Program Objective:** 4.4.2 Develop and implement annual maintenance and renewal programs for transport assets

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.2.4 Undertake bridges and culverts maintenance and repair program including inspections, monitoring and bridge repair works	Infrastructure Operations	1. In accordance with adopted programs and reactive maintenance requirements based on risk (bridges and culverts maintenance and repair program)	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.
4.4.2.5 Carry out reactive maintenance to Koala Food Trees and Koala Fencing on Link Rd (Ocean Dr)	Infrastructure Operations	1. In accordance with adopted programs and reactive maintenance requirements based on risk (reactive maintenance to Koala Food Trees and Koala Fencing)	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.
4.4.2.6 Bridgeworks and Road Rehabilitation Program - Undertake regular bridge and geotechnical road pavement tests to inform and develop programme	Infrastructure Operations	1. Deliver project according to approved project plan (Bridgeworks and Road Rehabilitation Program)	1. 100%	1. 100%	Achieved. Works delivered on budget across operational general ledgers. Works schedule based on inspections and assessment criteria from Council's road and stormwater risk rating and road hierarchy systems.

**Delivery Program Objective:** 4.4.3 Develop and implement traffic and road safety programs

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.4.3.1 Develop a Road Safety Action Plan and undertake associated safety education and awareness programs identified in the plan	Infrastructure Planning	1. Undertake road safety educational programs	1. 100%	1. 0%	Deferred. Projects deferred to 2020/21 due to COVID-19 social distancing constraints.
4.4.3.2 Install and maintain street lights in accordance with identified priorities	Infrastructure Planning	1. Deliver street lighting program according to approved schedule and prioritisation	1. 100%	1. 100%	Achieved. Project complete.

**Community Strategic Plan:** 4.5 Plan for integrated and connected communities across the Port Macquarie-Hastings area**Delivery Program Objective:** 4.5.1 Carry out strategic planning to manage population growth and provide for co-ordinated urban development

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.5.1.07 Review Local Environmental Plan (LEP) and Development Control Plan (DCP) provisions to promote development of the Yippin Creek Urban Release Area (UGMS Action 4)	Strategy	1. Report to Council regarding draft planning outcomes by 30 June 2020	1. 100%	1. 85%	Behind schedule. Flood free access and flood evacuation are critical issues with the Planning Proposal. A Councillor Briefing on the link between Beechwood Road and flood free evacuation of the Yippin Creek Planning Proposal will be held on 8 July 2020. It is intended to go to the 12 August 2020 Ordinary Council Meeting with a status update subject to the Councillor Briefing.
4.5.1.08 Progress Council led precinct planning for the proposed Health and Education Precinct (UGMS Action 13)	Strategy	1. Undertake support studies for a planning proposal in consultation with stakeholders by 30 June 2020	1. 100%	1. 100%	Achieved. The planning proposal is currently being drafted. The ecology, contamination and heritage assessments which will support the planning proposal are currently being drafted. Council has adopted the programmed timeframe of 26 months which is on target for delivery.
4.5.1.09 Complete a review of the Port Macquarie-Hastings Development Control Plan (UGMS Action 32)	Strategy	1. Adoption of DCP amendments by 30 June 2020	1. 100%	1. 100%	Achieved. The Port Macquarie-Hastings Development Control Plan (Amendment 13) has been finalised and commenced on 17 June 2020.
4.5.1.10 Review LEP and DCP provisions to promote appropriate housing choice options (UGMS Action 1)	Land Use Planning (Development Assessment)	1. Completion of support studies for a planning proposal by 30 June 2020	1. 100%	1. 100%	On target. Consultants preparing the Local Housing Strategy for the LGA have completed preliminary findings. Project to be placed on hold due to the COVID-19 pandemic, and stakeholder and community engagement which is the next phase of the project, will be undertaken when Federal and State Government restrictions arising from the pandemic are lifted. Works to continue into 2020-2021.

**Community Strategic Plan:** 4.5 Plan for integrated and connected communities across the Port Macquarie-Hastings area**Delivery Program Objective:** 4.5.1 Carry out strategic planning to manage population growth and provide for co-ordinated urban development

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.5.1.11 Investigate the capacity of land at Ocean Dr/Houston Mitchell Dr for light industrial use and at Ocean Dr/Bonny View Dr for light industrial development or for use as a school (UGMS Act 17)	Land Use Planning (Development Assessment)	1. Final report to Council re Local Environmental Plan (LEP) and Development Control Plan (DCP) amendments by 30 June 2020	1. 100%	1. 90%	Behind schedule. Public exhibition of the Planning Proposal and draft Development Control Plan provisions for land at the intersection of Ocean Drive and Houston Mitchell Drive, Bonny Hills was completed in late 2019. Submissions are under consideration and the Proponent to provide additional information to Council. Anticipated a report will be presented to Council in Quarter 1 2020/21.
4.5.1.14 Review the Port Macquarie-Hastings Heritage Inventory (UGMS Action 31)	Strategy	1. Complete Stage 2 of the Heritage Inventory review and report to Council by 30 June 2020	1. 100%	1. 0%	Behind schedule. The Stage 1 review is complete. Stage 2 has not commenced as it needs to respond to the Housing Strategy which is a work in progress. The Housing strategy is a predecessor to completion of the Heritage inventory. This work is forecast to be completed in 2020/21.
4.5.1.15 Preparation of an Outline Plan (Stage 1 investigations) for the Fernbank Creek and Sancroix potential future growth areas (UGMS Action 6)	Strategy	1. Report to Council regarding progress of the Outline Plan and key support studies in consultation with landowners by 30 June 2020	1. 100%	1. 100%	Achieved. The Structure (Outline) Plan is complete and the Planning Proposal work is well progressed for the 2020/21 year.
4.5.1.16 Undertake a review of the current Development Contributions Deferral Scheme	Strategy	1. Review of the current Development Contributions Deferral Scheme commenced and reported to Council by 30 June 2020	1. 100%	1. 70%	Behind schedule. The Scope of the Deferral Review has been determined. It needs to be reported to the Executive and potentially to Council.

**Community Strategic Plan:** 4.5 Plan for integrated and connected communities across the Port Macquarie-Hastings area

**Delivery Program Objective:** 4.5.2 Plan for infrastructure that supports population growth

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.5.2.2 Continue the review of the Major Roads Contributions Plan for completion in 2020-2021 (UGMS Action 23)	Strategy	1. Complete review of draft works program for review of the Major Roads Contributions Plan by 30 June 2020	1. 100%	1. 0%	Behind schedule. A review of the Major Roads Contributions Plan will be based on a works program to be provided by Council's Transport and Stormwater Network Team. The works program has been delayed due to resource constraints and higher priority projects. Following this works program the costs and priorities will be used to inform the Major Roads Contributions Plan review. Refer to OP action 4.4.4.48.

**Community Strategic Plan:** 4.6 Restore and protect natural areas

**Delivery Program Objective:** 4.6.1 Develop and implement a range of programs for the environmental management of lands within the local government area

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.6.1.01 Undertake strategic biosecurity (weed management) program to restore and conserve the natural environment of the Mid North Coast	Environment and Regulatory Services	1. 2,300 km of Council roads managed for roadside weeds  2. 28 km of 70 km network of priority riparian zones managed for invasive weeds  3. 65 ha of 363 ha area of coastal dune system managed for Bitou Bush	1. 2,300km  2. 28km  3. 65ha	1. 2,300km  2. 28km  3. 65ha	Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.  Achieved. As per requirements in the Operational Plan, work has been completed.  Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.

**Community Strategic Plan:** 4.6 Restore and protect natural areas

**Delivery Program Objective:** 4.6.1 Develop and implement a range of programs for the environmental management of lands within the local government area

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		4. 680 ha of Council assets managed for invasive weeds	4. 680ha	4. 680ha	Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.
		5. 70 days per annum undertaking management of high priority weeds on high risk sites within drainage network	5. 70d	5. 70d	Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.
		6. 75 properties > 1 ha inspected for invasive weeds	6. 75#	6. 75#	Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.
4.6.1.02 Undertake aquatic weed control program to restore and conserve the natural environment of the Mid North Coast	Environment and Regulatory Services	1. Riparian land managed for aquatic weed invasion	1. 100%	1. 100%	Achieved. Works are ongoing annually.
4.6.1.05 Implement the Bushland Regeneration Management Program and collaborate with various community groups (e.g. Landcare)	Environment and Regulatory Services	1. 10% of sites to a Tier 3 level (Tier 3 Sites are self-sustaining with little to no management intervention required)	1. 10%	1. 10%	Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.
		2. 40% of sites to a Tier 1 level (Tier 1 – Strategic weed removal to ensure that weeds do not out compete, suppress or prevent the growth of native vegetation).	2. 40%	2. 40%	Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.



**Community Strategic Plan:** 4.6 Restore and protect natural areas

**Delivery Program Objective:** 4.6.1 Develop and implement a range of programs for the environmental management of lands within the local government area

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
		3. 50% of sites to a Tier 2 level (Tier 2 - Bushland sites are managed in a way as to encourage natural regrowth via minimal weed removal)	3. 50%	3. 50%	Achieved. As per requirements in the Operational Plan, work has been completed. And as per the biosecurity requirements for Port Macquarie Hastings Council.
4.6.1.06 Inform and educate residents, industry and community groups about Council's tree management requirements within the Port Macquarie-Hastings 2013 Development Control Plan (DCP)	Recreation, Property and Buildings	1. Develop and implement educational material and delivery program  2. Provide advice in accordance with service standards and industry best practice	1. 100%  2. 100%	1. 100%  2. 97%	Achieved. Educational material delivered via correspondence and conversations regarding different legislative requirements, including civil advice letters, Local Land Services, Office of Environment and Heritage jurisdiction, meetings with contractors and residents regarding Development Control Plan provisions and application process.  Behind schedule. For the period from 1 July 2019 to 30 June 2020 the total number of CRM's received was 1,281. 760 (Public), 187 (Private), 228 (Storm), and 106 (Illegal tree removal/pruning). 5 CRM's currently exceed the 60 day service standard, with 5 CRM's still to be actioned. Additional information: 477 enquires (270 public phone and 207 private phone and email enquires). This does not include calls transferred from call centre to mobile or landline. In addition, there were 230 internal enquires.
		3. Undertake investigations in relation to all reported illegal tree works	3. 100%	3. 100%	Achieved. 106 illegal tree incidents reported and investigated from 1 July 2019 to 30 June 2020.

**Community Strategic Plan:** 4.6 Restore and protect natural areas**Delivery Program Objective:** 4.6.1 Develop and implement a range of programs for the environmental management of lands within the local government area

<b>Operational Plan Activity 2019 - 2020</b>	<b>Lead Responsibility</b>	<b>Success Measures</b>	<b>Target</b>	<b>YTD Actual</b>	<b>Comment on Progress</b>
4.6.1.07 Improve mapping of Bushland Regeneration sites for community access	Environmental and Regulatory Services	1. Bushland Mapping and site surveying undertaken	1. 100%	1. 100%	Achieved. As per requirements in the Operational Plan, work has been completed.
4.6.1.08 Commence implementation of identified actions from the adopted Koala Population Recovery Strategy (UGMS Action 29)	Environment and Regulatory Services	1. Implementation of management actions outlined in the Koala Population Recovery Strategy	1. 100%	1. 100%	Achieved. Work is continuing on asset maintenance such as fence repairs and koala road strike initiatives.
4.6.1.09 Complete preparation of a Comprehensive Koala Plan of Management (CKPoM) for coastal areas in the Port Macquarie-Hastings	Strategy	1. Report CKPoM to Council for adoption by 31 December 2019	1. 100%	1. 70%	Behind schedule. Report went to the November 2019 Ordinary Council Meeting. A new State Environmental Planning Policy (SEPP) has been issued subsequently. The State Government then much later provided guidance paper on the SEPP. The implications are not clear and puts this item at risk. A report will go to the 15 July Ordinary Council Meeting detailing the impact of the new SEPP and guidance papers on the production schedule for the CKPoM.
4.6.1.11 CW Implement mitigation actions from Hastings River Flood Plain Risk Management Plan: Stage 4: Install river stream flow gauges & rainfall gauges to inform floodplain modelling	Environment and Regulatory Services	1. Installation of stream gauges	1. 100%	1. 100%	Achieved. Project complete.

**Community Strategic Plan:** 4.7 Provide leadership in the development of renewable energy opportunities  
**Delivery Program Objective:** 4.7.1 Promote renewable energy outcomes within Council

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.7.1.02 CW Install solar energy systems at the Kew Waste Transfer Station	Commercial Business Units	1. Deliver project according to approved project plan (Install solar energy systems at the Kew Waste Transfer Station)	1. 100%	1. 0%	Deferred. Project deferred in 2019-2020 (see February 2020 Monthly Budget adjustment). Project to be rescheduled in consideration of Council's Waste Strategy objectives / priorities.
4.7.1.04 CW Undertake LED lighting upgrade to Council Office and other public buildings	Recreation, Property and Buildings	1. Complete LED lighting upgrade to offices and other buildings	1. 100%	1. 100%	Achieved. Glasshouse - 100 Clevertionics light fitting have been installed and are operational Wauchope Indoor Stadium - there was not enough funds to complete these works within the budget, as the cost is low Building Service will install them under our maintenance budget from the 1st July 2020. No further action required.
4.7.1.06 CW Install solar energy systems at selected existing Council facilities	Recreation, Property and Buildings	1. Install solar energy systems at identified Council facilities	1. 100%	1. 90%	Behind schedule. Due to COVID-19 there is a medium possibility due to stock and staff availability that these projects could carry into first quarter of 2020-2021. All three sites are planned to have practical completion by the end of August 2020.
4.7.1.08 Continue to implement and monitor the Long Term Energy Strategy	Strategy	1. Provide six monthly update reports to Council on the status of the Long Term Energy Strategy	1. 100%	1. 100%	Achieved. Report went to Ordinary Council Meeting 20 May 2020.

**Community Strategic Plan:** 4.8 Increase awareness of issues affecting our environment, including the preservation of flora and fauna  
**Delivery Program Objective:** 4.8.1 Ensure all Council operations comply with environmental standards and regulations

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.8.1.1 Operate and maintain water treatment plants in accordance with adopted maintenance programs and scheme requirements	Infrastructure Operations	1. Monitor plants continuously with plant breakdowns attended to within 24 hours	1. 100%	1. 100%	Achieved. All Water Treatment Plants monitored continuously by Council's remote water monitoring system (SCADA C).
4.8.1.2 Operate the water supply network to ensure public health and safety	Infrastructure Operations	1. Ensure any public health and safety issues in relation to water supply are responded to in line with service standards	1. 100%	1. 100%	Achieved. Enquiries responded to in accordance with service standards.
4.8.1.3 Maintain and operate storage dams in accordance with Australian National Committee On Large Dams (ANCOLD) guidelines	Infrastructure Operations	1. Ensure any issues in relation to the operation and maintenance of storage dams are handled in line with ANCOLD guidelines	1. 100%	1. 100%	Achieved. Renewal programs being carried out in accordance with plans.
4.8.1.4 Operate and maintain sewerage treatment plants in accordance with environmental licences, adopted maintenance programs and scheme requirements	Water and Sewer	1. Monitor plants continuously with plant breakdowns attended to within 24 hours	1. 100%	1. 100%	Achieved. All Wastewater Treatment Plants monitored continuously by Council's remote water monitoring system (ClearSCADA).
4.8.1.5 Operate the sewerage network to ensure service delivery meets public health and safety requirements	Infrastructure Operations	1. Ensure any public health and safety issues in relation to sewerage network are responded to in line with service standards	1. 100%	1. 100%	Achieved. Enquiries responded to in accordance with service standards. Three reportable surcharges occurred in this quarter.

**Community Strategic Plan:** 4.8 Increase awareness of issues affecting our environment, including the preservation of flora and fauna  
**Delivery Program Objective:** 4.8.2 Increase community awareness and enable access to the natural environment

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.8.2.1 Deliver bushfire preparedness and planning programs to the community	Environment and Regulatory Services	1. All community enquires relating to bushfire requests are responded to within the 7 day service standard 2. Bushfire preparedness and planning program delivered	1. 100% 2. 100%	1. 100% 2. 100%	Achieved. Customer requests are responded to within 7 days.  Achieved. Community programs are delivered primarily by Rural Fire Service and NSW Fire and Rescue with support by Council as required. One joint agency neighbourhood program delivered to residents in Laurieton; Port Macquarie-Hastings Council, Rural Fire Services, NSW Fire and Rescue and National Parks and Wildlife services.

**Delivery Program Objective:** 4.8.3 Promote Biodiversity Programs

Operational Plan Activity 2019 - 2020	Lead Responsibility	Success Measures	Target	YTD Actual	Comment on Progress
4.8.3.1 Commence implementation of identified actions from the adopted Biodiversity Strategy	Environment and Regulatory Services	1. Implementation of management actions of Biodiversity Strategy	1. 100%	1. 100%	Achieved. Additional feral deer control began in earnest post bushfire crisis.



NSW Local Government Grants Commission  
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Locked Bag 3015 NOWRA NSW 2541

OUR REFERENCE: A713604  
YOUR REFERENCE:  
CONTACT: Helen Pearce  
(02) 4428 4131  
helen.pearce@olg.nsw.gov.au

Mr Jeffery Sharp  
Acting General Manager  
Port Macquarie-Hastings Council

By email: [council@pmhc.nsw.gov.au](mailto:council@pmhc.nsw.gov.au)

21 August 2020

Dear Mr Sharp

In accordance with the NSW Local Government Grants Commission's (Commission) policy of providing information to councils about the way the Commission calculates financial assistance grants (FAGs), please find attached a summary of Council's 2020-21 estimated FAGs entitlement (**Appendix A**).

The Commonwealth Treasury's estimate of the Consumer Price Index (CPI) for 2020-21 has been revised down substantially since the 2019-20 mid-year end of financial year update. The total national FAGs for 2020-21 increased by 1.1%, when compared to the 2019-20 final amount. This is the lowest percentage increase since the paused indexation period of 2014-15 to 2016-17. The Commonwealth Government has advised that this CPI revision is due to the economic impact of bushfires and the COVID-19 pandemic. Accordingly, while the State's FAGs allocation for 2020-21 is slightly higher than last year, it is lower than the estimates which were prepared based on early estimates of CPI.

The national FAGs figure for 2020-21 is \$2.56 billion and is made up of \$1.77 billion for the general purpose component and \$0.79 billion for the local roads component. The national estimated entitlement for 2019-20 reduced by \$5.4 million to account for final adjustments to the CPI and population shares for the year.

The national general purpose component was distributed across the states and territories on a population basis. NSW received 32% or \$565 million, which represents a 0.9% increase on last year's final figure. The local roads component is based on an historical formula. NSW's share of the total road funding is a fixed 29% share, or \$228 million, which was in line with the previous year. The total FAGs allocation to NSW for 2020-21 is \$794 million.

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(follow the "Commissions & Tribunals" links)



Council's 2020-21 FAGs estimated entitlement, compared to the 2019-20 final entitlement is as follows:

Port Macquarie-Hastings Council				
Year	General Purpose \$	Local Roads \$	Total \$	
2019-20 final	\$6,435,151.00	\$3,012,176.00	\$9,447,327.00	<b>Change</b>
2020-21 est.	\$6,438,610.00	\$3,068,941.00	\$9,507,551.00	0.6%

To assist councils with budgeting and bank reconciliations, a breakdown of the 2020-21 quarterly instalments is attached (**Appendix A**). The NSW Statement of Payments is also attached (**Appendix B**).

As councils will be aware, the Commission is required to adhere to the National Principles which mandate a per capita payment based on population growth/decline. It is also the policy of the NSW Government to explore opportunities to direct grants to communities with the greatest relative need. The Commission has had regard to these policies in allocating the grants.

A key challenge for the Commission continues to be the Commonwealth's request to apply the minimum per capita grant, which has a significant impact on the ability of the Commission to redirect funding. The map contained in **Appendix D** identifies the rate of population change in NSW from 2006 to 2016. **Appendix D** also lists the revised expenditure categories, disability factors, data sources used in calculating the expenditure allowance and the relative disability allowance.

Another challenge for the Commission this year has been the substantially reduced CPI estimate. NSW received an increase of 0.9%, or \$5.1 million, on last year's final general purpose component figure. This is substantially lower than the 4%, or \$21.3 million, increase NSW received in 2019-20. As a direct result of the lower than expected CPI estimate, the Commission has, this year, reduced the amount to be quarantined for application by the relative disability allowance from \$5 million to \$4.5 million. This ensured that funds are still able to be directed to those councils with a greater relative need whilst ensuring that additional uncertainty is not delivered to the sector during this difficult time with the implementation of the 0% floor to the general purpose grant.

In addition to these calculations, the Commonwealth Government decided to retain the practice of forward payments of approximately half of the financial assistance grants, based on the 2019-20 estimates for payment. The Commonwealth Government decided to make this year's early payment given the cashflow challenges faced by local government across Australia and to allow councils early access to the funds to help manage the cumulative impacts of drought, bushfires and now the COVID-19 crisis. Councils received approximately 52% of their estimated 2020-21 FAGs on 26 May 2020. The remainder of the grant entitlements will be paid in quarterly instalments in August 2020, November 2020, February 2021 and May 2021.

**CONSIDERATIONS FOR 2021-22 GRANTS**

Councils should be mindful that, given the current economic environment, there is a real possibility that there will be an extended period of a reduced CPI going forward. Should that occur, the Commission will likely need to restore the negative floor to ensure the integrity of the FAGs allocation system is maintained. Such a decision will result in some councils receiving less in 2021-22 than they will in 2020-21.

**SPECIAL SUBMISSIONS RELATING TO 2021-22 GRANTS**

Special submissions from councils for 2021-22 will be considered by the Commission. The purpose of a submission is to give councils the opportunity to present information on the financial impact of inherent expenditure disabilities beyond councils' control that are not generally recognised in the current methodology. Please refer to the expenditure functions and Council's disability factors listed in **Appendix A**. This process allows the Commission to adequately consider all legitimate factors that affect councils' capacity to deliver services.

**Appendix C**, titled *Guidelines for Special Submissions*, contains guidelines for preparing submissions – please read the guidelines carefully.

Submissions should be e-mailed to the Commission at [olg@olg.nsw.gov.au](mailto:olg@olg.nsw.gov.au) by **16 November 2020**.

I would ask that this letter please be tabled at the next Council meeting.

If you have any questions concerning these matters, please contact me on (02) 4428 4131.

Yours sincerely



**Helen Pearce**  
**Executive Officer**



## APPENDIX A

## LOCAL GOVERNMENT GRANTS COMMISSION 2020-21 FINANCIAL ASSISTANCE GRANTS

## Port Macquarie-Hastings Council

## General Purpose Component

## Expenditure Allowance

Expenditure Functions	State ave cost per capita
Recreation and cultural	\$214.66
Admin and governance	\$254.03
Education and community	\$63.34
Roads, bridges, footpaths and aerodromes	\$204.07
Public order, safety, health and other	\$163.68
Housing amenity	\$71.25

Recreation and cultural			Pop <SS = relative disadvantage Pop >SS = 0 ATSI <SS = 0 ATSI >SS = relative disadvantage
Disability Measure	LGA measure	State Std (SS)	Weighted DF%
Population	84,525	63,194	0.0%
Aboriginal & Torres Strait Islander	4.0%	2.9%	4.0%

Admin and governance			
Disability Measure	LGA measure	State Std	Weighted DF%
Population	84,525	63,194	0.0%

Education and community			
Disability Measure	LGA measure	State Std	Weighted DF%
Population	84,525	63,194	0.0%

Roads, bridges, footpaths and aerodromes			
Disability Measure	LGA measure	State Std	Weighted DF%
Population	84,525	63,194	0.0%
Road Length	1,263	1,149	3.9%

Public order, safety, health and other			RTD <SS = 0 RTD >SS = relative disadvantage Env <SS = 0 Env >SS = relative disadvantage
Disability Measure	LGA measure	State Std	Weighted DF%
Population	84,525	63,194	0.0%
Rainfall, topography and drainage index	188%	161%	9.9%
Environment (Ha of environmental lands)	91,089	54,087	1.9%

Housing amenity			
Disability Measure	LGA Std	State Std	Weighted DF%
Population	84,525	63,194	0.0%

## Isolation Allowance

Outside the Greater Statistical Area	Yes
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## APPENDIX A

## LOCAL GOVERNMENT GRANTS COMMISSION 2020-21 FINANCIAL ASSISTANCE GRANTS

## Pensioner Rebate Allowance

PR <SS = relative disadvantage (+ allowance)	
PR >SS = relative advantage (- allowance)	
LGA % Pensioner Rebates (PR) Res Props:	28.7%
State Standard (SS) % PR	15.4%

## Revenue Allowance

Revenue Allowance	
CV <SS = relative disadvantage (+ allowance)	
CV >SS = relative advantage (- allowance)	
No. of Urban Properties:	36,148
Standard Value Per Property:	\$488,302
Council Value (CV):	\$250,766

No. of Non-urban Properties:	1,170
Standard Value Per Property:	\$732,180
Council Value (CV):	\$513,069

## Relative Disadvantage Allowance

Unsealed roads; Isolation; Population Decline	\$2,967
Special Submission	-

Total General Purpose Grant	\$6,438,610
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## Local Roads Component

Population:	84,525
Local Road Length (km):	1,263
Length of Bridges on Local Roads (m):	4,815

Road/Population Allowance:	\$2,655,999
Bridge Length Allowance:	\$412,942
Local Roads Total:	\$3,068,941

Total Grant	\$9,507,551
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## Quarterly Instalments Payable in 2020-21 for 2020-21 FAGs

	August 2020	
GPC	\$763,027.25	
LRC	\$375,808.50	\$1,138,835.75
	November 2020	
GPC	\$763,027.25	
LRC	\$375,808.50	\$1,138,835.75
	February 2021	
GPC	\$763,027.25	
LRC	\$375,808.50	\$1,138,835.75
	May 2021	
GPC	\$763,027.25	
LRC	\$375,808.50	\$1,138,835.75
	TOTAL	
GPC	\$3,052,109.00	
LRC	\$1,503,234.00	\$4,555,343.00

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APPENDIX B Financial Assistance Grants - Schedule of Payments 2020-21											
Councils	Population 30/6/2019	2020-21 Recommended General Purpose Entitlement	2020-21 Recommended Local Roads Entitlement	2020-21 Recommended Total Entitlement	2019-20 General Purpose Entitlement	2019-20 Local Roads Entitlement	2019-20 Total Entitlement	2020-21 General Purpose Entitlement	2020-21 Local Roads Entitlement	2020-21 Total Entitlement	2020-21 Total Payments
Lane Cove (M)	40,155	842,043	226,618	1,068,661	(1,814)	(627)	(2,441)	427,577	140,769	573,376	145,192
Leeton (S)	11,445	3,486,766	1,009,405	4,496,171	(7,390)	(2,290)	(9,680)	1,762,719	559,343	2,322,062	1,698,557
Lismore (C)	43,602	4,433,241	2,001,802	6,435,043	(9,558)	(4,287)	(13,845)	2,318,975	3,371,372	5,690,347	518,772
Liverpool (C)	21,605	3,602,898	1,310,454	4,913,352	(7,773)	(2,780)	(10,553)	1,860,815	675,288	2,536,103	1,730,470
Liverpool (S)	227,965	6,495,015	2,386,052	8,881,067	(14,072)	(5,021)	(19,093)	3,733,079	4,265,428	8,000,507	1,169,231
Liverpool (S)	3,405	2,517,966	1,427,398	3,945,364	(1,083)	(369)	(1,452)	1,250,438	1,738,602	2,989,040	1,158,945
Lord Howe Island (Bd)	386	225,231	1,387,185	1,612,416	(443)	(148)	(591)	118,301	108,447	226,748	974,625
Mid-Coast	85,165	5,708,366	1,446,252	7,154,618	(12,356)	(3,600)	(15,956)	2,900,365	733,906	3,724,271	2,703,625
Mid-Western Regional	33,836	12,724,821	5,560,517	18,285,338	(27,458)	(11,806)	(39,264)	6,642,861	2,555,767	9,198,628	6,054,502
Moree Plains (S)	25,251	4,233,347	2,530,997	6,764,344	(9,099)	(6,342)	(15,441)	2,175,370	1,307,986	3,483,356	2,048,881
Murray (M)	30,981	882,611	248,824	1,131,435	(10,922)	(3,333)	(14,255)	2,500,026	1,544,573	4,044,600	1,540,314
Murray River	12,118	5,573,833	2,947,844	8,521,677	(11,897)	(6,556)	(18,453)	358,433	128,267	486,700	328,530
Murrumbidgee (new)	3,917	3,040,155	1,696,135	4,736,290	(6,362)	(3,500)	(9,862)	1,606,625	4,467,274	6,073,899	2,711,387
Murrumbidgee (S)	16,377	2,991,990	1,946,841	4,938,831	(7,950)	(2,013)	(9,963)	1,587,759	892,577	2,480,336	1,500,034
Nambucca (S)	19,692	2,851,428	1,236,284	4,087,712	(6,455)	(2,088)	(8,543)	1,388,113	497,371	1,885,484	1,280,082
Narrabri (S)	5,153	1,615,575	1,038,875	2,654,450	(1,155)	(374)	(1,529)	1,475,671	313,553	1,789,224	1,313,586
Narrabri (S)	5,899	3,365,330	1,642,730	5,008,060	(10,446)	(3,461)	(13,907)	1,730,847	848,623	2,579,470	1,682,549
Narrabri (S)	165,571	10,884,883	1,804,332	12,689,215	(3,176)	(3,176)	(6,352)	1,536,975	774,851	2,311,826	2,223,020
Newcastle (S)	75,021	1,573,177	486,166	2,059,343	(3,381)	(1,058)	(4,439)	831,081	290,459	1,121,540	738,735
North Sydney	273,486	5,735,235	2,281,700	8,016,935	(12,354)	(4,058)	(16,412)	2,960,971	1,169,513	4,130,484	2,713,900
North Western Regional	5,411	1,854,747	991,583	2,846,330	(3,986)	(2,101)	(6,087)	1,858,769	637,035	2,495,804	1,676,526
Orange (C)	42,451	3,545,971	1,222,943	4,768,914	(7,676)	(2,598)	(10,274)	1,858,769	637,035	2,495,804	1,676,526
Parish (S)	14,837	4,373,631	2,208,357	6,581,988	(9,398)	(4,666)	(14,064)	2,254,978	1,114,340	3,369,318	2,100,655
Parish (S) (new)	257,197	7,305,476	2,055,911	9,361,387	(15,821)	(4,300)	(20,121)	3,792,258	1,042,115	4,834,373	3,487,417
Perrin (C)	212,877	8,486,100	2,513,409	10,999,509	(18,379)	(5,307)	(23,686)	4,405,948	1,589,174	5,995,122	4,062,574
Port Macquarie-Hastings	51,459	6,435,910	3,368,585	9,804,495	(13,437)	(3,728)	(17,165)	3,372,854	1,080,481	4,453,335	3,292,884
Port Macquarie-Hastings	21,345	1,525,875	1,038,585	2,564,460	(6,009)	(2,446)	(8,455)	1,119,187	376,130	1,495,317	1,038,585
Port Macquarie-Hastings Regional	61,100	3,705,701	2,570,722	6,276,423	(8,009)	(2,446)	(10,455)	1,119,187	376,130	1,495,317	1,038,585
Ravenshoe (C)	155,648	3,263,932	1,007,467	4,271,399	(7,031)	(2,446)	(9,477)	1,694,143	518,004	2,212,147	1,592,126
Richmond Valley	131,271	2,752,730	976,680	3,729,410	(7,782)	(3,460)	(11,242)	1,862,977	494,823	2,357,800	1,735,373
Ryde (C)	13,271	2,752,730	976,680	3,729,410	(7,782)	(3,460)	(11,242)	1,862,977	494,823	2,357,800	1,735,373
Shellharbour (C)	73,233	4,346,720	985,950	5,332,670	(9,412)	(2,035)	(11,447)	2,277,976	504,153	2,782,129	2,059,332
Shellharbour (C)	105,648	9,041,892	3,562,817	12,604,709	(19,578)	(7,487)	(27,065)	4,738,433	1,810,770	6,549,203	4,284,171
Silverton (VC)	50	34,888	1,364,048	1,398,936	(6,425)	(2,839)	(9,264)	1,300,719	680,872	1,981,591	1,208,182
Snowy Mountains Regional	23,461	2,513,786	1,364,048	3,877,834	(6,425)	(2,839)	(9,264)	1,300,719	680,872	1,981,591	1,208,182
Snowy Mountains Regional	20,765	6,981,787	2,888,480	9,870,267	(14,927)	(8,119)	(23,046)	3,607,655	1,488,307	5,095,962	3,338,205
Stamford (B)	14,419	4,460,068	1,436,860	5,896,928	(9,624)	(3,058)	(12,682)	2,330,944	750,254	3,081,198	2,138,600
Stamford (B)	230,811	4,833,872	2,099,169	6,933,041	(10,477)	(4,455)	(14,932)	2,541,302	1,081,820	3,623,122	2,284,223
Sydney (C)	248,343	5,165,769	1,441,144	6,606,913	(10,949)	(3,026)	(13,975)	2,458,402	701,945	3,160,347	2,658,148
Tamworth Regional	82,541	6,340,010	4,413,086	10,753,096	(13,726)	(3,326)	(17,052)	3,311,969	2,778,327	6,090,296	4,321,115
Tamworth Regional	6,307	2,408,148	1,365,477	3,773,625	(5,133)	(2,889)	(8,022)	1,215,372	652,814	1,868,186	1,187,643
Tenterfield (S)	6,994	3,325,319	1,719,358	5,044,677	(7,078)	(3,647)	(10,725)	1,681,624	891,376	2,573,000	1,630,317
Tilbourn (VC)	134	78,367	78,367	156,734	(168)	(64)	(232)	40,467	37,732	78,200	37,732
Tweed (S)	97,001	7,892,593	3,013,197	10,905,790	(17,073)	(6,396)	(23,469)	4,131,884	1,553,704	5,685,588	3,743,006
Upper Hunter (S)	14,180	3,201,359	2,025,487	5,226,846	(4,294)	(1,152)	(5,446)	1,636,875	1,046,713	2,683,588	1,567,626
Upper Lachlan (S)	8,059	2,950,790	1,985,107	4,935,897	(6,329)	(4,202)	(10,531)	1,024,618	2,520,409	3,545,027	1,448,673
Uralla (S)	6,012	1,995,588	1,980,106	3,975,694	(3,627)	(2,078)	(5,705)	862,455	519,862	1,382,317	828,716
Wagga Wagga (C)	65,138	1,718,865	3,881,443	5,600,308	(2,018)	(1,378)	(3,396)	3,368,910	3,368,910	6,737,820	3,368,910
Wagga Wagga (C)	5,953	4,243,919	2,033,928	6,277,847	(9,940)	(4,398)	(14,338)	2,388,989	1,551,519	3,940,508	2,388,989
Warren (S)	2,897	1,986,050	1,078,915	3,064,965	(4,132)	(2,287)	(6,419)	988,130	557,718	1,545,848	988,130
Warren (S)	9,278	4,862,993	2,588,771	7,451,764	(15,331)	(5,422)	(20,753)	2,428,548	1,322,287	3,750,835	2,384,113
Waverley	74,295	1,550,813	451,368	2,002,181	(3,378)	(964)	(4,342)	825,777	238,931	1,064,708	730,658
Weddin (S)	3,613	1,837,209	1,050,244	2,887,453	(3,852)	(2,191)	(6,043)	913,747	540,572	1,454,319	919,580
Wentworth (S)	7,053	4,357,204	2,108,153	6,465,357	(9,300)	(4,485)	(13,785)	2,236,813	1,068,863	3,305,676	2,111,391
Wentworth (S)	81,188	1,702,519	610,132	2,312,651	(1,287)	(4,959)	(6,246)	899,716	312,937	1,212,653	829,141
Wingecarrieme (S)	51,134	3,262,668	1,985,210	5,247,878	(7,035)	(4,108)	(11,143)	1,015,988	2,771,331	3,787,319	1,553,690
Woolendilly (S)	53,149	2,432,315	1,421,366	3,853,681	(3,041)	(8,291)	(11,332)	1,274,976	727,961	2,002,937	1,152,472
Woolongong (C)	218,174	16,403,470	2,526,901	18,930,371	(4,631)	(3,319)	(7,950)	8,563,816	7,659,078	16,222,894	12,119,174
Woolongong (C)	1,165,583	1,165,583	1,165,583	2,331,166	(3,361)	(1,036)	(4,397)	905,686	712,957	1,618,643	1,165,583
Woolongong (C)	17,087	1,707,229	1,413,137	3,120,366	(3,792)	(1,036)	(4,828)	905,686	712,957	1,618,643	1,165,583
Woolongong (C)	8,898,357	585,441,249	228,278,935	813,720,184	(1,213,563)	(483,244)	(1,696,807)	291,631,073	117,445,797	409,076,870	118,449,984
Total											

**APPENDIX C****LOCAL GOVERNMENT GRANTS COMMISSION  
GUIDELINES FOR SPECIAL SUBMISSIONS IN RELATION TO THE 2021-22 GRANTS**

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**1. GENERAL**

All submissions **must** be consistent with the principles which have been adopted by the NSW Local Government Grants Commission (Commission). The principles are attached in **Table 1**.

Information in the submissions must relate to the year ended 30 June 2020, in order to be compatible with the Commission's **Return of General Information** for that year (for the 2021-22 grant calculations).

Only operational costs should be included; capital costs are to be excluded.

Submissions should be based only on *inherent* disabilities and problems, which are outside a council's control. **Additional costs that result from deliberate policy decisions made by councils to provide a higher than average standard of service are not considered disabilities.**

Information provided on disabilities should be brief and the costing estimates of the disabilities should be as accurate as is practicable.

If you have further question, then please contact Helen Pearce on (02) 4428 4131 or by email at [helen.pearce@olg.nsw.gov.au](mailto:helen.pearce@olg.nsw.gov.au).

Submissions should be e-mailed to the Commission at [olg@olg.nsw.gov.au](mailto:olg@olg.nsw.gov.au) as soon as possible, but no later than **16 November 2020**.

**2. EXPENDITURE DISABILITIES****(a) Content**

The details of the Commission's expenditure calculations for Council's area are enclosed (See **Appendix A**). This information should be used in assessing whether to make a submission on expenditure disabilities; that is, in assessing whether the particular disabilities of Council's area are **already recognised** in the formula. If council believes that disabilities **other than those currently identified by the formula** have an impact on the cost of providing services, then this should be substantiated in the submission.

Similarly, if council believes that the impact of any disability already identified by the Commission is greater than indicated, then the case should be argued in the submission. Please refer to **Table 2** for the basic format for a special submission. Details of the expenditure items considered, the council functions and disability measures can be found in **Appendix D**.

**(b) Required Format**

**Table 2** shows the **REQUIRED FORMAT** for submissions on expenditure disabilities. Submissions should be **brief** and include:

- (1) the function affected (using the Commission's functional heading);
- (2) a **brief** description of the disability;
- (3) a **brief** account of the action taken to deal with that disability;
- (4) the **estimated additional cost** impact of that action.

**APPENDIX C****LOCAL GOVERNMENT GRANTS COMMISSION  
GUIDELINES FOR SPECIAL SUBMISSIONS IN RELATION TO THE 2021-22 GRANTS**

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Where a disability factor affects costs across a number of council functions, separate details should be used showing the cost impact in each function area.

**(c) Outcome**

Where the Commission recognises an additional disability raised in a submission beyond the measures recognised, an adjustment will be made as an "other" category.

Where an additional disability is recognised which has an impact on a number of councils, the methodology will be adjusted and *all councils* will be affected according to the extent of the relevant disability.

**3. REVENUE DISABILITIES**

While the approved principles generally bind the Commission's operation in this area, councils may wish to comment on the current methodology if it is considered that these unfairly disadvantage them.

It should be noted that non-rateable properties are taken into consideration in the Commission's calculation automatically. The loss of revenue from non-rateable properties does not need to be specified in the submission.

**APPENDIX C**  
**LOCAL GOVERNMENT GRANTS COMMISSION**  
**GUIDELINES FOR SPECIAL SUBMISSIONS IN RELATION TO THE 2021-22 GRANTS**

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**TABLE 1**

**APPROVED PRINCIPLES**

1. General purpose grants to local governing bodies will be allocated as far as practicable on a full equalisation basis as defined in the *Local Government (Financial Assistance) Act 1995*; that is a basis which attempts to compensate local governing bodies for differences in expenditure required in the performance of their functions and in their capacity to raise revenue.
2. The assessment of revenue and expenditure allowances of local governing bodies will, as far as is practicable, be independent of the policy or practices of those bodies in raising revenue and the provision of services.
3. Revenue raising capacity will primarily be determined on the basis of property values; positive and negative allowances relative to average standards may be calculated.
4. Revenue allowances may be discounted to achieve equilibrium with expenditure allowances.
5. Generally for each expenditure function an allowance will be determined using operational cost; both positive and negative allowances relative to average standards may be calculated.
6. Expenditure allowances will be discounted to take account of specific purpose grants.
7. Additional costs associated with non-resident use of services and facilities will be recognised in determining expenditure allowances.

**APPENDIX C**  
**LOCAL GOVERNMENT GRANTS COMMISSION**  
**GUIDELINES FOR SPECIAL SUBMISSIONS IN RELATION TO THE 2021-22 GRANTS**

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**TABLE 2**  
**REQUIRED FORMAT FOR SUBMISSIONS ON EXPENDITURE DISABILITIES**

**Function:**

**Disability:**

**Description and Response:**

**Cost Impact:**



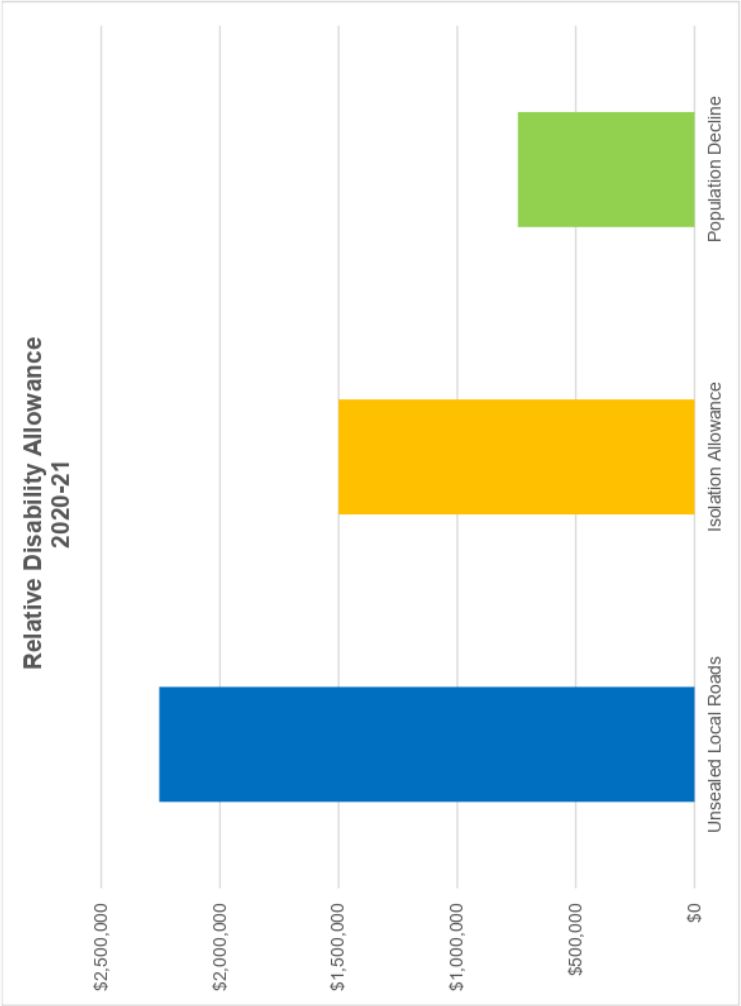
**APPENDIX D**  
**LOCAL GOVERNMENT GRANTS COMMISSION**  
**2020-21 FINANCIAL ASSISTANCE GRANTS**

Expenditure Categories with Expenditure Items Listed Below (Expenditure Items Source – Financial Data Return – Special Schedule 1)					
Recreation & cultural	Administration & governance	Community amenity	Community education	Roads, bridges & footpaths	Public order, safety, health & other
Museums	Administration	Public Cemeteries	Admin & Education	Aerodromes	Animal Containment
Art Galleries	Governance	Public Toilets	Children's Services	Urban Roads Local	Fire Service Levy
Communities Centres & Halls		Town Planning	Aged and Disabled	Sealed Rural Roads Local	Noxious Plants & Insects
Performing Arts Venues		Street Lighting	Social Protection	Unsealed Rural Roads Local	Environment Protection
Other Sport & Recreation				Bridges on Urban Roads Local	Stormwater Management
Other Performing Arts				Bridges on Sealed Rural Roads Local	Urban Storm Drainage
Public Libraries				Bridges on Unsealed Rural Roads Local	Other
Swimming Pools				Footpaths	Health
Sporting Grounds				Parking Areas	Enforcement of Regulations
Parks and Gardens					Beach Control
					Building Control
					Street Cleaning

**APPENDIX D**  
**LOCAL GOVERNMENT GRANTS COMMISSION**  
**2020-21 FINANCIAL ASSISTANCE GRANTS**

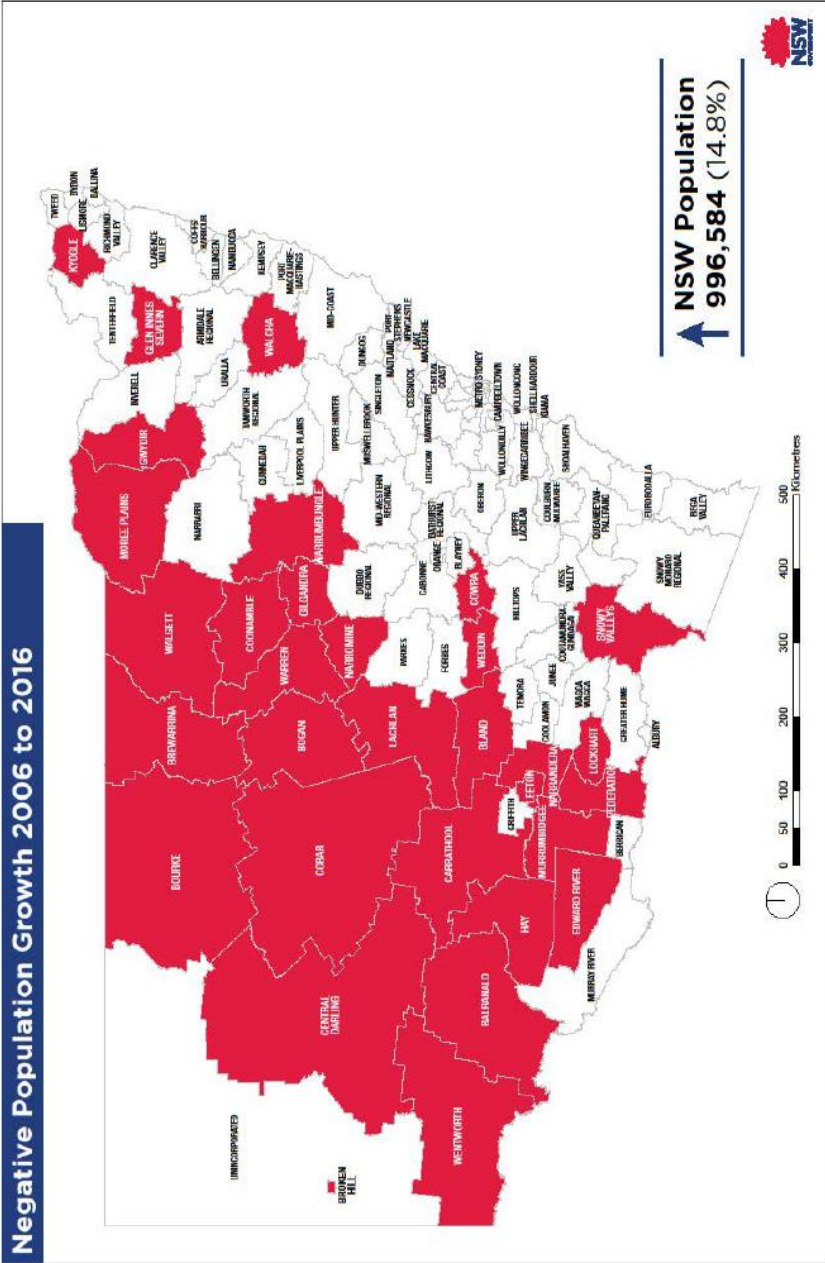
Expenditure Disability Factors		
Disability Factor	Description	Data Source
Population Size	Number of people residing in local government area. The more people in community, the cheaper it is to provide resources per person. This suggests compensation for councils with smaller populations	ABS 3218.0 Regional Population Growth Australia, Estimated Resident Population (released 25 March 2020).
ATSI	Proportion of residents identified as Aboriginal and Torres Strait Islander.	ABS 2075.0 Census of Population and Housing - Counts of Aboriginal and Torres Strait Islander Australians, 2016 (released 5 December 2018).
Road Length	Kilometres of road within a local government area.	Data provided by OLG, based on data supplied by each local council for the 2018-19 financial year.
Environment	Hectares of environmental land (hectares of conservation and natural environment, water and inland water bodies).	ABS 1410.0 - LAND AND ENVIRONMENT, Local Government Area, 2011-2018 (released 19 November 2019).
Rainfall, topography and drainage index	An index that measures variation in the cost of construction and maintenance of stormwater drainage based on a number of considerations.	Data provided by OLG, Independent Consultants, 1987, Stormwater Drainage Return.

**APPENDIX D**  
**LOCAL GOVERNMENT GRANTS COMMISSION**  
**2020-21 FINANCIAL ASSISTANCE GRANTS**



\$4.5 million of the \$5.1 million CPI increase was apportioned to councils with greatest relative disadvantage on the basis of unsealed local roads, isolation and population decline.

**APPENDIX D**  
**LOCAL GOVERNMENT GRANTS COMMISSION**  
**2020-21 FINANCIAL ASSISTANCE GRANTS**



Red indicates population decline in NSW from 2006-2016.



## TRANSPORT AND STORMWATER PROGRAM STEERING GROUP CHARTER

Adopted: Ordinary Council 2020 XX XX

### 1.0 OBJECTIVES

To provide governance and reporting oversight on major projects within the Transport and Stormwater program in accordance with Council's adopted Project Management Framework (PMF).

### 2.0 KEY FUNCTIONS

- To oversee the progress of Transport and Stormwater programs.
- To advise and make recommendations (as required) to Council on Transport and Stormwater major projects.
- To liaise with Government Agencies as necessary.
- To provide guidance on the planning, delivery, control, monitoring and close-out of Transport and Stormwater major projects in line with PMF and adopted Operational Plan(s).
- To meet Council's commitment to deliver quality transport and stormwater infrastructure projects across the Local Government Area.

### 3.0 MEMBERSHIP

#### 3.1 Voting Members

- Chairperson - Director Infrastructure
- Councillor (Major Projects Portfolio representative)
- Group Manager Finance Services
- Group Manager Community
- Group Manager Infrastructure Planning
- Group Manager Project Delivery

#### 3.2 Non-Voting Members

- The Project Manager(s) may be required to attend on an as needs basis in a non-voting capacity only.
- Councillors and members of the Executive Group are invited to attend in an observer capacity only.
- There may be occasions where other attendees are required at Steering Group meetings, such as funding partners, independent stakeholders, representatives from other levels of government, client side project managers (if applicable), stakeholder engagement specialists and other Council staff. These guests will be invited to meetings on an as needs basis.

#### 3.3 Obligations of Members

- 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 Steering Group are to obtain the Mayor's agreement to make media and other statements on behalf of Council. 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 Steering Groups are bound by the existing operational delegations in relation to speaking to the media.

- A Councillor as a member of a Steering Group or the Steering 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 a Steering Group or the Steering Group itself cannot direct staff and must abide by the decisions of Council and the policies of Council.
- Outside of the Steering Group, operational planning, delivery and day to day direction of the project will be managed, directed and overseen by Council Officers to directly support implementation of all formal resolutions of Council.

### **3.4 Appointment of Members**

- Council, by resolution duly passed, will appoint members to the Steering Group.

## **4.0 TIMETABLE OF MEETINGS**

- Meetings of the Steering Group shall be held as regularly as the Steering Group decides, but no less than on a quarterly basis.

## **5.0 MEETING PRACTICES**

### **5.1 Decision Making**

- Recommendations of the Steering 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 (if required).
- Recommendations to be made through the relevant Director, who will determine under delegation, the process for implementation.

### **5.2 Quorum**

- A meeting shall not proceed unless a quorum of half + 1 voting members are present.

### **5.3 Chairperson and Deputy Chairperson**

- The Chairperson shall be the Director of Infrastructure.
- At all meetings of the Steering Group, the Chairperson shall occupy the Chair and preside. In the absence of the Chairperson, as the Steering Group's first item of business, the Steering Group shall elect one of its members to preside at the meeting.

### **5.4 Secretariat**

- The Director Infrastructure is to be responsible for ensuring that the Steering Group has adequate secretariat support. The secretariat will ensure that the business paper and supporting papers are circulated at least three (3) days prior to each meeting. Minutes shall be appropriately approved and circulated to each member within three (3) weeks of a meeting being held.

### **5.5 Recording of decisions and explicit discussions on risks**

- The secretariat shall record all decisions and discussions that relate to risks.

**6.0 CONVENING OF “OUTCOME SPECIFIC” WORKING GROUPS**

- The Steering Group can at times request a working group to be convened, for a limited period of time, for specific actions. These specifics will be minuted clearly. The working group will report back to the Steering Group with outcomes.

**7.0 CONFIDENTIALITY AND CONFLICT OF INTEREST**

- Councillors, Council staff and members of this Steering Group must comply with the applicable provisions of Council's Code of Conduct in carrying out their 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.
- Steering 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 Steering Group meetings are deemed to have a real or perceived conflict of interest, it may be appropriate they be excused from Steering Group deliberations on the issue where the conflict of interest may exist.
- Any independent members of the Steering Group will be required to complete a confidentiality agreement that will cover the period of their membership of the Steering Group.



## WATER AND SEWER PROGRAM STEERING GROUP CHARTER

Adopted: Ordinary Council 2020 XX XX

### 1.0 OBJECTIVES

To provide governance and reporting oversight on major projects within the Water and Sewer program in accordance with Council's adopted Project Management Framework (PMF).

### 2.0 KEY FUNCTIONS

- To oversee the progress of Water and Sewer programs.
- To advise and make recommendations (as required) to Council on Water and Sewer major projects.
- To liaise with Government Agencies as necessary.
- To provide guidance on the planning, delivery, control, monitoring and close-out of Water and Sewer major projects in line with PMF and adopted Operational Plan(s).
- To meet Council's commitment to deliver quality water and sewer infrastructure projects across the Local Government Area.

### 3.0 MEMBERSHIP

#### 3.1 Voting Members

- Chairperson - Director Infrastructure
- Councillor (Major Projects Portfolio representative)
- Group Manager Finance Services
- Group Manager Community
- Group Manager Infrastructure Planning
- Group Manager Project Delivery

#### 3.2 Non-Voting Members

- The Project Manager(s) may be required to attend on an as needs basis in a non-voting capacity only.
- Councillors and members of the Executive Group are invited to attend in an observer capacity only.
- There may be occasions where other attendees are required at Steering Group meetings, such as funding partners, independent people, other levels of government, client side project managers (if applicable), stakeholder engagement specialists and other Council staff. Such people will be invited to meetings on an as needs basis.

#### 3.3 Obligations of Members

- 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 Steering Group are to obtain the Mayor's agreement to make media and other statements on behalf of Council. 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 Steering Groups are bound by the existing operational delegations in relation to speaking to the media.

- A Councillor as a member of a Steering Group or the Steering 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 a Steering Group or the Steering Group itself cannot direct staff and must abide by the decisions of Council and the policies of Council.
- Outside of the Steering Group, operational planning, delivery and day to day direction of the project will be managed, directed and overseen by Council Officers to directly support implementation of all formal resolutions of Council.

### **3.4 Appointment of Members**

- Council, by resolution duly passed, will appoint members to the Steering Group.

## **4.0 TIMETABLE OF MEETINGS**

- Meetings of the Steering Group shall be held as regularly as the Steering Group decides, but no less than on a quarterly basis.

## **5.0 MEETING PRACTICES**

### **5.1 Decision Making**

- Recommendations of the Steering 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 (if required).
- Recommendations to be made through the relevant Director, who will determine under delegation, the process for implementation.

### **5.2 Quorum**

- A meeting shall not proceed unless a quorum of half + 1 voting members are present.

### **5.3 Chairperson and Deputy Chairperson**

- The Chairperson shall be the Director of Infrastructure.
- At all meetings of the Steering Group, the Chairperson shall occupy the Chair and preside. In the absence of the Chairperson, as the Steering Group's first item of business, the Steering Group shall elect one of its members to preside at the meeting.

### **5.4 Secretariat**

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### **5.5 Recording of decisions and explicit discussions on risks**

- The secretariat shall record all decisions and discussions that relate to risks.

**6.0 CONVENING OF “OUTCOME SPECIFIC” WORKING GROUPS**

- The Steering Group can at times request a working group to be convened, for a limited period of time, for specific actions. These specifics will be minuted clearly. The working group will report back to the Steering Group with outcomes.

**7.0 CONFIDENTIALITY AND CONFLICT OF INTEREST**

- Councillors, Council staff and members of this Steering Group must comply with the applicable provisions of Council's Code of Conduct in carrying out their 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.
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- Any independent members of the Steering Group will be required to complete a confidentiality agreement that will cover the period of their membership of the Steering Group.



## RECREATION, PROPERTY & BUILDINGS AND OTHER PROJECTS PROGRAM STEERING GROUP CHARTER

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Adopted: Ordinary Council 2020 XX XX

### 1.0 OBJECTIVES

To provide governance and reporting oversight on major projects within the Recreation, Property & Buildings and other projects program in accordance with Council's adopted Project Management Framework (PMF).

### 2.0 KEY FUNCTIONS

- To oversee the progress of Recreation, Property & Buildings and other projects.
- To advise and make recommendations (as required) to Council on Recreation, Property & Buildings and other projects.
- To liaise with Government Agencies as necessary.
- To guidance on the planning, delivery, control, monitoring and close-out of Recreation, Property & Buildings and other projects in line with PMF and adopted Operational Plan(s).
- To meet Council's commitment to deliver quality Recreation, Property & Buildings and other projects across the Local Government Area.

### 3.0 MEMBERSHIP

#### 3.1 Voting Members

- Chairperson - Director Development and Environment
- Councillor (Major Projects Portfolio representative)
- Group Manager Finance Services
- Group Manager Community
- Group Manager Recreation, Property and Buildings or Group Manager Commercial Business Units
- Group Manager Project Delivery
- External Member - for Port Macquarie Aquatic Centre Project only

#### 3.2 Non-Voting Members

- The Project Manager(s) may be required to attend on an as needs basis in a non-voting capacity only.
- Councillors and members of the Executive Group are invited to attend in an observer capacity only.
- There may be occasions where other attendees are required at Steering Group meetings, such as funding partners, independent people, other levels of government, client side project managers (if applicable), stakeholder engagement specialists and other Council staff. Such people will be invited to meetings on an as needs basis.

#### 3.3 Obligations of Members

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Recreation, Property & Buildings and other projects Program Steering Group Charter  
Page 1 of 3

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 Steering Groups are bound by the existing operational delegations in relation to speaking to the media.

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- Recommendations to be made through the relevant Director, who will determine under delegation, the process for implementation.

### **5.2 Quorum**

- A meeting shall not proceed unless a quorum of at least one (1) more than half the number of members are present.

### **5.3 Chairperson and Deputy Chairperson**

- The Chairperson shall be the Director of Development and Environment.
- At all meetings of the Steering Group, the Chairperson shall occupy the Chair and preside. In the absence of the Chairperson, as the Steering Group's first item of business, the Steering Group shall elect one of its members to preside at the meeting.

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- Any independent members of the Steering Group will be required to complete a confidentiality agreement that will cover the period of their membership of the Steering Group.

## 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

MAYORS SPORTING FUND - 12 MONTH ACTIVITY REPORT 2019/2020					
2019/2020					
Bentley Name	Phoebe Suppressed	Swimming	NSW Country Swimming Championships & Australian Age Swimming Championships, Sydney		\$350.00
Drewitt	Maddison	Track n Field Hockey	PSSA Track and Field Championships, Sydney		\$350.00
Goodridge	Madeline	Track n Field	All Schools Hockey Championships, Newcastle		\$350.00
Graham	Nathan	Athletics	NSW CHS Track n Field Championships, Sydney Olympic Park		\$750.00
Jean	Morgan	Swimming	All Australian Schools Athletic Championships, Perth Western Australia		\$350.00
Madden	Shania	Dressage	School Sport Australia Swimming Championships, Melbourne, Victoria		\$500.00
Meier-Smith	Luke	Mountain Biking	Runner Up 2019 Sporting Scholarship Recipient		\$3,000.00
Wall	Lleyton	Triathlon	Recipient of 2019 Sporting Scholarship (3 of 4 installments)		\$500.00
Whitton	Bailey	Swimming	Runner Up 2019 Sporting Scholarship Recipient		\$350.00
Wauchope High School	Under 18's Girls Rugby Team		School Sport Australia Swimming Championships, Melbourne, Victoria		\$300.00
					<b>\$7,150.00</b>





**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, © Neamap, © Port Macquarie-Hastings Council

Aerial Image - Location to Land for Boardwalk

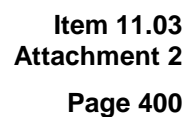
**\$Subtitle**  
1:5,000 @A3



Printed on 02/09/2020  
Compiled by IR







# 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**

<b>Event Name</b>	<b>Year</b>	<b>Sponsorship Granted</b>	<b>Economic Impact</b>
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
<b>TOTAL (40)</b>		<b>\$163,500</b>	<b>\$10,994,948</b>

Event Name	Year	Sponsorship Granted since COVID19	Est. Economic Impact
Wauchope Twilight Tastings	2020	\$2500 granted however waiting for acquittal to determine any returned funds	<i>*Cancelled</i>
Laurieton Multisport Challenge	2020	\$2,500 granted. \$875 retained by PMHC due to cancelation. New total \$1,625 granted.	<i>*Cancelled</i>
Cycling NSW Junior Tour	2020	\$2,500 rolled to 20/21	<i>\$175,000 *Postponed</i>
PMBA Body board Teams Challenge	2020	\$2,500 rolled to 20/21	<i>\$154,000 *Postponed</i>
Fox Super Flow MTB Champs	2020	\$5,000	<i>\$172,000</i>
Howling Moon Blues Festival	2020	\$5,000 rolled to 20/21	<i>\$823,700 *Postponed</i>
MotoFest Wauchope	2020	\$4,000	<i>Unknown as will be an online event in 2020</i>
Surf n' Country	2020	\$4,000 rolled to 20/21	<i>\$1,000,000 *Postponed</i>
Elephant Trail Race	2020	\$4,000 rolled to 20/21	<i>\$760,900 *Postponed</i>
Gardenista	2020	\$4,000 rolled to 21/22	<i>\$1,200,000 *Postponed</i>
King of the Mountain	2020	\$2,000 rolled to 21/22	<i>\$286,000 *Postponed</i>
David 'Goose' Gosby Memorial	2020	\$2,000	<i>\$274,209</i>
<b>TOTAL (12)</b>		<b>\$40,000</b>	

\*Estimates in *red* - Acquittal data for these events will be due after event.

# 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



## **North Brother Local Catchments Flood Study**

Port Macquarie Hastings Council

### **Draft Options Assessment Report**

Revision A

8 May 2020

IA157500





## Draft Options Assessment Report



## North Brother Local Catchments Flood Study

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Revision	Date	Description	By	Review	Approved
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## Draft Options Assessment Report

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## Foreword

The primary objective of the New South Wales Government's Flood Prone Land Policy is to reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods, utilising ecologically positive methods, wherever possible. Under the Policy, the management of flood prone land remains the responsibility of local government.

The policy provides for a floodplain management system comprising the following five sequential stages:

- 1. Data Collection** Involves compilation of existing data and collection of additional data
- 2. Flood Study** Determines the nature and extent of the flood problem
- 3. Floodplain Risk Management Study** Evaluates management options in consideration of social, ecological and economic factors relating to flood risk with respect to both existing and future development
- 4. Floodplain Risk Management Plan** Involves formal adoption by Council of a plan of management for the floodplain
- 5. Implementation of the Plan** Implementation of flood, response and property modification measures (including mitigation works, planning controls, flood warnings, flood preparedness, environmental rehabilitation, ongoing data collection and monitoring by Council)

Port Macquarie Hastings Council is undertaking this study for the North Brother Local Catchments study area to investigate the existing and future flood risks in accordance with the NSW Government's *Floodplain Development Manual*. The study identifies and assesses potential flood mitigation options and guides land use planning and future development on the floodplain in the study area.

This study represents stages 1 to 4 of the management process and has been prepared for Council by Jacobs. This report is a progress report documenting the draft options assessment of the floodplain risk management stage of the study.

**Draft Options Assessment Report****Important note about this report**

The sole purpose of this report and the associated services performed by Jacobs is to undertake a flood study for the North Brother Local Catchments study area located in New South Wales in accordance with the scope of services set out in the contract between Jacobs and Port Macquarie Hastings Council (the Client). That scope of services, as described in this report, was developed with the Client.

In preparing this report, Jacobs has relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, Jacobs has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

Jacobs derived the data in this report from information sourced from the Client, third parties, and/or available in the public domain at the time or times outlined in this report. The passage of time, manifestation of latent conditions or impacts of future events may require further examination of the project and subsequent data analysis, and re-evaluation of the data, findings, observations and conclusions expressed in this report. Jacobs has prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by Jacobs for use of any part of this report in any other context.

Topographic data used in this study included that sourced from a LiDAR survey and ground survey which were undertaken by third parties. Undertaking independent checks on the accuracy of the data was outside Jacobs's scope of work for this study.

This report has been prepared on behalf of, and for the exclusive use of, Jacobs's Client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the Client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

## Draft Options Assessment Report



## 1. Introduction

### 1.1 General

This report discusses the hydraulic assessment results of the draft flood mitigation options for the North Brother local catchments study area for consideration by Port Macquarie Hastings Council and the floodplain advisory sub-committee ("committee"). The options presented in this report were short-listed by Council and the committee from a long-list of options for 16 flooding locations and aim to alleviate flooding at identified flooding trouble spots particularly where properties are at risk to flooding of elevated hazard. The results will assist with further refinement of the options and facilitate consultation with stakeholders and landowners affected by implementation of the options.

This report also investigates non-structural options for managing the flood risk, including property modification and response modification measures.

The content of this report will be included in the subsequent Options Evaluation Report and Draft Floodplain Risk Management Study (FRMS) reports.

### 1.2 Consultation

The findings in this report are to be discussed with Council, the committee and stakeholders and landowners as a part of the options development process. Public exhibition of this report is also proposed to enable early feedback on the proposed options.

Community consultation is also scheduled to occur on a finalised list of the options during public exhibition.

### 1.3 Floodplain Risk Management

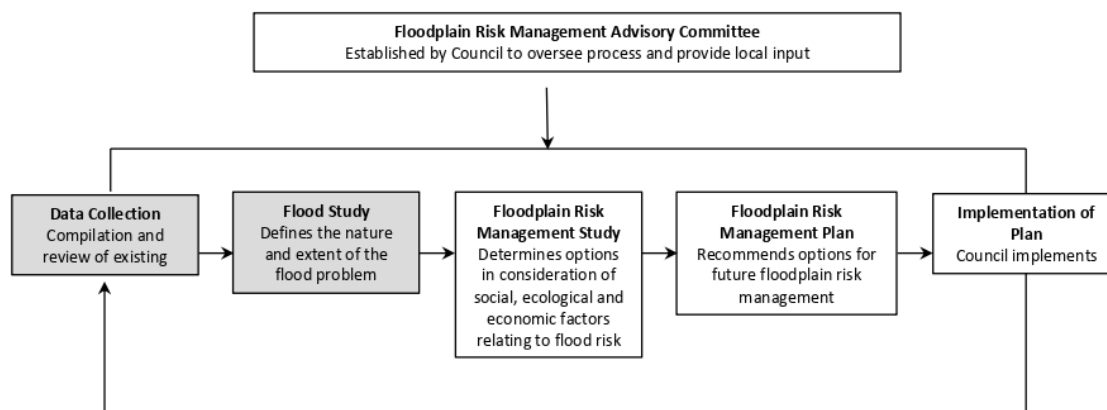
Council is responsible for managing the existing, continuing and future flood risk for its Local Government Area (LGA). The floodplain risk management planning process, as set out in the *Floodplain Development Manual* (NSW Government, 2005) has a number of steps which are illustrated in Figure 1-1. The current Flood Study phase of this study defines the flooding problem. Once the Flood Study has been endorsed by Council, the study moves to the Floodplain Risk Management Study and Plan phase, which seeks to identify and prioritise feasible options for mitigating the flood risk.

The Floodplain Risk Management Advisory Committee for Council was established in 2018 and includes a number of Council Representatives, staff from the Department of Planning Industry and Environment (DPIE, formerly Office of Environment and Heritage), the State Emergency Services (SES), in addition to local stakeholders including community representatives.

## Draft Options Assessment Report

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Figure 1-1 Floodplain Risk Management Process

**1.4 Structure of this Report**

This report is structured by the following sections:

- Section 2 provides background on the existing flood behaviour and flooding problems.
- Section 3 describes the general types of floodplain risk management measures in addition to providing a detailed assessment of the selected structural mitigation options.
- Section 4 provides an appraisal of non-structural flood risk management measures.
- Section 5 provides conclusions and recommendations based on the assessments made in this report.

## 2. The Existing Flooding Problem

### 2.1 Description of Flooding Conditions

#### 2.1.1 Flood behaviour

Flooding behaviour was defined based on numerical modelling of hydrology and hydraulics, estimating catchment flood flows and the flooding patterns and behaviour. Modelling was undertaken in DRAINS software (hydrology) and TUFLOW software (hydraulics), as documented in the North Brother Local Catchments Flood Study – Final Flood Study Report (Jacobs, 2020). Flood depth mapping based on the modelling results is presented in Appendix A.

Overland flooding in the steeper parts of the study area, generally upstream of Ocean Drive and Bold Street, is typically a result of runoff from North Brother Mountain concentrating in natural gullies which discharge towards receiving waterways including Queens Lake, Stingray Creek, Camden Haven River and Watsons Taylor Lake. Issues arise when the gullies and flows encounter existing development, which in some instances at the larger gullies have considered the drainage conditions and provided substantial set-back from the gullies such that there is minimal interaction between floodwaters and development.

At most of the smaller gullies and flow paths, attempts have been made to manage the overland flows by use of diversion drains and underground drainage. The natural flow paths have mainly been filled in for development although shallow flow paths may have been retained. The diversion drains and drainage network have limited capacity so begin to surcharge and overflow in relatively frequent flooding events, causing flooding through properties and into buildings with substantial damage. In a number of locations the existing roads form the main flow path for floodwaters.

Most of the overland flow paths cross Ocean Drive and Bold Street, which traverse the foot of the Mountain. The cross drainage culverts are also limited in capacity and prone to blockage by flood debris including rocks and vegetation, causing overflows over the road. These are two main roads in the study area and traffic is significantly impeded or roads become cut-off during floods. The roads are raised which results in ponding upstream of the road crossings.

The areas downstream of Ocean Drive and Bold Street are mainly low-lying and relatively flat. Development patterns have resulted in a number of low points being formed in roads and through properties, causing overland flows to pond to significant depths. In some areas attempts have been made to provide a continuous overland flow path to the receiving waterways, however, their capacity is also limited which causes hazardous flooding through roads and on properties. Underground and open channel drainage systems are present but are often exceeded. Drainage in these low-lying areas may also be impeded by high water levels in the receiving waters due to floods or storm surge, and mainstream flooding may also affect these areas. These issues are expected to worsen with climate change and sea level rise.

#### 2.1.2 Flood Depth

Overland flow depths on properties are typically up to 0.3m in up to the 1% AEP event. Depths exceed 0.5m in a number of locations in the 0.2EY event, and exceed 1m in the 5% and 1% AEP events. Areas of deeper flows include main flow paths and drainage low points in a number of roads.

During the PMF event, property and road flooding exceeding 0.5m depth is widespread, with property and road flooding of 1m depth also common. Depths of flooding exceeding 2m occur on approximately 20 properties in the study area.

The flood depth mapping shows relatively high depths of ponding on the upstream sides of many buildings. In most cases this is due to the model terrain not allowing free drainage of water around the buildings. In real life the ground surface around buildings is usually graded to allow water to drain off and not form trapped points. There may also be property stormwater drainage present which is not included in the model. Some care therefore needs to be taken in the review of the flood depth mapping.

## Draft Options Assessment Report



### 2.1.3 Duration of Flooding

Overland flooding in the study area is generally a result of intense short-duration rainfall events. As a result, the duration of inundation of roads and built areas is typically short, limited to 1 – 2 hours in up to the 0.5% AEP event. Storage areas such as road sag points in Sirius Drive and Lilli Pilli Close in Lakewood may be inundated for longer durations of up to 3hrs due to constrained capacity of stormwater drainage servicing these areas.

Durations of inundation are likely to be up to 4 hours in the PMF event particularly in some flood storage locations, affecting roads including Botanic Drive and Ocean Drive west of Lakewood shopping centre.

Note that the duration of flooding for depths greater than 0.3m, at which stage floodwaters become impassable for most passenger vehicles, is generally limited to approximately 1 hour duration in most roads.

A river flooding event may occur shortly after overland flooding in the study area, in which case the lower-lying areas of the study area may experience more extensive durations of flooding. River flooding was not assessed in this study.

Flood hazard mapping was prepared for the 1% AEP event for current climate conditions and for the 1% AEP event under the adopted climate change scenario (increased rainfall intensity by 10% and with 0.9m sea level rise). Recent research has been undertaken into the hazard that flooding poses and the vulnerability of the public and assets when interacting with floodwaters. A combined flood hazard classification is presented in *Australian Disaster Resilience Handbook 7. Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia* (AIDR, 2017a) and *Guideline 7-3 Flood Hazard* (AIDR, 2017b) based on this research, and is illustrated in Figure 2-1. The flood hazard categories according to the AIDR definition are:

- H1 – Generally safe for people, vehicles and buildings;
- H2 – Unsafe for small vehicles;
- H3 - Unsafe for vehicles, children and the elderly;
- H4 - Unsafe for people and vehicles;
- H5 - Unsafe for people and vehicles. Buildings require special engineering design and construction; and
- H6 – Unsafe for people or vehicles. All buildings types considered vulnerable to failure.

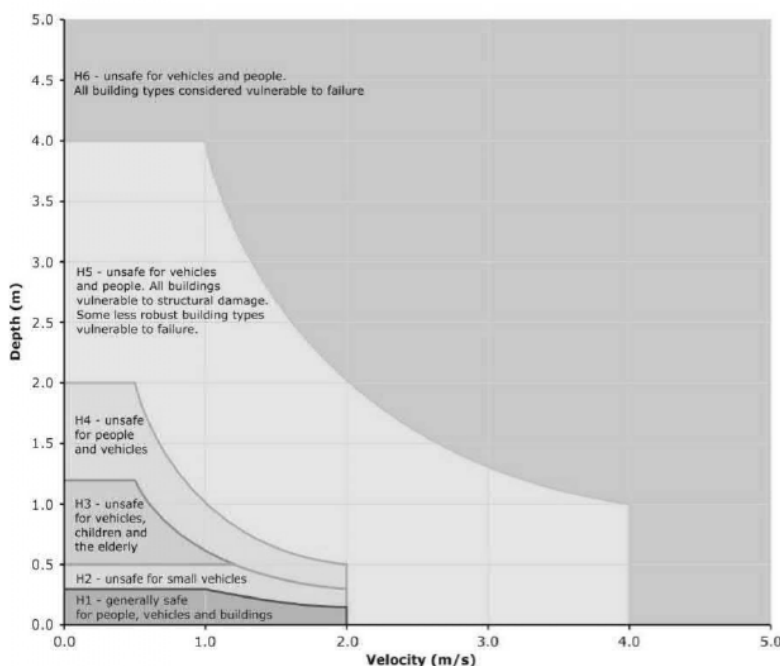
The flood hazard classification is more discrete and provides guidance on flood hazard thresholds to different members of the community (e.g. children and elderly) and different assets (small versus larger vehicles, standard versus specialised engineered buildings). The AIDR flood hazard definition potentially provides a more suitable guideline for assessing flood hazard on the floodplain from an emergency management perspective.

The flood hazard mapping is provided in Appendix A and is denoted provisional. The provisional mapping is based on direct flood modelling outputs and was not updated to reflect the “true” flood hazard to take into consideration evacuation, isolation and other emergency management aspects. There are numerous areas of high flood hazard (>H5) typically reflect the swift overland flows in watercourses and flow paths including roadways.

## Draft Options Assessment Report

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Figure 2-1 General flood hazard vulnerability curves, Australian Institute for Disaster Resilience (AIDR) definition. Reproduced from Figure 6 in *Guideline 7-3: Flood Hazard* (AIDR, 2017b)



#### 2.1.4 Provisional Hydraulic Categories Mapping

Three flood hydraulic categories identified in the *Floodplain Development Manual* (NSW Government, 2005). These are also defined in Council's Flood Policy (2015):

- Floodway, where significant discharge of water occurs during floods and blockage could cause redirection of flows. Generally characterised by relatively high flow rates; depths and velocities;
- Flood storage, characterised by relatively deep areas of floodwater and low flow velocities. Floodplain filling of these areas can cause adverse impacts to flood levels in adjacent areas; and
- Flood fringe, areas of the floodplain characterised by shallow flows at low velocity.

There is no firm guidance on hydraulic parameter values for defining these hydraulic categories, and appropriate parameter values may differ from catchment to catchment. For example, the minimum threshold flows and depths which might define a floodway in an overland flow catchment may be markedly lower than those for a large lowland river due to the different scale of flooding. The category definition adopted in the Hastings River Flood Study (PBP, 2006) and Hastings River Floodplain Risk Management Study (Worley Parsons, 2012) was initially considered for this study. For the Hastings River the floodways were defined as areas in the 1% AEP flood with flows greater than 2m, velocities greater than 0.5m/s and velocity x depth greater than 1m<sup>2</sup>/s. This does not agree with the flooding conditions in the North Brother study area, where 1% AEP flows are generally less than 1.5m deep. Hence, an alternative hydraulic category system is required.

Howells et. al. (2003) suggest that consideration of flow depths, velocities and velocity x depth of flood flows can be used to help define the hydraulic category areas. Various combinations of flow, depth and velocity were trialled for appropriate threshold values for the hydraulic categories. For the purposes of this study, the hydraulic categories were defined as per the criteria in Table 2-1, which were selected following trials of different criteria values and categorisation methods. These criteria are consistent with those adopted by a number of other councils in NSW for overland flooding.



## Draft Options Assessment Report



Table 2-1 Hydraulic Categories Criteria

Hydraulic Category	Criteria
Floodway	Area within the flood extent where: <ul style="list-style-type: none"> <li>• Velocity x Depth &gt; 0.3m<sup>2</sup>/s AND</li> <li>• Velocity &gt; 0.5m/s AND</li> <li>• Depth &gt; 0.15m.</li> </ul>
Flood Storage	Remaining area within 1% AEP flood extent where Depth > 0.15m
Flood Fringe	Remaining area in the floodplain (i.e. area within PMF extent) outside the Floodway and Flood Storage areas.

The provisional hydraulic categories mapping is presented in Appendix A for both the 1% AEP design flood for current climate, and for the 1% AEP event with climate change. The mapping is treated as provisional and may need to be considered in further detail to ensure a continuous floodway strip (where appropriate) and to remove/reclassify isolated areas which currently meet the floodway criteria to either flood storage or flood fringe categories. This would be achieved by manual inspection and adjustment of the mapped floodway areas.

Floodway areas are generally located within the natural watercourses and flow paths, although there are a number of roads which contain floodways throughout the study area. Floodways pass through properties on Black Swan Terrace, Koonwarra Street, Pelican Court, Elouera Place, Flinders Drive, St Joseph's School, Peach Grove, Gow Place, Kew Road and in Laurieton between Quarry Place and Bold Street, among others.

## 2.2 Summary of Flood Problem Areas

Flooding hot spots are identified in the flood study, confirming problem areas previously identified by Council. The hot spots are summarised in Table 2-2 below. Critical areas with consideration of high flood depths, velocities or hazard are highlighted with orange cell or text shading. In summary, the identified critical locations include:

- Black Swan Terrace, West Haven.
- Kimington Terrace, Koonwarra Street, Captain Cook Bicentennial Drive villas and Ocean Street property and Pelican Court, West Haven.
- Bold Street, Laurieton
  - Laurieton Hotel and adjoining areas
  - Harbourside Crescent villas.
- Lake Street property, Laurieton. Corner Seymour Street.
- St Joseph's School, Laurieton.
- Lilli Pilli Close, Lakewood (road flooding).
- Sirius Drive, Honeysuckle Avenue and Mahogany Close, Lakewood (road flooding).
- Ocean Drive between Fairwinds Avenue and Mission Terrace (road flooding).
- Pelican Court, West Haven (road flooding).
- Waterview Crescent, Kimington Terrace and Koonwarra Drive, West Haven (road flooding).
- Bold Street between Laurie Street and Mill Street (road flooding).
- Lord Street at Seymour Street, Laurieton (road flooding).

## Draft Options Assessment Report



Table 2-2 Description of Flooding Hot Spots

Location	Description
<b>Property flooding</b>	
Black Swan Terrace, West Haven	Flow depths on properties up to 0.5m in the 0.2EY event and up to 0.7m in the 1% AEP event. Swift flows of 2m/s. Flood hazard up to H5 rating in the 1% AEP event.
Ringtail Cl, Lakewood	Overflows from open channel onto properties with flooding in backyards to depths 0.2 – 0.3m in the 1% AEP event. Relatively low flooding impact.
Lilli Pilli Cl, Lakewood	Flooding in backyards to depths of 0.3 – 0.5m in the 1% AEP event from open drain overflows. Flooding in cul-de-sac to depths up to 0.8m.  Also significant flooding of car park around Lakewood shopping centre.
Mission Terrace, Lakewood	Overflows with depths of 0.1 – 0.3m in the 1% AEP event from cul-de-sac onto downhill property. Overflows from the overland flow path running through properties on the uphill side of the road with depths up to 0.2m
Kirmington Terrace to Pelican Court, West Haven	Flows through properties on low side of Koonwarra Street of 0.3m in the 0.2EY event and exceeding 0.5m in the 1% AEP event. Velocities up to 2m/s in the 1% AEP event. Flood hazard up to H4 (some localised H5) rating in the 1% AEP event.  Flow depths 0.5m in the 0.2EY event and up to 0.8m in the 1% AEP event on Captain Cook Bicentennial Drive villas and Ocean Drive property, at dwellings. Flood hazard up to H4 rating in the 1% AEP event.  Flood depths of 0.6 – 0.8m in the 0.2EY event within Pelican Court roadway and pedestrian walkway. Depths up to 0.6m at dwellings in 1% AEP event. Flood hazard up to H4 rating on properties and H5 on roadway in the 1% AEP event.  Groundwater springs occur in this area but are not directly related to the surface water flood risk. These springs appear to be a spatially random occurrence.
Flinders Dr Estate, Laurieton	Overflows from drainage easement swale onto properties with depths to 0.3m in the 0.2EY event and 0.5m in the 1% AEP event.  Overflows from Reliance Crescent sag point onto properties to depths of 0.2m in the 0.2EY event and 0.4m in the 1% AEP event.
Bold Street area, Laurieton	Significant flows through Laurieton Hotel with H4 hazard rating.  Trapped drainage point on western side of commercial properties with significant depths, though local drainage may be present which would mitigate the flood depths.  Overflows down fire trail at Norman Street/ Mill Street affecting properties with depths up to 0.3m in the 1% AEP.  Overflows onto units on Harbourside Crescent from trunk drainage channel to depths exceeding 0.5m in the 1% AEP event, with H5 hazard rating.

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Quarry Way, Laurieton	Overflows from flow diversion drain to depths of 0.5m in the 1% AEP event on properties. The drain is reported to be affected by significant debris blockage.
Lake Street, Laurieton	Flood depths up to 1m in the 1% AEP event affecting dwelling on the corner of Lake Street and Seymour Street. Overflows from Lake Street onto properties between Ocean Drive and Castle Street to depths of 0.3m in the 1% AEP.
St Joseph's School, Laurieton.	Swift flows in overland flow paths to depths of 0.8m and velocities exceeding 2m/s in the 1% AEP event. Flows between buildings are 0.4m in the 0.2EY event and 0.6m in the 1% AEP event, with velocities up to 2m/s. Flood hazard rating of H4 in pedestrian walkways and H5 in overland flow paths in the 1% AEP event.
Properties adjacent to Stingray Creek and Camden Haven River, Laurieton	Numerous properties on low-lying land at risk of oceanic inundation during storm surge events. Estimated depths on the flood mapping expected to be conservative due to likely attenuation of ocean inflows through the river mouth.
Blackbutt Crescent and Peach Grove, Laurieton	Overflows from flow diversion drain to depths of 0.5m in the 1% AEP event on properties. The drain cross-sectional profile and capacity significantly reduces near its discharge point onto Peach Grove at Tunis Street. Flows into the drain originate from natural watercourse further uphill, which is significantly affected by rubble and debris blockage.
Elouera Place, West Haven	Overflows from watercourse and diversion drain. Depths over 0.3m in the 0.2EY event and 0.5m in the 1% AEP event.
Sirius Drive, Honeysuckle Avenue and Mahogany Close, Lakewood	Flood depths on properties 0.3 – 0.5m in the 1% AEP event, built up from road ponding areas.
Sirius Drive and Oak Close, Lakewood	Depths 0.3 – 0.4m and velocities 1m/s in the 1% AEP event.
Sandpiper Close	Overflows from concrete channel along Ocean Drive. Depths 0.3 – 0.4m and velocities 1m/s in the 1% AEP event.
Properties on lower side of Ocean Drive, 200m east of Hoschke Road, West Haven	Road low point overflows onto properties with depths of 0.5m and velocities of 1m/s in the 1% AEP event.
<b>Roads</b>	
Ocean Drive west of Lakewood shopping centre	5% AEP event flood depths of 0.4m 1% AEP event flood depths of 0.5m, H3 hazard rating
Botanic Drive, Lakewood	1% AEP event flood depths of 0.4m, H2 hazard rating
Lilli Pilli Close, Lakewood	5% AEP event flood depths of 0.6m 1% AEP event flood depths of 0.7m, H3 hazard rating
Ocean Drive east of Lakewood shopping centre	5% AEP event flood depths of 0.3m 1% AEP event flood depths of 0.35m, >H4 hazard rating
Sirius Drive, Honeysuckle Avenue and Mahogany Close, Lakewood	0.2EY event flood depths of 0.6 – 0.7m 1% AEP flood depths 1m, H3 hazard rating
Ocean Drive between Fairwinds Avenue and Mission Terrace	0.2EY event flood depths of 0.5m 1% AEP event flood depths of 0.7m, >H4 hazard rating
Ocean Drive and Mission Terrace intersection	0.2EY event flood depths of 0.4m

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	1% AEP event flood depths of 0.6m, H3 hazard rating
Ocean Drive near Waterview Crescent	5% AEP event flood depths of 0.2 – 0.3m 1% AEP event flood depths of 0.3m, low hazard rating but long section of flooding
Ocean Drive near Pelican Court	5% AEP event flood depths of 0.3m 1% AEP event flood depths of 0.4m, H3 hazard rating
Pelican Court, West Haven	0.2EY event flood depths 0.6m 1% AEP event flood depths of 1m, H5 hazard rating
Waterview Crescent, Kirmington Terrace and Koonwarra Drive, West Haven	0.2EY event flood depths of 0.2m with 2m/s velocity; max 0.6m depths (low velocity) 1% AEP event flood depths up to 0.7m, H5 – H6 hazard rating
Ocean Drive east of Hoshcke Road	0.2EY event flood depths of 0.4m 1% AEP event flood depths of 0.5m, H3 hazard rating
Ocean Drive east of Flinders Drive	5% AEP event flood depths of 0.3m 1% AEP event flood depths of 0.4m, H3 hazard rating
Kew Road/Bold Street near Tunis Street, Laurieton	1% AEP event flood depths of 0.5m, H2 hazard rating
Bold Street between Laurie Street and Mill Street	0.2EY event flood depths over 0.5m 1% AEP event flood depths 0.6 – 0.8m, H5 hazard rating
Bold Street north of Hanley Street, Laurieton	0.2EY event flood depths of 0.3m with 1m/s velocity 1% AEP event flood depths up to 0.5m, H3 hazard rating
Lord Street at Seymour Street, Laurieton	0.2EY event flood depths of 0.5m 1% AEP event flood depths up to 0.7m, H3 hazard rating
Flinders Drive, Laurieton Tunis Street, Laurieton Rosewood Court and Mission Terrace, Lakewood Diamantina Way, Lakewood	H5 hazard rating on steep sections of road (1% AEP event)

### 2.3 Above-Floor Property Flooding

A floor level survey was undertaken in October 2019 for selected properties in the study area, which were identified based on presence of high hazard flooding at the dwelling in the 1% AEP event. The minimum habitable floor level was surveyed at a total of approximately 270 buildings. Floor levels for the remaining 2,000 (approximately) properties in the study area were estimated based on an assumed 0.2m height above the maximum ground level at the dwelling.

Above-floor flooding in the 0.2EY, 5%, 2% and 1% AEP and PMF flood events is mapped on Figure 2-2. The buildings shown on the map were selected as those affected by main flow paths and bodies of flooding, and exclude those affected by minor ponding. This selection process was done for each flood AEP and was also used in the flood damages assessment (see Section 2.6).

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Above-floor flooding is expected to incur significantly greater flood damages to the building and contents compared to yard (i.e. below floor level) flooding. The map indicates the spatial distribution of properties with above-floor flooding and their relative vulnerability, with properties affected in frequent events such as the 0.2EY event being more vulnerable than those affected only in rarer events such as the 1% AEP event.

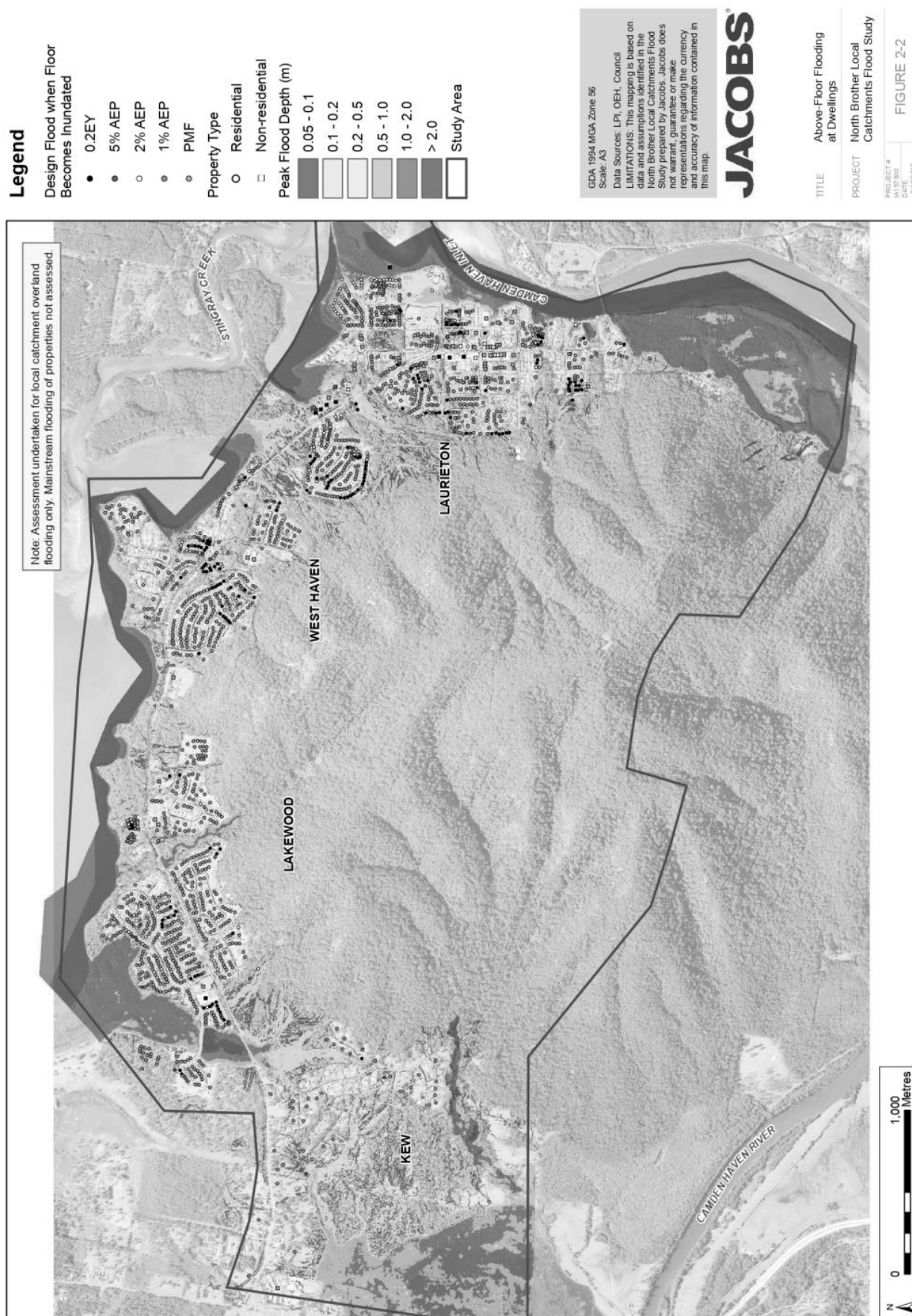
## 2.4 Very High Hazard Residential Properties

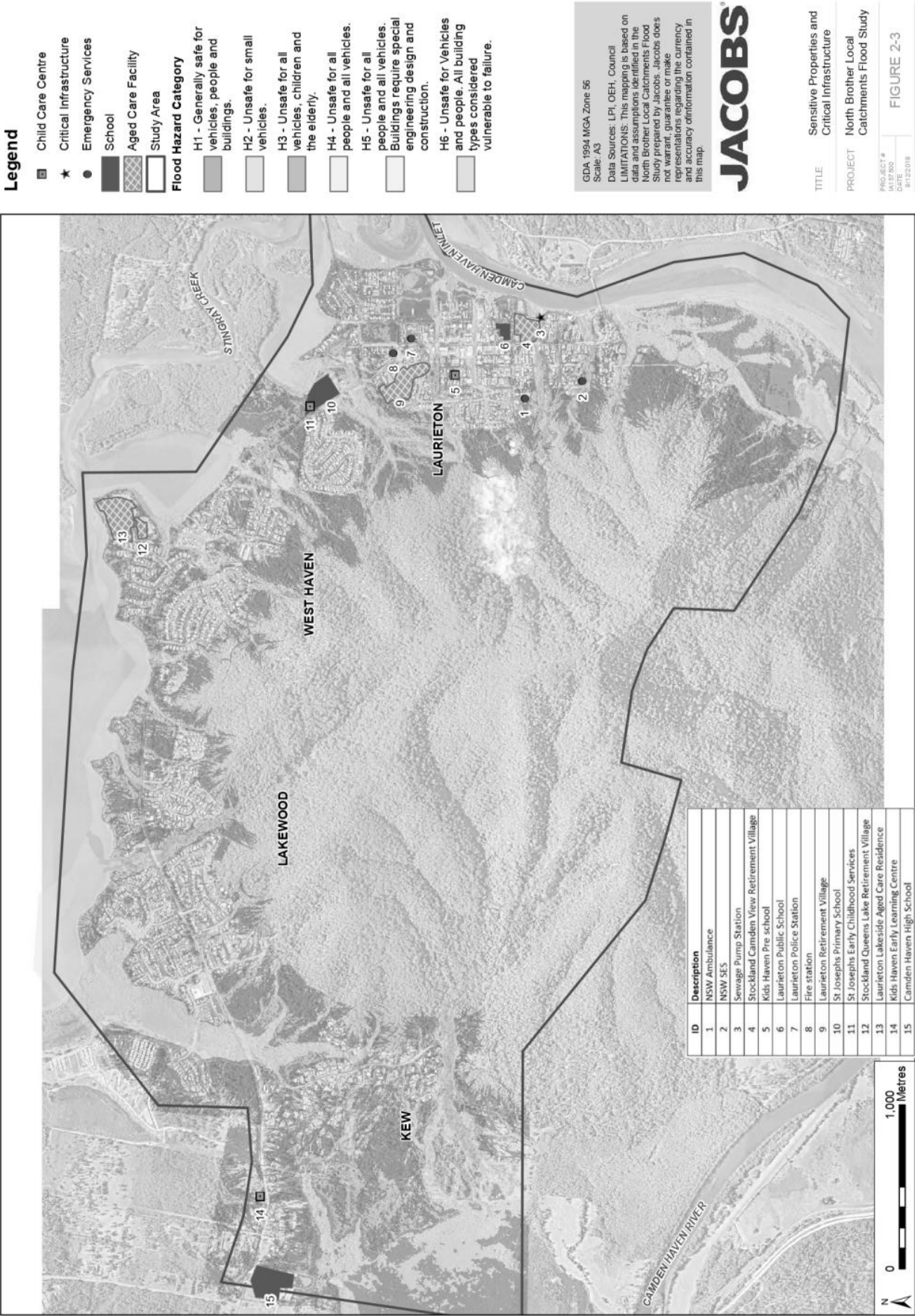
A count of properties with very high hazard flooding conditions at the dwelling was undertaken based on the flood hazard mapping in Appendix A, with the review identifying 20 residential properties with a flood hazard rating of H5 or H6 in the 1% AEP event, whereby damage to the building may result due to floodwaters. The properties are located within the flood problem areas as discussed in 2.2 and may be candidates for management measures including voluntary purchase and redevelopment by Council, as discussed in Section 4.1.1 and Section 4.1.4, respectively.

## 2.5 Sensitive Properties and Critical Infrastructure

Sensitive properties and critical infrastructure have been identified in the catchment. Certain types of properties may require specific evacuation considerations due to the vulnerability of their occupants, such as schools and pre-schools, and aged care facilities. Critical infrastructure impacted by flooding may have effects on the recovery and functioning of the community following a flood event.

The sensitive properties and critical infrastructure are mapped on Figure 2-3. The flood hazard in the PMF event is mapped on the figure. Note that centrally-operated facilities are listed. Properties which include apartments, villa estates etc. have not been identified.





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The sensitive properties and critical infrastructure identified as being directly affected by overland flooding are summarised in Table 2-3 with the flood hazard on each site indicated. Note that the list is based on the overland flood modelling in this study, and a number of sites are impacted by mainstream flooding which is not assessed.

Table 2-3 List of flood-affected sensitive properties and critical infrastructure

Name	Overland Flow Flood Hazard* (Existing case, no climate change)		Hydraulic Category (1% AEP, climate change)
	1% AEP	PMF	
Sensitive Properties			
Stockland Camden View Retirement Village	Mostly H1/H2 Up to H5	H6	Flood Fringe/Flood Storage/Floodway
Kids Haven Pre School	H1	H1	Flood Fringe
Laurieton Public School	H1	H4	Flood Fringe
Laurieton Retirement Village	Mostly H1 – H2 Localised H3	H6	Mostly Flood Fringe/Flood Storage. Some Floodway areas
St Josephs Primary School	Mostly H1/H2 Up to H5	H5-H6	Flood Fringe/Flood Storage/Floodway
St Josephs Early Childhood Services	Mostly H1/H2 Up to H4	H5	Flood Fringe/Flood Storage/Floodway
Stockland Queens Lake Retirement Village	Mostly H1/H2	H4	Mostly Flood Fringe. Some Flood Storage areas
Laurieton Lakeside Aged Care Residence	Mostly H1	Mostly H1- H3	Flood Fringe
Kids Haven Early Learning Centre	H1	H1	Flood Fringe
Camden Haven High School	Mostly H1	Mostly H1, up to H4 in low-lying southern part of school	Mostly Flood Fringe
Critical Facilities and Infrastructure			
NSW Ambulance Laurieton	H1	H3	Flood Fringe/Flood Storage
NSW SES Camden Haven unit	H1	H3	Flood Fringe
Laurieton Police Station	H1	H2	Flood Fringe
Fire station Laurieton	H3	H4	Flood Fringe/Flood Storage
Laurieton sewage pumping station	H4	H6	Flood Storage/Floodway

\* Note, overland flood hazard indicated. Some properties are also affected by mainstream flooding.

## 2.6 Flood Damages Assessment

### 2.6.1 Overview

Flood events may cause damage to property with significant costs to property owners and insurers. The damage may occur due to floodwaters affecting the building façade and interior (weatherboard exterior, gyprock interior walls, carpets), electrical wiring and building contents and other property outside the dwelling (vehicles,



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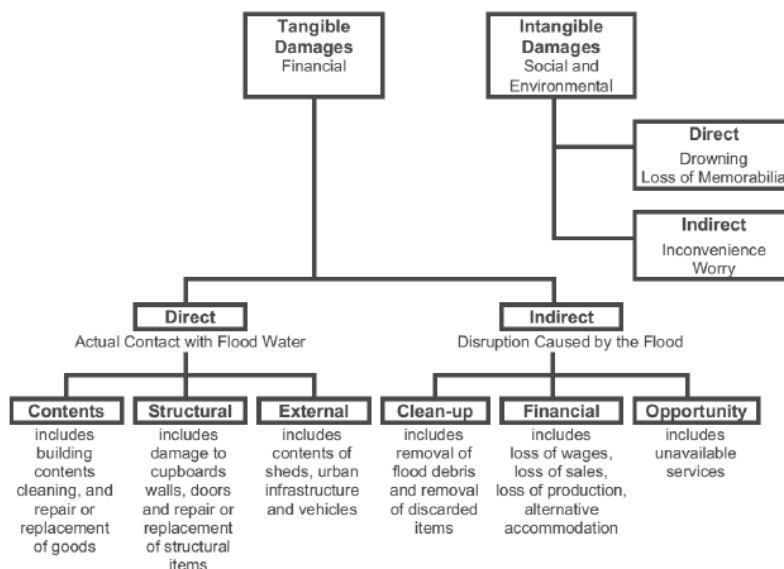
contents of sheds and garages, etc). Structural damage to the dwelling can also occur due to extreme flood hazard conditions.

The cost of flooding is estimated to identify the magnitude of the event to a community, and subsequently provide a benchmark for the viability of potential measures for mitigating the impacts of flooding. This section describes the estimation of flood damage costs in the study area, focussing on residential and commercial properties.

### 2.6.2 Flood Damages Categories

The type of damages associated with floods is shown in Figure 2-4 (*Floodplain Development Manual, NSW Government 2005*). The cost of damage caused by floods may include tangible and intangible components. Tangible damage costs include the direct material damage and rebuilding costs to existing homes, property and infrastructure, and also the indirect costs associated with the social disruption of the floods, such as: clean-up; lost income during and after the flood event; and the cost of alternative accommodation for people displaced by the floods. A monetary value can be readily placed on the direct damages, which are the focus of this assessment.

Figure 2-4 Types of Flood Damage



Other social and environmental damages to which a monetary value cannot readily be placed are intangible damages, which include emotional stress of the flood event, injury and loss of life. While these damages cannot readily be incorporated into an economic feasibility assessment of mitigation options, it is still important to consider the potential for these intangible damages, particularly if there is an elevated risk of loss of life.

### 2.6.3 Estimation of Direct Tangible Flood Damage Costs

#### 2.6.3.1 Property Information

Residential and commercial properties were identified and characterised based on knowledge and site observations of the study area.

Residential house types in the study area are generally a mixture of one and two storey houses, in addition to a number of villa and apartment complexes. In floodplains with deep flooding (riverine floodplains) two storey

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houses would experience a second increment of flood damages as floodwaters rise and affect the second storey. While some properties in the low-lying areas adjacent to the rivers and lakes would be affected by riverine flooding, the focus of this study is on overland flows from the local catchments, affecting up to the first storey of the house only. For the purposes of this assessment all houses were assumed to be single storey.

Flood damages are estimated based on flood level in relation to building floor level, with the damages increasing as the flood levels increase. The floor levels of approximately 270 buildings, selected based on high hazard flooding in the 1% AEP event, were surveyed. The floor levels of remaining buildings were estimated based on LiDAR ground levels plus and assumed 0.2m above the highest ground level at the building.

Affected buildings for the flood damages assessment were selected based on interpretation of overland flood extents from the flood mapping, to include only those properties affected by main flow paths and significant ponding shown on the mapping so as not to overestimate the flood damages. The affected properties were selected for each event assessed in the flood damages estimation, i.e. the 0.2EY, 5%, 2% and 1% AEP and PMF events. This approach was taken so as not to overestimate the flood damages.

### 2.6.3.2 Residential Property Damages

Residential flood damages guidelines and a calculation spreadsheet was developed by the NSW Office of Environment and Heritage (OEH, 2016b). The calculation spreadsheet includes a representative stage-damage curve derived for typical house types in the study area to estimate structural, contents and external damage. The amount of damage is based on the flood inundation depth, for a suite of annual exceedance probability events ranging from the 20% AEP event up to the PMF. These values are then summed to provide a total damage for each flood event analysed. The AEP of the PMF in the study area is assumed to be 1 in 10,000,000.

The stage-damage curves assume some flood damages for flood levels below the floor level. A minimum damage value of \$12,060 (2018 dollars) is assumed to occur at a level 0.5m below the floor level. This approach accounts for flood damages to parts of the dwelling and property below the floor level and ensures that damages are not underestimated.

Various input parameters are used to define the flooding and location characteristics which derive a location specific damage curve. The parameters adopted for the study area are presented in Table 2-4.. Unless otherwise stated, default parameters have been used (as recommended in the *Residential Flood Damage Guidelines* (OEH, 2016b)).

The DECCW stage-damage curves within the spreadsheet are derived for late 2001, and have been updated using an Average Weekly Earnings (AWE) factor to the current day values. AWE is used to update residential flood damage curves rather than the inflation rate measured by the Consumer Price Index (CPI). The most recent AWE value from the Australian Bureau of Statistics (ABS, 2019) at the time of the assessment was November 2018, however, this resulted in a multiplication factor on 2001 dollars of 2.37, which was significantly out of step from the factor value derived from November 2017 AWE of 1.76 and from previous recent years. On this basis, a factor of 1.9 was assumed for up to August 2019 to keep in trend with AWE increases for the years prior to November 2017.

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Table 2-4 Input parameters for damage calculations

Parameter	Value	Comment
Regional Cost Variation Factor	1.0	Appropriate value for a major city (Sydney) and surrounds. Similar value assumed for major regional city.
Post flood inflation factor	1.15	
Typical duration of immersion	1 hour	
Building damage repair limitation Factor	0.85	Represents short duration flood (<12 hours) where some materials can recover from short periods of flooding and may not need replacement
Typical free-standing house size	240m <sup>2</sup>	
Contents damage repair limitation Factor	0.75	Guidelines suggest a value of 0.75 for short duration floods
Effective warning time (hrs)	0	Only marginal improvement in damages cost when effective warning time is increased to 1 hour as a sensitivity assessment
Level of flood awareness	Low	Flood warning times are nil, and it is assumed that residents are typically not aware of potential damage of flood waters and the measures to minimise damages (e.g. elevated storage of goods).

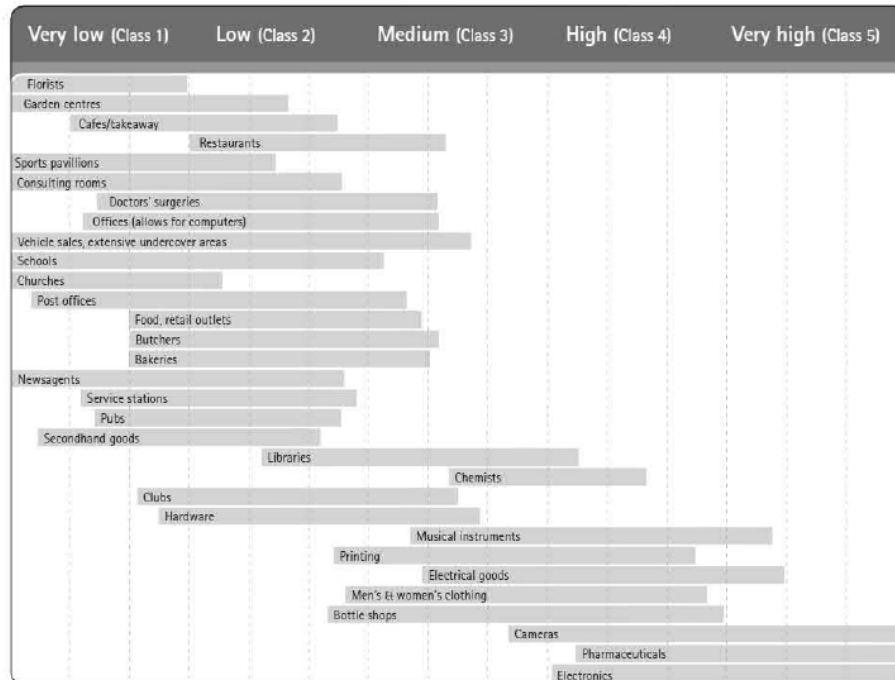
## 2.6.3.3 Commercial Property Damages

No information on commercial property flood damage costs in NSW was found during a literature search. The most relevant information obtained was published in the Queensland Government Natural Resources and Management Department's *Guidance on the Assessment of Tangible Flood Damages* (2002). This document contains flood damage curves for commercial properties over a range of property footprint areas and degrees of susceptibility to flooding and is based on information published in *ANUFLOOD: A Field Guide* (Centre for Resource and Environmental Studies (Australian National University), 1992). Different types of commercial and non-residential properties were assigned a susceptibility rating, as illustrated in Figure 2-5.

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Figure 2-5 Damage categories for commercial properties (reproduced from *Guidance on the Assessment of Tangible Flood Damages* (Qld. Government, 2002))



The stage-damage data were factored up by a value of 1.9 from late 2001 dollars to current values based on Average Weekly Earnings (AWE), similar to the approach adopted for the residential flood damages.

An additional multiplication factor of 1.6 was applied based on guidance in *Rapid-Appraisal Method (RAM) for Floodplain Management* (Victorian Government Natural Resources and Environment, 2000), which suggests that the ANUFLOOD values are underestimated and should be increased by 60%.

A total of 89 commercial and non-residential premises/buildings which are potentially flood-affected were identified. Detached buildings on non-residential properties were assessed individually e.g. on school grounds. Individual shops within an overall commercial building complex were also assessed separately where possible. The results of the commercial and non-residential property flood damages assessment are provided in Section 2.6.3.5.

#### 2.6.3.4 Damages to Utilities and Infrastructure

Utilities and infrastructure in the study area which are susceptible to flooding may include roads and other public infrastructure such as sewage pumping stations, electrical transformer boxes, etc.

The potential cost of damage to roads is difficult to estimate for the study area, as the nature of flooding in a significant portion of study area is typically due to relatively shallow, short-duration flows, although road damage is possible for roads conveying higher velocity flows.

The roads damages guidance published in the references cited in this study are based on longer-duration mainstream flooding damages and hence are likely to overestimate the flood damages to roads in the study area. Hence these costs have not been included in this assessment.

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## 2.6.3.5 Damage Assessment Results

The most convenient way to express flood damage for a range of flood events is by calculating the Annual Average Damage (AAD). The AAD is equal to the total damage caused by all floods over a long period of time divided by the number of years in that period. The AAD for the existing case then provides a benchmark by which to assess the merit of flood management options.

The AAD value is determined by multiplying the damages that can occur in a given flood by the probability of that flood actually occurring in a given year and then summing across a range of floods. This method allows smaller floods, which occur more frequently to be given a greater weighting than the rarer catastrophic floods.

Table 2-5 summarises the residential damages and the commercial and non-residential damages. The residential and commercial property flood damages include direct damages to property such as structural, external and contents damage, and indirect damages such as clean up costs and accommodation/ loss of rent costs. Infrastructure damage, vehicular damage and intangible damages are not included.

The OEH (2016b) guidelines recommend that the adopted freeboard in the flood planning level (0.5m) be considered in the flood damages estimation. This gives the "Protection Level" which reduces the floor level relative to the flood levels in the calculations which are adopted as the damages estimates. Calculations of damages based on floor level (no freeboard adjustment applied) are also provided as a sensitivity check.

The flood damages here are "potential flood damages", which may be reduced with increased flood awareness and preparedness in the community. The Net Present Value of the flood damages assumes a 7% discount rate over a 50 year life, as per the OEH (2016b) guidelines. The damages are in 2019 dollar values

Table 2-5 Estimated Tangible Flood Damages due to Overland Flooding

Event	Based on Floor Level*		Based on Protection Level (Floor Levels minus Freeboard)*	
	Number of properties flooded above floor level	Estimated Flood Damage	Number of properties flooded above protection level	Estimated Flood Damage
<b>Residential</b>				
20% AEP	161	\$18.9M	344	\$40.3M
5% AEP	222	\$25.6M	429	\$50.8M
2% AEP	380	\$42.7M	679	\$80.6M
1% AEP	492	\$54.1M	839	\$100.0M
PMF	1,616	\$193.9M	2,062	\$274.5M
<b>AAD</b>		<b>\$8.9M</b>		<b>\$17.6M</b>
<b>Commercial/Non-Residential</b>				
20% AEP	10	\$1.0M	34	\$4.4M
5% AEP	16	\$1.5M	44	\$6.1M
2% AEP	27	\$2.3M	59	\$8.3M
1% AEP	31	\$2.5M	63	\$8.9M
PMF	83	\$12.9M	98	\$22.7M
<b>AAD</b>		<b>\$0.5M</b>		<b>\$1.9M</b>

\* Damages estimate based on Protection Level is to be adopted. Estimate based on floor level used as a sensitivity check.

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It should be noted that the flood damages estimated for the study area need to be considered with care. The OEH residential stage-damage curves recommended for use in NSW have been developed based on flood damages from low-land mainstream/ flooding, where flood surface gradients are relatively flat and the depth of flooding within a dwelling is fairly uniform. Due to the steep terrain in parts of the study area and the generally shallow nature of overland flows (particularly in the more frequent flood events), flood levels may vary greatly on a property and damage may be concentrated on one side of a dwelling. Flood depths are also relatively shallow so the damage incurred may be less than those suggested by the curves. Nevertheless, the stage-damage curves provide the best guidance available for estimating flood damages given the scarcity of actual flood damage data to residential properties on overland flow paths and have been adopted for this study.

**2.6.5 Summary**

Flood damages in the study area is primarily attributed to residential dwellings that are impacted by overland flooding. The estimates based on Protection Level are adopted. The flood damages estimates were based on properties selected based on their impact from main areas of flooding, and excludes those affected by localised minor ponding. The residential AAD for the study area is \$17.6 million. The non-residential AAD is \$1.9 million.

There are 523 residential and non-residential properties that are estimated to experience above floor flooding (not protection level) for the 1% AEP event. In the PMF, 1,699 properties are estimated to experience above floor flooding.

While flood damage estimates for the study area are indicative only, they are useful in the evaluation of flood management options, aimed at reducing flood damage estimates while being economically viable to implement.

### 3. Floodplain Risk Management Measures

#### 3.1 Overview

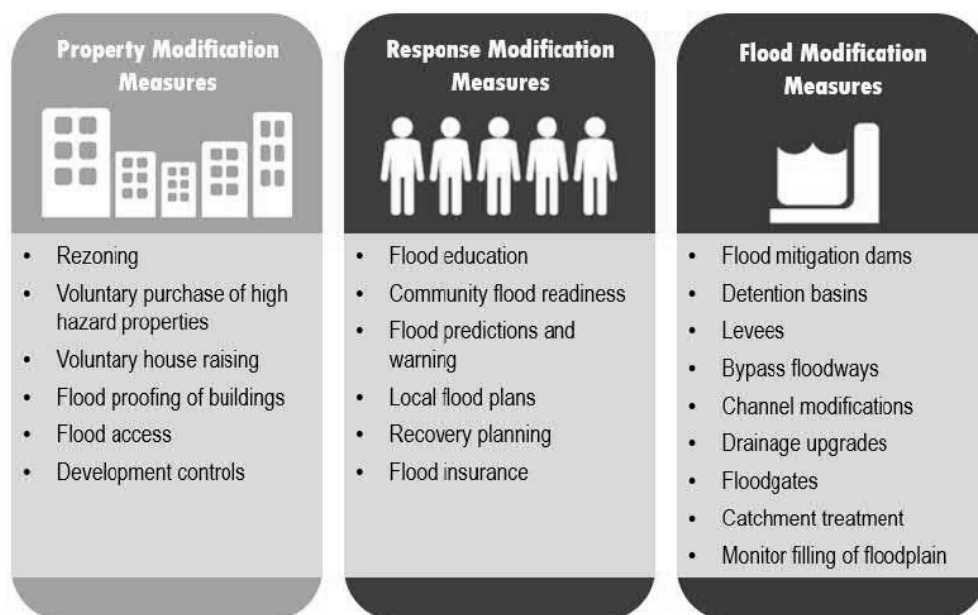
One of the objectives of this Floodplain Risk Management Study is to identify and compare various floodplain risk management options to deal with existing and future flood risk in the study area, considering and assessing their social, economic, ecological and cultural impacts and their ability to mitigate flood impacts.

The *Floodplain Development Manual* (NSW Government, 2005) describes floodplain risk management measures in three broad categories as described below:

- **Property modification** measures involve modifying existing properties (for example, house-raising) and/or imposing controls on new property and infrastructure development (for example, floor height restrictions);
- **Response modification** measures involve modifying the response of the population at risk to better cope with a flood event (for example improving community flood readiness); and
- **Flood modification** measures involve modifying the behaviour of the flood itself (for example, construction of a levee to exclude floodwaters from an area or flood retarding/detention basins to store floodwaters and reduce peak outflows).

Examples of measures falling under the three categories are outlined in Figure 3-1. Some of these measures may or may not be appropriate in a particular catchment, depending on factors such as the flooding behaviour and patterns of development.

**Figure 3-1 Floodplain Risk Management Measures** (Source: *Floodplain Development Manual*, 2005)



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### 3.2 Considerations in Options Identification and Prioritisation

In determining the nature and priority of potential options for further detailed assessment, the following factors have been considered:

- The identified mitigation options are aimed at improving flooding conditions due to local catchment flooding. Riverine flood levels exceed the local catchment flood levels by a substantial amount particularly in the 1% AEP event and inundate low-lying areas of the study area. The local catchment flood mitigation options in these areas should be designed not to worsen the susceptibility of these areas to riverine flooding. For example, substantial lowering of raised berms may allow overtopping of river floodwaters in more frequent events.
- Design river tailwater conditions due to elevated ocean levels are up to 2.1m AHD in the 1% AEP event. Some low-lying areas on properties and roads have a ground level of approximately 2.6m AHD and would be difficult to drain via underground pipes.
- The effectiveness of mitigation options during future climate change scenario is to be considered. The design river tailwater conditions due to elevated ocean levels would increase to 3.0m AHD in the 1% AEP event in a climate change scenario, with 0.9m of sea level rise.
- The design riverine flood levels are 2.3 – 2.4m AHD in the 5% AEP event and 2.9 – 3.0m AHD in the 1% AEP event in the current climate. The flood levels in a climate change scenario are expected to increase by up to 0.8m in the 1% AEP event as a result of 0.9m sea level rise and 10% increase in rainfall (Patterson Britton and Partners, 2013).
- Given the low elevation of a number of identified sites for potential mitigation, it is expected that the effectiveness of the mitigation options would be reduced if local overland flooding coincided with a mainstream flood peak. Some contingency will be incorporated into the options modelling with adoption of elevated, but not peak, river tailwater levels.

### 3.3 Selection of Options for Detailed Assessment

A description and qualitative evaluation of identified works-based flood modification options at 16 locations was provided in the Working Draft Options Report, dated 9 December 2019. The identified options aim to mitigate flooding at the locations summarised in Table 2-2, in particular property flooding. A short-list of six combinations of options were selected by Council and the committee, and have been analysed in the TUFLOW model for hydraulic performance. The results of the modelling are described in this section.

Property and response modification measures will be addressed in the draft FRMS.

### 3.4 Assessed Flood Modification Measures

The short-listed options were tested in the TUFLOW model for the 0.2EY, 5%, 2% and 1% AEP events and the 1% AEP with climate change event to assess the improvements to flooding conditions. Existing underground utilities were considered in the configuration of the options based on Dial Before You Dig searches.

The assessed options are described, and their modelled performance is summarised for the 0.2EY, 5% and 1% AEP events in the following sections.

#### 3.4.1 Black Swan Terrace, West Haven

Council commissioned, separately from this study, a design for an improved trunk drainage pipe inlet arrangement and high-flow diversion to the street. Additional works in the street including raising of the road verge and driveways are proposed. Details of the design were provided following the final flood study, hence it has not been incorporated into the design flood modelling and mapping. Since the design development of mitigation works at this location are already well-advanced, further mitigation options are not proposed in this study.



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The pre-developed conditions at Black Swan Terrace have been retained in the mitigation case modelling. Post-development hydraulic modelling for this option is being undertaken by others on behalf of Council. Flow conditions in Koonwarra Street, downstream of the works, are not expected to be significantly changed as a result of the works, hence omission of the works from the mitigation case modelling should not affect the assessment of other mitigation options.

**3.4.2 Kirmington Terrace to Pelican Court, West Haven**

This area is identified as a critical flood problem area with significant flooding of properties in Koonwarra Street, Captain Cook Bicentennial Drive villas, Ocean Drive and Pelican Court. The flood hazard is high to very high (H4, some H5) on properties and on roads in the 1% AEP event. The area is highly affected in frequent events such as the 0.2EY event.

Flooding originates from three separate overland flow paths, including one from Black Swan Terrace, a second near Kirmington Terrace and a third from near Hoschke Road. Flow paths 1 and 2 converge in Koonwarra Street and then flow path 3 converges at Pelican Court. Overland flows are about 15m<sup>3</sup>/s in flow paths 1 and 2 in total in the 1% AEP event downstream of Koonwarra Street, and 20m<sup>3</sup>/s in combined flow paths 1, 2 and 3 in Pelican Court. Existing pipe flows in Pelican Court are 3m<sup>3</sup>/s in the 1% AEP event in addition to the overland flows. The existing pipes in the network run full in the 0.2EY event. Flow paths 1 and 2 affect a number of properties throughout this area.

Flow path 3 directly affects two dwellings on Ocean Drive (numbers 384 and 386) near Hoschke Road in addition to contributing to flows in Pelican Court. It includes a 2m wide drainage channel through properties on the higher side of Ocean Drive, draining to a 2.4m x 0.9m box culvert under Ocean Drive, which is the main flow constraint. The culvert conveys 3.7m<sup>3</sup>/s in the 1% AEP while another 3.7m<sup>3</sup>/s overflows over Ocean Drive. It discharges to the formed swale on the low side of the road before the flows enter Pelican Court.

Floodwaters pond in Pelican Court and flow overland via an access road in addition to through properties to discharge to Queens Lake.

**3.4.2.1 Option 4A+4B+4C****Description**

The following options were assessed in combination (Options 4A+4B+4C):

- Option 4A – voluntary acquisition of one property in Koonwarra Street (number 53) which has floodway and H5 flood hazard conditions. Regrade the site to form a flow path to relieve flood conditions in the road and on adjacent properties.
- Option 4B – new additional trunk drainage line 2x 1200mm diameter pipes, intercepting flows at downstream end of channel on Captain Cook Bicentennial Drive villas, cross Ocean Drive and run under The Gateway and discharge to receiving waterway to the north of Pelican Court. This proposed pipe capacity would be approximately 5m<sup>3</sup>/s which would reduce the total overland flow in Pelican Court by about 25% in the 1% AEP event. An inlet basin/rock debris trap similar to that proposed at Black Swan Terrace may be required.
- Option 4C – voluntary acquisition of one property, 7 Pelican Court, adjacent to the access road to form a larger flow path and provide additional capacity for flows out of Pelican Court sag.

Refer to Figure 3-2 for illustration of options.

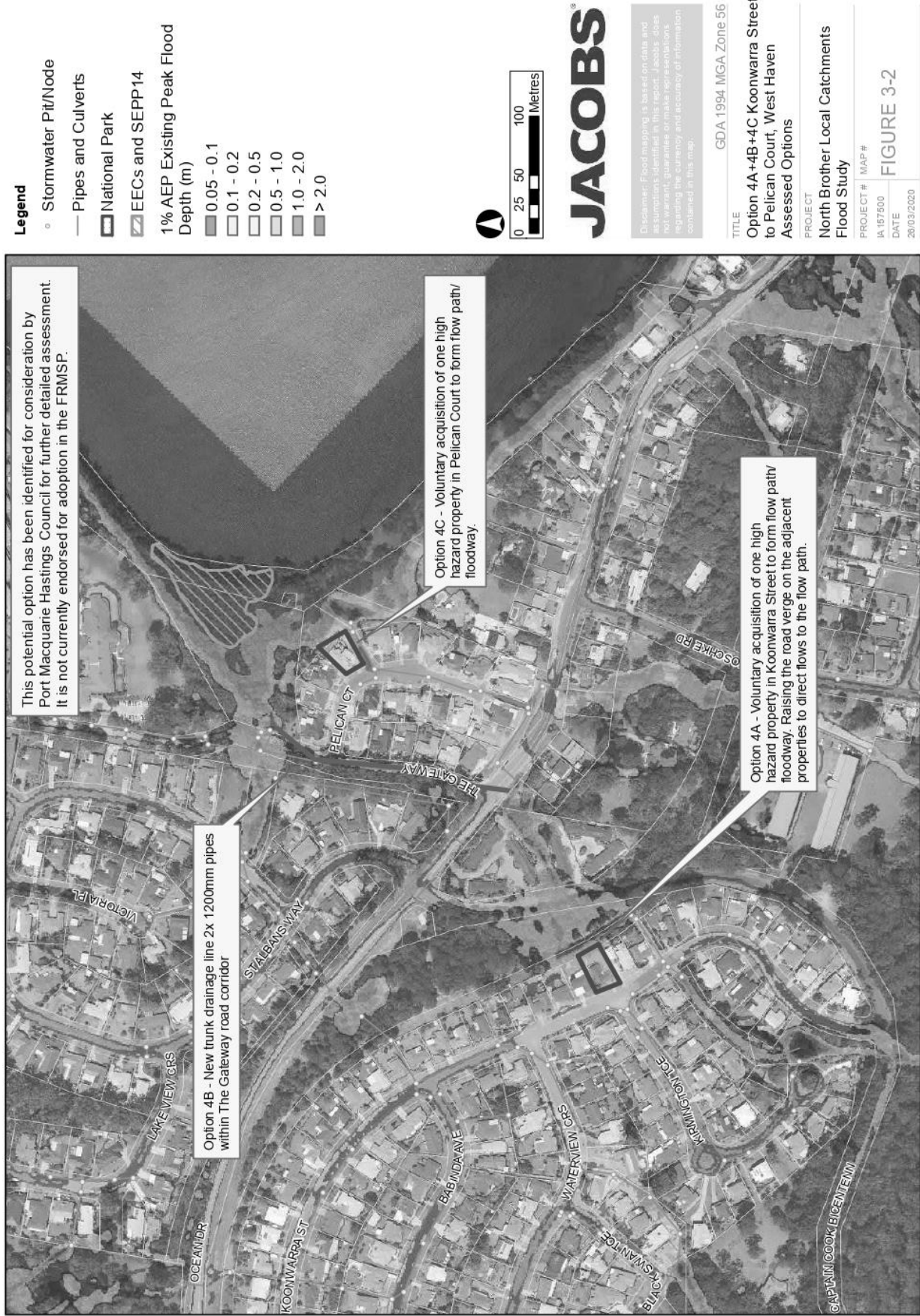
**Constraints assessment**

- High property prices (~\$500K each) plus demolition and disposal costs.
- Existing underground utilities in Ocean Drive and The Gateway (Telstra, Optus, NBN, power, stormwater).
- Substantial number of trees in western verge of The Gateway, require removal if running new trunk drainage in the verge.

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- Limited space to widen existing channel running through Captain Cook Bicentennial Drive villas and then turning at Ocean Drive. Presence of existing driveway crossing over channel into Ocean Drive property.
- Minimal space for rock debris trap at new trunk drainage inlet structure. Requires more detailed site assessment for potential rock debris loads. There are a number of informal traps upstream (e.g. road crossings) and a discontinuous flow path running off the mountain, so rock debris loads may be low.

Based on the site constraints it is assumed that the new trunk drainage line would run under the western side of The Gateway in order to minimise the number of underground services which need to be crossed and/or protected.



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**Hydraulic performance**

Flood impact maps, showing the change in flood levels, are presented in Figure 3-3 to Figure 3-5 for the 0.2EY, 5% and 1% AEP events, respectively. The hydraulic performance of Options 4A+4B+4C is summarised in Table 3-1.

**Table 3-1 Hydraulic performance of Options 4A+4B+4C**

Event AEP	Changes in flood conditions
0.2EY	<ul style="list-style-type: none"> <li>Koonwarra Street – flood levels reduced by up to -0.04m at three properties adjacent to new floodway</li> <li>Pelican Court – flood levels reduced by -0.2 to -0.4m in roadway and alleyway. Localised reductions only on properties up to -0.1m.</li> <li>Reduced flood hazard from very high (H5) to mostly low (H1, H2) in Pelican Court, some moderate H3 in alleyway.</li> </ul>
5% AEP	<ul style="list-style-type: none"> <li>Koonwarra Street – flood levels reduced by -0.04m to -0.2m at four properties adjacent to new floodway.</li> <li>Pelican Court – flood levels reduced by -0.2 to -0.7m in roadway and alleyway. Reductions on properties typically to -0.1m, up to -0.4m on two properties.</li> <li>Reduced extent of very high flood hazard (H5) in Pelican Court.</li> </ul>
1% AEP	<ul style="list-style-type: none"> <li>Koonwarra Street – flood levels reduced by -0.04m to -0.4m at four properties adjacent to new floodway</li> <li>Minor localised increase of +0.02m on Captain Cook Bicentennial Drive villas</li> <li>Pelican Court – flood levels reduced by -0.2 to -0.7m in roadway and alleyway. Reductions on properties typically to -0.1m, up to -0.4m on two properties.</li> <li>Eliminated occurrence of high - very high flood hazard (H4-H5) at two dwellings in Koonwarra Street (one through acquisition of property).</li> <li>Reduced flood hazard on Ocean Drive from up to very high (H5) to low (H2). Note that road may be cut-off in other locations.</li> <li>Reduced extent of H3-H5 hazard in Pelican Court.</li> </ul>
1% AEP plus climate change	Similar performance to 1% AEP, in terms of reductions in flood levels in mitigated versus existing development case (with climate change). No reduction in performance due to sea level rise.

**Summary**

Options 4B and 4C appear to be effective at reducing flood levels and flood hazard (magnitude and extent) on Ocean Drive and Pelican Court including up to 20 dwellings.

Option 4A reduces the number of properties at risk to high hazard flooding and to flood damages due to the property purchase. However, the reductions in flood levels on adjacent properties is generally minor, with the more substantial reductions limited to one property. The likely high cost of this option (property purchase price plus demolition costs and earthworks) may make this option more challenging to justify purely from an economic standpoint. Notwithstanding, the removal of a household subject to high flood hazard should be considered in the subsequent multi-criteria evaluation of this option.









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**JACOBS****3.4.3 Tunis Street Overland Flow Path, Laurieton**

This overland flow path originates above Blackbutt Crescent and Peach Grove, where a natural gully overflows into a constructed diversion channel which skirts around properties on Blackbutt Crescent and conveys flows through an easement to Peach Grove at Tunis Street. There is an existing low capacity pipe (375mm diameter) draining the flows in the easement to the existing drainage system. Flows in excess of the overland flow path spill out onto properties on Peach Grove and contribute to flooding at the main complex at Laurieton retirement village, although flooding at this complex is exacerbated by partially-trapped drainage low points.

The main flow path splits around Gow Place and Norman Street/Tunis Street intersection, with the northern branch flowing through the Laurieton retirement village villas and exiting around Kew Road at Castle Street, and the southern branch draining to the sag point on Bold Street at Tunis Street, and then joining a separate flow path through commercial and residential properties on Bold Street to McLennan Street.

The main stormwater drainage line consists of up to 900mm diameter pipe in Tunis Street, draining to the river.

Peak overland flows in these flow paths are summarised in Table 3-2.

**Table 3-2 Peak flood flows at Tunis Street overland flow path**

Location	Event AEP		
	0.2EY	5% AEP	1% AEP
Upstream of Peach Grove	5.2	9.4	14.1
Tunis Street at Peach Grove	3.5	6.2	9.2
Gow Street branch	1.8	3.2	5.0
Tunis Street and natural gully at Lord Street	2.1	4.1	7.1

**3.4.3.1 Option 6A****Description of Options**

Option 6A was assessed individually:

- Option 6A – construct/raise a 160m long berm, up to 1m high above existing ground levels, between the natural flow path and the diversion channel above Blackbutt Crescent to reduce overflows into the diversion channel and hence reduce flows through the properties downstream. However, this option is expected to increase the flows being directed toward St Josephs School.

Refer to Figure 3-6 for illustration of Option 6A. The figure also describes Options 6B to 6E, refer to Section 3.4.3.2 for details.





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**Constraints assessment**

- Option 6A would need to be constructed within the national park area, likely requiring removal of a large number of trees for the proposed bund in addition to site access for construction plants.
- The option would be constructed on a natural berm which appears to be formed from flood-flow deposits of rock rubble and other material. Geotechnical conditions may be challenging.
- Periodic maintenance of the proposed bund would be required.

**Hydraulic performance**

Flood impact maps, showing the change in flood levels, are presented in Figure 3-7 to Figure 3-9 for the 0.2EY, 5% and 1% AEP events, respectively. The hydraulic performance of Option 6A is summarised in Table 3-3.

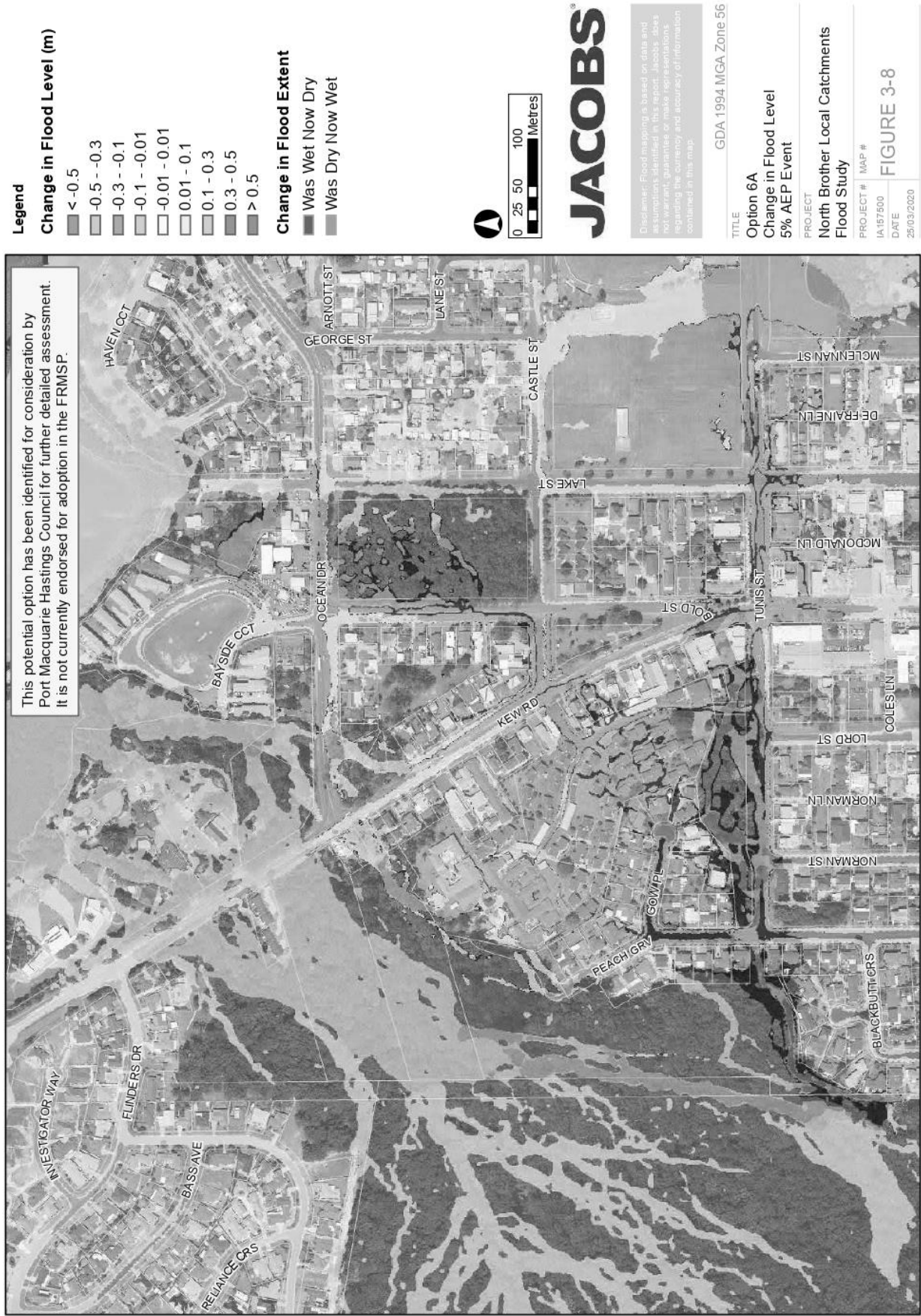
Table 3-3 Hydraulic performance of Options 6A

Event AEP	Changes in flood conditions
0.2EY	<ul style="list-style-type: none"> <li>• Reductions in flood levels of -0.05 to -0.1m on Gow Place properties and Laurieton retirement village villas.</li> <li>• Localised reductions of up to -0.4m on Peach Grove properties.</li> <li>• Minor reductions of up to -0.05m on residential and commercial properties on and to the east of Ocean Drive.</li> <li>• Widespread minor increases of +0.02m on St Josephs School grounds.</li> </ul>
5% AEP	<ul style="list-style-type: none"> <li>• Reductions in flood levels of -0.05 to -0.2m on Gow Place properties and Laurieton retirement village villas, some localised areas greater than -0.02m. Reductions of -0.03m at Laurieton retirement village main facility.</li> <li>• Localised reductions of up to -0.4m on Peach Grove properties. One property experiences minor increases of less than +0.02m.</li> <li>• Minor reductions of up to -0.06m on residential and commercial properties on and to the east of Ocean Drive.</li> <li>• Widespread increases of +0.03 to +0.07m on St Josephs School grounds.</li> </ul>
1% AEP	<ul style="list-style-type: none"> <li>• Reductions in flood levels of -0.05 to -0.2m on Gow Place properties and Laurieton retirement village villas, some localised areas greater than -0.02m. Reductions of -0.1m at Laurieton retirement village main facility.</li> <li>• Localised reductions of up to -0.4m on Peach Grove properties. One property experiences minor increases of less than +0.02m.</li> <li>• Minor reductions of up to -0.06m on residential and commercial properties on and to the east of Ocean Drive.</li> <li>• Widespread increases of +0.03 to +0.07m on St Josephs School grounds.</li> </ul>
1% AEP plus climate change	Similar performance to 1% AEP, in terms of reductions in flood levels in mitigated versus existing development case (with climate change). No reduction in performance due to sea level rise.

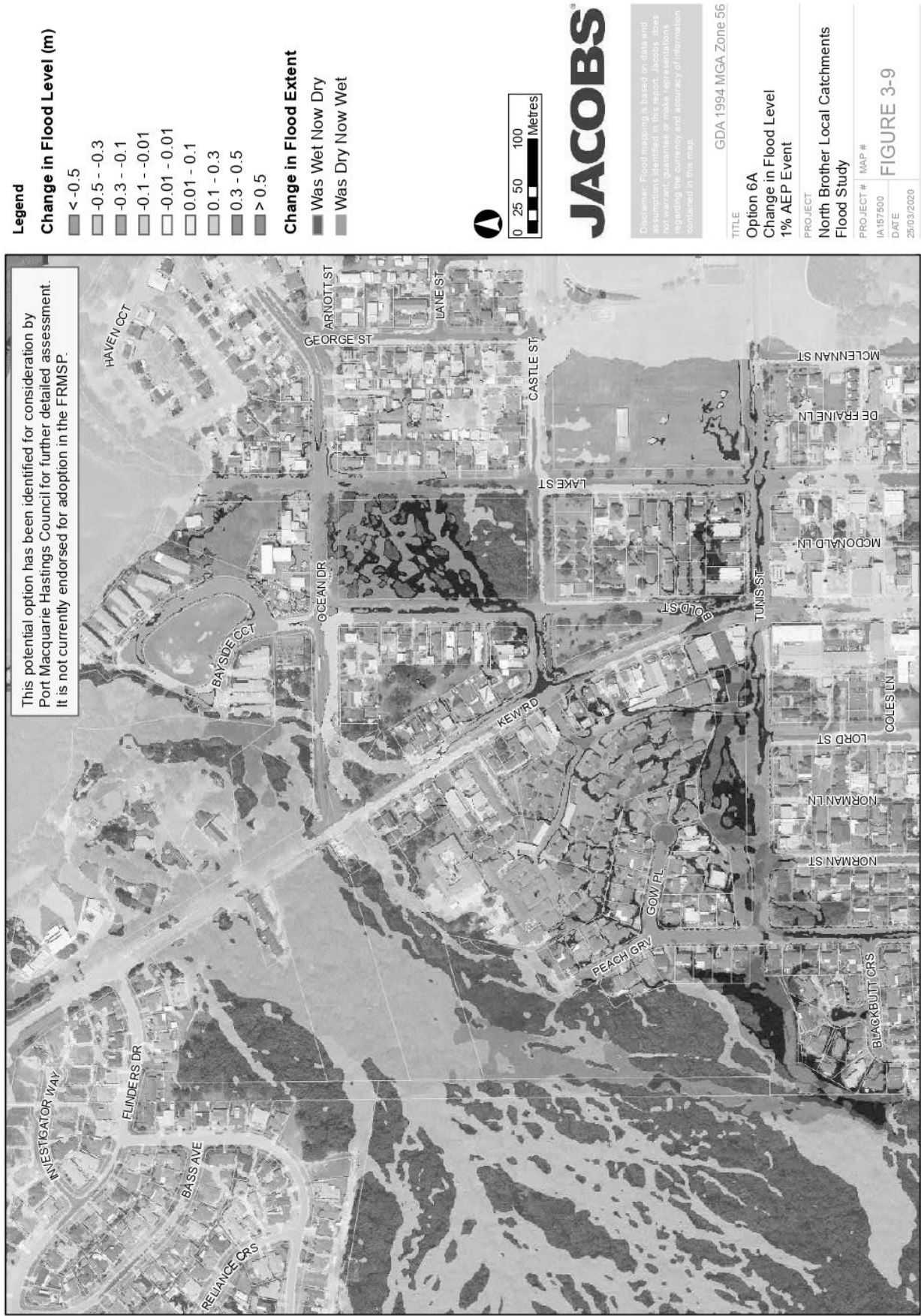
**Summary**

While there are minor to modest (up to -0.2m) reductions in flood levels on a large number of residential properties, these are offset by minor increases (+0.03 to +0.07m) on St Josephs School. An engineered berm in the national park is likely to result in vegetation impacts and hence requires consultation with NPWS.









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**3.4.3.2 Option 6B+6C+6D+6E****Description of Options**

The following options were assessed in combination (Options 6B+6C+6D+6E):

- Option 6B – increase the existing diversion channel capacity behind Blackbutt Crescent properties to reduce overflows onto properties, achieved by a combination of widening the existing channel to a base width of 6 – 10m (current base width 3 – 5m, top width 5 – 8m), raising the banks (e.g. block retaining wall along the property boundaries) and clearing of vegetation in the channel.
- Option 6C – construct new diversion channel 3m base width and 1m deep behind Peach Grove properties north of Tunis Street to direct flows south to the easement at the end of Tunis Street. This is outside of the national park. Form a bund on the lower side of the channel to increase capacity.
- Option 6D – install new trunk drainage line from the easement down Tunis Street to discharge to the river (approximately 740m). A new line consisting of 3 x 1.35m diameter pipes has been assessed, having a system capacity of approximately 5% AEP (about 9.5m<sup>3</sup>/s) and would reduce the 1% AEP overland flows through downstream properties by about 67%. A rock debris trap/basin would need to be constructed at the trunk drainage inlet to reduce the inlet blockage risk.
- Option 6E – upgrade drainage in Gow Place cul-de-sac to reduce overflows through properties and the retirement village villas. The existing drainage consists of a 450mm pipe which drains through an easement and discharges to open space between Gow Place and Tunis Street. There is an existing 3m lintel pit inlet plus smaller approximately 1m lintel inlets. Replacing one of these smaller inlets with a second 3m lintel is proposed. The existing 450mm pipe is proposed to be upgraded to 1.05m pipe and extended to discharge further down the gully to prevent backflow into the cul-de-sac. A 900mm pipe connection from the gully to the new trunk drainage line is proposed.

**Constraints assessment**

- Option 6B - Works would need to be undertaken on the edge of the national park land for a 100m section of the upgraded channel. The channel is assumed to be grassed and would need to be maintained to ensure limited vegetation growth.
- Option 6C - The channel is assumed to be grassed and would need to be maintained to ensure limited vegetation growth.
- Option 6D – There are numerous existing underground utilities (Telstra, Optus, NBN, power, stormwater) under Tunis Street and adjoining streets. Approximately 10 crossings of the utilities are identified and would need to be protected. It is assumed that the existing utilities are at sufficiently shallow depth to enable the new trunk drainage to be laid beneath. Trench construction methods are expected to be appropriate for most sections of the alignment. Deep trenching (up to 3m) with temporary shoring is likely to be required for sections of the alignment. Pipe jacking installation is expected to be required in the section between Lord Street and Lake Street (about 200m) to allow the road access to remain open (e.g. Coles loading dock). Design and construction will need to minimise traffic impacts including delivery truck access to Coles Supermarket loading dock. A rock debris trap/basin would need to be constructed at the trunk drainage inlet to reduce the inlet blockage risk.
- A structural assessment was undertaken for Option 6D due to the space constraints related to this option. Relevant findings are summarised below

The existing buildings are single storey and are likely to have shallow foundations. The construction zone of construction access & excavation for the proposed 3x 1.35m diameter pipes would need to extend approx. 3m to 5m from the edge of the new pipes to limit effect to the existing buildings. For open cut sections this construction zone would take up most of the two lanes of Tunis Street and footpaths i.e. 11m to 15m wide. Appropriate traffic diversions would be required.

Vibration due to construction activities can be a concern and a detailed structural inspection of the existing buildings should be conducted to assess if some areas of the existing buildings are more susceptible to such vibration. The construction techniques can then be chosen to limit effects in these vibration sensitive zones.

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The soils in this location are likely to be high acid-sulphate. Trial pitting and geotechnical investigation and interpretation should be carried out by to confirm risks and mitigation measures.

Overall, it is considered feasible to construct 3x 1.35m diameter stormwater flood control pipes underground along Tunis Street. The width and depth of excavation for the pipes would be considerable taking up most of Tunis Street and footpaths. Numerous controls would need to be put in place for environmental considerations and for the structural integrity of existing buildings during construction. Consideration could be given to the option for 2x larger pipes to limit the width of excavation and zone of construction activities. The other alternative would be for rectangular box culverts where open cut & cover excavation might be considered – this may offer some advantages in terms of width of excavation but would require a substantial structural cover slab to withstand the vehicular loadings.

### Hydraulic performance

Flood impact maps, showing the change in flood levels, are presented on Figure 3-10 to Figure 3-12 for the 0.2EY, 5% and 1% AEP events, respectively. The hydraulic performance of Option 6B+6C+6D+6E is summarised in Table 3-4.

**Table 3-4 Hydraulic performance of Options 6B+6C+6D+6E**

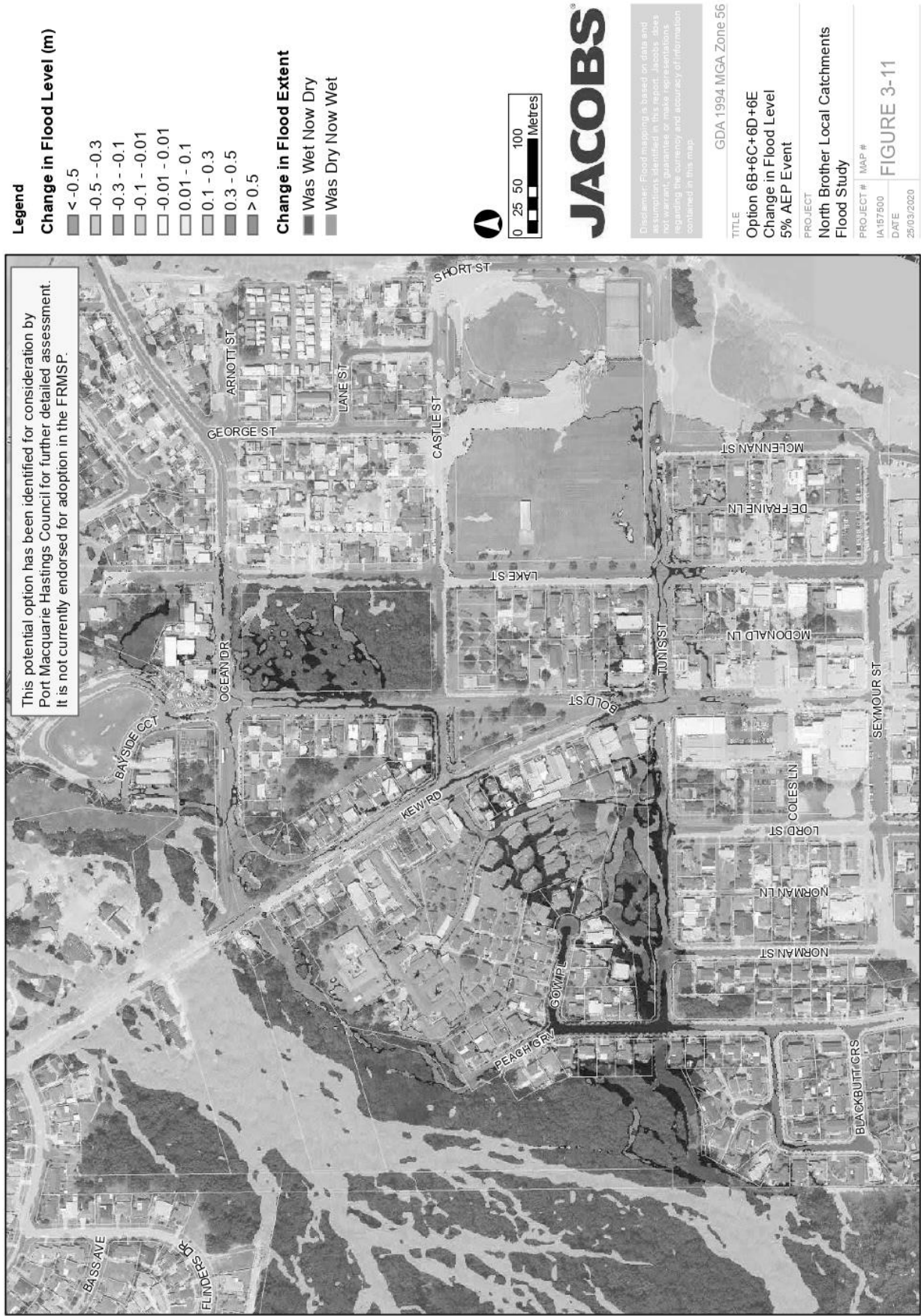
Event AEP	Changes in flood conditions
0.2EY	<ul style="list-style-type: none"> <li>• Reductions in flood levels of up to -0.3m on Gow Place properties and Laurieton retirement village villas, including substantial reductions in flood extent.</li> <li>• Reductions in flood levels of up to -0.4m on Peach Grove properties including reductions in flood extent.</li> <li>• Minor reductions of up to -0.05m on residential and commercial properties on and to the east of Kew Road/Bold Street.</li> </ul>
5% AEP	<ul style="list-style-type: none"> <li>• Reductions in flood levels of up to -0.3m on Gow Place properties and Laurieton retirement village villas, including substantial reductions in flood extent.</li> <li>• Reductions in flood levels of up to -0.5m on Peach Grove properties including reductions in flood extent.</li> <li>• Reductions of -0.05 to -0.1m on residential and commercial properties on and to the east of Ocean Drive, with some localised reductions of -0.2m.</li> <li>• Removal of areas of very high hazard (up to H5) in road and on properties between Peach Grove and to the east of Kew Road/Bold Street.</li> </ul>
1% AEP	<ul style="list-style-type: none"> <li>• Reductions in flood levels of up to -0.4m on Gow Place properties and Laurieton retirement village villas, including some reductions in flood extent.</li> <li>• Reductions in flood levels of up to -0.5m on Peach Grove and Blackbutt Crescent properties including reductions in flood extent. Some localised reductions of up to -0.7m.</li> <li>• Reductions of -0.1 to -0.2m on residential and commercial properties on and to the east of Ocean Drive.</li> <li>• Removal of areas of very high hazard (up to H5) in road and on properties between Blackbutt Crescent/Peach Grove and to the east of Kew Road/Bold Street.</li> </ul>
1% AEP plus climate change	Generally similar performance to 1% AEP, in terms of reductions in flood levels in mitigated versus existing development case (with climate change). Slight reduction in performance due to sea level rise in low elevation areas below 3m AHD, where the reductions fall from -0.07m in the current climate case to -0.01m in the climate change scenario.

**Draft Options Assessment Report****JACOBS®****Summary on performance**

The combined options 6B+6C+6D+6E provide substantial reductions in flood levels, extents and hazard as a result of significant drainage capacity upgrades. There are minor reductions in flood levels in low-lying areas as a result of sea level rise in the climate change scenario.









## Draft Options Assessment Report

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**3.4.4 Lake Street at Seymour Street, Laurieton**

The corner property at this location receives overland flows and trunk drainage flows from the Quarry Way flow path. There is an open channel and flow path through this property, where the dwelling is surrounded by high hazard flooding to depths of over 1m in the 1% AEP event. The floodwaters pond behind the raised road crest in Lake Street before overflowing over the road and around the southern side of the Laurieton United Services Club. It is identified as being affected by above-floor flooding.

The drainage at this location includes 2x 1.5m x 0.75m box culverts at the inlet at the downstream end of the channel through this property, turning into 2x 1200mm pipes crossing Lake Street, which then increase to 2x 1500mm pipes on the low side of the road and discharging to a channel on the southern side of the Services Club.

Flood mitigation works proposed for the Quarry Way flow path as described in Section **Error! Reference source not found.** would mitigate flooding at this location. Further works could be provided for additional mitigation.

**3.4.4.1 Option 8B****Description of Options**

Option 8B was selected for assessment. The culvert inlet is currently unscreened and has been modelled as 50% blocked due to likely debris blockage. A large-faced debris screen or other debris controls are proposed to retrofit the existing culvert inlet to reduce the risk of blockage. The debris screen is assumed to be effective and has been represented with a reduced blockage factor of 10%.

Refer to **Error! Reference source not found.** for illustration.

**Constraints assessment**

No major constraints identified for this option. Inspection and maintenance after significant storm events are required to increase reliability.

**Hydraulic performance**

Flood impact maps, showing the change in flood levels, are presented on Figure 3-14 to Figure 3-16 for the 0.2EY, 5% and 1% AEP events, respectively. The hydraulic performance of Option 8B is summarised in Table 3-5.

## Draft Options Assessment Report

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Table 3-5 Hydraulic performance of Options 8B

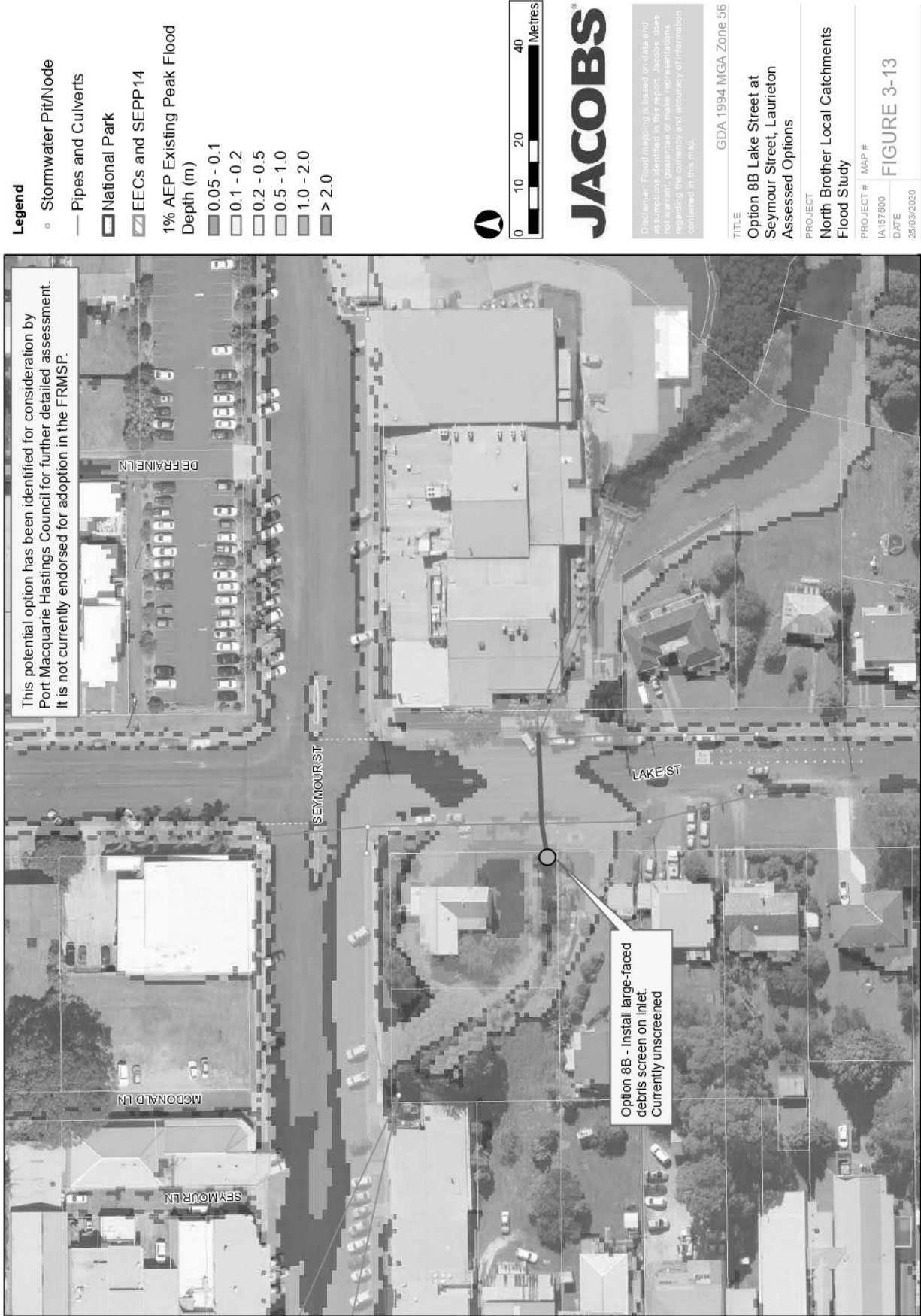
Event AEP	Changes in flood conditions
0.2EY	<ul style="list-style-type: none"> <li>Minor reductions of -0.03m on private property dwelling and Laurieton United Services Club side entrance.</li> <li>Reductions of up to -0.1m on Lake Street</li> </ul>
5% AEP	<ul style="list-style-type: none"> <li>Reductions of -0.08m on private property dwelling and -0.13m at Laurieton United Services Club side entrance.</li> <li>Reductions of up to -0.1m on Lake Street</li> <li>Minor increases of less than -0.02m on some private properties and parts of club property due to reduced drainage capacity of local stormwater drainage branches.</li> </ul>
1% AEP	<ul style="list-style-type: none"> <li>Reductions of -0.1m on private property dwelling and Laurieton United Services Club side entrance.</li> <li>Reductions of up to -0.1m on Lake Street.</li> <li>Minor localised increases of less than -0.02m on some private properties due to reduced drainage capacity of local stormwater drainage branches.</li> </ul>
1% AEP plus climate change	Similar performance to 1% AEP, in terms of reductions in flood levels in mitigated versus existing development case (with climate change). No reduction in performance due to sea level rise.

**Summary on performance**

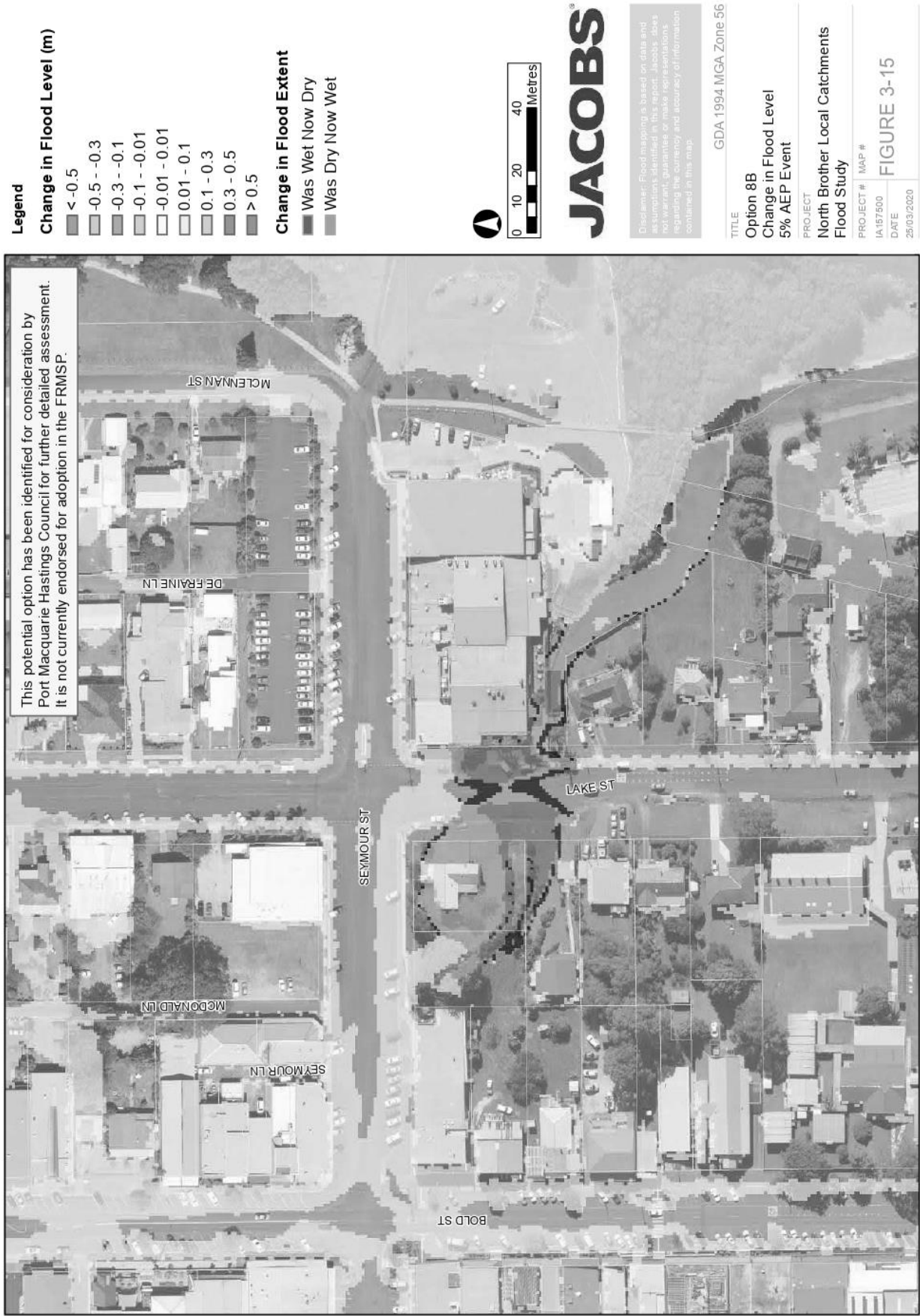
Option 8B provides minor to modest improvements (up to -0.1m) in flooding conditions with benefits confined to one residential property. The spatial extent of the reductions in flood levels at the Services Club are limited to the western side entrance on Lake Street, while there are no changes in flood levels along the main northern side of the club building. The effect of the proposed inlet debris screen is constrained by the limited capacity of the existing culverts crossing the road.

While the debris screen proposed as Option 8B provides at best modest improvements to flooding conditions to property and the road, it could be considered by Council as a low-cost measure to reduce the risk of severe blockage of the culvert inlet at this and other locations in the study area.













## Draft Options Assessment Report

**JACOBS****3.4.5 St Joseph's School, Laurieton**

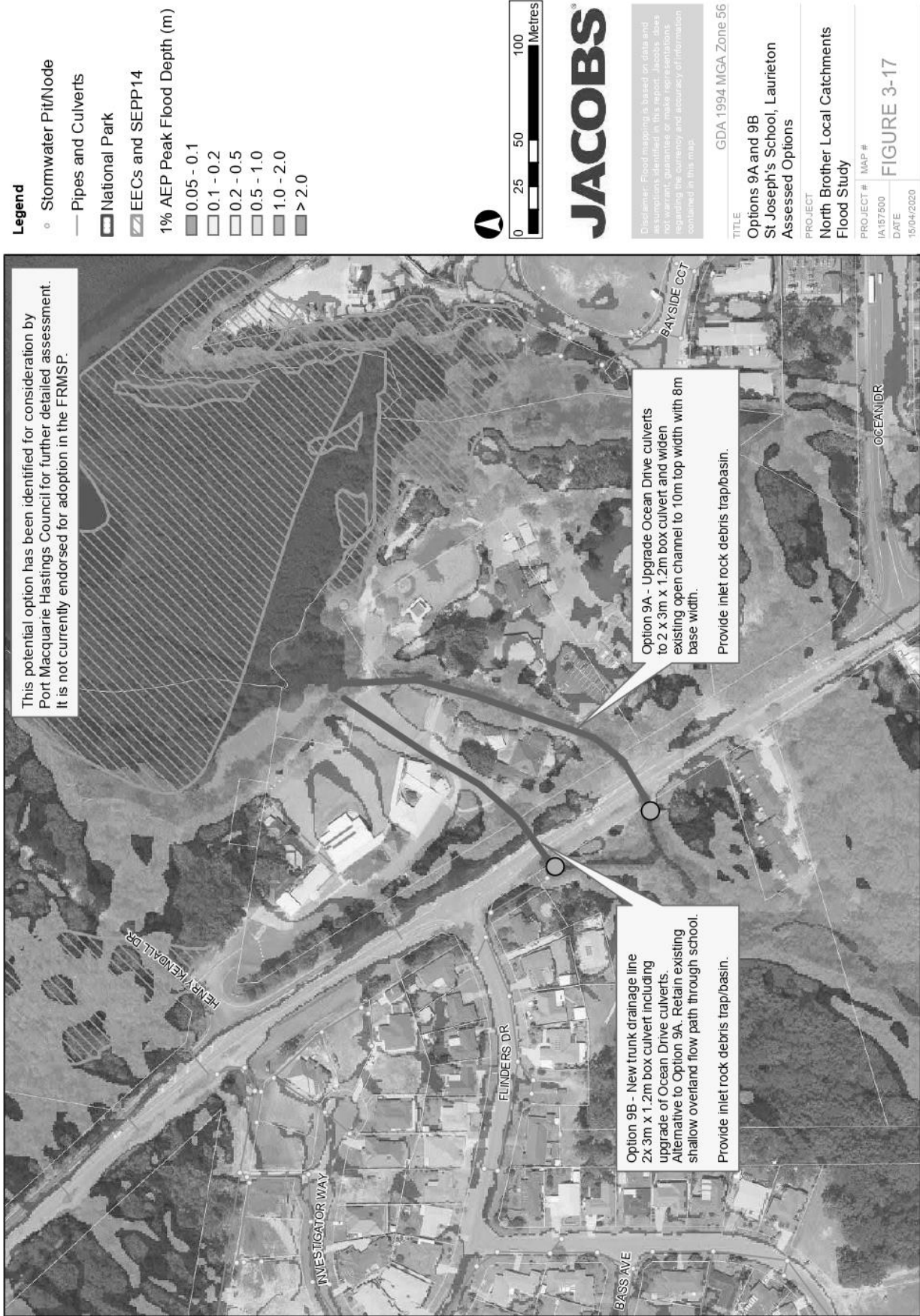
Flooding at the school results from natural flow paths being directed down to Ocean Drive to three culvert crossings. The culverts discharge on the low side of the road and along with road overflows, overland flooding passes through the school in three main flow paths, including one through the main cluster of school administration and classroom buildings. Council's stormwater drainage spatial layer does not show an existing underground trunk drainage conveying flows through the school grounds, although from review of aerial photography there appears to be drainage pits connected to a privately-owned system. Flows exceed 0.5m deep in the 1% AEP event with areas of very high (H5) flood hazard.

Peak overland flows in these flow paths are summarised in Table 3-6.

**Table 3-6 Peak flood flows in overland flow paths at St Joseph's School**

Location	Event AEP		
	0.2EY	5% AEP	1% AEP
Northern flow path (admin bldg.)	4	5.5	8
Middle flow path	5.5	6.5	8.5
Southern flow path	8.5	10	12.5
Total	17.5	22	29

Refer to Figure 3-17 for illustration of options.



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**3.4.5.1 Option 9A****Description of Option**

Option 9A was assessed, involving widening and reconstruction of a landscaped open channel in the southern flow path. The southern flow path and road cross culvert is the main flow path and there is a formalised open channel provided for this flow path. The proposed channel would have an 8m base width (about 10m top width) and a depth of 1 – 1.5m. The existing channel has an approximately 6 – 8m top width with variable base width.

Box culverts were originally proposed for this site to fit under the existing channel, however, elevations are too low to fit such a culvert option while maintaining a surface flow path.

A rock debris trap/basin would need to be constructed at the Ocean Drive culvert inlet to reduce the inlet blockage risk.

**Constraints assessment**

There are a number of existing structures and features including buildings, footbridges, car parks and paths which would be potentially affected or considered in the design of Option 9A. The minimum clearance between buildings or other existing structures is about 19m.

The existing buildings are single storey and are likely to have shallow foundations. Additionally, one of the buildings is an existing old church building believed to be around 120 years old. The construction access & excavation zone for the proposed channel widening would need to extend approximately 3 – 5m from the edge of the channel to limit effect to the existing buildings.

Vibration due to construction activities can be a concern and a detailed structural inspection of the existing buildings should be conducted to assess if some areas of the existing buildings are more susceptible to such vibration. The final alignment of the proposed culvert can then be chosen to avoid these vibration sensitive zones.

The sediments adjacent to the school may be mildly contaminated. The soils in this location are likely to be high acid-sulphate. Trial pitting and geotechnical investigation and interpretation should be undertaken to confirm risks and mitigation measures.

There will be numerous building stormwater drains discharging into the existing open channels in the school grounds and these will need to be surveyed and coordinated with the design of the modified open channel.

The existing channel and its banks appear to be landscaped with well-established gardens, which are likely to be of high value to the school and adjacent church. The option needs to include landscaping to re-establish the gardens.

There are existing utilities along Ocean Drive (Optus, Telstra, NBN, power) which cross the existing culverts under the road. It is assumed that sufficient clearance from the utilities can be maintained if the upgraded culverts are installed at a similar elevation.

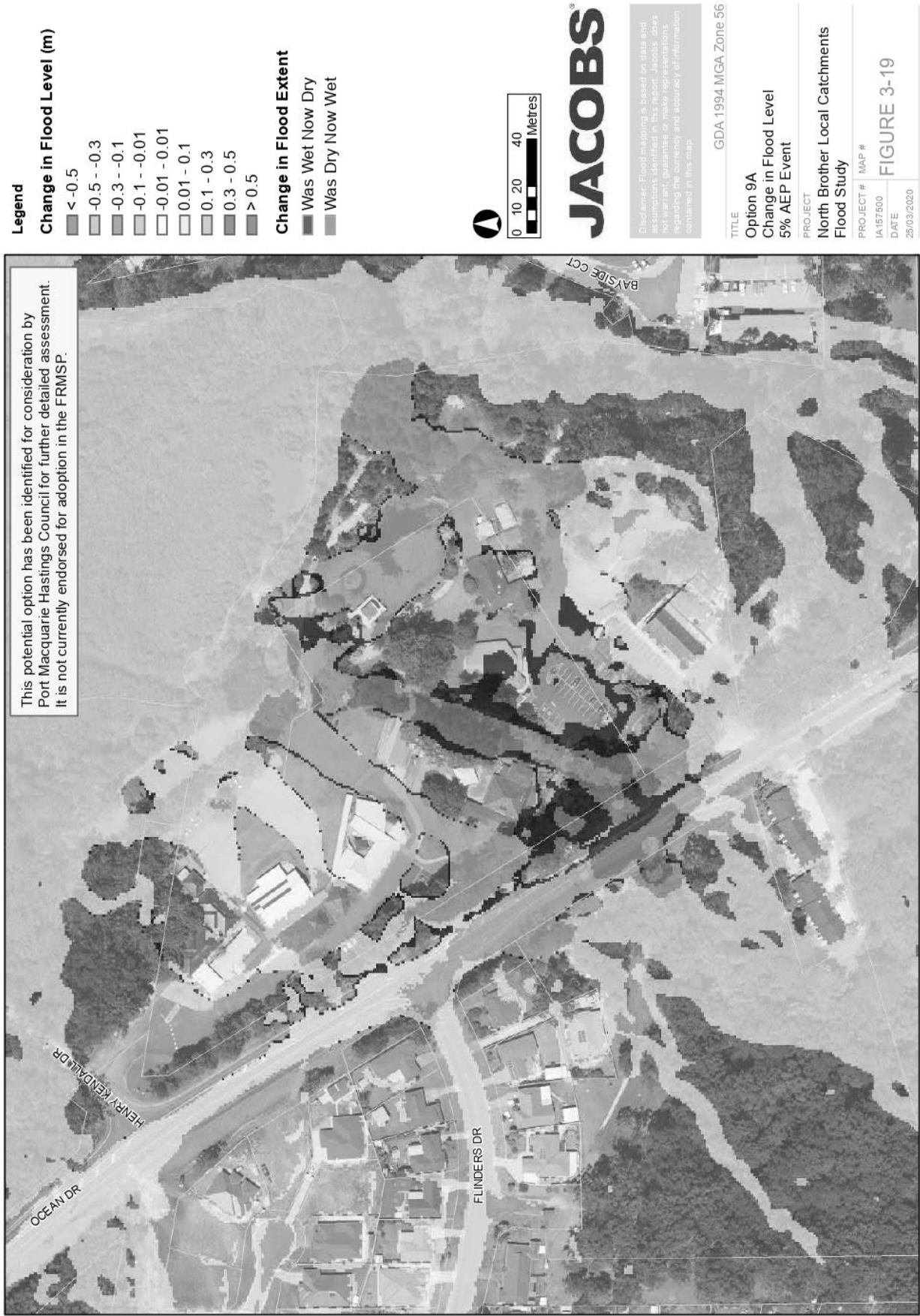
The channel through the mangrove/wetland areas would need to be widened downstream to Stingray Creek to accommodate increased flood flows and this would have localised impacts on sensitive habitats (EECs/SEPP 14 wetlands). Additionally, the school grounds have dense tree coverage which will inhibit construction access. Existing trees will need to be protected during the construction works. It is anticipated that a REF will be required and would need a flora and fauna study.

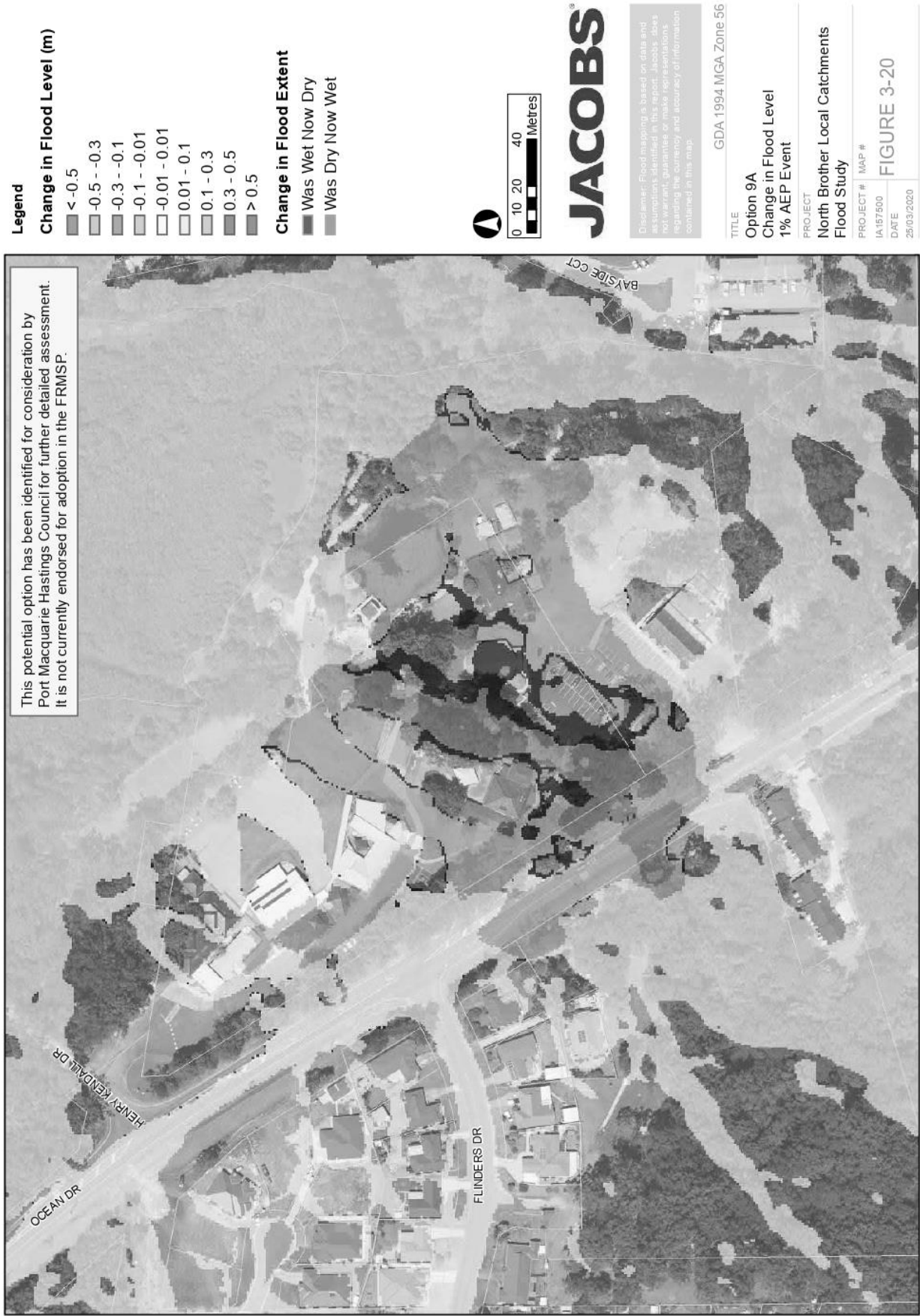
**Hydraulic performance**

Flood impact maps, showing the change in flood levels, are presented on Figure 3-18 to Figure 3-20 for the 0.2EY, 5% and 1% AEP events, respectively. The hydraulic performance of Option 9A is summarised in Table 3-7.









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Table 3-7 Hydraulic performance of Options 9A

Event AEP	Changes in flood conditions
0.2EY	<ul style="list-style-type: none"> <li>Maximum decreases of -0.4 to -0.5m in the channel (southern flow path) upstream and downstream of Ocean Drive culvert crossing, with reductions in flood extent</li> <li>Decrease of -0.02 to -0.06m at and between school buildings, minimal reduction in flood extent</li> <li>Some reduction in high-very high hazard extent in southern and middle flow paths including on walkways, minimal reduction in flood hazard around school office (only localised high hazard in existing case and mostly low hazard)</li> </ul>
5% AEP	<ul style="list-style-type: none"> <li>Maximum decreases of -0.3 to -0.4m in the channel (southern flow path) upstream and downstream of Ocean Drive culvert crossing, with reductions in flood extent</li> <li>Decrease of -0.02 to -0.08m at and between school buildings, minimal reduction in flood extent</li> <li>Some reduction in high-very high hazard extent in southern and middle flow paths including on walkways, minimal reduction in flood hazard around school office (only localised high hazard in existing case and mostly low hazard)</li> </ul>
1% AEP	<ul style="list-style-type: none"> <li>Maximum decreases of -0.3 to -0.4m in the channel (southern flow path) upstream and downstream of Ocean Drive culvert crossing, with reductions in flood extent</li> <li>Decrease of -0.02 to -0.08m at and between school buildings, minimal reduction in flood extent</li> <li>Some reduction in high-very high hazard extent in southern and middle flow paths including on walkways, minimal reduction in flood hazard around school office (only localised high hazard in existing case and mostly low hazard)</li> </ul>
1% AEP plus climate change	Similar performance to 1% AEP, in terms of reductions in flood levels in mitigated versus existing development case (with climate change). No reduction in performance due to sea level rise.



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**3.4.5.2 Option 9B****Description of Option**

An alternative option to 9A is option 9B, consisting of installation of box culverts beneath the middle flow path. There is an existing shallow overland flow path through this alignment and it was assumed that this could be retained. The culverts would need to fit between existing school buildings. A rock debris trap/basin would need to be constructed at the Ocean Drive culvert inlet to reduce the inlet blockage risk.

**Constraints assessment**

The culverts would need to fit between two existing buildings and require reconstruction of a vehicle access driveway to one of the buildings. There is 16m clearance between the buildings. The existing buildings are single storey and are likely to have shallow foundations. The construction access and excavation zone for the proposed culverts would need to extend approximately 3 – 5m from the edge of the proposed culverts to limit effect to the existing buildings.

Vibration due to construction activities can be a concern and a detailed structural inspection of the existing buildings should be conducted to assess if some areas of the existing buildings are more susceptible to such vibration. The final alignment of the proposed culvert can then be chosen to avoid these vibration sensitive zones. Overall, the excavation for the proposed 1.2m deep box culverts can be located at least 5m from the existing structures which should, subject to investigations, not interfere with the existing building foundations.

The sediments adjacent to the school may be mildly contaminated. The soils in this location are likely to be high acid-sulphate. Trial pitting and geotechnical investigation and interpretation should be carried out by to confirm risks and mitigation measures.

There will be numerous building stormwater drains discharging into the existing open channels in the school grounds and these will need to be surveyed and coordinated with the design of the modified open channel.

There appears to be an existing pit and pipe drainage line beneath the middle flow path, which may need to be relocated for installation of the box culverts. This line should be maintained for local drainage.

There are existing utilities along Ocean Drive (Optus, Telstra, NBN, power) which cross the existing culverts under the road. It is assumed that sufficient clearance from the utilities can be maintained if the upgraded culverts are installed at a similar elevation.

The channel through the mangrove/wetland areas would need to be widened downstream to Stingray Creek to accommodate increased flood flows and this would have localised impacts on sensitive habitats (EECs/SEPP 14 wetlands). Appropriate rock scour protection would be required at the culvert outlet. It is anticipated that that an REF will be required and would need a flora and fauna study.

**Hydraulic performance**

Flood impact maps, showing the change in flood levels, are presented on Figure 3-21 to Figure 3-23 for the 0.2EY, 5% and 1% AEP events, respectively. The hydraulic performance of Option 9B is summarised in Table 3-8.

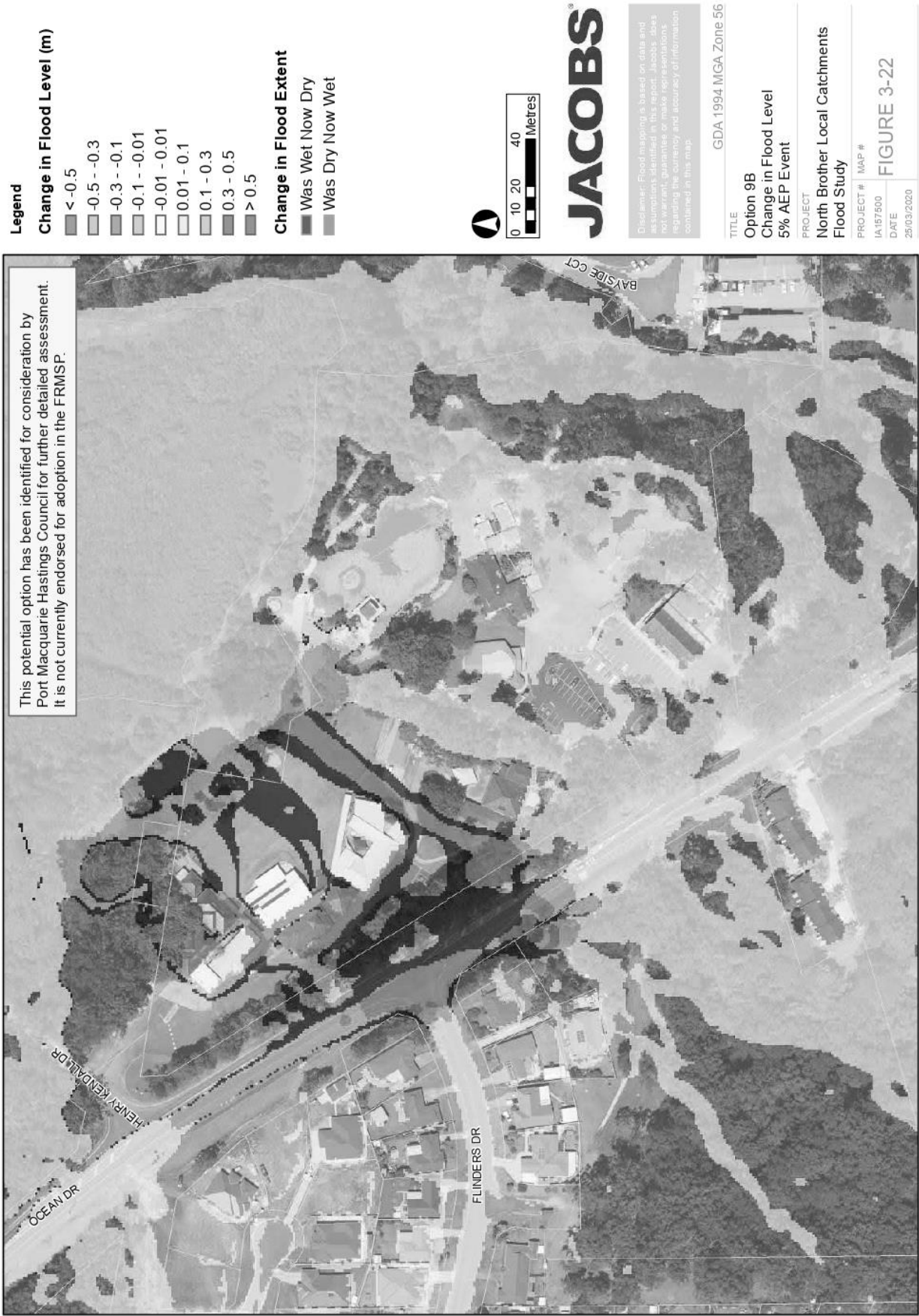
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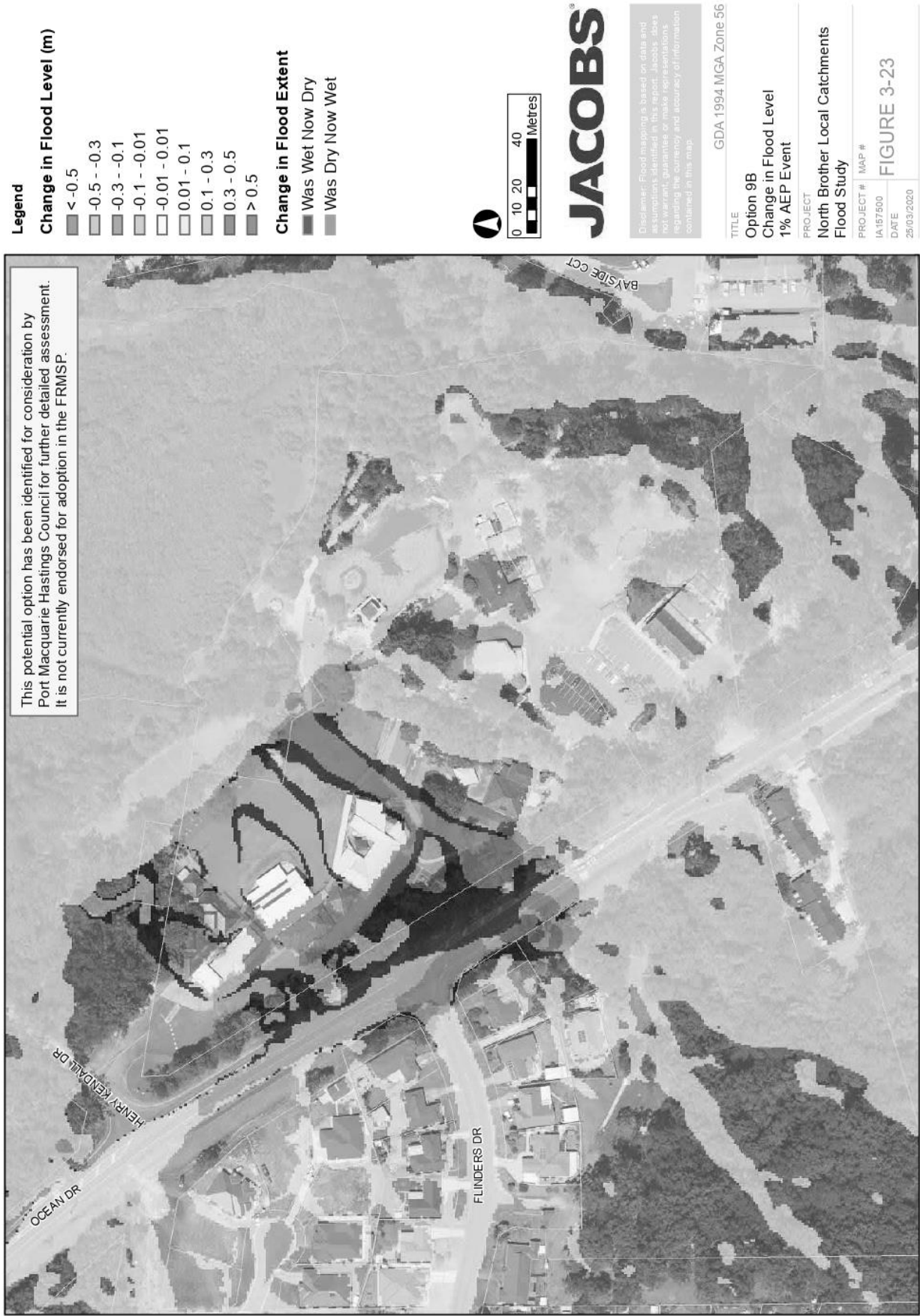


Table 3-8 Hydraulic performance of Options 9B

Event AEP	Changes in flood conditions
0.2EY	<ul style="list-style-type: none"> <li>Maximum decreases of -0.2 to -0.3m in the middle flow path and adjacent buildings through the school, with substantial reductions in flood extent</li> <li>Decrease of up -0.2m around school office and adjacent buildings, with substantial reduction in flood extents</li> <li>Reductions in flood depths on Ocean Drive around Flinders Drive of up to -0.2m. reductions in flood levels/depths around Ocean Drive culvert crossing (middle flow path) of up to -0.3m with substantial reduction in flood extents</li> <li>Reductions from high-very high hazard (up to H5) in the middle flow path in the existing case including on walkways, down to all low hazard (H1) in mitigation case</li> <li>Reductions from localised high hazard (up to H4) around the school office in the existing case including on walkways, down to low hazard (H1, some localised H2) in mitigation case.</li> </ul>
5% AEP	<ul style="list-style-type: none"> <li>Maximum decreases of -0.2 to -0.3m in the middle flow path and adjacent buildings through the school, with substantial reductions in flood extent</li> <li>Decrease of up -0.2m around school office and adjacent buildings, with substantial reduction in flood extents</li> <li>Reductions in flood depths of -0.1 to -0.2m. on Ocean Drive around Flinders Drive and reductions of up to -0.3m at culvert crossing</li> <li>Reductions from high-very high hazard (up to H5) in the middle flow path in the existing case including on walkways, down to all low hazard (H1) in mitigation case</li> <li>Reductions from localised high hazard (up to H4) around the school office in the existing case including on walkways, down to low hazard (H1, some localised H2) in mitigation case.</li> </ul>
1% AEP	<ul style="list-style-type: none"> <li>Maximum decreases of -0.2 to -0.3m in the middle flow path and adjacent buildings through the school, with substantial reductions in flood extent</li> <li>Decrease of up -0.2m around school office and adjacent buildings, with some reduction in flood extents</li> <li>Reductions in flood depths on Ocean Drive around Flinders Drive of -0.1 to -0.2m. reductions in flood levels/depths around Ocean Drive culvert crossing (middle flow path) of up to -0.3m with substantial reduction in flood extents</li> <li>Reductions from very high hazard (H5) in the middle flow path in the existing case including on walkways, down to mostly low hazard (H1-H2) in mitigation case</li> <li>Reductions from high-very high hazard (H4-H5) around the school office in the existing case including on walkways, down to mostly low hazard (H1-H2, some localised H3-H4) in mitigation case.</li> </ul>
1% AEP plus climate change	Similar performance to the 1% AEP event, in terms of reductions in flood levels in mitigated versus existing development case (with climate change). No reduction in performance due to sea level rise.







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### 3.5 Summary of Options

The assessed options are summarised in Table 3-9. A description, constraints/impacts, hydraulic performance, improvements to property flooding and estimated savings in flood damages are provided. The savings in flood damages are a comparison of the net present value of average annual flood damages between the mitigated and existing cases, based on a 0.5m protection level, over an assumed 50 year life of the option and assuming a 7% discount rate.

For the flood damage assessment, the PMF was assumed not be changed by the mitigation options given the magnitude of the flood event. The AAD is not sensitive to this assessment given the rarity of the PMF event.

The flood damages also only consider overland flooding and do not account for damages due to peak mainstream flooding.

Further detailed assessment will include cost estimation and benefit-cost assessment and multi-criteria assessment, incorporating refinements to the options where appropriate.

Table 3.9 Summary of assessed flood modification options performance

Option	Location	Description	Constraints and Impacts Plus other comments	Hydraulic Benefits (1% AEP event unless otherwise noted) And Negative Impacts if Any	Savings in Flood Damages (50 years life, 7% Discount Factor)	Cost of Works	Benefit Cost Ratio
4A+4B +4C	Koonwarra Street to Pelican Court, West Haven	<ul style="list-style-type: none"> <li>Voluntary acquisition of 53 Koonwarra Street. Regrade the site to form a flow path</li> <li>New additional trunk drainage line 2x 1200mm diameter pipes, intercepting flows at downstream end of channel on Captain Cook Bicentennial Drive villas, cross Ocean Drive and run under The Gateway. Inlet debris trap basin required.</li> <li>Voluntary acquisition of 7 Pelican Court. Regrade the site to form a flow path</li> </ul>	<ul style="list-style-type: none"> <li>High property prices (~\$500K each) plus demolition and disposal costs</li> <li>Existing underground utilities in Ocean Drive and The Gateway (Telstra, Optus, NBN, power, stormwater).</li> <li>Substantial number of trees in western verge of The Gateway, require removal if running new trunk drainage in the verge.</li> <li>Limited space to widen existing channel running through Captain Cook Bicentennial Drive villas and then turning at Ocean Drive. Presence of existing driveway crossing over channel into Ocean Drive property.</li> <li>Minimal space for rock debris trap at new trunk drainage inlet structure. Requires more detailed site assessment for potential rock debris loads.</li> </ul>	<ul style="list-style-type: none"> <li>Koonwarra Street – flood levels reduced by -0.04m to -0.4m at four properties</li> <li>Minor localised increase of +0.02m on Captain Cook Bicentennial Drive villas</li> <li>Pelican Court – flood levels reduced by -0.2 to -0.7m in roadway and alleyway. Reductions on properties typically to -0.1m, up to -0.4m on two properties.</li> <li>Eliminated occurrence of H4-H5 flood hazard at two dwellings in Koonwarra Street (one through acquisition of property).</li> <li>Reduced flood hazard on Ocean Drive from up to H5 to H2. Note that road may be cut-off in other locations.</li> <li>Reduced extent of H3-H5 hazard in Pelican Court.</li> <li>0.2EY event: Reduced flood hazard from H5 to H1-H2 in Pelican Court, some H3 in alleyway</li> <li>Number of above-floor flooded properties reduced by 6 in the 1% AEP event.</li> </ul>	\$3,876,000	TBC	TBC
				Options 4B and 4C reduce flood levels and hazard on Ocean Drive and Pelican Court including up to 20 dwellings.  Option 4A reduces the number of properties at risk due to the property purchase. However, the reductions in flood levels on adjacent properties is generally minor. The substantial reductions are limited to one property. The likely high cost of this option may make this option more challenging to justify purely from an economic standpoint. Notwithstanding, the removal of a household subject to high flood hazard should be considered in the subsequent multi-criteria evaluation of this option			



Option	Location	Description	Constraints and Impacts Plus other comments	Hydraulic Benefits (1% AEP event unless otherwise noted) And Negative Impacts if any	Savings in Flood Damages (50 years life, 7% Discount Factor, with 0.5m protection level)	Cost of Works	Benefit Cost Ratio
6A	Tunis Street Overland Flow Path, Laurieton	Construct/raise berm between the natural flow path and the diversion channel above Blackbutt Crescent to reduce overflows into the diversion channel	<ul style="list-style-type: none"> <li>Works fully within national park area, likely requiring removal of a large number of trees for the proposed bund in addition to site access for construction plants.</li> <li>The option will be constructed on a natural berm which appears to be formed from flood-flow deposits of rock rubble and other material. Geotechnical conditions may be challenging.</li> <li>Periodic maintenance of the proposed bund would be required.</li> </ul>	<ul style="list-style-type: none"> <li>Reductions in flood levels of -0.05 to -0.2m on Gow Place properties and Laurieton retirement village villas, some localised areas greater than -0.02m. Reductions of -0.1m at Laurieton retirement village main facility.</li> <li>Localised reductions of up to -0.4m on Peach Grove properties. One property experiences minor increases of less than +0.02m.</li> <li>Minor reductions of up to -0.08m on residential and commercial properties on and to the east of Ocean Drive.</li> <li>Widespread increases of +0.03 to +0.07m on St Josephs School grounds</li> <li>Number of above-floor flooded properties reduced by 19 (residential) in the 1% AEP event.</li> </ul>	\$2,265,000 net	TBC	TBC
6B+6C +6D+ 6E	Tunis Street Overland Flow Path, Laurieton	<ul style="list-style-type: none"> <li>Increase existing diversion channel capacity behind Blackbutt Crescent properties. Widen and remove/maintain vegetation</li> <li>Construct new diversion channel behind Peach Grove properties north of Tunis Street</li> <li>Install new 3 x 1.35m trunk drainage line from the easement down Tunis Street to discharge to the river (approximately 740m). Inlet debris trap basin required.</li> <li>Upgrade and extend drainage in Gow Place to 1.05m dia pipe. Upgrade pit inlets. Install new 900mm pipe connection from the gully to the new trunk drainage line.</li> </ul>	<ul style="list-style-type: none"> <li>Works would need to be undertaken in part in the national park.</li> <li>Upgraded diversion channels are to be grassed and require maintenance to limit vegetation growth.</li> <li>Close proximity to existing buildings likely to have shallow foundations. Wide construction footprint for trenching likely to take up most of road corridor.</li> <li>Appropriate traffic diversions would be required.</li> <li>Vibration due to construction activities may be a concern.</li> <li>Acid sulphate soils in this location.</li> <li>Numerous existing underground utilities (Telstra, Optus, NBN, power, stormwater) under Tunis Street and adjoining streets. Approximately 10 crossings of the utilities are identified and would need to be protected. It is assumed that the existing utilities are at sufficiently shallow depth to enable the new trunk drainage to be laid beneath.</li> <li>Design and construction will need to minimise traffic impacts including delivery truck access to Coles Supermarket loading dock. Pipe jacking likely required for this section</li> <li>A rock debris trap/basin would need to be constructed at the trunk drainage inlet to reduce the inlet blockage risk.</li> </ul>	<ul style="list-style-type: none"> <li>Reductions in flood levels of up to -0.4m on Gow Place properties and Laurieton retirement village villas, including some reductions in flood extent.</li> <li>Reductions in flood levels of up to -0.5m on Peach Grove and Blackbutt Crescent properties including reductions in flood extent. Some localised reductions of up to -0.7m.</li> <li>Reductions of -0.1 to -0.2m on residential and commercial properties on and to the east of Ocean Drive.</li> <li>Removal of areas of very high hazard (up to H5) in road and on properties between Blackbutt Crescent/Peach Grove and to the east of Kew Road/Bold Street.</li> <li>Climate change scenario: the option generally has similar performance to 1% AEP, in terms of reductions in flood levels. Slight reduction in performance due to sea level rise in low elevation areas below 3m AHD, where the reductions fall from -0.07m in the current climate case to -0.01m in the climate change scenario.</li> <li>Number of above-floor flooded properties reduced by 36 in the 1% AEP event (34 residential, 2 commercial).</li> </ul>	\$15,680,000	TBC	TBC



Option	Location	Description	Constraints and Impacts Plus other comments	Hydraulic Benefits (1% AEP event unless otherwise noted) And Negative Impacts if Any	Savings in Flood Damages (50 years life, 7% Discount Factor, with 0.5m protection level)	Cost of Works	Benefit Cost Ratio
8B	Lake Street at Seymour Street, Laurelton	Install debris control structure at existing or proposed upgraded culvert inlet.	<ul style="list-style-type: none"> <li>No significant constraints</li> <li>Inspection and maintenance after storm events required to increase reliability</li> </ul>	<ul style="list-style-type: none"> <li>Reductions of -0.1m on private property dwelling and Laurelton United Services Club side entrance.</li> <li>Reductions of up to -0.1m on Lake Street.</li> <li>Minor localised increases of less than -0.02m on some private properties due to reduced drainage capacity of local stormwater drainage branches.</li> </ul>	\$8,000	TBC	TBC
9A	St Joseph's School, Laurelton	Upgrade Ocean Drive culvert crossing. Inlet rock debris trap basin required.  Widen existing open channel in southern flow path to 10m top width (8m base width)	<ul style="list-style-type: none"> <li>Minimum clearance between buildings and other features is 19m. Existing buildings are single storey and are likely to have shallow foundations. One building believed to be around 120 years old. Vibration due to construction activities can be a concern and a detailed structural inspection of the existing buildings should be conducted to assess if some areas of the existing buildings are more susceptible to such vibration. The final alignment of the proposed culvert can then be chosen to avoid these vibration sensitive zones.</li> <li>Sediments may be mildly contaminated and high acid-sulphate.</li> <li>Existing drainage needs to be surveyed and coordinated with the design of the modified open channel.</li> <li>The existing channel and its banks appear to be landscaped with well-established gardens, which are likely to be of high value to the school and adjacent church. The option needs to include landscaping to re-establish the gardens.</li> <li>Existing utilities along Ocean Drive (Optus, Telstra, NBN, power).</li> <li>Sensitive habitats downstream. Possible localised impacts from expanded channel draining to Slingray Creek. Review of Environmental Factors likely required.</li> </ul>	<ul style="list-style-type: none"> <li>Maximum decreases of -0.3 to -0.4m (up to -0.5m in 0.2EY event) in the channel (southern flow path) upstream and downstream of Ocean Drive culvert crossing, with reductions in flood extent</li> <li>Decrease of -0.02 to -0.08m at and between school buildings, minimal reduction in flood extent</li> <li>Some reduction in high-very high hazard extent in southern and middle flow paths including on walkways, minimal reduction in flood hazard around school office (only localised high hazard in existing case and mostly low hazard)</li> </ul>	\$145,000	TBC	TBC

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Option	Location	Description	Constraints and Impacts Plus other comments	Hydraulic Benefits (1% AEP event unless otherwise noted) And Negative Impacts if any	Savings in Flood Damages (50 years life, 7% Discount Factor, with 0.5m protection level)	Cost of Works	Benefit Cost Ratio
9B	St Joseph's School, Laureton	Install 2x 3m x 1.2m box culvert in the middle flow path, including upgrade of Ocean Street culvert crossing. Inlet rock debris trap basin required	<ul style="list-style-type: none"> <li>Minimum clearance between buildings and other features is 10m</li> <li>Existing buildings are single storey and are likely to have shallow foundations. One building believed to be around 120 years old. Vibration due to construction activities can be a concern and a detailed structural inspection of the existing buildings should be conducted to assess if some areas of the existing buildings are more susceptible to such vibration. The final alignment of the proposed culvert can then be chosen to avoid these vibration sensitive zones.</li> <li>Sediments may be mildly contaminated and high acid-sulphate.</li> <li>Existing drainage need to be surveyed and coordinated with the design of the modified open channel. Reconstruction of existing driveway required.</li> <li>Existing utilities along Ocean Drive (Optus, Telstra, NBN, power).</li> <li>Sensitive habitats downstream. Possible localised impacts from expanded channel draining to Stingray Creek. Review of Environmental Factors likely required.</li> </ul>	<ul style="list-style-type: none"> <li>Maximum decreases of 0.2 to -0.3m in the middle flow path and adjacent buildings through the school, with substantial reductions in flood extent</li> <li>Decrease of up -0.2m around school office and adjacent buildings, with some reduction in flood extents</li> <li>Reductions in flood depths on Ocean Drive around Flinders Drive of -0.1 to -0.2m. Reductions in flood levels/depths around Ocean Drive culvert crossing (middle flow path) of up to -0.3m with substantial reduction in flood extents</li> <li>Reductions from H5 hazard in the middle flow path in the existing case including on walkways, down to mostly H1-H2</li> <li>Reductions from H4-H5 hazard around the school office in the existing case including on walkways, down to mostly H1-H2 hazard, some localised H3-H4 in mitigation case. Reductions from H4 down to H1-H2 in up to 5% AEP event.</li> </ul>	\$500,000	TBC	TBC

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## 4. Non-Structural Measures

### 4.1 Property Modification Measures

#### 4.1.1 Voluntary Purchase of High Hazard Properties

Voluntary purchase of high flood hazard properties may be considered in order to eliminate the potentially high risk of loss of life and damage to property from these areas by physically removing the dwellings at risk to hazardous flood conditions.

OEH has prepared Guidelines for Voluntary Purchase Schemes (OEH, 2013b). This describes the eligibility criteria for NSW Government funding for VP schemes, which include:

- no other feasible flood risk management options are available to address the risk to life at the property;
- residential properties and not commercial and industrial properties;
- buildings were approved and constructed prior to 1986;
- properties are located either 1) within high hazard areas where there is a significant risk to life for occupants and those who may have to evacuate or rescue them, 2) within a floodway where the removal of the house may be part of a floodway clearance program aimed to reduce the significant impacts caused by the existing development on flood behaviour elsewhere in the floodplain, or 3) within the footprint of a proposed flood mitigation measure or where a flood mitigation measure may result in a significant increase in flood risk to a house that cannot be protected.

Two high flood hazard properties have been nominated for voluntary purchase in order to form a floodway to relieve flooding semi-trapped points in Koonwarra Street and Pelican Court, refer to Options 4A and 4C in the flood modification measures (Section 3.4.2.1).

In total, there are 19 residential properties affected by high hazard flooding, considered as being H5 or higher, in the 1% AEP event which may be eligible for voluntary purchase. This excludes any villas, units or strata buildings. There are limits to the funding available for a voluntary purchase program and additional eligibility criteria may apply. Feasibility of a voluntary purchase program is likely to be limited by the relatively high property prices in the study area. Further assessment needs to be undertaken with the finalised structural mitigation options and whether these eliminate the high flood hazard conditions to particular properties.

#### 4.1.2 Voluntary House Raising

Voluntary house raising has long been a traditional response to flooding in New South Wales, as demonstrated by the number of raised houses in frequently flooded urban areas such as Lismore and Fairfield (Floodplain Development Manual, 2005). There are advantages associated with house raising which are noted as follows (Frost and Rice, 2003).

- A reduction of flood damages due to personal items being stored above the nominated flood level
- A reduction in danger to personal safety and a reduction in the cost of potentially needing to evacuate residents
- Potentially cost-effective alternative to voluntary purchase, with positive social outcomes (i.e. home owners who have strong sentimental value on their properties can remain in the same location).

Some of the disadvantages include:

- Residents' concern over security and privacy due to an open, exposed ground floor
- Accessibility issues for the elderly or people with a disability
- Following raising, residents may develop a false sense of security from impacts. This can result in a belief that they will not be impacted by flooding or reluctance to evacuate when required.

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- Over time and when flooding has not occurred, residents may be inclined to utilise the ground floor and converting it to a habitable area.

OEH has prepared *Guidelines for Voluntary House Raising Schemes* (OEH, 2013a). This describes the eligibility criteria for NSW Government funding of VHR schemes including:

- not located in floodways;
- limited to areas of low flood hazard;
- the suitability of individual houses for raising;
- residential properties and not commercial and industrial properties;
- buildings were approved and constructed prior to 1986;
- properties cannot be benefiting substantially from other floodplain mitigation measures;
- VHR should generally return a positive net benefit in damage reduction relative to its cost (benefit–cost ratio greater than 1).

Inclusion of a property in a voluntary house raising scheme places no obligation on the owner to sell the property or on the council or NSW Government to fund the purchase of the property. Owner participation in the scheme is voluntary and there are limitations on the availability of funding.

Whilst house raising can be considered for a range of building types, it is easiest and cheapest for timber-framed houses clad with non-masonry materials. A large proportion of houses in the study area which area flood-affected are of single or double brick construction which are considered costly and impractical for raising.

Due to the factors outline above, house raising is not considered feasible as a mitigation measure for dwellings within the study area.

#### 4.1.3 Planning and development controls

##### 4.1.3.1 General

Land use planning and development controls are an essential element in managing flood risk and the most effective way of ensuring future flood risk is managed appropriately. Planning controls including flood planning levels, flood related development control plans and restrictions on permissible types of development in different parts of the floodplain are recommended to ensure that development in the study area occurs in an appropriate manner in relation to flooding.

##### 4.1.3.2 Amendments to LEP

The *Port Macquarie Hastings Local Environmental Plan 2011* (LEP 2011) provides land use controls for the LGA and has been developed to be consistent with the FDM. Part 7.3 of the LEP 2011 contains clauses on flood planning. Excerpts of this clause are provided below:

(1) *The objectives of this clause are as follows:*

- (a) *to minimise the flood risk to life and property associated with the use of land,*
- (b) *to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,*
- (c) *to avoid significant adverse impacts on flood behaviour and the environment.*

(2) *This clause applies to:*

- (a) *land that is identified as "Flood planning area" on the Flood Planning Map, and*

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(b) other land at or below the flood planning level.

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:

(a) is compatible with the flood hazard of the land, and

(b) is not likely to significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and

(c) incorporates appropriate measures to manage risk to life from flood, and

(d) is not likely to significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and

(e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

(4) A word or expression used in this clause has the same meaning as it has in the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005, unless it is otherwise defined in this clause.

The LEP includes mapping of known flood liable lands, where there are flood studies completed for those areas. It currently does not include the overland flood areas of the North Brother local catchments.

While the LEP does require consideration of the compatibility of development to the "flood hazard of the land", it only makes reference to the flood liable lands and flood planning area. It does not make reference to the actual flood hazard rating, that being governed by flood depth, velocity and/or velocity-depth product, or to the hydraulic category of the floodplain (floodway, flood storage etc.).

#### Recommendation

The following updates to LEP 2011 and the Section 10.7 certificates are recommended:

- Amendment of LEP 2011 to include the North Brother local catchments flood mapping on the LEP Flood Planning Map. The current flood prone land mapping and flood planning area mapping does not include this study area.
- The Section 10.7 certificates should provide flood information for properties such as flood levels and flood planning levels across the lot, in addition to the flood hazard and hydraulic categories present on each lot.

#### 4.1.3.3 Amendments to Flood Policy

##### Overview

Council's Flood Policy (2015) outlines the development controls to be applied to proposed developments to manage flood risk to occupants and minimise flood damages to the development and flood impacts to adjacent properties. Development controls include flood planning level categories and provisions for different types of development (permissible development types, minimum floor levels), considerations for filling, fencing, boundary adjustments, rezoning and subdivision in the different hydraulic zones in the floodplain. The flood policy draws on the design flood information borne from Council's existing flood studies

##### Prescriptive Controls

Prescriptive controls that apply to a particular Flood Risk include:

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- Floor Level
- Flood Proofing
- Flood Impact on Other Properties
- Site Access and Flood Evacuation Requirements.

The Flood Policy provides requirements for different types of development in relation to these prescriptive controls. These requirements vary depending on the hydraulic classification and flood hazard conditions on the property.

#### Hydraulic Classifications

The flood policy provides definitions for the different hydraulic classifications of the floodplain, including floodway, flood storage and flood fringe areas. It outlines the type and nature of development which is allowed according to the hydraulic classifications on the property. Generally, new development is not allowed in floodway areas. There may be circumstances in which certain types of limited or Minor Development (including infill development, redevelopment, replacement development or minor extensions) could proceed, subject to a range of considerations.

#### Flood Hazard

The flood policy provides guidance on how proposed developments are to comply with the prescribed development controls and provisions. One of these is consideration of the flood hazard on the property. The flood hazard categorisation system adopted in the flood policy differs from the hazard categorisation system recommended in Australian Rainfall and Runoff 2019, which is based on recent research and which is presented in *Australian Disaster Resilience Handbook 7. Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia* (AIDR, 2017a) and *Guideline 7-3 Flood Hazard* (AIDR, 2017b). The flood hazard mapping prepared in this study for the North Brother Local Catchments follows the ARR 2019 system.

#### Flood Planning Levels

The Flood Policy defines the adopted flood planning levels for various types of proposed development. Council has adopted a 0.5m freeboard across the whole LGA, including both mainstream and overland flood areas. The different flood planning level categories define the minimum levels for floor levels, flood proofing, flood impacts to other properties and site access (e.g. roads) and evacuation routes for different types of development.

Table 4-1 Flood Planning Level (FPL) Categories

Category Proposed	FPL Category Description
FPL1	20 year ARI Flood level (No allowance for Climate Change, No Freeboard)
FPL2	100 year ARI Flood level + Climate Change Allowance (No Freeboard)
FPL3	100 year ARI Flood level + Climate Change Allowance + 500mm Freeboard
FPL4	Probable Maximum Flood (PMF)

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**Comments and Recommendations**

- The Flood Policy should be updated to refer to this North Brother Local Catchments Flood Study and the flood mapping and other design flood data following adoption of this study by Council.
- Design flood events are referred to in the Flood Policy in terms of Average Recurrence Interval (ARI) which is not in line with current floodplain management best practice of referring to events by Annual Exceedance Probability (AEP). Update to the Flood Policy should include reference to AEP terminology and/or definitions on conversion in its glossary (i.e. 5% AEP = 20 year ARI, and 1% AEP = 100 year ARI).
- The Flood Policy has been developed mainly in the context of mainstream flooding. For example, in relation to reliable site access for new residential developments, the Flood Policy states that Council will only support development where "Effective Warning Time and reliable access is available for evacuation. Developments will be required to demonstrate that evacuation through low hazard conditions during the early warning period of a Flood is achievable. A minimum 8 hours Effective Warning Time must be available to a particular site". For overland flooding such warning time is not available (usually the warning time is less than 1 hour). Therefore, it is recommended to update the Flood Policy to provide exemptions or modified conditions for development of properties subject to overland flooding.
- Continuing from the item above, mapping should be provided and included/cited in the Flood Policy which indicates the areas subject to mainstream flooding (as defined by the riverine flood studies) and those subject to overland flooding (as defined in this and subsequent overland flood studies and which are above the extent of mainstream flooding). This mapping will be prepared as a part of this study, for the North Brother study area.
- The Flood Policy needs to state that both the mainstream and overland flooding conditions need to be considered for development and re-development of properties.
- Consider incorporation of the ARR 2019 flood hazard categorisation system into the Flood Policy to reflect the current best practice in defining flood hazard conditions.
- "High flood hazard" could be considered as H3 or higher hazard (ARR 2019 hazard categories). The lower threshold for H3 hazard is similar or slightly lower than the high and transitional hazard categories in the *Floodplain Development Manual* method.

**4.1.3.4 Rezoning**

Rezoning could be considered where there is an incompatibility of the flood hazard or hydraulic category on the property compared to the type of land use. Section 2.4 identifies sensitive properties and critical facilities which are affected by high hazard flooding and floodway (as well as flood storage and flood fringe) areas. Unlike mainstream flooding, the high hazard and floodway areas are generally localised in the 1% AEP event. Rezoning of entire properties, especially larger premises occupied by schools, nursing homes etc. to preclude those land uses is likely to result in the suitable parts of the properties being underutilised.

Properties with larger areas of high hazard up to H5/H6 in PMF include:

- St Josephs school
- Laurieton Retirement Village
- Stockland Camden View Retirement Village.

Rezoning of these properties in response to flood hazard in the PMF could be considered, although many of these sensitive properties are large facilities and there is an absence of large vacant lots to which these facilities could be relocated, and relocation would be an expensive and complex exercise. Other measures and development controls may be appropriate to manage redevelopment of these properties. Therefore, rezoning of the identified affected sensitive properties and critical facilities is generally not recommended, based on the overland flood conditions presented in this study. Rezoning in response to mainstream flood conditions has not been assessed.

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**4.1.4 Council Redevelopment**

This measure is an alternative to voluntary purchase (refer Section 4.1.1) whereby Council would still purchase high-impacted flooded properties on a voluntary basis but instead of rezoning the land, the property is redeveloped with new dwellings designed to withstand the high hazard flooding conditions on the property and resist flood damages. The intention is for the redeveloped property to be resold with a break-even financial outcome, which offsets the high property purchase costs which tend to make voluntary purchase unfeasible.

However, initial assessment identifies a number of issues with this approach:

- It would be in conflict with Council's Flood Policy in addition to other planning policies which preclude (re)development in floodway and high flood hazard areas.
- This approach may need to be fully funded by Council.
- Specialised building design and engineering would be required to withstand high to extreme hazard flood forces (H5 and H6 hazard rating) in the 1% AEP event and rarer, which adds to the cost of this option.
- This approach would not reduce the risk of flooding on the population in the PMF.
- There is a high upfront cost to be borne by Council for each redevelopment.
- There may also be probity issues in the case of Council acquiring the property, redeveloping and reselling the property.
- The generally older characteristics of the local population may mean that there is a reduced capacity for the residents of properties to move elsewhere. There may be reluctance to sell-off the properties in this regard. Conversely, however, there may be increased uptake in this option for residents who are frequently affected by flooding.

**Recommendation**

Further consideration by Council is required to determine if these issues can be addressed to make this a viable approach. Development controls such as floor levels above the PMF for flood refuge would need to be assessed for suitability in a town planning context.

**4.1.5 Flood Proofing and Flood Compatible Design of Individual Buildings**

Flood compatible design refers to the design and construction of buildings with appropriate water-resistant materials such that flood damage to the building itself (structural damage) and possibly its contents, is minimised should the building be inundated. *Reducing Vulnerability of Buildings to Flood Damage* (Hawkesbury-Nepean Floodplain Management Steering Committee, 2007) provides a comprehensive discussion of the various options for building design to minimise the impact of flooding. These include structural and architectural design and building materials, in addition to design considerations such as setting of electrical equipment above flood levels to reduce risk of their damage.

Flood compatible and flood proofing design measures are prescribed for different types of development in Council's Flood Policy (2015), including the minimum elevations in the development which the flood compatible materials must reach in all parts of proposed buildings.

Promotion of types of flood proofing measures should also be undertaken as a part of flood awareness and readiness improvement programs (refer Section 4.2.3).

Flood proofing of residential properties can also refer to implementing external measures such as walls or landscaping to redirect flows away from and around vulnerable parts of the house, such as doorways and other entry points. It is generally a measure that can be pursued by individual property owners in low hazard areas to prevent above floor inundation but may result in diversion of flows to neighbouring properties and resultant impacts. A flood impact assessment may be required by Council as per the Flood Policy to ensure adverse flood impacts to adjacent properties are prevented.



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**Recommendation**

Promotion of flood proofing measures should also be included in flood education and awareness programs.

## 4.2 Response Modification Measures

### 4.2.1 Flood Warning Systems

The study area includes local catchments and overland flow paths where flash flooding may occur. Flash flood catchments are those defined as catchments in which less than six hours may elapse between heavy rainfall and flooding. Flash flooding usually results from relatively short intense bursts of rainfall, commonly from thunderstorms. This is problematic in urban areas where drainage systems may not cope. Flash floods tend to be quite local and it is difficult to provide effective warning because of their rapid onset. The reasons for this have been identified for flash flood catchments as follows (McKay, 2004, 2008):

- Flash floods are less predictable than larger scale flooding. Rainfall over small catchments is usually not well predicted by numerical weather prediction models
- For flash floods, there is insufficient time to develop reliable flood warnings and for effective the dissemination and response to the flood warnings. More rapid user response is required, which necessitates specialised communication systems and a high level of public flood awareness
- A reliance on rainfall triggers increases the frequency of false alarms
- The use of water level triggers does not allow sufficient time for response.

It is not possible for BOM to issue specific predictions for flash flood catchments based on their regional rainfall gauging network. More importance is placed on the role of the SES and other agencies to interpret the regional warnings which are provided by BOM to warn the community of the potential road closures and damage as a result of predicted storms and flash floods.

Flash flood warning systems have been proposed for some catchments, such as the Avalon overland flood areas on the Northern Beaches of Sydney. However, the time to peak for critical storm events in the Avalon area is about 1 hour from the start of the storm, and about 30 minutes after peak rainfall rates in the design storm event (MHL, 2016), which offers a short warning time. The critical duration in that area for the 1% AEP event is the 2 hour event.

In contrast, although some of the lower areas in North Brother study area have a critical storm duration of up to 2 hours, the critical duration for most of the study area is generally the 30 minute duration event. Time to peak in many flow paths, especially on known problem areas further up the mountain, is in the range of 15 minutes. Due to the steepness of the local catchments the overland flooding is expected to peak almost instantaneously (5 to 10 minutes) in response to high intensity rainfall. Therefore, there would be minimal to no warning provided for many locations in the study area. Potential delays in analysis of rainfall data and subsequent dissemination of warnings via phone or text systems would further erode the warning time.

Given the issues and challenges discussed above, the development of a flash flood warning system for the study area is not recommended. Greater emphasis should be placed on the importance of flood education and awareness in the community. Local residents have a role in being able to understand how the issued weather warnings and actual occurrences of intense rainfall during a storm may translate to flooding impacts to their properties, and in addition, be aware of ways to prepare their properties to reduce flood damages and risk to life.

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**4.2.2 Flood Depth Signage on Roads**

A number of road crossings are affected by significant flooding. Flood depth signage is recommended for key locations primarily to warn drivers of the flood hazard during a flood event and reduce occurrences of people driving into floodwaters. Flood depth signage may also act as a passive reminder to residents of the potential for flooding in their neighbourhood streets. Nominated locations are where H3 or higher flood hazard occurs in the 1% AEP event, including:

- Ocean Drive 70m east of Sirius Drive
- Ocean Drive 380m east of Fairwinds Avenue
- Ocean Drive 30m east of The Gateway
- Bold Street sag between Laurie Street and Mill Street
- Bold Street sag between Mill Street and Hanley Street.

While there are other roads affected by high hazard flooding conditions, Ocean Drive and Bold Street are higher-trafficked roads and crossed by major flow paths with a higher risk of vehicles being washed off the road.

**Recommendation**

It is recommended that flood depth signage be installed at key road crossings as a warning of the flood hazard during a flood event and reduce occurrences of people driving into floodwaters, in addition as a passive reminder of flooding risk.

**4.2.3 Flood Education, Awareness and Readiness**

Flood education and awareness should be promoted throughout the study area. Measures may include information brochures in English and multi-lingual including promotion of NSW SES FloodSafe brochures and website (<http://www.floodsafe.com.au/>). Additionally, Council or SES may run educational workshops or distribute information sheets to help people plan and prepare for a flood.

Section 10.7 certificates issued by Council could be used to inform property owners about flood risk to their properties, where there are flood studies completed within Port Macquarie Hastings LGA.

Additionally, Council's floodplain management web page and social media could be further developed to enhance the messaging on flood risk and flood preparation, particularly in relation to overland flooding. This may include flood mapping on an interactive mapping portal on the website itself rather than links to the flood study reports and mapping, where it can be difficult for community members to navigate through often lengthy technical reports. Information on, or links to external websites (SES, floodsafe, etc), should be included for advice for residents on how to prepare for flooding.

During flood events, Council should a list of road closed to flooding (and roads recently opened as the flooding recedes) on their website and social media. This will encourage road users to find alternative routes and reduce the number of drivers encountering flooded roads and potentially driving into floodwaters.

A flood education and awareness program should be developed by Council which outlines and schedules various flood education methods to be implemented (e.g. brochures, news articles highlighting previous flooding, SES events, Council web pages etc.). The program should be reviewed after each significant flood event to assess the effectiveness of the program, reinvigorate flood awareness in the community and plan the roll-out of new flood information as it becomes available.

As a part of an overall flood education and awareness program for the study area, Council should consult with operators of sensitive properties and facilities to provide information on the flood risk on the property and

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promote the development of a flood management plan for the properties (refer to Section 4.2.5 for further details).

**Recommendation**

It is recommended that Council develops a flood education program to promote flood awareness and readiness in the community. Measures may include:

- Promotion of FloodSafe brochures to help residents understand the flood risk and prepare their property and personal plans for a flooding event.
- Flood depth signage on key roads affected by flooding.
- List of road closures and roads recently opened on website/social media page during flood events
- Section 10.7 certificates to inform property owners about flood risk to their properties
- Provide flood mapping on an interactive mapping portal on Council's website for easier viewing
- Promotion and support for SES information events
- Enhanced messaging on flood risk and flood preparedness on Council's floodplain management webpage particularly for overland flooding.
- Consult with operators of sensitive properties and occupants of dwellings affected by high flood hazard to provide information on the flood risk and promote the development of a flood management plan for the properties.

The program should be reviewed after each significant flood event.

**4.2.4 Improved flood evacuation response and procedures**

Flood evacuation is under the control of the SES and the SES needs to update the current evacuation planning based on information presented in this report, including flood depth and hazard mapping.

**Recommendation**

It is recommended that the SES updates the current emergency planning, such as development of a Local Flood Plan or update of the EMPLAN, based on information presented in this study.

**4.2.5 Development of Flood Management Plans**

A flood management plan is a document which outlines and discusses the measures to help manage the flood risk on a particular property, and its occupants and visitors to the site. The purposes of the plan are:

- To address existing, future and continuing flood risks on the site;
- To promote a satisfactory awareness of expected flood behaviour and risks;
- To identify measures to become flood prepared, and
- To recommend a course of action during and after flood events.

Flood management plans can be likened to a fire evacuation plan or a bushfire emergency plan and should be tailored specifically for a particular property. It outlines procedures for prior, during and after a flood event and the roles and responsibilities, generally of facility staff, in enacting the flood management plan. It may also describe evacuation routes and refuge places.

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Several facilities are affected by very high to extreme (H5, up to H6) flood hazard in the PMF. Development of a flood management plan for the facilities should be considered to manage the flood risk to occupants. Council and SES should also consider encouraging and helping occupants of private dwellings to prepare their own flood management plans. Council should consult with the facility operators and occupants of dwellings subject to high flood hazard as a part of an overall flood education and awareness program for the study area and promote the development of a flood management plan for the properties.

As a part of the development of a flood management plan, evacuation from the site may be identified as a suitable option. This would require safe evacuation routes to be identified or otherwise new safe evacuation access installed (see Section 1.1.1). If sheltering-in-place in facility buildings is identified as a more suitable approach, an assessment of the structural stability of the buildings in the flood conditions should be undertaken.

**Recommendation**

Council should consult with high flood risk facilities and occupants of dwellings subject to high flood hazard regarding management of flood risk on the site. Development of a flood management plan for the site should be considered by the facility operators with the assistance of Council/SES.

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## 5. Conclusions and Recommendations

### 5.1 Conclusions

Six selected structural options and combinations of options have been assessed in the TUFLOW hydraulic model for the North Brother local catchments. The options were selected by Council and the floodplain risk management committee from a long-list of options for 16 locations in the study area. The hydraulic performance, site constraints and improvements in flood damages have been confirmed for the selected options. The following options have high merit in terms of reductions in flood damages and improvements in flood hazard:

- Option 4A+4B+4C
- Option 6B+6C+6D+6E
- Option 9B.

Subsequent costing of these options in addition to cost benefit and multi-criteria analyses will confirm the economic feasibility and viability of these options.

In addition, a range of non-structural options have been evaluated for the study area. These include measures related to planning and policy, property modification and flood emergency management and response modification. Recommendations have been made in relation to these measures with consideration of the flood behaviour in the study area.

### 5.2 Recommendations

- Council and the committee are to review and consider the findings on the hydraulic and damages assessment for the selected options. Feedback is sought on the assessment, including any refinements to the options.
- Consultation with stakeholders, landowners and community is to be undertaken on the short-listed options.
- The hydraulic modelling will be subsequently updated based on proposed refinements to the options following Council/committee and stakeholder consultation. The flood damages will be updated, and costing of options undertaken for input into a cost-benefit analysis. A multi-criteria analysis will also be undertaken to consider other aspects of the options.
- A floodplain risk management study and plan will be formed based on the subsequent outcomes, for community consultation and approval by Council.

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## 6. References

- Australian Institute of Disaster Resilience (2017a) Australian Disaster Resilience Handbook 7. Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia
- Australian Institute of Disaster Resilience (2017b) Guideline 7-3. Flood Hazard
- Australian National University (1992) ANUFLOOD: A Field Guide. Centre for Resource and Environmental Studies
- Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors), 2019, Australian Rainfall and Runoff: A Guide to Flood Estimation, Commonwealth of Australia
- Frost, S. & Rice, M., 2003, 'Voluntary House Raising Program: the Fairfield Experience', Floodplain Management Authorities of NSW 43rd Annual Conference, Forbes.
- Hawkesbury-Nepean Floodplain Management Steering Committee (2007) Reducing Vulnerability of Buildings to Flood Damage.
- Institution of Engineers, Australia (1987) Australian Rainfall and Runoff: A Guide to Flood Estimation, Vol. 1, Editor-in-chief D.H. Pilgrim, Revised Edition 1987 (Reprinted edition 1998), Barton, ACT
- NSW Government (2005) Floodplain Development Manual, the management of flood liable land
- Office of Environment and Heritage (2013a) Floodplain Management Program Guidelines for Voluntary House Raising Schemes. Document OEH 2013/0056.
- Office of Environment and Heritage (2013b) Floodplain Management Program Guidelines for Voluntary Purchase Schemes. Document OEH 2013/0055.
- Office of Environment and Heritage (2016a) Flood Emergency Response Planning – Classification of Communities. Document OEH 2016/0736.
- Office of Environment and Heritage (2016b) Residential Flood Damage Guidelines. NSW Government. Document OEH 2016/0732.
- McKay, G. 2004, 'Flash flood warning systems – Are they a waste of time?', in Staying Afloat: Floodplain Management Authorities of NSW 44th Annual Conference, May 11-14 2004, Coffs Harbour, pp.1-7.
- McKay, G. 2008, 'Guidelines for local flash flood warning system proposals', in Floodplain Management Authorities of NSW 48th Annual Conference, February 26-29 2008, Wollongong.
- MHL (2016) Avalon to Palm Beach Floodplain Risk Management Study and Plan, Draft Report. MHL Report 2321. Prepared for Pittwater Council.
- Millener, D., Howley, D., Galloway, M. and Leszczynski, P. (2013) Flash Flood Warning System For Sydney's Northern Beaches, presented to the 53<sup>rd</sup> Floodplain Management Authorities Conference, 28-31 May, Tweed Heads, NSW.
- Queensland Government (2002) Guidance on the Assessment of Tangible Flood Damages. Department of Natural Resources and Mines
- Smith GP, Davey EK and Cox RJ (2014) Flood hazard, Technical report 2014/07, Water Research Laboratory, University of New South Wales, Sydney.
- Victorian Government (2002) Rapid-Appraisal Method (RAM) for Floodplain Management. Department of Natural Resources and Environment.

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## 7. Glossary

Annual Exceedance Probability (AEP)

The chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. In this study AEP has been used consistently to define the probability of occurrence of flooding. It is to be noted that design rainfalls used in the estimation of design floods up to and including 100 year ARI (ie. 1% AEP) events was derived from 1987 Australian Rainfall and Runoff. The following relationships between AEP and ARI applies to this study (AR&R, 2016).

Frequency Descriptor	EY	AEP (%)	AEP (1 in x)	ARI
Very frequent	12			
	6	99.75	1.002	0.17
	4	98.17	1.02	0.25
	3	95.02	1.05	0.33
	2	86.47	1.16	0.50
	1	63.2	1.58	1.00
Frequent	0.69	50.00	2	1.44
	0.5	39.35	2.54	2.00
	0.22	20.00	5	4.48
	0.2	18.13	5.52	5.00
	0.11	10.00	10.00	9.49
Infrequent	0.05	5.00	20	20.0
	0.02	2.00	50	50.0
	0.01	1.00	100	100
Rare	0.005	0.50	200	200
	0.002	0.20	500	500
	0.001	0.10	1000	1000
	0.0005	0.05	2000	2000
Extremely Rare	0.0002	0.02	5000	5000
Extreme			PMP	

Australian Height Datum (AHD)

A common national surface level datum approximately corresponding to mean sea level.

Average Annual Damage (AAD)

Depending on its size (or severity), each flood will cause a different amount of flood damage to a flood prone area. AAD is the average damage per year that would

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occur in a nominated development situation from flooding over a very long period of time.

Average Recurrence Interval (ARI)	The long-term average number of years between the occurrences of a flood as big as or larger than the selected event. For example, floods with a discharge as great as or greater than the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.
Catchment	The land area draining through the main stream, as well as tributary streams, to a particular site. It always relates to an area above a specific location.
DRAINS	DRAINS is a computer program which is used to simulate local catchment rainfall-runoff and stormwater system hydraulics and is widely used across Australia.
Development	<p>Is defined in Part 4 of the EP&amp;A Act</p> <p><u>In fill development</u>: refers to the development of vacant blocks of land that are generally surrounded by developed properties and is permissible under the current zoning of the land. Conditions such as minimum floor levels may be imposed on infill development.</p> <p>New development: refers to development of a completely different nature to that associated with the former land use. Eg. The urban subdivision of an area previously used for rural purposes. New developments involve re-zoning and typically require major extensions of exiting urban services, such as roads, water supply, sewerage and electric power.</p> <p>Redevelopment: refers to rebuilding in an area. Eg. As urban areas age, it may become necessary to demolish and reconstruct buildings on a relatively large scale. Redevelopment generally does not require either re-zoning or major extensions to urban services.</p>
Effective Warning Time	The time available after receiving advise of an impending flood and before the floodwaters prevent appropriate flood response actions being undertaken. The effective warning time is typically used to move farm equipment, move stock, raise furniture, evacuate people and transport their possessions.
Exceedances per Year (EY)	The number of times an event is likely to occur or be exceeded within any given year.
Flood	Relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with major drainage before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves overtopping coastline defences excluding tsunami.
Flood fringe areas	The remaining area of flood prone land after floodway and flood storage areas have been defined.



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Flood liable land	Is synonymous with flood prone land (i.e.) land susceptibility to flooding by the PMF event. Note that the term flooding liable land covers the whole floodplain, not just that part below the FPL (see flood planning area)
Floodplain	Area of land which is subject to inundation by floods up to and including the probable maximum flood event, that is flood prone land.
Floodplain risk management options	The measures that might be feasible for the management of particular area of the floodplain. Preparation of a floodplain risk management plan requires a detailed evaluation of floodplain risk management options.
Floodplain risk management plan	A management plan developed in accordance with the principles and guidelines in this manual. Usually include both written and diagrammatic information describing how particular areas of flood prone land are to be used and managed to achieve defined objectives.
Flood plan (local)	A sub-plan of a disaster plan that deals specifically with flooding. They can exist at state, division and local levels. Local flood plans are prepared under the leadership of the SES.
Flood planning levels (FPLs)	Are the combination of flood levels (derived from significant historical flood events or floods of specific AEPs) and freeboards selected for floodplain risk management purposes, as determined in management studies and incorporated in management plans. FPLs supersede the "designated flood" or the "flood standard" used in earlier studies.
Flood proofing	A combination of measures incorporated in the design, construction and alteration of individual buildings and structures subject to flooding, to reduce or eliminate flood damages.
Flood readiness	Readiness is an ability to react within the effective warning time.
Flood risk	<p>Potential danger to personal safety and potential damage to property resulting from flooding. The degree of risk varies with circumstances across the full range of floods. Flood risk in this manual is divided into 3 types, existing, future and continuing risks. They are described below.</p> <p><u>Existing flood risk</u>: the risk a community is exposed to as a result of its location on the floodplain.</p> <p><u>Future flood risk</u>: the risk a community may be exposed to as a result of new development on the floodplain.</p> <p><u>Continuing flood risk</u>: the risk a community is exposed to after floodplain risk management measures have been implemented. For a town protected by levees, the continuing flood risk is the consequences of the levees being overtopped. For an area without any floodplain risk management measures, the continuing flood risk is simply the existence of its flood exposure.</p>
Flood storage areas	Those parts of the floodplain that are important for the temporary storage of floodwaters during passage of a flood. The extent and behaviour of flood storage areas may change with flood severity, and loss of flood storage can increase the

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severity of flood impacts by reducing natural flood attenuation. Hence, it is necessary to investigate a range of flood sizes before defining flood storage areas

Floodway areas	Those areas of the floodplain where a significant discharge of water occurs during floods. They are often aligned with naturally defined channels. Floodways are areas that, even if only partially blocked, would cause a significant redistribution of flood flow, or a significant increase in flood levels.
Freeboard	Provides reasonable certainty that the risk exposure selected in deciding on a particular flood chosen as the basis for the FPL is actually provided. It is a factor of safety typically used in relation to the setting of floor levels, levee crest levels, etc. Freeboard is included in the flood planning level.
Hazard	A source of potential harm or situation with a potential to cause loss. In relation to this manual the hazard is flooding which has the potential to cause damage to the community.
Local overland flooding	Inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.
m AHD	Metres Australian Height Datum (AHD)
m/s	Metres per second. Unit used to describe the velocity of floodwaters.
m <sup>3</sup> /s	Cubic metres per second or "cumecs". A unit of measurement of creek or river flows or discharges. It is the rate of flow of water measured in terms of volume per unit time.
Mainstream flooding	Inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.
Modification measures	Measures that modify either the flood, the property or the response to flooding.
Overland flow path	The path that floodwaters can follow as they are conveyed towards the main flow channel or if they leave the confines of the main flow channel. Overland flow paths can occur through private property or along roads.
Probable Maximum Flood (PMF)	The largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation coupled with the worst flood producing catchment conditions. Generally, it is not physically or economically possible to provide complete protection against this event. The PMF defines the extent of flood prone land, that is, the floodplain.
Probable Maximum Precipitation (PMP)	The PMP is the greatest depth of precipitation for a given duration meteorologically possible over a given size storm area at a particular location at a particular time of the year, with no allowance made for long-term climatic trends (World Meteorological Organisation, 1986). It is the primary input to PMF estimation.
Risk	Chance of something happening that will have an impact. It is measured in terms of consequences and likelihood. In the context of the manual it is the likelihood of

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	consequences arising from the interaction of floods, communities and the environment.
Runoff	The amount of rainfall which ends up as a streamflow, also known as rainfall excess.
Stage	Equivalent to water level (both measured with reference to a specified datum)
TUFLOW	TUFLOW is a computer program which is used to simulate free-surface flow for flood and tidal wave propagation. It provides coupled 1D and 2D hydraulic solutions using a powerful and robust computation. The engine has seamless interfacing with GIS and is widely used across Australia.

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## **Appendix A. Flood Mapping**

Figure A-1 – 0.2EY Design Flood - Peak Flood Depths

Figure A-2 – 5% AEP Design Flood - Peak Flood Depths

Figure A-3 – 1% AEP Design Flood - Peak Flood Depths

Figure A-4 – Probable Maximum Flood - Peak Flood Depths

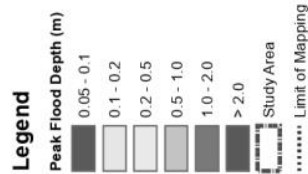
Figure A-5 – 1% AEP Design Flood - Climate Change Scenario Peak Flood Depths

Figure A-6 – 1% AEP Flood - Provisional Flood Hazard

Figure A-7 – 1% AEP Flood - Provisional Hydraulic Categories

Figure A-8 – 1% AEP Flood - Climate Change Scenario Provisional Flood Hazard

Figure A-9 – 1% AEP Flood - Climate Change Scenario Provisional Hydraulic Categories



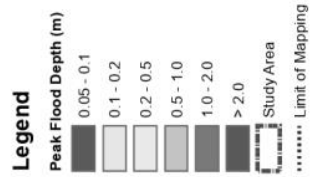
NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the representations regarding the currency and accuracy of information contained in this map.



TITLE	0.2EY Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-1(A)
DATE	28/11/2018





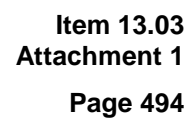
NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data and representations regarding the currency and accuracy of information contained in this map.

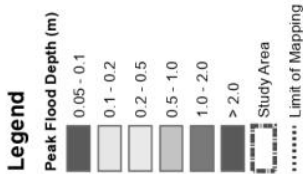
**JACOBS**

TITLE	0.2EY Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-1(B)
DATE	28/12/2018









NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

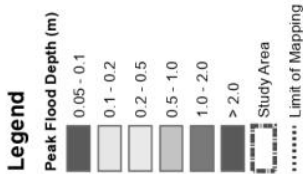
GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data and representations regarding the currency and accuracy of information contained in this map.



TITLE	0.2EY Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-1(D)
DATE	28/12/2018





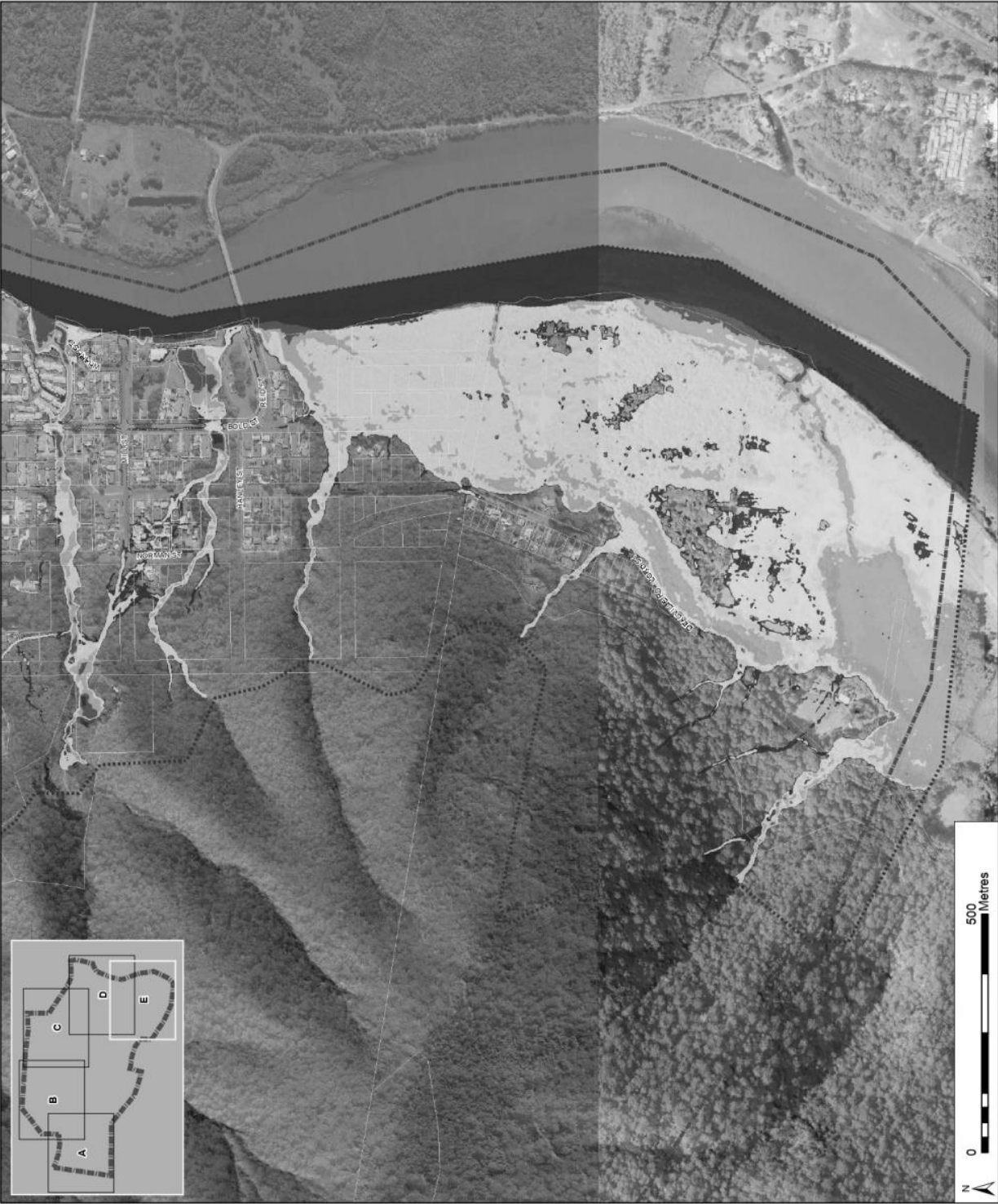


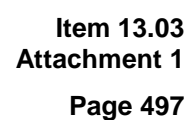
NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

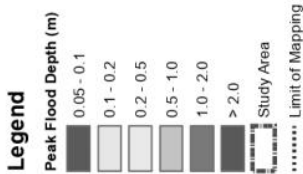
GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data or representations regarding the currency and accuracy of information contained in this map.



TITLE	0.2EY Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJ. SET #	MAP A-1(E)
DATE	28/12/2018





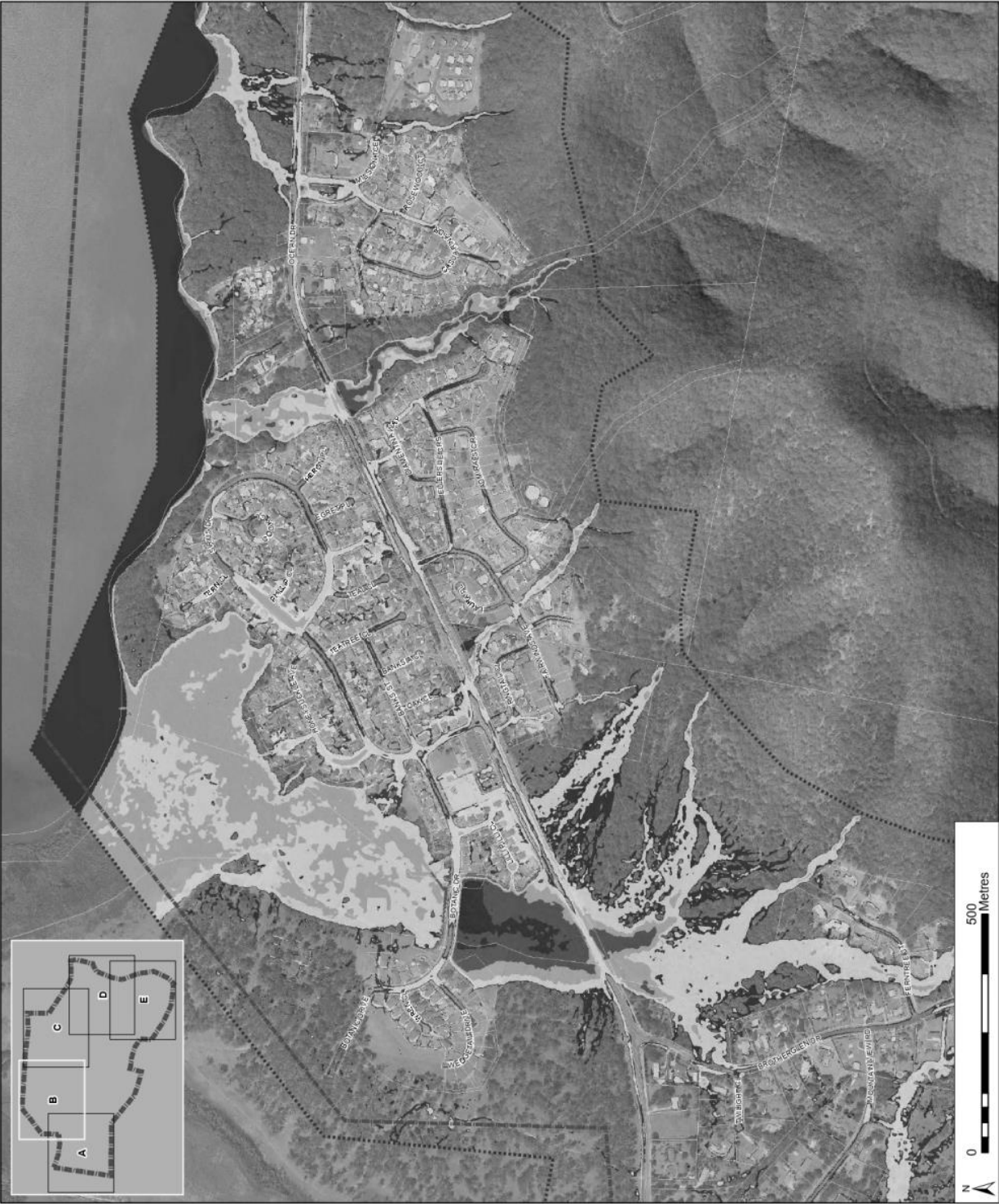


NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakesystem Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data, representations or any other information contained in this map.

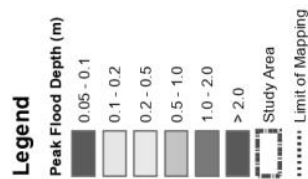
**JACOBS**

TITLE	5% AEP Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-2(B)
INVESTIGATOR	
DATE	3/03/2020









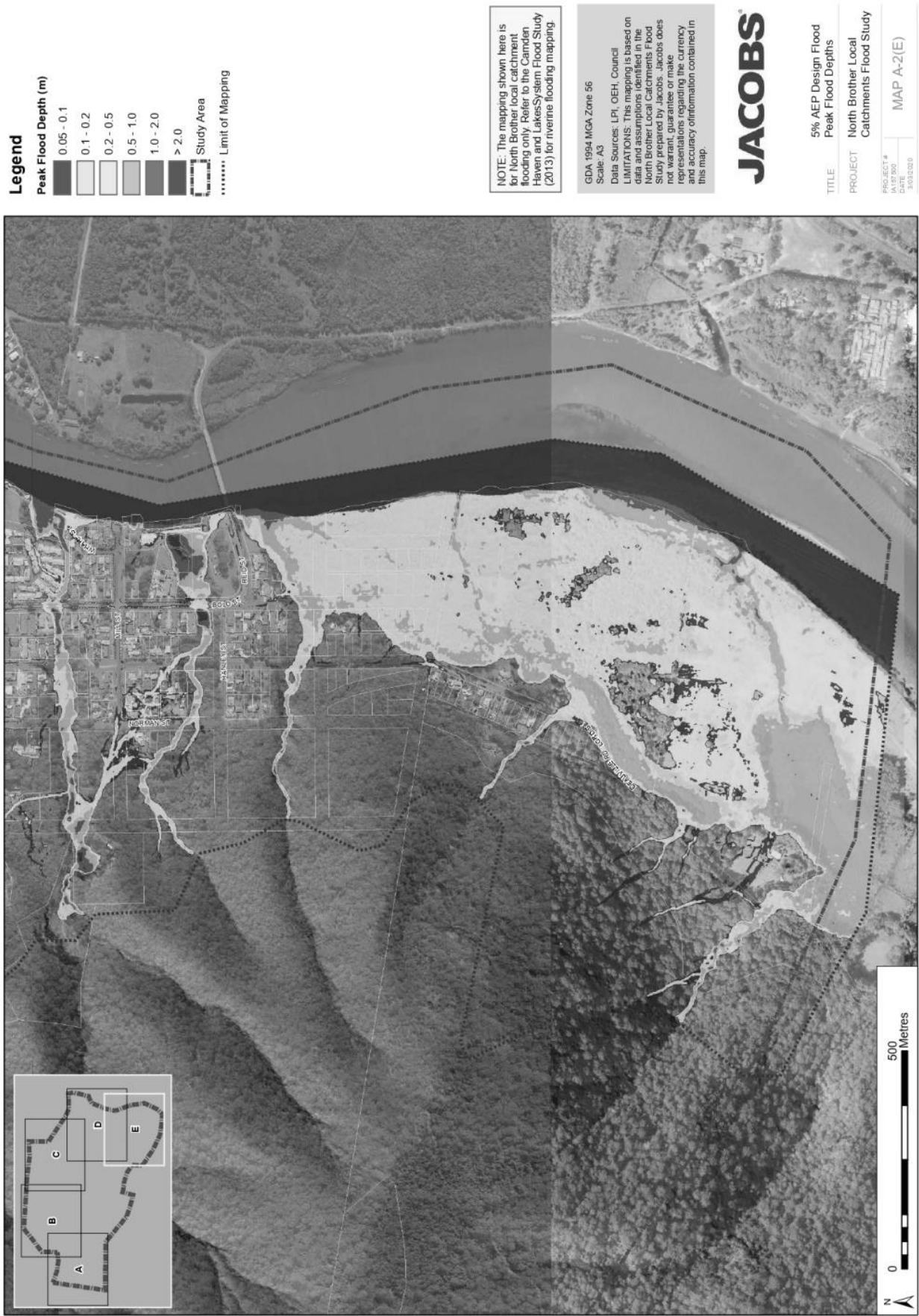
NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakesystem Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data and representations regarding the currency and accuracy of information contained in this map.

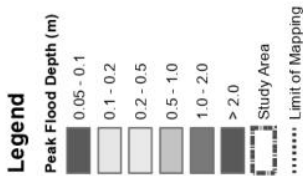


TITLE	5% AEP Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
FIGURE #	MAP A-2(D)
DATE	30/03/2020









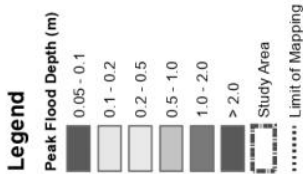
NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakesystem Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data or representations regarding the currency and accuracy of information contained in this map.



TITLE	1% AEP Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-3(A)
INVESTIGATOR	
DATE	30/09/20



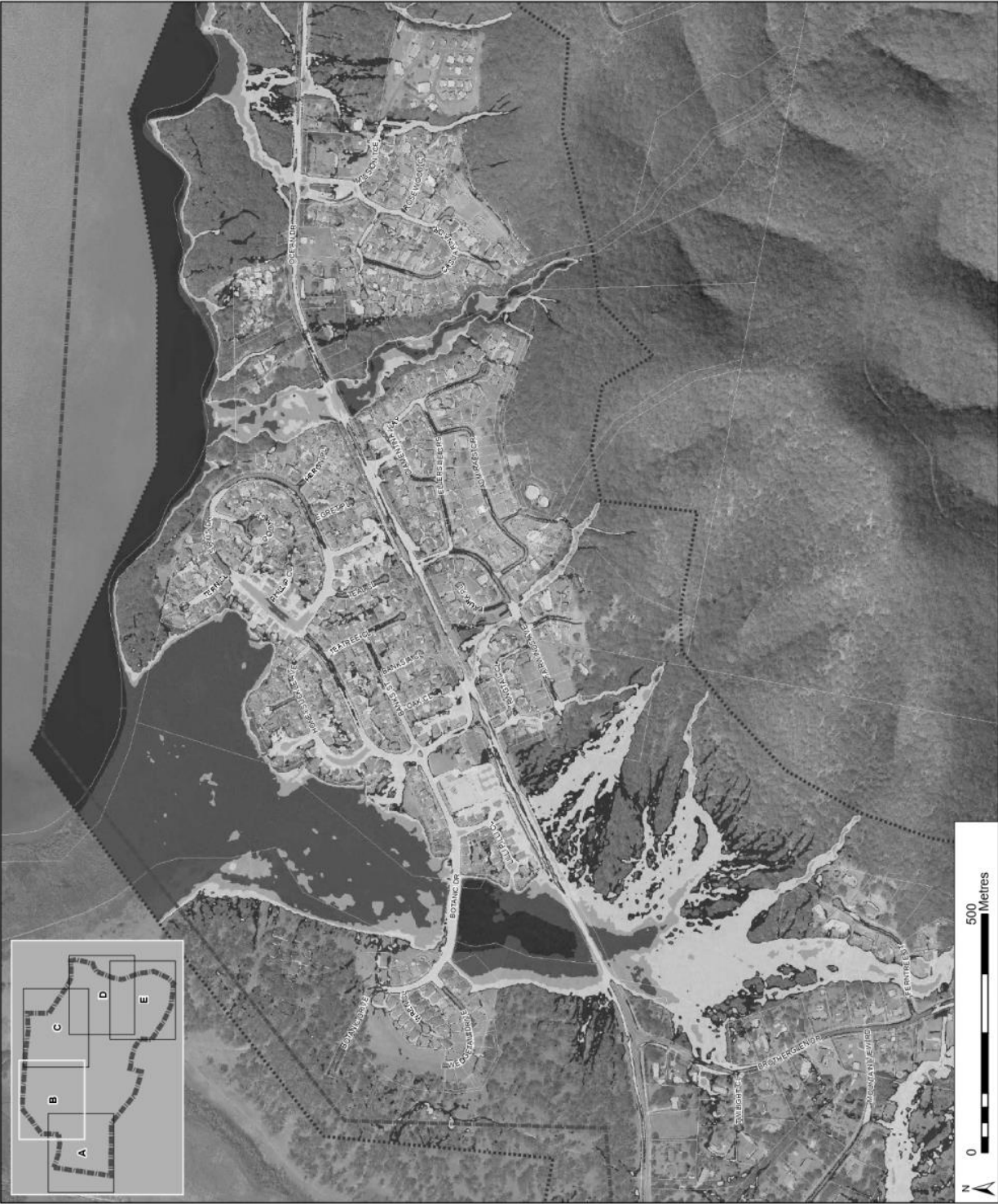


NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakesystem Flood Study (2013) for riverine flooding mapping.

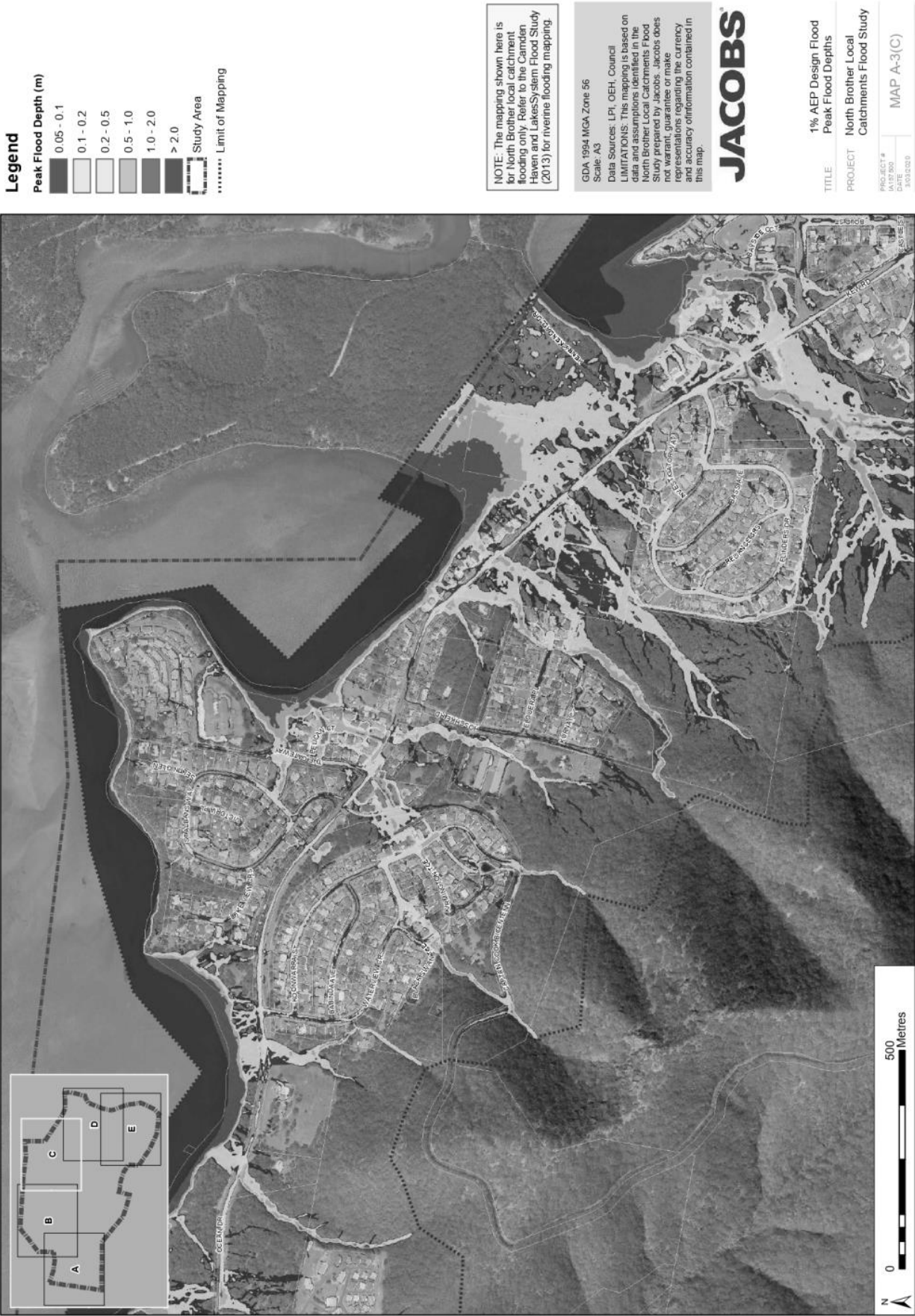
GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data, representations or any other information contained in this map.



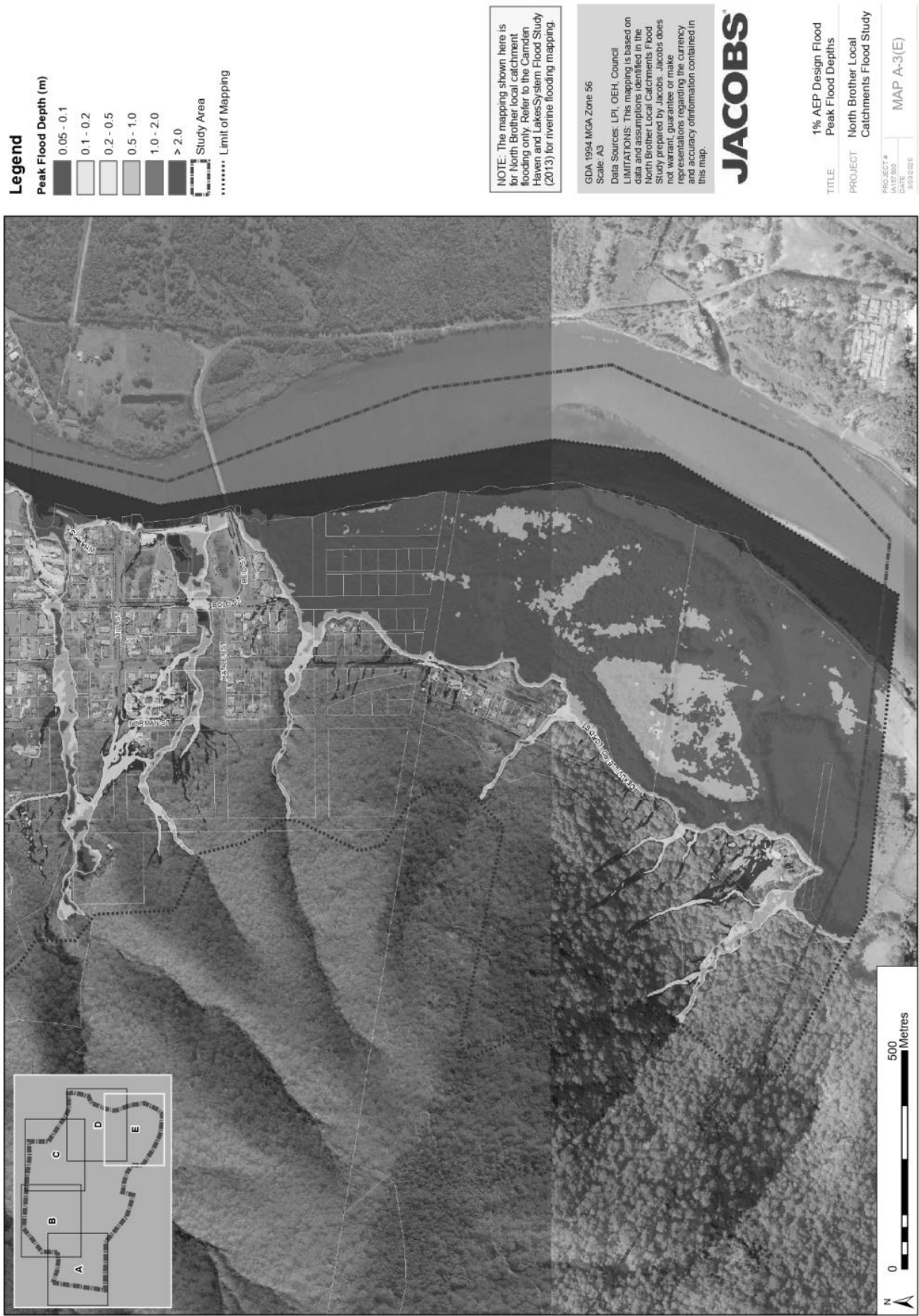
TITLE	1% AEP Design Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-3(B)
DATE	3/03/2020



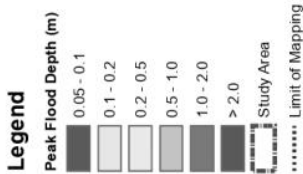












NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

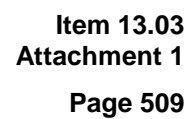
GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data or representations regarding the currency and accuracy of information contained in this map.



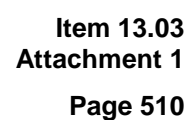
TITLE	Probable Maximum Flood Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-4(A)
ISSUED	28/11/2018
DATE	

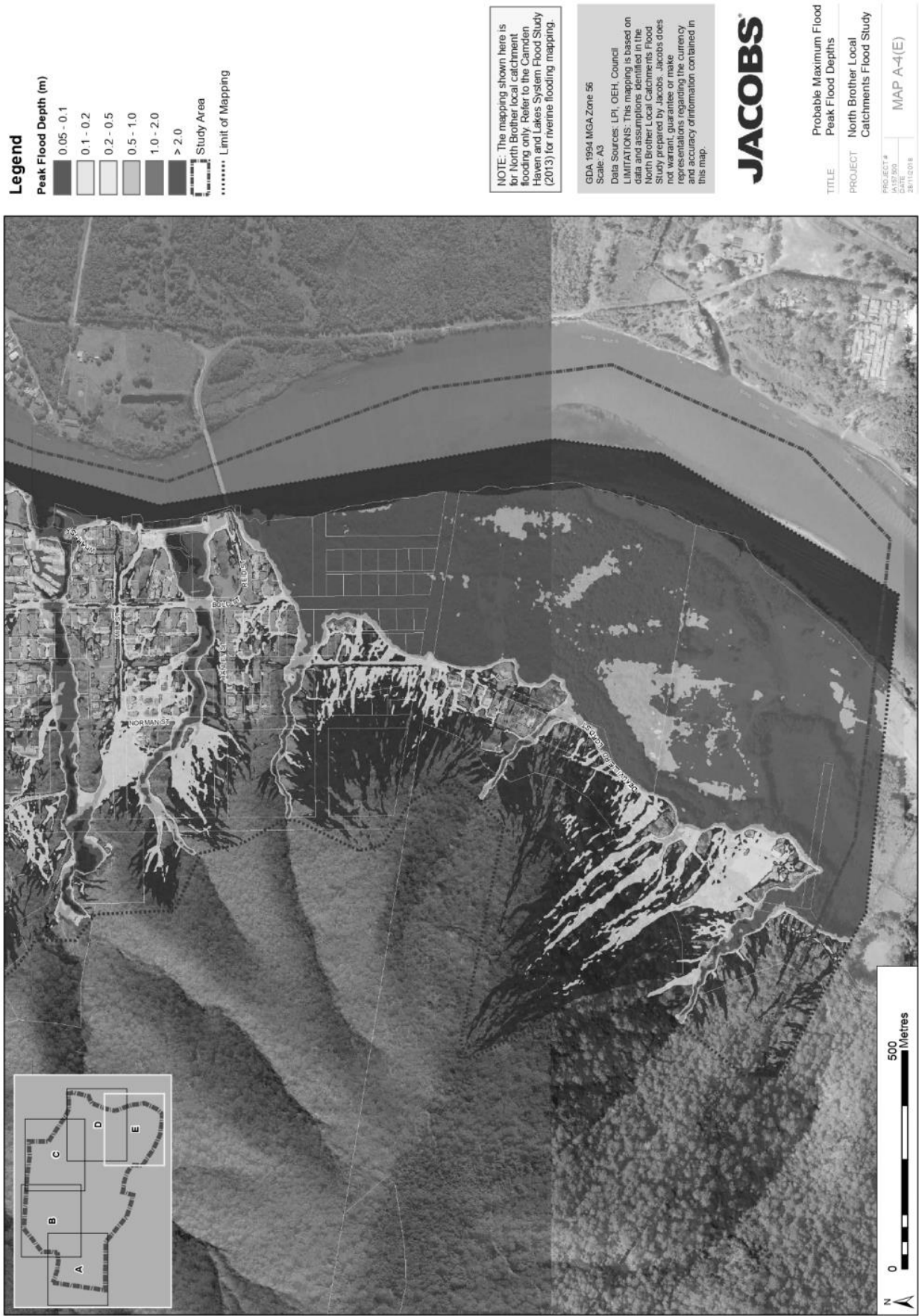




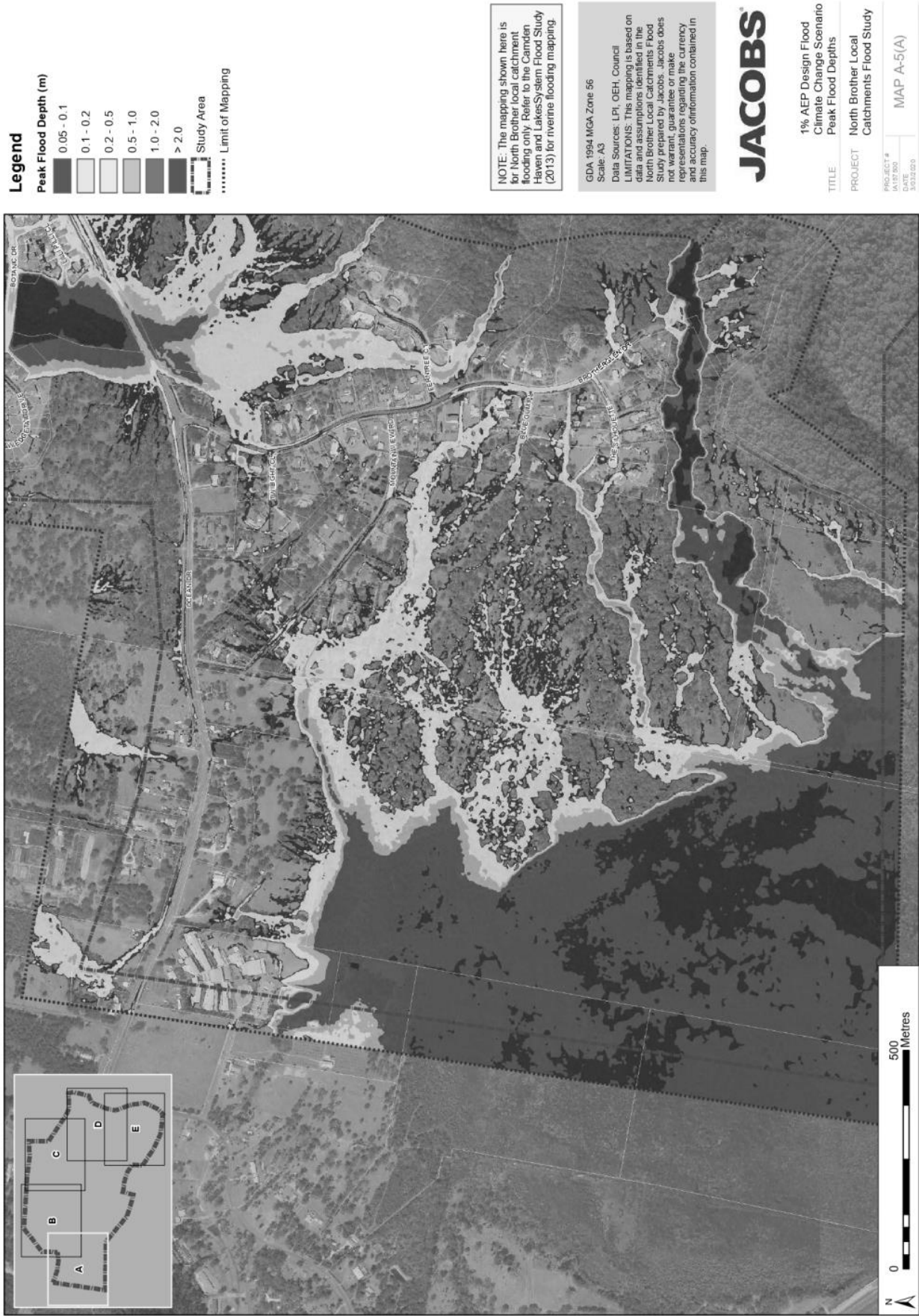


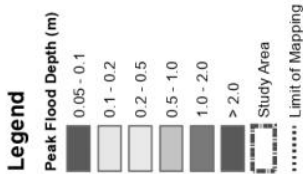










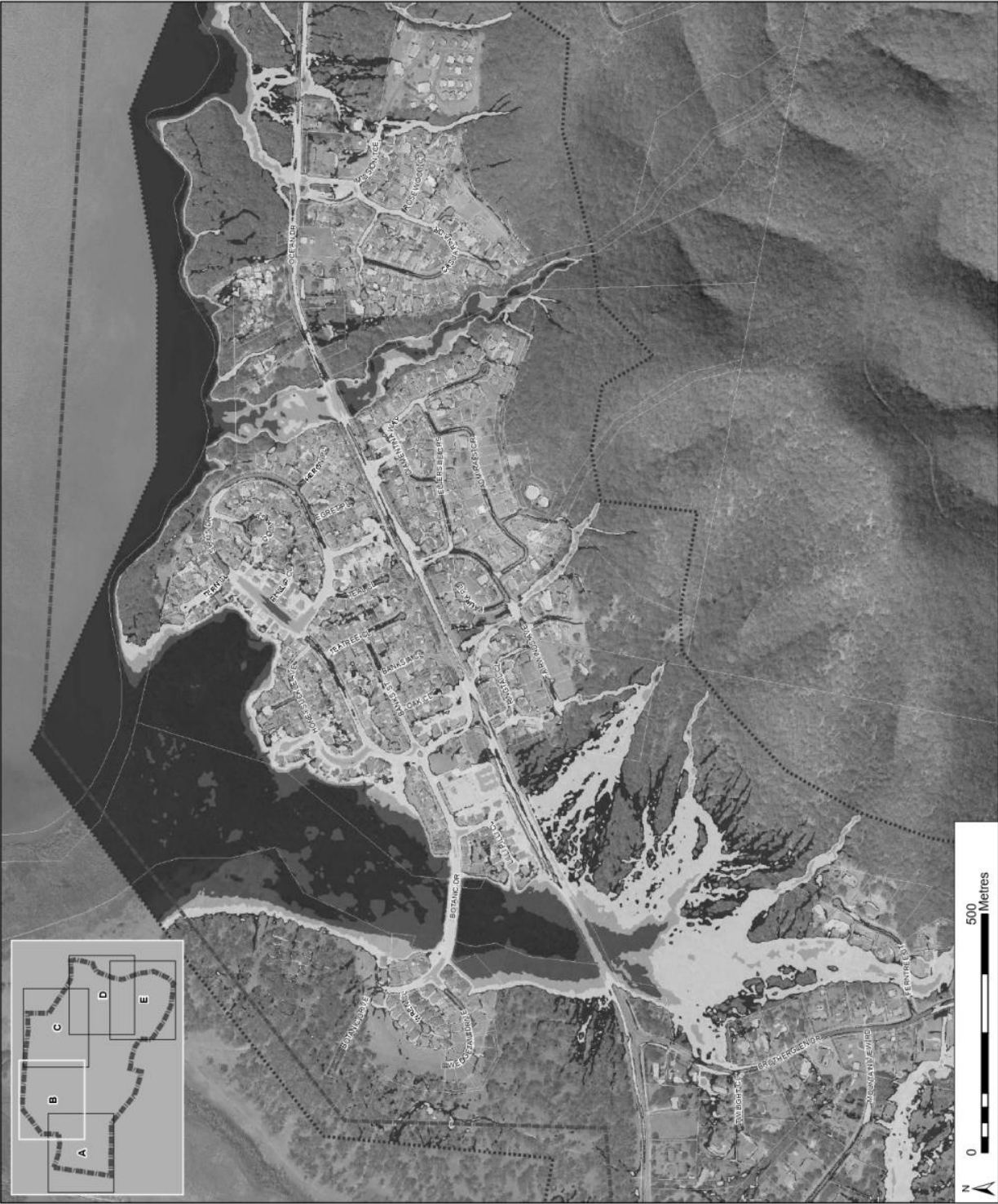


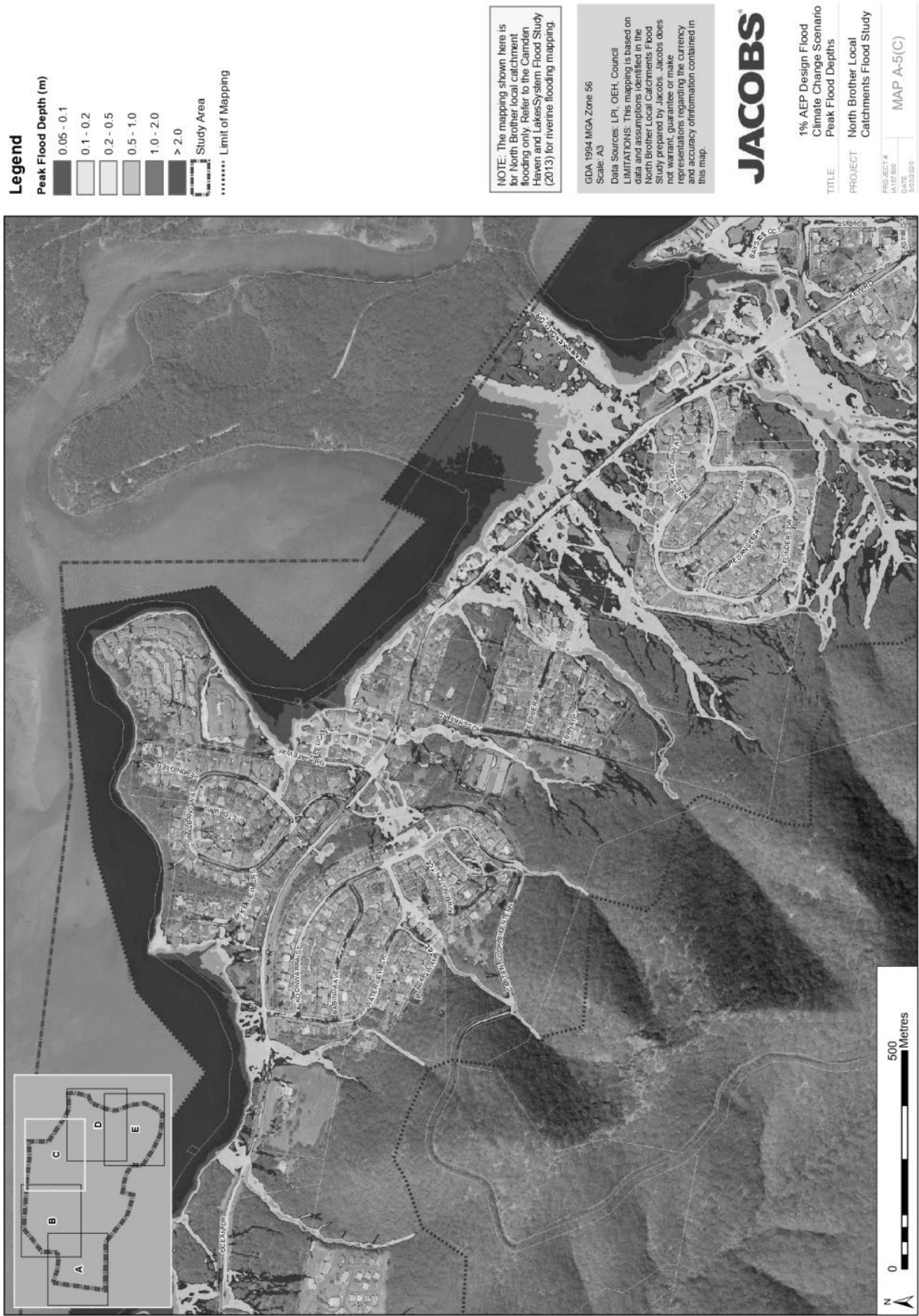
NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakesystem Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data or representations regarding the currency and accuracy of information contained in this map.

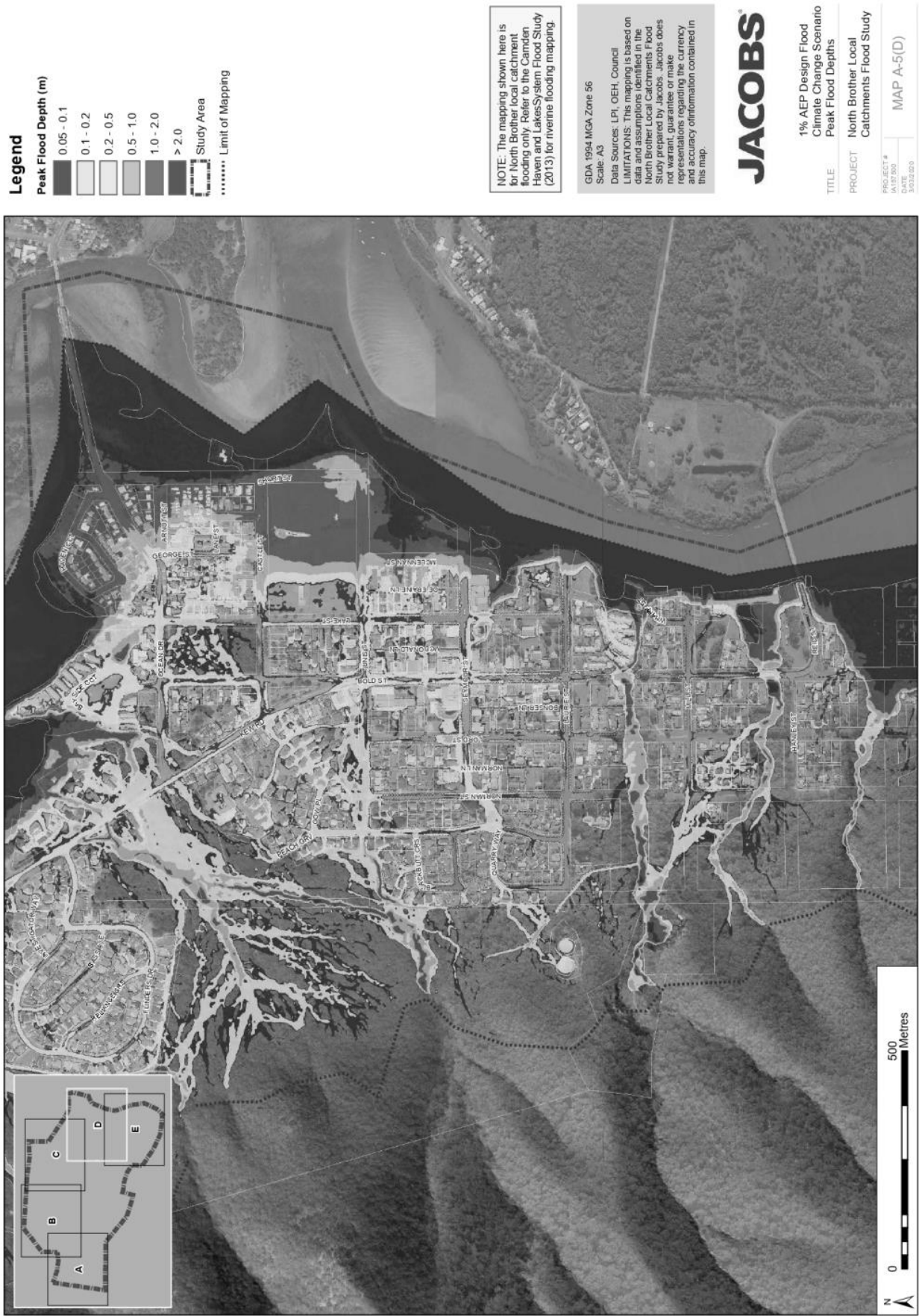


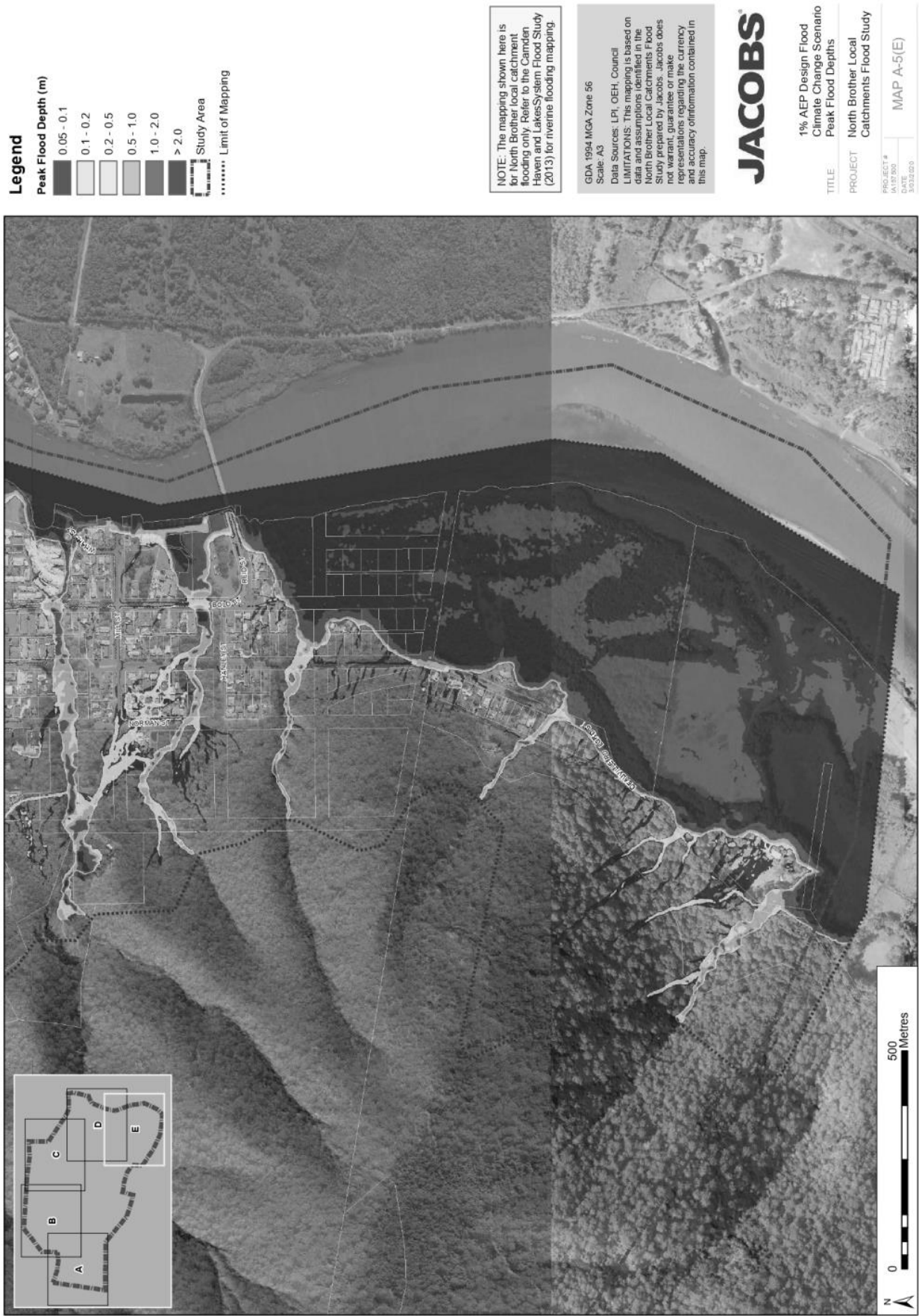
TITLE	1% AEP Design Flood Climate Change Scenario Peak Flood Depths
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-5(B)
DATE	30/02/2020

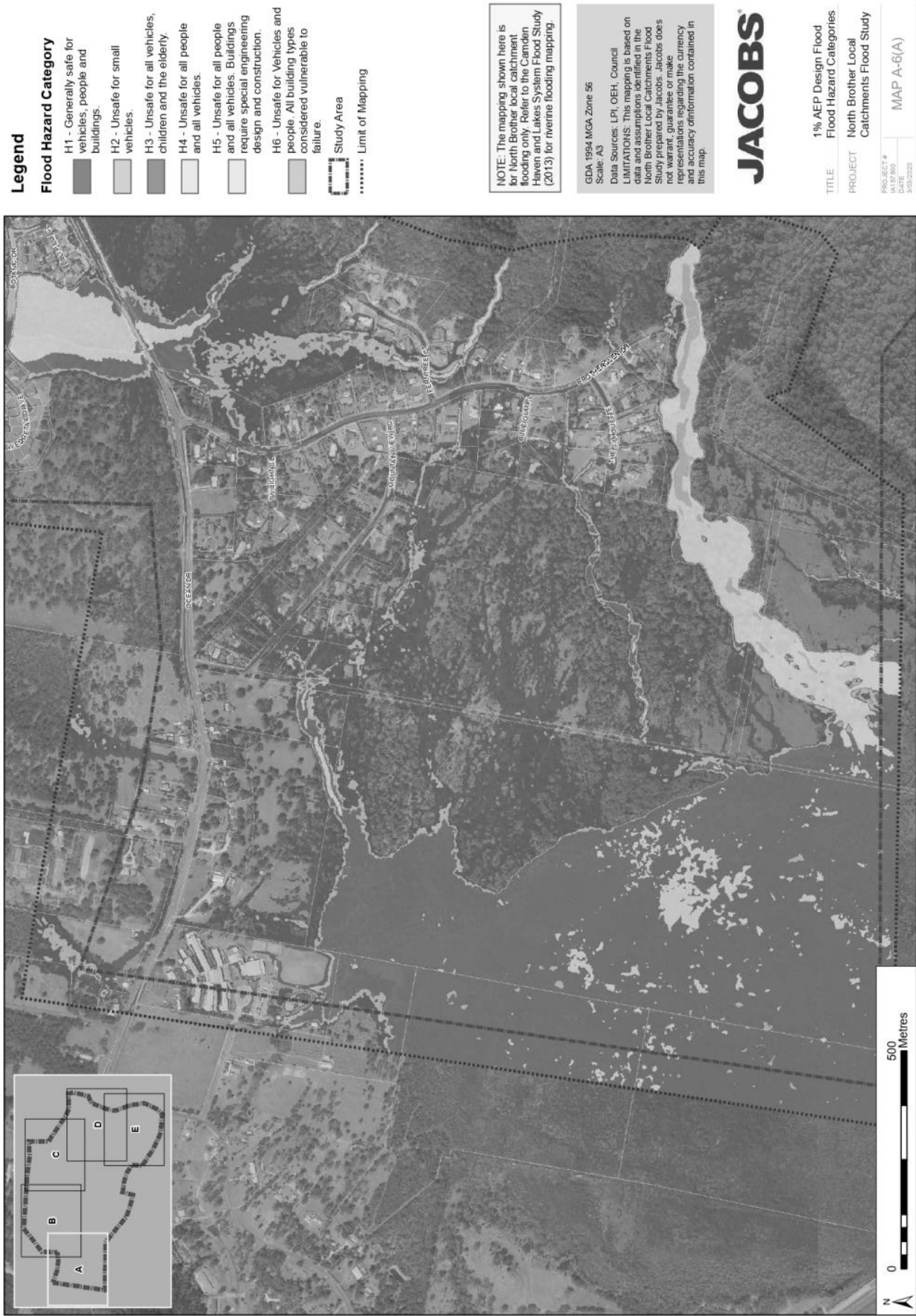


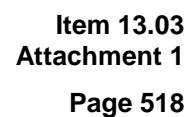




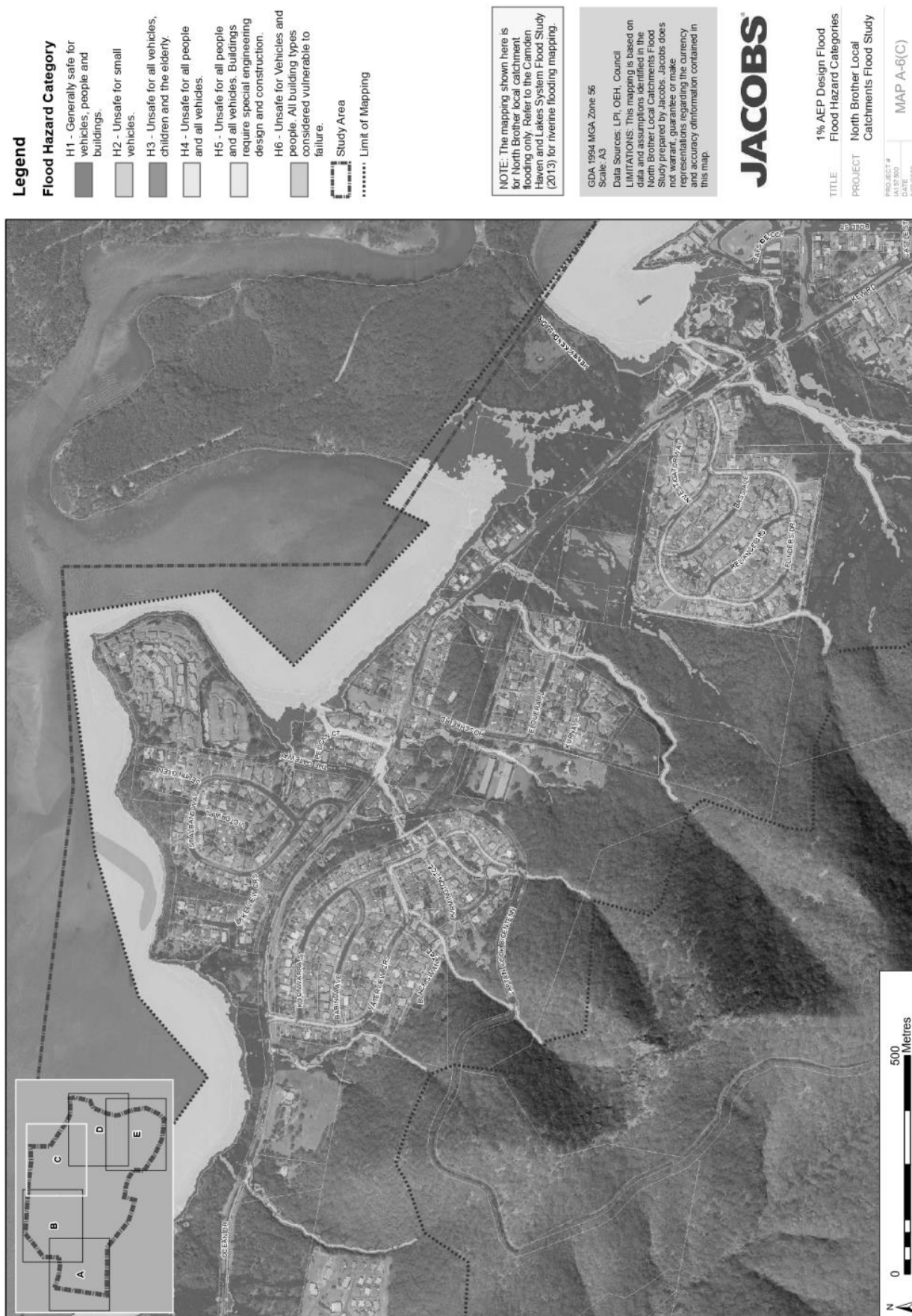






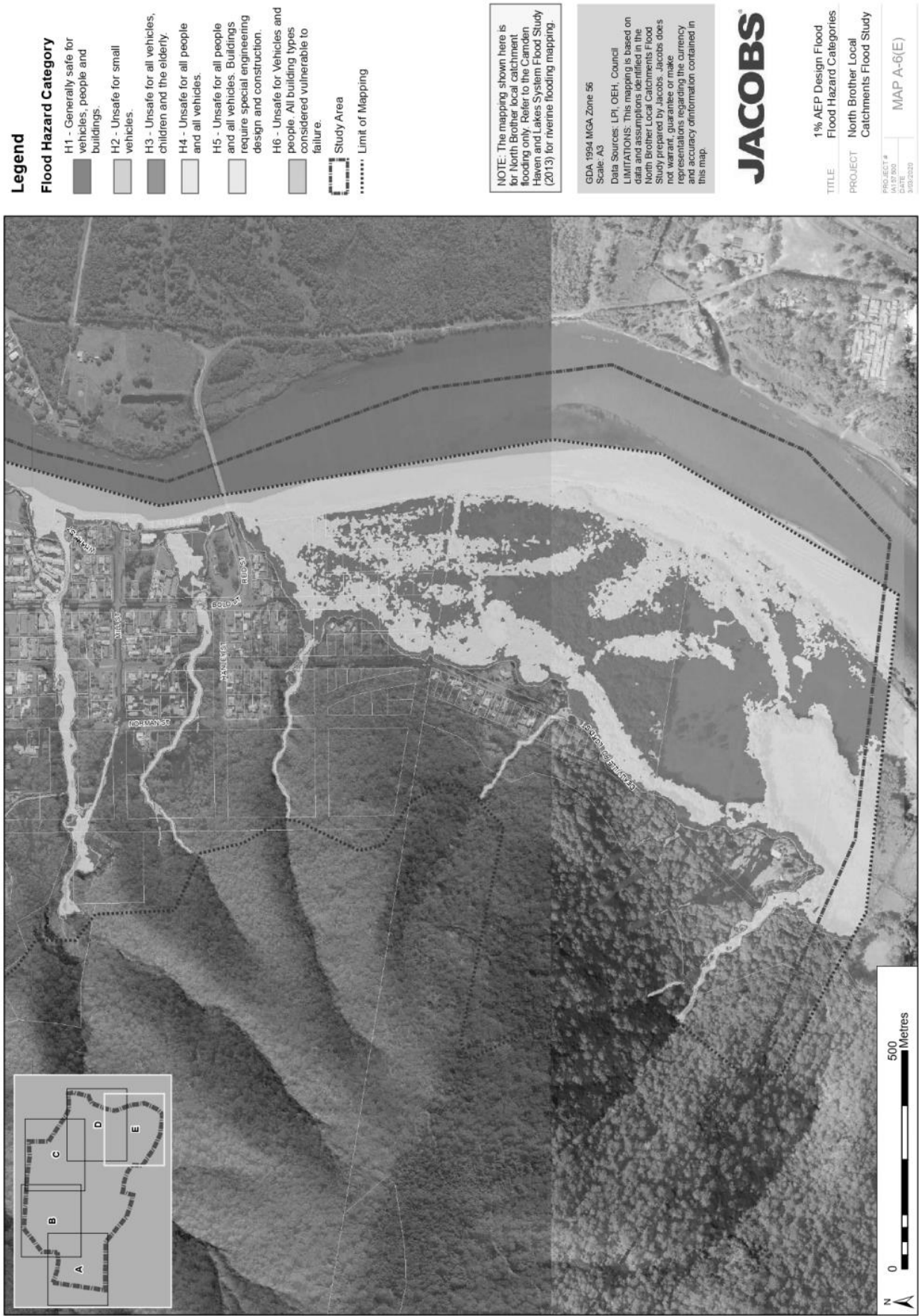












**Legend**

**Hydraulic Categories**

Floodway

Flood Storage

Flood Fringe

Watercourse

Limit of Mapping

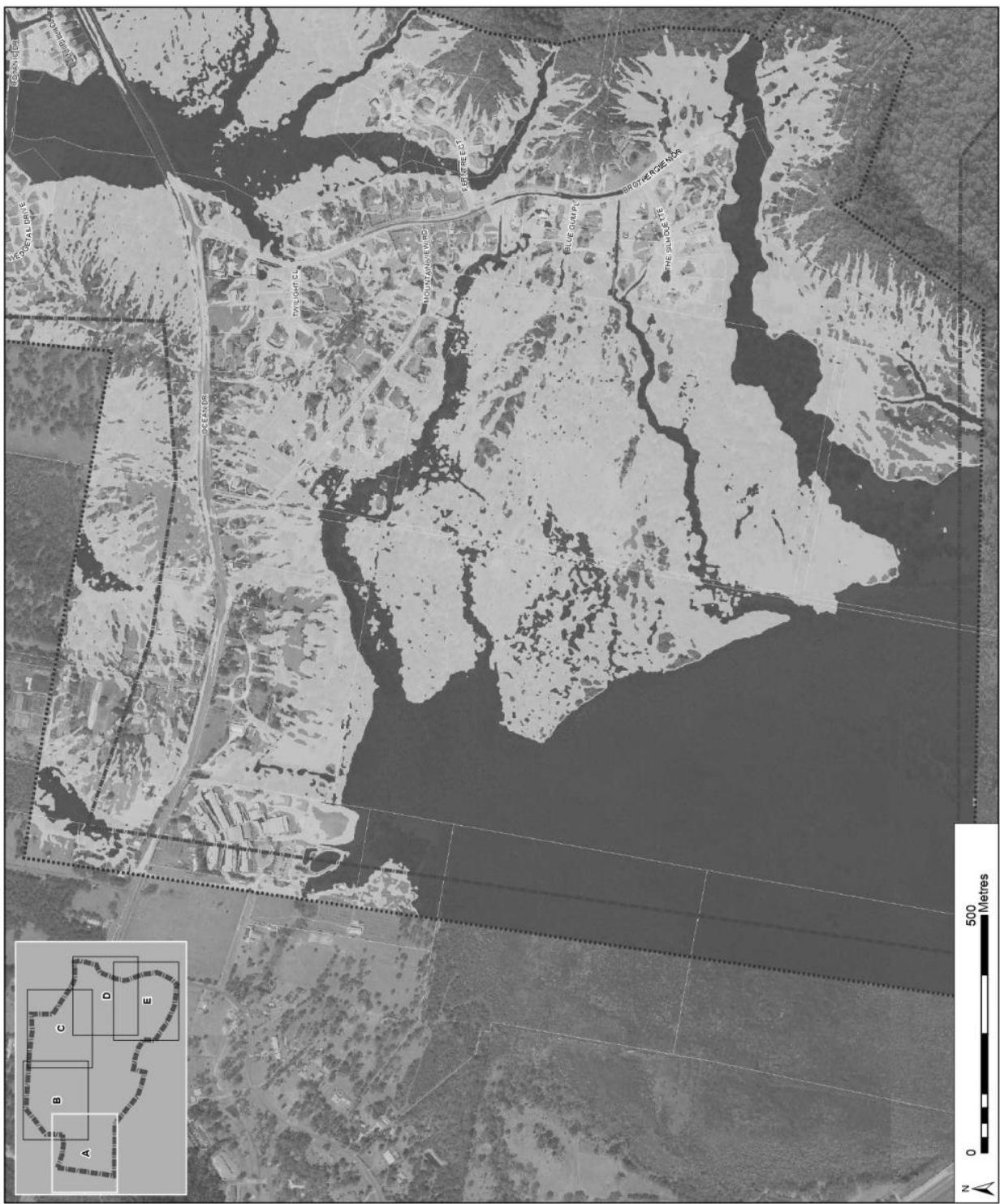
Study Area

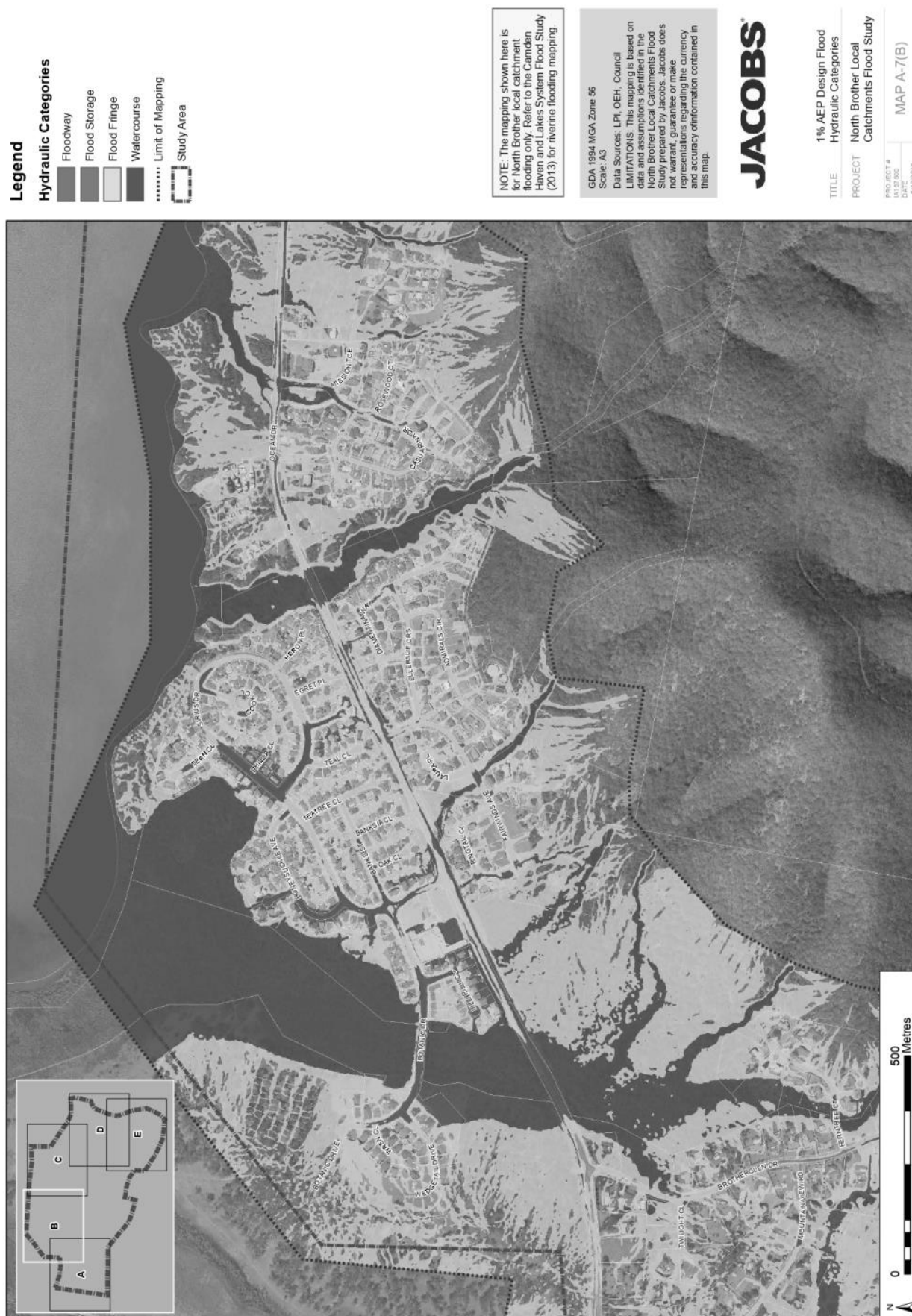
NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy, completeness or representations regarding the currency and accuracy of information contained in this map.

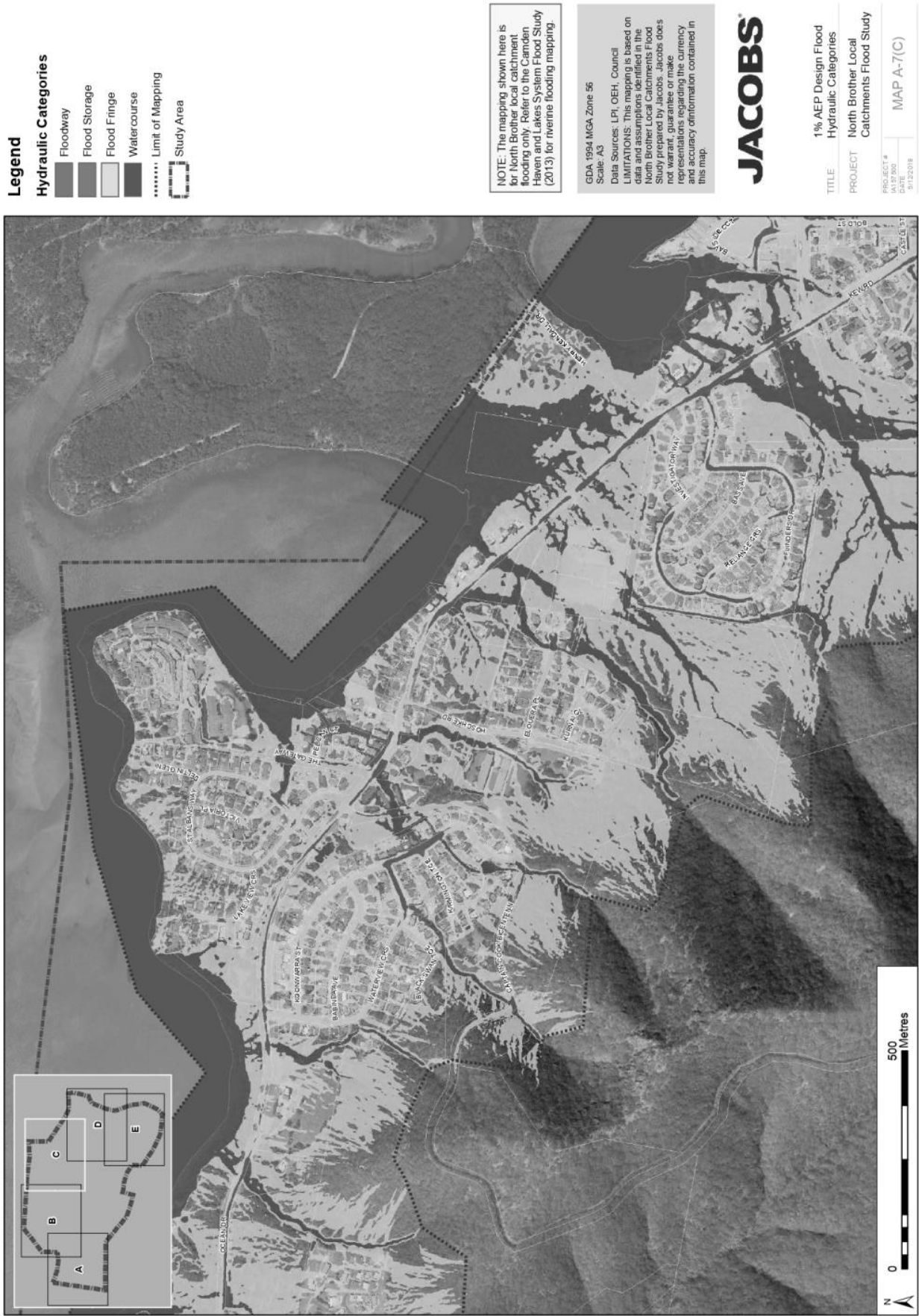


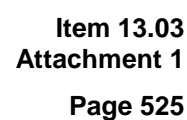
TITLE	1% AEP Design Flood Hydraulic Categories
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-7(A)
DATE	9/12/2018











**Legend**

**Hydraulic Categories**

Floodway

Flood Storage

Flood Fringe

Watercourse

Limit of Mapping

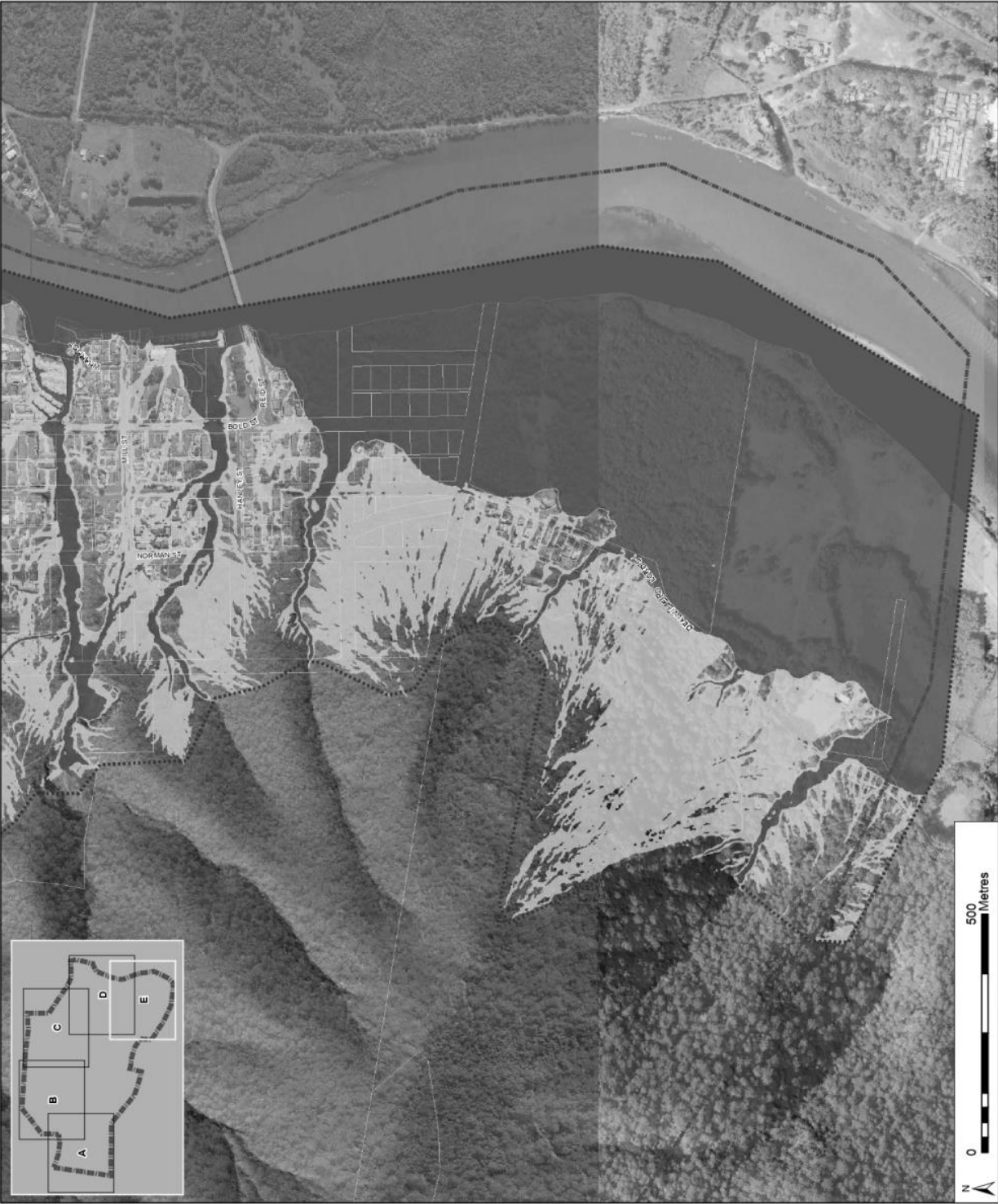
Study Area

NOTE: The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data and representations regarding the currency and accuracy of information contained in this map.



TITLE	1% AEP Design Flood Hydraulic Categories
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-7(E)
DATE	9/12/2018



**Legend**

**Flood Hazard Category**

H1 - Generally safe for vehicles, people and buildings.

H2 - Unsafe for small vehicles.

H3 - Unsafe for all vehicles, children and the elderly.

H4 - Unsafe for all people and all vehicles.

H5 - Unsafe for all people and all vehicles. Buildings require special engineering design and construction.

H6 - Unsafe for Vehicles and people. All building types considered vulnerable to failure.

Study Area

Limit of Mapping

**NOTES:**

1. The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

2. The climate change scenario comprises a 10% increase in the 1% AEP rainfall and a 0.9m sea level rise.

GDA 1994 MGA Zone 56

Scale: A3

Data Sources: LPI, OEH, Council

**LIMITATIONS:** This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the representations regarding the currency and accuracy of information contained in this map.

**JACOBS**

1% AEP Design Flood  
Climate Change Scenario  
Flood Hazard Categories

TITLE

PROJECT

North Brother Local  
Catchments Flood Study

PROJ. SET #

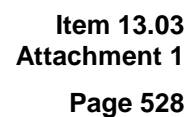
MAP A-8(A)

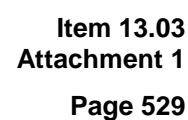
DATE

3/03/2020

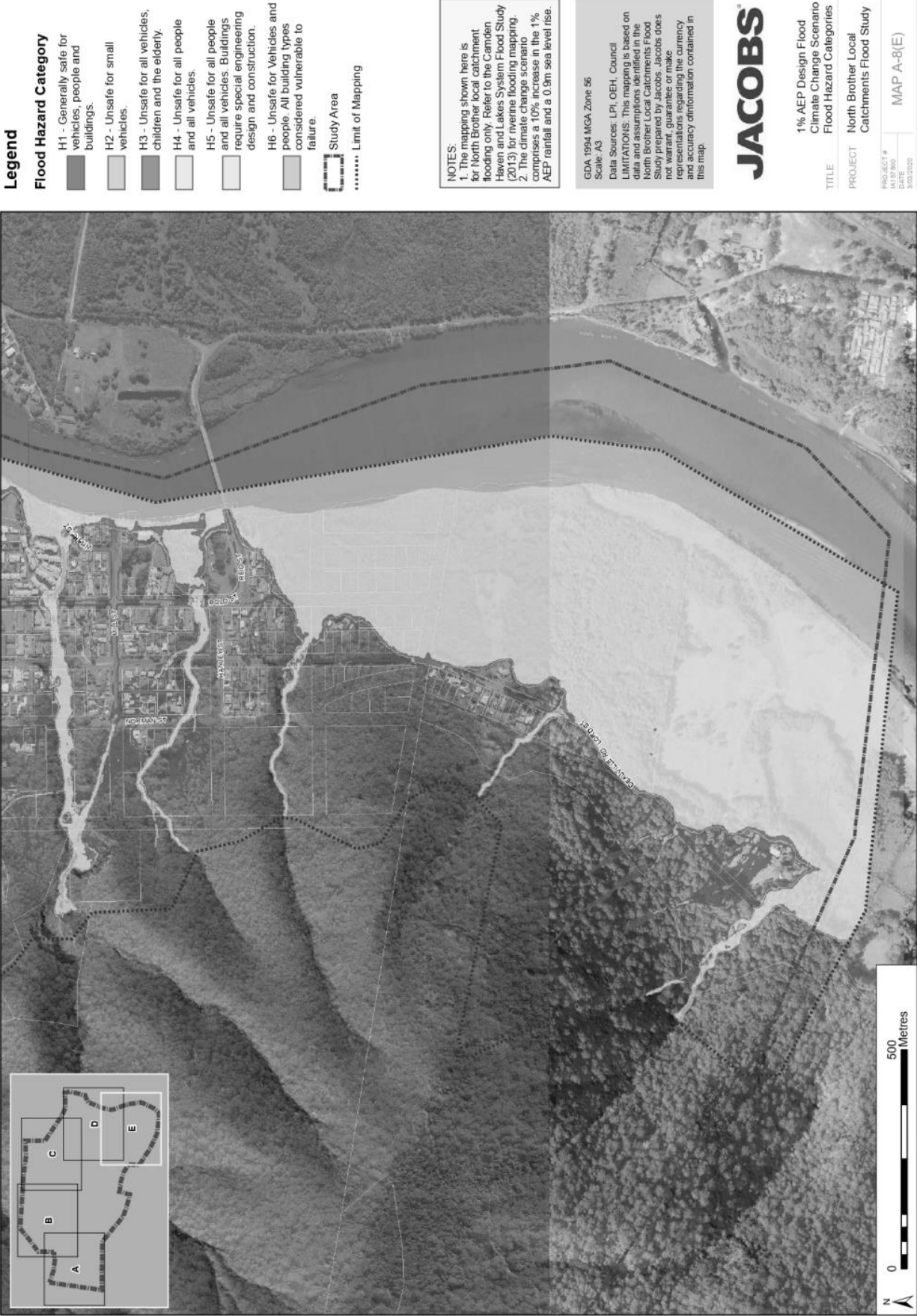














Legend

Hydraulic Categories

Floodway

Flood Storage

Flood Fringe

Watercourse

Study Area

Limit of Mapping

NOTES:  
1. The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.  
2. The climate change scenario comprises a 10% increase in the 1% AEP rainfall and a 0.9m sea level rise.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data or representations regarding the currency and accuracy of information contained in this map.



1% AEP Design Flood Climate Change Scenario Hydraulic Categories	
TITLE	North Brother Local Catchments Flood Study
PROJECT	
PROJ. SET #	MAP A-9(A)
INSTR. #	
DATE	8/12/2018



**Legend**

**Hydraulic Categories**

- Floodway
- Flood Storage
- Flood Fringe
- Watercourse
- Study Area
- Limit of Mapping

**NOTES:**

1. The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.

2. The climate change scenario comprises a 10% increase in the 1% AEP rainfall and a 0.3m sea level rise.

GDA 1994 MGA Zone 56  
Scale: A3

Data Sources: LPI, OEH, Council

**LIMITATIONS:** This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data and representations regarding the currency and accuracy of information contained in this map.



1% AEP Design Flood Climate Change Scenario Hydraulic Categories	
TITLE	North Brother Local Catchments Flood Study
PROJECT	
PROJECT #	MAP A-9(B)
DATE	8/12/2018



**Legend**

**Hydraulic Categories**

Floodway

Flood Storage

Flood Fringe

Watercourse

Study Area

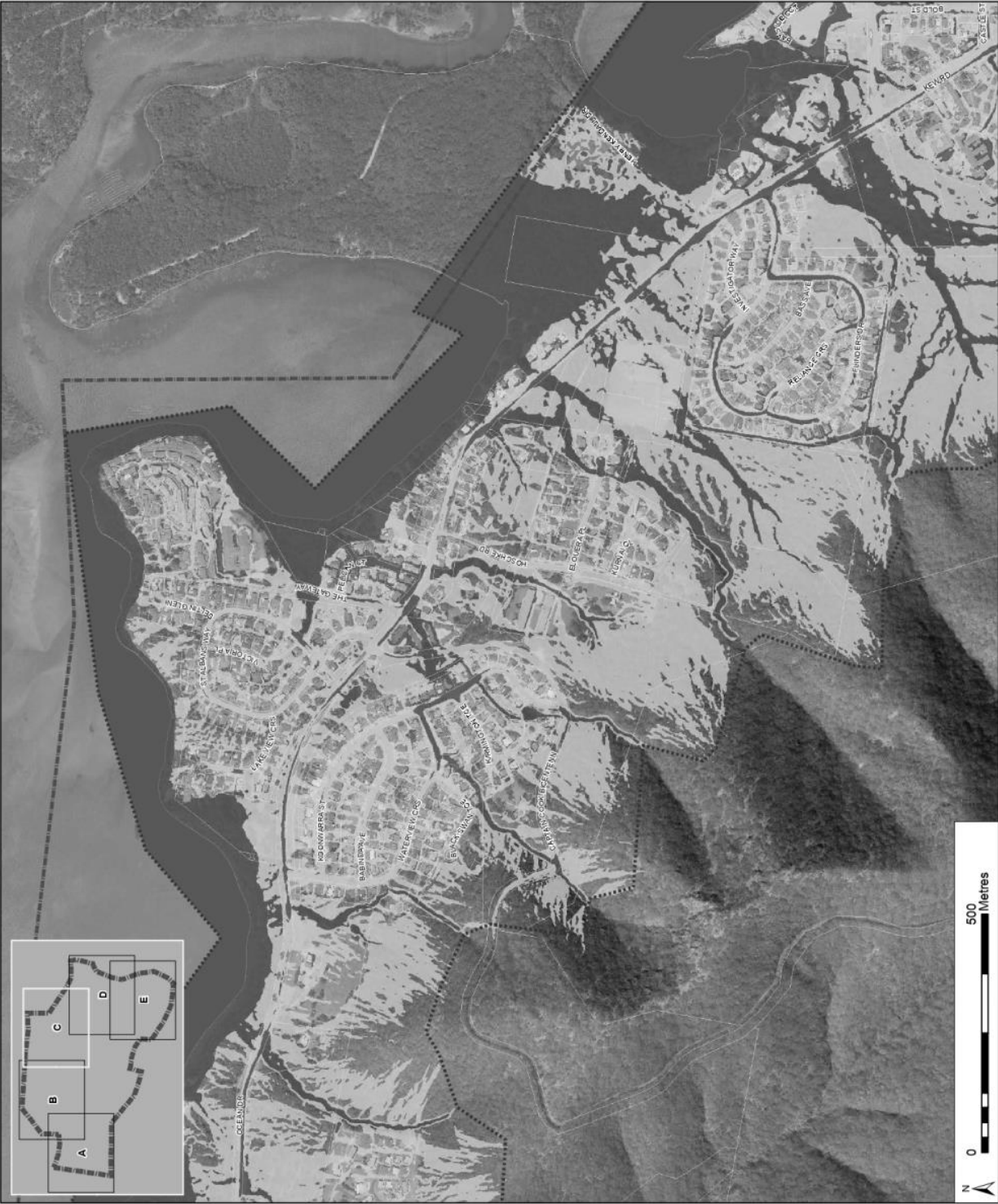
Limit of Mapping

**NOTES:**  
1. The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.  
2. The climate change scenario comprises a 10% increase in the 1% AEP rainfall and a 0.3m sea level rise.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
LIMITATIONS: This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data and representations regarding the currency and accuracy of information contained in this map.



TITLE	1% AEP Design Flood Climate Change Scenario Hydraulic Categories
PROJECT	North Brother Local Catchments Flood Study
PROJECT #	MAP A-9(C)
DATE	8/12/2018



**Legend**

**Hydraulic Categories**

Floodway

Flood Storage

Flood Fringe

Watercourse

Study Area

Limit of Mapping

**NOTES:**  
1. The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.  
2. The climate change scenario comprises a 10% increase in the 1% AEP rainfall and a 0.9m sea level rise.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
**LIMITATIONS:** This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data or representations regarding the currency and accuracy of information contained in this map.



TITLE	1% AEP Design Flood Climate Change Scenario Hydraulic Categories
PROJECT	North Brother Local Catchments Flood Study
PROJ. SET #	MAP A-9(D)
INSTR. #	
DATE	8/12/2018





**Legend**

**Hydraulic Categories**

Floodway

Flood Storage

Flood Fringe

Watercourse

Study Area

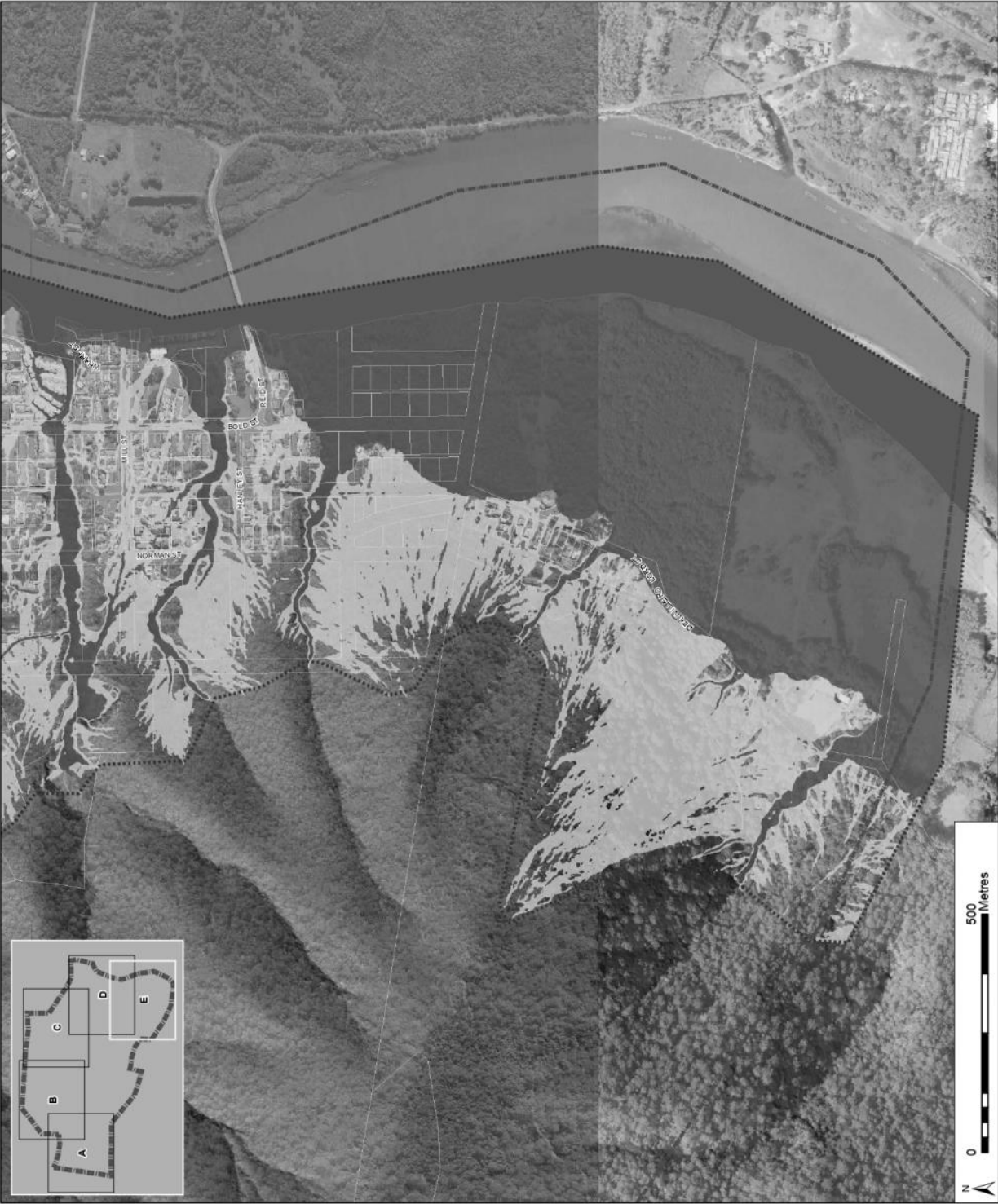
Limit of Mapping

**NOTES:**  
1. The mapping shown here is for North Brother local catchment flooding only. Refer to the Camden Haven and Lakes System Flood Study (2013) for riverine flooding mapping.  
2. The climate change scenario comprises a 10% increase in the 1% AEP rainfall and a 0.9m sea level rise.

GDA 1994 MGA Zone 56  
Scale: A3  
Data Sources: LPI, OEH, Council  
**LIMITATIONS:** This mapping is based on data and assumptions identified in the North Brother Local Catchments Flood Study prepared by Jacobs. Jacobs does not warrant the accuracy of the data or representations regarding the currency and accuracy of information contained in this map.



1% AEP Design Flood Climate Change Scenario Hydraulic Categories	
North Brother Local Catchments Flood Study	
TITLE	MAP A-9(E)
PROJECT	
PROJ. SET #	
DATE	8/12/2018



# Flood study outlines risk

BY LIZ LANGDALE AND TRACEY FAIRHURST

PORT Macquarie-Hastings Council is urging community members to have their say once the North Brother Flood Study goes on public exhibition from July 13.

Since the North Brother Local Catchments Flood Study was completed in 2019, council has engaged consultants Jacobs Pty Ltd to undertake further investigative works.

This includes a floor level

study and above flood level flooding risk assessment, associated with a flash event originating from the mountain catchment.

Port Macquarie-Hastings Councilor Lisa Intemann said the study is just one stage of a very long process which looks to address the risk associated with overland flooding from the North Brother Mountain in the Camden Haven.

"It's very important for the community to be aware of this (study) and to see

those locations that might be affected by stormwater minimisation measures," she said.

Camden Haven resident Simon Hancox said his biggest concern is the large volume of residents who would be impacted as a result of the mapping, in comparison to those who have directly been impacted by major storm events in the past.

"The question that no one from council could answer when I attended the meeting, was how many physical

properties had damage caused or high volume impact from these events? (one in 100 storm events)," he said.

Mr Hancox estimates only a very small number of properties would have actually been damaged by these incidents.

However, he said if hundreds of properties are included as part of the flood mapping, it could have negative consequences for residents in terms of sale prices and home insurance

payments.

Cr Intemann said insurance companies don't solely rely on mapping to determine police.

"They do their own assessment of risk," she said.

Cr Intemann said residents could benefit from the mapping because in the future council could carry out works to help minimise flood risk to properties.

"If risk is reduced (by council), that means their (residents') risk is reduced," she said.

For risk assessment and modelling purposes, the floor level of all remaining properties in the study area (those located clear of modelled high hazard flooding) were estimated to be 200mm above the height of the ground level at the building.

A spokesperson from council said nothing is off the table when it comes to feedback.

Council is appealing to residents to make a submission once the study goes on exhibition from July 13.

## Kew consultations underway

COMMUNITY members are set to have their say on an upgrade for the main street in Kew.

Around \$1,600,000 in funding is available for the upgrades after Port Macquarie-Hastings Council secured \$800,000 in grant funding from the Building Better Regions Fund. Another \$800,000 was received in matched funding from council to continue and finalise a concept plan designed by

sulancy, Lindsay Dyan Pty Ltd.

Camden Haven Chamber of Commerce president Stuart Bate said Kew is the gateway to the Camden Haven and the first impression for visiting tourists.

"Kew is a thriving business centre utilised by locals and rural residence of the Camden Haven," Mr Bate said.

"Kew has developed a strong community essence and supports the economic

many people. Improvements to the main street will be welcomed by all as a sense of renewal and validation."

The improvement works are expected to capitalise on the planned population growth for the area, outlined in the council's Urban Growth Management Strategy 2017-2036.

Provide feedback on the plans by visiting haveyoursay.pnhc.nsw.gov.au/kew-main-street



NEW PLANS: Public consultations are underway in Kew. Photo: PMHC

## North Brother Local Catchments Flood Study | Zoom Meeting Minutes

**Date:** Monday 27 July 2020

**Time:** 5.30pm - 6.30pm

**Location:** Zoom

### Attendees:

Community Members	PMHC
Michael Carroll (MC) Joy Walker (JW) Susanna van Niekerk (SvN) Bernie Cheetham (BC) Mark and Kerrie Canterbury (M&KC) Robert Scott (RS) Stewart O'Brien (SOB) Bernard Verkuylen (BV)	<b>Mark Edenborough</b> - Senior Stormwater Engineer, Infrastructure Planning (ME) <b>AG Gray</b> - Community Engagement Project Officer (AG)

### Action

- Assess existing culvert at head of infrastructure at Captain Cook Drive (ME)
- Mark to follow up to see where Ocean Drive (near Number 388) sits on Council's road upgrade hierarchy.
- Respond to Robert's question re PMHC maintenance on behalf of NPWS from 2013 - why has this not progressed? (ME)
- Add the drain between 57 and 59 Koonwarra Street to the needs to be added to the stormwater hot spot watch list. (ME)
- Mark to look at existing culvert at 38 Kirmington identified by Bernie as being a potential hazard with erosion well below the pipes.

### Introduction

- AG admitted people in to the meeting.
- Welcomed attendees and introduced PMHC representatives.
- Requested permission to record meeting purely for record keeping and to make sure we have captured questions. Permission granted by all attendees (filed in Content Manager).
- AG explained how the meeting would run - Mark to give you an overview/presentation of the project; we will then hand over to you to ask questions.
- AG advised that everyone would have the opportunity to speak and encouraged attendees to ask questions in the chat function.
- Any questions that required a detailed response will be taken off line and Mark will follow up.
- Zoom housekeeping, please stay on mute unless speaking.
- If we start to lose quality suggest turning off video.

### Project Overview (ME) 5 mins

- What we are doing
  - Long History of flooding in the study area.
  - Council needs to assess flood risks holistically in order to appropriately prioritise and fund remedial works – not just the 'squeaky wheel'

- Protect the community and manage future development to make sure it's compatible to the site
- Flood Study under state govt FRM Scheme provides council with access to 2:1 grant funding for the study and any resultant actions from the FRMP
- Flood Study Adopted July 2019
- Since that time:
  - Floor level survey
  - Defining actual risks associated with flooding identified in FS
  - Prioritising risks from a technical perspective and development of draft options
  - NOT ALL RISKS CAN BE ADDRESSED IN SHORT TERM – refine plan over time
    - Why we are only looking at 4 locations
    - What about the other properties?
- Draft Options Report
  - Structural – defined locations and describe works
  - Non Structural – summary slide and define
- Why we need feedback
- Next Steps

**Screen share (ME)**

Options mapping – 4 maps with options

Flood mapping – where it floods

**Attendee Q&A**

Question	Answer
MC: St Joseph's School originally located near Coles and they relocated many years ago and it was swampland then, when they relocated. Would the Catholic Church bear any of the costs for upgrading the stormwater facilities?	ME: Not considered at this stage that the Church would have to. In similar cases, although not at this scale, when they have ended up in court, more often than not it falls back to Council as having approved the development.  It would be worth us chatting to the Church to see if they have anything to contribute given that it is an extremely expensive fix there.
MC: Is voluntary acquisition likely? MC: So what happens in the event of the owner passing away?	ME: I've spoken to both these landowners and unsurprisingly perhaps they have indicated that they are not willing to sell to Council. Under the current funding model that we are seeking, any acquisitions must be voluntary so if the residents don't agree, it's off the table.  We are looking at alternate solutions  These are multi-million dollar solutions that take a long time to fund so if one of those properties came on the market we could revisit that.

<p>M&amp;KC: Option 4A the lowest point in the street is between 57 and 59 Koonwarra Street. There is already a drain and path there.</p> <p>Just open up the path. We have been here since 2007 and have never seen water from Black Swan flow down past 53 Koonwarra.</p>	<p>ME: My initial thoughts were why haven't we flagged one of the properties either side of the existing pathway for acquisition if that path wasn't wide enough? When you look at the desire lines of run off from Black Swan and Waterview Crescent, the water is trying to go straight through 53 Kirmington through the bushland where the water is deeper. It is another 50meters to take it down to the existing pathway.</p> <p>Given the residents of 53 Koonwarra are not open to selling then we would be looking at testing other measures such as widening or lowering the existing path potentially with larger pipes or culverts beneath it.</p> <p>That area in the reserve to the rear of properties was originally designed as a stormwater detention basin but it hasn't functioned as it should have. So the next solution we'll have to look at as we come out of the exhibition period and other feedback, we would look at amplifying that pathway and making that detention system operate more effectively - perhaps with earthworks. Going through this process and the state government scheme gives us more options to look at in areas like this.</p>
<p>SvN: support structural implementation done properly to direct flow properly and prevent damage to infrastructure.</p>	<p>ME - Agree with the sentiment. The aim of going through the flood plain risk management process is to come up with properly engineered and well-designed solutions so that we don't end up in this situation again in 20-30 years' time.</p> <p>Previous infrastructure from 20 years ago was inadequate to cope with the water flow off the mountain.</p>
<p>BC: Chris and I live in Kirmington and have been here for 2 years. I haven't seen much local flooding but did see some in 2008 and witnessed some flooding on Ocean drive then. If the acquisition of 53 Koonwarra went ahead, would Kirmington Tce be a flood path to feed that area and if so is the thought of flood level restrictions on any of those properties? Most of the properties stand above the level of Kirmington but it does concern me that</p>	<p>ME: It is not the intent for Kirmington Tce to act as a feeder should 53 Koonwarra be acquired. The land on that property would act a relief point for Koonwarra and lowered so that water flowing past that point would tip into the reserve, protecting properties further down the street.</p> <p>From a technical perspective utilising the land at 53 Koonwarra doesn't require culverts and pipes but from a social and financial perspective of buying a property,</p>

<p>If flood level restrictions put on properties - impact on property prices but I'm concerned about insurance if we are listed in a flood zone. I think we will run into big problems with insurance.</p>	<p>potentially outweigh that. That's why we are raising this with the community now</p>
<p>BC: I also agree with M&amp;K about the existing flow path - needs a lot of maintenance and vegetation removed to open it up. In Feb flood 200+ rainfall the pipework between 57 - 59 didn't cope with the flow.</p> <p>I think that area if it was upgraded and better drainage put downstream where it does the right hand turn and connect with The Gateway would seem to be a sound solution.</p> <p>At the top end of the existing flow path at the top of Kirmington there is one property - no. 38 I think, our friend from there</p> <p>The culvert is extremely deep he is worried that the water coming down Cpt Cook Bicentennial Drive doesn't right hand turn and is continually undermining the culvert in that area and could become a danger.</p> <p>I think the study needs to go to the head of the culvert. Very deep gully and appears to be a fair bit of erosion down below the pipes.</p>	<p>ME: Agree that pipes need to extend further toward The Gateway because if we increase the rate of flow at the existing path it increases the risk to properties further north.</p> <p>ME: will go and have a look at Capt Cook Drive to assess risk. Those culverts are concrete lined and we've had a lot of scour issues in that area historically. I am keen to come and walk through to see if there is anything that needs to be done in the interim.</p> <p>When it comes to putting designs together in the next phase we can include a review of those culverts.</p> <p>It is important that this local knowledge is shared. If you think of anything else please make a submission so that we can formally capture the information.</p>
<p>Robert: As the stormwater flow starts in NPWS land what is in place for cost sharing and other obligations from NPWS?</p>	<p>ME: NPWS sit on the Coast Estuary and Flood Plain Committee.</p> <p>Their view is that this is existing natural land and that developments are essentially Council's issue as we are the approving body. It is disappointing but the objective of this process is to gain funding under the state govt FRM Scheme. NPWS are an important stakeholder and we have been consulting with them and will continue to do so, which will help when we are looking at works on NPSW land then there are no surprises and they have been part of planning solutions.</p>
<p>K&amp;M: A system of maintenance is essential for the flow paths. They are often obstructed with debris.</p>	<p>ME: Explained that the Stormwater team has a number of known properties at risk of flooding across the LGA. We have a hot</p>

<p>AG: Noted that the issue of maintenance has come up in other submissions.</p> <p>The one between 57 and 59 Koonwarra needs to be added as it is never cleared until after the event</p>	<p>spot register that notes debris generating weather (east coast low events). The stormwater maintenance team then attends site to see what needs to be done to clear drains/flow paths prior to the event and afterwards.</p> <p>In this study area we have Tunis Street, Black Swan Tce and Pelican Crct is on the list inspection.</p> <p>Are there any other systems to be added to the list? Mark invited attendees to contact him with other areas that he could have assessed and acknowledged that the area around Kirmington and Koonwarra had been identified by attendees.</p>
<p>MC: The report looks at 384 and 386 Ocean drive affected by flood waters. I know the person in 388 and there is no curb and guttering outside his place and no piping or drain to take the water to the gully so often in heavy rain his garage floods. He isn't that high above road level.</p> <p>Ocean drive is narrow at that point are there any plans to widen the road or put in curb and guttering?</p>	<p>ME: We haven't identified anything in this flood study process with regard to Ocean Drive.</p> <p>Mark to follow up to see where Ocean Drive (near Number 388) sits on Council's road upgrade hierarchy.</p>
<p>Joy: Insurance policies in flood prone areas. I'm in Sirius Drive, Lakewood has now had a premium attached to it. Has council given any information to insurers?</p> <p>Can I confirm that even though we have commented tonight, we still have to put a submission in?</p>	<p>ME: what is on the screen is publicly available but none of this has been given to insurance agencies only flood levels in the Camden Haven.</p> <p>AG: I would encourage that so that we can formalise your comments and include them in the report following public exhibition.</p>
<p>RS: This may not have been a priority, but there are water diversions drains/levies that lie in NPSW land above Quarry Way that is blocked and overgrown this was acknowledged by PMHC in 2013 in a letter stating they had plans to carry out maintenance on behalf of NPWS but it has not progressed. The question is why hasn't this been progressed over the seven years?</p>	<p>Not responded to during meeting</p>
<p>Bernie: with the next stage what is the size of the document? People are scared off by the size of the document,</p>	<p>ME: We hope that we are able to undertake face to face engagement as the project progresses.</p>

is there any way that public meetings can be included in the notification.	AG: Acknowledge the complexity of the project and noted that we would look at ways to make it easier for the community to understand the project and how it might affect them. From an engagement perspective investigate ways to connect with the demographic.
Joy: next community newsletter will there be an update?  Can I confirm that the comments we have made that we still need to make a submission?	AG: Explained that the letter that was sent out to residents was a project update and that, while the Community Newsletter was no longer being sent out, we would look at ways to update the community that was more accessible than FB or Zoom.  It is challenging to undertake face to face engagement; we will try to share across other media channels.  Open until 9 August; via HYS. ME: shared HYS screen and explained where to find it.  AG: We sent out 2000 letters to stakeholders as a summary and to invite them to review the Report. It was interesting for us to see the turn out from the letters, not as many as we expected. Look at how we can improve engagement.

**Close**

- Thank you all for joining us today – you can always contact Mark directly if you have any other questions. (Mark put email and phone number on screen)
- And, thank you to those who have provided feedback on this project already, there is still time to do so, the Assessment Report is on public exhibition until 9 August.
- We encourage you to speak to your neighbours and peers who might live in the catchment area. We are very keen to hear from the broader community.



### North Brother Local Catchments Flood Study - Results of Exhibition of Draft Options Assessment Report *Community Submissions*

**Table 1 - Summary of submissions**

<b>Issue - Location of high priority works</b>		
CRM 12041 / 2020	Wayne Fuller	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <p>Does not agree with locations selected for high priority mitigation works. Alternate locations are:</p> <ul style="list-style-type: none"> <li>• Repair and maintain The Boulevard and Camden head Road.</li> <li>• Provide footpaths between Laurieton and the Beach.</li> </ul>
	<b>Response/ Comment:</b>	<p>This project seeks to identify potential works and measures to mitigate the flood risks associated with Local Catchment Flash Flooding from the North Brother Mountain.</p> <p>The works requested relate to Councils separate road rehabilitation and footpath program.</p>
<b>Issue - Location of high priority works</b>		
CRM 12041 / 2020	George Pagacs	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <p>Does not agree with locations selected for high priority mitigation works. Bushfire protection is a higher priority.</p>
	<b>Response/ Comment:</b>	<p>This project seeks to identify potential works and measures to mitigate the flood risks associated with Local Catchment Flash Flooding from the North Brother Mountain.</p> <p>Implementation of any mitigation measures adopted at the Floodplain Risk Management Plan phase will be assessed for funding priority against all other Council priorities for such as bushfire protection works, through a future Operational Plan budgetary process.</p>
<b>Issue - Maintenance of existing diversion drain</b>		
CRM 12039 / 2020	Robert G Scott	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <p>Maintenance of the diversion drain located beneath the Laurieton Reservoir is seen as a higher priority than the identified works. Mr Scott advises that this drain is over grown and in need have significant maintenance to restore the channel to its designed task of diverting water away from Quarry Way properties.</p>

**Table 1 - Summary of submissions**

	<b>Response/ Comment:</b>	<p>This drain has been subsequently inspected and it is agreed that the drain is overgrown and in need of maintenance. However the subject drain is located with National Parks land is not under the care and control of Council. Further, National Parks obtains no benefit from maintaining this drain, as it is located at the downstream end of the National Park.</p> <p>Maintenance of this drain (and other diversion drains not located in Council land) will be considered in the preparation of the upcoming Floodplain Risk Management Study and Plan process. Suggest that plan give consideration to developing a maintenance plan for these drains in partnership with National Parks Authority.</p>
<b>Issue - Maintenance of existing open drain</b>		
CRM 12037 / 2020	Ian Butlin	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in HYS summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>a) Request to maintain the existing open drain along Ocean Drive adjacent to Lilli Pilli Close. This drain has not been cleaned since last flood event 2013.</li> <li>b) Support for Council to implement flood mitigation works in the catchment. Further development in flood prone areas is not supported.</li> </ul>
	<b>Response/ Comment:</b>	<ul style="list-style-type: none"> <li>a) Subject open drain has been risk assessed and maintenance works currently being programmed via a separate CRM.</li> <li>b) This project will ultimately result in the adoption of a range of structural and non-structural measures which will result in the outcomes noted.</li> </ul>
<b>Issue - Maintenance of existing open drain and vegetation</b>		
CRM 12106 / 2020	Michael Ducat	Existing trees along Tunis Street and located in the stormwater drain constrict flows and continually drop limbs on adjoining homes
	<b>Response/ Comment:</b>	<p>Tunis Street has been identified as one of the locations for prioritised remedial works, with an augmented piped drainage system identified as a preliminary solution. Such works would replace the need for the current open drains in this location.</p> <p>Whilst no related to the current project, a separate request has been forwarded to Council's Parks Team to assess the safety of the existing trees at this location.</p>
<b>Issue - Maintenance of existing open drains upstream of Ocean Drive</b>		
CRM 11744 / 2020	Robert Ellicott	Submission provides recommendations regarding various locations to undertake open drain maintenance works upstream of Ocean Drive in the vicinity of Captain Cook Bicentennial Drive

**Table 1 - Summary of submissions**

	<b>Response/ Comment:</b>	A site meeting was held with Mr Ellicott and the subject open drains were inspected. Whilst these maintenance works are not the subject of this study, a separate maintenance request has been created to clear palm fronds and debris from the drains in the locations described by the customer and as inspected on site.
<b>Issue - Maintenance of existing open drains upstream of Ocean Drive</b>		
CRM 12310 / 2020	Christine Kurteff	<i>Hard copy survey submission</i> - yes/no responses to predefined questions included in summary table.  Additional comments as below:  Resident is landowner of one of the two properties identified for voluntary land acquisition (Pelican Ct) and has indicated that she is not willing to participate in a Voluntary Purchase if required.  Furthermore, and prior to the commencement of the exhibition period, a site meeting was conducted with Mrs Kurteff to discuss the study and identified potential impacts to her property. Mrs Kurteff also verbally informed Council at that stage that she would not support an acquisition of her property.
	<b>Response/ Comment:</b>	As a Voluntary Acquisition was suggested within the Draft Options Report and the landowner is not agreeable, an alternate solution requiring no land acquisition at this location will be investigated during the preparation of the Floodplain Risk Management Study and Plan.
<b>Issue - Request for general open drain maintenance</b>		
CRM 12308 / 2020	Frances Forman	<i>Hard copy survey submission</i> - yes/no responses to predefined questions included in summary text.  Additional comments as below:  Large amount of leaf litter located within the open drains, which can block and cause flooding in heavy rain. Request for general maintenance.
	<b>Response/ Comment:</b>	Site inspection of the open drains upstream of and in proximity to the resident's property was undertaken on 30 July 2020, with no significant debris buildup located. The area will continue to be monitored as part of ongoing routine inspections, with future maintenance programmed as required.
<b>Issue - Ocean Drive and Brotherglen overland flooding</b>		
CRM 12369 / 2020	Michelle Taylor	<i>Hard copy survey submission</i> - yes/no responses to predefined questions included in summary text.  Additionally, Ocean Drive near Brotherglen Drive has been identified by this submission as an additional location for stormwater mitigation measures on the basis that the resident has driven through floodwater at this location on numerous occurrences.
	<b>Response/ Comment:</b>	The Flood Study phase of this project has identified that this location is subject to overland flooding as suggested, however

**Table 1 - Summary of submissions**

		<p>the risks associated with flooding at this location have been determined to be lower than those that have been identified for structural flood mitigation measures at this stage. See Flood Hazard mapping for details.</p> <p>Whilst it would be great to design concept solutions for each location where there is a risk of flooding identified, the current Floodplain Risk Management Study and Plan process aims to identify, assess and prioritise works at a small number of high risk locations only at this stage. This is on the basis that the costs associated with remedying all flood risks to the catchment in the short term would be unaffordable. Hence, to streamline the Floodplain Risk Management Study and Plan Process, we are attempting to prioritise the highest risk locations only.</p> <p>Once future works have been completed to address the current high prioritised, an updated Floodplain Risk management Study would be prepared to re-prioritise and assess the next ranked priorities for further consideration and assessment.</p>
<b>Issue - Emergency access/escape route</b>		
CRM 12492 / 2020	Lorna Schumack	<p>Verbal submission collected via phone call on 24 July 2020 -</p> <p>Resident suggested that a separate bridge/culvert crossing be considered across the drain located to the south of the Theatre in Laurieton. The location of this bridge could be to the rear of the Community Health building and would function to provide an alternate access to Dunbogan if Bold Street were cut off by flooding at the gully.</p> <p>Also suggested the addition of a roundabout at Bold and Mill Streets, Laurieton to improve traffic flow.</p>
	<b>Response/Comment:</b>	<p>Emergency access/escape have not been considered to date, however escape/access routes such as the one proposed will be considered and assessed during the preparation of the Floodplain Risk Management Study and Plan.</p> <p>Suggestion regarding the placement of a roundabout is outside the scope of this project and has been referred to Councils' Transport Planning Team for a separate response.</p>
<b>Issue - Emergency access/escape route</b>		
CRM 12585 / 2020	Daphne Eggins	<p>Hard copy submission - yes/no responses to predefined questions included in summary text.</p> <p>Submission also asks a number of questions as noted below:</p> <ol style="list-style-type: none"> <li>1. Why does the water in the north end of Lake Street not go around to the river? The corner goes uphill.</li> <li>2. Where does the water from the creek between the service station and shop on Bold Street come out?</li> <li>3. Why does the manhole on the corner of Lake and Tunis Streets lift and flood out during heavy rain?</li> <li>4. Why cannot all the water from the top of Tunis Street be piped to the river?</li> </ol>

**Table 1 - Summary of submissions**

		<p>5. The drain should not have been put in the block where it is in Lake Street.</p> <p>6. Why do we have to put up with all the water coming across the road?</p> <p>7. Footpath adjacent to Mrs Eggins' property was lifted as part of an adjoining development and she was advised that it would also be lifted adjacent to adjoining properties at that time. This never occurred and the adjoining property with a lower level footpath is now flooded.</p>
	<b>Response/ Comment:</b>	<p>Responses to the queries raised are as below:</p> <ol style="list-style-type: none"> <li>1. Topography of the Lake and Tunis Street intersection directs overland flows from the upper catchment from Tunis Street into Lake Street, This has been confirmed by the modelling undertaken at the Flood Study Phase. This is a result of historic road and subdivision design practices employed in the early design of the Laurieton Township. Current standards would likely result in a very different layout.</li> <li>2. This surface runoff is captured in a piped drainage network just upstream of Kew Road. The piped drainage then conveys flows into Tunis Street and eastwards to the Camden Haven River. Mapping of Council's piped stormwater drainage network can be viewed online here: <a href="https://www.pmhc.nsw.gov.au/Building-Planning/Industry-Resources/Online-mapping-of-underground-services">https://www.pmhc.nsw.gov.au/Building-Planning/Industry-Resources/Online-mapping-of-underground-services</a></li> <li>3. This lid is understood to be a stormwater pit lid at this location. The pit lid would lift as a result of the pressure of the large volumes of stormwater flowing within this undersized stormwater drainage system - i.e. the system is undersized and stormwater is surcharging from this under pressure.</li> <li>4. As noted above, the existing stormwater system within Tunis Street is significantly undersized and does not have capacity to convey flows generated by the upstream catchment without surcharge/overflow. This was identified and confirmed by the North Brother Local Catchments Flood study and has subsequently been prioritised as one of the 4 highest risk locations in the catchment. The concept of collecting all runoff from the top of Tunis Street is essentially what has been identified in Structural Mitigation Option 6D within the Draft Options Report and will be further modelled and assessed as part of the upcoming Floodplain Risk Management Study and Planning process.</li> <li>5. Agreed - current development standards would not have resulted in the stormwater system and overland flowpaths within Lake Street looking as they do today. This is unfortunately a historic development issue, with the works designed and constructed prior to current standards and levels of understanding of the flowpaths originating from the upstream North Brother Mountain.</li> </ol>

**Table 1 - Summary of submissions**

		<p>6. In identifying the Tunis Street flowpaths as one of the highest risk priority locations for structural mitigation works, Council is working towards remediating the problems currently experienced at this location. Unfortunately, these works are likely very high cost, however by identifying the scope of the issue and designing mitigation measures via the State Governments Floodplain Risk Management Process as we are doing, Council will be eligible to apply for grant funding to assist with the costs associated with constructing the flood mitigation measures identified by the Floodplain Risk Management Plan prepared at the conclusion of this project.</p> <p>7. Modelling has indicated that the large volumes of stormwater overflows arriving at this location cannot be simply redirected by works to raise a footpath. A significant pit and pipe system upgrade is required - such as that identified in Option 6Dof the Draft Options Report.</p>
<b>Issue - Mitigation of measures impacting Laurieton United Service Club</b>		
CRM 12498 / 2020	Greg Armstrong - Submission on behalf of LUSC	<p>Submitter cannot find information in the report detailing where the study considers or addresses the existing stormwater drainage and flooding problems impacting the Laurieton United Services Club.</p> <p>Submission queries Council's prior written advice to the Club that any works to extend the pipeline traversing the property and / or create an easement on that property may be considered as part of any future development application by the Club.</p> <p>Requests that Jacobs review the flooding experienced by the natural waterway within the Club land and suggest mitigation options.</p>
	<b>Response/ Comment:</b>	<p>The Flood Study phase of the project identified and defined the scope and extent of flooding within the study area. A copy of the Flood Study can be viewed online here: <a href="https://www.pmhc.nsw.gov.au/Services/Environment/Waterways-and-coastlines/Floodplain-management/North-Brother-Local-Catchments">https://www.pmhc.nsw.gov.au/Services/Environment/Waterways-and-coastlines/Floodplain-management/North-Brother-Local-Catchments</a></p> <p>The Draft Options Report defines the risk assessment process that has been undertaken to date to arrive at the current four high priority locations for flood mitigation works and the conceptual options identified to address flooding within the catchment by non-structural means.</p> <p>No works have been identified or proposed to address the flooding problems experienced by the club at this time as a result of the study and investigations to date identifying other higher priority locations. This is not to say that the club does not have any issues, rather that there are other locations in the study area that pose a greater risk to life and property.</p> <p>Council's prior advice to the club that any works to extend the existing stormwater pipelines through the club site would be</p>

**Table 1 - Summary of submissions**

		<p>assessed as part of a future development application by the club for expansion works still stands. This is on the basis that the pipelines traversing the LUSC property were constructed over an existing creek/gully by LUSC at time of initial development to enable the orderly development of that site. There would be no public benefit (only private) to Council extending these pipelines further than existing.</p> <p>Furthermore, the requirement to create an easement over the existing pipelines was a development requirement of the initial works by the Club which remains outstanding.</p> <p>The North brother Local Catchments Flood Study (link above) already defines the extent of flooding experienced by the flowpath through the LUSC site. No further analysis is required at this stage. Note that the subject creek is a tidal component of the Camden Haven estuary and is also substantially flood affected by riverine flooding from the Camden Haven River. Details of the Camden Haven River flood extents can be found within the Camden Haven River Flood Study here:  <a href="https://www.pmhc.nsw.gov.au/Services/Environment/Waterways-and-coastlines/Floodplain-management/Camden-Haven-floodplain">https://www.pmhc.nsw.gov.au/Services/Environment/Waterways-and-coastlines/Floodplain-management/Camden-Haven-floodplain</a></p>
<b>Issue - Suitability of development applications in flood prone areas</b>		
CRM 12789 / 2020	Faith Bell	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>• Notes that Pelican Ct is a natural watercourse form the North Brother Mountain and feels that the areas should not have been developed.</li> <li>• Noted that drainage system upstream of Tallowood Place operates very well</li> <li>• Council should cease accepting building applications in flood prone areas at the base of the mountain until detailed flood studies have been finalised</li> </ul>
	<b>Response/ Comment:</b>	<p>Pelican Ct does function as the natural overland flowpath from a number of upstream natural gullies on the lower slopes of the North Brother Mountain and appears to have been a natural gully/stream prior to its development in the early 1990's.</p> <p>The area poses a high flood hazard and has been identified as one of four high priority locations for structural mitigation works.</p> <p>In relation to future building applications, whilst there are currently no planning controls in place around overland flooding from the North Brother Mountain, the Draft Options Report lists a number of high level non-structural measures, including planning controls which will be developed further in the upcoming Floodplain Risk Management Study and Planning Phase of the project.</p>
<b>Issue - Changes to LEP and Flood Policy &amp; Option 8B and alternatives</b>		

**Table 1 - Summary of submissions**

CRM 12919 / 2020	Andrew McCoubrie	<p>Very detailed submission has been prepared addressing two separate issues:</p> <ol style="list-style-type: none"> <li>1. Changes to LEP and Flood Policy</li> </ol> <p>Submission concerned that significant changes to the LEP and Flood Policy would result in far-reaching consequences to the affected property owners and to the greater Camden Haven area including increased insurance premiums, reduced property values, increased development restrictions and increased development costs.</p> <p>Submission queries why the Draft Options report does not discuss the proposed changes in detail, nor why any of the potential impacts are discussed?</p> <p>Mr McCoubrie believes that a majority of residents and those who received notification of the Draft Options Report would not comprehend the potential impacts of this policy recommendation. By not including any discussion of the potential consequences of LEP and Flood Policy changes, the community response may be misrepresented and any future actions by Council based upon this draft survey could be misguided and wasteful.</p> <p>Submission defines five impacts that are perceived to result from changes to the LEP and Flood Policy:</p> <ol style="list-style-type: none"> <li>i. The impacts and losses of increased insurance costs.</li> </ol> <p>Submission advises that Property and Business insurance will become harder to obtain and premiums will increase if properties are mapped as flood effected. Examples provided of property in North Haven and Dunbogan.</p> <ol style="list-style-type: none"> <li>ii. The loss of property value caused by updating Section 10.7 certificates.</li> </ol> <p>Submission queries the impact of 10.7 certificate informing a property purchaser of a high flood risk on sale values and process.</p> <ol style="list-style-type: none"> <li>iii. Development restrictions on potential uses of affected properties.</li> </ol> <p>Submission defines requirements of the current flood policy in regard to controls for building in Floodways' or Flood Storage Areas' and some of the impacts that those restrictions may have on a landowner - limited development potential, raised floor levels, higher costs etc. in addition to the related impacts of such development on adjoining properties such as view losses and privacy.</p> <p>Mr McCoubrie's property is substantially impacted by overland flooding as identified by the North Brother Flood Study and the</p>
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**Table 1 - Summary of submissions**

		<p>submission raises concern that LEP provisions will sterilise his land, devaluing the property.</p> <p>iv. Development costs</p> <p>Submission notes that modifying the LEP would potentially trigger additional planning requirements on any potential development (building extensions, replacing your home, new developments etc.) such as:</p> <ul style="list-style-type: none"> <li>• A property owner will most likely be required to undertake some form of "Flood Impact Assessment", which can add \$000's to development costs</li> <li>• Flood impacted properties are typically required to undertake specialised construction measures, based on specialist design and survey as required to meet the flood zoning requirements. This adds further cost.</li> <li>• Most property developments (rebuilt, extensions etc.) would be required to meet "Site Access and Flood Evacuation Requirements" which require that driveways be raised to 1:20 flood levels and evacuation routes be clearly defined.</li> <li>• Developments on flood prone land may take longer to assess and approve - costing more time to the landowner.</li> <li>• General loss of property value by flood zoning. Property values will substantially lessen as a result of adopting flood prone land mapping in relation to flood impacts associated with Flooding from the North Brother Mountain</li> </ul> <p>2. Option 8B and alternatives</p> <p>Submission notes that Option 8B directly impacts their property and queries whether the option is beneficial at all on the basis that it only reduces flood levels by 100mm in the context of flood waters in excess of 1000m deep?</p> <p>It is acknowledged that the option will result in a small improvement in risk to life, however other options are suggested:</p> <ul style="list-style-type: none"> <li>• Installation of a piped drainage system in lieu of the existing open drain traversing the property (sketch attached to submission)</li> <li>• Installation of a new trunk main along Seymour Street would bypass the open drain through the subject site and (sketch attached to submission).</li> </ul>
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**Table 1 - Summary of submissions**

	<b>Response/ Comment:</b>	<p>Given the detailed submission, the response has been broken into two sections as below and corresponding to the submission:</p> <p>1. Item 1</p> <p>It is acknowledged that changes to the LEP and flood policy as raised in the Draft Options Report have the potential to impact insurance costs, property values, development requirements and development costs as suggested, however at this stage no proposed changes to the Flood Policy or LEP have been developed and as such any impacts are hypothetical.</p> <p>The aim of the Draft Options Report was to gauge community support for the development of such controls, identify issues to be addressed via their development (such as the issues raised in this submission), and in the absence of the actual controls, inform the community that Council and our consultants, Jacobs, are planning to develop them as part of the upcoming Floodplain Risk Management Study and Plan.</p> <p>The flood study phase of this project has already defined and quantified the extent of flooding experienced within the study area and the associated risks. These risks are real and current. As shown in the structural options section of the Draft Options Report, significant works are required to mitigate and / or lower the identified risks in the top four highest risk locations. Furthermore, if adopted via the Floodplain Risk Management Plan phase, funding to construct those concepts in the four high priority locations is likely to be high in quantity and is yet to be secured.</p> <p>If the scope of works required at those four priority locations was extrapolated to the initial list of 16 high risk areas, the construction costs to the community would be astronomical.</p> <p>Hence, in the absence of unlimited budgets and time, some level of non-structural measures are required to be implemented across the catchment as a means of managing the risks to the community as a result of overland flooding from the catchment.</p> <p>Given the differences with respect to flow depths, durations and velocities when compared to riverine flooding, specific changes and additions to the Flood Policy will need to be developed to enable the actual risks associated with overland local catchment flooding to be managed. These will be developed initially by Jacobs in consultation with Council technical staff and the Coast, Estuary and Floodplain Sub Committee, prior to seeking community feedback via public exhibition.</p> <p>Likewise, the standard flood controls applicable to development as defined in the LEP will not be a good fit to local catchment overland flooding as the scale and risks are vastly different.</p> <p>As noted above, it is acknowledged that changes to the LEP and flood policy as raised in the Draft Options Report have the potential to impact insurance costs, property values, development requirements and development costs as</p>
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**Table 1 - Summary of submissions**

		<p>suggested, however we plan to work with the Coast estuary and Floodplain Sub Committee and wider Community to ensure that the tools developed are a good fit for the catchment and community.</p> <p>2. Item 2</p> <p>The initial risk assessment undertaken by Jacobs identified the subject property as a critical flood problem location, rated as a high priority, however alternate options such as the extension of a piped drainage system along the length of Seymour Street were discounted during the development of the Draft Options Report on the basis of the high cost involved and limited benefit to the wider community (predominant benefits to one property). When assessed against other works and locations, the cost to benefit ratio of larger scale works at this location is considered to be not favourable.</p> <p>That said, option 1 as suggested appears to be a suitable solution to address the existing overland flowpath through the site and may be more appropriately addressed via negotiation with Council in conjunction with a future development proposed for the site.</p>
<b>Issue - Request to be notified of Draft Options Report being reported to Council</b>		
CRM 12894 / 2020	Penny Small	Resident wishes to be notified of this report being reported to Council
	<b>Response/ Comment:</b>	All persons who lodged a submission will be notified of the report being presented to Council when the Council meeting agenda is published.
<b>Issue - Comments on preferences regarding Options 9A and 9B - works through School Property</b>		
CRM 13127 / 2020	Jim Treeves - St Josephs Primary School Laurieton	<p>Following site meeting with Jim Treeves (Parish Business Manager) regarding Options 9A and 9B, the School indicated the following preferences concerning the proposed works:</p> <ul style="list-style-type: none"> <li>• Option 9B is preferable</li> <li>• Works should be designed to retain existing lake on site and maintain surface flows to feed the lake in some extent.</li> </ul>
	<b>Response/ Comment:</b>	Noted. Further concept investigations at this property will focus on Option 9B only.
<b>Issue - Query regarding locations identified for Structural Mitigation Measures</b>		
CRM 13187 / 2020	Betty Booth	<p>Verbal submission lodged following discussion with resident.</p> <p>Resident enquired if her property was in one of the locations flagged for mitigation measures as she is continuing to experience overland flooding issues.</p>

**Table 1 - Summary of submissions**

	<b>Response/ Comment:</b>	<p>The North Brother Flood Study Draft Options Report is currently targeting the assessed four highest risk locations at present. Mrs Booth's property is not located in one of these areas as it currently stands, nor would be impacted by any of the proposed structural mitigation works.</p> <p>This current exhibition period was seeking feedback from residents on whether they agree with our assessment and options identified prior to further detailed assessment and design. Following completion of the future Floodplain Risk Management Study and Planning phase and implementation of measures at some time in the future, Council will again look to reprioritise the next high priority locations.</p>
<b>Issue - Hard copy survey submission lodged.</b>		
CRM 13318 / 2020	Deborah Murray	<p><i>Hard copy survey submission</i> - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments provided on submission related to a Traffic Signage query, and have been referred to the Transport Planning team for separate action</p>
	<b>Response/ Comment:</b>	<p>Thank you for your submission. Query regarding traffic signage has been referred to the Transport Planning team for separate action and response.</p>
<b>Issue - Table drain and Open Drain issues at Ocean Drive Westhaven</b>		
CRM 13307 / 2020	John Wood	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>• Submission describes a local drainage issue impacting the frontage of the resident's property and describes the history of the issue in detail.</li> <li>• Table drain is currently undersized and causes stormwater to back up into the property, inundating a lower floor level.</li> <li>• This issue is exacerbated by runoff from an upstream property and the poor condition of an open drain located within an adjoining property to the west.</li> <li>• Also queries whether the concept options identified considered an Ocean Drive bypass road realignment that was initially identified in the 1980s.</li> </ul>
	<b>Response/ Comment:</b>	<p>The issue raised is primarily a local drainage issue as opposed to a consequence of a North Brother flood event in that the problem stems from an inadequately sized table drain / pipeline within the frontage of the property and maintenance of an adjoining open drain.</p> <p>Inspections of the open drainage assets at this location have been scheduled to be undertaken during the week commencing 14 September 2020 to determine the need for maintenance</p>

**Table 1 - Summary of submissions**

		<p>and/or upgrade. A separate response will be provided following assessment and prioritisation of any identified works.</p> <p>With regard to the consideration of a future road bypass of Westhaven area, the current structural mitigation options are conceptual only and do not currently consider any road realignment changes. Review of the compatibility of concept designs with future works plans will be confirmed following further testing of the feasibility of the identified options during the Floodplain Risk Management Study phase.</p>
<b>Issue - Waterlogged ground experienced at Quarry Way</b>		
CRM 13305 / 2020	Christine Lomax	Submission advises that they experience very sodden and waterlogged ground around their property following heavy rain. Resident believes that this is subsurface water seeping from upstream North Brother Mountain and that clearing of the drainage diversion channels upstream will alleviate this issue.
	<b>Response/ Comment:</b>	<p>The issue described is very common amongst properties located at the base of North Brother Mountain. Our experience in the locality indicates that the subsurface geology of the Mountain is very porous and is subject to very large and fast moving subsurface groundwater flows during and in the days following heavy and / or prolonged rainfall.</p> <p>From a Council perspective, there are many locations where subsurface stormwater pipelines and other conduits convey large groundwater flows for many days or weeks following significant rainfall, often leading to premature failure of these critical council assets.</p> <p>Our experience is that maintenance and sealing of open drains around the base of the Mountain can reduce the incidence of concentrated groundwater ingress to the subsurface profile, however the majority of subsurface water is likely to enter via those natural undrained surfaces up and downslope of formal drains.</p> <p>Other than constructing large cut-off subsurface drains upstream of residential areas this is considered to be a natural feature of the topography/geology of the Mountain.</p>
<b>Issue - Condition of water diversion drain beneath Laurieton Reservoir</b>		
CRM 13254 / 2020	Robert Scott	<p>Submission raises concern regarding the condition of the existing water diversion drain located beneath the Laurieton Reservoir and provided examples of current blockage and flooding that has occurred historically from this drain.</p> <p>Submissions demonstrates that this has been a longstanding issue for the community and recommends that maintenance work is required to clear fallen trees and debris from the drain.</p>

**Table 1 - Summary of submissions**

	<b>Response/ Comment:</b>	<p>This drain has been subsequently inspected and it is agreed that the drain is overgrown and in need of maintenance. However the subject drain is located with National Parks land is not under the care and control of Council. Further, National Parks obtains no benefit from maintaining this drain, as it is located at the downstream end of the National Park.</p> <p>Maintenance of this drain (and other diversion drains not located in Council land) to be considered in the preparation of the upcoming Floodplain Risk Management Study and Plan process. Suggest that plan give consideration to developing a maintenance plan for these drains in partnership with National Parks Authority.</p>
<b>Issue - Consideration of existing works</b>		
	Mark Canterbury	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>• Would like report to give consideration to existing drainage works carried out by residents to minimise the flood impacts on their homes</li> </ul>
	<b>Response/ Comment:</b>	<p>The Floodplain Risk Management Study and Plan are relatively high level studies and contain information based on best available survey and plans. Prior to the commencement of any detailed designs and following the completion of the Floodplain Risk Management Plan process, these kind of site specific improvements and works will need to be assessed and incorporated into the detailed design phase, prior to construction.</p>
<b>Issue - Description of existing flooding issue</b>		
	Greg Watson on behalf of Camden Haven Anglican Church.	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>• Provided details of historic flooding experienced at the Camden Haven Anglican Church.</li> <li>• Church has raised the driveway and verge of their property in an attempt to divert overland flows around the building and works.</li> </ul>
	<b>Response/ Comment:</b>	<p>The Flood Study Phase of this project has confirmed the flood risk defined in the submission however when assessed against all other issues / risks in the catchment area, the location has not been assigned as one of the top four priorities for mitigation measures at this stage on the basis that there are higher risk locations.</p>
<b>Issue - Description of existing flooding issue</b>		
	James Black	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p>

**Table 1 - Summary of submissions**

		Additional comments as below: <ul style="list-style-type: none"> <li>• Provided details of historic local flooding issue experienced at Flinders Drive, Laurieaton.</li> </ul>
	<b>Response/Comment:</b>	Whilst this area has not been prioritised for Structural Mitigation Measures under the Draft Options Report, the issue described is considered a local drainage issue and may be able to be rectified via some minor modifications to the street verge and existing local drainage. Council's Stormwater Engineers will investigate this solution with the resident separately to the Flood Study Process.
<b>Issue - Kerb and Guttering in Hanley Street</b>		
	Paul Bedwell	<i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text. Additional comments as below: <ul style="list-style-type: none"> <li>• Guttering needs to be installed along the length of Hanley Street. This would stop the flooding at this location</li> </ul>
	<b>Response/Comment:</b>	Whilst this area has not been prioritised for Structural Mitigation Measures under the Draft Options Report, the issue described is considered a local drainage issue. Council has a register of pending Kerb and Gutter requests and have now added this location to the list for further assessment, prioritisation and consideration of funding as part of the future Operational Plan budgetary planning process.
<b>Issue - Private drainage issue at Rosewood Court, Lakewood</b>		
	Michael Davison	<i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text. Additional comments as below: <ul style="list-style-type: none"> <li>• Defines existing drainage issues impacting properties at Rosewood Court, Lakewood</li> </ul>
	<b>Response/Comment:</b>	The issues described relate to surface drainage between private properties. Prior to further Council assessment of these private matters, landowners should talk to their neighbours and attempt to address/solve issues civilly. If unsuccessful, residents may contact Council's Compliance team on 6581 8111 for advice.
<b>Issue - Survey submission</b>		
	Susanna van Niekerk	<i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.
	<b>Response/Comment:</b>	Thank you for your submission
<b>Issue - Various matters raised</b>		

**Table 1 - Summary of submissions**

	Joy Walker	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>• Defines existing stormwater issues impacting properties in Sirius Dr and Honeysuckle Ave, Lakewood whereby water backs up from the downstream lake, compromising the function of the public stormwater system.</li> <li>• Submission notes that maintenance is required to be undertaken prior to significant rainfall to allow stormwater drainage system to function and reduce likelihood of flooding.</li> <li>• Drainage works needed urgently to ensure CBD is not impacted by flooding</li> <li>• Suggested that St Josephs School and Catholic Church should co-contribute to the cost of works required within the school site.</li> <li>• Queries around potential flood mapping <ul style="list-style-type: none"> <li>○ Impact on insurance costs</li> <li>○ Does Council provide this information to insurance companies</li> <li>○ May impact property values as buyers may not wish to purchase a flood prone property.</li> </ul> </li> </ul>
	<b>Response/ Comment:</b>	<p>The Flood Study phase of this project has confirmed that the location listed is at risk of overland flooding due to a combination of local catchment overland flows, topography and elevated tailwater levels.</p> <p>Council Maintenance staff do proactively inspect the subdivision to assess the need for urban drainage maintenance, however residents are requested to advise of any specific concerns via contacting the customer service team on 6581 811 to enable a prompt assessment to be undertaken.</p> <p>In regard to the CBD flooding, Option 6 as defined in the Draft Options Report addresses flooding within the northern end of the Laurieton CBD. When viewed in the context of all the flood risks identified by the Flood Study, work to address the other identified risks in the CBD area are not as high of a priority at this stage and may be considered in a future iteration of the Floodplain Risk Management Plan.</p> <p>Concerning the potential for a co-contribution from St Josephs School and the Catholic Church for any works through their properties, the plan at this stage does not consider funding sources, however generally speaking, as the issues experienced stem from upstream public land, it would be anticipated that works will be publically funded (Council and / or Grant Funded).</p> <p>That said, Council would welcome any Co-Contribution offered in future.</p> <p>Lastly, with regard to flood mapping, preliminary flood hazard and flood planning mapping has been prepared, however without</p>



**Table 1 - Summary of submissions**

		<p>corresponding draft LEP provisions and Flood Policy updates, the impact of flood mapping on the community is difficult to define at this stage.</p> <p>The Draft Options Report is very high level at this point in time and simply lists flood mapping as one of many non-structural measures to be investigated as the Floodplain Risk Management Study and Planning process proceeds. Further analysis of the potential impacts will need to be undertaken in consultation with the Coast, Estuary and Floodplain Committee and local community as the non-structural measures are developed in the coming months. With no draft policy or planning changes prepared to date, the Draft Options Report was simply seeking feedback on whether such measures are likely to be supported at this early stage.</p>
<b>Issue -</b>		
	Michael K Carroll	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>Have noticed water pooling in the verge area outside 386 and 388 Ocean Drive after light rain in addition to a location between 282 Ocean Dr and 25 Diamantina Way</li> </ul>
	<b>Response/ Comment:</b>	<p>Inspections of the drainage assets at this location have been scheduled to be undertaken during the week commencing 14 September 2020 to determine the need for maintenance and/or upgrade. A separate response will be provided following assessment and prioritisation of any identified works.</p>
<b>Issue -</b>		
	Bernie and Trish Cheetham	<p><i>Have Your Say</i> Online Submission - yes/no responses to predefined questions included in summary text.</p> <p>Additional comments as below:</p> <ul style="list-style-type: none"> <li>Feedback provided on the option to Voluntarily Acquire a property in Kirmington Tce. Alternate suggestion provided for consideration.</li> <li>Gully near 38 Kirmington Tce is overgrown and requires maintenance.</li> <li>The creation of flood areas and notations on the 10.7 zoning certificates could be counterproductive for property owners as far as property values and ability to get insurance. This point needs careful consideration.</li> <li>Based on observed water depths across Ocean Drive during flood events, submitted believes that installation of flood level signs is not warranted.</li> </ul>

**Table 1 - Summary of submissions**

		<ul style="list-style-type: none"> <li>• Recommends that consideration be given to face to face meetings in the next phase of the process in attempt to get a better involvement of the stakeholders.</li> <li>• Notes that the size and complexity of the study was daunting and possibly deterred the older residents from being involved.</li> </ul>
	<b>Response/ Comment:</b>	<p>The first part of this submission was discussed with the resident during the Zoom meeting on 27 July. In this regard and on the basis that the landowner subject to the proposed Voluntary Acquisition is not agreeable, further options as suggested will be investigated.</p> <p>Concerning the maintenance of the gully between Kirmington Tce and Koonwarra Street, an inspection has been undertaken to confirm its condition and Council technical staff are currently in the process of prioritising and planning maintenance works.</p> <p>With regard to flood notations on 10.7 zoning certificates, provisional flood hazard and flood planning mapping has been prepared, however without corresponding draft LEP provisions and Flood Policy updates, the impact of flood mapping on the community is difficult to define at this stage.</p> <p>Furthermore, the provisional mapping will be revised following drafting of appropriate changes to the Flood Policy and LEP to reflect suitable freeboards, levels and controls applicable to local catchment flooding (as opposed to riverine flooding - which is the focus of the current Flood Policy)</p> <p>The Draft Options Report is very high level at this point in time and simply lists 10.7 zoning certificate notifications as one of many non-structural measures to be investigated as the Floodplain Risk Management Study and Planning process proceeds.</p> <p>Further analysis of the potential impacts will need to be undertaken in consultation with the Coast, Estuary and Floodplain Committee and local community as the non-structural measures are developed in the coming months.</p> <p>It is agreed that face to face meetings/consultation would be beneficial in future stages of this project and acknowledged that the current COVID-19 related meeting restrictions have made mass participation difficult at this point in time. We will monitor State and Federal Government COVID-19 related meeting restrictions and tailor future consultations around available/permissible consultation/meeting methods, with a view to more face to face engagement.</p> <p>With regard to flood signage, the need for flood signage will be defined based on depth and velocity related risks as identified by the Flood Study Phase.</p>

**Final Draft**

**16 September 2004**

Hastings Council

**Settlement Shores Estate Canal  
Maintenance Plan**

Canal Maintenance Plan

September 2004

**Final Draft     16 September 2004****Contents**

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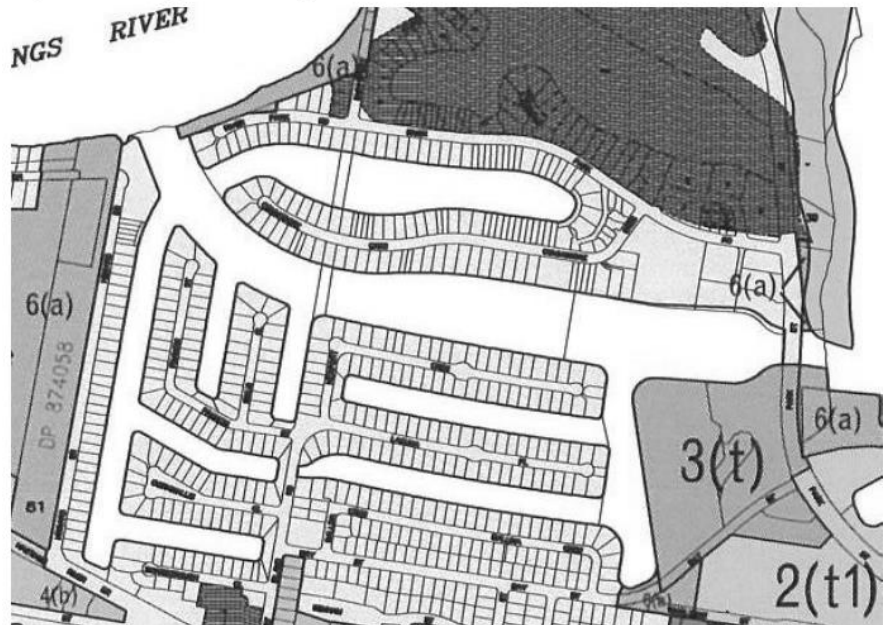
**Appendices**

- A Data Collection Sheet
- B Residents 'Have Your Say' Collection Sheet
- C Schedule of Properties
- D Canal Maintenance Plan Spreadsheets
- E Photographs
- F Hydrographic Survey
- G Review of Environmental Factors
- H Original Design Drawings

**F****Final Draft****16 Sep****1. Introduction**

Following a competitive tendering process GHD Pty Ltd were commissioned by Hastings Council to prepare a maintenance plan for Stage 1 & 2 of the Settlement Shores Estate canals comprising approximately 410 residential and 5 commercial allotments with waterway frontage. The plan provides for Council and affected property owners suitable guidance for the future maintenance of the canals.

This report covers the methodology applied, the findings of the assessment of the defects, estimated cost of repairs, Hydrographic Survey and a Review of the Environmental Factors for Settlement Shores Estate canal development.

**Figure 1.1 Project Area Map****1.1 Project Background**

The Settlement Shores Estate canals form part of a coastal estuary linked to the lower Hastings River. There will be floods and estuarine processes at work that will require reasonably regular, but simple maintenance. This was acknowledged and taken into account in the original design of the waterway system, and in the covenants created on each waterfront lot.

The private property boundary is approximately 2.1 metres out from the revetment wall that is the first 2.1 metres width of beach is private land. The properties are well above the highest known flood level. However, there will be times when flood waters will rise well up the sloping bank (revetment wall) at the rear of properties.

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A very important covenant on the title of the allotments requires there be no buildings, fences, trees or other obstructions within 5.4 metres (7.9 metres in the case of the Governors Way) of the revetment wall. The main objective of this covenant is to allow landowners and/or the Council, to gain continuous access along the bank adjacent to the waterway for the purpose of removing flood debris, repairing any erosion or possible damage caused by floods to the beaches or revetment walls, or repairing any damage to the slope at the rear of the properties. It was always considered, that tradespersons and their plant and equipment may one day need to gain access to waterfront properties by means of the bank along the water frontage.

While there will seldom be the need for Council workers to use the sloping bank on adjoining properties for access, it is in everybody's interest that access via the waterway bank is available when necessary.

Another covenant affecting all property owners, states that individual property owners are responsible for the maintenance and repair of the revetment wall and 2.1 metres of the adjacent beaches to the property boundary. The revetment wall and 2.1 metres of beach of course stands within each property and forms part of the property. This same covenant also gives Council the power to carry out any necessary maintenance if the property owner fails to do so and charge the cost of the said maintenance to the property owner.

The beach zone and waterway itself, outside the 2.1 metre property boundary from the revetment wall, is vested in the Council and the Council has accepted responsibility for maintaining the beach zone, waterways and flood structures.

It is recommended that the procedures on the process for maintenance of the revetment walls and beaches be provided by Council to the residents of Settlement Shores.

## **1.2 Project Objectives**

### **Settlement Shores Canal System**

The consultancy is to report on the condition of the foreshore and canal area for each property as shown in Appendix C Schedule of Properties. In addition to the condition and maintenance assessments, a 10-year maintenance works program, Canal Maintenance Plan (CMP), is to be prepared for use as the basis for its forthcoming and future years maintenance programs.

A suitable framework that reflects Council and resident priorities, addresses the issues identified, can be environmentally and financially sustained while clearly documenting maintenance actions and responsibilities is needed to provide a formalised asset management approach to the maintenance of the Settlement Shores Estate Canal system. This future requirement has been kept in mind during the development of the condition assessment methodology.

**F****Final Draft****16 Sep****1.3 Maintenance Plan**

The development of the Canal Maintenance Plan (CMP) will identify actions to address ongoing maintenance of the canals and rehabilitation and maintenance of associated infrastructure. The maintenance plan provides Council and property owners with guidance for the future maintenance of the canals by identifying the current condition of the canal infrastructure, identifying proposed canal maintenance actions including dredging, beach restoration and repairs.

Investigations undertaken for the CMP were:

- Identification of the current condition of the canal infrastructure. A damages audit and condition assessment was undertaken to provide an assessment of the various infrastructure elements of the canals including revetment walls, beach zones, boat ramps, jetties and drainage outlets;
- Assess current canal levels. A hydrographic survey was undertaken to provide a record of current canal bed levels to determine the extent of sedimentation and scouring within the canals;
- Assess the existing canal sediments. Materials testing was undertaken on sedimentation from various sample locations within the canals to assess sediment contamination and the suitability of reuse in beach restoration;
- Identify proposed canal maintenance actions including dredging, beach restoration and repairs. The CMP describes the maintenance necessary, prioritises the maintenance actions and provides guidelines to Council and property owners to assist with implementing the recommended maintenance; and
- Involve the community, particularly affected property owners in the development of the CMP and proposed maintenance actions for the canal estate.



**F****Final Draft****16 Sep****2. Damages Condition Assessment Audit****2.1 Introduction**

The broad process for data collection involved the development of standard forms prepared in association with the Hastings Council working party, for collection of field information. The forms were developed based on infrastructure items current condition and a priority rating relating to safety, environment and image, and procedures for inputting and verification of data through photographs. Data collection sheets developed and used in the project are included in Appendix A. In developing the damages audit collection form applicable covenants for the waterfront properties within Settlement Shores Estate were reviewed.

The residents of the estate received a 'Resident have your say' form (refer Appendix B), via the post to allow input. The number of responses received from the residents was 210. Quotes from the responses have been transcribed into the 'Summary of residents have your say form'.

The inspections involved,

- Visual inspection and condition assessment,
- Identification of defects and repairs required,
- Rehabilitation works supported by photographs,
- Preventative maintenance, and
- Prioritisation of the works and costing to bring the canal system to a suitable standard.

Schedule of all the properties inspected are noted in Appendix C

Table 2.1 below summarises the number of lots per street inspected.

**Table 2.1 Summary of Lots Inspected**

<b>Street Name</b>	<b>Total no of Lots</b>
Ballina Crescent	32
Bay Street	2
Commodore Crescent	86
Cornwallis Close	31
Francis Street	41
Hastings River Drive	1
Hibbard Drive	39
Laguna Place	55

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Street Name	Total no of Lots
Newport Island Road	56
Park Street	2
River Park Road	46
Scarborough Close	16
Sirius Close	23
<b>Totals</b>	<b>430</b>

**2.2 Methodology**

Data collected during the audit process has been entered in the HCC – Canal Maintenance Plan spreadsheet included in Appendix D.

**2.2.1 Data Collection**

The data collected through a visual inspection of all properties determined the condition of each canal infrastructure element and identified any above ground structures, such as fences, buildings and trees within 5.4 metres, or in the case of Governors Way 7.9 metres, of the revetment wall within the property. This data was entered on the Data Collection Sheet in Appendix A. Additionally remedial works necessary were identified, and prioritised based on safety, environmental or cost implications and image.

**2.2.2 Infrastructure Items**

The following infrastructure items were surveyed during the Damages Audit process:

Item Name	Boat Ramp	Beach Zone	Drainage Headwall	Drainage Outlet	Jetties	Paths/ Public Access	Rock Protection	Revetment Walls
Item Code	BR	BZ	DH	DO	JE	PA	RP	RW

Each infrastructure item was identified with a unique Item Code such as Revetment Wall (RW) and these codes have been expanded in the Condition Assessment spreadsheets in Appendix D, to be more descriptive of the works required. In addition to the infrastructure items obstructions such as trees, buildings and fences within 5.4m of revetment walls and 7.9m for the Governors Way were documented.

**F****Final Draft****16 Sep****2.2.3 Allocation of Defects and Required Maintenance**

Where defects and maintenance were identified these were allocated against the infrastructure item or obstruction. The damages audit provides an assessment of the present condition of the various infrastructure elements of the canals. The condition assessment data for each property assessed is located in the Condition Assessment spreadsheet.

**2.2.4 Photographs of Defects**

During the Damages Audit a photographic record of infrastructure items requiring rehabilitation, repair or ongoing maintenance for each property was compiled. Photographs taken during the inspections are located in Appendix E with supporting descriptions of items inspected. Each photograph has GIS data in the damages audit spreadsheet that identifies the location of the infrastructure item or obstruction.

**2.3 Identification of Maintenance Works**

Maintenance works for properties with frontage to the Settlement Shores Estate canal system were identified for each asset covering rehabilitation, recurring maintenance, replacement and defects. This includes cyclic/preventative maintenance, inspection requirements, and frequency of works, type and condition. The scope of works identified during inspections could vary from minor repairs to major works. Thus any cost estimates could be well in excess or short of anticipated costs.

Treatment and interval for works were tabulated for each asset. In addition, the significance of not carrying out the work, i.e. consequence or impact, in terms of safety, environment, and increased long term cost and image criticality was recognised and works prioritise accordingly.

This enabled the production of a ten (10) year prioritised maintenance works plan for the Canal System.

Estimates for reactive maintenance were not included.

**2.4 Works Plan Development**

The levels of assessment for canal infrastructure items undertaken for the development of the works plan as follows:

1. Condition assessments including recommendation for removal if appropriate.
2. Description of defects, maintenance repairs or rehabilitation works.
3. Prioritised maintenance and rehabilitation works in terms of either environmental, health or safety or maintenance repairs.
4. Photographic record of defect.
5. GIS positional data.
6. Estimated Restoration costs.
7. Trade or work type, frequency and recommended year to start.
8. Estimated Cost of works per year.

**F****Final Draft****16 Sep****2.5 Works Prioritisation**

The development of the 10 year maintenance works plan for Settlement Shores Canal Estate was based on works being assessed using the following prioritisation factors:

**1. PRIORITY (P)**

This was recorded where the defects/damage have a safety or environmental implication or if not remediated are likely to have significant cost implications.

**2. OPPORTUNITY (O)**

This was recorded where defects/damage appear to have no safety, environmental or cost implications but if not rectified could have implications in the future.

**3. ROUTINE (R)**

This was recorded where defects/damage appear to have no safety, environmental or cost implications now or in the future but if not rectified are likely to impact on Councils image to the residents, staff and the public.

**2.5.1 Prioritisation of Works**

The above allows Hastings Council to analyse the spreadsheet and produce programmes of remediation works based on the impact on the Canal system through a prioritisation approach.

In this way a simple prioritisation process is used to establish the programme of planned maintenance work.

**F****Final Draft****16 Sep****3. Hydrographic Survey**

The hydrographic survey provides an accurate record of the current canal levels from which the extent of sedimentation and scouring within the canals can be determined.

The survey datum is AHD and based from the State Survey Permanent Mark (SSPM) 48640 located at Newport Island Road between Cornwallis Close and Scarborough Avenue and SSPM 69796 located Cnr. Newport Island Road and Francis Streets. NSW Lands and Property Information provided the relevant data for the SSP marks.

The hydrographic survey compared the current levels measured at 30 metre intervals to construction data on the canals provided by Hastings Council. This information was necessary for the preparation of dredging maintenance plans.

Damaged or miss-located infrastructure was also surveyed to give a location suitable for cross-reference to Council's GIS database.

The survey satisfies Council's requirements to provide location and invert level data for all stormwater outlets and canal bed levels for 15 metres from the outlet. All survey work is electronically produced as a digital terrain model on a diskette or CD in CivilCAD format as requested by Council's Principal Design Engineer. A copy is included in Appendix F.

The result of the survey indicates that the Canal has varying depths of sediment build-up and in some instances where the canal floor has had some loss and is below design level. A summary of the survey is provided in Table 3.1 below.

The cut and fill as indicated in the summary represent build-up or loss of sediment in the canal determined from the difference between the original canal design and the survey undertaken in May 2003.

The columns in Table 3.1 represent the following:

- ▶ Cut – areas of sediment build-up in the base of the canal that will need to be removed to return the canal to the original design condition,
- ▶ Fill – areas of base loss in the canal which will require filling to return the canal to the original design condition,
- ▶ Balance – is the difference between the cut and fill, indicating the amount of possible material to be removed from each of the canals. Governors Way is the only canal that will require fill to be imported.

**F****Final Draft****16 Sep****Table 3.1 Summary of Canal Surveyed Volumes**

Canal No.	Canal Name	Volume (m <sup>3</sup> )		
		Cut	Fill	Balance
1.	The Governors way	41,470	67,250	- 25,780
2.	South West Passage	10,730	2,590	8,140
3.	Crescent Arm	4,550	830	3,720
4.	South Cove	4,170	690	3,480
5.	Regatta Point	32,350	10,520	21,830
6.	Lachlan Bay	3,780	830	2,950
7.	Blue Bay	3,350	520	2,830
8.	Settlement City Canal	25,170	340	24,830
9.	Newport Canal	16,940	65	16,875
10.	Ballina Canal	15,000	300	14,700
<b>Totals</b>		<b>157,510</b>	<b>83,935</b>	<b>73,575</b>

The method of dredging allows for the spoil from the cut to be replaced within the areas of the canals showing levels below the designed canal levels.

The model indicates that approximately 75,000m<sup>3</sup> of excess material will need to be removed and disposed off site.

The cross section and longitudinal sections included within Appendix F illustrates in more detail the various areas in the canals requiring the works.

**F****Final Draft****16 Sep****4. Review of Environmental Factors**

A Review of Environmental factors (REF), included in Appendix G was undertaken to assess the likely impacts of the proposed maintenance works on the local environment and to develop a range of control measures that would mitigate those identified impacts. The purpose of the REF is to provide the basis on which Council may determine whether the proposed development is likely to have a significant impact on the environment.

The proposed maintenance works addressed in the REF include dredging of the canal system to design depths, maintenance of foreshore infrastructure including storm water systems, revetment wall, beach zone, rock protection and jetties, removal of trees and shrubs, and structures located within the Council designated access easement.

The potential impacts of the work are detailed within the REF. Generally, the works will result in improved access along both the canal and foreshore corridors. In addition, it is likely that the maintenance works will restore the integrity of many foreshore systems and provide greater levels of safety and environmental protection to the local area.

A number of potentially adverse impacts will occur as a result of the works. These include impacts related to noise, flora and fauna, stormwater control, visual amenity, waste management and access. These impacts will largely be short-term and confined to the proposed development site and immediate surrounds. A range of control measures is proposed within the REF.

**4.1 Materials Testing**

Materials testing of the canal base were undertaken as a component of the Maintenance Plan and are included within the REF. Generally the materials sampled identified two dominate sediment types within the canal system, sand and silt/clay. Materials testing included sediment sampling and physical and chemical analyses, including tests for contaminants and for the presence of acid sulphate soils. For detailed information on materials testing refer to REF, Chapter 5 The Existing Environment.

**F****Final Draft****16 Sep****5. Canal Maintenance Plan****5.1 Introduction**

The Canal Maintenance Plan (CMP) provides a condition assessment of infrastructure items and location of obstructions for restoration, removal, repair and ongoing maintenance. The CMP documents current condition of items and proposed actions to be taken. Dredging has been identified as items of concern by Council and residents and the significant impact of dredging is discussed within the Review of Environmental Factors. Areas to be dredged have been identified from the hydrographic survey and have been itemised and prioritised in the CMP for Council and are provided in the Review of Environmental Factors, Section 2.1.

**5.2 Description of CMP Actions**

Proposed canal maintenance actions include dredging, beach restoration and repairs. The CMP describes the maintenance necessary, prioritises the maintenance actions and provides guidelines to Council and property owners to assist with implementing the recommended maintenance repairs as well as preventative maintenance actions that could be undertaken to assist in reducing financial and environmental impact.

**5.2.1 Canal Sediment Dredging**

There are various methods of dredging canals from grab bucket to backhoe dredges. The preferred method of dredging the canals is the use of cutter suction dredge. Suction dredging is best suited for the removal of silt and sand from navigation channels. These dredges are capable of pumping sand, silt and muds ashore from the dredge into barges via a pipeline for redistribution to an acceptable off site land-based disposal site or for pumping and repositioning within the canals to return the canal base to original design levels. This preferred method of dredging enable effective control of sediment and protection of water quality during dredging operations. This form of dredging cuts down the substratum profile down to the required depth at a location prior to moving onto the next location and provides control of the amount of materials being removed from the canal base.

For smaller dredging operation, or for dredging activity within dry waterways, a backhoe dredge either mounted on a pontoon or on bank edge is a preferred option. The backhoe dredges enables for removal of soft and stiff materials such as boulders and clays. The material is placed in a hopper for disposal. Cleaning and excavating around stormwater outlets, which lie on the banks of the canal, are an ideal use of the backhoe dredge. The use of the half open shell bucket allows for the removal of excessive build-up and/or debris to be removed from the stormwater outlets.

Disposal of excess dredging materials to off-site locations are discussed further within the REF. Hastings Council will advise of possible disposal sites for further investigation and assessment prior to disposal.



**F****Final Draft****16 Sep****5.3 Design Concepts of the CMP Actions**

The CMP is designed to allow Hastings Council and residents to have a collection of objective data to analyse from the spreadsheets and produce programmes of remediation works based on the impact on the Canal system through a prioritisation approach. In this way a simple prioritisation process is used to establish the technical programme of planned maintenance work based on priority ranking and available funds.

The level or standard and quality of maintenance and repair work should be equivalent to that required to bring the canal back to a similar condition as originally designed and constructed. Original design drawings of the canal were provided by Hastings Council and are included in Appendix H.

**5.4 Work Methods to be Employed for Maintenance Works**

Work methods identified for the Settlement Shores Estate canal project are:

- ▶ Dredging as referenced in the Review of Environmental Factors;
- ▶ Rehabilitation;
- ▶ Removal of items; and
- ▶ Repair and replacement.

These works methods were selected during the damages audit after identifying the current condition of each infrastructure item surveyed and the obstructions, which contravened allotment covenants.

Residents proposing to undertake works within the property boundary of the canals are to seek advice from Council in relation to the procedures involved to undertake such works. The general procedures and form of advice to be provided by Council will be:

- ▶ Guidance for the preparation of construction details for remedial works to be undertaken;
- ▶ Provision of standard detail drawings refer to original design drawings in Appendix H ;
- ▶ Submission of proposed construction approval application (S68) to Council; and
- ▶ Inspection of the construction/remedial works and final inspection by Council representative to insure the design intent is achieved.

**5.5 Guidelines on CMP Actions****5.5.1 Actions by Residents**

The identification of obstructions such as trees, buildings/structures and fences on some properties, which may be in breach of the property covenants, impacts on access to the canal for maintenance purposes.

Canal Maintenance Plan actions by residents are to restore and maintain infrastructure items identified in the CMP affecting their properties with reference to each allotment's covenants as illustrated in Table 5.1 below.

**F****Final Draft****16 Sep****Table 5.1 Preventative Maintenance Responsibilities and Frequency by Owner**

Infrastructure Item	Actions	How often	By Whom
2.1 metre Beach Zone	Inspect and Maintain	6 monthly	Owner
Boat Ramp	Inspect and Maintain	Yearly	Owner
Jetty	Inspect and Maintain	Yearly	Owner
2.1 metre Rock Protection	Inspect and Maintain	6 monthly	Owner
Revetment Wall	Inspect and Maintain	Yearly	Owner

**5.5.2 Actions by Council**

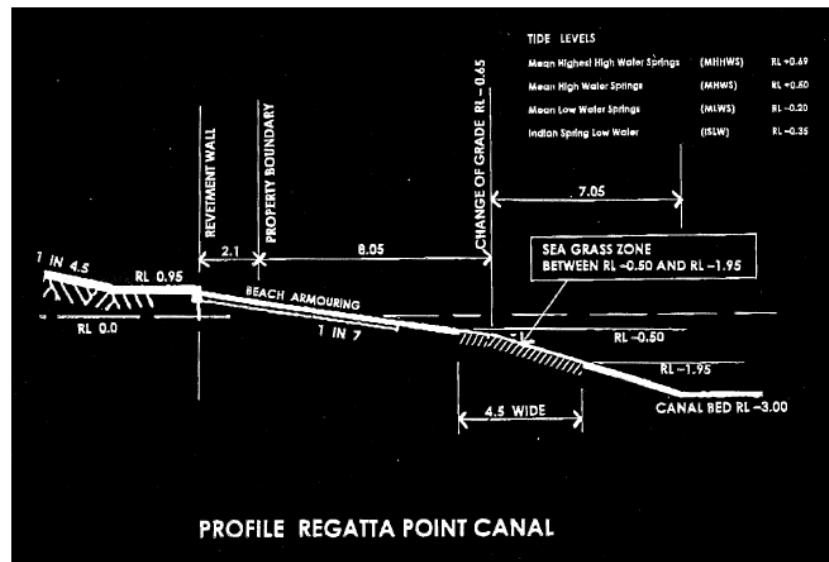
GHD recommends that Council perform an annual inspection of the canal estate to ensure that residents and Council are meeting their obligations to each other and the environment. In addition to the above Council may also consider carrying out post flood inspections and maintenance.

Canal Maintenance Plan actions by Council are to restore and maintain infrastructure identified in the CMP with reference to the covenant for the canal estate as illustrated in Table 5.2 below.

**Table 5.2 Preventative Maintenance Responsibilities and Frequency by Council**

Infrastructure Item	Actions	How often	By Whom
Beach Zone outside 2.1 metre boundary	Inspect and Maintain	6 monthly	Council
Drainage Headwall	Inspect and Maintain	6 monthly	Council
Drainage Outlet	Inspect and Maintain	6 monthly	Council
Paths and Public Access	Inspect and Maintain	6 monthly	Council
Rock Protection outside 2.1 metre boundary	Inspect and Maintain	6 monthly	Council

Figure 5.2 illustrates a typical profile of the canal indicating the maintenance areas.

**F****Final Draft****16 Sep****Figure 5.2 Profile of Canal****5.6 Financing the CMP**

Council has been collecting funds from residents as a levy which when added to funds from Council's maintenance budget for the Settlement Shores Canal Estate should allow the Council to carry out or assist residents to carry out the work required to restore the foreshore. In addition we note that residents are required to carry out their own maintenance and repairs for items within the private property zone, which includes the revetment wall and 2.1 metres of beach zone.

Other avenues of funding for these types of projects may be available from State Government Grants.

For significant works Council may be able to obtain a once of payment by the appropriate property holders to finance a specific item.

The Councils restoration works and the residents rehabilitating their properties should produce an environmentally and financially sustainable works program.

**5.7 Schedule of Maintenance Works for Ten Years**

The Schedule of Maintenance Works for Ten Years is detailed in the Canal Maintenance Plan spreadsheet provided in Appendix D and is based on the Condition Assessment data.

**F****Final Draft****16 Sep****5.8 Maintenance Works**

Restoration works, rehabilitation and preventative maintenance identified and costed over the next ten years for Settlement Shores Canals are summarised in Tables 5.3 to Table 5.5. The tables illustrate the Priority, Opportunity and Routine works required for each of the infrastructure items as indicated in Section 2.2.2. A detailed description of the works and costs is provided in the Ten Year Works Plan section of the Canal Maintenance Plan spreadsheet in Appendix D.

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Table 5.3 Summary of Costs for Priority Items over a Ten Years

Year	Rehabilitation Item																Council Funds	Residents Funds	Totals
	BR		BZ		DH		DO		JE		PA		RP		RW				
	Council	Resident	Council	Resident	Council	Resident	Council	Resident	Council	Resident	Council	Resident	Council	Resident	Council	Resident			
	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)			
2004		9,030.00	7,510.00	4,950.00				3,110.00	1,710.00	600.00	19,580.00	12,000.00		13,250.00	14,400.00	43,200.00	37,620.00	91,720.00	129,340.00
2005		3,420.00	5,070.00	77,400.00				2,450.00	2,930.00	80.00	21,630.00			1,600.00		22,350.00	7,600.00	129,330.00	136,930.00
2006	500.00	7,600.00	10,450.00	44,920.00				2,250.00	850.00	600.00	22,740.00	10.00		1,600.00	5,110.00	27,260.00	15,410.00	108,480.00	123,890.00
2007																			
2008																			
2009																			
2010																			
2011																			
2012																			
2013																			
Totals	500.00	20,050.00	23,030.00	127,270.00	Nil	Nil	7,810.00	5,490.00	1,280.00	63,950.00	12,010.00	Nil	1,600.00	19,960.00	14,400.00	92,810.00	60,630.00	329,530.00	390,160.00

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Table 5.4 Summary of Costs for Opportunity Items over a Ten Years

Year	Rehabilitation Item																Council Funds	Residents Funds	Totals
	BR		BZ		DH		DO		JE		PA		RP		RW				
	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)			
2004																			
2005																			
2006																			
2007		2,350.00	4,450.00	11,200.00				1,500.00	6,360.00				3,200.00	6,400.00		2,550.00	30,360.00	38,010.00	
2008	50.00	11,270.00	5,170.00	232,280.00			530.00	1,920.00	80.00	19,300.00				12,000.00		11,470.00	288,240.00	294,070.00	
2009		2,570.00	4,800.00	159,610.00			1,060.00	960.00	17,910.00					10,400.00	3,600.00	10,790.00	202,240.00	211,700.00	
2010																			
2011																			
2012																			
2013																			
Totals	50.00	16,190.00	14,420.00	503,890	Nil	Nil	1,590.00	4,380.00	80.00	43,570.00	Nil	Nil	3,200.00	28,800.00	3,600.00	24,810.00	520,840.00	543,780.00	

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Table 5.5 Summary of Costs for Routine Items over a Ten Years

Year	Rehabilitation Item															
	BR		BZ		DH		DO		JE		PA		RP		RW	
	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)	Council (\$)	Resident (\$)
2004																193,156.00
2005																193,156.00
2006																193,156.00
2007																193,156.00
2008																193,156.00
2009																193,156.00
2010	250.00	360.00	2,650.00	22,950.00			50.00		600.00				950.00		1,300.00	26,160.00
2011		80.00	1,000.00	8,350.00			100.00		80.00						540.00	9,050.00
2012		180.00	600.00	36,900.00					680.00				3,730.00		1,510.00	43,000.00
2013	250.00	620.00	4,250.00	68,200.00			150.00						4,680.00		3,350.00	77,000.00
<b>Totals</b>	500.00	1,240.00	8,500.00	13,6400.00	Nil	Nil	300.00	Nil	1,360.00	Nil	Nil	Nil	9,360.00	Nil	6,700.00	155,210.00
																<b>165,190.00</b>

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Appendix A

Data Collection Sheet



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Appendix B

Residents 'Have Your Say' Collection  
Sheet

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Appendix C

**Schedule of Properties**

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The Properties inspected in the Settlement Shores Canal Estate are listed in the table below.

**Table C1 – Schedule of Properties Inspected**

Street No	Street Name	Canal No.	DP No	Lot
1	Ballina Crescent	8	SP33548	
3	Ballina Crescent	8	DP263363	51
5	Ballina Crescent	8	DP263363	52
7	Ballina Crescent	8	DP263363	53
9	Ballina Crescent	8	DP263363	54
11	Ballina Crescent	8	DP263363	55
13	Ballina Crescent	10	DP263363	56
15	Ballina Crescent	10	DP263363	57
17	Ballina Crescent	10	DP263363	58
19	Ballina Crescent	10	DP263363	59
21	Ballina Crescent	10	DP263363	60
23	Ballina Crescent	10	DP263363	61
25	Ballina Crescent	10	DP263363	62
27	Ballina Crescent	10	DP263363	63
29	Ballina Crescent	10	SP20744	
31	Ballina Crescent	10	DP263363	65
33	Ballina Crescent	10	DP263363	66
35	Ballina Crescent	10	DP263363	67
37	Ballina Crescent	10	DP263363	68
39	Ballina Crescent	10	DP263363	69
41	Ballina Crescent	10	DP263363	70
43	Ballina Crescent	10	DP263363	71
45	Ballina Crescent	10	DP263363	72
47	Ballina Crescent	10	DP263363	73
49	Ballina Crescent	10	DP263363	74
51	Ballina Crescent	10	DP263363	75
53	Ballina Crescent	10	DP263363	76
55	Ballina Crescent	10	DP263363	77
57	Ballina Crescent	10	DP263363	78

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Street No	Street Name	Canal No.	DP No	Lot
59	Ballina Crescent	10	DP263363	79
61	Ballina Crescent	10	DP263363	80
63	Ballina Crescent	10	DP263363	81
1	Bay Street	8	DP702484	2
4	Bay Street	8		4
3	Commodore Crescent	1	SP57610	
5	Commodore Crescent	1	SP55917	
7	Commodore Crescent	1	SP54573	
9	Commodore Crescent	1	DP856497	1
11	Commodore Crescent	1	DP856497	2
13	Commodore Crescent	1	DP848277	1
15	Commodore Crescent	1	DP848277	2
16	Commodore Crescent	5	SP56423	
17	Commodore Crescent	1	DP844805	207
18	Commodore Crescent	5	DP849382	2
19	Commodore Crescent	1	DP844805	207
20	Commodore Crescent	5	DP849382	1
22	Commodore Crescent	5	DP1008624	2
24	Commodore Crescent	5	DP1008624	1
25	Commodore Crescent	1	DP1032752	63
26	Commodore Crescent	5	DP849171	2
27	Commodore Crescent	1	SP66213	
28	Commodore Crescent	5	DP849171	1
29	Commodore Crescent	1	SP57503	
29	Commodore Crescent	1	SP57503	
30	Commodore Crescent	5	DP846024	1
31	Commodore Crescent	1	SP61030	
32	Commodore Crescent	5	DP846024	2
33	Commodore Crescent	1	SP61030	

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Street No	Street Name	Canal No.	DP No	Lot
34	Commodore Crescent	5	DP837959	1
35	Commodore Crescent	1	SP33664	
36	Commodore Crescent	5	DP837959	2
37	Commodore Crescent	1	SP33664	
38	Commodore Crescent	5	DP836232	1
39	Commodore Crescent	1	SP33742	
40	Commodore Crescent	5	DP836232	2
41	Commodore Crescent	1	SP33742	
42	Commodore Crescent	5	DP833585	13
43	Commodore Crescent	1	SP34513	
44	Commodore Crescent	5	DP833585	12
45	Commodore Crescent	1	SP34513	
47	Commodore Crescent	1	DP747489	201
	Commodore Crescent		DP833585	11
49	Commodore Crescent	1	DP747489	201
50	Commodore Crescent	5	DP845675	102
51	Commodore Crescent	1	SP33472	
52	Commodore Crescent	5	DP845675	101
53	Commodore Crescent	1	SP33472	
54	Commodore Crescent	5	DP833585	9
55	Commodore Crescent	1	DP709410	195
56	Commodore Crescent	5	DP833585	8
57	Commodore Crescent	1	DP709410	194
1/59	Commodore Crescent	1	DP1032601	1
2/59	Commodore Crescent	1	DP1032601	2
60	Commodore Crescent	5	DP833585	7
61	Commodore Crescent	1	DP709410	192
63	Commodore Crescent	1	DP709410	191
64	Commodore Crescent	5	DP833585	6
65	Commodore Crescent	1	DP709410	190
66	Commodore Crescent	5	DP833585	5

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Street No	Street Name	Canal No.	DP No	Lot
67	Commodore Crescent	1	DP709410	189
69	Commodore Crescent	1	SP66235	
70	Commodore Crescent	5	DP833585	4
71	Commodore Crescent	1	DP709410	187
1/72	Commodore Crescent	5	DP1045118	2
2/72	Commodore Crescent	5	DP1045118	1
73	Commodore Crescent	1	DP710567	198
74	Commodore Crescent	5	DP858924	2
75	Commodore Crescent	1	DP710567	199
76	Commodore Crescent	5	DP858924	1
77	Commodore Crescent	1	SP33567	
78	Commodore Crescent	5	DP833585	1
79	Commodore Crescent	1	SP33567	
80	Commodore Crescent	5	DP842288	33
81	Commodore Crescent	1	DP1033888	1
82	Commodore Crescent	5	DP842288	34
83	Commodore Crescent	1	DP1033888	2
84	Commodore Crescent	5	DP259848	15
85	Commodore Crescent	1	DP259724	3
86	Commodore Crescent	5	DP259848	14
87	Commodore Crescent	1	DP259724	3
88	Commodore Crescent	5	DP259848	13
89	Commodore Crescent	1	DP259724	4
90	Commodore Crescent	5	DP259848	12
91	Commodore Crescent	1	DP259724	5
93	Commodore Crescent	1	DP259724	6
94	Commodore Crescent	5	DP739202	1
95	Commodore Crescent	1	SP32986	
96	Commodore Crescent	5	DP259848	9
97	Commodore Crescent	1	SP32986	
98	Commodore Crescent	5	DP259848	8

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Street No	Street Name	Canal No.	DP No	Lot
1	Cornwallis Close	4	DP246284	92
2	Cornwallis Close	3	DP246284	62
3	Cornwallis Close	4	DP246284	91
4	Cornwallis Close	3	DP246284	63
5	Cornwallis Close	4	DP246284	90
6	Cornwallis Close	3	DP246284	64
7	Cornwallis Close	4	DP246284	89
8	Cornwallis Close	3	DP246284	65
9	Cornwallis Close	4	DP246284	88
10	Cornwallis Close	3	DP246284	66
11	Cornwallis Close	4	DP246284	87
12	Cornwallis Close	3	DP246284	67
13	Cornwallis Close	4	DP246284	86
14	Cornwallis Close	3	DP246284	68
15	Cornwallis Close	4	DP246284	85
16	Cornwallis Close	3	DP246284	69
17	Cornwallis Close	4	DP246284	84
18	Cornwallis Close	3	DP246284	70
19	Cornwallis Close	4	DP246284	83
20	Cornwallis Close	3	DP246284	71
21	Cornwallis Close	4	DP246284	82
22	Cornwallis Close	3	DP246284	72
23	Cornwallis Close	4	DP246284	81
24	Cornwallis Close	3	DP246284	73
25	Cornwallis Close	4	DP246284	80
26	Cornwallis Close	3	DP246284	74
27	Cornwallis Close	4	DP246284	79
28	Cornwallis Close	3	DP246284	75
29	Cornwallis Close	2	DP246284	78
30	Cornwallis Close	2	DP246284	76

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Street No	Street Name	Canal No.	DP No	Lot
31	Cornwallis Close	2	DP246284	77
1	Francis Street	3	DP246284	61
2	Francis Street	6	DP246284	23
3	Francis Street	3	DP246284	60
4	Francis Street	6	DP246284	24
5	Francis Street	3	DP246284	59
6	Francis Street	6	DP246284	25
7	Francis Street	3	DP246284	58
8	Francis Street	6	DP246284	26
9	Francis Street	3	SP62159	
9	Francis Street	3	SP62159	
10	Francis Street	6	DP246284	27
11	Francis Street	3	DP246284	56
12	Francis Street	6	DP246284	28
13	Francis Street	3	DP246284	55
14	Francis Street	6	DP246284	29
15	Francis Street	3	DP246284	54
16	Francis Street	6	DP246284	30
17	Francis Street	3	DP246284	53
18	Francis Street	6	DP246284	31
19	Francis Street	3	DP246284	52
20	Francis Street	6	DP246284	32
21	Francis Street	3	DP246284	51
22	Francis Street	6	DP246284	33
23	Francis Street	3	DP246284	50
25	Francis Street	3	DP246284	49
27	Francis Street	3	DP246284	48
29	Francis Street	2	DP246284	47
31	Francis Street	2	DP246284	46
33	Francis Street	2	DP246284	45



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Street No	Street Name	Canal No.	DP No	Lot
35	Francis Street	2	DP246284	44
37	Francis Street	2	DP246284	43
39	Francis Street	2	DP246284	42
41	Francis Street	2	DP246284	41
43	Francis Street	2	DP246284	40
45	Francis Street	2	DP246284	39
47	Francis Street	2	DP246284	38
49	Francis Street	2	DP246284	37
51	Francis Street	2	DP246284	36
53	Francis Street	2	DP246284	35
55	Francis Street	2	DP246284	34
0	Francis Street	2	DP246284	141
	Hastings River Drive		DP246284	144
2	Hibbard Drive	2	DP246284	105
4	Hibbard Drive	2	DP246284	106
6	Hibbard Drive	2	DP246284	107
8	Hibbard Drive	2	DP246284	108
10	Hibbard Drive	2	DP246284	109
12	Hibbard Drive	2	DP246284	110
14	Hibbard Drive	2	DP246284	111
16	Hibbard Drive	2	DP246284	112
18	Hibbard Drive	2	DP246284	113
20	Hibbard Drive	2	DP246284	114
22	Hibbard Drive	2	DP246284	115
24	Hibbard Drive	2	DP246284	116
26	Hibbard Drive	2	DP246284	117
28	Hibbard Drive	2	DP246284	118
30	Hibbard Drive	2	DP246284	119
32	Hibbard Drive	2	SP58871	

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Street No	Street Name	Canal No.	DP No	Lot
34	Hibbard Drive	2	DP246284	121
36	Hibbard Drive	2	DP246284	122
38	Hibbard Drive	2	DP246284	123
40	Hibbard Drive	2	DP246284	124
42	Hibbard Drive	2	DP246284	125
44	Hibbard Drive	2	DP246284	126
46	Hibbard Drive	2	DP246284	127
48	Hibbard Drive	2	DP246284	128
50	Hibbard Drive	2	DP246284	129
52	Hibbard Drive	2	DP246284	130
54	Hibbard Drive	2	DP246284	131
56	Hibbard Drive	2	DP246284	132
58	Hibbard Drive	2	DP246284	133
60	Hibbard Drive	2	DP246284	134
62	Hibbard Drive	2	DP285242	1
62	Hibbard Drive	2	DP285242	2
62	Hibbard Drive	2	DP285242	3
62	Hibbard Drive	1	DP285242	4
62	Hibbard Drive	1	DP285242	5
62	Hibbard Drive	1	DP285242	6
64	Hibbard Drive	1	SP64481	
66	Hibbard Drive	1	SP57839	
68	Hibbard Drive	1	SP22336	
1	Laguna Place	9	DP709409	133
2	Laguna Place	10	DP263432	82
3	Laguna Place	9	DP709409	132
4	Laguna Place	10	DP263432	83
5	Laguna Place	9	DP709409	131
6	Laguna Place	10	DP263432	84
7	Laguna Place	9	DP709409	130

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Street No	Street Name	Canal No.	DP No	Lot
8	Laguna Place	10	DP263432	85
9	Laguna Place	9	DP709409	129
10	Laguna Place	10	DP263432	86
11	Laguna Place	9	DP709409	128
12	Laguna Place	10	DP263432	87
13	Laguna Place	9	DP709409	127
14	Laguna Place	10	DP263432	88
15	Laguna Place	9	DP709409	126
16	Laguna Place	10	DP263432	89
17	Laguna Place	9	DP709409	125
18	Laguna Place	10	DP263432	90
19	Laguna Place	9	DP709409	124
20	Laguna Place	10	DP263432	91
21	Laguna Place	9	DP709409	123
22	Laguna Place	10	DP263432	92
23	Laguna Place	9	DP709409	122
24	Laguna Place	10	DP263432	93
25	Laguna Place	9	DP709409	121
26	Laguna Place	10	DP263432	94
27	Laguna Place	9	DP709409	120
28	Laguna Place	10	DP263432	95
29	Laguna Place	9	DP709409	119
30	Laguna Place	10	DP263432	96
31	Laguna Place	9	DP709409	118
32	Laguna Place	10	DP263432	97
33	Laguna Place	9	DP709409	117
34	Laguna Place	10	DP263432	98
35	Laguna Place	9	DP709409	116
36	Laguna Place	10	DP263432	99
37	Laguna Place	9	DP709409	115
38	Laguna Place	10	DP263432	100

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Street No	Street Name	Canal No.	DP No	Lot
39	Laguna Place	9	DP709409	114
40	Laguna Place	10	DP263432	101
41	Laguna Place	9	DP709409	113
42	Laguna Place	10	DP263432	102
43	Laguna Place	9	DP709409	112
44	Laguna Place	10	DP263432	103
45	Laguna Place	9	DP709409	111
46	Laguna Place	10	DP263432	104
48	Laguna Place	10	DP263432	105
49	Laguna Place	9	SP30448	
50	Laguna Place	10	DP263432	106
54	Laguna Place	10	SP31775	
1/47	Laguna Place	9	SP31175	
2/47	Laguna Place	9	SP31175	
1/52	Laguna Place	10	SP31454	
2/52	Laguna Place	10	SP31454	
0	Laguna Place	9	DP263432	110
2	Newport Island Road	7	DP709409	186
3	Newport Island Road	9	DP709409	134
4	Newport Island Road	7	DP709409	185
5	Newport Island Road	9	DP709409	135
6	Newport Island Road	7	DP709409	184
7	Newport Island Road	9	DP709409	136
8	Newport Island Road	7	DP709409	183
9	Newport Island Road	9	DP709409	137
10	Newport Island Road	7	DP709409	182
11	Newport Island Road	9	DP709409	138
12	Newport Island Road	7	DP709409	181
13	Newport Island Road	9	DP709409	139
14	Newport Island Road	7	DP709409	180

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Street No	Street Name	Canal No.	DP No	Lot
15	Newport Island Road	9	DP709409	140
16	Newport Island Road	7	DP709409	179
17	Newport Island Road	9	DP709409	141
18	Newport Island Road	1	DP709409	178
19	Newport Island Road	9	DP709409	142
20	Newport Island Road	1	DP709409	177
21	Newport Island Road	9	DP709409	143
22	Newport Island Road	1	DP709409	176
23	Newport Island Road	9	DP709409	144
24	Newport Island Road	1	DP709409	175
25	Newport Island Road	9	DP709409	145
26A	Newport Island Road	1	SP837379	
26B	Newport Island Road	1	SP837379	
27	Newport Island Road	9	DP709409	146
28	Newport Island Road	1	DP709409	173
29	Newport Island Road	9	DP709409	147
30	Newport Island Road	1	DP709409	172
31	Newport Island Road	9	DP709409	148
32	Newport Island Road	1	DP709409	171
33	Newport Island Road	9	DP709409	149
34	Newport Island Road	1	DP709409	170
35	Newport Island Road	9	DP709409	150
36	Newport Island Road	1	DP709409	169
37	Newport Island Road	9	DP709409	151
38	Newport Island Road	1	DP709409	168
39	Newport Island Road	9	DP709409	152
40	Newport Island Road	1	DP479073	1
41	Newport Island Road	9	DP709409	153
42	Newport Island Road	9	DP479073	2
43	Newport Island Road	1	DP709409	154
44	Newport Island Road	9	DP479073	3

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Street No	Street Name	Canal No.	DP No	Lot
45	Newport Island Road	1	DP709409	155
46	Newport Island Road	9	DP709409	165
47	Newport Island Road	1	DP709409	156
48	Newport Island Road	9	DP709409	164
49	Newport Island Road	1	DP709409	157
50	Newport Island Road	9	DP709409	163
51	Newport Island Road	1	DP709409	158
52	Newport Island Road	9	DP709409	162
54	Newport Island Road	9	DP709409	161
56	Newport Island Road	9	DP709409	160
58	Newport Island Road	9	DP709409	159
0	Newport Island Road		DP246284	142
0	Newport Island Road		DP246284	143
	Park Street		DP1018087	5
	Park Street		SP55534	
2	River Park Road	3	DP259848	16
4	River Park Road	3	SP68531	
4	River Park Road	3	SP19226	
6	River Park Road	3	DP259848	18
8	River Park Road	3	DP259848	19
10	River Park Road	3	DP259848	20
12	River Park Road	3	DP259848	21
14	River Park Road	3	DP259848	22
16	River Park Road	3	DP259848	23
18	River Park Road	3	DP259848	24
20	River Park Road	3	DP259848	25
22	River Park Road	3	DP259848	26
24	River Park Road	1	DP259848	27
26	River Park Road	1	DP259848	28

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Street No	Street Name	Canal No.	DP No	Lot
100	River Park Road	3	DP842288	32
102	River Park Road	3	DP842288	31
104	River Park Road	3	SP57994	
106	River Park Road	3	DP833585	29
108	River Park Road	3	DP833585	28
110	River Park Road	3	DP833585	27
112	River Park Road	3	DP833585	26
114	River Park Road	3	DP833585	25
116	River Park Road	3	DP833585	24
118	River Park Road	3	DP833585	23
120	River Park Road	3	DP833585	22
122	River Park Road	3	DP833585	21
124	River Park Road	3	DP833585	20
126	River Park Road	3	DP845452	2
128	River Park Road	3	DP845452	1
130	River Park Road	3	DP844417	1
132	River Park Road	3	DP844417	2
134	River Park Road	3	DP861467	12
136	River Park Road	3	DP861467	11
138	River Park Road	3	DP840700	161
140	River Park Road	3	DP840700	162
142	River Park Road	3	DP840701	39
144	River Park Road	3		
146	River Park Road	3	DP846392	1
148	River Park Road	3	DP846392	2
150	River Park Road	3	DP863688	2
152	River Park Road	3	DP863688	1
154	River Park Road	3	DP853912	1
156	River Park Road	3	DP853912	2
158	River Park Road	3	SP50986	
0	River Park Road	3	DP736860	2

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Street No	Street Name	Canal No.	DP No	Lot
0	River Park Road	3	DP838475	7
1/2	Scarborough Close	4	DP834411	1
2/2	Scarborough Close	4	DP834411	2
4	Scarborough Close	4	DP246284	94
6	Scarborough Close	4	SP22140	
6	Scarborough Close	4	SP22140	
8	Scarborough Close	4	DP246284	96
10	Scarborough Close	4	DP246284	97
12	Scarborough Close	4	DP246284	98
14	Scarborough Close	4	DP246284	99
16	Scarborough Close	4	DP246284	100
18	Scarborough Close	4	DP246284	101
20	Scarborough Close	4	DP246284	102
22A	Scarborough Close	4	SP15845	
22B	Scarborough Close	4	SP15845	
23	Scarborough Close	4	SP16873	
24	Scarborough Close	4	SP17291	
1	Sirius Close	6	DP246284	22
2	Sirius Close	7	DP246284	1
3	Sirius Close	6	DP246284	21
4	Sirius Close	7	DP246284	2
5	Sirius Close	6	DP246284	20
6	Sirius Close	7	DP246284	3
7	Sirius Close	6	DP246284	19
8	Sirius Close	7	DP246284	4
9	Sirius Close	6	DP246284	18
10	Sirius Close	7	DP246284	5
11	Sirius Close	6	DP246284	17
12	Sirius Close	7	DP246284	6



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Street No	Street Name	Canal No.	DP No	Lot
13	Sirius Close	6	DP246284	16
14	Sirius Close	7	DP246284	7
15	Sirius Close	6	DP246284	15
16	Sirius Close	7	DP246284	8
17	Sirius Close	6	DP246284	14
18	Sirius Close	7	DP246284	9
19	Sirius Close	6	DP246284	13
1/20	Sirius Close	7	SP18443	10
2/20	Sirius Close	7	SP18443	10
21	Sirius Close	1,6	DP246284	12
24	Sirius Close	7	SP18443	

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**16 September 2004**

Appendix D

Canal Maintenance Plan Spreadsheets

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Appendix E  
**Photographs**

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Appendix F

**Hydrographic Survey**

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Appendix G

Review of Environmental Factors

**Final Draft**

**16 September 2004**

Appendix H

Original Design Drawings

**Final Draft****16 September 2004****GHD Pty Ltd** ABN 39 008 488 373

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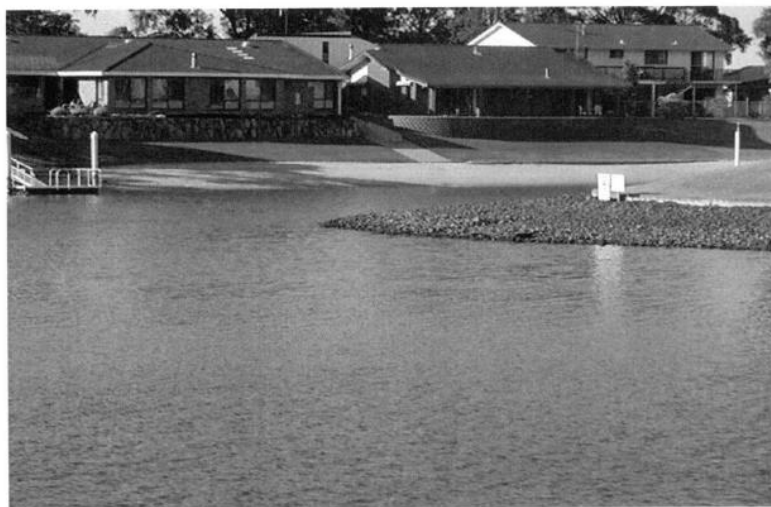
**Document Status**

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
Draft	G Humby	J. Fullerton		G K Pyke		

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**Port Macquarie-Hastings Council**

**Settlement Shores Canal Estate  
Canal Maintenance**



**Resident & Landowners  
Guidelines**



Prepared By:  
Technical Services and  
Natural Resources Sections

APRIL 2006

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## 1. INTRODUCTION

The purpose of this document is to provide residents of the Settlement Shores Canal Estates with guidelines on undertaking certain works within the canals. The "canal" is generally described as the area between the revetment walls as shown in **APPENDIX A**.

Works within the canals may involve any of the following:-

- Maintenance dredging of canal beds
- Rehabilitation of the beach zones
- Repair of the revetment walls
- Repair of boat ramps, jetties and mooring poles
- Construction of boat ramps, jetties and mooring poles
- Rehabilitation of rock protection
- Repair of stormwater outlets

This Guideline applies to all the canals except the new Broadwater & North/South Harbour canal development.

## 2. REFERENCE DOCUMENTS

These guidelines form part of the following overall document set: -

- Canal Maintenance Plan (CMP) 2004
- Canal Maintenance Plan - Review of Environmental Factors (REF) 2004
- Resident & Landowner Guidelines 2006

The CMP is a very detailed document which identifies, on an individual property basis, the condition of the existing canals, including the extent of sedimentation, condition of revetment walls, boat ramps, jetties and beach zones. Details of 'illegal' structures and plantings are also listed. The CMP contains a catalogue of photographs for each property as evidence of the condition of the asset. The CMP also provides a detailed table of recommended works and priorities for both Council and private landowners.

The REF documents detail the existing environmental, the potential impacts of the proposed maintenance works and the environmental safeguards necessary to undertake the works.

The REF and CMP may be obtained from Council on request.

## 3. RESPONSIBILITIES

### 3.1 Council

The waterway itself is outside the private property boundary and is vested in Council's ownership. Council has accepted responsibility for maintaining the waterways and flood structures (ie flood control weir, stormwater outlets, revetment walls fronting public reserves, rock protection and beach zone up to the property boundary).

### 3.2 Landowners

A revetment wall is constructed along the length of the canals, with the common boundary of each allotment and the canals, extending to a point 2.1 metres below the revetment wall.

#### **The revetment wall forms part of the residential property.**

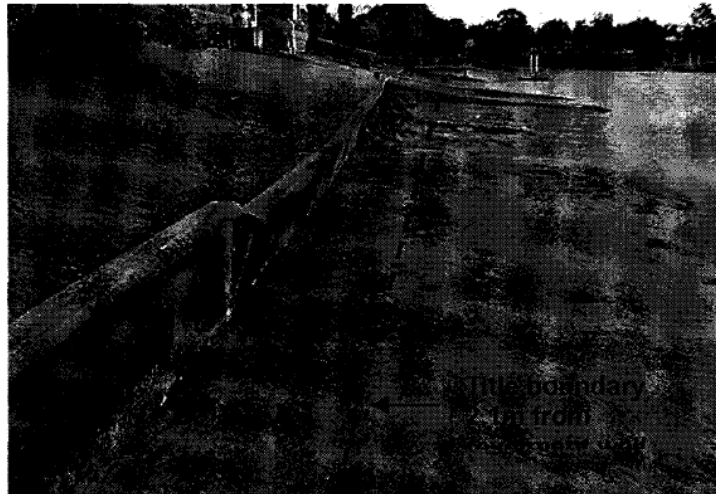
A covenant, placed on each property title, states that individual property owners are responsible for the maintenance and repair of the revetment wall. Council encourages all owners to undertake the necessary maintenance work however; council has the power to carry out the necessary maintenance work if a property owner fails to do so. The cost of that maintenance may be charged to the property owner.

A second covenant on each of the allotment titles requires there be no buildings, fences, trees or other obstructions within 5.4 metres of the revetment wall in the majority of canals, and 7.9 metres of the revetment wall in the case of The Governors Way. This covenant is required to enable landowners and/or the Council to gain continuous access along the bank adjacent to the waterway for the purpose of removing flood debris, repairing erosion or damage caused by floods or repairing any damage to the canals at the rear of the properties. Council may request property owners to remove obstructions from this zone considered contrary to the covenant.

## 4. MAINTENANCE WORKS

Maintenance works are those works required to return the canal assets to a condition as close as possible to their original condition.

Maintenance works are necessary to reinstate the structural, operational and environmental integrity of the canal system infrastructure. A description of the type of maintenance works proposed is shown in **APPENDIX B**. Specific details of the type of works required adjacent to or within your property may be obtained from the CMP by contacting Council. The CMP also indicates the severity of the problem that may exist with the canal infrastructure adjacent to your property.



**5. MAINTENANCE WORKS BY LAND OWNERS**

The type of maintenance works required by land owners is described in **APPENDIX B**.

The following steps are to be followed by residents when undertaking maintenance works on the canals:-

Step 1	Check with Council about the condition of the canal/structure within or adjacent to your property.
Step 2	Arrange an inspection of the canal/structure with one of Council's Development Engineers.
Step 3	Subject to advice from Council's Development Engineer, you may need to make an application to Council for the proposed works.  <i><b>Note:</b> An engineering design certified by a Civil or Structural Engineer may be required as part of the application for certain structural works eg repair of revetment walls. Council's Development Engineer will advise you about this.</i>
Step 4	Council approves the application with or without conditions.
Step 5	Arrange for a Council approved contractor to undertake the works. Certain minor works; eg beach replenishment, may be undertaken by landowners under Council supervision.
Step 6	Council inspects the works at stages indicated in the approval to the application.
Step 7	Major works (eg revetment wall repairs) are to be certified by the contractor as being constructed in accordance with the approved design.



**6. MAINTENANCE WORKS BY COUNCIL**

Council is responsible for dredging the canals and maintenance of the beach zone 2.1 metres from the revetment walls. Council will also be responsible for maintenance of revetment walls and beach zones fronting public reserves; stormwater pipes and outlets and flood control structures (eg weirs and associated heavy rock armouring).

Council will generally undertake maintenance works as follows:-

Step 1	Determine the priority of the works to be undertaken considering the available funds.
Step 2	Determine the need to contract out the works.
Step 3	Confirm the method needed to undertake the works.
Step 4	Determine the need for detailed engineering design for works.
Step 5	Prepare design as required.
Step 6	Confirm the proposed works are adequately covered by the REF and modify as required.
Step 7	Obtain the necessary licences. eg Rivers & Foreshores Part 3A and Fisheries Management Act Permit/s.
Step 8	Advise adjoining residents of the intention to carry out work.
Step 9	Carry out works.
Step 10	Restore the work areas.

**7. DESIGN DETAILS**

The methods of foreshore maintenance will vary from activity to activity. Advice should initially be obtained from Council to confirm the method of obtaining:-

- Site access
- Disposal of waste material
- Placement of beach zone restoration materials
- Sourcing the type of materials needed
- Certification of structural works

Typical design details for canal profiles, revetment walls, boat ramps and jetties are shown in Error! Reference source not found..

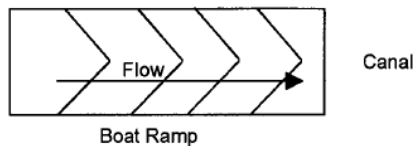
Generally residents will be required to undertake works in accordance with the original approved designs.

Any departures from the approved designs are to be designed by a civil or structural engineer and approved by Council. Residents should discuss any departures with Council before engaging consultants to confirm if the departures will be supported.

Notwithstanding the above requirement, improvements should be made to the earliest boat ramp design shown in the original plans. Details of these improvements are outlined below.

#### 8.1 Boating Ramp Improvements

It is recommended that timber or concrete edge strips be installed onto new and existing boat ramps to provide a channelling effect to water flowing down the ramp. Alternatively for new boat ramps a dish or concave profile could be constructed. Thirdly, saw-cuts can be placed into existing or new 'flat' boat ramps.



These techniques prevent water from flowing over the sides and creating scour, erosion and undermining the boat ramp.

#### 8.2 Stormwater Outlets

Residents are required to control all stormwater from the rear of their properties and direct drainage waters to the legal point of discharge for your property. No stormwater outlets are allowed to discharge water directly to the canals. This form of inappropriate drainage will cause scour and erosion to the beach zones.

### 9. BOATING FACILITIES

Boating facilities are permitted within the canal and include ramps, jetties and mooring poles. The general location and type of facilities permitted are shown in **APPENDIX**. The CMP provide an assessment of the current condition of the existing boating facilities and details may be obtained from Council upon request.

It is the landowner's responsibility to ensure all boating facilities are maintained in good condition.

Please note that boating facilities are subject to an annual licence fee and that this fee is managed by Council's Property Section. Information about licence amounts can be obtained by contacting the Property Section at Council.

### 10. APPLICATION AND FEES

All work within the canals is to be approved by Council. An application form (**APPENDIX**) is to be submitted and approved by Council. Work requiring an application include:

- Construction of boat ramps and jetties
- Erection of mooring poles
- Restoration of the beach zone
- Restoration of revetment walls

Residents should enquire with Council if an application for any work not listed above is needed. Residents should also enquire with Council to confirm the relevant application fees.

No work shall be undertaken within the canal zone without first obtaining the approval of Council.

**11. FUNDING**

The preliminary investigations, detailed surveys, environmental assessments and preparation of the Canal Maintenance Plan have been funded from licence fees collected up until now.

The CMP has identified dredging of the canals to cost in the vicinity of \$1 million and Council has allocated funds towards Stage 1 of this work. Council will also fund maintenance of public stormwater outlets and other public infrastructure.

Landowners will be required to fund works on private land; eg revetment wall restoration, part beach zone restoration and maintenance of boat ramps, jetties and mooring poles.

**12. MONITORING**

The Audit undertaken through the CMP now provides Council with a comprehensive record of the condition of the canals. Monitoring by Council of the revetment walls, the beach profile and the integrity of the beach will be carried out. This is likely to involve surveys of the waterway profiles and visual inspections of walls, rock protection and armouring. Surveys should be carried out at intervals along the waterways at key points susceptible to scour and erosion and at all drainage outlets. Visual inspections should also be carried out after major storm events at the various key points to determine whether there is any damage. These inspections may also require work to be carried out under water. Residents should also monitor facilities fronting their own properties and advise Council accordingly.

Monitoring is to be carried out initially at 5 yearly intervals and following major stormwater and flood events. This will enable Council to determine a more detailed and better monitoring program, particularly in regard to location and frequency of surveys and inspections.

Should the monitoring by Council indicate that maintenance should be carried out by property owners on their revetment walls, then Council will notify the property owners concerned.

The maintenance frequency of rock protection and the armoured beach will depend on the extent and depth of erosion. Maintenance may not be required until a considerable portion of the thickness of the rock protection has been depleted.

**13. CONTACTS**

The following contacts are available through Council's principal phone number 6581 8111.

**Development Engineer - Andy Davis**  
**Engineering Development Co-ordinator - Geoff Metcalfe**

- Applications for boat ramps, jetties and moorings
- Advice on condition of canals and private works eg revetment wall
- Application to undertake restoration works

**Environmental Engineer – Gordon Cameron**  
**Natural Resources Manager – Matt Rogers**

- Programming of Council maintenance works
- Method of maintenance works
- Environmental management of Council maintenance works
- Co-ordination of Canal Working Party
- Canal Maintenance Plan (CMP) monitoring and reviews
- Approvals to maintenance works by Council





Settlement Shores Canal Estate

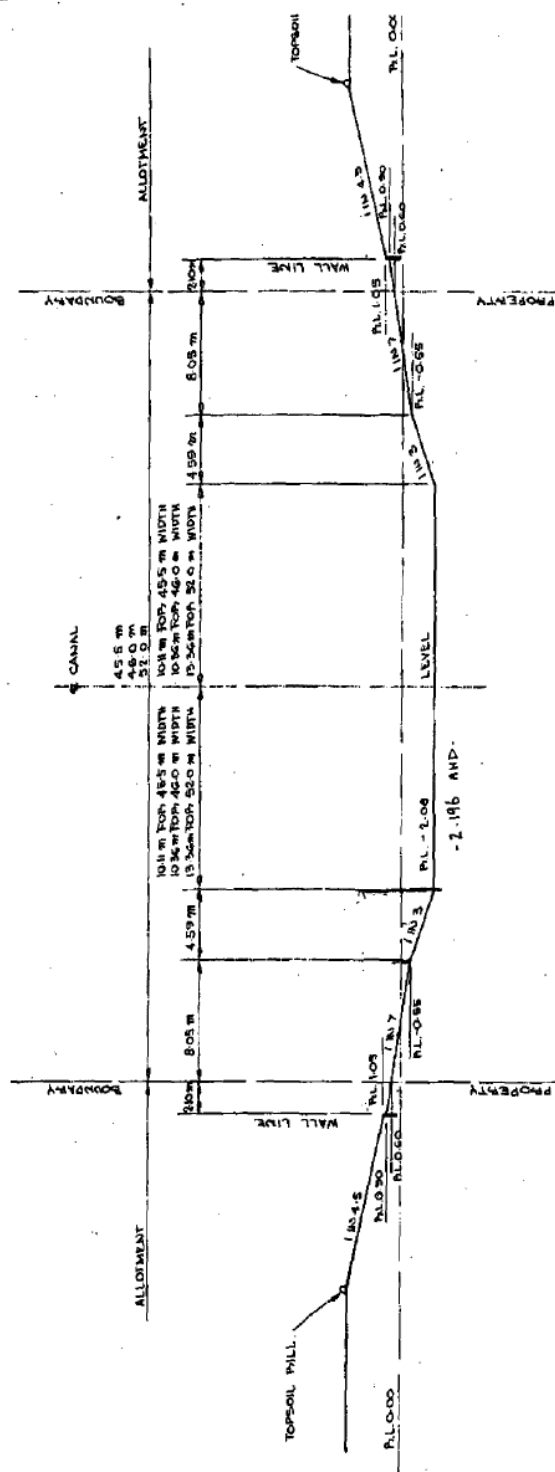
Canal Maintenance

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**APPENDIX A**

**CANAL PROFILES  
(Typical Cross Section)**

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Settlement Shores Canal Estate

Canal Maintenance

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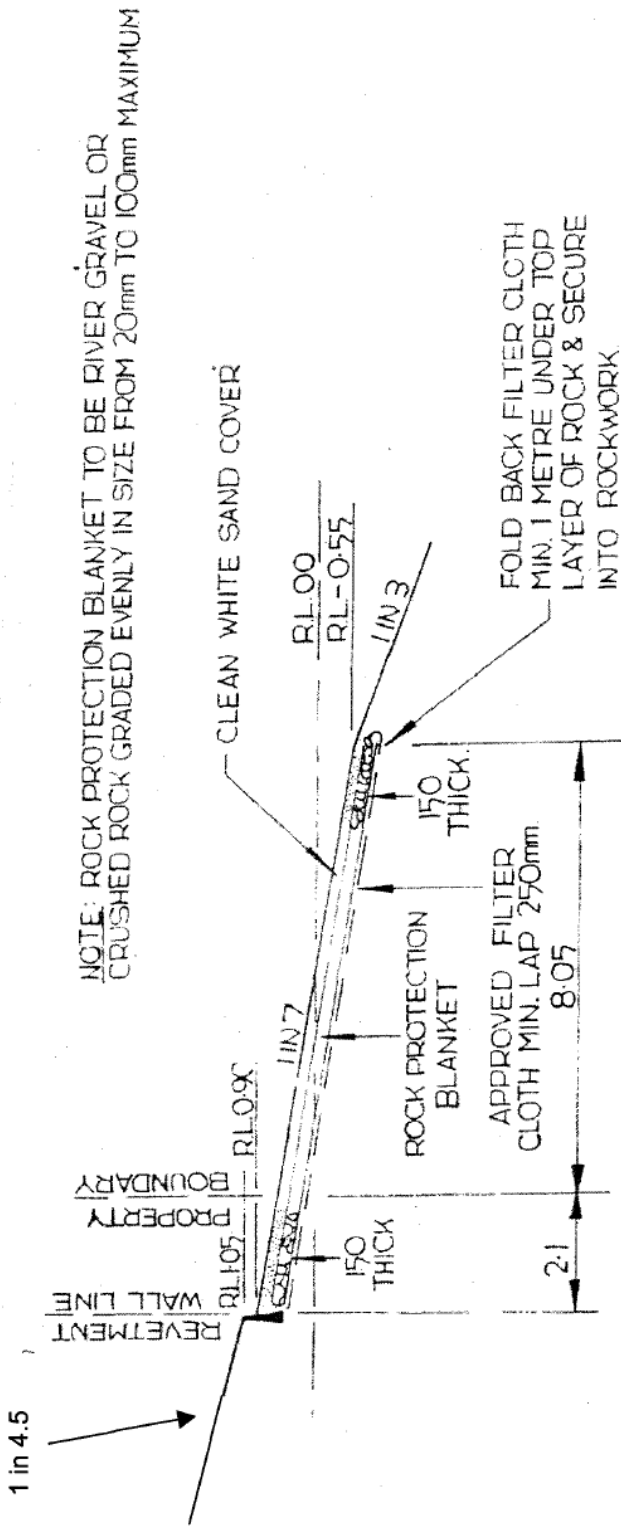
**APPENDIX B**

**TYPICAL CROSS SECTIONS**

**Beach Armouring  
Revetment Wall Detail  
Boat Ramp Details  
Jetty Details**

---

**BEACH ARMOURING**



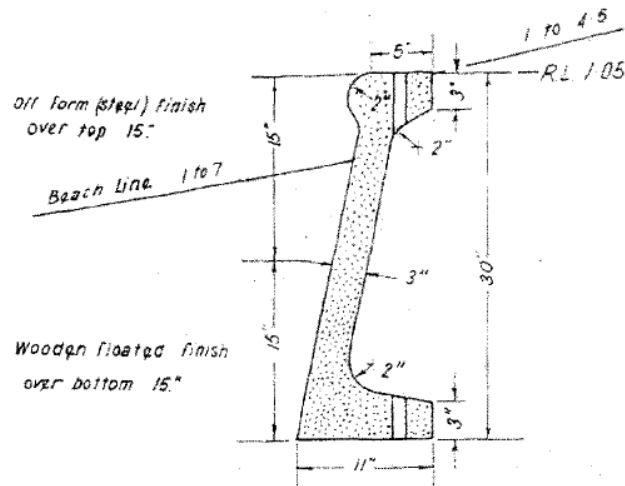
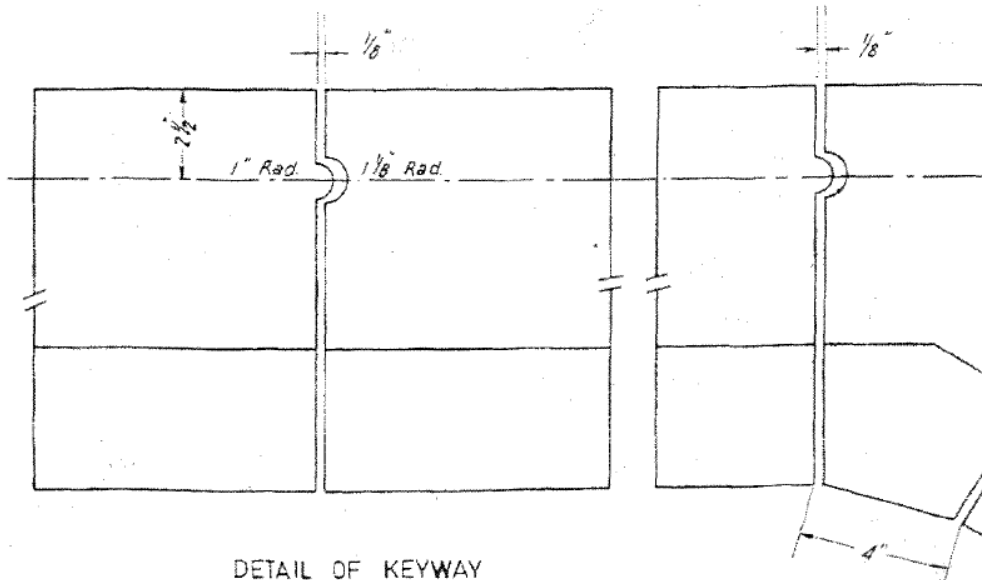
NOTE: ROCK PROTECTION BLANKET TO BE RIVER GRAVEL OR CRUSHED ROCK GRADED EVENLY IN SIZE FROM 20mm TO 100mm MAXIMUM

Specification:	
SIZE	% PASSING
100mm	100
19mm	60-100
2.36mm	20-45
150mm	0-5

**CANAL ROCK PROTECTION**

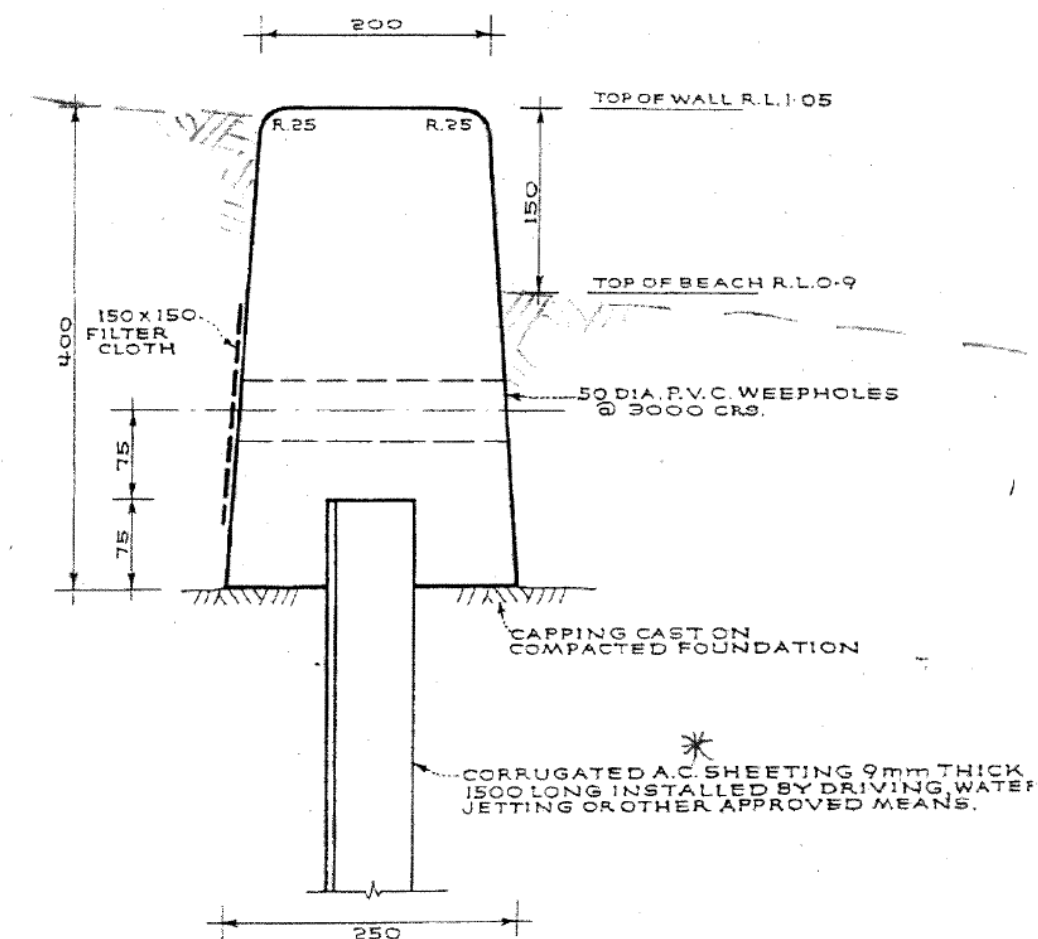
Settlement Shores Canal Estate

Canal Maintenance

**REVETMENT WALL DETAIL - A****END ELEVATION**  
Scale - 1 inch to 1 foot**DETAIL OF KEYWAY**  
Scale 3 inches to 1 foot**CORNERSTONE**  
(30° Deflection angle)

Settlement Shores Canal Estate

Canal Maintenance

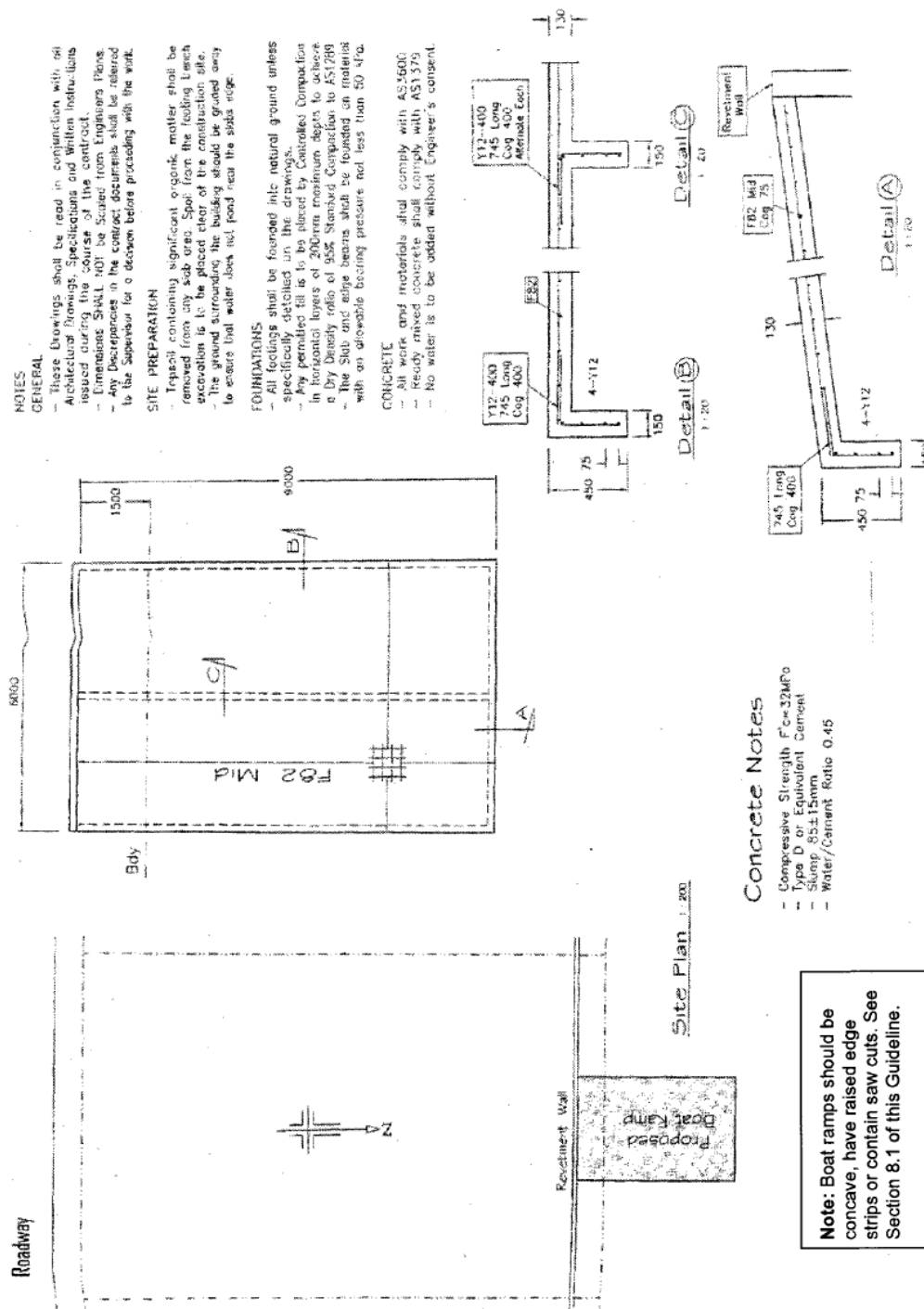
REVETMENT WALL DETAIL - B

\* AC (asbestos concrete)  
To be replaced with filler  
board or equivalent material

## NOTES:

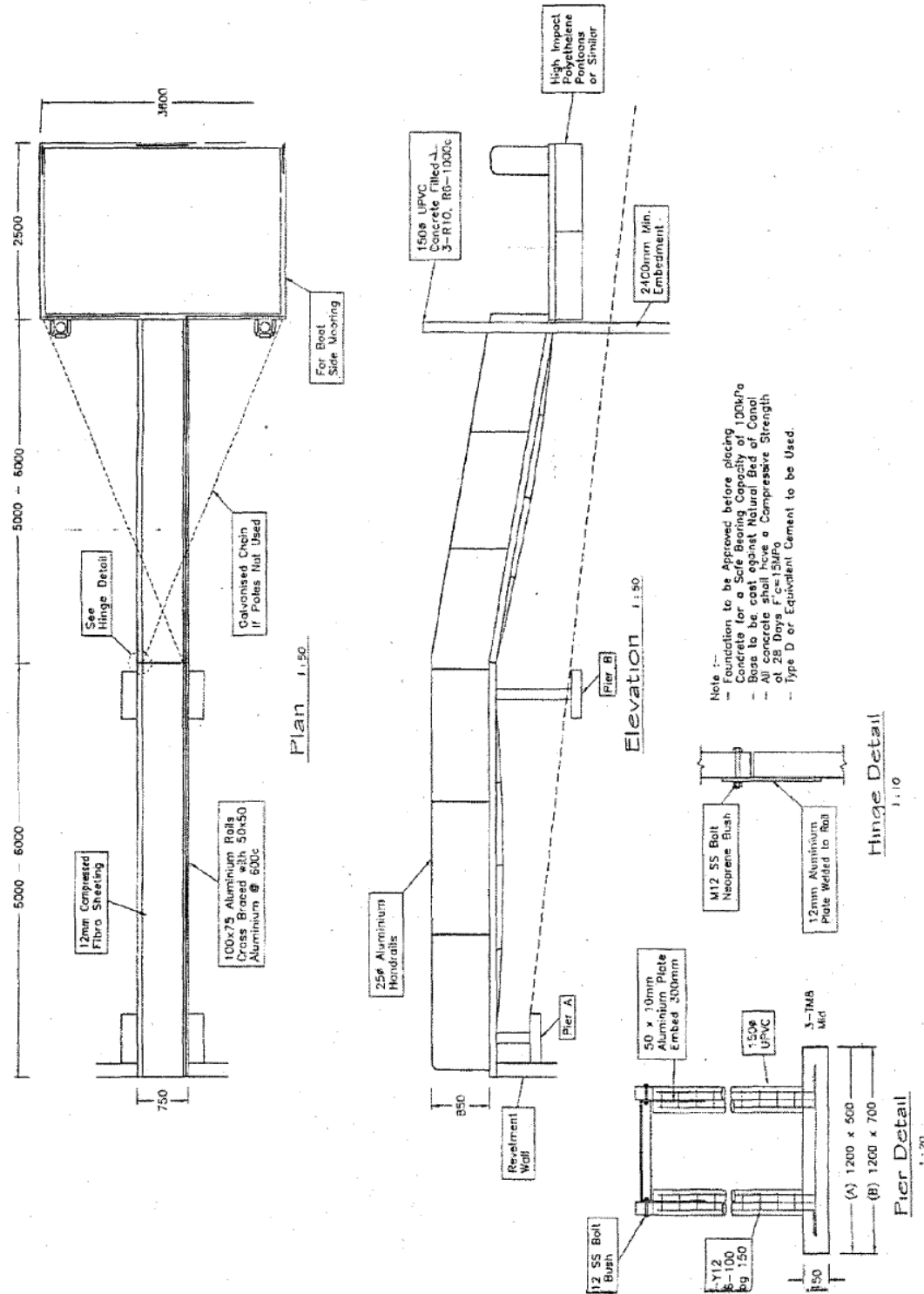
1. Concrete capping to be constructed by using concrete extruding machine.
2. Joints in concrete capping at 6000 crs.
3. Backfill not to be placed against concrete capping until 7 days after pouring.
4. Concrete to be cured and protected from weather for a minimum of 3 days after pouring.
5. The cut off sheeting shall be 9mm thick corrugated filler board sheet. Sides shall be lapped at least 1 corrugate.

## BOAT RAMP DETAIL



Settlement Shores Canal Estate

Canal Maintenance

**JETTY DETAIL**



Settlement Shores Canal Estate

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Canal Maintenance

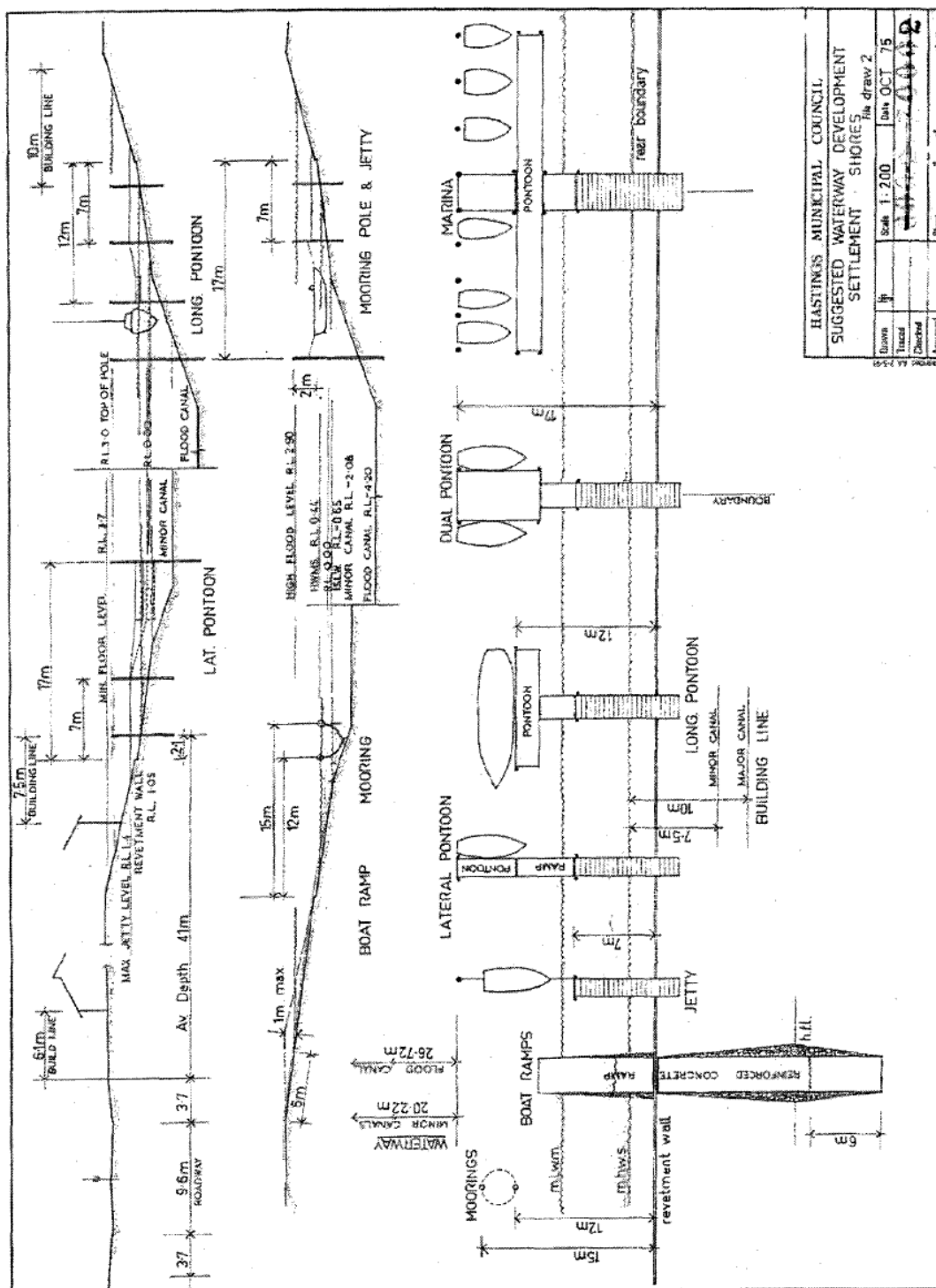
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**APPENDIX C**

**TYPICAL LOCATION OF  
CANAL BOATING INFRASTRUCTURE**

**Pontoons  
Jetties  
Moorings  
Boat Ramps**

---



Settlement Shores Canal Estate

---

Canal Maintenance

---

APPENDIX D

APPLICATION FORM

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## PORT MACQUARIE-HASTINGS COUNCIL

PO Box 84, Port Macquarie NSW 2444 DX 7415  
**PMO Office:** 6581 8111 **Laurelton Office:** 6559 9958 **Wauchope Office:** 6585 1922



## Application Form DE1

## General Requirements

1. The Information Booklet attached to this form can be used to help determine the type of approval that the proposal will require.
2. Tick the boxes and fill out the sections as appropriate.
3. Fees **must** be paid at time of lodgement.
4. Review and submit all the plans and documentation required to support the application.
5. This form may be used for a single or combined application. Advice on the combining of applications should be first sought from Council prior to making an application(s).
6. Council will not accept incomplete applications. It is the responsibility of the applicant to ensure information as required is provided.

**Privacy Notice:** The personal information provided may be available for public access and / or disclosure under various NSW Government Legislation. For further information please contact Council's Corporate and Community Services Division.

Office  
Use  
Only

PROPERTY NO:

APPLICATION NO: (YEAR / NO.)

/

1. PROPERTY DETAILS (The following details must be completed)			
Lot No.	Section No.	Strata Plan No.	Deposited Plan No.
Street No.	Street Name		
Township			Postcode
PRESENT USE OF LAND / BUILDING (Please describe, e.g. vacant land, dwelling, etc.)			
2. APPLICATION SUMMARY		TYPE OF WORK PROPOSED (Please tick the relevant boxes)	
<input type="checkbox"/> Building Works - New	<input type="checkbox"/> Building Works - Additions/Alterations	<input type="checkbox"/> Shop Fitout	
<input type="checkbox"/> Demolition	<input type="checkbox"/> Subdivision	<input type="checkbox"/> Change of Use/First Use	
<input type="checkbox"/> Earth Works	<input type="checkbox"/> Water Tank	<input type="checkbox"/> Waste Water System	
<input type="checkbox"/> Dwelling Entitlement	<input type="checkbox"/> Other: (Jetties, Driveways, etc.)		
DESCRIBE THE WORKS, e.g. building a new house, etc.			
VALUE OF WORK		OR NO. OF EXISTING/PROPOSED LOTS (Relates to subdivision of land)	
\$			

3. APPLICANT DETAILS		
Applicant Name(s)		
Street Address	TOWNSHIP	POSTCODE
Postal Address		Postcode
Email Address	Mobile	
Business Phone	Business Fax	
I declare to the best of my knowledge and belief that all the particulars hereon are correct in every detail and the information required has been supplied.		
Signature(s)		Date

4. OWNER DETAILS		
This section <b>must</b> be completed by ALL owners. If agreements for the sale of the property have been exchanged, names of both the vendor and the purchaser must be provided.		
Owner(s) Name		
Street Address	TOWNSHIP	POSTCODE
Phone No	Email Address	
Signature(s)		Date
Owner(s) Name		
Street Address	TOWNSHIP	POSTCODE
Phone No	Email Address	
Signature(s)		Date

**5. TYPE OF APPLICATION** (Please tick the type of applications being lodged)**(A) Consents/Certificates issued under the Environmental Planning & Assessment Act**

Please read the notes to determine the type of consent/approval or certificate required. Note: if you are uncertain regarding the integrated development criteria and its relevance to your proposal please seek clarification from Council's Town Planner prior to lodgement of the application.

- ☐ **Complying Development** (If you tick this box you will need to complete Section 7)
- ☐ **Modification to Complying Development** (Complying Development No: )

- ☐ **Local Standard Development Consent**
- ☐ **Staged Development Consent** (Please attach staging details)
- ☐ **Deferred Development Consent**
- ☐ **Modification of Development Consent** (DA No: )  
(Attach document outlining the nature of modification proposed)
- ☐ **Construction Certificate** (If you tick this box you will need to complete Section 7)
- ☐ **Staged Construction Certificate** (Please attach staging details)
- ☐ **Modification of Construction Certificate** (CC No: )
- ☐ **BASIX Certificate**

- ☐ **Designated Development Consent**
- ☐ **Integrated Development Consent** (Please indicate under which Act the licences/permits are required)
- ☐ **Fisheries Management Act 1994** [ ] s 144 [ ] s 201 [ ] s 205 [ ] s 219
- ☐ **Heritage Act 1977** [ ] s 58
- ☐ **National Parks & Wildlife Act 1974** [ ] s 90
- ☐ **Protection of the Environment Operations Act 1997** [ ] ss 43(a), 47 & 55 [ ] ss 43(b), 48 & 55  
[ ] s 43(d), 55 & 122
- ☐ **Rural Fires Act 1997** [ ] s 100B
- ☐ **Roads Act 1993** [ ] s 138
- ☐ **Rivers and Foreshores Improvement Act 1948** [ ] Part 3A

- ☐ **Subdivision Certificate**
- ☐ **Subdivision Construction Certificate**
- ☐ **Strata Subdivision Certificate**

**(B) Approvals issued under the Local Government Act (Section 68)**

- ☐ **Install and operate a sewerage management system**
- ☐ **Carry out sewerage works**
- ☐ **Carry out stormwater works**
- ☐ **Carry out water supply works**
- ☐ **Erect a temporary structure on public land**
- ☐ **Other** (please specify)

**(C) Approvals Issued under The Roads Act 1993 (Section 138)**

For driveways – it is recommended that a copy of "A Guide to Quality Assurance of Driveways and Minor Concrete Structures" be obtained

**Use of a road reserve to:**

- |  |   |
|--|---|
| <input type="checkbox"/> Construct road works including drainage           | <input type="checkbox"/> Control traffic                              |
| <input type="checkbox"/> Construct a footpath                              | <input type="checkbox"/> Pumping water into a road                    |
| <input type="checkbox"/> Construct a driveway                              | <input type="checkbox"/> Connect to another road                      |
| <input type="checkbox"/> Connect to Council services,<br>eg water/sewerage | <input type="checkbox"/> Work zones for buildings                     |
| <input type="checkbox"/> Disturb the surface                               | <input type="checkbox"/> Interfere with structure (eg tree, sign etc) |
|  | <input type="checkbox"/> Other  |

**(D) Appointment of Port Macquarie-Hastings Council as Principal Certifying Authority (PCA)**

Once you have the necessary approvals the property owner **MUST** appoint a PCA prior to work starting

- ☐ Appoint Council as the PCA (for inspections/compliance certificates including the issue of the occupation/subdivision certificate).
- ☐ Nominate PCA (if not Council)

**6. FORWARDING INSTRUCTIONS** (Please provide instructions for forwarding the Determination)

☐ Post to Applicant

☐ Pick Up Phone No:

**7. BUILDING DETAILS**

Please complete **ONLY** if you require a building construction certificate or complying development certificate.

Builder/Company Name

Street Address	Township	Postcode
Business Phone	Mobile	
Licence No.	Email Address	

Plumber/Company Name

Street Address	Township	Postcode
Business Phone	Mobile	
Licence No.	Email Address	

## SECTION 7 Cont.

Australian Bureau of Statistics			
No. Buildings Proposed		No. of Storeys (including underground floors)	
No. Buildings to be demolished		No. of Proposed Lots	
Dual Occupancy Y/N		Gross Floor Area of new building work (m <sup>2</sup> )	
Current Area (m <sup>2</sup> )		No. of Units	
<b>Materials to be Used</b> (Please indicate the materials to be used in the construction of the new building/s)			
<b>1. FLOOR</b>	<b>CODE</b>	<b>3. WALLS</b>	<b>CODE</b>
Concrete/Slate	<input type="checkbox"/> 20	Brick (Double)	<input type="checkbox"/> 11
Timber	<input type="checkbox"/> 40	Brick (Veneer)	<input type="checkbox"/> 12
Other	<input type="checkbox"/> 80	Concrete/Stone	<input type="checkbox"/> 20
		Fibre cement	<input type="checkbox"/> 30
<b>2. ROOF</b>	<b>CODE</b>	Timber	<input type="checkbox"/> 40
Tiles	<input type="checkbox"/> 10	Curtain glass	<input type="checkbox"/> 50
Concrete/Slate	<input type="checkbox"/> 20	Steel	<input type="checkbox"/> 60
Fibre cement	<input type="checkbox"/> 30	Aluminium	<input type="checkbox"/> 70
Steel	<input type="checkbox"/> 60	Other	<input type="checkbox"/> 80
Aluminium	<input type="checkbox"/> 70		
Other	<input type="checkbox"/> 80	<b>4. FRAME</b>	<b>CODE</b>
		Timber	<input type="checkbox"/> 40
		Steel	<input type="checkbox"/> 60
		Aluminium	<input type="checkbox"/> 70
		Other	<input type="checkbox"/> 80
<b>Proposed Method of Termite Control</b>			
Please indicate hereunder by placing a tick ✓, the proposed termite management system in accordance with AS 3660.1			
<b>Slab on Ground Construction – Monolithic Slab</b>		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>a) Protection of slab penetrations/control joints</b>			
<input type="checkbox"/> Stainless Steel Mesh	<input type="checkbox"/> Graded Stone	<input type="checkbox"/> Full Hand-sprayed Chemical Barrier	
<input type="checkbox"/> Full reticulated Chemical Barrier	<input type="checkbox"/> Other		
<b>b) Protection of slab perimeter</b>			
<input type="checkbox"/> Stainless Steel Mesh	<input type="checkbox"/> Graded Stone	<input type="checkbox"/> Hand-sprayed Chemical Barrier	
<input type="checkbox"/> Reticulated Chemical Barrier	<input type="checkbox"/> Other		
<input type="checkbox"/> Slab edge exposure (min. 75mm exposed edge)			
<b>Suspended Floors including:</b>			
<input type="checkbox"/> Metal ant-capping	<input type="checkbox"/> Graded Stone	<input type="checkbox"/> Stainless Steel Mesh	
<input type="checkbox"/> Other			
<b>Owners Acknowledgement for Chemical Termite Treatment Only</b>			
I/We, the owners of the subject property, acknowledge that the chemical barrier used for termite treatment has a finite life and in the event that the barrier may need to be replenished the proposed method of replenishment will be as follows:			
Signatures:			



**8. PROVISION OF SEWERAGE SYSTEM JUNCTION DIAGRAM (OPTIONAL)**

Would you like a diagram which indicates the position of Council's sewer main and connection junction point provided to you? (Please note: fee applies).

☐

Ye

☐

No

**9. LIST DOCUMENTS AND PLANS ACCOMPANYING THIS APPLICATION**

1.

2.

3.

4.

5.

**10. OFFICE USE ONLY - FEES**

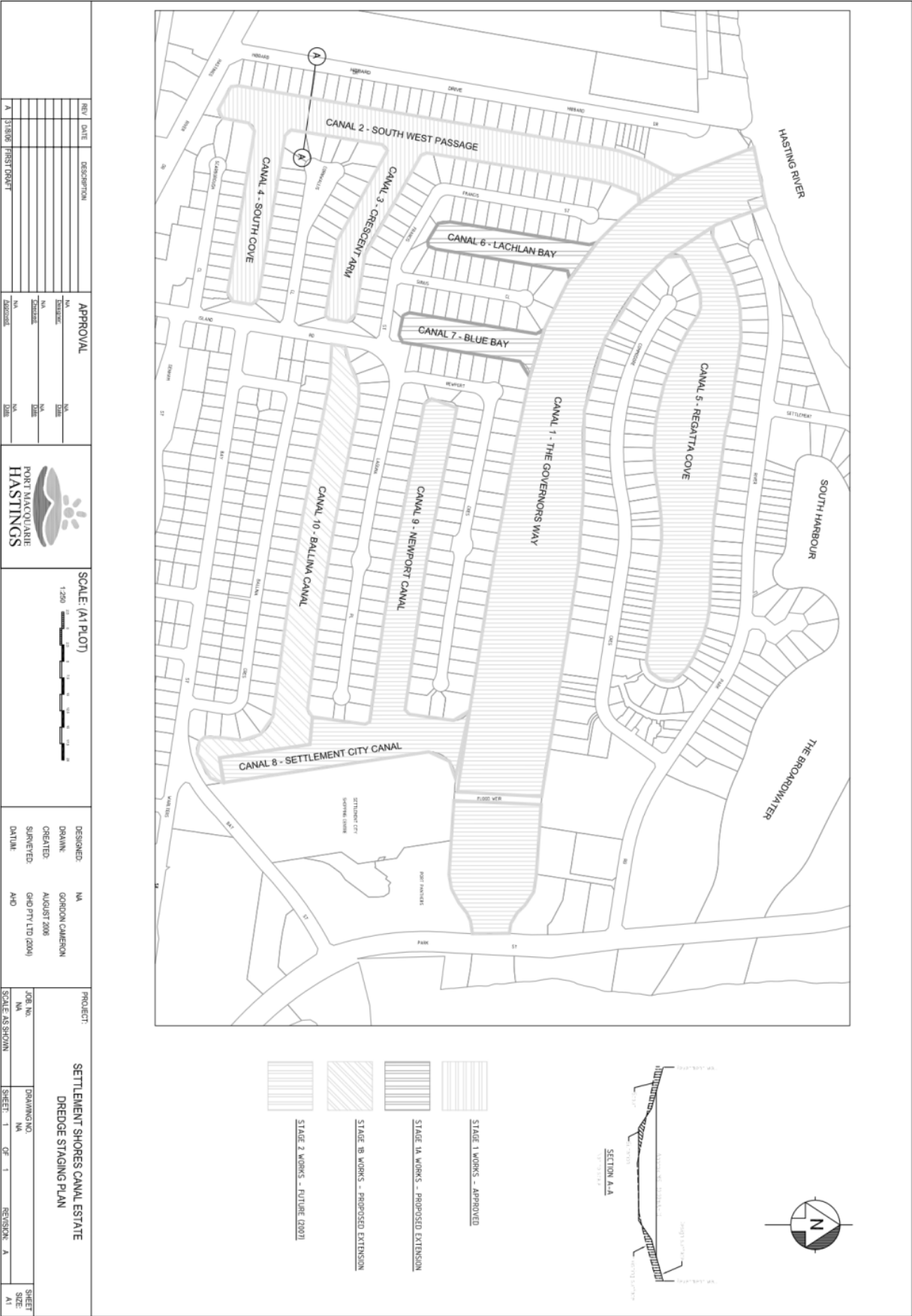
Development Application		92		DA – Subdivision Consent	DAS	92	
DA Modification	DAA	92		Strata Subdivision Cert.	CST	94	
DA Staged	DA	92					
PlanFirst Levy	DOP	61		Subdivision Cert.	CSU	830	
SEPP 65 (DRP)	DRP	76		Subdivision – Const.Cert.	CCS	859	
Integrated Admin. Fee	REFER	92		Plan Check Fee	ENGPC	93	
Notification	AD	742		Addit. Plan Check Fee	ENGP	93	
Advertising	AD	742		Supervision of Subdivision Work		860	
Archiving	MC	883		Bond Assessment	EBOND	875	
Construction Certificate	CCB	826		Complying Development	CDC	841	
CC Modification	CCB	826		CD – Long Service Levy	CDLSL	845	
CC Staged	CCB	826		CD – S68	CDS	843	
Long Service Levy	LSL	747		CD – Water Meter Hire		844	
BASIX	BSX	831		CD – Specification Purchase		851	
Water Meter Hire	WMETER	304		CD - Modification		841	
Sewer Connection-S68	S	350					
Sewer Mgmnt Facility	SEPTIC	912					
Specification Purchase	SPEC	189		Credit Card Merchant Fee	MF		
S68 – Not related to a DA	S	861		PCA Inspections	INSP		
Sewer Junction Diagram	SD	351		Section 138 Roads Act		858	

TOTAL FEES \$

RECEIPT NUMBER

RECEIVED BY

DATE



## REPORT

### **Settlement Shores Estate**

#### Canal Maintenance Plan

Client: Port Macquarie-Hastings Council

Reference: M&APA1195R003F1.0

Revision: 1.0/Final

Date: 18 September 2017





Project related



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Document title: Settlement Shores Estate

Document short title: Settlement Shores CMP  
Reference: M&APA1195R003F1.0  
Revision: 1.0/Final  
Date: 18 September 2017  
Project name: Settlement Shores CMP  
Project number: PA1195  
Author(s): Matthew Potter

Drafted by: Matthew Potter

Checked by: Greg Britton

Date / initials: 18/09/17 *MB*

Approved by: Greg Britton

Date / initials: 18/09/17 *MB*

Classification

Project related

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Project related



### **Appendices**

**Appendix A: Field Data Collection Sheet and Plans**

**Appendix B: Community Consultation Data**

**Appendix C: Schedule of Properties**

**Appendix D: Canal Maintenance Plan Spreadsheet**

**Appendix E: Hydrographic Survey Plans**

**Appendix F: Review of Environmental Factors**

**Appendix G: Original Canal Design Drawings**



Project related



## 1 Introduction

Royal HaskoningDHV (RHDHV) was commissioned to review and update the 2004 Settlement Shores Estate Canal Maintenance Plan (CMP) on behalf of Port Macquarie-Hastings Council. The CMP covers the area shown in **Figure 1**, which comprises a total of 433 allotments with waterway frontage.



Figure 1: Extent of Settlement Shores Estate Canal Maintenance Plan study area

This report covers the methodology applied, investigations completed and findings used to develop a 10-year maintenance works program for the canal system and should be read in conjunction with the *Settlement Shores Canal Estate Canal Maintenance – Resident and Landowners Guidelines*. Supporting documentation is included within several appendices including:

- Appendix A – Field Data Collections Sheet and Plans;
- Appendix B – Community Consultation Data;
- Appendix C – Schedule of Properties
- Appendix D – Canal Maintenance Plan Spreadsheet;
- Appendix E – Hydrographic Survey Plans;
- Appendix F – Review of Environmental Factors; and,
- Appendix G – Original Canal Design Drawings.





Project related



## 1.1 Project Background

The Settlement Shores Estate is located approximately 3km to the north-west of the Port Macquarie CBD and comprises a system of man-made canals constructed along the lower reaches of the Hasting River. The canals are linked to the Hastings River by The Governors Way canal, which includes a flood control weir adjacent to the Settlement City shopping centre.

There are a number of assets within the canals that will require ongoing maintenance over their design life as they are subjected to estuarine and flooding processes, operational wear and tear and the passage of time. These include the canal waterway areas, flood weir, public footpaths, stormwater outlets, beach areas, rock protection, revetment walls, boat ramps, jetties, gangways and pontoons. The CMP defines the maintenance actions recommended for each of these assets, including allocation of responsibilities in accordance with the covenants created on each waterfront lot.

A key aspect of these covenants is the definition of the waterfront property boundary, which extends 2.1 metres into the canals off the face of canal revetment walls. Landowners are responsible for maintenance and repair of canal assets within their property boundary that include the revetment wall and beach zone extending 2.1 metres from the face of the revetment wall. Privately owned structures that extend into the waterway such as boat ramps, jetties, gangways, pontoons and other mooring infrastructure are also the responsibility of the landowner to maintain.

Covenants on canal waterfront properties also require that there are no buildings, fences, trees or other obstructions within a distance of 5.4 metres (or 7.9 metres in the case of The Governors Way) of the revetment wall. The intent of this requirement is to maintain continuous access along the canal embankment to facilitate plant and equipment access to foreshore areas for the purpose of maintenance activities undertaken by landowners and/or Council. These activities may include removal of flood debris and repairing damage to beaches, revetment walls, canal embankments and rock protection. As such, landowners are responsible for maintaining these clear access corridors for the benefit of the canal system. Council may instruct landowners to remove existing obstructions at their expense to ensure clear access is provided.

Council's responsibility for maintenance and repair extends to the following assets:

- revetment walls fronting public property;
- beach zone beyond 2.1 metres off the face of canal revetment walls;
- canal waterway depths;
- flood control weir; and,
- stormwater outlets connected to the public drainage system.

Maintenance activities undertaken on assets that fall within the responsibility of landowners are to be paid for by landowners. Landowner maintenance activities that have been identified as priority works may be undertaken under a Council managed and facilitated maintenance program if sufficient collective interest is shown by residents. As Council can undertake works without Development Consent, landowners would be exempt from paying Development Application Fees under such a program. It is also anticipated that efficiencies would be gained from undertaking similar maintenance works at multiple properties at one time, therefore lowering the cost incurred by landowners.

## 1.2 Project Objectives

The objective of this project is to prepare a CMP reference document that can be used as a basis for planning of maintenance activities within the canal system over the next 10 years. This includes:



Project related



- an assessment of the condition of the canal waterway and foreshore assets at each property detailed within the Schedule of Properties (refer Appendix C);
- identification and prioritisation of recommended maintenance actions;
- estimated costs for implementation of maintenance actions; and,
- environmental assessment documentation.

### 1.3 Maintenance Plan

The CMP comprises a 10-year maintenance works program that has been developed based on the findings obtained from several investigations including:

- asset condition inspections completed for each individual property by RHDHV engineers to evaluate condition and recommended maintenance actions for canal infrastructure;
- hydrographic survey completed over the canal waterway area to determine current canal bed levels, which were compared with the original canal design bed levels to define required canal maintenance dredging areas and volumes;
- material testing completed on sediment samples collected from proposed canal dredging areas to assess contamination levels and suitability for reuse in nourishment of nearby canal beach areas; and,
- community consultation facilitated by preparation of a fact sheet and survey form (refer **Appendix B**) to establish community views on level of service and prioritisation of maintenance actions.

To maintain consistency with the 2004 CMP, which included key input from a Council working party established for the project, the previously developed asset inspection methodology and reporting format has been primarily retained and updated with assessment of the current maintenance requirements.



Project related



## 2 Asset Condition Investigations

### 2.1 General

Asset condition inspections were conducted by RHDHV engineers between 14<sup>th</sup> and 16<sup>th</sup> December 2015. The inspections were undertaken by foot with all residents notified by a mail out that RHDHV staff would be accessing their property frontage for the purposes of the CMP. The inspection activities included:

- property walkover;
- collection of visual observations of asset condition;
- identification of recommended maintenance activities; and,
- photographs taken to record asset condition.

The field data collection sheet form provided within **Appendix A** was used to record observations, which were compiled into a spreadsheet containing all observations and recommended maintenance actions (refer **Appendix D**). A schedule of all the properties inspected is provided in **Appendix C. Table 1** provides a summary of the lots inspected in each street within the canal system.

Table 1: Summary of Lots Inspected

Street Name	Number of Lots Inspected
Ballina Crescent	31
Bay Street	3
Commodore Crescent	78
Cornwallis Close	31
Cove Place	6
Francis Street	41
Harbour Lane	3
Hastings River Drive	1
Hibbard Drive	37
Laguna Place	53
McInherney Close	1
Newport Crescent	58
Newport Island Road	4
Park Street	3
River Park Road	43
Scarborough Close	14
Sirius Close	23
Council Reserves (no address)	3
<b>TOTAL</b>	<b>433</b>



Project related



## 2.2 Methodology

### 2.2.1 Data Collection

Field observations were recorded using a combination of hand written notes on field log sheets (refer **Appendix A**) and tablet-based software. All observations from visual inspection of canal infrastructure condition and the presence of obstructions within the canal maintenance access zone (5.4 metres behind the revetment wall generally and 7.9 metres for properties along The Governors Way) were compiled into a spreadsheet (refer **Appendix D**). Observations from inspection of the two large commercial lots at the Settlement City shopping centre were separately recorded on a plan drawing (refer **Appendix D**).

To facilitate ease of reference for property locations in the field, a system of Property ID Numbers was developed and marked on plans for ready reference during the site walk-over. This comprised a canal numbering system and sequential numbering of properties fronting each canal to give each lot a unique identifier consisting of Canal Number\_Property Number, or Property ID Number. A separate spreadsheet-based register of the DP Number, Lot Number and Street Address corresponding to each Property ID Number was used to compile field observations. Plans documenting the Property ID Numbers allocated to each lot are provided in **Appendix A**.

### 2.2.2 Infrastructure Items

The asset inspections completed for development of the 2004 Canal Maintenance Plan utilised a system of asset condition codes (corresponding to different asset types and maintenance actions) that were geographically referenced within the canals by DP Number and Lot Number of properties. This system is understood to have been developed in collaboration with Council and community members. A similar system was adopted for the 2015 condition assessment. The adopted asset condition codes are listed in **Table 2** and include additional codes developed specifically for Pontoon/Gangway (PG) structures.

Table 2: Asset condition codes for site walk-over assessment

Infrastructure Item	Item Code	Description
Boat Ramp	BR	No Work Required, Maintain Condition.
Boat Ramp	BR1	Seal Cracks in Boat Ramp that are not causing sliding or failure of the slab.
Boat Ramp	BR2	Fill edges of boat ramp with mass concrete / rock protection battered to existing surface.
Boat Ramp	BR3	Demolish and Reinstate entire boat ramp.
Boat Ramp	BR4	Demolish and Reinstate Slab section due to movement.
Boat Ramp	BR5	Remove oyster build-up around the edges and joins of the boat ramp.
Beach Zone	BZ	No Work Required, Maintain Condition.
Beach Zone	BZ1	Re-shape and flatten existing subgrade (shale) material, place and compact 150mm layer of rock protection and 150mm layer of clean white sand to original levels.
Beach Zone	BZ2	Dredge silt and sand beneath the pontoon, adjacent to the boat ramp and along property length to original levels, inc. removal of excess sand where appropriate.
Beach Zone	BZ3	Remove vegetation / plants / shrubs / trees / rubbish / objects from the beach zone.
Beach Zone	BZ4	Remove sea grass from BZ underneath jetty, adj. boat ramp and along property.
Drainage Outlet	DO	No Work Required, Maintain Condition.



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Infrastructure Item	Item Code	Description
Drainage Outlet	DO1	Remove plants/ shrubs / oyster build-up from drainage outlet.
Drainage Outlet	DO2	Replace length of drainage pipe and fill over where cracked, broken or holes formed.
Drainage Outlet	DO3	Reinstate rock mattress protection at drainage outlet.
Drainage Outlet	DO4	Install trash rack on drainage outlet.
Drainage Outlet	DO5	Fill cracks in headwall with grout.
Drainage Outlet	DO6	Replace entire pipe connection and headwall at outlet location.
Jetty	JE	No Work Required, Maintain Condition.
Jetty	JE1	Prop Jetty and demolish existing blockwork pier, drill starter bars, and place new concrete masonry blocks. Remove propping.
Jetty	JE2	Prop Jetty and demolish existing concrete piles and concrete footing. Form up footing and piles and pour concrete. Remove propping.
Jetty	JE3	Patch Repair eroded concrete piers.
Jetty	JE4	General Maintenance to the Jetty inc. replacing timber decking, rusted connections etc..
Jetty	JE5	Urgent Maintenance to the Jetty inc. replacing timber decking, rusted connections etc..
Jetty	JE6	Complete demolition of existing jetty and replacement with a standard aluminium jetty.
Pontoon/Gangway	PG	No Work Required, Maintain Condition.
Pontoon/Gangway	PG1	Restraint piles are leaning, secure pontoon, remove leaning piles and replace with new piles.
Pontoon/Gangway	PG2	Repair worn, corroded or damaged pile guides and fastenings.
Pontoon/Gangway	PG3	Pontoon is tilting/listing, repair or replace floatation unit(s) to correct pontoon stability.
Pontoon/Gangway	PG4	General Maintenance to the pontoon/gangway inc. repair of damaged decking, non-slip surfacing, handrails, rubbing strips, mooring cleats, rusted hinges/connections, rollers, transition plate.
Pontoon/Gangway	PG5	Urgent Maintenance to the pontoon/gangway inc. repair of damaged decking, non-slip surfacing, handrails, rubbing strips, mooring cleats, rusted hinges/connections, rollers, transition plate.
Pontoon/Gangway	PG6	Complete demolition of existing pontoon/gangway and replacement.
Maintenance	MA	General small Maintenance of property, small drainage lines etc..
Note	NOTE	Other comments not specifically related.
Objects	OB	Objects noted but not requiring removal.
Fence	OB1	Inc. timber, stainless steel, chicken wire, steel etc..
Small Objects	OB2	Inc. lights, chairs, posts, flag poles, garden beds, plants, statues, hoses, planter boxes etc..
Boat Winch	OB3	Removal and reinstatement of boat winch.
Structural Items	OB4	Removal of larger structural items including retaining walls, large concrete steps,



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Infrastructure Item	Item Code	Description
		and more permanent items.
Path/Public Access	PA	No work Required. Maintain condition.
Path/Public Access	PA1	Re-construct Public Access, concrete path.
Rock Protection	RP	No work Required. Maintain condition.
Rock Protection	RP1	Replace large rock protection.
Revetment Wall	RW	No work Required. Maintain condition.
Revetment Wall	RW1	Demolish existing wall and construct new wall in location.
Revetment Wall	RW2	Render chipped sections of wall with grout.
Revetment Wall	RW3	Remove grass overgrow over the wall.
Revetment Wall	RW4	Remove staining of wall - high pressure water.
Revetment Wall	RW5	Excavate behind wall and replace with geotextile and drainage material. Compact and Fill.
Revetment Wall	RW6	As above (RW5) plus realign wall segment to original alignment.
Tree (500mm girth)	T1	Small trees / shrubs / plants <1m high.
Tree (500/1000mm girth)	T2	Medium trees (2-5m high).
Tree (1000/2000mm girth)	T3	Large trees > 5m high.
Trees	T4	Trimming of branches overhanging the maintenance zone.
Weir	WE	Cleaning of surface of weir using high pressure water.

### 2.2.3 Allocation of Maintenance Actions

Identified maintenance actions were allocated against each infrastructure item existing within individual properties using the coding system outlined above. Obstructions located within the maintenance zone were also allocated against individual properties in the same manner. A listing of maintenance actions and identified obstructions is provided against each individual property within the canal maintenance plan spreadsheet (refer **Appendix D**).

### 2.2.4 Photographs

Photographs taken during the asset condition inspections have been compiled into a folder structure corresponding to the canal numbering system and Property ID Number allocated to each inspected lot. The photos have been filed in Council's electronic document management system.

## 2.3 Identification of Maintenance Works

The maintenance works identified for properties with canal water frontage cover minor repairs, removal of obstructions, demolition and replacement of components and complete reconstruction of assets. The asset condition codes (refer **Table 2**) cover a range of different maintenance actions and were applied to individual properties based on visual observations. Generic costs were then applied against each asset condition code to develop the overall budget for maintenance works. A more detailed inspection and assessment by Council Engineers and Contractors would be required at each individual property to determine site specific requirements and costs for maintenance works at individual properties.



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Notwithstanding, it is considered that this approach is suitable for future maintenance planning and budgetary purposes.

In addition to maintenance actions associated with the current asset condition assessment, preventative maintenance works were also incorporated into the works plan. These involve inspections and minor works at regular intervals according to the type of asset and are outlined in **Section 5.5**. A nominal annual allowance for the cost of inspections and minor works over the 10-year planning period has been included in the maintenance budget.

Identified maintenance actions were prioritised (refer **Section 2.5**) based on safety, environmental, and cost implications, impacts on Council's reputation, and consultation feedback received from landowners (refer **Appendix B**). This enabled the development of a 10-year prioritised maintenance works plan for the canal system.

An allowance of \$20,000 every 5 years has been included in the 10-year maintenance works budget (refer **Section 5.7**) for reactive maintenance (e.g. flood damage or debris removal).

## 2.4 Works Plan Development

The levels of assessment undertaken for canal infrastructure items to develop the works plan are as follows:

1. Condition assessment from visual observations
2. Description of defects and maintenance works
3. Prioritisation of maintenance works
4. Photographic records of assets
5. Estimated cost of maintenance works
6. Recommended frequency and/or year to start
7. Allocation of responsibility for maintenance actions between landowner/resident and Council
8. Estimated cost of maintenance works per year

## 2.5 Works Prioritisation

The development of the 10-year prioritised maintenance works plan for the canal system was based on application of prioritisation codes to each maintenance action identified from inspections. These are outlined in **Table 3** below and included within the canal maintenance plan spreadsheet (refer **Appendix D**).

Table 3: Works Prioritisation Codes

Prioritisation Code	Description
Priority (P)	Defects/damage have safety or environmental implications or if not remediated are likely to have significant cost implications.
Opportunity (O)	Defects/damage appear to have no safety, environmental or cost implications but if not rectified could have implications in the future.
Routine (R)	Defects/damage appear to have no safety, environmental or cost implications now or in the future but if not rectified are likely to impact on Council's reputation.

Generic prioritisation codes have been applied to different maintenance actions as shown in **Table 4**.



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Table 4: Prioritisation Assigned to Identified Maintenance Actions

Item Code	Prioritisation Code
BR3	P - Priority
BR4	P - Priority
JE5	P - Priority
JE6	P - Priority
PG1	P - Priority
PG2	P - Priority
PG5	P - Priority
PG6	P - Priority
RP1	P - Priority
RW1	P - Priority
BR1	O - Opportunity
BR2	O - Opportunity
BZ1	O - Opportunity
DO3	O - Opportunity
DO5	O - Opportunity
JE1	O - Opportunity
JE2	O - Opportunity
JE3	O - Opportunity
JE4	O - Opportunity
PA1	O - Opportunity
PG3	O - Opportunity
PG4	O - Opportunity
RW2	O - Opportunity
RW5	O - Opportunity
BR5	R - Routine
BZ3	R - Routine
DO1	R - Routine

It is noted that inspections identified a number of trees and objects within the maintenance access exclusion zone. The removal of these items to provide maintenance access will be assessed by Council on a case by case basis and has been excluded from the canal maintenance plan schedule and budget.





Project related



### 3 Hydrographic Survey

A hydrographic survey was carried out in November 2015 to obtain an accurate record of the canal bed and foreshore levels. A multi-beam survey was completed with a survey boat during spring high tides to obtain the maximum area of full-bottom coverage. The water-based survey was supplemented with traditional land-based survey of cross-sections in areas that were inaccessible by boat (i.e. beach areas up to the revetment wall).

The surveyed canal levels were compared against the original canal design levels and profiles to identify areas of sediment accumulation and erosion. This comparison is presented graphically on the hydrographic survey plans provided in **Appendix E**.

The results of the survey indicate that sediment accumulation has occurred within the canal system and dredging is required to restore the original canal design levels. A summary of quantities of 'cut' (or dredging) volumes relative to original canal design levels is provided in **Table 5**. It should be noted that the area of cut shown immediately upstream of the flood weir and downstream of the weir to the bridge was excluded from consideration. The shallow depth of the upstream area is associated with rock protection placed around the flood weir. In addition, Council has advised that the deeper depths within The Governors Way are not required to be maintained in the area downstream of the flood weir as this is not considered to be a navigable area due to limitations imposed by extensive shoaling and seagrass growth in the area downstream of the road bridge (Park Street).

Table 5: Summary of Canal Dredging Volumes

Canal	Dredging Volume (m <sup>3</sup> )
Canal 1 – The Governors Way	15,100
Canal 2 – South West Passage	1,590
Canal 3 – Crescent Arm	550
Canal 4 – South Cove	420
Canal 5 – Regatta Cove	12,930
Canal 6 – Lachlan Bay	380
Canal 7 – Blue Bay	270
Canal 8 – Settlement City Canal	280
Canal 9 – Newport Canal	100
Canal 10 – Ballina Canal	290
<b>Total</b>	<b>32,050</b>

Observations that can be made from the distribution of cut and fill areas identified from the survey results, include:

- the bulk of dredging (88%) is required within Canal 1 – The Governors Way and Canal 5 – Regatta Cove;
- the remaining smaller canals require small quantities of dredging that are generally evenly distributed along the length of canals, with the exception of localised deeper depths of dredging required in the vicinity of stormwater outlets;



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- beach areas adjacent to revetment walls are generally shown as fill areas, indicating that beaches are generally depleted and lower than design levels, the most depleted beach areas are located within Canal 5 – Regatta Cove and along the water frontage of the Settlement City shopping centre and the Panthers Port Macquarie Club;
- Canal 8 – Settlement City Canal, Canal 9 – Newport Canal, and Canal 10 – Ballina Canal are shown as fill areas, indicating that canal bed levels and beaches are generally lower than design levels; and,
- a localised area of significant sediment accumulation was identified immediately adjacent to the stormwater outlet between No. 29 and No.31 Ballina Crescent, this shoaled area is a maximum of 1.3 metres above the design level of the canal, extends out to the canal centreline and is considered to be a potential navigation hazard.



Project related



## 4 Review of Environmental Factors

### 4.1 General

Under SEPP (Infrastructure) 2007, a public authority is allowed to carry out a range of public activities without development consent, provided appropriate consultation with all relevant government authorities and an environmental impact assessment under Part 5 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) is undertaken. Clauses 68 and 129 of *SEPP Infrastructure* are applicable to the proposed maintenance works.

Division 13 "port, wharf and boating facilities" Clause 68:

- "routine maintenance works (including dredging, or bed profile levelling, of existing navigation channels if it is for safety reasons or in connection with existing facilities)"

Division 25 "waterway or foreshore management activities" Clause 129:

- "development for the purpose of waterway or foreshore management activities" including bank management, coastal management and beach nourishment"

A Review of Environmental Factors (REF, refer **Appendix F**) has been prepared to address potential environmental impacts associated with proposed maintenance works that include:

- dredging of the canal waterway to restore original design depths;
- maintenance of foreshore infrastructure including stormwater outlets, revetment walls, beach zone, rock protection, jetties, gangways, pontoons; and,
- removal of trees and other objects within the maintenance access exclusion zone.

The potential impacts of the above works and associated mitigation and control measures are detailed within the REF. It is considered that these impacts will be short-term, localised to the site of maintenance works within the canal system and can be effectively managed by best practice procedures. The proposed works will provide significant benefit to the local community by improving access along waterway and foreshore areas, restoring deteriorating infrastructure, increasing levels of safety and amenity of boating infrastructure, protecting against foreshore erosion, and improving the aesthetic appeal of the canals.

### 4.2 Materials Testing

A range of testing was undertaken on sediment samples collected from proposed canal dredging areas. The number of samples collected was in accordance with the National Assessment Guidelines for Dredging 2009 (NAGD) and included locations within the main areas of dredging and adjacent to selected stormwater outlets where sedimentation has occurred. The sediment samples were analysed at a N.A.T.A. accredited laboratory for the presence of contaminants and acid sulfate soils. The results of this analysis are reported within the REF and used to evaluate the sediment suitability for restoration of sand reserves on canal beach areas.

The results of the testing are summarised below:

- sediment generally comprised fine to medium grained sand with 5 to 25% fines content (particles in the silt and clay size fractions);



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- contaminant levels in the sediment were below the waste classification criteria set out in relevant guidelines;
- test results indicated that although potential acid sulfate soils (PASS) were present, the natural acid neutralising capacity within the sediment, due to the existence of shell, was sufficient to maintain the pH of the sediment above an acceptable level in the event that it is oxidised; and,
- the dredge material is deemed suitable, geochemically and from a PASS perspective, for nourishment of the canal beach areas.

### 4.3 Water Quality Measurements

Water quality measurements were completed at a number of locations within the canal system and at reference locations within the Hastings River. Measurements were completed from a boat with a hand-held water quality measurement probe capable of measuring a range of parameters including temperature, pH, dissolved oxygen, conductivity, salinity and turbidity. This data is reported within the REF and used to assess the water quality within the canals and compare this against surrounding waterways.

The key findings from review of water quality measurements are summarised below:

- the water quality within the Settlement Shores Estate canals is similar to the Hastings River and Back Channel;
- the water quality in the Hastings River, Back Channel and Settlement Shores Estate is consistent with estuarine waters, characterised by lower pH and lower electrical conductivity compared to marine environments;
- no extreme water quality parameter values were recorded, however a few records were outside the ANZECC trigger range for estuarine waters (attributed to natural events) including:
  - 3 turbidity readings in Canal 2 and southern end of Canal 4, at the mid-depth of the waterway, were more than 10 NTU on the 23<sup>rd</sup> April 2016, which is above the ANZECC trigger values. The highest value was 21.5 NTU. The increased turbidity was possibly caused by freshwater runoff;
  - A total of 7 pH readings in Settlement Shores and 2 pH readings in the Back Channel, all at the mid-depth of the waterway, were less than 7 on the 23<sup>rd</sup> April 2016, which is below the ANZECC trigger values. The lowest reading was 6.69. Lower pH is possibly caused by rainfall, which has a pH of approximately 5 to 5.5;
  - A total of 3 DO readings in Settlement Shores at the mid-depth of the waterway and 2 DO readings in the Back Channel, at the surface and mid-depth of the waterway, were more than 110% on the 14<sup>th</sup> December 2015, which is above the ANZECC trigger values. However, on the same day the mid-depth DO reading in the Hastings River was also elevated at a value of 138%; and,
- water quality monitoring completed during the last maintenance dredging campaign (2005/2006) demonstrated a high level of compliance with EPA licence criteria.

Project related



## 5 Canal Maintenance Plan

### 5.1 General

The Canal Maintenance Plan (CMP) documents the current condition of canal infrastructure, location of obstructions within the maintenance access zone and recommends a range of maintenance actions involving removal, repair, replacement and ongoing maintenance of assets. Dredging is also a key component of the CMP to restore design water depths in areas where sedimentation has occurred.

### 5.2 Description of CMP Actions

Canal maintenance actions proposed at individual properties are detailed within the CMP spreadsheet (refer **Appendix D**) and the asset condition codes (refer **Section 2.2.2**). These actions include beach restoration, repairs to deteriorated infrastructure, and preventative or routine maintenance to reduce future financial and environmental impact. Each action has been prioritised based on safety, environmental, and cost implications, impacts on Council's reputation, and consultation feedback received from landowners (refer **Appendix B**).

A description of canal dredging and specific maintenance actions associated with the Settlement City foreshore and flood weir are described below.

#### 5.2.1 Canal Dredging

The preferred method of dredging within the canals is to use a cutter suction dredger (CSD), which was adopted for completion of the previous maintenance dredging campaign in 2006. A small truck-mounted CSD (refer **Figure 2**) would be able to access shallow water depths within the canals and is suited to removal of silts and sands found on the canal bed. Dredged material would be dislodged by the CSD cutterhead and pumped hydraulically via a floating discharge pipeline to a treatment and disposal location.



Figure 2: Small truck-mounted CSD used in 2006 maintenance dredging campaign

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The dredged material could be used to restore sand reserves on nearby canal beach areas that have been depleted. It would be preferable to separate the fines content and water from the sand prior to placement on the foreshore. This would assist in reducing turbidity near the placement areas and the material would be less likely to be mobilised following placement, resulting in increased longevity and foreshore stability. Separation of fines from the sand could be achieved via a hydrocyclone unit (refer **Figure 3**) located on the shore and connected to the discharge pipeline. The clean sand could be distributed to beach areas via a separate discharge pipeline extending alongshore from the hydrocyclone unit.



Figure 3: Hydrocyclone unit used in 2006 maintenance dredging campaign

The resultant restored beach areas are visually attractive for local residents (refer **Figure 4**) and improve the stability of canal infrastructure (e.g. boat ramps and revetment walls) located along depleted shoreline areas. It has been reported by residents that the benefit provided by sand nourishment of canal beaches in some areas was relatively short-lived following the previous maintenance dredging campaign. This is considered to be the result of a combination of factors including the erosive action of boat wake waves and heavy rainfall runoff flowing over steep canal embankments and over beach areas at low tides. As a result, some residents have elected to stabilise their beach areas by placement of rock adjacent to their revetment wall. These residents may not wish to have sand placed along their property frontage. In a similar manner to the notifications issued for the previous maintenance dredging campaign, residents in areas of the canals that are proposed to be dredged should be notified and given the opportunity to decline sand placement in beach areas that are already stabilised with rock. This will enable sand nourishment activities to be concentrated on depleted sandy beach areas or areas of exposed muddy



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substrate or coffee rock. Furthermore, it may be prudent to follow up sand nourishment activities with a program of beach armouring to increase the service life of replenished beach areas.



Figure 4: Restored canal beach area during 2006 maintenance dredging campaign

The use of a barge-mounted excavator or tracked long-reach excavators operating from land may be considered for areas with minor dredging volumes and for areas that dry at low tide where significant sedimentation has occurred. This situation would typically apply at the head of canals where discharge from stormwater outlets has resulted in the settlement of sediments around the outlet and impacts on adjacent infrastructure (e.g. reduced water depth at boat ramps).

The use of land-based equipment is typically constrained by obstructions within the maintenance access zone. Although reserve areas exist at the head of most canals, access to the waterfront is often limited by the growth of mature trees or shrubs. As such, a barge-mounted excavator is likely to be the most practical solution. Dredged material would need to be loaded into hopper barges or skip bins and transported to a shore transfer point for rehandling into trucks. The material could then be transported by truck for local beneficial reuse applications within Settlement Shores Estate or elsewhere, or disposed at a licenced waste management facility. This is a less efficient operation compared to the use of a CSD and hydrocyclone, and it would be preferable to access the shallow areas with a CSD at spring high tides where practicable.

### 5.2.2 Settlement City Foreshore

The Settlement City foreshore extends over two commercial lots that comprise the Settlement City Shopping Centre and Panthers Port Macquarie. These premises occupy the western shoreline between the head of Canal 8 – Settlement City Canal and the flood weir, and the northern shoreline between the flood weir and the Park Street road bridge. Observations in these areas recorded during the asset condition inspections are detailed on the plan included within **Appendix D** and discussed below.



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### Northern Shoreline

A large section of the northern shoreline (refer sections 2 to 5 on the plan) was observed to have suffered significant damage to the rock protection.

The rock protection in the vicinity of the road bridge (refer section 1 on plan) appeared to be in reasonable condition and comprised larger 300-400mm diameter rock. Further to the west of the bridge abutment (refer section 2 on plan), smaller sized rock of around 100mm diameter had been displaced seaward or lost from the upper portion of the foreshore resulting in exposure of the beach, adjacent bank and underlying geotextile fabric.

Loss of rock protection has caused severe undermining of the concrete public footpath that runs along approximately 100 metres of shoreline before linking with the concrete flood weir structure (refer sections 3 to 5 on plan). This has resulted in loss of foundation material beneath the footpath, which has rotated substantially and cracked apart over much of this length. In the vicinity of the flood weir (refer section 6 on plan), a larger 300mm rock size has been used and has largely been retained over the beach zone. However, this larger rock protection has been lost immediately adjacent to the footpath and undermining has started to occur beneath the footpath and the adjoining concrete wingwall of the flood weir structure. The footpath is currently unsafe and has been fenced off to prevent public access.

Maintenance actions associated with restoration of the northern shoreline include:

- demolition and disposal of the existing damaged concrete footpath section;
- reconstruction of canal rock protection as a sloped revetment with underlying geotextile fabric and igneous rock of similar size to that found in the vicinity of the Park Street road bridge (300mm diameter, subject to assessment of design flood current velocities and appropriate rock sizing);
- reconstruction of public footpath with suitable foundation material, edge beam treatment along the seaward side, and realignment of the footpath to run further along the crest of the foreshore embankment before linking with the concrete flood weir structure; and,
- periodic visual monitoring of the condition of rock protection (including inspection after major flood events) and maintenance as required (e.g. topping up of rock thickness).

It is understood that a Development Application has been submitted by Lend Lease for maintenance works (similar to those above) to be completed along the northern shoreline. As such, the costs of these works have not been included in the 10-year maintenance works budget (refer **Section 5.7**).

### Western Shoreline

Revetment wall instability was observed over most of the length of the western shoreline. Depletion of beach levels and wall rotation and failure in sections has resulted in an unsightly and unstable shoreline, and exposure of asbestos cement (AC) sheeting.

Immediately upstream of the flood weir (refer section 8 on plan), the revetment wall (comprising a concrete capping cast on corrugated AC sheeting) has rotated as a result of depleted beach levels and absence of rock protection. The rotation of the revetment wall has lowered the crest of the wall and washout of backfill material has occurred immediately behind the wall. Remedial works proposed in this section of shoreline involve:

- placement of geotextile fabric over the beach zone and washout area behind the wall;
- placement of igneous rock protection of similar size to that found in the vicinity of the Park Street road bridge (300mm diameter, subject to assessment of design flood current velocities and





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- appropriate rock sizing) to form a rock wedge extending from the top of the washout area to the beach level with a maximum face slope of 1V:1.5H (vertical to horizontal); and,
- periodic visual monitoring of the condition of rock protection (including inspection after major flood events) and maintenance as required (e.g. topping up of rock thickness).

Around the bend in the shoreline into Canal 8 – Settlement City Canal (refer section 9 on plan), the placement of cobble-sized rock protection (approximately 100mm diameter) across the beach up to the face of the revetment wall appears to have stabilised this area. No maintenance action is required other than periodic monitoring of the condition of rock protection.

The 310m long section of shoreline (refer sections 10 to 13 on plan) between the bend and the head of Canal 8 – Settlement City Canal has depleted beach levels and no visible rock protection. This has resulted in exposure of up to 0.5m of AC sheeting below the concrete capping forming the revetment wall. The absence of toe support in combination with the dense growth of casuarina trees immediately behind the wall (root system applying further pressure to the rear of the wall) has caused the concrete capping to rotate leaving a large cavity behind the wall. In some sections of the wall this rotation has resulted in cracking at the top of the AC sheeting and the concrete capping falling on to the adjacent beach. Various ad-hoc remedial treatments have been applied along localised sections of the wall. This has included casting mass concrete beam sections along the toe of revetment wall and replacement of a 10m section of the wall with a keyed concrete block wall that has rotated (possibly due to poor foundation conditions). Remedial works proposed along this section of shoreline involve:

- placement of geotextile over the beach zone;
- placement of igneous rock protection of similar size to that found around the bend in the shoreline at the north-western corner of the Settlement City shopping centre (100mm diameter, subject to assessment of design flood current velocities and appropriate rock sizing) to form a rock wedge extending from above the top of the revetment wall to the beach level with a maximum face slope of 1V:1.5H (vertical to horizontal);
- filling of cavities behind the revetment wall with the same igneous rock material used to construct the rock wedge above; and,
- periodic visual monitoring of the condition of rock protection (including inspection after major flood events) and maintenance as required (e.g. topping up of rock thickness).

The above rock treatment would provide a number of benefits including:

- provision of toe support for rotating revetment walls;
- preventative maintenance for existing wall sections that have not rotated yet;
- protection of the upper beach zone against further loss of sediments and undermining of the revetment wall;
- the treatment is a flexible structure and could tolerate some movement without failure. As such, the root system of trees would not cause the treatment to fail;
- vegetation could be retained, which provides a visual screen between canal residents and the Settlement City shopping centre complex; and,
- improvement of the aesthetics of the shoreline by providing a uniform protective treatment and covering unsightly areas of revetment wall instability and failure.

At the southern end of the western shoreline (refer section 14 on plan), the revetment wall is effectively stabilised by being buried beneath accumulating sediment and vegetation growth at the head of the canal. No maintenance action is required other than periodic monitoring of the level of the beach zone.

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### 5.2.3 Flood Weir

Inspection of the concrete flood weir structure determined that it was in a serviceable condition.

Longitudinal cracking and rust staining (indicating corrosion of concrete reinforcement) was observed along the top of the small step that exists below the weir crest on both sides of the structure. However, the issues are essentially cosmetic and crack repairs were considered to be cost-prohibitive and not necessary at this stage as the structural integrity of the weir structure was not being threatened. Periodic visual monitoring of concrete condition will inform future maintenance actions.

Oyster growth was observed along the lower portion of the concrete weir structure in the vicinity of the waterline. However, the waterway around the weir is not a designated swimming area and the oyster growth is not in close proximity to the weir crest that is trafficable by pedestrians. As such, the oyster growth could be removed for aesthetic reasons but does not pose an immediate public safety concern.

Pedestrian access to the flood weir is controlled by a gate located behind the Settlement City shopping centre parking area and a handrail installed along the edge of the downstream wingwall. A lifebuoy is also mounted on the handrail for use in the event that a person falls into the water. The weir is used by residents on the northern side of the canal for convenient walking access to the shopping centre. Given the high level of pedestrian usage and potential public safety risks associated with people falling into the water, it is considered that several improvements to safety provisions around the weir would be beneficial. These include:

- installation of a second lifebuoy on the northern side of the weir to provide ready access in the event of a person falling into the water in this area;
- provision of high visibility safety signage similar to that provided at the Broadwater Canals flood weir (refer **Figure 5**); and,
- installation of flexible reflective bollards along the crest of the weir to improve navigation safety during elevated water level conditions, similar to that provided at the Broadwater Canals flood weir.



Figure 5: Safety signage provided at Broadwater Canals flood weir



Project related



Figure 6: Flexible reflective bollards installed along crest of Broadwater Canals weir

### 5.3 Design Concept for CMP Actions

The CMP spreadsheet provides objective data on the current condition of assets within the canal system and describes conceptual maintenance actions that are recommended on a property by property basis. The simple system adopted for prioritisation of different maintenance actions (refer **Section 2.5**) and available funding will determine the scheduling of maintenance works.

The level or standard and quality of maintenance and repair work should be equivalent to that required to restore canal infrastructure to a serviceable condition similar to its original design and construction. Original design drawings of the canal provided by Council are included within **Appendix G**. Reference should also be made to the *Settlement Shores Canal Estate Canal Maintenance – Resident and Landowners Guidelines* for guidance on typical design details for canal infrastructure.

### 5.4 Work Methods to be Employed for the Maintenance Works

Work methods identified for implementation of maintenance actions include:

- dredging (as described in **Section 5.2.1** and the REF);
- rehabilitation;
- erosion protection;
- removal of items; and,
- repair and/or replacement.

These works were identified based on visual inspection of the condition of canal infrastructure and identification of obstructions within the maintenance access zone that are in breach of allotment covenants. It is noted that due to land access limitations associated with the presence of obstructions, maintenance actions requiring the use of heavy equipment and delivery of bulk materials (e.g. rock) would need to be completed from the waterway using floating plant.

Residents proposing to undertake works within the property boundary of the canals are to seek advice from Council in relation to the procedures involved to undertake such works. The general procedures and form of advice to be provided by Council will be:



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- guidance for the preparation of construction details for remedial works to be undertaken;
- provision of standard detail drawings (refer to original canal design drawings in **Appendix G** and the *Settlement Shores Canal Estate Canal Maintenance – Resident and Landowners Guidelines*;
- submission of a Canal Maintenance Request form to Council; and,
- inspection of the construction/remedial works and final inspection by Council representative to confirm that the design intent has been achieved.

## 5.5 Guidelines for CMP Actions

### 5.5.1 Actions by Residents

Residents are expected to assist with clearing the maintenance access zone within the canal system by identifying and removing obstructions such as trees, buildings/structures and fences that may be in breach of allotment covenants.

Canal Maintenance Plan actions by residents are to periodically inspect, repair, restore and maintain canal infrastructure items that have been identified within their properties to ensure that preventative maintenance is completed in a timely manner to prevent excessive deterioration of assets. This should be undertaken in accordance with the allotment covenants defining maintenance responsibilities, as summarised in **Table 6**.

Table 6: Preventative Maintenance Responsibilities and Frequency by Residents

Infrastructure Item	Actions	Frequency	By Whom
2.1 metre Beach Zone	Inspect and Maintain	6 monthly	Resident
Private Boat Ramp	Inspect and Maintain	Yearly	Resident
Private Jetty	Inspect and Maintain	Yearly	Resident
Private Pontoon / Gangway	Inspect and Maintain	Yearly	Resident
2.1 metre Rock Protection	Inspect and Maintain	6 monthly	Resident
Revetment Wall	Inspect and Maintain	Yearly	Resident

Residents should also monitor assets/infrastructure fronting their properties (particularly following floods and major storms) and advise Council of any maintenance issues.

### 5.5.2 Actions by Council

Canal Maintenance Plan actions by Council are to periodically inspect, repair, restore and maintain canal infrastructure items that are outside private property boundaries, in addition to infrastructure items that are located within Council owned land (e.g. public reserves) or are public assets or utilities. This should be undertaken in accordance with the allotment covenants defining maintenance responsibilities, as summarised in **Table 7**.



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Table 7: Preventative Maintenance Responsibilities and Frequency by Council

Infrastructure Item	Actions	Frequency	By Whom
Beach Zone outside 2.1 metre boundary	Inspect and Maintain	6 monthly	Council
Drainage Headwall	Inspect and Maintain	6 monthly	Council
Drainage Outlet	Inspect and Maintain	6 monthly	Council
Paths and Public Access	Inspect and Maintain	6 monthly	Council
Rock Protection outside 2.1 metre boundary	Inspect and Maintain	6 monthly	Council
Public Boat Ramp Facility	Inspect and Maintain	Yearly	Council
Flood Weir	Inspect and Maintain	Yearly	Council

In addition to the above regime of inspections and routine maintenance, it is recommended that inspections are undertaken following floods and major storm events to identify reactive maintenance actions that are not included within the CMP works plan.

**Figure 7** illustrates a typical canal profile and the delineation of maintenance responsibilities at private properties by the property boundary, located 2.1 metres from the face of the revetment wall.

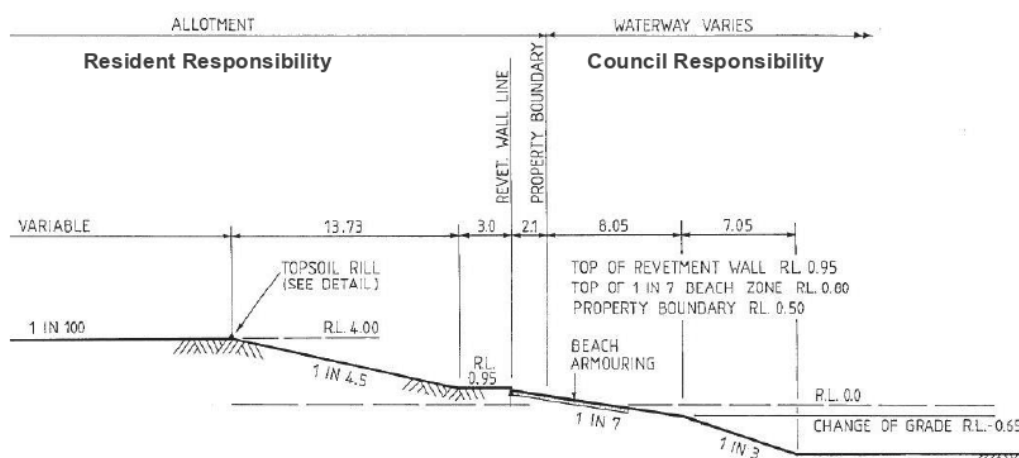


Figure 7: Typical Canal Profile (Canal 5 – Regatta Cove)

## Project related



## 5.6 Financing the CMP

Council collects annual fees for occupation of public waterway areas by boating structures (e.g. jetty/pontoon structures and boat ramps) within the canal system. These funds are available to be allocated towards maintenance of infrastructure under the responsibility of Council (e.g. dredging).

Landowners will be required to fund works on private property in accordance with the responsibilities defined by allotment covenants (refer **Table 6** and **Figure 7**).

If sufficient collective interest is shown by residents to support a broad program of maintenance on particular assets, Council may be able to facilitate the procurement of a Contractor to undertake private maintenance works on behalf of residents. In this case, a coordinated program of similar works at a number of canal properties could be undertaken by the Contractor and funded by appropriate contributions from agreeable private landowners who would receive direct benefit from the works. As Council can undertake works without Development Consent, landowners would be exempt from paying Development Application Fees under such a program. It is also anticipated that efficiencies would be gained from undertaking similar maintenance works at multiple properties at one time, therefore lowering the cost incurred by landowners.

## 5.7 Schedule of Maintenance Works and Budget Costs

The schedule of maintenance works proposed over a 10 year period is detailed within the Canal Maintenance Plan spreadsheet provided in **Appendix D**. A summary of the proposed annual maintenance budgets for Priority, Opportunity and Routine items over the next 10 years is provided in **Table 8**, **Table 9** and **Table 10** respectively. These budgets are summed against different types of infrastructure and are allocated towards Council and Resident funding sources in accordance with allotment covenants defining responsibilities for maintenance. A summary of the costs allowed for reactive maintenance and the overall budget for the 10-year canal maintenance plan are provided in **Table 11** and **Table 12**.

Project related



Table 8: Summary of Costs for Priority Maintenance Actions

Year	Maintenance Action																				Council Expense £	Landowner Expense £	Totals £			
	BR3		BR4		JB6		JB8		PG1		PG2		PG6		PG8		RP1		RWR					Dredging Council £	Settlement City Western Shoreline Council £	Flood Wall Council £
	Council £	Landowner £	Council £	Landowner £	Council £	Landowner £	Council £	Landowner £	Council £	Landowner £	Council £	Landowner £	Council £	Landowner £	Council £	Landowner £	Council £	Landowner £								
2016																							3,000	3,000	3,000	
2017					12,500		14,000						4,000		1,700,000						594,880			594,880	2,001,500	7,953,100
2018	240,000		136,000						240,500								385,000	575,000		420,000	414,510			799,510	504,500	1,307,510
2019											26,750										414,510			414,510	26,750	441,260
2020																					229,040	50,000		229,040	50,000	2,760,40
2021																										
2022																										
2023																										
2024																										
2025																										
2026																										
Totals	240,000		136,000		12,500		14,000		240,500		26,750		4,000		1,700,000		385,000	575,000		420,000	1,612,940	50,000	3,000	2,040,940	781,750	2,826,190

Table 9: Summary of Costs for Opportunity Maintenance Actions

Year	Maintenance Action																				Totals						
	BR1		BR2		BR3		DB1		DB2		JE1		JE2		JE3		JE4		PA1			PG3		PG4		RM2	
	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)		Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)
2016																											
2017																											
2018																											
2019				41,700																							
2020					6,832,000	164,000	1,000		500			13,500	40,950														
2021														10,500				2,000							1,050	13,900	
2022		6,150															8,500			400	3,150		4,000				
2023																											
2024																											
2025																											
2026																											
Totals		6,150		41,700	6,832,000	164,000	1,000		500			13,500	40,950	10,500		8,500	2,000		400	3,150		4,000	1,050		13,900		

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Table 9: Summary of Costs for Opportunity/Maintenance Actions (continued)

Year	Maintenance Action		Council Expense (£)	Landowner Expense (£)	Totals (£)
	Council (£)	Landowner (£)			
2016					
2017					
2018					
2019				41,700	41,700
2020			694,700	21,925.0	916,625
2021	25.0	4,750	3,300	55,150	58,450
2022			450	21,000	22,250
2023					
2024					
2025					
Totals	25.0	4,750	698,450	33,730.0	1,026,980

Table 10: Summary of Costs for Routine Maintenance Actions

Year	Maintenance Action						Council Expense (£)	Landowner Expense (£)	Totals (£)
	EPW		B2b		D01				
	Council (£)	Landowner (£)	Council (£)	Landowner (£)	Council (£)	Landowner (£)			
2016		3,150	2,400	43,000	1,050.0		3,450	46,150	49,600
2017									
2018									
2019									
2020									
2021		3,150	2,400	43,000	1,050.0		3,450	46,150	49,600
2022									
2023									
2024									
2025									
2026		3,150	2,400	43,000	1,050.0		3,450	46,150	49,600
Totals		9,450	7,200	1,290,000	3,150.0		10,350	1,384,400	140,000





Project related



Table 11: Summary of Costs for Roadside Maintenance

Year	Roadside Maintenance	
	Council (£)	Landowner (£)
2016	20,000	
2017		
2018		
2019		
2020		
2021	20,000	
2022		
2023		
2024		
2025		
2026	20,000	
Totals	40,000	

Table 12: Summary of 10-year Canal Maintenance Plan Budget

Year	Council Expense (£)	Landowner Expense (£)
2016	26,450	46,150
2017	534,880	200,500
2018	798,510	508,000
2019	414,510	614,150
2020	913,740	268,250
2021	26,750	101,300
2022	400	21,800
2023		
2024		
2025		
2026	23,450	46,150
Totals	2,196,140	1,281,000



Project related



## Appendix A: Field Data Collection Sheet and Plans



## SETTLEMENT SHORES CANALS ASSET INSPECTION FIELD LOG SHEET

Property ID Number: \_\_\_\_\_  
 Residential ☐ Commercial ☐ Reserve ☐ Other: \_\_\_\_\_

Canal infrastructure items inspected:

Item	Code	Y/N	Item	Code	Y/N
Revetment Wall	RW		Boat Ramp	BR	
Beach Zone	BZ		Jetty	JE	
Rock Protection	RP		Pontoon/Gangway	PG	
Drainage Outlet	DO		Path/Public Access	PA	
Weir	WE		Other:		
Other:			Other:		

Obstructions noted within 5.4m (7.9m for Governors Way) of the revetment wall:

Code	Description/Location	Photo No.(s)

The following maintenance actions have been identified:

Code	Description/Location	Priority	Photo No.(s)

**Prioritisation Codes:**

- P Priority Defects/damage have safety or environmental implications or if not remediated are likely to have significant cost implications.
- O Opportunity Defects/damage appear to have no safety, environmental or cost implications but if not rectified could have implications in the future.
- R Routine Defects/damage appear to have no safety, environmental or cost implications now or in the future but if not rectified are likely to impact on Councils image to the residents, staff and the public.

Inspector(s): \_\_\_\_\_ Inspection Date: \_\_\_\_\_



## ASSET CONDITION CODES

Revetment Wall (RW)		Boat Ramp (BR)	
RW	No Work Required, Maintain Condition	BR	No Work Required, Maintain Condition
RW1	Demolish/Reconstruct	BR1	Seal Cracks
RW2	Render Chipped Sections	BR2	Fill edges with Concrete/Rock Protection
RW3	Remove Grass Overgrow	BR3	Demolish/Reinstate Entire Ramp
RW4	Remove Staining	BR4	Demolish/Reinstate Slab Section
RW5	Excavate/Replace Drainage Material Behind	BR5	Remove Oyster Build-up
RW6	RW5 + Realign Wall Segment		

Jetty (JE)		Pontoon/Gangway (PG)	
JE	No Work Required, Maintain Condition	PG	No Work Required, Maintain Condition
JE1	Demolish/Reconstruct Blockwork Pier	PG1	Replace Leaning Piles
JE2	Demolish/Reconstruct Concrete Pier	PG2	Repair Pile Guides/Fastenings
JE3	Patch Repair Concrete Pier	PG3	Repair/Replace Pontoon Floatation Units
JE4	General Maintenance (deck, connections)	PG4	General Maintenance (deck, connections)
JE5	Urgent Maintenance (deck, connections)	PG5	Urgent Maintenance (deck, connections)
JE6	Demolish/Reconstruct Jetty	PG6	Demolish/Reconstruct Pontoon/Gangway

Beach Zone (BZ)		Objects (OB)	
BZ	No Work Required, Maintain Condition	OB	Noted, No Removal Required
BZ1	Regrade/flatten, place Rock/Sand	OB1	Fence (e.g. timber, steel, chicken wire)
BZ2	Dredge along property to Original Levels	OB2	Small Objects (e.g. lights, chairs, plants)
BZ3	Remove Vegetation/Rubbish/Objects	OB3	Boat Winch, Remove/Reinstate
BZ4	Remove Seagrass	OB4	Large Items (e.g. retaining walls, steps)

Rock Protection (RP)		Path/Public Access (PA)	
RP	No Work Required, Maintain Condition	PA	No Work Required, Maintain Condition
RP1	Replace Large Rock Protection	PA1	Reconstruct Public Access

Trees (T)		Miscellaneous	
T1	Small Trees/Shrubs (500mm girth, <1m high)	MA	Minor Maintenance of property, drainage
T2	Medium Trees (500/1000mm girth, 2-5m high)	NOTE	Other Comments
T3	Large Trees (1000/2000mm girth, >5m high)	WE	Cleaning of Weir Surface
T4	Trimming of Overhanging Branches		

Drainage Outlet (DO)			
DO	No Work Required, Maintain Condition	DO4	Install Trash Rack at Outlet
DO1	Remove Plants/Oyster Build-up from Outlet	DO5	Fill Cracks in Headwall with Grout
DO2	Replace Length of Drainage Pipe	DO6	Replace Pipe/Headwall at Outlet
DO3	Reinstate Rock Mattress at Outlet		

Prioritisation Codes:		
P	Priority	Defects/damage have safety or environmental implications or if not remediated are likely to have significant cost implications.
O	Opportunity	Defects/damage appear to have no safety, environmental or cost implications but if not rectified could have implications in the future.
R	Routine	Defects/damage appear to have no safety, environmental or cost implications now or in the future but if not rectified are likely to impact on Councils image to the residents, staff and the public.

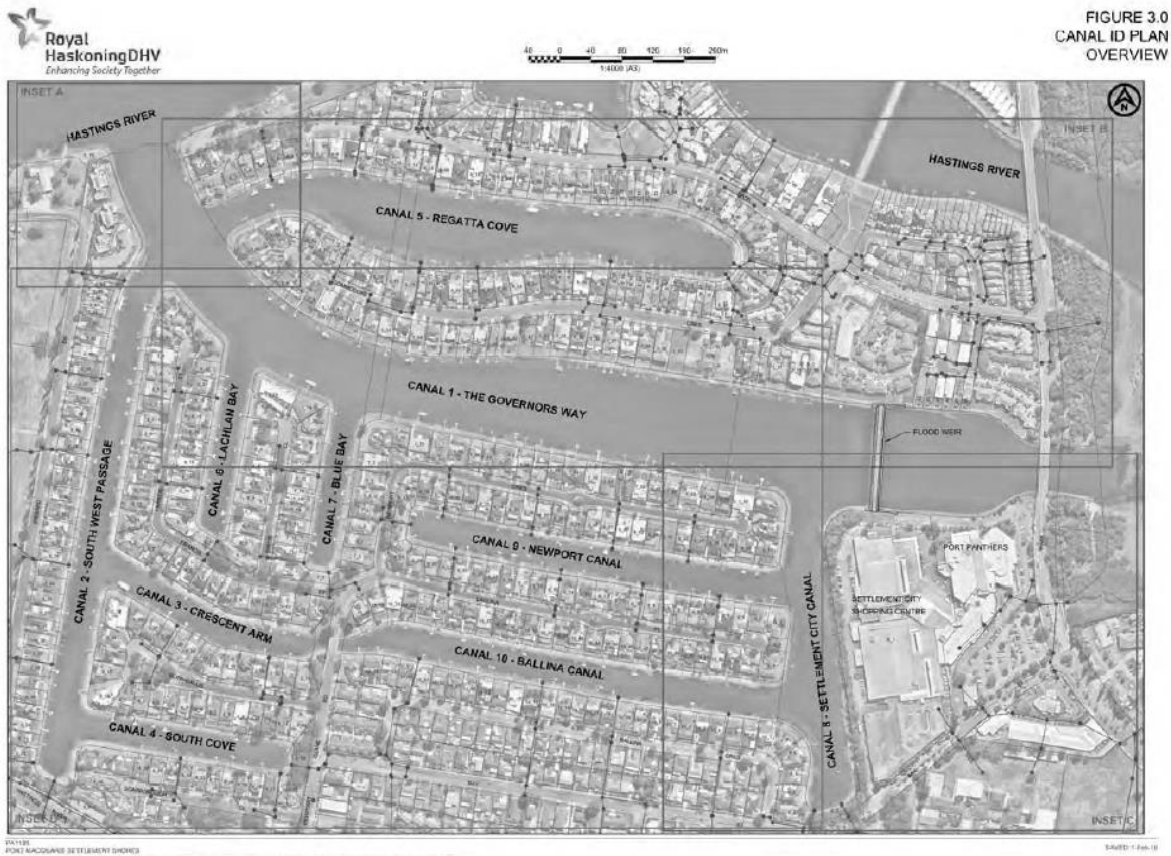








FIGURE 3.3  
CANAL ID PLAN  
INSET C



PA1196  
PORT SACCAVAGE SETTLEMENT DROUGHT  
© 2019 ROYAL HASKONINGDHV. All rights reserved. Settlement Street Canal ID to existing drainage plan. 10-10A CANAL ID PLAN.dwg

24/09/2019 10:00:19







Project related



## Appendix B: Community Consultation Data



Project related



## Community Engagement

Community engagement was undertaken over the period March to April 2016. This engagement consisted of two community engagement sessions within the canal estate and a resident survey, which was mailed to all canal residents and available online via Council's engagement website.

Council staff engaged with approximately 70 canal residents over the two engagement sessions and received 161 survey responses.

The purpose of the initial engagement was to inform canal residents of the project and to gain an understanding of the community's expectations with regards to canal maintenance. The feedback received has been incorporated into the plan with some key outcomes being changes to the way private maintenance is approved by Council, a focus on long lasting maintenance actions and acknowledging the need for greater cooperation between Council and Roads and Maritime Services for controlling boating activities that degrade canal infrastructure.

## Resident Survey

A project fact sheet and survey questionnaire (included as Enclosure 1 to Appendix B) was mailed to all canal residents and made available on Council engagement website. The survey questionnaire asked residents to:

*Please rank the following maintenance actions in order of preference (number 1 for most preferred) or place a cross in the 'Not Required' box if you do not believe that the action needs to be completed as part of a Council facilitated maintenance program.*

- Dredging to restore canal waterway depths
- Placement of sand on beach areas
- Placement of appropriately sized rock protection on beach areas
- Replacement of loose/leaning pontoon restraint piles
- Installation of pile guides on pontoons
- Fill boat ramp edge/end cavities with concrete or rock protection
- Concrete crack repairs on boat ramps
- Repair/replacement of damaged slab sections on boat ramps
- Concrete crack/chip repairs on revetment walls
- Removal of vegetation overgrowth on revetment walls
- Removal of vegetation growth on beach areas
- Removal of obstructions in canal bank access zone

Out of 415 properties surveyed 161 responses were received equating to an approximate 39% response rate.

Based on the median score of the responses received, the preferred priority of maintenance actions is:

1. Dredging to restore canal waterway depths
2. Placement of sand on beach areas
3. Fill boat ramp edge/end cavities with concrete or rock protection
4. Concrete crack/chip repairs on revetment walls
5. Placement of appropriately sized rock protection on beach areas



## Project related



The remaining actions had the same median score of 13, indicating that residents believe those actions are not required as part of a Council maintenance program. The majority of responses indicated that the following actions should be the sole responsibility of private property owners.

- Repair/replacement of damaged slab sections on boat ramps
- Concrete crack repairs on boat ramps
- Removal of obstructions in canal bank access zone
- Removal of vegetation growth on beach areas
- Removal of vegetation overgrowth on revetment walls
- Replacement of loose/leaning pontoon restraint piles
- Installation of pile guides on pontoons

The survey also asked residents to answer the following:

*Would you support the introduction of a special rate to fund a higher level of canal maintenance? Yes / No.*

83% of responses answered No with only 17% indicating they would support an additional rate or fee to increase the level of maintenance service. However, the majority of those who did indicate 'yes' stated that their support was conditioned on there being greater transparency and guarantee of the works.



Project related



**Enclosure 1 to Appendix B: Community Consultation –  
Project Fact Sheet and Resident Survey**

# Settlement Shores Estate

## Canal Maintenance Plan Review

# FACT SHEET

Port Macquarie-Hastings Council is currently reviewing the Canal Maintenance Plan (CMP) for Settlement Shores Estate. The previous CMP was created in 2004 and outlined canal maintenance priorities for a 10 year period. An updated CMP document is being prepared to cover the next 10 years and will address maintenance of canal water depths, boating infrastructure, beach areas, rock protection, revetment walls, stormwater outlets, foreshore footpaths and the flood control weir.

A similar project is nearing completion for the Broadwater Canals Estate.

For more information and to view the project boundary and canal depth survey results please go to [pmhclisting.com.au/settlement-shores-review](http://pmhclisting.com.au/settlement-shores-review)

### Reviewing the Plan

The process for reviewing the CMP includes the following activities:

- canal survey
- inspection of assets
- sediment sampling
- data review and document assembly

The canal survey and asset inspections were completed at the end of 2015 with an outline of the findings to date provided below.

### Survey

A survey of existing levels on the beach areas and seabed within the canals was completed in December 2015.

It found that approximately 32,000 cubic metres of dredging, at an average depth of 1 metre, is required to restore the original seabed levels within the canals. The required depth of dredging is generally less than 1 metre. Most of this dredging is located within Regatta Cove and The Governors Way. The heads of canals, particularly in the vicinity of stormwater outlets, require relatively minor dredging. The last canal dredging was completed in 2006.

### Asset Inspections

Field inspections of canal assets were conducted in December 2015 and involved photographing and noting the condition of assets. Key findings from the asset inspections are summarised below.

A number of pontoons did not have pile guides to restrain their movement, which can result in damage or failure of the pontoon.

Pontoon restraint piles were often leaning or loosely embedded. This may be due to the absence of pile guides in some cases or insufficient embedment into the seabed.



Beach levels were depleted in several canal areas. Residents have reported that sand pumped onto beaches during 2006 dredging was subsequently lost in heavy rainfall during low tides. Maintenance of beach levels is essential for revetment wall stability.



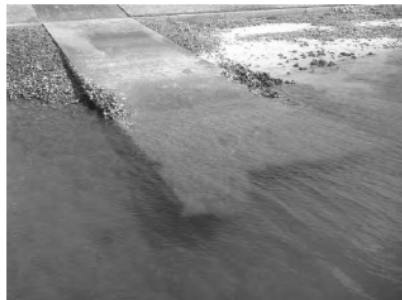
In beach areas where appropriate rock protection had been applied, beach levels appear to be stable and maintained at original levels.

For more information go to [pmhclisting.com.au/settlement-shores-review](http://pmhclisting.com.au/settlement-shores-review)





A number of boat ramps had lost foundation material from beneath the edges and end of the concrete ramp slabs creating cavities. If these cavities are not filled the ramp slab may settle and/or crack, which has already occurred at a number of boat ramps.



Revetment walls were generally in a reasonable condition, with only minor repairs recommended to seal cracks and chips as preventative maintenance against premature deterioration.

Overgrown grass beyond the revetment walls and weeds, reeds and coastal dune vegetation in the upper portion of beach areas was prevalent. In some cases this groundcover has helped retain sand on beach areas, however it may be considered to look overgrown and unsightly.



Obstructions were also identified within the "Keep Clear" zone (5.4m from the revetment wall generally and 7.9m for The Governors Way). These obstructions included trees, shrubs, retaining walls, garden beds, fish cleaning tables, fencing, poles, boat winches and other objects. Clear access along canal banks is required for the removal of flood debris and completion of repair and maintenance works.

## Sediment Sampling

Sampling to assess contamination levels within the sediment and its suitability for replenishment of canal beach areas will be conducted in April/May 2016.

## Maintenance Responsibilities

Maintenance responsibilities are defined within the Residents & Landowners Guidelines and are summarised below.

### Council

- revetment walls fronting public property
- beach zone beyond 2.1 metres off the face of revetment walls fronting private property
- canal waterway depths
- flood control weir
- stormwater outlets

### Property Owners

- revetment walls fronting private property
- beach zone within 2.1 metres of revetment wall
- boat ramps
- jetties, gangways and pontoons
- maintain continuous access along canal banks within 5.4m of revetment walls (7.9m for The Governors Way)

## Level of Service

Council is currently inviting the community to comment on the level of service expected for canal maintenance activities that may be facilitated by Council. This will assist with the development of a prioritised 10 year maintenance plan and budget.

Unfortunately the stormwater levy and general rate revenue does not have sufficient funds to provide a higher level of maintenance services. Council would like to gain the community's views on introducing a special rate in addition to current rates to increase the level of maintenance above what is currently provided.

A special rate is currently collected from the Broadwater Canal Community and covers maintenance activities within that Canal estate, providing a high level of service. The current rate is 0.000746 x the rateable land value (e.g. for a rateable land value of \$300,000 the annual special rate would be \$223.80)

Please complete the survey form (attached) to assist with prioritisation of maintenance actions within the canals and provide any other comments that may assist Council.

For more information go to [pmhclisting.com.au/settlement-shores-review](http://pmhclisting.com.au/settlement-shores-review)



FACT SHEET

**Settlement Shores Estate - Canal Maintenance Plan Review****Survey Form**

Please rank the following maintenance actions in order of preference (number 1 for most preferred) or place a cross in the 'Not Required' box if you do not believe that the action needs to be completed as part of a Council facilitated maintenance program.

<b>Respondent Address (Optional):</b>		
<b>Maintenance Action</b>	<b>Ranking (insert no.)</b>	<b>Not Required (place 'X')</b>
Dredging to restore canal waterway depths		
Placement of sand on beach areas		
Placement of appropriately sized rock protection on beach areas		
Replacement of loose/leaning pontoon restraint piles		
Installation of pile guides on pontoons		
Fill boat ramp edge/end cavities with concrete or rock protection		
Concrete crack repairs on boat ramps		
Repair/replacement of damaged slab sections on boat ramps		
Concrete crack/chip repairs on revetment walls		
Removal of vegetation overgrowth on revetment walls		
Removal of vegetation growth on beach areas		
Removal of obstructions in canal bank access zone		
<b>Other suggested maintenance actions (insert below):</b>		
Would you support the introduction of a special rate to fund a higher level of canal maintenance?	<b>Y / N</b>	
<b>Comments:</b>		

Please submit the completed survey forms to the Port Macquarie-Hastings Council Customer Service Centre or by email to [council@pmhc.nsw.gov.au](mailto:council@pmhc.nsw.gov.au). To ensure the project remains on schedule please return survey forms and any comments by Friday 22<sup>nd</sup> April 2016.

Alternatively the survey can be completed online at [pmhclisting.com.au/settlement-shores-review](http://pmhclisting.com.au/settlement-shores-review)

**Next Steps**

The updated Canal Maintenance Plan will be prepared based on consideration of project investigations and level of service desired by the community. This document will be placed on public exhibition for review and comment later this year. Based on this review and feedback received further discussion regarding funding mechanisms will take place.

For more information go to [pmhclisting.com.au/settlement-shores-review](http://pmhclisting.com.au/settlement-shores-review)



# SURVEY





Project related



## Appendix C: Schedule of Properties

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
1	Ballina	CR	8	8_3	SP0033548-0
3	Ballina	CR	8	8_4	DP0263363-51
5	Ballina	CR	8	8_5	DP0263363-52
7	Ballina	CR	8	8_6	DP0263363-53
9	Ballina	CR	8	8_7	DP0263363-54
11	Ballina	CR	10	10_1	DP0263363-55
13	Ballina	CR	10	10_2	DP0263363-56
15	Ballina	CR	10	10_3	SP0020908-0
17	Ballina	CR	10	10_4	DP0263363-58
19	Ballina	CR	10	10_5	DP0263363-59
21	Ballina	CR	10	10_6	DP0263363-60
23	Ballina	CR	10	10_7	DP0263363-61
25	Ballina	CR	10	10_8	DP0263363-62
27	Ballina	CR	10	10_9	DP0263363-63
29	Ballina	CR	10	10_10	SP0020744-0
31	Ballina	CR	10	10_11	DP0263363-65
33	Ballina	CR	10	10_12	DP0263363-66
35	Ballina	CR	10	10_13	DP0263363-67
37	Ballina	CR	10	10_14	DP0263363-68
39	Ballina	CR	10	10_15	DP0263363-69
41	Ballina	CR	10	10_16	DP0263363-70
43	Ballina	CR	10	10_17	DP0263363-71
45	Ballina	CR	10	10_18	DP0263363-72
47	Ballina	CR	10	10_19	DP0263363-73
49	Ballina	CR	10	10_20	SP0089966-0
51	Ballina	CR	10	10_21	DP0263363-75
53	Ballina	CR	10	10_22	DP0263363-76
55	Ballina	CR	10	10_23	DP0263363-77
57	Ballina	CR	10	10_24	DP0263363-78
59	Ballina	CR	10	10_25	DP0263363-79
61	Ballina	CR	10	10_26	DP0263363-80
0	Bay	ST	8	8_2	DP0263340-4
1	Bay	ST	1	1_50	DP1083464-109
3	Bay	ST	8	8_1	DP0702484-2
3	Commodore	CR	1	1_39	SP0057610-0
5	Commodore	CR	1	1_38	SP0055917-0
7	Commodore	CR	1	1_37	SP0054573-0
9	Commodore	CR	1	1_36	DP0856497-1
11	Commodore	CR	1	1_35	DP0856497-2
13	Commodore	CR	1	1_34	DP0848277-1
15	Commodore	CR	1	1_33	DP0848277-2
16	Commodore	CR	5	5_45	SP0056423-0
17	Commodore	CR	1	1_32	DP0844805-207
18	Commodore	CR	5	5_46	DP0849392-2
20	Commodore	CR	5	5_47	DP0849392-1
22	Commodore	CR	5	5_48	DP1008624-2
24	Commodore	CR	5	5_49	DP1008624-1
25	Commodore	CR	1	1_31	DP1032752-63
26	Commodore	CR	5	5_50	DP0849171-2
27	Commodore	CR	1	1_30	SP0066213-0
28	Commodore	CR	5	5_51	DP0849171-1

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
29	Commodore	CR	1	1_29	SP0057503-0
30	Commodore	CR	5	5_52	DP0846024-1
31	Commodore	CR	1	1_28	SP0061030-0
32	Commodore	CR	5	5_53	DP0846024-2
34	Commodore	CR	5	5_54	DP0837959-1
35	Commodore	CR	1	1_27	SP0033664-0
36	Commodore	CR	5	5_55	DP0837959-2
38	Commodore	CR	5	5_56	DP0836232-1
39	Commodore	CR	1	1_26	SP0033742-0
40	Commodore	CR	5	5_57	DP0836232-2
42	Commodore	CR	5	5_58	DP0833585-13
43	Commodore	CR	1	1_25	SP0034513-0
44	Commodore	CR	5	5_59	DP0833585-12
46	Commodore	CR	5	5_60	DP1067898-2
47	Commodore	CR	1	1_24	DP0747489-201
48	Commodore	CR	5	5_61	DP1067898-1
50	Commodore	CR	5	5_62	DP0845675-102
51	Commodore	CR	1	1_23	SP0033472-0
52	Commodore	CR	5	5_63	DP0845675-101
54	Commodore	CR	5	5_64	DP0833585-9
55	Commodore	CR	1	1_22	DP0709410-195
56	Commodore	CR	5	5_65	DP0833585-8
57	Commodore	CR	1	1_21	DP0709410-194
58	Commodore	CR	5	5_66	DP0833585-7
59B	Commodore	CR	1	1_19	DP1032601-2
59A	Commodore	CR	1	1_20	DP1032601-1
61	Commodore	CR	1	1_18	DP0709410-192
62	Commodore	CR	5	5_67	DP0833585-6
63	Commodore	CR	1	1_17	DP0709410-191
65	Commodore	CR	1	1_16	DP0709410-190
66	Commodore	CR	5	5_68	DP0833585-5
67	Commodore	CR	1	1_15	DP0709410-189
69	Commodore	CR	1	1_14	SP0066235-0
70	Commodore	CR	5	5_69	DP0833585-4
71	Commodore	CR	1	1_13	DP0709410-187
72	Commodore	CR	5	5_70	DP1045118-2
72A	Commodore	CR	5	5_71	DP1045118-1
73	Commodore	CR	1	1_12	DP0710567-198
74	Commodore	CR	5	5_72	DP0858924-2
75	Commodore	CR	1	1_11	DP0710567-199
76	Commodore	CR	5	5_73	DP0858924-1
78	Commodore	CR	5	5_74	DP0833585-1
79	Commodore	CR	1	1_10	SP0033567-0
80	Commodore	CR	5	5_75	DP0842288-33
81	Commodore	CR	1	1_9	DP1033888-1
82	Commodore	CR	5	5_76	DP0842288-34
83	Commodore	CR	1	1_8	DP1033888-2
84	Commodore	CR	5	5_77	DP0259848-15
86	Commodore	CR	5	5_78	DP0259848-14
87	Commodore	CR	1	1_7	SP0080562-0
88A	Commodore	CR	5	5_79	DP1108917-132

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
88B	Commodore	CR	5	5_80	DP1108917-131
89	Commodore	CR	1	1_6	DP0259724-4
90	Commodore	CR	5	5_81	DP0259848-12
91	Commodore	CR	1	1_5	DP0259724-5
92	Commodore	CR	5	5_82	DP0739202-2
93	Commodore	CR	1	1_4	DP0259724-6
94	Commodore	CR	5	5_83	DP0739202-1
95	Commodore	CR	1	1_3	SP0032986-0
96	Commodore	CR	5	5_84	DP0259848-9
98	Commodore	CR	5	5_85	DP0259848-8
1	Cornwallis	CL	4	4_13	DP0246284-92
2	Cornwallis	CL	3	3_16	DP0246284-62
3	Cornwallis	CL	4	4_12	DP0246284-91
4	Cornwallis	CL	3	3_17	DP0246284-63
5	Cornwallis	CL	4	4_11	DP0246284-90
6	Cornwallis	CL	3	3_18	DP0246284-64
7	Cornwallis	CL	4	4_10	DP0246284-89
8	Cornwallis	CL	3	3_19	DP0246284-65
9	Cornwallis	CL	4	4_9	DP0246284-88
10	Cornwallis	CL	3	3_20	DP0246284-66
11	Cornwallis	CL	4	4_8	DP0246284-87
12	Cornwallis	CL	3	3_21	DP0246284-67
13	Cornwallis	CL	4	4_7	DP0246284-86
14	Cornwallis	CL	3	3_22	DP0246284-68
15	Cornwallis	CL	4	4_6	DP0246284-85
16	Cornwallis	CL	3	3_23	DP0246284-69
17	Cornwallis	CL	4	4_5	DP0246284-84
18	Cornwallis	CL	3	3_24	DP0246284-70
19	Cornwallis	CL	4	4_4	DP0246284-83
20	Cornwallis	CL	3	3_25	DP0246284-71
21	Cornwallis	CL	4	4_3	DP0246284-82
22	Cornwallis	CL	3	3_26	DP0246284-72
23	Cornwallis	CL	4	4_2	DP0246284-81
24	Cornwallis	CL	3	3_27	DP0246284-73
25	Cornwallis	CL	4	4_1	DP0246284-80
26	Cornwallis	CL	3	3_28	DP0246284-74
27	Cornwallis	CL	2	2_19	DP0246284-79
28	Cornwallis	CL	2	2_15	DP0246284-75
29	Cornwallis	CL	2	2_18	DP0246284-78
30	Cornwallis	CL	2	2_16	DP0246284-76
31	Cornwallis	CL	2	2_17	DP0246284-77
5	Cove	PL	1	1_46	DP0270887-11
7	Cove	PL	1	1_45	DP0270887-10
9	Cove	PL	1	1_44	DP0270887-9
11	Cove	PL	1	1_43	DP0270887-8
13	Cove	PL	1	1_42	DP0270887-7
15	Cove	PL	1	1_41	DP0270887-6
0	Francis	ST	6	6_11	DP0246284-140
1	Francis	ST	3	3_14	DP0246284-61
2	Francis	ST	6	6_12	DP0246284-23
3	Francis	ST	3	3_13	DP0246284-60

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
4	Francis	ST	6	6_13	DP0246284-24
5	Francis	ST	3	3_12	DP0246284-59
6	Francis	ST	6	6_14	DP0246284-25
7	Francis	ST	3	3_11	DP0246284-58
8	Francis	ST	6	6_15	DP0246284-26
9	Francis	ST	3	3_10	SP0062159-0
10	Francis	ST	6	6_16	DP0246284-27
11	Francis	ST	3	3_9	DP0246284-56
12	Francis	ST	6	6_17	DP0246284-28
13	Francis	ST	3	3_8	DP0246284-55
14	Francis	ST	6	6_18	DP0246284-29
15	Francis	ST	3	3_7	DP0246284-54
16	Francis	ST	6	6_19	DP0246284-30
17	Francis	ST	3	3_6	DP0246284-53
18	Francis	ST	6	6_20	DP0246284-31
19	Francis	ST	3	3_5	DP0246284-52
20	Francis	ST	6	6_21	DP0246284-32
21	Francis	ST	3	3_4	DP0246284-51
22	Francis	ST	6	6_22	DP0246284-33
23	Francis	ST	3	3_3	DP0246284-50
24	Francis	ST	6	6_23	DP0246284-139
25	Francis	ST	3	3_2	DP0246284-49
27	Francis	ST	3	3_1	DP0246284-48
29	Francis	ST	2	2_14	DP0246284-47
31	Francis	ST	2	2_13	DP0246284-46
33	Francis	ST	2	2_12	DP0246284-45
35	Francis	ST	2	2_11	DP0246284-44
37	Francis	ST	2	2_10	DP0246284-43
39	Francis	ST	2	2_9	DP0246284-42
41	Francis	ST	2	2_8	DP0246284-41
43	Francis	ST	2	2_7	DP0246284-40
45	Francis	ST	2	2_6	DP0246284-39
47	Francis	ST	2	2_5	DP0246284-38
49	Francis	ST	2	2_4	DP0246284-37
51	Francis	ST	2	2_3	DP0246284-36
53	Francis	ST	2	2_2	DP0246284-35
55	Francis	ST	2	2_1	DP0246284-34
2	Harbour	LA	5	5_42	SP0052467-0
4	Harbour	LA	5	5_43	SP0053962-0
6	Harbour	LA	5	5_44	SP0055009-0
105	Hastings River	DR	2	2_21A	DP0594942-1
0	Hibbard	DR	2	2_21	DP0246284-144
2	Hibbard	DR	2	2_22	DP0246284-105
4	Hibbard	DR	2	2_23	DP0246284-106
6	Hibbard	DR	2	2_24	DP0246284-107
8	Hibbard	DR	2	2_25	DP0246284-108
10	Hibbard	DR	2	2_26	DP0246284-109
12	Hibbard	DR	2	2_27	DP0246284-110
14	Hibbard	DR	2	2_28	DP0246284-111
16	Hibbard	DR	2	2_29	DP0246284-112
18	Hibbard	DR	2	2_30	DP0246284-113

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
20	Hibbard	DR	2	2_31	DP0246284-114
22	Hibbard	DR	2	2_32	DP0246284-115
24	Hibbard	DR	2	2_33	DP0246284-116
26	Hibbard	DR	2	2_34	DP0246284-117
28	Hibbard	DR	2	2_35	DP0246284-118
30	Hibbard	DR	2	2_36	DP0246284-119
32	Hibbard	DR	2	2_37	SP0058871-0
34	Hibbard	DR	2	2_38	SP0073584-0
36	Hibbard	DR	2	2_39	DP0246284-122
38	Hibbard	DR	2	2_40	DP0246284-123
40	Hibbard	DR	2	2_41	DP0246284-124
42	Hibbard	DR	2	2_42	DP0246284-125
44	Hibbard	DR	2	2_43	DP0246284-126
46	Hibbard	DR	2	2_44	DP0246284-127
48	Hibbard	DR	2	2_45	DP0246284-128
50	Hibbard	DR	2	2_46	DP0246284-129
52	Hibbard	DR	2	2_47	DP0246284-130
54	Hibbard	DR	2	2_48	DP0246284-131
56	Hibbard	DR	2	2_49	DP0246284-132
58	Hibbard	DR	2	2_50	DP0246284-133
60	Hibbard	DR	2	2_51	DP0246284-134
62	Hibbard	DR	2	2_52	DP0285242-2
62	Hibbard	DR	2	2_53	DP0285242-3
62	Hibbard	DR	2	2_54	DP0285242-4
62	Hibbard	DR	2	2_55	DP0285242-5
62	Hibbard	DR	2	2_56	DP0285242-6
68	Hibbard	DR	2	2_57	SP0022336-0
0	Laguna	PL	8	8_9	DP0263432-110
1	Laguna	PL	9	9_25	SP0074464-0
2	Laguna	PL	10	10_29	DP0263432-82
3	Laguna	PL	9	9_24	DP0709409-132
4	Laguna	PL	10	10_30	DP0263432-83
5	Laguna	PL	9	9_23	DP0709409-131
6	Laguna	PL	10	10_31	DP0263432-84
7	Laguna	PL	9	9_22	DP0709409-130
8	Laguna	PL	10	10_32	DP0263432-85
9	Laguna	PL	9	9_21	DP0709409-129
10	Laguna	PL	10	10_33	DP0263432-86
11	Laguna	PL	9	9_20	DP0709409-128
12	Laguna	PL	10	10_34	DP0263432-87
13	Laguna	PL	9	9_19	DP0709409-127
14	Laguna	PL	10	10_35	DP0263432-88
15	Laguna	PL	9	9_18	DP0709409-126
16	Laguna	PL	10	10_36	DP0263432-89
17	Laguna	PL	9	9_17	DP0709409-125
18	Laguna	PL	10	10_37	DP0263432-90
19	Laguna	PL	9	9_16	DP0709409-124
20	Laguna	PL	10	10_38	DP0263432-91
21	Laguna	PL	9	9_15	DP0709409-123
22	Laguna	PL	10	10_39	DP0263432-92
23	Laguna	PL	9	9_14	DP0709409-122

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
24	Laguna	PL	10	10_40	DP0263432-93
25	Laguna	PL	9	9_13	DP0709409-121
26	Laguna	PL	10	10_41	DP0263432-94
27	Laguna	PL	9	9_12	DP0709409-120
28	Laguna	PL	10	10_42	DP0263432-95
29	Laguna	PL	9	9_11	DP0709409-119
30	Laguna	PL	10	10_43	DP0263432-96
31	Laguna	PL	9	9_10	DP0709409-118
32	Laguna	PL	10	10_44	DP0263432-97
33	Laguna	PL	9	9_9	DP0709409-117
34	Laguna	PL	10	10_45	DP0263432-98
35	Laguna	PL	9	9_8	DP0709409-116
36	Laguna	PL	10	10_46	DP0263432-99
37	Laguna	PL	9	9_7	DP0709409-115
38	Laguna	PL	10	10_47	DP0263432-100
39	Laguna	PL	9	9_6	DP0709409-114
40	Laguna	PL	10	10_48	DP0263432-101
41	Laguna	PL	9	9_5	DP0709409-113
42	Laguna	PL	10	10_49	DP0263432-102
43	Laguna	PL	9	9_4	DP0709409-112
44	Laguna	PL	10	10_50	DP0263432-103
45	Laguna	PL	9	9_3	DP0709409-111
46	Laguna	PL	10	10_51	DP0263432-104
47	Laguna	PL	9	9_2	SP0031175-0
48	Laguna	PL	10	10_52	DP0263432-105
49	Laguna	PL	9	9_1	SP0030448-0
50	Laguna	PL	10	10_53	DP0263432-106
52	Laguna	PL	10	10_54	SP0031454-0
54	Laguna	PL	8	8_8	SP0031775-0
9	McInherney	CL	1	1_1	DP0535212-2
0	Newport	CR	9	9_26	DP0709409-179
2	Newport	CR	7	7_8	DP0710566-186
3A	Newport	CR	9	9_27	DP1080242-2
3B	Newport	CR	9	9_28	DP1080242-1
4	Newport	CR	7	7_7	DP0710566-185
5	Newport	CR	9	9_29	SP0075338-0
6	Newport	CR	7	7_6	DP0710566-184
7	Newport	CR	9	9_30	DP0709409-136
8	Newport	CR	7	7_5	DP0710566-183
9	Newport	CR	9	9_31	DP0709409-137
10	Newport	CR	7	7_4	DP0710566-182
11	Newport	CR	9	9_32	DP0709409-138
12	Newport	CR	7	7_3	DP0710566-181
13	Newport	CR	9	9_33	DP0709409-139
14	Newport	CR	7	7_2	DP0710566-180
15	Newport	CR	9	9_34	DP0709409-140
16	Newport	CR	7	7_1	DP0710566-179
17	Newport	CR	9	9_35	DP0709409-141
18	Newport	CR	1	1_73	DP0709409-178
19	Newport	CR	9	9_36	DP0709409-142
20	Newport	CR	1	1_72	DP0709409-177

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
21	Newport	CR	9	9_37	DP0709409-143
22	Newport	CR	1	1_71	DP0709409-176
23	Newport	CR	9	9_38	DP0709409-144
24	Newport	CR	1	1_70	DP0709409-175
25	Newport	CR	9	9_39	DP0709409-145
26B	Newport	CR	1	1_68	DP0837379-2
26A	Newport	CR	1	1_69	DP0837379-1
27	Newport	CR	9	9_40	DP0709409-146
28	Newport	CR	1	1_67	DP0709409-173
29	Newport	CR	9	9_41	DP0709409-147
30	Newport	CR	1	1_66	DP0709409-172
31	Newport	CR	9	9_42	DP0709409-148
32	Newport	CR	1	1_65	DP0709409-171
33	Newport	CR	9	9_43	DP0709409-149
34	Newport	CR	1	1_64	DP0709409-170
35	Newport	CR	9	9_44	DP0709409-150
36	Newport	CR	1	1_63	DP0709409-169
37	Newport	CR	9	9_45	DP0709409-151
38	Newport	CR	1	1_62	DP0709409-168
39	Newport	CR	9	9_46	DP0709409-152
40	Newport	CR	1	1_61	DP0749073-1
41	Newport	CR	9	9_47	DP0709409-153
42B	Newport	CR	1	1_59	DP1137445-2
42A	Newport	CR	1	1_60	DP1137445-1
43	Newport	CR	9	9_48	DP0709409-154
44	Newport	CR	1	1_58	DP0749073-3
45	Newport	CR	9	9_49	DP0709409-155
46	Newport	CR	1	1_57	DP0709409-165
47	Newport	CR	9	9_50	DP0709409-156
48	Newport	CR	1	1_56	DP0709409-164
49	Newport	CR	9	9_51	DP0709409-157
50	Newport	CR	1	1_55	DP0709409-163
51	Newport	CR	8	8_10	DP0709409-158
52	Newport	CR	1	1_54	DP0709409-162
54	Newport	CR	1	1_53	DP0709409-161
56	Newport	CR	1	1_52	DP0709409-160
58	Newport	CR	1	1_51	DP0709409-159
0	Newport Island	RD	3	3_15	DP0246284-142
0	Newport Island	RD	4	4_14	DP0246284-143
0	Newport Island	RD	7	7_9	DP0246284-141
25	Newport Island	RD	10	10_27	DP0263363-81
0	Park	ST	1	1_48	DP0709410-198
0	Park	ST	1	1_49	DP0263340-5
49	Park	ST	1	1_47	SP0055534-0
2	River Park	RD	5	5_12	DP0259848-16
4	River Park	RD	5	5_11	SP0019226-0
6	River Park	RD	5	5_10	DP0259848-18
8	River Park	RD	5	5_9	DP0259848-19
10	River Park	RD	5	5_8	DP0259848-20
12	River Park	RD	5	5_7	DP0259848-21
14	River Park	RD	5	5_6	DP0259848-22



Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
16	River Park	RD	5	5_5	DP0259848-23
18	River Park	RD	5	5_4	DP0259848-24
20	River Park	RD	5	5_3	DP0259848-25
22	River Park	RD	5	5_2	DP0259848-26
24	River Park	RD	5	5_1	DP0259848-27
26	River Park	RD	1	1_2	DP0259848-28
100	River Park	RD	5	5_13	DP0842288-32
102	River Park	RD	5	5_14	DP0842288-31
104	River Park	RD	5	5_15	SP0057994-0
106	River Park	RD	5	5_16	DP0833585-29
108	River Park	RD	5	5_17	DP0833585-28
110	River Park	RD	5	5_18	DP0833585-27
112	River Park	RD	5	5_19	DP0833585-26
114	River Park	RD	5	5_20	DP0833585-25
116	River Park	RD	5	5_21	DP0833585-24
118	River Park	RD	5	5_22	DP0833585-23
120	River Park	RD	5	5_23	DP0833585-22
122	River Park	RD	5	5_24	DP0833585-21
124	River Park	RD	5	5_25	DP0833585-20
126	River Park	RD	5	5_26	DP0845452-2
128	River Park	RD	5	5_27	DP0845452-1
130	River Park	RD	5	5_28	DP0844417-1
132	River Park	RD	5	5_29	DP0844417-2
134	River Park	RD	5	5_30	DP0861467-12
136	River Park	RD	5	5_31	DP0861467-11
138	River Park	RD	5	5_32	DP0840700-161
140	River Park	RD	5	5_33	DP0840700-162
142	River Park	RD	5	5_34	DP0840701-39
146	River Park	RD	5	5_35	DP0846392-1
148	River Park	RD	5	5_36	DP0846392-2
150	River Park	RD	5	5_37	DP0863688-2
152	River Park	RD	5	5_38	DP0863688-1
154	River Park	RD	5	5_39	DP0853912-1
156	River Park	RD	5	5_40	DP0853912-2
158	River Park	RD	5	5_41	SP0050986-0
166	River Park	RD	1	1_40	DP0736860-2
2	Scarborough	CL	4	4_15	DP0834411-2
2	Scarborough	CL	4	4_16	DP0834411-1
4	Scarborough	CL	4	4_17	DP0246284-94
6	Scarborough	CL	4	4_18	SP0022140-0
8	Scarborough	CL	4	4_19	DP0246284-96
10	Scarborough	CL	4	4_20	DP0246284-97
12	Scarborough	CL	4	4_21	DP0246284-98
14	Scarborough	CL	4	4_22	DP0246284-99
16	Scarborough	CL	4	4_23	DP0246284-100
18	Scarborough	CL	4	4_24	DP0246284-101
20	Scarborough	CL	4	4_25	DP0246284-102
22	Scarborough	CL	4	4_26	SP0015845-0
23	Scarborough	CL	2	2_20	SP0016873-0
24	Scarborough	CL	4	4_27	SP0017291-0
1	Sirius	CL	6	6_10	DP0246284-22

Table C1: Schedule of Properties Inspected

Street No.	Street Name	Street Type	Canal No.	Canal ID No.	DP No.-Lot No.
2	Sirius	CL	7	7_10	DP0246284-1
3	Sirius	CL	6	6_9	DP0246284-21
4	Sirius	CL	7	7_11	SP0081334-0
5	Sirius	CL	6	6_8	DP0246284-20
6	Sirius	CL	7	7_12	DP0246284-3
7	Sirius	CL	6	6_7	DP0246284-19
8	Sirius	CL	7	7_13	DP0246284-4
9	Sirius	CL	6	6_6	DP0246284-18
10	Sirius	CL	7	7_14	DP0246284-5
11	Sirius	CL	6	6_5	DP0246284-17
12A	Sirius	CL	7	7_15	DP1102277-62
12B	Sirius	CL	7	7_16	DP1102277-61
13	Sirius	CL	6	6_4	DP0246284-16
14	Sirius	CL	7	7_17	DP0246284-7
15	Sirius	CL	6	6_3	DP0246284-15
16	Sirius	CL	7	7_18	DP0246284-8
17	Sirius	CL	6	6_2	DP0246284-14
18	Sirius	CL	7	7_19	DP0246284-9
19	Sirius	CL	6	6_1	DP0246284-13
20	Sirius	CL	7	7_20	SP0018443-0
21	Sirius	CL	1	1_75	SP0081817-0
22	Sirius	CL	1	1_74	DP0246284-11
Reserve adjacent to 68 Hibbard Drive	-	-	1	1_76	DP0710560-5
Reserve adjacent to 0 Newport Island Road	-	-	7	7_9A	
Reserve adjacent to 2 Laguna Place	-	-	10	10_28	DP0263432-111
<b>Total Number of Properties</b>	<b>433</b>				



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## Appendix D: Canal Maintenance Plan Spreadsheet





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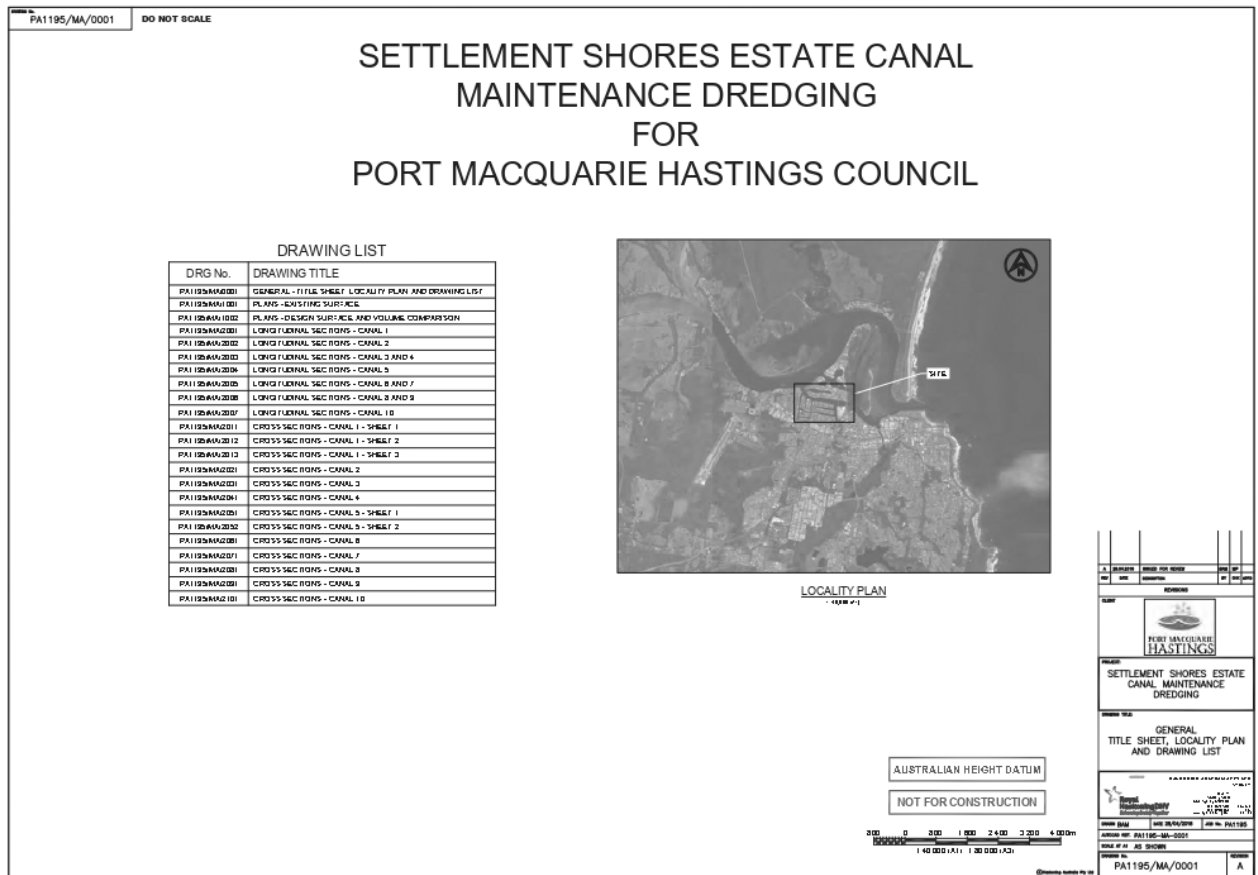
ITEMS LOGBOOK							ITEMS WORK ACTIONS				ESTIMATED COSTS				
Canal No./Property ID No.	Canal No.	Property ID No.	Screen No.	Screen Name	Screen Type	CP Number/ Lin Number	Action Code	Item description - Description of Works/ Location	Frequency	Priority Level	Responsibility	Rate	Unit	Quantity	Estimated Cost
9.9	9	9	25	sgm	1	31020400-1 (1)	1-2	2 pairs of concrete pipes with one new hand cast iron end distribution joint. 1 pair of concrete pipes mounted. Septic tank. Hand cast iron.	2x4x6 inches 1/2 x 1/2	O-Opportunity	contractor	\$	450	per pair	2 \$ 1,300
9.9	9	9	25	sgm	2	31020400-1 (1)	2-2	2 pairs of hand cast iron end distribution primary septic tank with polyester liner 3/4 inch	2x4x6 inches 1/2 x 1/2	O-Opportunity	contractor	\$	250	per pair	1 \$ 250
9.9	9	9	25	sgm	2	31020400-1 (1)	2-2	2 pairs of hand cast iron end distribution primary septic tank with polyester liner 3/4 inch	2x4x6 inches 1/2 x 1/2	O-Opportunity	contractor	\$	250	per pair	1 \$ 250

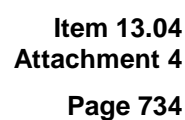


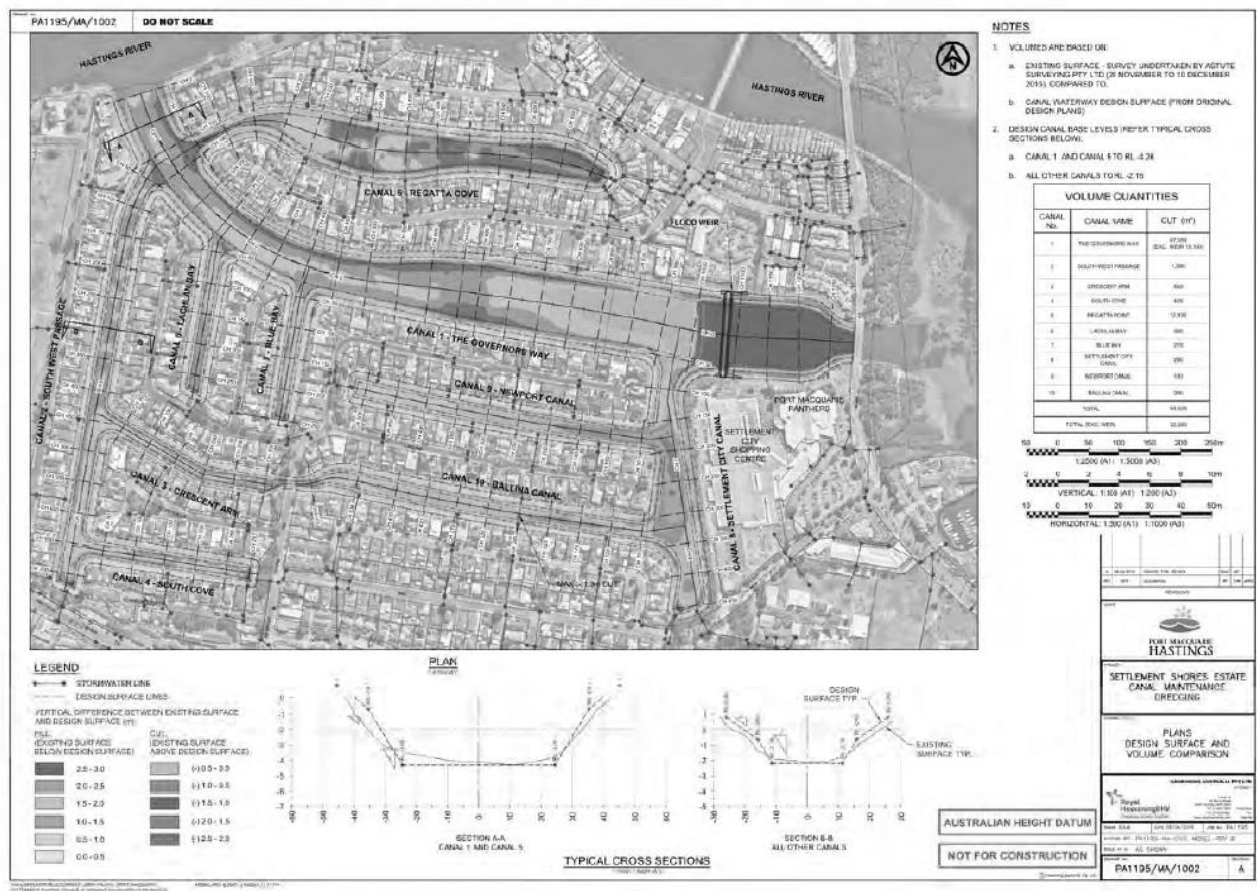
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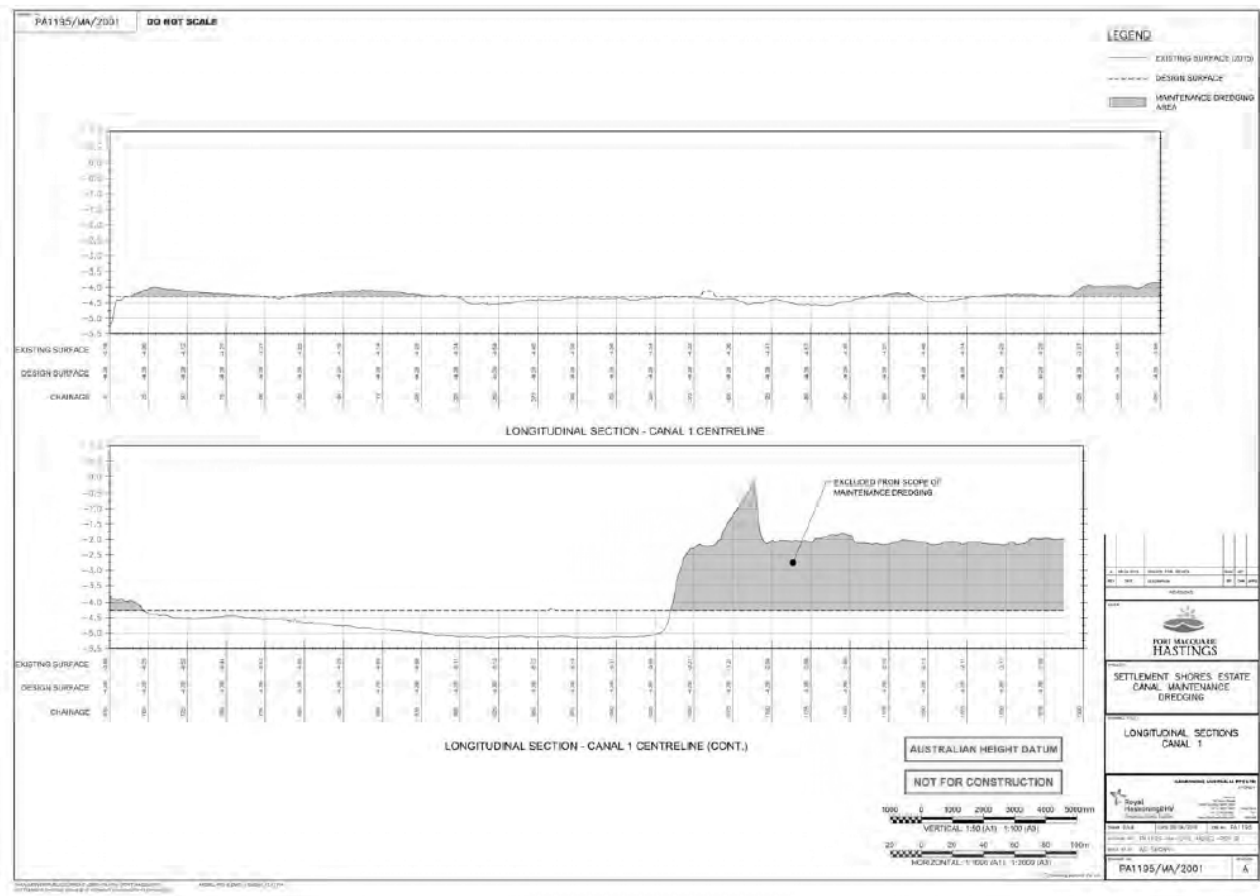
## Appendix E: Hydrographic Survey Plans

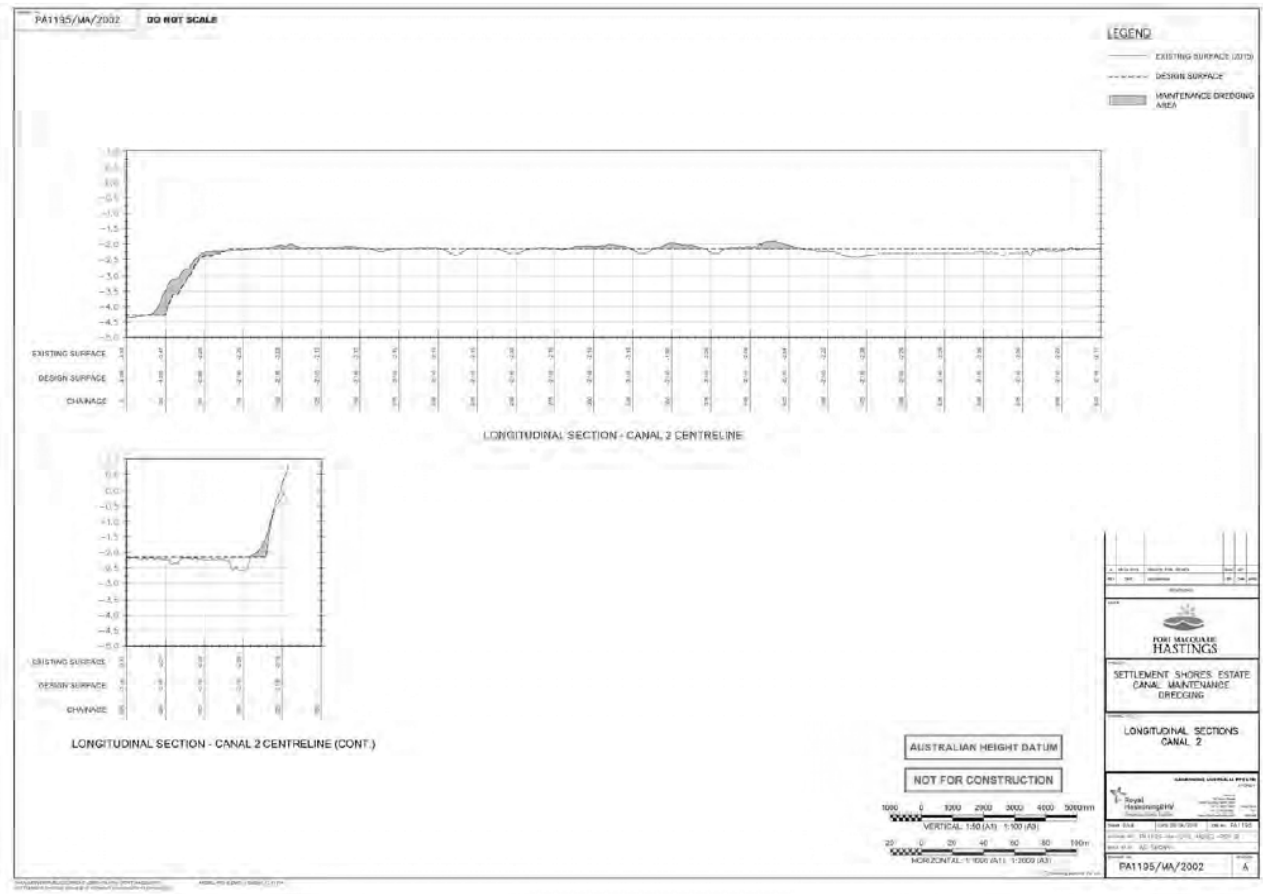


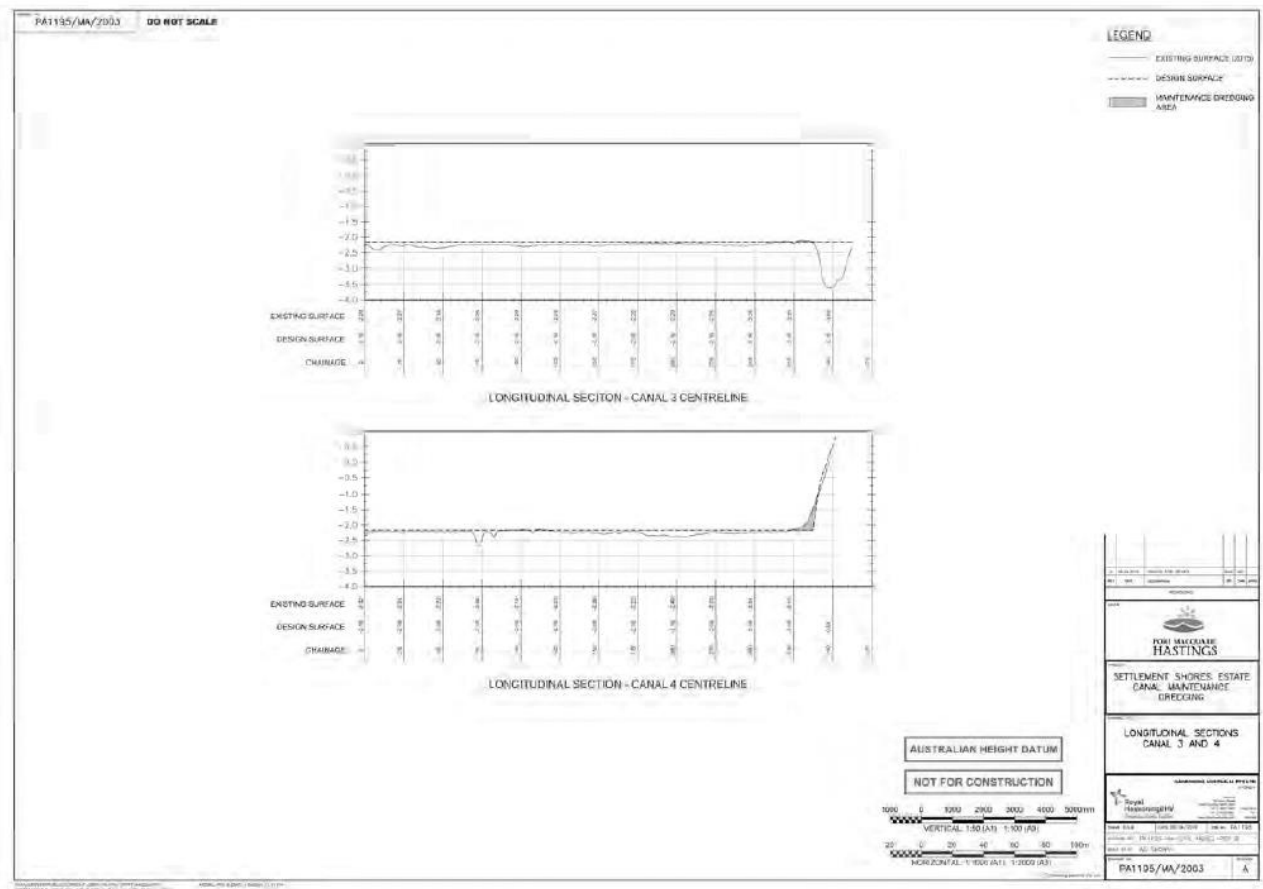


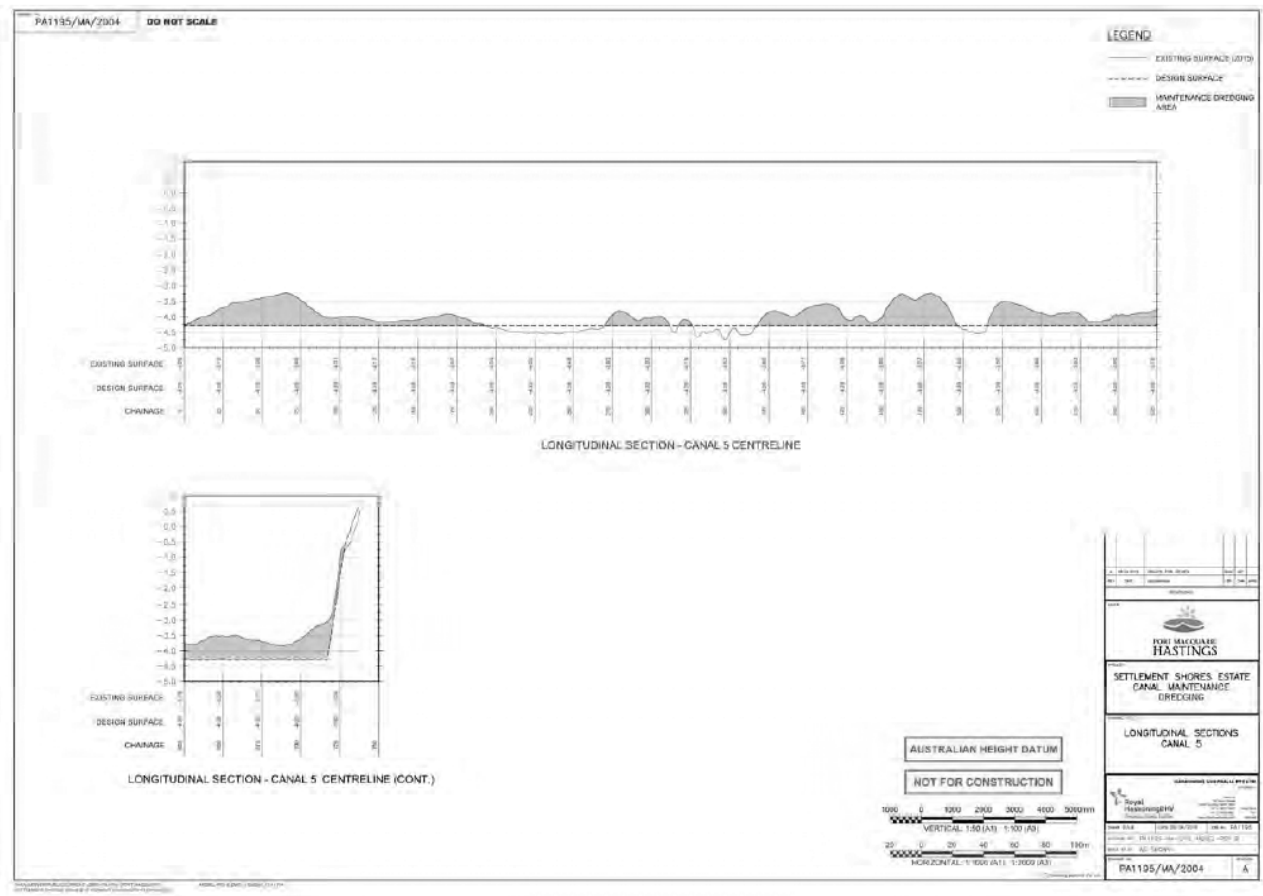


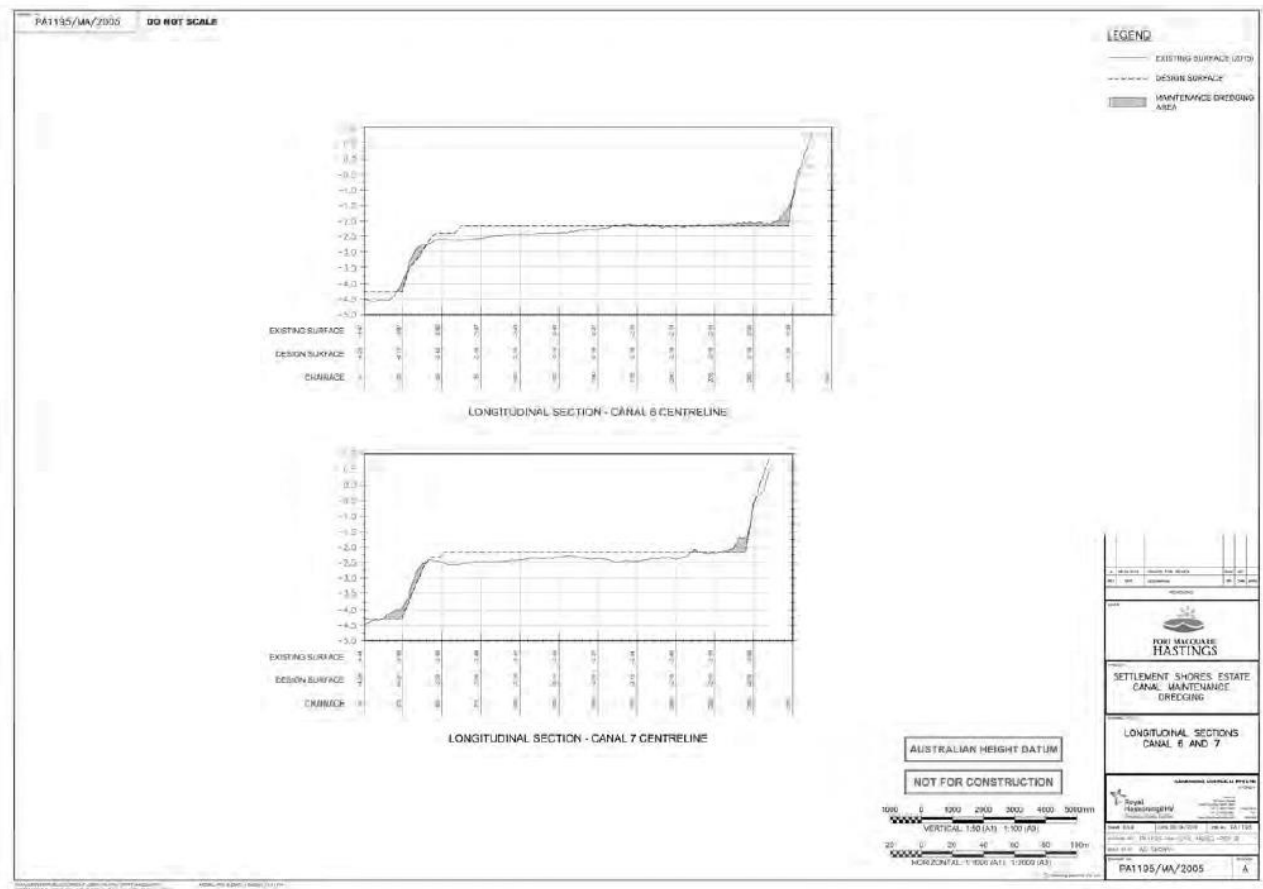


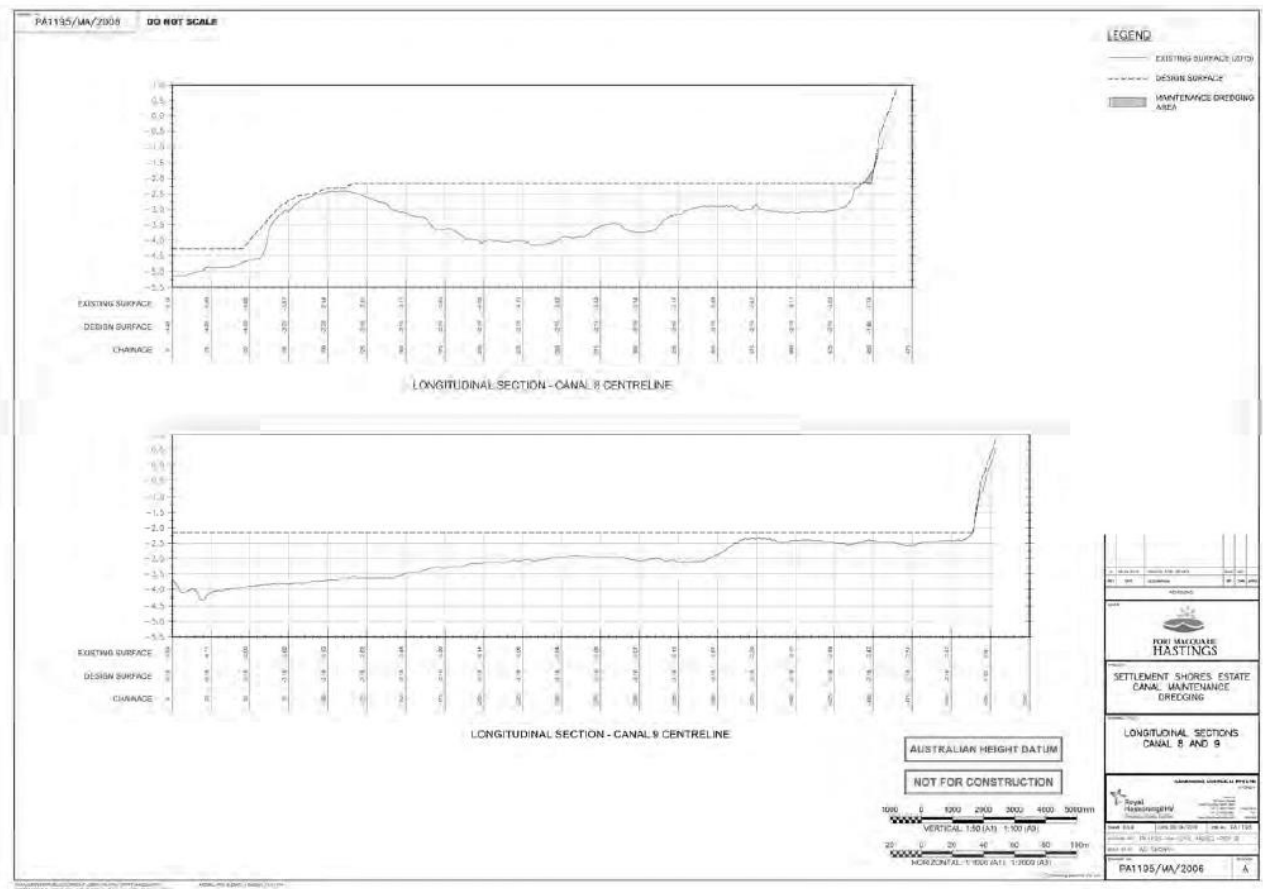


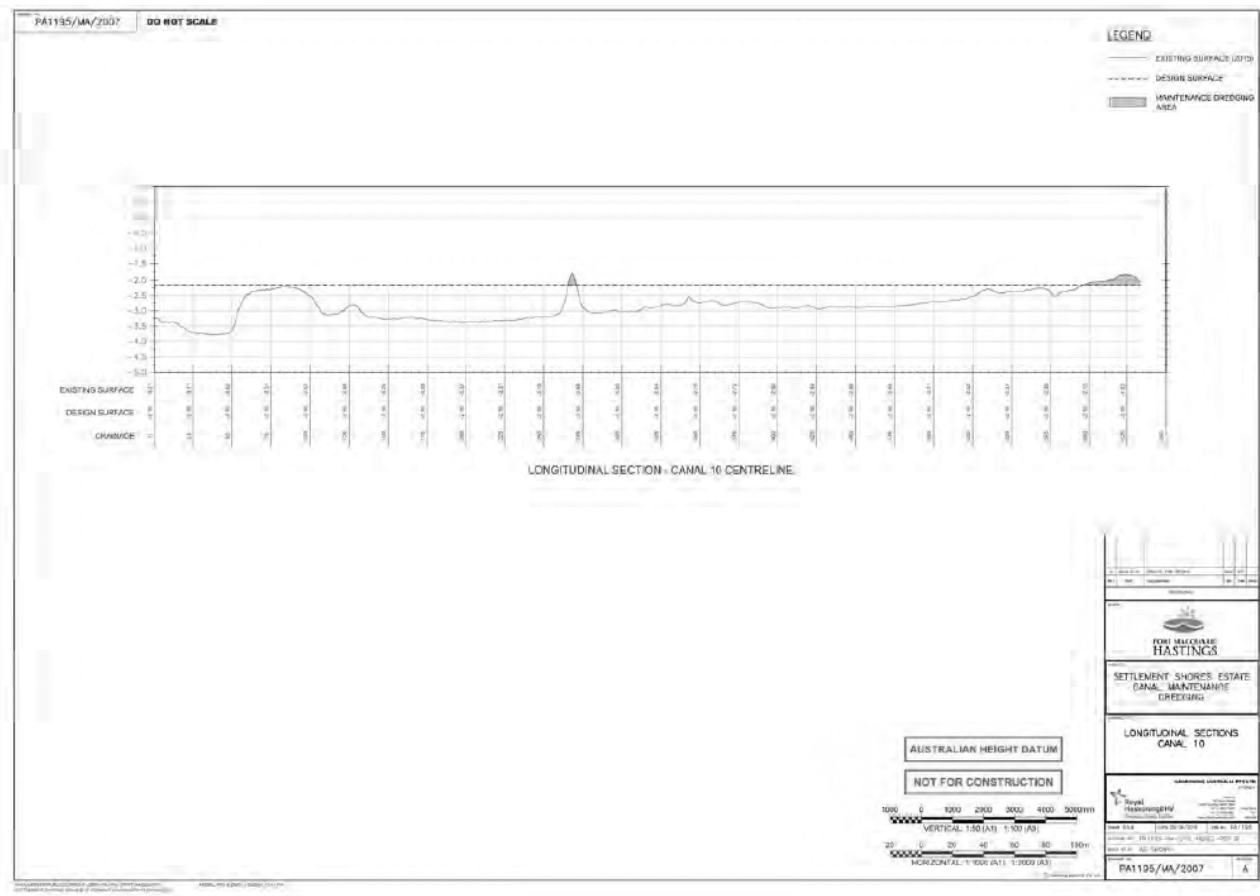


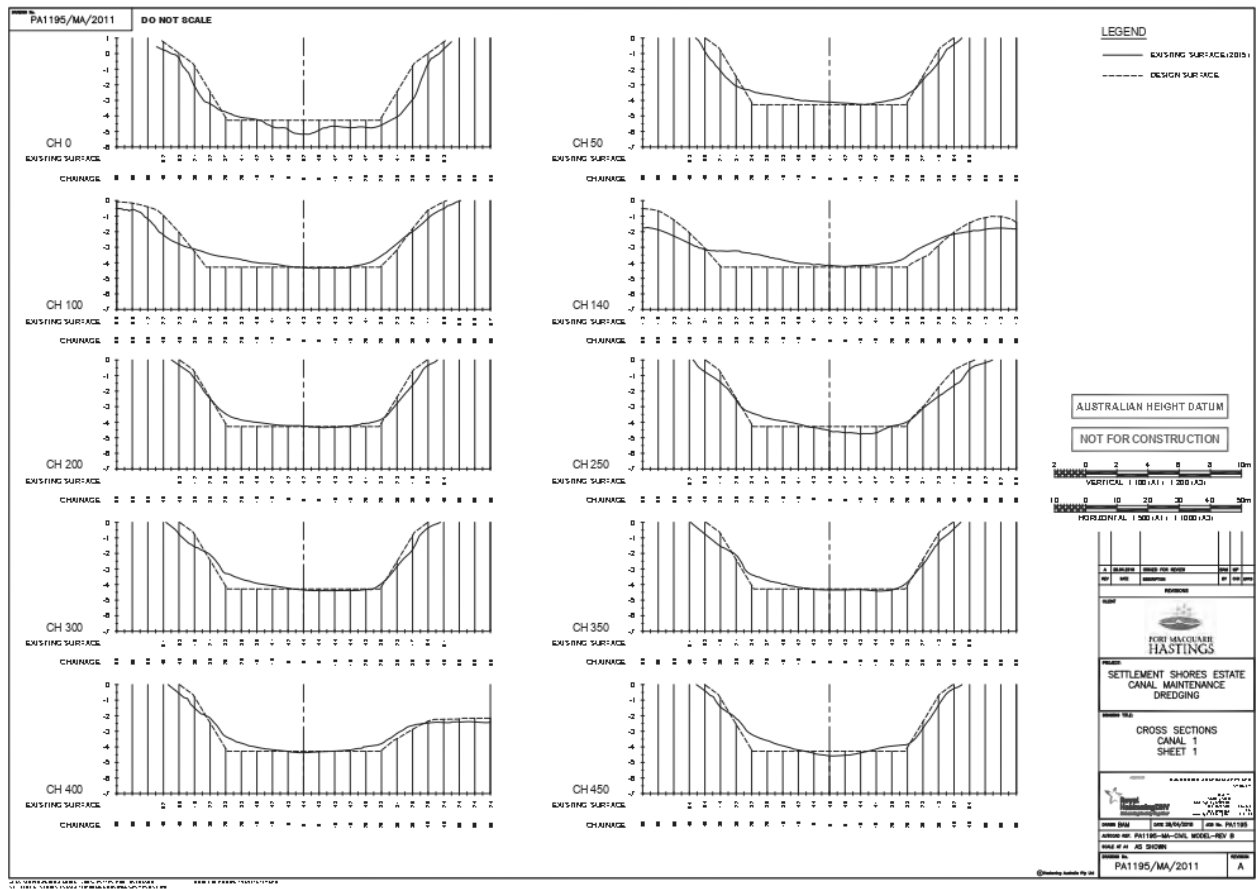




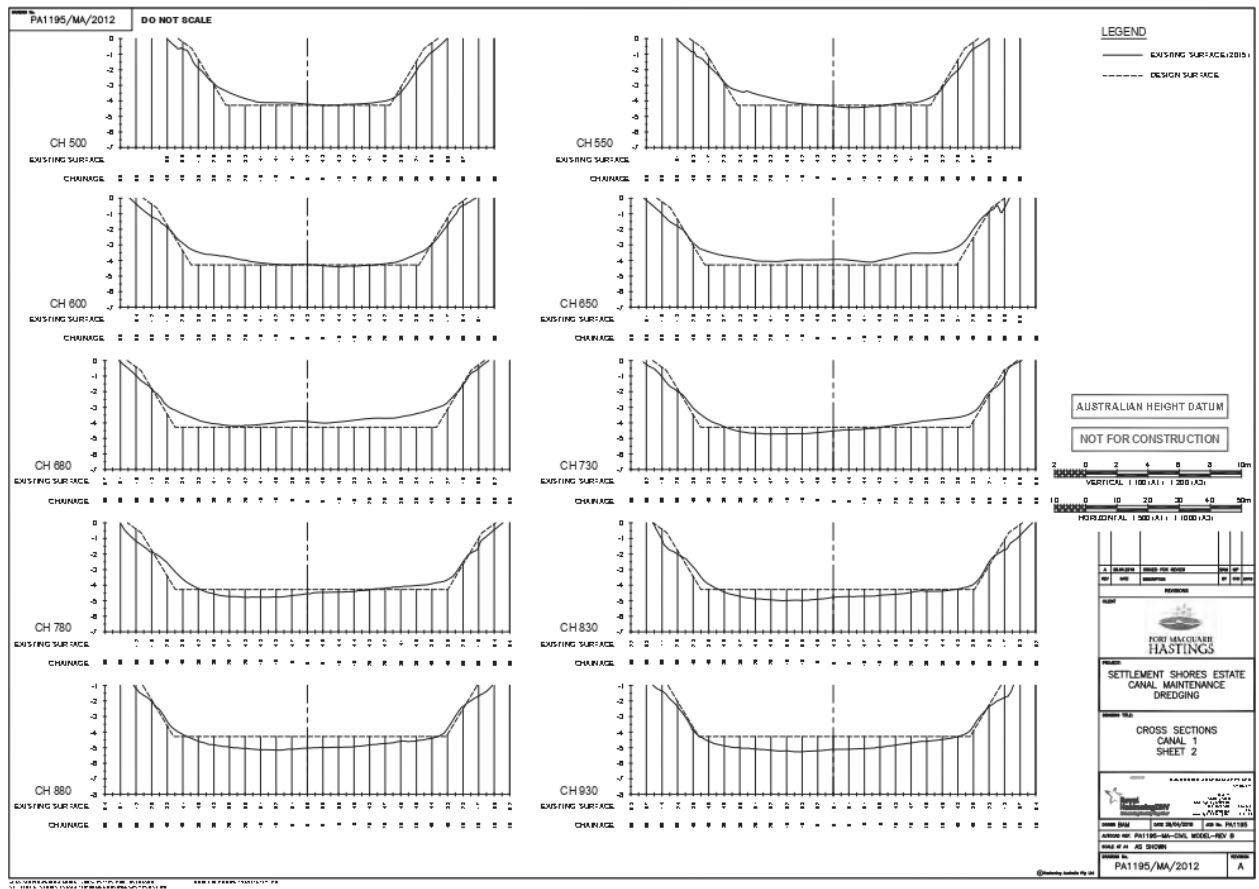


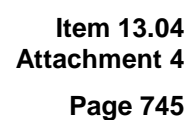


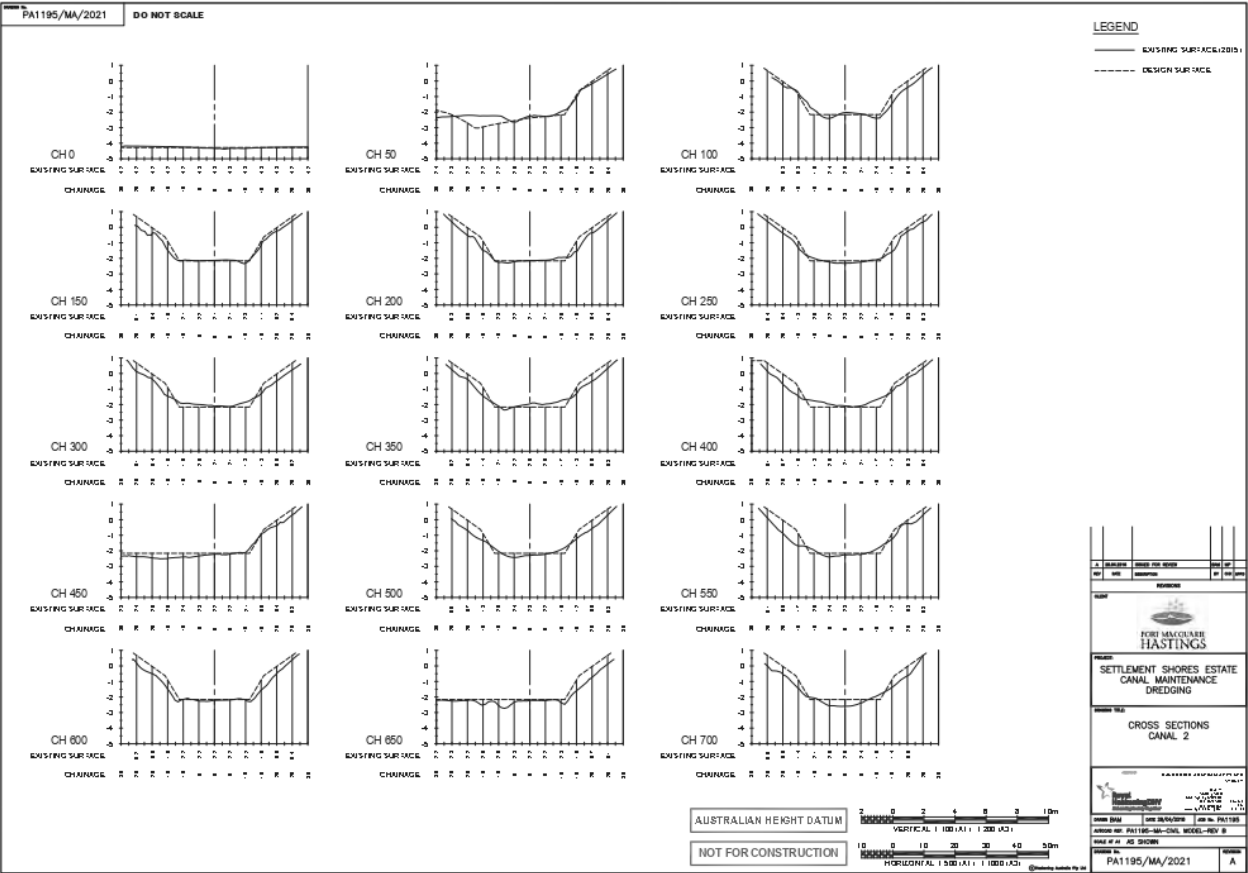


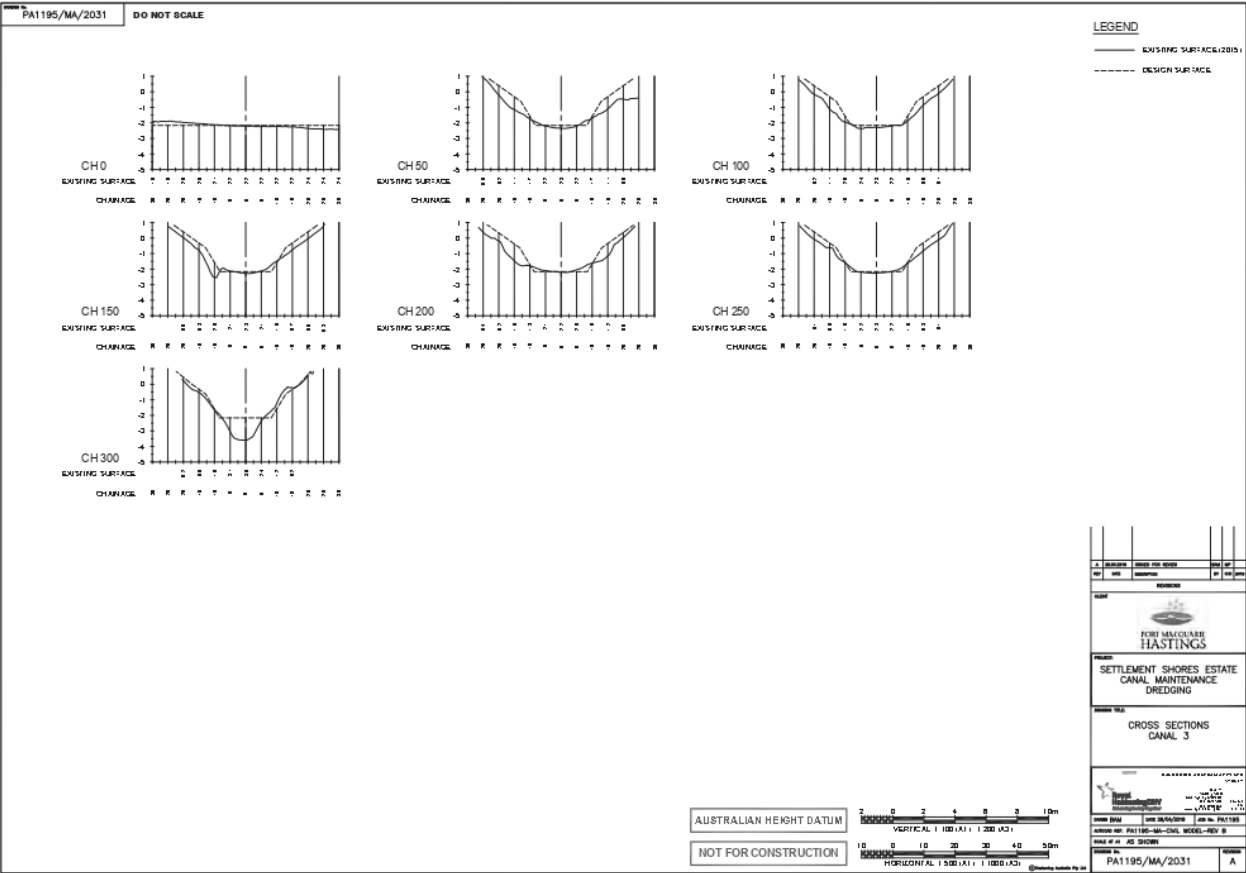


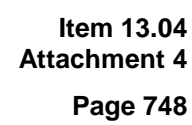


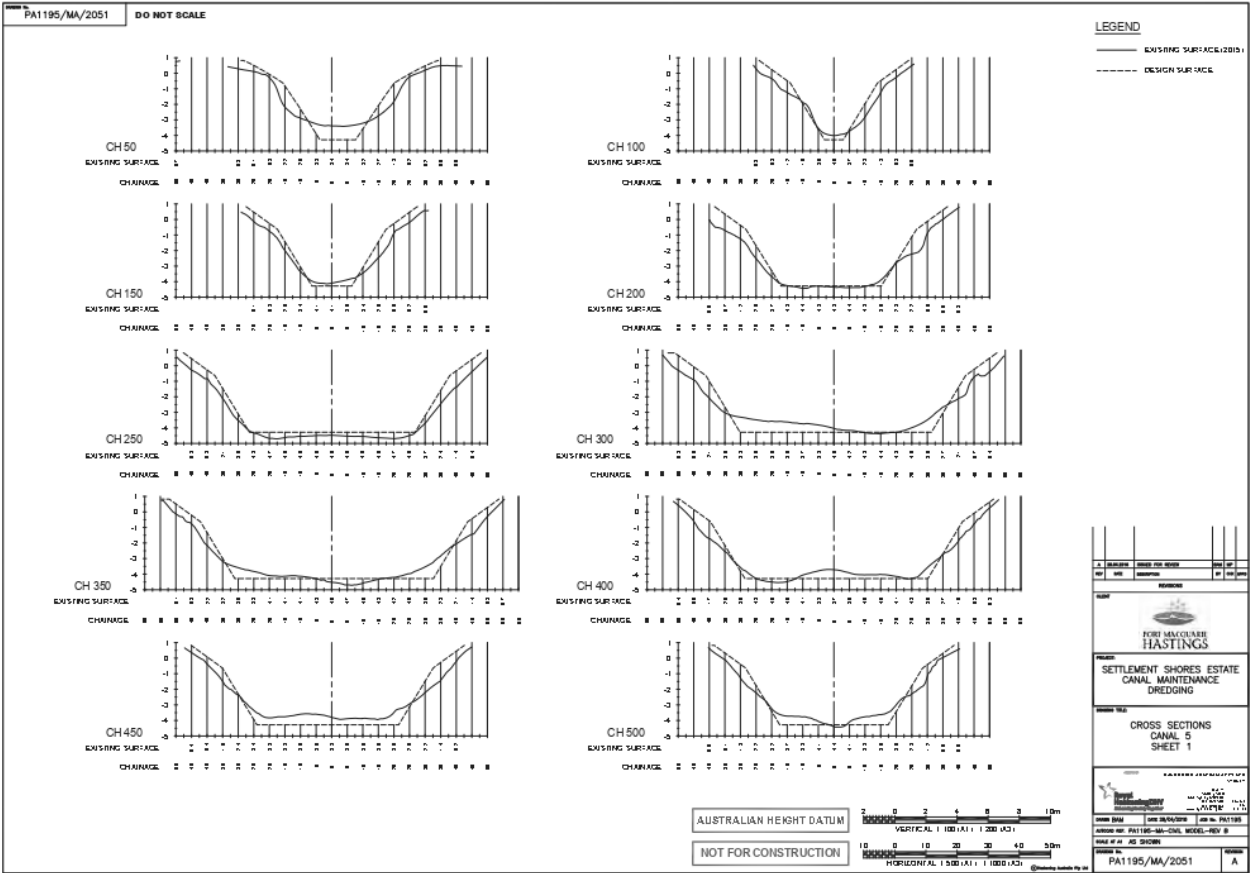


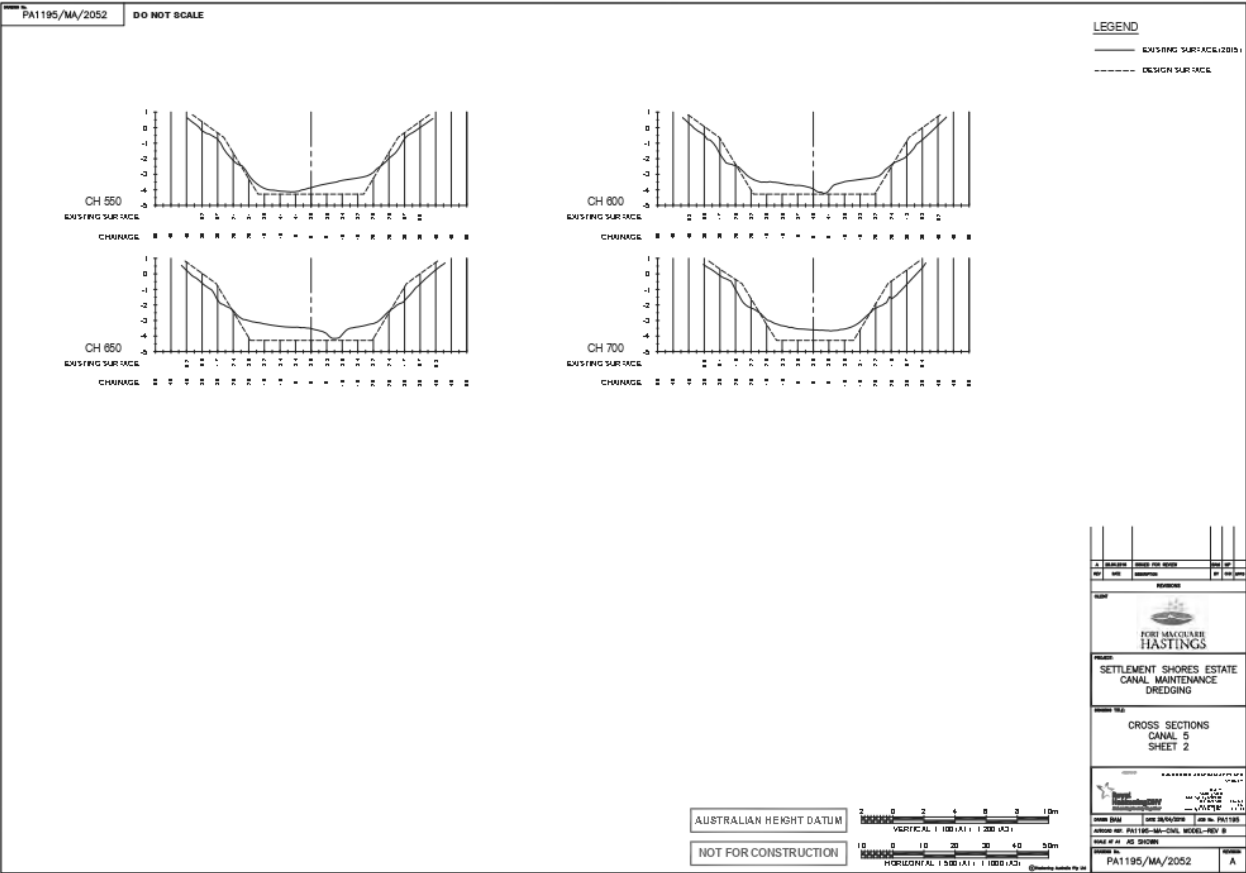


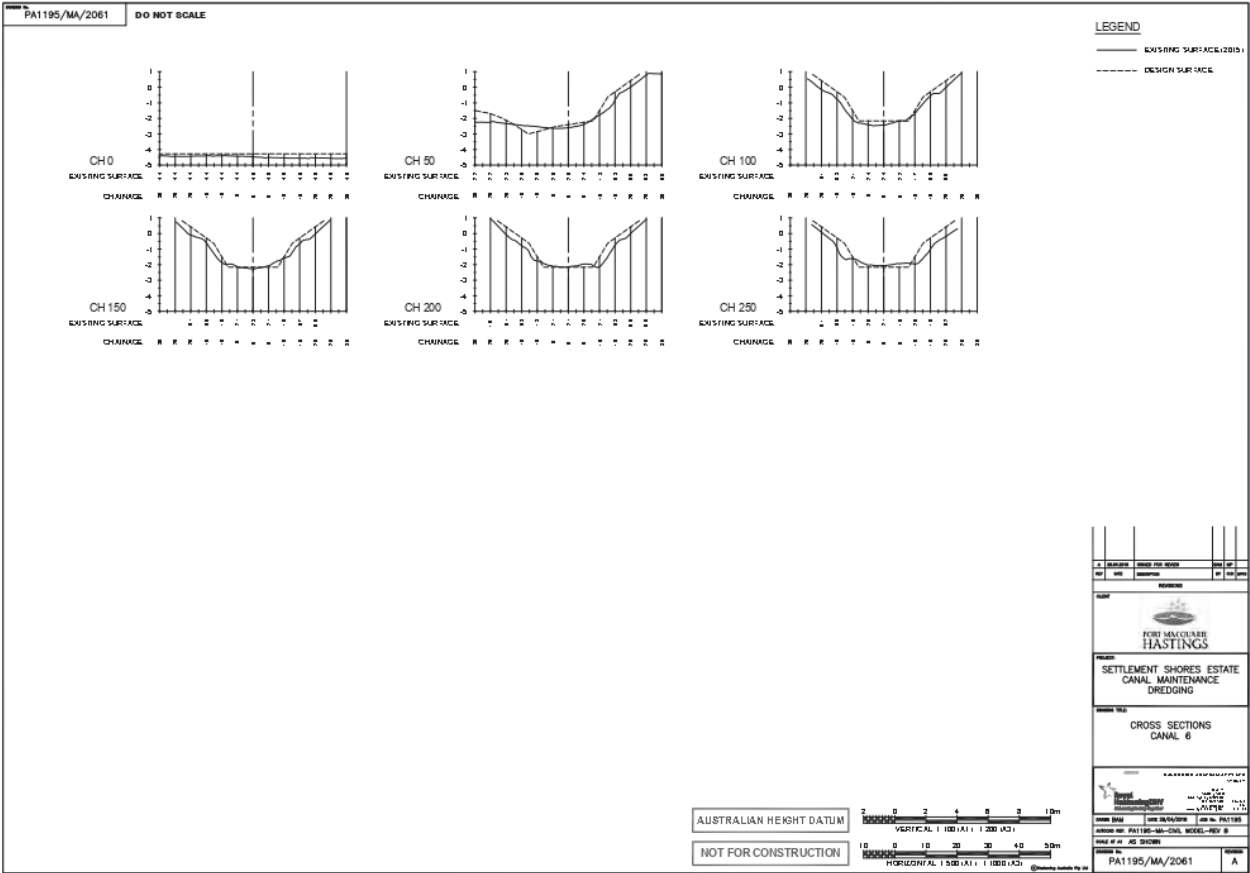




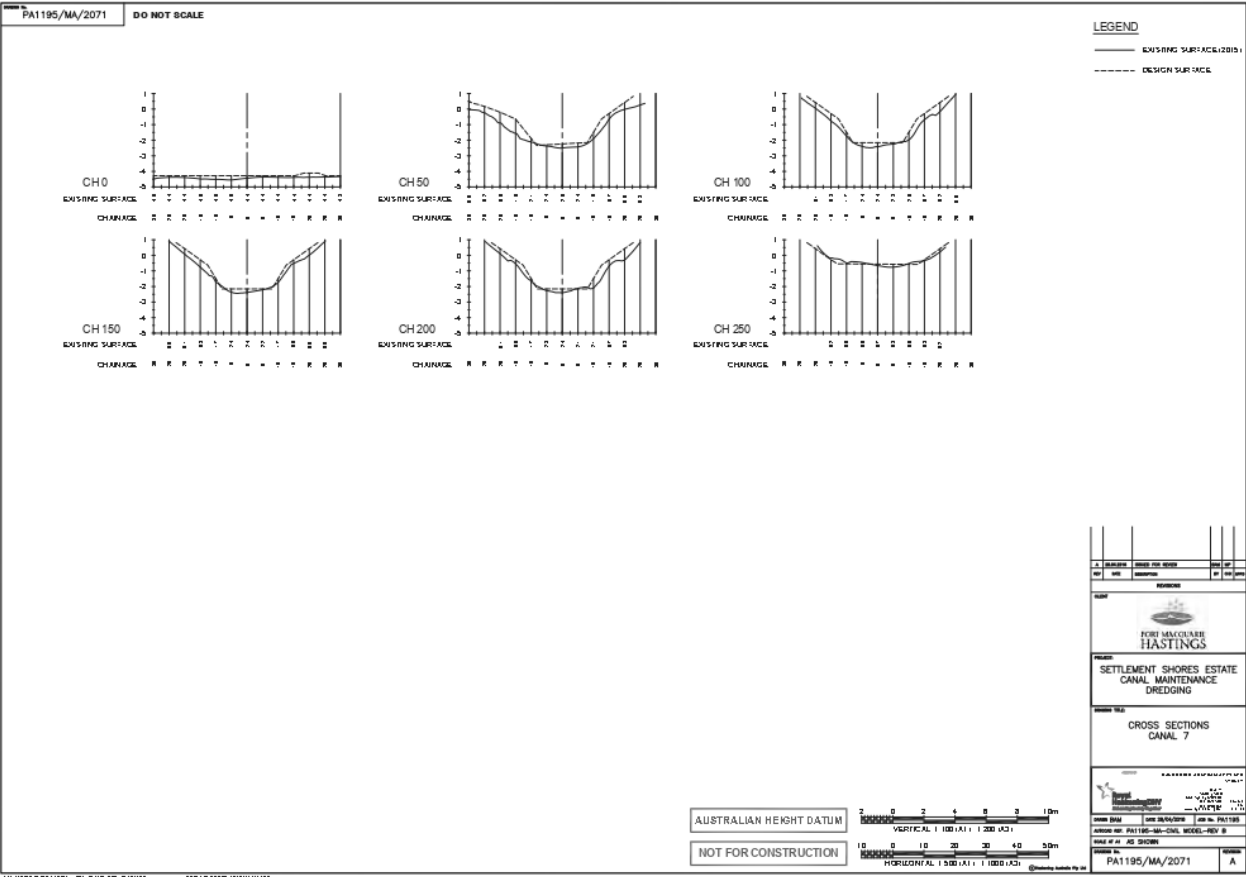


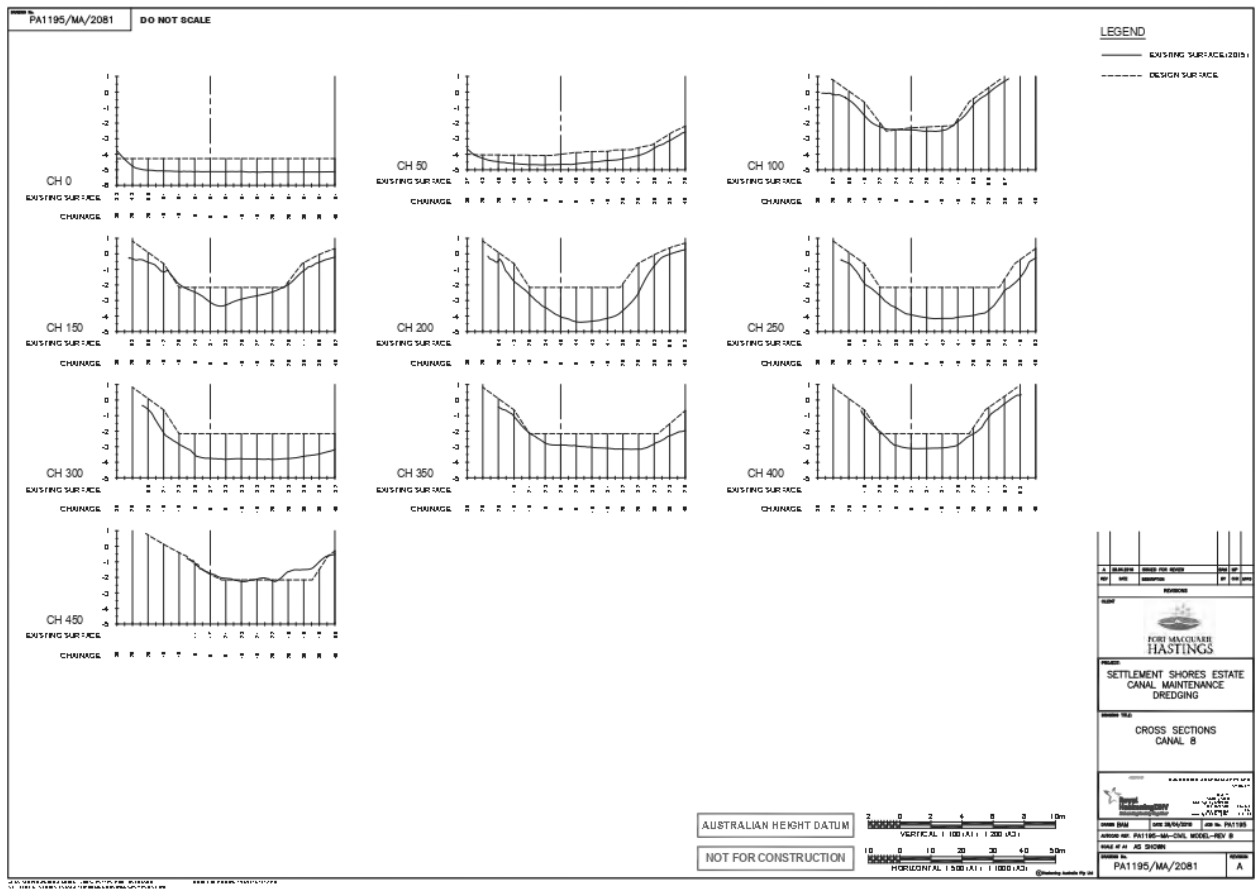


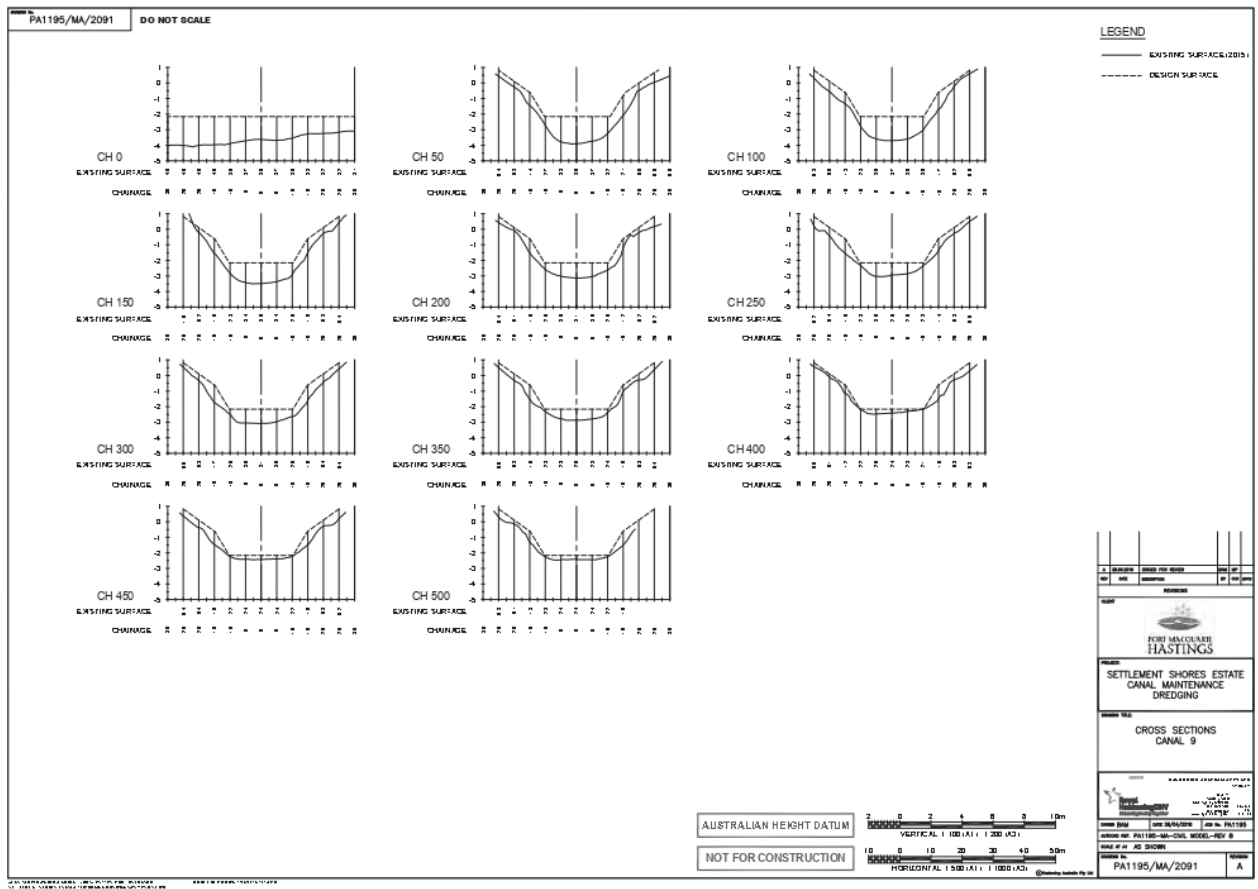


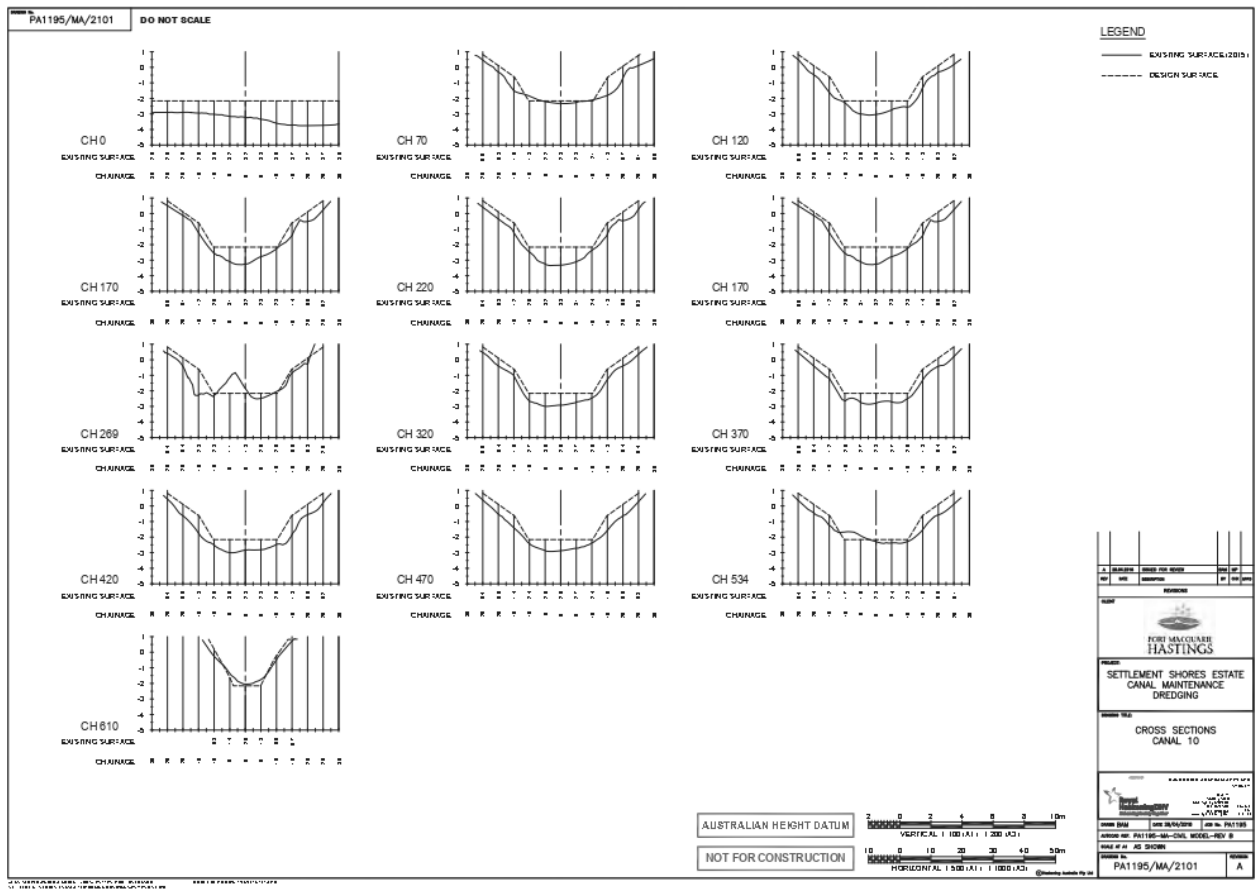














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## Appendix F: Review of Environmental Factors

## REPORT

### **Settlement Shores Estate**

Canal Maintenance Plan  
Review of Environmental Factors

Client: Port Macquarie-Hastings Council

Reference: M&APA1195R004F2.0

Revision: 2.0/Final

Date: 18 September 2017





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Document title: Settlement Shores Estate

Document short title: Settlement Shores REF  
Reference: M&APA1195R004F2.0  
Revision: 2.0/Final  
Date: 18 September 2017  
Project name: Settlement Shores CMP  
Project number: PA1195  
Author(s): Rick Plain

Drafted by: Rick Plain

Checked by: Matt Potter

Date / initials: 18/09/17 

Approved by: Gary Blumberg

Date / initials: 18/09/17 

Classification

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Appendix A – Sediment Sampling Investigation

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## 1 Introduction

### 1.1 Background

The Settlement Shores Estate is located approximately 3km to the north-west of the Port Macquarie CBD and comprises a system of artificial canals constructed along the lower reaches of the Hastings River. The canals are linked to the Hastings River by The Governors Way canal, which includes a flood control weir adjacent to the Settlement City shopping centre.

The canals themselves are classified as drainage reserves under the care and control of Council. The Settlement Shores Estate Canals are subject to a Waterway Maintenance Plan (WMP), which is linked to the titles of all properties fronting the canal area. The WMP is required under NSW legislation and addresses Council's responsibilities for the ongoing maintenance of waterway and foreshore areas including maintenance dredging.

There are a number of assets within the canals that will require ongoing maintenance over their design life as they are subjected to estuarine and flooding processes, operational wear and tear, and the passage of time. These include the canal waterway areas, flood weir, public footpaths, stormwater outlets, beach areas, rock protection, revetment walls, boat ramps, jetties, gangways and pontoons.

A Canal Maintenance Plan (CMP) has been prepared, which is to be used as a basis for planning of maintenance activities within the canal system over the next 10 years. Council's responsibility for maintenance and repair extends to the following assets:

- revetment walls fronting public property;
- beach zone beyond 2.1 metres from the face of canal revetment walls;
- canal waterway depths;
- flood control weir; and,
- stormwater outlets connected to the public drainage system.

Landowners are responsible for:

- maintenance and repair of canal assets within their property boundary that include the revetment wall and beach zone extending 2.1 metres from the face of the revetment wall;
- privately owned structures that extend into the waterway such as boat ramps, jetties, gangways, pontoons and other mooring infrastructure; and,
- maintenance of a clear access way within 5.4 metres (7.9 metres for The Governors Way) from the revetment wall where buildings, fences, trees or other obstructions are prohibited.

### 1.2 Review of Environmental Factors Scope

This Review of Environmental Factors (REF) covers all items detailed in the CMP. It has been prepared specifically to cover ongoing maintenance activities over a period of 10 years. The condition of infrastructure within the Settlement Shores Estate canals would need to be reviewed in 10 years' time with a revised or new REF to be prepared.

### 1.3 Level Datum

All reference to Reduced Level (RL) in this report is given in metres above Australian Height Datum (AHD). AHD is approximately equal to mean sea level at the Australian coastline and within the Settlement Shores Estate.



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## 2 Proposed Works

### 2.1 Project Description

The scope of work is likely to include activities outlined in the Canal Maintenance Plan (RHDHV, 2016) and generally comprises maintenance dredging and maintenance works as described below.

#### **Maintenance Dredging**

The key elements of the maintenance dredging for Settlement Shores Estate canals would comprise:

- dredging of Canal 1 – The Governors Way and Canal 5 – Regatta Cove to RL -4.28 m;
- dredging all other canals to RL -2.16 m;
- dredging to provide sufficient channel width and stable underwater batter slopes; and,
- dredging to clear sedimentation from around stormwater outlets.

The area to be dredged is indicatively shown within the CMP and would require approximately 32,000 m<sup>3</sup> of maintenance dredging.

#### **Maintenance Works**

Maintenance activities were identified during the condition assessment undertaken for the CMP. The scope of works and activities associated with the item codes used for different infrastructure items are outlined in **Table 1**.

Table 1: Identified maintenance activities

Infrastructure Item	Item Code	Description
Boat Ramp	BR1	Seal cracks in boat ramp that are not causing sliding or failure of the slab.
Boat Ramp	BR2	Fill edges of boat ramp with mass concrete / rock protection battered to existing surface.
Boat Ramp	BR3	Demolish and reinstate entire boat ramp.
Boat Ramp	BR4	Demolish and reinstate slab section due to movement.
Boat Ramp	BR5	Remove oyster build-up around the edges and joins of the boat ramp.
Beach Zone	BZ1	Re-shape and flatten existing subgrade (shale) material, place and compact 150mm layer of rock protection and 150mm layer of clean white sand to original levels.
Beach Zone	BZ3	Remove vegetation / plants / shrubs / trees / rubbish / objects from the beach zone.
Drainage Outlet	DO1	Remove plants/ shrubs / oyster build-up from drainage outlet.
Drainage Outlet	DO3	Reinstate rock mattress protection at drainage outlet.
Drainage Outlet	DO5	Fill cracks in headwall with grout.
Jetty	JE1	Prop jetty and demolish existing blockwork pier, drill starter bars, and place new concrete masonry blocks. Remove propping.
Jetty	JE2	Prop jetty and demolish existing concrete piles and concrete footing. Form up footing and piles and pour concrete. Remove propping.
Jetty	JE3	Patch repair eroded concrete piers.
Jetty	JE4	General maintenance to the jetty inc. replacing timber decking, rusted connections etc..



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Infrastructure Item	Item Code	Description
Jetty	JE5	Urgent maintenance to the jetty inc. replacing timber decking, rusted connections etc..
Jetty	JE6	Complete demolition of existing jetty and replacement with a standard aluminium jetty.
Pontoon/Gangway	PG1	Restraint piles are leaning, secure pontoon, remove leaning piles and replace with new piles.
Pontoon/Gangway	PG2	Repair worn, corroded or damaged pile guides and fastenings.
Pontoon/Gangway	PG3	Pontoon is tilting/listing, repair or replace floatation unit(s) to correct pontoon stability.
Pontoon/Gangway	PG4	General maintenance to the pontoon/gangway inc. repair of damaged decking, non-slip surfacing, handrails, rubbing strips, mooring cleats, rusted hinges/connections, rollers, transition plate.
Pontoon/Gangway	PG5	Urgent maintenance to the pontoon/gangway inc. repair of damaged decking, non-slip surfacing, handrails, rubbing strips, mooring cleats, rusted hinges/connections, rollers, transition plate.
Pontoon/Gangway	PG6	Complete demolition of existing pontoon/gangway and replacement.
Path/Public Access	PA1	Re-construct public access, concrete path.
Rock Protection	RP1	Replace large rock protection.
Revetment Wall	RW1	Demolish existing wall and construct new wall in location.
Revetment Wall	RW2	Render chipped sections of wall with grout.
Revetment Wall	RW5	Excavate behind wall and replace with geotextile and drainage material. Compact and fill.

## 2.2 Methodology

### **Dredging**

The dredging would be undertaken with a small Cutter Suction Dredger (CSD). Dredged material would be pumped from the dredge via a discharge pipeline to a hydrocyclone situated on a barge or on the foreshore. The hydrocyclone would separate sand from the fine material. Suitable sandy material would be discharged from the hydrocyclone via a pipeline directly onto the canal foreshore to nourish beach areas, stabilise the revetment walls and restore the design canal profile. Small excavation equipment such as 'Bobcats' or front-end loaders might be required to assist with spreading of the sand.

### **Maintenance Works**

The required maintenance activities are relatively diverse. Materials required for the maintenance program would include, but not be limited to, the following:

- sand and soil;
- aggregate and rock;
- concrete, cement and mortar;
- vegetation, including shrubs, trees and turf;
- timber;
- geotextile fabric material; and,
- metal reinforcing, fastening and fittings.

Required machinery would include, but not be limited to, the following:



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- small excavation equipment such as 'Bobcats' and excavators;
- concrete pumps and mixers;
- delivery vehicles;
- vegetation trimming equipment including saws and mulchers;
- generators;
- barge-mounted earthmoving equipment;
- floating barges;
- small work boats; and,
- soil compaction equipment.

### 2.3 Program and Sequencing

The CMP details a ten-year maintenance schedule (extending from 2016 to 2026) to remedy the issues identified in the condition assessment.

Priority maintenance issues are scheduled into the initial four (4) years (i.e. 2016 to 2020) and comprise maintenance dredging and other maintenance works that are required to address urgent repairs to infrastructure within the canals that have safety or environmental implications or if not addressed are likely to have significant cost implications. The maintenance dredging works are proposed to be undertaken in four (4) separate annual campaigns covering different canal areas between 2017 and 2020 as follows:

- 2017 – Canal 5, Canal 9 and Canal 10;
- 2018 to 2019 – Canal 1, Canal 6, Canal 7 and Canal 8; and,
- 2020 – Canal 2, Canal 3 and Canal 4.

A program for opportunity maintenance (i.e. defects/damage that appear to have no safety, environmental or cost implications but if not rectified could have implications in the future) is proposed to be completed between 2019 and 2022 and is subject to Council budget allocations and input from residents.

Routine maintenance activities (i.e. defects/damage that appear to have no safety, environmental or cost implications but if not rectified are likely to impact on Council's image to the residents, staff and the public) are planned to be completed every 5 years.

### 2.4 Need for the Proposed Works

Under NSW legislation, Council is required to prepare a Waterway Management Plan (WMP), which addresses Council's responsibilities for ongoing maintenance of waterways and foreshores including maintenance dredging. In addition, a covenant is placed on each property title, which states that individual property owners are responsible for the maintenance and repair of the revetment wall and the maintenance of a clear access way within 5.4 metres (7.9 metres for The Governors Way) from the revetment wall where buildings, fences, trees or other obstructions are prohibited. Private residents are also obliged to maintain privately owned structures and the beach zone extending 2.1 metres from the face of the revetment wall.

The works are required in accordance with the WMP and covenant placed on each property title. This document is an overarching REF, which covers a range of maintenance activities on public property undertaken by Council or facilitated by Council on private property on behalf of landowners.

A lack of maintenance within the canals would potentially pose a risk to the safety of the community. In addition, navigation within canals would become compromised if maintenance dredging activities were not undertaken. Over time, it is possible that the surrounding environment and ecology would be affected if maintenance activities were not completed.



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### 3 Statutory Requirements

#### 3.1 State Environmental Planning Policy (Infrastructure) 2007

Under SEPP (Infrastructure) 2007, a public authority, is allowed to carry out a range of public activities without development consent, provided appropriate consultation with all relevant government authorities and an environmental impact assessment under Part 5 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) is undertaken. Clauses 68 and 129 of *SEPP Infrastructure* are applicable to the proposed dredging and potential reuse of dredged material.

Division 13 "port, wharf and boating facilities" Clause 68:

- "routine maintenance works (including dredging, or bed profile levelling, of existing navigation channels if it is for safety reasons or in connection with existing facilities).

Division 25 "waterway or foreshore management activities" Clause 129:

- "development for the purpose of waterway or foreshore management activities" including bank management, coastal management and beach nourishment.

The works described above are permitted without consent when carried out by, or on behalf of a public authority. Under SEPP (Infrastructure) 2007, the proposed dredging could be considered as maintenance works and the proposed reuse of dredged material for placement on the adjacent canal foreshore could be considered a waterway and foreshore management activity. Therefore development consent is not required.

Similarly, it is considered that the other maintenance activities proposed within the canals would also be covered by the description of activities that are permitted without consent within either Clause 68 or Clause 129 of *SEPP Infrastructure*.

#### 3.2 NSW Planning and Approvals Process

The statutory basis for planning and environmental assessment in NSW is set out in the EP&A Act and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

Part 4 of the EP&A Act sets out the development assessment requirements for those developments that require consent. Part 5 of the EP&A Act specifies the environmental impact assessment requirements for activities undertaken by or on behalf of public authorities that are permissible without development consent.

As development consent is not required for the proposed activities, the project falls under Part 5 of the EP&A Act which confers a duty on the determining authority to consider the environmental impacts of an activity and Clause 228 of the *EP&A Regulation 2000* lists factors to be taken into account.

Where it is identified that an activity under Part 5 of the EP&A Act is likely to significantly affect the environment, threatened species, populations, ecological communities or their habitats, an EIS must be prepared. On the basis of items listed under Clause 228 of the EP&A Regulation, it is considered that the proposed dredging and other maintenance activities within the canals are not likely to significantly affect the environment and an EIS is not required. Therefore, the Environmental Assessment contained herein takes the form of a REF.



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### 3.2.1 Determining Authority

In accordance with Section 110 under Part 5 of the EP&A Act, the determining authority is defined as:

*a Minister or public authority and, in relation to any activity, means the Minister or public authority by or on whose behalf the activity is or is to be carried out or any Minister or public authority whose approval is required in order to enable the activity to be carried out.*

Council is therefore a determining authority as the maintenance activities are to be carried out on behalf of Council. The determining authority is responsible for designating the period for which this REF is valid and applicable. The REF should be reviewed as necessary with this document forming the base of future REF's.

## 3.3 Other Legislation Requirements

### 3.3.1 State Legislation

The following regulatory approvals are applicable to the proposed maintenance dredging works:

- *Fisheries Management Act 1994* (FM Act) – Clause 201 - Permit for dredging and reclamation works from DPI Fishing and Aquaculture and Clause 205 - to cut, remove, damage or destroy marine vegetation. However, the *Policy and Guidelines for Fish Habitat Conservation and Management* (Fisheries NSW, 2013) state that in order to reduce red tape for individuals wanting to undertake works in modified waterways, such as canal estates, these waterways are not captured by the definition of key fish habitat, thereby removing the need to adhere to the policies and guidelines. As such, permits are not required under the FM Act for the proposed dredging and other maintenance activities within the Settlement Shores Estate canals.
- Environment Protection Licence (EPL) under Section 43 for a scheduled activity under the *Protection of the Environment Operations Act 1997* (POEO Act) is only required for maintenance dredging involving extraction of more than 30,000m<sup>3</sup> of material in one year. Maintenance dredging would involve extraction of more than 30,000 m<sup>3</sup> of material overall. However, the maintenance dredging program is proposed to be undertaken over several years in separate smaller campaigns. As such, the dredging program is considered to be a non-scheduled activity and an EPL would not be required.  
However, Council may choose to apply for a licence to control the carrying out of non-scheduled activities for the purpose of regulating water pollution.
- Under the *Water Management Act 2000* (WM Act) an approval is required to undertake controlled activities on waterfront land, unless that activity is otherwise exempt. Controlled activities include excavating or depositing material on waterfront land (within 40 metres of a waterway). *Water Management (General) Regulation 2011* sets out a number of exemptions in relation to controlled activities. Under the regulation, a public authority does not need to obtain a controlled activity approval for any controlled activities that it carries out in, on or under waterfront land. Council therefore does not need to seek controlled activity approval for the proposed dredging and other maintenance activities.
- Under *SEPP No 62 – Sustainable Aquaculture*, a determining authority must consider whether a development application would have an adverse effect on oyster aquaculture development or a priority oyster aquaculture area. The closest priority oyster aquaculture area to Settlement Shores Estate is on the opposite side of the Hastings River to the canal system entrance and approximately 200 m upstream. Increased turbidity could have an adverse effect on oyster





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aquaculture areas. However, provided the mitigation measures outlined herein (refer **Section 6.3**) are adopted, the increase in turbidity caused by dredging, placement of sand or any other maintenance activity is expected to be insignificant and within the limits of natural variability at any priority oyster aquaculture area.

### 3.3.2 Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) requires that proposals for development or "actions" that have, will have, or are likely to have a significant impact on any matter of national environmental significance are to be referred to the Commonwealth Environment Minister for consideration and approval.

The EPBC Act identifies the following matters of national environmental significance:

- world heritage;
- national heritage;
- wetlands of international importance;
- listed threatened species and communities;
- listed migratory species;
- protection of the environment from nuclear actions; and,
- marine environment.

The proposed dredging and other maintenance activities would not have a significant impact on any of the above. Therefore, referral to the Minister for approval is not required.

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#### 4 Consultation

Consultation with canal residents has been undertaken by Council throughout the development of the CMP. This has included community mail outs providing information about CMP investigation activities (including the asset inspection), face-to-face meetings with residents and Council's 'PMHC Listening' website to engage with the community.

Residents were provided with a Fact Sheet outlining the findings of CMP investigations, including key maintenance issues identified from the asset inspections, and were invited to comment on the prioritisation of maintenance actions through completion of a survey form or an online survey available on the PMHC Listening website. Feedback from the survey was used to prioritise maintenance actions and develop a 10-year schedule of maintenance activities.

The CMP will be placed on public exhibition for review and comment by the community and further consultation will be undertaken by Council to discuss possible funding mechanisms for the maintenance program.

Council have been involved in the development of the CMP through the project review process and have provided input into the selection and prioritisation of maintenance actions and associated scheduling over the 10-year maintenance program.

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## 5 Existing Environment

### 5.1 Tenure, Land Use and Zoning

#### 5.1.1 Tenure

The waterway itself, outside the property boundary, is vested in the Council, and the Council has accepted responsibility for maintaining the waterways and flood structures.

A revetment wall is constructed along the length of the canals. The common boundary of each allotment and the canals is 2.1 metres below (seaward of) the outer face of the revetment wall. Landowners are responsible for the maintenance and repair of the revetment wall, the adjacent beach zone and private boating structures.

All work within the canals is to be approved by Council. Work requiring approval includes, but is not limited to:

- construction of boat ramps, jetties, gangways and pontoons;
- erection of mooring poles;
- restoration of the beach zone; and,
- restoration of revetment walls.

#### 5.1.2 Site History and Site Use

The total area of Settlement Shores Estate is about 175 hectares. The site is level and for the most part was originally used for farming and grazing. The area was one of the first parts of Port Macquarie to be settled and farmed. Work was initially undertaken by convicts since the town was established as a convict jail (McIllwain and Boys).

The site is bordered to both the east and the west by wide tidal reaches of the Hastings River estuary. Development of Settlement Shores Estate was undertaken with the aim of creating a high-quality residential area taking full advantage of its attractive riverside position and close proximity to the growing resort centre of Port Macquarie.

The development was implemented in two major stages. Stage A was completed in the 1970's and consisted mainly of detached housing on the southern half of the site nearest to Port Macquarie town centre. The second stage, based around wider curved waterways, was developed with the potential to incorporate a variety of uses including resort accommodation, commercial and retail areas and waterfront entertainment areas surrounding large-scale harbours capable of handling various types of watercraft.

#### 5.1.3 Zoning

The land in the vicinity of Settlement Shores Estate is zoned as 'General Residential', with the following exceptions:

- the land either side of the upstream end of Canal 1 – The Governors Way is zoned 'Public Recreation';
- a parcel of land at the end of Canal 8 – Settlement City Canal is zoned 'Public Recreation';
- Settlement City Shopping Centre and Port Macquarie Panthers is zoned 'Commercial Core'; and,
- land adjoining Canal 1 – The Governors Way, downstream of Park Street bridge, is zoned 'Environmental Conservation'.



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The area zoned 'General Residential' comprises predominantly residential housing blocks. A number of Council access easements have been created within the residential precinct to allow access to the foreshore areas.

Recreational land includes foreshore parklands and vegetated reserves.

Land to the north of Settlement Shores Estate includes further residential allotments and canal networks. Land to the south of the site includes land zoned as 'General Residential', 'High Density Residential' and 'Business Development'. Land to the west of the site primarily comprises 'Public Recreation' and consists of a sports complex.

## 5.2 Shoreline Morphology and Bathymetry

Settlement Shores Estate is an artificial waterway. The design elevation of the canal bed varies between approximately RL -2.2m and RL -4.3m with a beach slope of 1V:7H (vertical:horizontal) adjacent to the canal revetment wall and an underwater slope of 1V:3H below around -0.65m AHD. The bed of the central portion of the canal is designed to be relatively level.

The foreshore edge within the canals is generally defined by a precast concrete revetment wall or a concrete capping beam on an asbestos cement sheetpile wall. The embankment slope landward of the revetment wall is generally designed at 1V:4.5H.

Beach armouring seaward of the revetment is designed to comprise a rock protection blanket consisting of river gravel or crushed rock graded evenly in size from 20mm to 100mm maximum. The rock protection was originally designed to be covered with a layer of sand. The revetment walls rely on passive toe support from material placed seaward of the walls for their stability. The level of the beach was designed to be 150mm below the crest of the revetment wall.

The existing canal beach areas are armoured at selected locations, which are typically around bends in the canal alignment or in areas that are subjected to high flows during flood events, such as along Canal 1 – The Governors Way. Beach armouring has also been implemented in other areas of the canals, possibly by residents who have sought to improve the stability of their beach areas (and revetment walls) with the placement of cobble-sized rock. Sandy canal beach areas are generally depleted to levels below the original canal design levels with material being deposited on the bed of the central portion of the canals, which is typically at levels above the original canal design levels.

Dredging is one way to restore navigation depths within the canals and nourish nearby canal beach areas. Alternatively, cobble-sized rock can be placed over canal beach areas to provide a more stable beach profile in areas where maintenance of sandy beach areas has been problematic due to ongoing erosion.

## 5.3 Coastal Processes

### 5.3.1 Wind Climate

Port Macquarie lies within the horse latitudes, which is a zone around 30 degrees south and north of the equator dominated by the subtropical high pressure systems, which suppresses precipitation and cloud formation, and has variable winds mixed with calm winds. Southeasterly trade winds occur to the north and westerly trade winds occur to the south.

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The Bureau of Meteorology (BoM, 2016) provides wind records and wind roses for a number of locations throughout NSW. The closest monitoring station to Settlement Shores Estate is Port Macquarie Airport. **Figure 1** and **Figure 2** depict the wind roses for Port Macquarie Airport at 9 am and 3 pm respectively. The data used to generate the plots was obtained between 26 Jul 1995 to 30 Sep 2010. The wind roses indicate generally light breezes and a high proportion of thermal breezes, which form due to temperature differential between the land and the sea. Thermal breezes typically blow from the northeast in the afternoon, when the land is warmed by the sun (seabreeze), and from the west overnight and early morning when the land cools.

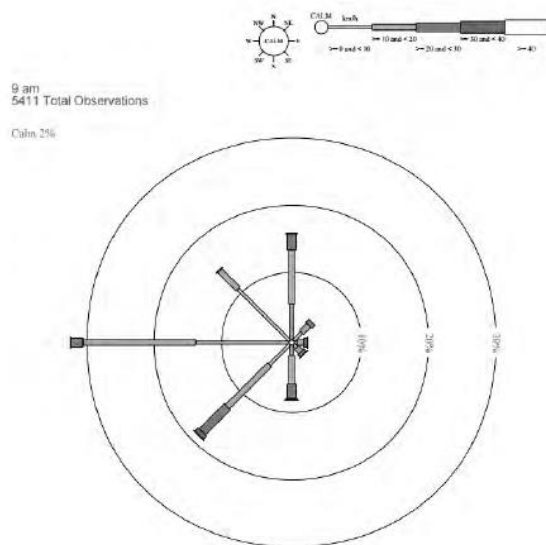


Figure 1: 9 am wind rose at Port Macquarie airport (BoM, 2016)

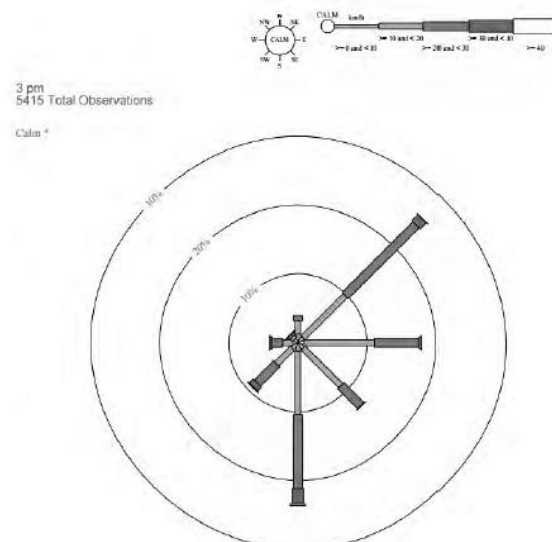


Figure 2: 3 pm wind rose at Port Macquarie airport (BoM, 2016)



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The 1 hour 10 year ARI (average recurrence interval) wind speed for the design of structural members outlined in the Australian Standards is presented in **Table 2**. The wind speed is corrected for 10m above a water body, which is the standard criterion used for wind wave hindcasting.

Table 2: AS1170.2 1 Hour Design Wind Speed

Direction	1 hour Wind Speed (m/s) (10 year ARI)
	AS 1170.2 <sup>1</sup>
N	18.0
NE	18.0
E	18.0
SE	21.4
S	20.3
SW	21.4
W	22.5
NW	21.4

### 5.3.2 Rainfall and Temperature

Meteorological data was sourced from the Bureau of Meteorology monitoring station at Port Macquarie Airport (BoM, 2016). Data was obtained from 1995 to 2016 and it is plotted in **Figure 3**. The data indicates that the average monthly maximum temperature ranges from 27.6°C in January (summer) to 18.7°C in July (winter) while average monthly minimum temperature ranges from 6.5°C in July (winter) to 18.7°C in January (summer). The mean yearly rainfall is 1436mm with rain generally falling on more than 100 days per year.

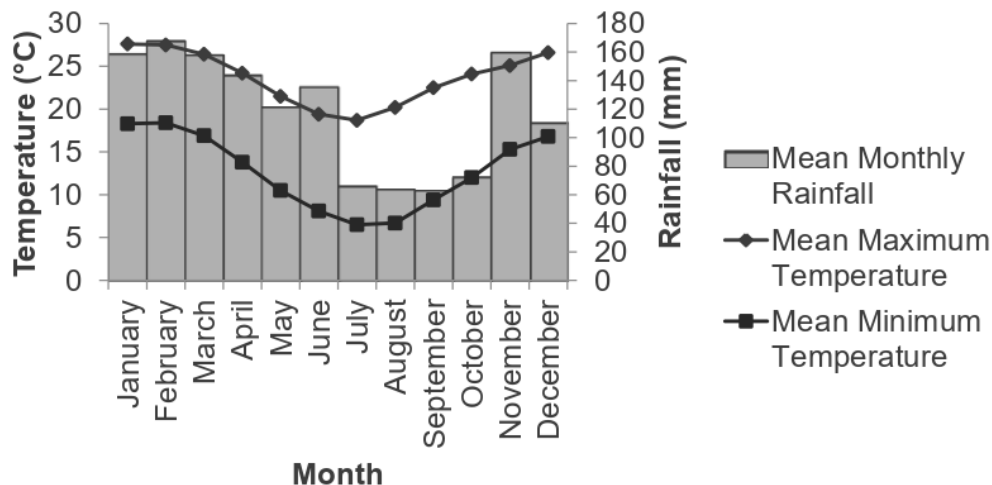


Figure 3: Mean rainfall and temperature at Port Macquarie airport (BoM, 2016)

<sup>1</sup> The AS 1170.2 regional wind speeds were converted to site wind speeds as per the methodology outlined in the Standard. This involved applying wind directional multipliers for the 8 cardinal directions and then converting to 1 hour duration wind speeds using the applicable equation presented in Figure II-2-1 of Resio et al (2002). It was assumed that the terrain/height multiplier (using Terrain Category 2 and 10m height), shielding multiplier and topographic multiplier were all equal to unity.



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### 5.3.3 Waves

Wave action at the site is considered to be minimal. The site lies within a 4 knot zone and boat wash is expected to be less than 0.2m.

Due to the limited fetch in any one direction within the canals, wind waves would be minimal. Wind wave hindcasting using methods outlined in the Coastal Engineering Manual (USACE, 2002) have been conducted at the site. The results are presented in **Table 3**. This value is conservative as it pertains to an upper bound fetch distance over deep water, and assumes the terrain is generally flat with a few scattered obstructions, however the land surrounding the canals is occupied by residential developments.

Table 3: Wind-wave hindcasting results using methods from USACE (2002)

Fetch (m)	Fetch Direction	Wind Speed for a 10 year ARI event from Table 2 (m/s)	Significant Wave Height (m)	Peak Wave Period (sec)
850	East and West	22.5	0.4	1.6
600	North and South	20.3	0.3	1.3

### 5.3.4 Tidal Planes

The *OEH NSW Tidal Planes Analysis* (MHL, 2012) presents the harmonic analysis of tidal planes using data records from 1990 to 2010 for a number of locations along the NSW coast. The tidal planes for Settlement Shores Estate are best represented by the analysis for Settlement Point, on the Hastings River. The tidal planes are presented in **Table 4**. The tidal planes offshore of Port Macquarie are also presented in the table. The tidal range offshore of Port Macquarie is larger than the tidal range at Settlement Point, which indicates the entrance and lower reaches of the Hastings River constricts tidal flows.

Table 4: Tidal planes (m AHD)

Location	Port Macquarie Offshore (m AHD)	Settlement Point (m AHD)
Higher High Water	1.031	0.817
Mean High Water Springs	0.657	0.491
Mean High Water	0.517	0.397
Mean High Water Neaps	0.378	0.302
Mean Tide Level	0.001	-0.002
Mean Low Water Neaps	-0.376	-0.306
Mean Low Water	-0.515	-0.400
Mean Low Water Springs	-0.654	-0.495
Indian Spring Low Water	-0.922	-0.728

### 5.3.5 Extreme Water Levels

A flood study for the Hastings River was undertaken by Patterson Britton and Partners in 2006. Flood levels were determined for 20, 50, 100 and 200 year ARI flood events occurring concurrently with an



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ocean water level of 2.2m AHD, which corresponds to a 20 year ARI ocean water level. The flood levels at the entrance to Settlement Shores Estate canals are presented in **Table 5**.

Sea level rise was not accounted for in the water level analysis and it would alter the Extreme Water Levels in the future.

Table 5: Predicted peak design flood level at the entrance to Settlement Shores Estate Canals (PBP, 2006)

ARI Flood Event	Flood Level (m AHD)
20	2.3
50	2.5
100	2.8
200	3.2
Probable Maximum Flood	6.2

### 5.3.6 Sea Level Rise Due to Climate Change

The Port Macquarie-Hastings Council Flood Policy (2015) references the previous NSW Government's Sea Level Rise Policy Statement (2009) benchmarks, which indicate an increase in mean sea level of 0.4m by 2050 and 0.9m by 2100. These are the adopted levels for sea level rise.

In addition, changes to rainfall intensity are predicted to occur as a result of climate change with modelling suggesting an increase in intensity on the Mid North Coast of NSW by up to 10% on present day levels over the next 60 years.

### 5.3.7 Currents

Currents through the canals due to tidal movement are expected to be minor. The location of the weir prevents tidal through-flows in the canals. As such, the volume of water flowing through the canals due to tidal fluctuations is essentially limited to the water stored within the canals.

The RMS boating map for the region (RMS, 2013) indicates that the speed limit in Settlement Shores Estate canals is 4 knots, which limits the propeller power that would produce significant propeller wash. Propeller wash at the site would not be expected to exceed 0.9m/s, 5m behind a vessel<sup>2</sup>.

Direct currents due to rainfall runoff are expected to be minor. Localised currents would occur near the stormwater outlets. However, with the exception of some stormwater outlets at the southern extent of the site, the catchment areas for the stormwater culverts are relatively small, which reduces the flow rate at the outlet.

During a 20 year ARI flood event, the weir in the Settlement Shores Estate canals is overtopped. The Hastings River Flood Study (PBP, 2006) indicates flood velocities up to 1 m/s are expected through Canal 1 – The Governors Way. Negligible velocities are predicted in the remaining canals, which do not carry through-flow of flood waters. However, during a Probable Maximum Flood (PMF), overland flow is predicted over the entirety of Settlement Shores Estate with velocities up to 1 m/s predicted (PBP, 2006). These water velocities are not confined to the canals.

<sup>2</sup> Based on 100 kw installed engine power at 10% thrust for 0.3 m diameter single propeller (Verhey, 1985).





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### 5.3.8 Sediment Transport

A comparison of the hydrographic survey (Astute Survey, 2016) and the original canal design profile suggests that the canal beach areas have generally eroded with sediment deposited near the central, deeper portions of the canals.

Dredging was last undertaken in 2006/2007 to restore the canals to the original canal design profile. Anecdotal evidence from discussions with residents indicates that in some canal areas the dredged sand that was pumped onto beaches during the last campaign was subsequently lost as result of heavy rainfall experience during low tides. The mechanism observed was rainfall runoff sheeting down the steep embankment behind the revetment wall and washing sand off the beach areas and into the canal waterway. Other residents have noted that waves generated from vessel wake and exposure of some canals to a wind fetch may be the cause of sediment mobility and loss from canal beach areas.

The hydrographic survey also indicates that shallow areas typically exist near stormwater outlets located at the heads of canals. As such, the deposition of sediments derived from stormwater outflows is considered to be a process contributing to reduction of navigation depths within localised areas of the canals.

## 5.4 Water Quality

Water quality monitoring forms part of the Settlement Shores Development Consent dated 30 November 1990. Water quality monitoring is required in the original (Stage 1 and 1A) canals and the newer (Stage 2) canals. In addition, monitoring is required in waters outside of the canal system, including the Hastings River and Back Channel.

Water quality monitoring was undertaken by RHDHV staff on the 14<sup>th</sup> December 2015 and the 23<sup>rd</sup> April 2016. The results are presented in **Table 6**. The monitoring locations included:

- 12 locations within Settlement Shores Estate canals;
- 1 location in the Hastings River, upstream of Settlement Shores Estate; and,
- 2 locations in Back Channel, downstream of Settlement Shores Estate.

At each location, hand-held water quality measurement probes were used to determine a range of water quality parameters at the surface and at the mid depth of the waterway. Freshwater inflows are expected to influence a number of the water quality parameters. The rainfall records preceding the water quality monitoring dates are presented in **Table 7**. Passing showers were experienced on 23<sup>rd</sup> April 2016.



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Table 6: Results of water quality monitoring by RHDHV

Date	Water Quality Parameter	ANZECC (2000) Estuarine Trigger Values		Surface Samples			Mid-depth Samples		
		Low	High	Canal Average	Back Channel	Hastings River	Canal Average	Back Channel	Hastings River
14/12/2015	DO (% Saturation)	80	110	90.3	124.0	103.0	100.2	124.0	138.0
23/04/2016				99.7	103.0	95.0	86.0	99.0	97.0
14/12/2015	Conductivity (dS/m)			43.0	51.2	44.6	44.1	51.8	46.8
23/04/2016				47.0	51.3	45.2	48.7	50.5	46.1
14/12/2015	pH	7.0	8.5	7.9	8.1	7.3	7.9	8.2	8.0
23/04/2016				7.4	7.4	7.1	7.1	6.8	7.9
14/12/2015	Turbidity (NTU) <sup>1</sup>	0.5	10.0	0.4	0.0	0.7	0.3	0.0	0.6
23/04/2016				2.7	2.3	1.8	7.7	3.4	3.5
14/12/2015	Temperature (°C)			22.7	20.3	22.4	22.3	20.1	22.1
23/04/2016				24.8	25.2	24.2	25.6	25.6	24.6
23/04/2016	ORP (mV)			112.4	94.0	136.0	112.0	95.5	134.0

Note:

Calibration of water quality monitoring probe on the 14<sup>th</sup> December 2015 used a high calibration standard (approx. 1000 NTU), which provides poor accuracy for low turbidity readings. The probe was calibrated with a lower calibration standard (approx. 90 NTU) on the 23<sup>rd</sup> April 2016, which provided better accuracy for low turbidity readings.

Table 7: Rainfall records preceding water quality monitoring

Date	Rainfall (mm)	Date	Rainfall (mm)
4 <sup>th</sup> December 2015	0	13 <sup>th</sup> April 2016	0
5 <sup>th</sup> December 2015	0	14 <sup>th</sup> April 2016	6
6 <sup>th</sup> December 2015	0	15 <sup>th</sup> April 2016	0
7 <sup>th</sup> December 2015	0	16 <sup>th</sup> April 2016	0
8 <sup>th</sup> December 2015	0	17 <sup>th</sup> April 2016	0
9 <sup>th</sup> December 2015	0	18 <sup>th</sup> April 2016	16.6
10 <sup>th</sup> December 2015	13	19 <sup>th</sup> April 2016	19.6
11 <sup>th</sup> December 2015	0	20 <sup>th</sup> April 2016	0
12 <sup>th</sup> December 2015	0	21 <sup>st</sup> April 2016	0.2
13 <sup>th</sup> December 2015	0	22 <sup>nd</sup> April 2016	0
14 <sup>th</sup> December 2015	0	23 <sup>rd</sup> April 2016	8.6



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The following observations were made from the water quality monitoring:

- Electrical conductivity (EC) was higher on the 23<sup>rd</sup> April 2016 in Settlement Shores. This is unexpected as it is thought that freshwater inflows would have reduced EC. The EC may be caused by dissolved salts in the runoff.
- Electrical conductivity was marginally higher at the mid-depth of the waterway at all locations. This is expected as saltwater is denser than fresh water and minor inversion layers would occur in the river as a result.
- Water temperature was higher on the 23<sup>rd</sup> April 2016 at all locations, this may be due to measurement at different states of the tide.
- pH was lower on the 23<sup>rd</sup> April 2016 at all locations, possibly caused by freshwater inflows.
- The pH in Hastings River was lower near the surface in both sampling periods. This is expected as heavier seawater which is more prevalent at depth generally has a higher pH than freshwater.
- Turbidity was lower near the surface at all locations. Currents and freshwater flows would mobilise bed sediment in the lower portion of the water column.
- A total of 3 turbidity readings in Canal 2 and southern end of Canal 4, at the mid-depth of the waterway, were more than 10 NTU on the 23<sup>rd</sup> April 2016, which is above the ANZECC trigger values. The highest value was 21.5 NTU. The increased turbidity is possibly caused by freshwater runoff.
- A total of 7 pH readings in Settlement Shores and 2 pH readings in the Back Channel, all at the mid-depth of the waterway, were less than 7 on the 23<sup>rd</sup> April 2016, which is below the ANZECC trigger values. The lowest reading was 6.69. Lower pH is possibly caused by rainfall, which has a pH of approximately 5 to 5.5.
- A total of 3 DO readings in Settlement Shores at the mid-depth of the waterway and 2 DO reading in the Back Channel, at the surface and mid-depth of the waterway, were more than 110% on the 14<sup>th</sup> December 2015, which is above the ANZECC trigger values. However, on the same day the mid-depth DO reading in the Hastings River was also elevated at a value of 138%.

Important findings that are relevant to this REF include:

- The water quality within Settlement Shores Estate canals is similar to the Hastings River and Back Channel;
- The water quality in the Hastings River, Back Channel and Settlement Shores Estate canals is consistent with estuarine waters characterised by lower pH and lower EC compared to marine environments.
- No extreme water quality parameters were recorded, however a few records were outside the ANZECC trigger range for estuarine waters (attributed to natural events).

Water quality monitoring was undertaken during the dredging campaign in 2006/2007. The monitoring was required to confirm that the dredging operations complied with the EPA licence requirements, which specified:

- pH between 6.5 to 8.5 at the return water discharge point; and,
- Total Suspended Solids (TSS) less than 50mg/L at the return water discharge point.

Background monitoring upstream and downstream of the dredge operations was also undertaken. A summary of the water quality monitoring is presented in **Table 8**. The pH measurements complied with the EPA licence for all samples. A total of 8 samples exceeded the EPA licence criteria for TSS. Two (2) of the exceedances were inside the silt curtain and the TSS values were 860mg/L and 1810mg/L. Four



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(4) of the exceedances were at the discharge point, outside the silt curtain and the remaining exceedance was 50m downstream of the discharge point. The highest TSS measurement outside of the silt curtain was 75mg/L. These results indicate that the dredging operation was generally compliant with the EPA licence requirement and that the deployment of silt curtains was an effective measure to contain turbidity generated by the dredging works.

Table 8: Water quality monitoring during dredging campaign in 2006/2007

Location		pH	TSS (mg/L)
100 m Downstream - 24 Samples	Lowest	7.11	2.00
	Mean	7.96	6.38
	Highest	8.18	15.00
50 m Downstream - 129 Samples	Lowest	7.04	2.00
	Mean	7.96	10.30
	Highest	8.41	58.00
30 m Upstream - 1 samples	Lowest	7.65	32.00
	Mean	7.65	32.00
	Highest	7.65	32.00
50 m Upstream - 127 Samples	Lowest	6.68	2.00
	Mean	7.93	9.35
	Highest	8.40	50.00
Hasting River and Governors Way Confluence - 24 Samples	Lowest	7.12	2.00
	Mean	8.00	5.58
	Highest	8.27	12.00
Discharge Point - 25 Samples	Lowest	7.09	5.00
	Mean	7.93	20.17
	Highest	8.17	75.00
Inside Curtain 2 samples	Lowest	7.56	860.00
	Mean	7.61	1335.00
	Highest	7.66	1810.00

## 5.5 Sediment Characteristics

### 5.5.1 Local Geology

The Hastings 1:250,000 Geological Series Sheet SH 56-14 indicates the site is underlain by sand, silt, mud and gravel. The Soil Landscape Series Sheet indicates the land around the canal networks is disturbed terrain.

### 5.5.2 Sediment Sampling and Analysis

Sediment sampling was undertaken on the 2<sup>nd</sup> May 2015 to determine the physical and chemical quality of the sediments to be dredged.



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Samples were collected from 11 locations using a piston core within the proposed dredging footprint, as shown on the plan provided in **Appendix A**. Sampling was undertaken by Geochemical Assessments Pty Ltd. A judgemental rather than random sampling plan was been adopted in order to target the areas of sediment accumulation throughout the canals. The number and locations of samples was determined in accordance with the National Assessment Guidelines for Dredging 2009 (NAGD). Sediment samples were collected at 0.5m increments through the proposed depth of dredging to obtain representative sediment characterisation. The sediment Sampling and Analysis Plan (SAP) for the investigation is provided in **Appendix A** which also includes field logs and photographs taken over the length of each core. It should be noted that the SAP was modified to account for shallow refusal (no sample obtained) at sample location SS01 with relocated sample SS11. An additional sample was collected at location SS12 to investigate the nature of the localised high spot adjacent to a stormwater outlet within Canal 10 – Ballina Canal.

Up to 3 sub-samples were collected from each piston core sample for analysis by a NATA accredited laboratory.

Physical testing comprised the determination of the particle size distribution (PSD) by sieve analysis, and reporting of percentage gravel, sand, silt and clay. PSD testing was undertaken on five (5) samples recovered plus a duplicate sample for quality assurance.

Contaminant testing included a suite of heavy metals on all samples and testing for polycyclic aromatic hydrocarbons (PAHs), BTEX, polychlorinated biphenyl (PCBs), Organochlorine (OC) and Organophosphate (OP) pesticides, tributyltin (TBT), nutrients and total organic carbon (TOC) on a total of five (5) samples.

Acid Sulfate Soil (ASS) screen testing was completed for all samples. Following the ASS screen testing, Chromium Reducible Sulfur suite was completed on four (4) samples to determine acid neutralising capacity (ANC) and potential liming rates for treatment of the material.

### 5.5.3 Physical Sediment Properties

Results of the particle size distribution (PSD) analysis are presented in **Figure 4**. The PSD analysis indicates that the material to be dredged is fine to medium grained sand with 5 to 25% fines and up to 15% gravel. Field observations indicate lenses of sandy mud up to 200mm thick. The colour of the sediment is generally light brown to grey and black.



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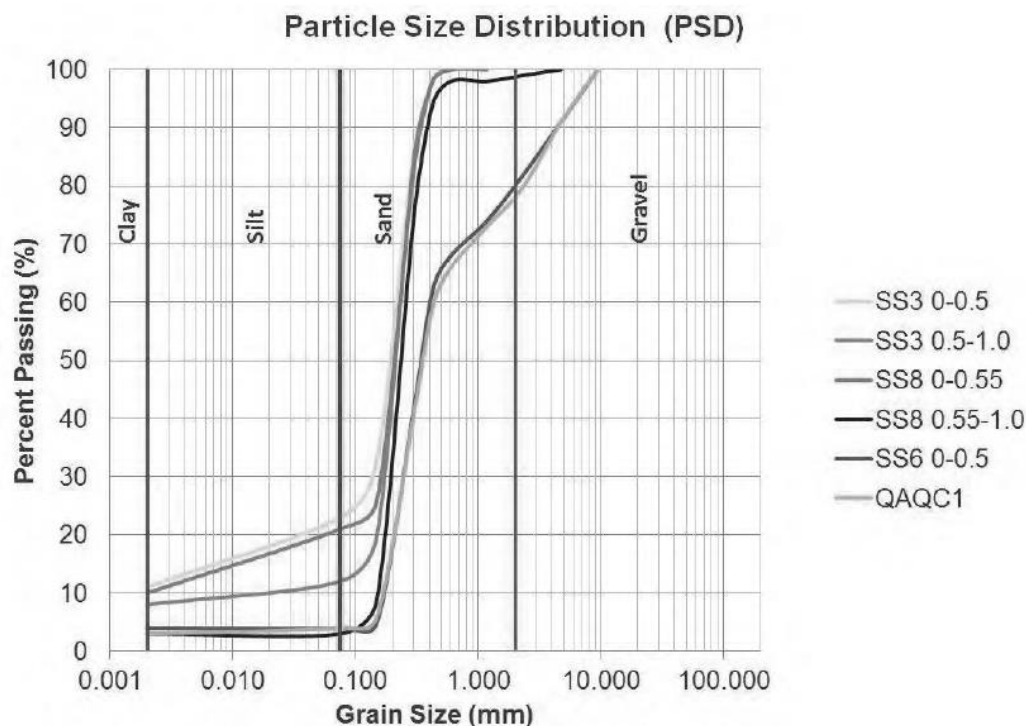


Figure 4: Results of particle size distribution analysis at Settlement Shores Estate

It should be noted that the sampling undertaken at location SS12 indicated that the material forming the localised high spot within the canal comprised black coloured sandy gravel. The location of the high spot is adjacent to a stormwater outlet and may have been the result of material being washed down through the stormwater system. The height of the deposited material, at up to 1.3m above the design canal bed level and close to the centre line of the canal, is considered to be a navigation hazard and should be removed. This could be achieved with localised dredging of the gravel material with a barge-mounted excavator. This could load into a hopper barge or work barge supporting skip bins for onshore transfer and disposal at a licenced waste facility.

#### 5.5.4 Chemical Sediment Properties

Contamination testing indicated that all samples were below the limit of recording (LOR) or below the waste classification criteria set out in:

- NSW EPA (2014) Waste Classification Guidelines for general solid waste;
- National Assessment Guidelines for Dredging (2009) and ANZECC Guidelines for Fresh and Marine Water Quality (2000); and,
- National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013) health investigation levels for public open space and ecological investigation levels.

Levels of TBT, OC Pesticides, OP Pesticides, Total Petroleum Hydrocarbons, BTEXN and TPB's were below the Limit or Recording (LOR) for all samples. Levels of antimony, cadmium, silver and mercury were also below the LOR. Levels of arsenic, chromium, copper, cobalt, lead, manganese, nickel,



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selenium, vanadium, zinc, TOC and PAH's were below the waste classification criteria. The results are presented in **Appendix A**.

Nitrate and nitrite levels were below the LOR and ammonia levels were relatively low. These are the predominant inorganic forms of nitrogen in the soil, which are readily available to plants. Low levels of inorganic nitrogen indicate low soil fertility.

Total nitrogen and total phosphorus levels were relatively high in samples near the surface and relatively low in samples recovered at depth. Total nitrogen is the sum of organic nitrogen and inorganic nitrogen. Inorganic nitrogen levels were relatively low and the total nitrogen primarily comprised organic nitrogen. Organic nitrogen is primarily held in organic matter and it is not immediately available to plants. Organic nitrogen is mineralised by microbes into inorganic forms. Total phosphorus includes forms that are available and unavailable to plants. Phosphorus and organic nitrogen is returned to the soil in plant residues and organic matter. The results indicate organic matter is present near the surface and much of the nitrogen and phosphorus in the sediment is presently unavailable to plants.

### 5.5.5 Acid Sulfate Soils

The Wauchope/Port Macquarie Acid Sulfate Soil Risk Map (DLWC, 1997) indicates Settlement Shores Estate, including the canal network and surrounding land, is disturbed terrain. Soil investigations are required to assess these areas for acid sulfate potential. The Port Macquarie-Hastings Council LEP 2011 acid sulfate soils map classifies the waterways forming the canals as Class 1 and the terrestrial area as Class 3. Development consent is required for any works on Class 1 land and for works more than 1m below the water natural ground surface or works that result in lowering of the water table by more than 1m in Class 3 land. However, development consent is not required under the LEP to carry out any works if the works are not likely to lower the water table.

ASS screening tests on sediment samples showed moderate to very vigorous reactions during oxidation with 30% hydrogen peroxide. Following oxidation,  $pH_{tox}$  ranged from 2 to 6 with 15 of the 20 samples experiencing significant pH change (change >3.5 pH units). The screening test results indicated that all samples were likely to be Potential Acid Sulfate Soil (PASS) material. The results are presented in **Table 9**.

The Chromium Reducible Sulfur suite was undertaken on 4 samples most likely to contain PASS or Actual Acid Sulfate Soil (AASS) based on the screening tests. The Titratable Actual Acidity (TAA) results indicated that no samples tested had any actual acidity (AASS) present prior to disturbance of the sediments. The acid trail results for potential sulfidic acidity exceeded the ASSMAC "action criteria" for all samples (highlighted grey in **Table 9**). The results indicate a potential for acid sulfate soil conditions to develop in the sediments if exposed to air.

Generally, where action criteria are exceeded, an acid sulfate soil management plan is required for the disturbance of the sediments, unless mitigating factors such as sufficient acid neutralising capacity (ANC) are established. Such factors are accounted for by determining the net acidity of each sample using the acid base accounting equation:

$$\text{Net acidity} = \text{potential sulfidic acidity} + \text{existing acidity} - \text{acid neutralising capacity}$$

The ANC of a sediment is the ability of the sediment to neutralise any acid that may be produced on oxidation and maintain the pH above 5.5. Organic matter, calcium carbonates (i.e. shell) and magnesium carbonates are common naturally occurring neutralising agents. The effectiveness of these agents varies depending on particle size, coatings on the agent and kinetic factors which affect the rate at which they



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dissolve and become available. To account for these limitations, the acid neutralising capacity is divided by a minimum fineness factor of 1.5.

As shown **Table 9**, the net acidity was found to be less than the ASSMAC action criteria for 3 of the 4 samples, which indicates sufficient acid neutralising capacity to maintain a pH above 5.5.





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Table 9: Laboratory results investigating the presence of PASS

			pH test/Rate				pH <sub>100</sub>	Potential Acidity		Actual Acidity		ANC Fineness Factor	Net Acidity		Lining Rate	Net Acidity excluding ANC		Lining Rate excluding ANC		
			pH (T)	pH (S)	pH (S) - pH (T)	Strength of Reaction		% <sub>CH</sub>	TAA	% <sub>S</sub>	mol H <sub>2</sub> /t		% <sub>S</sub>	mol H <sub>2</sub> /t		kg CaCO <sub>3</sub> /t	% <sub>S</sub>	mol H <sub>2</sub> /t	kg CaCO <sub>3</sub> /t	
ASSMAC Guidelines			<4	<3.5	>1		pH Unit	% <sub>S</sub>	mol H <sub>2</sub> /t	% <sub>S</sub>	mol H <sub>2</sub> /t		% <sub>S</sub>	mol H <sub>2</sub> /t	kg CaCO <sub>3</sub> /t	% <sub>S</sub>	mol H <sub>2</sub> /t	kg CaCO <sub>3</sub> /t		
Investigation	Date	Sample ID	Depth	0.1	0.1	>1		0.1	0.005	10	0.02	2	0.3	0.02	10	1	0.02	10	1	
Settlement Shores Estuarine Sediment Sampling	2/5/16	S52	0-0.5	8.7	8	2.7	3													
	2/5/16	S52	0.5-1.0	8.5	2.6	5.9	4													
	2/5/16	S53	0-0.5	8.5	4	4.5	3													
	2/5/16	S53	0.5-1.0	7.9	2.3	5.6	4	6.8	0.16	132	<0.02	<2	3.5	<0.02	<10	<1	0.18	112	8	
	2/5/16	S54	0-0.5	8.4	5.2	3.2	3													
	2/5/16	S54	0.5-1.0	8.4	2.9	5.5	3													
	2/5/16	S55	0-0.5	8.5	4.4	4.1	3													
	2/5/16	S56	0-0.5	7.4	2	5.4	4	7.2	0.180	118	<0.02	<2	3.5	<0.02	<10	<1	0.19	118	9	
	2/5/16	S56	0.5-1.0	8	2.2	5.8	4													
	2/5/16	S57	0-0.5	8.3	5.2	3.1	2													
	2/5/16	S57	0.5-1.0	8.4	4.3	4.1	2													
	2/5/16	S58	0-0.5	8.6	8.6	0	1													
	2/5/16	S58	0.55-1.0	8.8	2.4	6.4	4													
	2/5/16	S59	0-0.5	8.5	2.7	5.8	3													
	2/5/16	S59	0.5-1.0	8.7	2.2	6.5	4	7.6	0.190	66	<0.02	<2	3.5	<0.02	<10	<1	0.1	66	5	
	2/5/16	S59	1.0-1.5	8.5	2.2	6.3	4	6.3	0.16	112	<0.02	<2	3.5	0.18	112	8	0.18	112	8	
	2/5/16	S520	0-0.5	8.4	2.3	6.1	4													
	2/5/16	S521	0-0.5	8.6	5.6	3	3													
	2/5/16	S523	0.5-1.05	8.5	2.5	6	4													
	2/5/16	S522	0.28-0.6	8.8	2.6	6.2	2													
	2/5/16	QA021		8.3	2.3	6.2	4													
	2/5/16	QA022		8.0	2.4	6.2	4													

Notes:  
Reaction Rate: 1 – Slight, 2 – Moderate, 3 – Vigorous, 4 – Very Vigorous  
DOLD – pH<sub>100</sub> <3.5, drop in pH (x1) or reaction rate (x2) indicates PASS  
TAA exceeds ASSMAC "action criteria" (i.e., ANS)  
Value exceeds ASSMAC "action criteria", (i.e., PASS)  
Potential acidity not reported where pH<sub>100</sub> ≥ 4.5  
ANC not effective where pH<sub>100</sub> ≤ 6.5  
Net acidity based on the highest results of either the acid or sulfur trial

## Notes:

Reaction Rate: 1 – Slight, 2 – Moderate, 3 – Vigorous, 4 – Very Vigorous

BOLD – pH<sub>100</sub> (<3.5), drop in pH (>1) or reaction rate (>2) indicates PASS

TA exceeds ASSMAC "action criteria" i.e. AA05

Value exceeds ASSMAC "action criteria", i.e. PASS

Retention acidity not required where pH<sub>100</sub> > 4.5ANC not effective where pH<sub>100</sub> > 6.5

Net acidity based on the highest results of either the acid or sulfur trial

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## 5.6 Ecology

### 5.6.1 Flora

A field investigation involving a site walkover inspection was undertaken as part of the development of the CMP. The study area has been heavily modified and transformed into a residential estate. The modifications have resulted in clearing of vegetation, major earthworks, introduction of exotic species and paving of a significant portion of land.

The majority of the observed vegetation is highly disturbed canal-side grassland formation and garden beds, consisting of numerous exotic species and of no conservation value. The native species diversity within the canals is low and restricted mainly to isolated remnant vegetation.

Seagrass mapping provided by NSW Department of Primary Industries indicates isolated and small patches of mangroves and fringing seagrass beds in the littoral zone comprising *zostera*. Mangroves were observed on-site, particularly near the Settlement City Shopping Centre and a large specimen on the southern side of Canal 1 – The Governors Way. Seagrasses were observed in some areas, however, the water depth would preclude the growth of seagrasses beyond the littoral zone due to the lack of sunlight penetration at depth. A variety of saltmarsh species were also observed in places along the foreshore.

A search of the NPWS Atlas of NSW Wildlife identified 60 species and 15 vegetation communities present within the Port Macquarie-Hastings Local Government Area and listed under the NSW *Threatened Species Conservation (TSC) Act 1995* (TSC Act 1995) as vulnerable, endangered or critically endangered. These species and communities are listed in **Appendix B** and may be present in the study area. However, with the exception of coastal saltmarsh, these species are not considered potential inhabitants due to the site's history of modification and the lack of native vegetation coverage.

### 5.6.2 Fauna

The study area has been heavily modified and transformed into a residential estate. The modifications have resulted in clearing of vegetation, habitat isolation, traffic dangers, predatory pressures and competition from introduced and domestic species. This has influenced the range and abundance of native fauna within the study site.

A search of the NPWS Atlas of NSW Wildlife identified species listed species present within the Port Macquarie-Hastings Local Government Area and listed under the NSW *Threatened Species Conservation (TSC) Act 1995* (TSC Act 1995) as vulnerable, endangered or critically endangered. The search included:

- 10 amphibians;
- 6 reptiles;
- 81 birds;
- 35 mammals; and,
- 3 insects.

These species are listed in **Appendix B** and may be present in the study area. However, none of the listed species are considered to be potential inhabitants due to the site's history of disturbance, the lack of native vegetation coverage, the distribution of the species and their preferred habitat.

The NSW Fisheries threatened species database includes nine (9) critically endangered species, 11 endangered species and eight (8) vulnerable species present within NSW. None of these species are



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likely to be present within the Settlement Shores Estate canal development as their distribution and habitat requirements are incompatible with the area.

## 5.7 Cultural Heritage

### 5.7.1 Aboriginal Cultural Heritage

A search of the NSW Office of Environment and Heritage Aboriginal Heritage Information Management System (AHIMS) has shown that no aboriginal sites or aboriginal places are recorded or been declared in or near Settlement Shores Estate.

### 5.7.2 Non-indigenous Heritage

A search of the NSW Heritage Office State Heritage Inventory has shown only two items of heritage significance that occur near to or within the study area. These comprise:

1. The Hibbard Cemetery, located on Hibbard Drive, Port Macquarie. The Cemetery is located off Hibbard Drive, approximately 700 metres west of Canal 2 – South West Passage, which is the western-most canal in the Settlement Shores Estate system.
2. "The Cross" navigational marker, located on Park Street. The Cross is located approximately 100 m south of the Park Street bridge over Canal 1 – The Governors Way.

A review of Port Macquarie-Hastings Council's Local Environment Plan 2011 (PMHC, 2011) has confirmed these sites as being the only items of heritage significance that are located near the study area.

## 5.8 Traffic and Access

Public boating facilities, including boat ramps and pontoons, are generally not provided within the Settlement Shores Estate precinct (although a public boat ramp and pontoon exists at McInherney Park). Water access to Settlement Shores Estate canal network is restricted to the upstream end of Canal 1 – The Governors Way, which links with the Hastings River. The majority of the canals do not provide through access. As such, boating traffic is generally limited to that of private residents.

Road traffic in Settlement Shores Estate consists mainly of passenger vehicles associated with residential blocks.

A number of easements and vacant blocks owned by Council are located around Settlement Shores Estate. These easements provide access to the foreshore for any maintenance activities that may be required. In addition, a covenant placed on the blocks requires landowners to maintain a clear access way within 5.4 metres (7.9 metres for The Governors Way) from the revetment wall where buildings, fences, trees or other obstructions are prohibited. This clear access way is intended to provide access to the foreshore for maintenance activities and to remove flood debris, if required.

In 2004, a survey concluded waterway access for boating activities within the canal system was below the expected standard. 57% of respondents believed that the canal was safe to navigate, while 43% said the canal bed adjacent to their property was silting up. Dredging works were undertaken in 2006/2007, however, sediment transport has led to further siltation. A recent 2016 survey of canal residents indicated that dredging to restore canal waterway depths was considered to be the highest priority maintenance action for the CMP.

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## 5.9 Recreational Use

Settlement Shores Estate is a residential development with minimal public recreation zones on the foreshore. The majority of the foreshore and nearshore areas are private property. Many residents of the canals own a recreational vessel and enjoy scenic views from their dwellings and backyards.

The speed limit in the canals is restricted to 4 knots and the waterways are relatively narrow, which limits recreational use. Fishing restrictions do not apply to Settlement Shores Estate, however public access to the foreshore is limited.

## 5.10 Utilities

Public utilities are available to each of the residences situated along the residential canal system. These may include power, telecommunications, sewerage and potable water.

In addition, submarine cabling is present spanning a number of canals. This comprises high voltage underground power cables at the following locations:

- crossing Canal 1 between 18-20 Newport Crescent and 67-69 Commodore Crescent;
- crossing Canal 9 between 27-29 Laguna Place and 29-31 Newport Crescent;
- crossing Canal 8 between the eastern end of Newport Crescent and Settlement City Shopping Centre; and,
- crossing Canal 8 between the eastern end of Laguna Place and Settlement City Shopping Centre.

Submarine telecommunications cabling associated with the National Broadband Network (NBN) also crosses Canal 1 between 18-20 Newport Crescent and 67-69 Commodore Crescent.



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## 6 Environmental Impact Assessment and Mitigation Measures

### 6.1 Hydrodynamics and Hydraulics

Minimal current and wave action is expected within the Settlement Shores Estate canals. However, the proposed maintenance activities would have the following impacts:

- Dredging would have minimal impact on currents and wave action and the canal profile is proposed to be restored to the design profile.
- The placement of sand or rock protection on the foreshore would have minimal impact on currents and wave action, however a flatter foreshore slope, rather than a vertical wall, would be achieved by placing sand or rock seaward of the revetment and it would assist in dissipating wave energy.
- Other maintenance activities including repairs to boat ramps, jetties, pontoons and the revetment wall would have minimal impact on the hydrodynamics and hydraulics of the waterway. The cross sectional area or water depth would not be significantly altered by the presence of these structures.

### 6.2 Sediment Characteristics

#### 6.2.1 Acid Sulphate Soils

The assessment criteria for acid sulfate soils are provided in the Acid Sulfate Soils Assessment Guidelines (Ahern, et. al, 1998). Sediment sampling indicated the “action criteria” in the Acid Sulfate Soil Assessment Guideline was exceeded. Mitigating factors such as sufficient acid neutralising capacity (ANC) were established for some of the sediment samples. However, the net acidity of one sample indicated the ANC was insufficient to neutralise the sediment and maintain the pH above 5.5.

Generally, fines (smaller particle size) are associated with sulfidic material and sand and gravel is generally non-sulfidic “clean” material. It may be possible to partially or fully separate the acid sulfate fines from the sand resource through proposed use of the hydrocyclone. The separated sand and gravel is expected to require little or no neutralising agent prior to use. The fines/water return from the hydrocyclone would be discharged back into the waterway via a separate pipeline and would have little opportunity to be oxidised.

An acid sulfate soil management plan (ASSMP) is required for construction activities that result in the removal and/or disturbance of soil/sediment. To determine the feasibility of the hydrocyclone and required dosing rates of the fines and sand content, field trials should be conducted. Sampling of the sand and fines shall be undertaken and analysed by a NATA accredited laboratory. Details of the field testing and laboratory testing should be included in the ASSMP.

#### 6.2.2 Soils

The colour of the sediment in-situ is light brown to grey and black. Organic fines would contribute to the dark colouring of the sediment. These fines would be removed by the hydrocyclone and the colour of the sand would be lighter in colour. Following placement of the material on the foreshore and exposure to ultraviolet light from the sun, the material would be bleached and it is expected the colour of the material would match existing sandy material on the foreshore within a few years.

As noted in **Section 5.5**, the material to be dredged is classified as fine to medium grained sand with a fines (silt and clay) content of up to 25% and gravel up to 15%. Contamination testing indicated that all samples were below the limit of recording (LOR) or below the waste classification criteria set out in:



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- NSW EPA (2014) Waste Classification Guidelines for general solid waste;
- National Assessment Guidelines for Dredging (2009) and ANZECC Guidelines for Fresh and Marine Water Quality (2000); and,
- National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013) health investigation levels for public open space and ecological investigation levels.

As such, the dredged material is deemed suitable for reuse to nourish the canal beach areas.

If material is to be stockpiled on-site prior to disposal or reuse, stockpiles should be limited in height to 2 m and batter slopes no steeper than 1V:3H. Measures should be introduced to ensure no significant windblown loss of material. Selection and arrangement of stockpile sites and method of delivery of material should be well thought out to consider the end use of material so it is transported as efficiently as possible.

The sediments generally have a relatively high organic nitrogen load (Total Kjeldahl Nitrogen up to 390mg/kg) in surface samples. The organic nitrogen may be mineralised to ammonium and nitrates when disturbed, increasing the chemical oxygen demand on the receiving waters. However, any side effects were not observed during previous dredging campaigns and organic nitrogen load was higher in the past.

## 6.3 Sediment Transport and Water Quality

### 6.3.1 Dredging and Other Machinery

The preferred method of dredging within the canals is hydraulic dredging with a Cutter Suction Dredger (CSD). Mechanical dredging with a backhoe dredger mounted on a barge or tracked long-reach excavators operating from land may be considered for areas with minor dredging volumes and drying areas where significant sedimentation has occurred. Other machinery, which may be used on-site from time to time include small excavation equipment such as 'Bobcats' and excavators, floating barges, small work boats, and soil compaction equipment.

Potential direct impacts from dredging could include:

- elevations in turbidity, potentially nutrients and contaminants;
- discharge of potentially acidic water from the dredged material processing area; and,
- management of spills.

The following mitigation measures are recommended to minimise water quality impacts from hydraulic dredging:

- The material to be dredged is sand with silt/clay (up to 25%) and gravel (up to 15%). As such, there may be some localised suspension of sand and silt at the cutter head in the case of hydraulic dredging but this would settle out of the water column. It is generally impractical to use silt curtains with cutter suction dredging techniques as these would interfere with placement and movement of dredge anchors and limit mobility of the dredge within the waterway. However, turbidity in the vicinity of dredging operations should be monitored and the cutter head speed, swing velocity, suction flow rate and thickness of cut should be optimised for the material encountered.
- return water quality must be managed onshore to ensure it meets relevant suspended solids (or turbidity) criteria before discharge. As part of this process, the outlet discharging return water



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from dredged sediment dewatering operations (e.g. fines/water discharge pipeline from the hydrocyclone) into the adjacent waterbody may be enclosed in a silt curtain to further contain fines contributing to turbidity. A water quality monitoring program must be implemented. At a minimum, this should include turbidity monitoring inside the silt curtain, directly outside the silt curtain and in a control (reference) area.

- Return water from hydraulic dredging and dewatering operations should also be monitored for acidity. Return water quality should be similar to the control (reference) area and should be treated prior to discharge if it is non-conforming.

The following mitigation measures are recommended to minimise water quality impacts from mechanical dredging:

- If mechanical dredging with a barge-mounted excavator or long reach excavator is used for dredging of localised areas (e.g. at the head of canals around stormwater outlets), the dredging operations should be undertaken within a silt curtain to contain any turbidity plumes to the immediate dredging area and limit mobilisation of plumes to surrounding areas. A water quality monitoring program must be implemented. At a minimum, this should include turbidity monitoring inside the silt curtain, directly outside the silt curtain and in a control (reference) area.
- Onshore stockpiles of moist or wet dredged material should be located within bunded areas with seepage waters collected in a controlled manner by a drainage system that allows suitable water quality to be verified with sampling and water treatment to be implemented (if required) prior to discharge into the adjacent waterbody.

There is potential for accidental fuel and oil spills during both hydraulic and mechanical dredging operations. In addition to monitoring of turbidity, visual monitoring would also consider signs for spillage of fuel. Other mitigation measures associated with spills and leakages include:

- Regular inspection of plant and equipment to minimise the risk of oil and fuel leaks.
- Display of Material Safety Data Sheets (MSDS) on board the dredge and with stores of each substance used in the works (i.e. fuel, lubricants etc.).
- An emergency spill response kit must be held on-site.
- Bunds must be formed around any booster pumps and any areas used to hold fuel and oil within the Contractor's compound to prevent spills affecting adjacent foreshore/ marine habitats.
- An environmental management plan shall be prepared that addresses, amongst other things, ways in which pollution of the sites by fuel, oil and other debris would be avoided. This should include protocols for equipment maintenance, storage of fuel and other chemicals and materials, management of waste and refuelling procedures.
- No major maintenance of equipment shall be undertaken on-site.

### 6.3.2 Sand/Rock Placement

The material to be placed on the foreshore as part of the proposed maintenance activities comprises rock and/or dredged material. The dredged material would be pumped through a hydrocyclone to separate the fines content from the sand. The clean sand would be discharged via pipeline on to nearby canal beach areas and the fines/water return from the hydrocyclone would be discharged back into the waterway via a separate pipeline.

Potential direct impacts of material placement could include:

- erosion;
- foreshore instability; and,



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- impacts on water quality at material placement areas.

The foreshore beach areas have historically eroded with deposition occurring in the deeper parts of the canal. The rate of erosion and deposition depends on the location within the canal network. Dredged areas would infill over time and the foreshore would be eroded at a similar rate to existing if the dredged material is placed on the foreshore. This is acceptable in some locations, however other locations require rock protection to provide long term foreshore stability. Rock size can vary depending on slope. Designs could explore boulder, cobble or even gravel sized placements.

Suspended solids and nutrients would be the main pollutants present in the water leaving the placement areas, especially during high rainfall events. The material placement areas (temporary and final) would be identified prior to commencement of dredging operations. They would be prepared and maintained throughout dredging operations to control the discharge of turbid water into nearby estuarine waters. This would include the establishment of appropriate sediment retention structures, such as a silt curtain, at all sediment discharge points to control dewatering and to allow sediments to settle into the disposal area without being washed directly back into the stormwater/canal system. As all placement areas fall within an estuarine environment, any return water would have the same characteristics as the receiving waters. An erosion and sediment control plan would be prepared as part of the Contractor's Environmental Management Plan (CEMP).

Placed and dredged batter slopes of 1V:7H near the shore and 1V:3H in deeper sections of the canals should be established, in accordance with the original canal design location and profile. This would ensure the foreshore is stable.

Silts and clays (i.e. fines) are to be disposed of at the previously identified disposal location, which could be on-site in areas above the high tide mark or at a remote disposal location. The material should be tested for contaminants and acid sulfate material prior to reuse or disposal.

### 6.3.3 Other Maintenance Operations

Other maintenance activities, including repairs to boat ramps, jetties, pontoons and the revetment wall, would not significantly affect sediment transport rates or water quality. The design of all boat ramps should be as low as practically possible so as to not interfere with the longshore sediment transport rates. Jetties and pontoons should contain the minimum number of piles for practical applications and the structures should not block alongshore sediment transport.

During construction and maintenance activities, there is the potential for a decline in surrounding surface water quality due to earthmoving activities and the storage and handling of products. For more substantial maintenance activities, such as the demolition or construction of a boat ramp, appropriate sediment retention structures, such as a silt curtain, should be maintained around the construction area.

Anti-fouling paints containing copper, organotin compounds, biocides or any other manufactured compound should not be applied to pontoons or any other surfaces while the pontoon is in Settlement Shores Estate. If pontoons are to be cleaned, they shall be removed from site and cleaned in accordance with Environmental Protection Authority requirements for slipping and cleaning of vessels. This shall include catching and treating any runoff. Boat ramps and pontoons, which have not been treated with anti-fouling paints may be scrubbed or jet blasted (with water) to remove marine growth.

There is potential for accidental fuel and oil spills during other maintenance operations. When undertaking work or refuelling, the site shall be monitored for visual signs of fuel and oil spills or leaks. Other mitigation measures associated with spills and leaks include:





## Project related



- Regular inspection of plant and equipment to minimise the risk of oil and fuel leaks.
- Display of Material Safety Data Sheets (MSDS) with stores of each substance used in the works (i.e. fuel, lubricants etc.).
- An emergency spill response kit must be held on-site.
- Bunds must be formed around any areas used to hold fuel and oil within the Contractor's compound to prevent spills affecting adjacent foreshore/ marine habitats.
- An environmental management plan shall be prepared that addresses, amongst other things, ways in which pollution of the sites by fuel, oil and other debris would be avoided. This should include protocols for equipment maintenance, storage of fuel and other chemicals and materials, management of waste and refuelling procedures.
- No major maintenance of equipment shall be undertaken on-site.

## 6.4 Ecology

The Settlement Shores Estate canals are not a key fish habitat under the *2013 Policy and Guidelines for Fish Habitat Conservation and Management, Fisheries NSW*. Despite the legislation, seagrass and other aquatic vegetation, including saltmarsh and mangroves, should be protected from damage where practicable as they are a valuable fish habitat. Canal beach nourishment activities should avoid placement of material over seagrass and saltmarsh plants. Saltmarsh may be used to revegetate and stabilise the foreshore. Any area of aquatic vegetation impacted by dredging is likely to be relatively small compared to the total amount of aquatic vegetation in the canals and Hastings River. In addition, affected areas would recover over time. The proposed maintenance dredging works are similar to that undertaken in 2006/2007 and the canals have recovered to their existing state.

The vulnerable and endangered species identified in **Section 5.6** are not considered to be potential inhabitants within the Settlement Shores Estate canal development due to the site's history of disturbance, the lack of native vegetation coverage, the distribution of the species and their preferred habitat. The study area does not contain endangered populations or endangered ecological communities as listed under the TSC Act 1995. The site does not contain recommended or declared critical habitats and the proposed maintenance works are not considered to be a key threatening process.

The proposed maintenance program may require the removal of trees and shrubs to maintain an access easement (subject to site specific evaluation by Council). The species potentially requiring removal have been planted since the canals were constructed in the 1970's and are not considered to be of ecological significance.

To ensure the proposed dredging and maintenance program does not unduly impact on the flora and fauna values of the existing environment, the following mitigation measures should be employed:

- Clearing of any vegetation would be restricted to that necessary to provide access along the designated access easement. Temporary protective fencing would be erected along the boundary of the work site where it adjoins native vegetation that does not require clearing.
- Prior to the clearance of vegetation, trees are to be examined by a suitably qualified person for the presence of hollows and arboreal animals. Animals present in the trees would require relocation before the resumption of clearing. Alternatively, the need to remove trees with identified habitat shall be reassessed by Council.
- Cleared vegetation is to be used as mulch in rehabilitation works where practicable.
- Rehabilitation of disturbed areas would commence as soon as practicable following completion of works.



## Project related



- Prior to use at any site, machinery is to be cleaned, degreased and serviced. If the machinery has previously been used in a waterway where the noxious macroalga *Caulerpa taxifolia* (Caulerpa) is present, the contractor shall:
  - a) inspect anchors, ropes and chains for pieces of Caulerpa
  - b) inspect diving equipment such as wetsuits, bags and other gear before and after use
  - c) inspect trailers, propellers and engine intakes
  - d) inspect construction equipment and materials
  - e) use dedicated 'wash-down' facilities where available, ensuring that vessel and equipment is thoroughly free of all matter before leaving the area
  - f) collect any fragments of Caulerpa that may have been picked up, seal the pieces in a plastic bag and dispose of them in a bin where they cannot re-enter the waterway.
- A visual inspection of the waterway for dead or distressed fish is to be undertaken twice daily during the works. Observations of dead or distressed fish are to be immediately reported to the Fishers Watch hotline on 1800 043 536. In such cases all works are to cease until the issue is rectified and approval is given to proceed.
- If native fauna is injured, immediate contact should be made with wildlife rescue groups and appropriate action taken.

## 6.5 Cultural Heritage

There are no Aboriginal heritage items within the works area. Two (2) non-aboriginal heritage items are located outside of the works area and these would not be impacted by the works. The area has been significantly disturbed and heritage artefacts are not expected to be found. Importantly, no new excavation into previously undisturbed areas is proposed. If, however, during the course of work, a cultural heritage artefact is located, work in the specific area would stop. Council and NSW Office of Environment and Heritage (OEH) would be notified of the find and appropriate actions as advised by OEH would be undertaken.

## 6.6 Odour and Air Quality

The sediment to be dredged is generally muddy sand. However, the presence of organic material and a sulphidic odour was noted during the sediment sampling investigation. The organic material is expected to be removed from the sand proposed to be placed on canal beaches by the hydrocyclone. The fines/water return from the hydrocyclone would be discharged back into the waterway via a separate pipeline and would have little opportunity to generate odour. Significant emission of hydrogen sulfide is therefore unlikely, however odours may be detected at nearby receptors from time to time during the dredging and placement activities. This is considered to be a minor and short-term impact in comparison to the benefits provided by the proposed maintenance dredging works.

Plant and equipment may emit smoke/fumes which could adversely affect air quality in the localised areas of operation. Appropriate maintenance of plant and equipment would be undertaken to address this potential issue including:

- Regularly maintaining all plant and equipment used during the dredging, reuse work and other maintenance activities in keeping with best practice principles. Maintenance would be in accordance with manufacturer's specifications in order to minimise the emission of smoke, fumes and other air pollutants into the atmosphere.
- Suspending the use of any plant/equipment found to be emitting visible smoke/fumes for longer than periods designated by their operations manuals. Suspension of use and undertaking of maintenance (if necessary) until acceptable levels are achieved.



## Project related



- Maintaining all service/inspection log books.

In order to minimise impacts and ensure control measures are effective, the following safeguards would be undertaken:

- Visual monitoring would be undertaken to assess the impact of dust generation on air quality, particularly during other maintenance activities.
- Where dust is observed to be a nuisance and cannot be controlled by water spraying or implementation of other mitigation measures, works shall cease and work practice reviewed to reduce air quality impacts.

## 6.7 Noise

All works is proposed to occur during the standard hours of construction being:

- Weekdays from 7am to 6pm;
- Saturday from 8am to 1pm; and,
- No work on Sundays or public holidays.

A community consultation program has been initiated by Council. Close liaison shall be maintained with residents and progress updates provided at regular intervals or at particular milestones. A contact name and phone number of a responsible person should be given out so that complaints can be dealt with effectively and efficiently. All complaints or communication should be answered;

If noise were to become an issue then the following steps could be undertaken to reduce noise (assuming that the noise generated by the Contractor was outside the permitted noise levels):

- restrictions could be placed on operational times at the locations closest to residential properties;
- Contractor could be required to undertake steps to reduce the amount of noise generated by plant and equipment including installation of mufflers and the like;
- activities that are known or have the potential to create excessive noise would, where possible, be scheduled to occur at times to cause least annoyance to the community. Carrying out such work during early morning should be avoided. This includes start up and idling etc. of heavy machinery prior to commencement of work;
- regular and effective maintenance of all equipment including vehicles moving on and off the site should be conducted. Prompt attention must be given to repair of loose or rattling parts and broken equipment. Maintenance work should only be carried out by qualified persons; and,
- when selecting equipment for the job, preference must be given to those with capacities best suited to the task at hand. That is, the use of larger machines with excess capacity should be avoided unless these can be shown to be quieter than smaller capacity machines.

## 6.8 Visual Impact

The existing landscape of Settlement Shores Estate consists of waterways, grasslands, and remnant and planted vegetation buffering residential and commercial areas.

Canal maintenance and dredging along the canals would result in a loss of vegetation and the removal or alteration of structures within the access easement and along the foreshore. Vegetation removed for the purposes of the works would be limited to that required to complete the maintenance and achieve an appropriate degree of access in accordance with the covenant placed on the land titles. Cleared areas shall be grassed as soon as possible following the removal of trees or structures.



Project related



Restoration of the design canal profile and maintenance of infrastructure would have a positive effect on visual amenity. During construction, stockpiling of dredged sediments would be minimised, with the sediments to be generally reused to nourish canal beach areas.

## 6.9 Traffic and Access

Due to the relatively large size of the dredge in relation to the navigable canal, the operation of the dredge would potentially impede the navigation of canal boating traffic during operational hours, particularly in the smaller canals. Floating dredge pipelines for the delivery of sand to the foreshore would further restrict vessel navigation. Council shall exhibit a Notice to Mariners in local newspapers, informing them of the dredging works, at least 14 days prior to the commencement of operations. Any vessel engaged in dredging shall display lighting and signals in accordance with the *Navigation Act 1991*. Council shall provide temporary signage on the canal banks upstream and downstream of the dredge and the dredge shall be moved to the nearest canal bank fronting a Council owned access easement during non-operating hours.

Vehicular traffic within the residential street network would be impacted by the presence of higher than normal flows of traffic associated with the construction and maintenance activities that would take place over the course of canal maintenance. While the maintenance plan includes a schedule of activities over a 10 year program, there would still be some impact on residents from the additional traffic, particularly in those areas adjacent to access easements running between the street and the canal foreshore.

Residents shall be notified in writing two weeks prior to any work in their vicinity, including foreshore maintenance and dredging activities, which would impact on their amenity and restrict their access along either the canal waterway or road networks.

## 6.10 Recreational Use

Restoration of the design canal profile and maintenance of infrastructure would have a positive effect on user/resident amenity. During maintenance works, there would be some impact on recreational use of the waterway, particularly for local residents.

## 6.11 Utilities

The contractors involved in dredging or other canal maintenance works should contact relevant service providers to determine the depth and location of utilities before commencing work. Service locating should be conducted if the contractors are unable to gather reliable information from the service providers.

Contractors should not anchor in the vicinity of submarine cables. Cutter suction dredge or mechanical dredging should not be conducted in the vicinity of underwater cables unless the depth of cables is identified from a dedicated pot-holing exercise to locate the cables, or from reliable information provided by the affected service provider or an accredited service locator.

## 6.12 Waste Management

Maintenance works have the potential to generate several forms of waste:

- Excavated Material: Maintenance works may result in the generation of excavated material including soils and sands;
- Construction Material: This includes concrete, metals and other damaged or excess construction materials generated during maintenance works;



Project related



- Green Waste: Maintenance works would require the removal of vegetation including trees and shrubs;
- General waste from maintenance activities, including food wrapping, bottles and other waste generated by site employees and contractors during the works; and
- Human Waste.

All waste material shall be appropriately stored on-site and disposed to a licenced waste disposal facility.



Project related



## 7 Environmental Factors Considered

Clause 228 of the *EP&A Regulation 2000* provides a list of factors that must be considered in determining the likely impacts of an activity on the natural and built environment and therefore the necessity for an EIS.

Following review of Clause 228 Factors in below, the proposed works are not considered to result in significant detrimental environmental impacts as demonstrated in this REF. Therefore it is concluded that an Environmental Impact Statement (EIS) is not required and this REF is considered an appropriate environmental assessment.

### a. Any Environmental Impact on a Community?

There would be no significant environmental impact on the community as a result of the proposals. Any potential impacts as a result of dredging and reuse activities or other maintenance activities would be mitigated as outlined in this REF.

### b. Any Transformation of a Locality?

There would be no significant adverse transformation of the locality as a result of the proposals. The waterway would be restored to the design profile. Any potential adverse impacts as a result of dredging and reuse activities or other maintenance activities would be mitigated as outlined in this REF.

A positive transformation is expected as a result of the beach nourishment and bank protection works.

### c. Any Environmental Impact on the Ecosystems of the Locality?

There would be no significant long term environmental impact on the ecosystems of the localities as a result of the proposals. Where possible, any potential impacts as a result of dredging and reuse activities would be mitigated as outlined in this REF.

The possible impacts and proposed mitigation measures have been discussed, which include disturbance of aquatic vegetation.

### d. Any Reduction of the Aesthetic, Recreational, Scientific or Other Environmental Quality or Value of a Locality?

There would be no significant reduction in the aesthetic, recreational, scientific or other environmental quality or value of the locality as a result of the proposals.

Temporary and localised impacts to the aesthetics and recreational values of the areas would be experienced during dredging and reuse activities but these impacts would be minimised as per mitigation measures outlined in this REF. Aesthetic, recreational, and environmental benefits would ultimately be achieved as a result of the proposals and restoration of the canal profile.

### e. Any Effect on a Locality, Place or Building Having Aesthetic, Anthropological, Archaeological, Architectural, Cultural, Historical, Scientific or Social Significance or Other Special Value for Present or Future Generations?

There are no heritage sites within the dredging areas or the placement areas. However, to preserve any archaeological material that may be present, mitigation measures would be adopted as outlined in this REF.

### f. Any Impact on the Habitat of Protected Fauna (Within the Meaning of the National Parks And Wildlife Act (NP&W Act) 1974)?

There would be no significant impact on the habitat of protected fauna.

## Project related

**g. Any Endangering of Any Species of Animal, Plant or Other Form of Life Whether Living on Land, In Water or In the Air?**

There would be no endangering of any species of animal, plant or other form of life.

**h. Any Long Term Effects on the Environment?**

There would be no long term adverse effects on the environment as a result of the proposals.

**i. Any Degradation of the Quality of the Environment?**

There would be no long term degradation of the quality of the environment as a result of the proposals. There is potential for the proposals to have localised and short term impacts to the quality of the environment. However, any potential impacts on the quality would be mitigated through the measures outlined in this REF.

**j. Any Risk to the Safety of the Environment?**

There would be a potential short term risk to the safety of the environment during the dredging and reuse activities as a result of the proposals. However, this risk would be minimised by the mitigation measures as outlined in this REF.

**k. Any Reduction in the Range of Beneficial Uses of the Environment?**

There would be no long term reduction in the range of beneficial uses of the environment as a result of the proposals. There is potential for the proposal to have short term impacts on the use of the surrounding environment during dredging and reuse activities. However, any potential impacts on the range of beneficial uses of the environment would be mitigated through the measures outlined in this REF.

**l. Any Pollution of the Environment?**

There would be potential short term water, air and noise pollution of the environment during the proposed dredging and reuse activities. However, potential impacts would be mitigated by control measures as described in this REF.

**m. Any Environmental Problems Associated with the Disposal of Waste?**

There would be no environmental problems associated with waste. As outlined in this REF, all dredged sand is proposed for reuse. Other maintenance activities may generate waste, which would be mitigated through the measures outlined in this REF.

**n. Any Increased Demands on Resources (Natural or Otherwise) that are or are Likely to Become in Short Supply?**

There would not be any increased demands on resources due to the proposed dredging and reuse activities or other maintenance activities.

**o. Any Cumulative Environmental Effect with Other Existing or Likely Future Activities?**

There is not likely to be any long term negative cumulative environmental effects with any existing or future activities as a result of the proposals.

**p. Any Impact on Coastal Process and Coastal Hazards, including those Under Projected Climate Change Conditions?**

There are no significant impacts expected as a result of the proposed dredging and reuse activities or other maintenance activities.



Project related



## 8 Project Justification and Alternatives Considered

### 8.1 General

Port Macquarie-Hastings Council has adopted the *Settlement Shores Canal Estate Canal Maintenance Resident and Landowners Guidelines* and the *Canal Maintenance Plan*. Council is committed to the maintenance of the canal system that involves maintaining navigation depths, and a sufficient quantity of sand or rock material in front of the canal revetment walls to maintain shoreline stability.

### 8.2 Benefits of Proposed Works

The proposed dredging and foreshore nourishment would restore the design canal profile. This would increase navigation depth, stabilise the foreshore, boat ramps and jetties, provide support to the revetment walls, and improve visual amenity and aesthetics of the canal network. These works would improve safety for waterway users and pedestrians along the foreshore.

Other maintenance activities, including repairs to boat ramps and jetties would improve and maintain recreational amenity for the local residents.

### 8.3 Alternatives Considered

Alternative dredging and placement methods were considered as part of the proposal. Other dredging techniques were deemed to be cost prohibitive. Furthermore, alternate techniques would not provide significant advantages with regards to:

- noise;
- water quality during and after dredging;
- impacts on the ecology; and,
- impacts on traffic and access during construction.

An option to do nothing has been considered. Preventative maintenance is deemed to be necessary to improve safety and stabilise the foreshore.

Alternatives to the other maintenance activities may be assessed on a case by case basis.

### 8.4 Ecologically Sustainable Development

#### 8.4.1 General

The concept of ecologically sustainable development (ESD) has as its goal the maintenance of existing ecological processes in such a way as to ensure their sustainability in the future, which in turn ensures future quality of life. It requires balance between the desire for economic gain, ecological improvement, social equity and quality of life, arranged in such a way as to allow the simultaneous development of the economy and the natural environment.

Not only does it require economic and social development to maintain ecological processes at present levels, it also requires those levels to be sustainable into the future. In many cases it may require a proposed development to improve ecological processes, where that ecology is currently unsustainable. ESD principles are centred around the desire for current and future generations to have a natural environment which is as good or better than the one inherited.





Project related



The *NSW Environmental Planning and Assessment Regulation 2000 – Schedule 2*, describes four principles of ecologically sustainable development to be considered when assessing a project, namely:

- the precautionary principle;
- inter-generational equity;
- the conservation of biological diversity and ecological integrity; and,
- improved valuation, pricing and incentive mechanisms.

#### **The Precautionary Principle**

The NSW Protection of the Environment Administration Act 2000 states that the precautionary principle means that “if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation”. In the application of this principle:

- careful evaluation should always be undertaken to avoid serious or irreversible environmental damage; and,
- an assessment of risk weighted consequences of various options should be considered.

#### **Inter-Generational Equity**

Intergenerational equity implies that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

#### **Conservation of Biodiversity and Ecological Integrity**

Biological diversity refers to the diversity of genes, species, populations, communities and ecosystems, and the linkages between them. Biological resources provided food, medicines, fibres and products used in industrial processes. The maintenance of biological diversity would ensure the maintenance of life supporting functions and is to be considered as a minimal requirement for intergenerational equity.

#### **Improved Valuation, Pricing and Incentive Mechanisms**

There exists the need to determine appropriate values for services provided by the natural environment in terms of its natural processes and aesthetic, cultural and social benefits. In the past, natural resources have not been valued according to the consequences of them not being available, particularly the environmental, economic and social damage that may arise.

The *NSW Protection of the Environment Administration Act 2000* states that environmental factors should be included in the valuation of assets and services, such as:

- polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement;
- the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste; and,
- environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.



Project related



#### 8.4.2 Application to the Project Proposal

##### **The Precautionary Principle**

The proposed dredging and other maintenance activities associated with the works would form waterway and nourishment areas similar to that which has historically existed. The area has been significantly modified and provides minimal natural habitat. In the preparation of the project proposal, investigations, studies and community consultation have been undertaken to establish the effects of the dredging and other maintenance activities.

##### **Inter-Generational Equity**

The proposed dredging and other maintenance activities would assist in the provision of safer waterway access for recreational users and ensure the longevity of the canal estate for use by future generations.

Use of dredged material to address erosion and maintain the canal profile results in improved amenity for local residents, provides stability of the foreshore revetment and improved safety.

##### **Conservation of Biodiversity and Ecological Integrity**

The conservation of biodiversity and ecological integrity would be supported by avoiding, where possible seagrasses, saltmarsh and other vegetation, and heritage areas.

Although disturbance of the aquatic environment may occur in the short-term following dredging and placement activities, recolonisation of disturbed habitats would be expected, and has occurred following previous dredging projects.

##### **Improved Valuation, Pricing and Incentive Mechanisms**

The proposed dredging activities have been selected to support the protection of the environment and natural amenity of the areas, in some cases at a premium. For example, reusing the sand for nourishment is more expensive than in-estuary disposal but represents an appropriate reuse of an otherwise unutilised resource.

The proposed monitoring programs and environmental protection measures would all increase the cost of the project proposal but are considered necessary to assist with future management of the areas.

Project related



## 9 Conclusion

Port Macquarie-Hastings Council proposes to undertake maintenance dredging activities within Settlement Shores Estate canals to improve their navigability, which has been affected by natural sediment transport processes. The majority of the dredged material is proposed to be reused to address foreshore erosion, provide shoreline protection and stabilise the revetment walls in the canal network. Other maintenance activities are required on an ongoing basis to improve safety and amenity.

Based on the content of this REF, it is considered that the proposed works would have no long-term adverse environmental impacts provided that the safeguards as recommended in this document are implemented. In addition, a number of monitoring programs have been proposed in order to assess and guide the sustainability of the dredging works and its outcome.

The following approvals are required to enable the proposed maintenance works to be undertaken:

- NSW Environment Protection Authority (EPA)
  - application Environment Protection Licence (EPL) available under the *Protection of the Environment Operations Act 1997* to control the carrying out of non-scheduled activities for the purpose of regulating water pollution.



Project related



## 10 References

Australian and New Zealand Environment and Conservation Council (ANZECC, 2000), *Australian and New Zealand Guidelines for Fresh and Marine Water Quality Volume 1 The Guidelines*, 2000.

Australia/ New Zealand Standard (AS/NZS 1170.2:2001), *Structural design actions Part 2: Wind Actions*, 2011.

Ahern C R, Stone Y and Blunden B (Ahern et. al, 1998). *Acid Sulfate Soils Manual 1998*. Acid Sulfate Soil Management Advisory Committee, Wollongbar, NSW, Australia.

Bureau of Meteorology (BoM, 2016), Climate Data Online, <http://www.bom.gov.au/climate/data/>, accessed 28/4/16.

Commonwealth of Australian (2009), *National Assessment Guidelines for Dredging (2009)*

Commonwealth of Australia (2013), *National Environment Protection (Assessment of Site Contamination) Measure (NEPM)*.

McIlwain and Boys, *Settlement Shores – The Design and Construction of Residential Canal Developments within Major Floodplains*.

NSW Department of Land and Water Conservation (DLWC, 1997), *Wauchope/Port Macquarie Acid Sulfate Soil Risk Map*.

NSW Department of Primary Industries (DPI, 2013), *Policy and Guidelines for Fish Habitat Conservation and Management*, Fisheries NSW, 2013.

NSW Environment Protection Authority (NSW EPA, 2014), *Waste Classification Guidelines Part 1: Waste Classification*.

NSW Government (2009), *NSW Sea Level Rise Policy Statement, 2009*.

NSW Roads and Maritime Services (RMS, 2013), *Map of Hastings, Wilson and Maria Rivers and Port Macquarie Area*.

Patterson Britton and Partners (PBP, 2006), *Hastings River Flood Study, 2006*.

Port Macquarie-Hastings Council (PMHC, 2011), *Port Macquarie-Hastings Local Environment Plan 2011*.

Port Macquarie-Hastings Council (PMHC, 2015), *Port Macquarie-Hastings Council Flood Policy, 2015*.

Public Works Manly Hydraulics Laboratory (MHL, 2012) *OEH NSW Tidal Planes Analysis*, prepared for NSW Office of Environment and Heritage, 2012.

US Army Corps of Engineers (USACE, 2002), *Coastal Engineering Manual, 2002*.

Verhey H J (Verhey, 1985), *The stability of bottom and banks subjected to the velocities in the propeller jet behind ships*.



Project related



## Appendix A – Sediment Sampling Investigation



## REPORT

### **Settlement Shores Canal Maintenance Plan Review Project**

Sediment Sampling and Analysis Plan

Client: Port Macquarie-Hastings Council

Reference: M&APA1195R002D01

Revision: 01/Draft

Date: 20 April 2016





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20 April 2016

SETTLEMENT SHORES SAP

M&amp;APA1195R002D01

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**Appendices****Appendix A: Sample Location Coordinates****Appendix B: RHDHV COC form**





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## 1 Background

The Settlement Shores Estate is located approximately 3km to the north west of the Port Macquarie CBD (refer **Figure 1**). The canals themselves are classified as drainage reserves under the care and control of Council. The Settlement Shores Estate Canals are subject to a Waterway Maintenance Plan (WMP), which is linked to the titles of all properties fronting the canal area. The WMP is required under NSW legislation and addresses Council's responsibilities for ongoing maintenance of waterways and foreshores including maintenance dredging.

In order to meet its obligations under the WMP, Council has engaged Royal HaskoningDHV (RHDHV) to prepare an up-to-date Settlement Shores Canal Maintenance/Dredging Plan, which contains a 10 year prioritised maintenance task and monitoring list. A component of the work includes a sediment quality assessment of the canal maintenance dredge material.

This report outlines the proposed sediment Sampling and Analysis Plan (SAP) for investigations within Settlement Shores Estate Canals. The SAP has been prepared having regard to recommendations outlined in the relevant guideline documents including:

- ANZECC/ ARMCANZ (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality;
- Commonwealth of Australia (2009) National Assessment Guidelines for Dredging (the NAGD);
- Acid Sulfate Soils Manual guidelines (Stone et. Al, 1998) published by the NSW Acid Sulfate Soils Management Advisory Committee (ASSMAC); and,
- NSW Environment Protection Authority (1995) Contaminated Sites: Sampling Design Guidelines.

The SAP includes the following elements:

- objectives of the SAP;
- map showing the proposed sampling locations;
- estimates of the number of samples;
- methods and procedures for sampling;
- details of methods for sample handling, preservation, storage and quality control and quality assurance (QC/QA); and,
- list of analyses required, detection limits and laboratory QC/QA procedures.



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Figure 1: Location Plan



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## 2 Compilation and Review of Existing Data

### 2.1 Site History

The following description of the site history has been taken from McIlwain and Boys (2001).

The total area of Settlement Shores is about 175 hectares. The site is level and for the most part was originally used for farming and grazing. The area was one of the first parts of Port Macquarie to be settled and farmed, the work being initially undertaken by convicts since the town was established as a convict jail.

The site is bordered to both the east and the west by wide tidal reaches of the Hastings River estuary.

Development of Settlement Shores was undertaken with the aim of creating a high-quality residential area taking full advantage of its attractive riverside position and close proximity to the growing resort centre of Port Macquarie.

The development was implemented in two major stages. Stage A was completed in the 1970's and consisted mainly of detached housing on the southern half of the site nearest to Port Macquarie town centre. The second stage, based around wider curved waterways, was developed with the potential to incorporate a wider variety of uses including resort accommodation, commercial and retail areas and waterfront entertainment areas surrounding large-scale harbours capable of handling a variety of watercraft.

### 2.2 Previous Sediment Investigations

A sediment sampling and analysis program was undertaken in June 2003 (GHD 2004) to support the last round of maintenance dredging. No visual signs of contamination, such as staining or odours, were noted during the investigation.

Analysis of heavy metal concentrations was undertaken for the 24 samples collected. Concentrations of arsenic, nickel and lead exceeding the ANZECC 2000 sediment quality guidelines were reported in four samples. No samples exceeded the health based soil investigation guidelines for parks and open spaces (NEPC, 1999). Organochlorine pesticides were not detected in any of the 24 samples analysed. Relatively high levels of organic nitrogen were reported in the majority of samples analysed, while inorganic nitrogen (nitrates and nitrites) were close to or below detection limits in all samples analysed. Reactive phosphorus was also reported at close to or below detection limits in all samples analysed.

It was concluded, based on the analyses, that disposal of the dredged material on the banks of the canal system was not considered to represent a significant risk to human health and/or the environment.

### 2.3 Contaminants of Potential Concern

Based on the review of the site history and previous sediment investigations within Settlement Shores Estate canals, Contaminants of Potential Concern (CoPC) have been identified for the proposed sampling and testing program.

Testing will include physical and geochemical analysis. Samples will be tested for analytes listed in **Table 1** below.



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Table 1: Contaminants of Potential Concern

CoPC
Trace metals
Organics (PAHs, TPH, BTEX, PCBs, OC/OP pesticide)
Total organic carbon (TOC)
Nutrients
Tributyltin (TBT)
Particle size distribution (hydrometer)



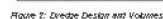
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### 3 Dredging Proposal

The key elements of the maintenance dredging for Settlement Shores Estate canals will comprise:

- dredging Canal 1 to 5 to RL -4.28 m (relative to Australian Height Datum)
- dredging all other canals to RL -2.16 m (relative to Australian Height Datum)
- dredging to provide sufficient channel width and stable slopes.

Typical cross sections of the canals are shown on **Figure 2**. The area to be dredged is indicatively shown on **Figure 2** as areas of cut (existing surface above design surface) and will require approximately 32,050 m<sup>3</sup> of maintenance dredging. This total volume broken down for each canal is also shown on **Figure 2**.





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## 4 Proposed Sampling and Testing

### 4.1 Objectives

The objective of this sediment quality assessment is to determine the physical and chemical quality of the sediments to be dredged.

### 4.2 Sample locations

Samples will be collected from 10 locations within the proposed dredge footprint as shown on **Figure 3**. A judgemental rather than random sampling plan has been adopted in order to target the areas of sediment accumulation throughout the canals. The number and locations of proposed samples have been determined in accordance with the National Assessment Guidelines for Dredging 2009 (NAGD).

Hydrographic survey analysis undertaken (refer **Figure 2**) determined that to restore canal bed levels to the original design levels requires dredging of approximately 32,050 m<sup>3</sup> of material. This volume excludes the shallow areas around the weir that as previously agreed comprise either existing rock protection structures or areas downstream of the weir that are not intended to be maintained as a navigable waterway. The analysis has also determined that the depths of dredging required at several locations exceed 0.5 metres and are up to 1.5 metres. These areas include Regatta Cove (Canal 5), The Governors Way (Canal 1) and localised areas around stormwater outlets.

Industry guidelines recommend sediment sampling at 0.5m increments through the depth of dredging to obtain representative sediment characterisation. Piston coring is proposed to recover samples with depth at each nominated location.

### 4.3 Sample Collection

The coordinates for each proposed sampling location are included in **Appendix A**. An onboard GPS will be used to position the sampling vessel at the nominated sampling locations. The GPS has an accuracy of +/-0.1m. However, following manoeuvring of the vessel into position and recovery of the sample from the sea bed, the positioning of cores is likely to have an accuracy of +/-5m.

The piston coring would be undertaken by Geochemical Assessments Pty Ltd. Prior to sampling, all equipment will be thoroughly inspected and washed down. Any evident sources of contamination will be cleaned and surfaces covered in plastic to avoid accidental contamination of any samples.

Up to 3 sub-samples will be collected from each piston core sample.

The following volumes will be retained:

- 250g homogenised sample for particle size analysis transferred to a ziplock plastic bag;
- 250g homogenised sample for ASS transferred to a ziplock plastic bag; and,
- 2 x 250ml homogenised sample for chemical analysis at all locations. Samples would be transferred to glass jars with Teflon lined lids with zero headspace.

Each jar/bag will be filled with zero headspace and tightly sealed to avoid loss of sample. Each container will be labelled with a unique identification number and each sample will be recorded on a log sheet.



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Sediment will typically adhere to the outside of the sample containers. To avoid cross contamination, after each container is sealed, the outside of each sample container will be washed with canal water.





Figure 5: Proposed Sample Locations



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#### 4.4 Estimated Number of Samples

For an estimated 32,050 m<sup>3</sup> of potentially contaminated sediment, the number of sampling locations required as specified in the NAGD is 10 discrete locations. For the proposed piston core locations, one subsample will be collected from each 0.5m depth increment within the core. The total number of subsamples collected is estimated to be 20 samples (refer **Table 2**).

In addition, a field duplicate will be collected at two locations.

Table 2: Estimated Sample Numbers

Canal	Sample location ID	Estimated thickness of sediment above design dredge depth	Proposed number of samples	Sample interval (m)	Suite of tests
1	SS1	1m	2	0-0.5	heavy metals, ASS screening
				0.5-1.0	heavy metals, ASS screening
	SS2	1m	2	0-0.5	heavy metals, ASS screening
				0.5-1.0	heavy metals, ASS screening
	SS3	1.5m	3	0-0.5	heavy metals, ASS screening, organics, nutrients and PSD
				0.5-1.0	heavy metals, ASS screening, organics, nutrients and PSD
				1.0-1.5	heavy metals, ASS screening
	SS4	1m	2	0-0.5	heavy metals, ASS screening
				0.5-1.0	heavy metals, ASS screening
2	SS5	0.5m	1	0-0.5	heavy metals, ASS screening
	SS6	1m	2	0-0.5	heavy metals, ASS screening, organics, nutrients and PSD
				0.5-1.0	heavy metals, ASS screening
3	SS7	1m	2	0-0.5	heavy metals, ASS screening
				0.5-1.0	heavy metals, ASS screening
5	SS8	1m	2	0-0.5	heavy metals, ASS screening, organics, nutrients and PSD
				0.5-1.0	heavy metals, ASS screening, organics, nutrients and PSD
	SS9	1.5m	3	0-0.5	heavy metals, ASS screening
				0.5-1.0	heavy metals, ASS screening
				1.0-1.5	heavy metals, ASS screening
8	SS10	0.5m	1	0-0.5	heavy metals, ASS screening
total number of samples:			20		

#### 4.5 Sample Preservation

All samples will be packed in ice in an esky immediately after sampling to maintain the temperature below 4°C. Samples will then be submitted to the analytical laboratory on the same day or the following morning.

If overnight storage of ASS samples is required, samples will be frozen.

#### 4.6 Sample Shipment

All sample containers will be clearly labelled with unique sample identification numbers. Samples will be transported in an esky in ice to the relevant analytical laboratory nominated for each of the analyses required. Royal HaskoningDHV will coordinate the analysis of the samples.

All samples will be transported under Royal HaskoningDHV chain of custody procedures. A copy of the chain of custody form is included in **Appendix B**.



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## 4.7 Analysis Schedule

### 4.7.1 Physical Analysis

Physical testing will comprise determination of the particle size distribution (PSD) by sieve analysis and hydrometer, and reporting of percentage gravel, sand, silt and clay. PSD testing will be undertaken on 20% of samples recovered.

### 4.7.2 Chemical Analysis

The laboratory selected to undertake the chemical testing is ALS (NATA registered). The proposed suite of tests comprises:

- A suite of heavy metals on all samples;
- Polycyclic aromatic hydrocarbons (PAHs), BTEX, PCBs, OC/OP pesticides, tributyltin (TBT), nutrients and total organic carbon (TOC) on 20% of samples; and,
- ASS screen testing on all samples.

Based on our experience, some detailed ASS (chromium suite) testing is likely. Similarly, TCLP testing is likely to be required for waste classification of the dredge material.

Statistical analysis and tabulation of data will be undertaken following data validation. Data management of the analysis results will be in accordance with the requirements of NAGD. Validation of data will include consideration of field QA/ QC procedures and evaluating the results from laboratory blanks, standard samples, field triplicate samples and split triplicate samples.

## 4.8 Equipment and Personnel

The equipment required for the sampling program is summarised as follows:

- piston corer
- tarpaulin/ plastic sheeting for containment of sediment
- measuring tape
- stainless steel bowl and spoons
- nitrile gloves and PPE
- Decon90 detergent (diluted to 5% with deionised water)
- sample containers and zip-lock bags
- permanent markers and other stationary
- eskies and ice
- camera
- data forms for recording field measurements and logging samples
- chain of custody forms

An experienced environmental scientist from Royal HaskoningDHV will coordinate the sampling program. Geochemical Assessments personnel will operate the piston corer and assist in the subsampling.

## 4.9 Health and Safety Precautions

The sampling program will adhere to Royal HaskoningDHV and Geochemical Assessments HSE systems

Safe Work Method Statements would be prepared for the coring and subsampling components of the proposed investigation.



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#### 4.10 Contingency Plan

Sampling may be delayed where severe weather is forecast, or due to equipment failure. In the event of delay, the sampling would be recommenced following the improvement in the weather or fixing of the equipment.



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## 5 QA/QC Procedures

### 5.1 Field QA/QC Procedures

Field QA/QC procedures will include the following:

- **Sample Location:** An onboard position fixing system will be used to locate the sampling locations.
- **Decontamination of Sampling Equipment:** Prior to use, the vessel will be thoroughly inspected and washed down. Any evident sources of contamination would be cleaned and covered in plastic to avoid accidental contamination of any samples. All surfaces used for sample handling will also be covered in plastic sheeting prior to subsampling. All sampling equipment that comes into contact with the sediment samples will be decontaminated (using Decon 90) prior to each sampling event.
- **Field duplicate:** A Duplicate Sample will be analysed and used to give an indication of the variability in the chemical properties of the sediment at a sample location.
- **Field Documentation:** Each sample location will be numbered on a sampling plan in the field logbook. All other observations including weather, time, date of sampling, water depth, and depth of core penetration will be noted in the field logbook. Time, date, core compaction and appearance of the sediments, e.g. texture, colour, odour and the like will also be reported in the field logbook during sub-sampling.
- **Cross Contamination:** Following sampling, to avoid cross contamination, each sample jar will be washed with water to remove sediment adhering to the outside of the sample containers.
- **Sample Control:** Each sample will have a unique identification number, which will be recorded in the field log book and chain of custody form. A chain of custody form will accompany the sediment samples at all times and will include the analysis method required of each laboratory.

### 5.2 Laboratory QA/QC Procedures

Laboratory QA/QC procedures for the chemical analyses will include the following:

- **Analysis Blanks:** One per analytical run or one in every 20 samples, whichever is the smaller.
- **Laboratory Duplicate:** One in every 10 samples or client batch, whichever is the smaller.
- **Laboratory Control Standard:** One per analytical run or one in every 20 samples, whichever is the smaller.
- **Laboratory Matrix Spike:** One in every 20 samples or client batch, whichever is the smaller.
- **Matrix Spike:** One in every 20 samples or client batch, whichever is the smaller.
- **Surrogate Spike:** For determinations that are appropriate, surrogate spikes will be added to all samples for analysis.
- **Calibration Blank and Mid Range Calibration Verification:** One per analytical run or one in every 20 samples, whichever is the smaller.



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## 6 Reporting

The main findings of the proposed sampling and testing investigation will be documented in a factual report. Reporting will be in accordance with the NAGD and NSW EPA (1997) reporting guidelines. The report will include:

- a description of the sampling program;
- tabulation of all laboratory results and a copy of the original laboratory sheets;
- results for organic analytes normalised to 1% total organic carbon (within limits of 0.2 to 10% TOC);
- statistical analysis of the results to calculate the mean, and standard deviation and the 95% upper confidence limit of the mean (95% UCL);
- comparison of geochemical results to relevant guidelines. Where values are less than the detection limit, a nominal value of one half of the detection limit will be used in the statistical analysis of the results; and,
- reporting of all QA/QC.

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HaskoningDHV

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**Appendix A: Sample Location Coordinates**

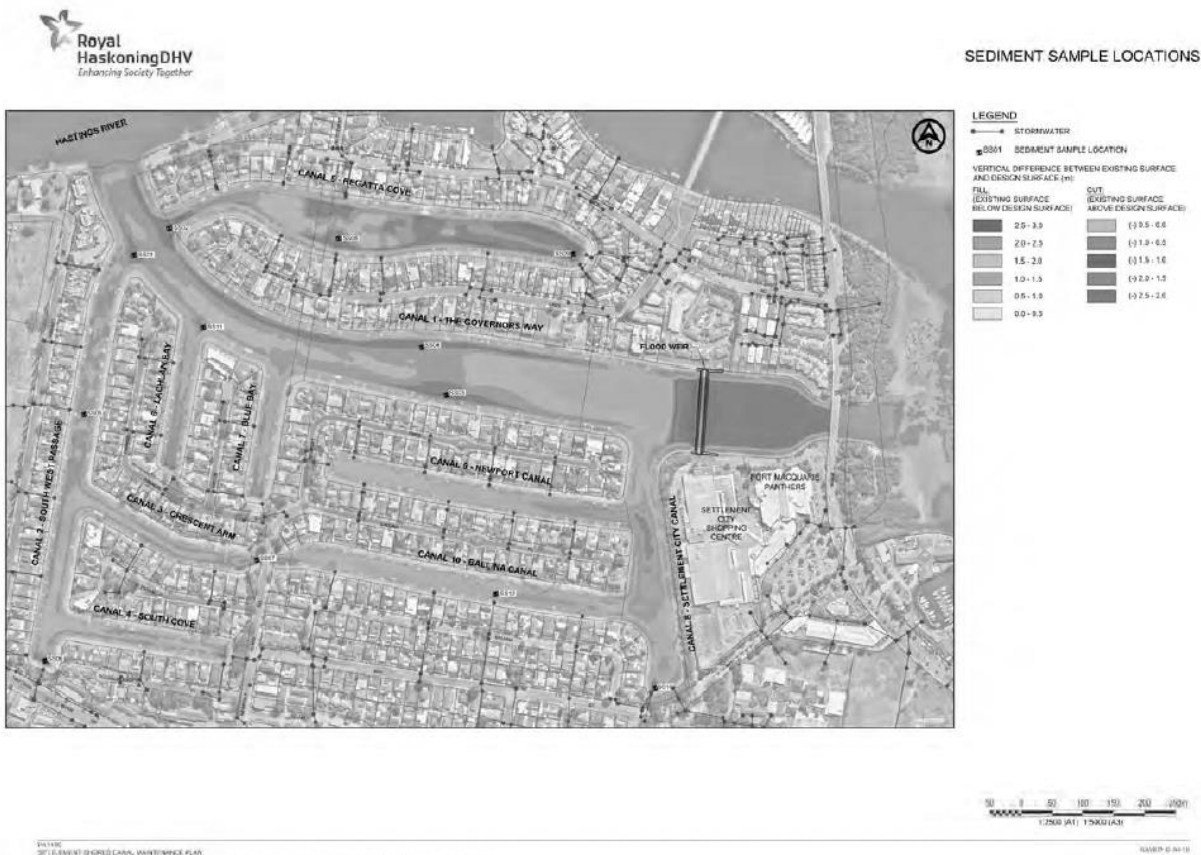
PROPOSED SAMPLE COORDINATES (MGA ZONE 56)		
SAMPLE ID	EASTING	NORTHING
SS01	489065.78	6523542.35
SS02	489122.28	6523586.21
SS03	489567.00	6523319.59
SS04	489527.18	6523395.10
SS05	488985.93	6523288.17
SS06	488922.65	6522891.19
SS07	489263.08	6523052.85
SS08	489393.85	6523569.53
SS09	489770.22	6523544.20
SS10	489913.44	6522852.59



## Appendix B: RHDHV COC form

[illegible]





Location: SS01  
 Easting (MGA Zone 56): 489065.78  
 Northing (MGA Zone 56): 6523542.35  
 Surface RL (m AHD): -2.8

Depth Range (m)	Description
Surface	Refusal on hard surface. Less than 0.1m sediment overlying.

Location: SS02  
 Easting (MGA Zone 56): 489122.28  
 Northing (MGA Zone 56): 6523586.21  
 Surface RL (m AHD): -3.5

Depth Range (m)	Description
0 - 0.5	Soft dark grey, sandy mud. Sand content increasing with depth, particularly at 0.4-0.5m. Faecal pellets in top 0.1m.
0.5 - 1.0	Fine-grained sand with trace mud. Light grey with distinct brown tinge (could be brown organic material, humic/coffee rock). Refusal at 1m depth.

Location: SS03  
 Easting (MGA Zone 56): 489567  
 Northing (MGA Zone 56): 6523319.59  
 Surface RL (m AHD): -3.1

Depth Range (m)	Description
0 - 0.5	Muddy sand with dark grey colouration (paler with depth). Lenses of humic/coffee rock material (0.32-0.36m).
0.5 - 1.08	Clean fine-grained quartzose sand with trace mud. Fines may be clay sized. Last 10cm is soft but is firm otherwise.
1.08 - 1.1	Pale green sandy gravelly clay (green coloured gravel).

Location: SS04  
 Easting (MGA Zone 56): 489527.18  
 Northing (MGA Zone 56): 6523395.1  
 Surface RL (m AHD): -3.7

Depth Range (m)	Description
0 - 0.1	Dark grey, hydrous, sandy mud with faecal pellets (from worms). Very soft.
0.1 - 0.5	Dark grey coloured sandy mud with trace gravel.
0.5 - 0.85	Sandy mud. Increased sand content with depth.
0.85 - 1.15	Sandy with some mud (silt/clay). Bottom of core refused on hard material, likely to be stiff clay. Bottom of core at 1.15m contained greeny coloured weathered rock fragments and brown humic rock.

**Location:** SS05  
**Easting (MGA Zone 56):** 488985.93  
**Northing (MGA Zone 56):** 6523288.17  
**Surface RL (m AHD):** -2.0

Depth Range (m)	Description
0 - 1.2	Grey/brown muddy sand with minor shell content. Firm consistency 0.95-1.2m, otherwise soft.

**Location:** SS06\*  
**Easting (MGA Zone 56):** 488922.65  
**Northing (MGA Zone 56):** 6522891.19  
**Surface RL (m AHD):** -1.0

Depth Range (m)	Description
0 - 0.4	Gravelly, medium quartzose sand with trace mud (5%). Gravel comprises quartz pebbles and lithic fragments. Vegetative material present including organic matter (broken down leaves). Grey to dark grey colour.
0.4 - 0.87	Slightly muddy, medium quartzose sand (well sorted). Brownish grey colour.
0.87 - 0.92	Sandy mud. Grey colour.
0.92 - 1.05	Slightly muddy quartzose sand. Grey to light brown colour.

\* Duplicate sample taken SS06 0-0.5m (QAQC1)

**Location:** SS07  
**Easting (MGA Zone 56):** 489263.08  
**Northing (MGA Zone 56):** 6523052.85  
**Surface RL (m AHD):** -1.8

Depth Range (m)	Description
0 - 0.78	Light tan coloured sand, well sorted and fine grained with trace mud. Minor shell fragment present.
0.78 - 1.0	Similar sand with higher mud content (5-10%). Darker grey to brown colour.

**Location:** SS08  
**Easting (MGA Zone 56):** 489393.85  
**Northing (MGA Zone 56):** 6523569.53  
**Surface RL (m AHD):** -3.5

Depth Range (m)	Description
0 - 0.55	Dark grey muddy sand. Soft consistency.
0.55 - 1.0	Grey, gravelly (shell fragments) sand with trace mud. Soft consistency.

**Location:** SS09\*  
**Easting (MGA Zone 56):** 489770.22  
**Northing (MGA Zone 56):** 6523544.2  
**Surface RL (m AHD):** -3.0

Depth Range (m)	Description
0 - 0.35	Light grey, well sorted sand with trace mud.
0.35 - 0.85	Dark grey muddy sand.
0.85 - 1.55	Light grey sand with trace mud.

\* Duplicate sample taken SS09 0.5-1.0m (QA/QC2)

**Location:** SS10  
**Easting (MGA Zone 56):** 489901  
**Northing (MGA Zone 56):** 6522847  
**Surface RL (m AHD):** -1.4

Depth Range (m)	Description
0 - 0.08	Muddy sand, dark grey to black colour. Surface layer of decomposing leaves/sticks (2cm thick). Sulphidic odour.
0.08 - 0.6	Muddy sand with trace gravel (shell fragments). Grey colouration. Organic rich layer between 0.24m and 0.27m. Higher mud content between 0.45m and 0.6m. Sulphidic odour.

**Location:** SS11  
**Easting (MGA Zone 56):** 489177  
**Northing (MGA Zone 56):** 6523427  
**Surface RL (m AHD):** -2.9

Depth Range (m)	Description
0 - 0.2	Black sandy mud. Very soft with faint sulphidic odour.
0.2 - 0.75	Grey muddy sand. Firm consistency.
0.75 - 1.05	Brown muddy sand. Gravel/shell layer 1.04-1.05m.
1.05 - 1.07	Fine grey sand.
1.07 - 1.1	Grey muddy sand.

**Location:** SS12  
**Easting (MGA Zone 56):** 489646  
**Northing (MGA Zone 56):** 6523000  
**Surface RL (m AHD):** -0.9

Depth Range (m)	Description
0 - 0.28	Sandy gravel. Lithic fragments to 3cm size. Black colouration with faint sulphidic odour.
0.28 - 0.6	Sandy gravel. Abundant lithic fragments, rounded/angular with occasional shells. Black colouration with anoxic sulphidic odour.

LOCATION: SS02





LOCATION: SS03







LOCATION: SS04









LOCATION: SS05

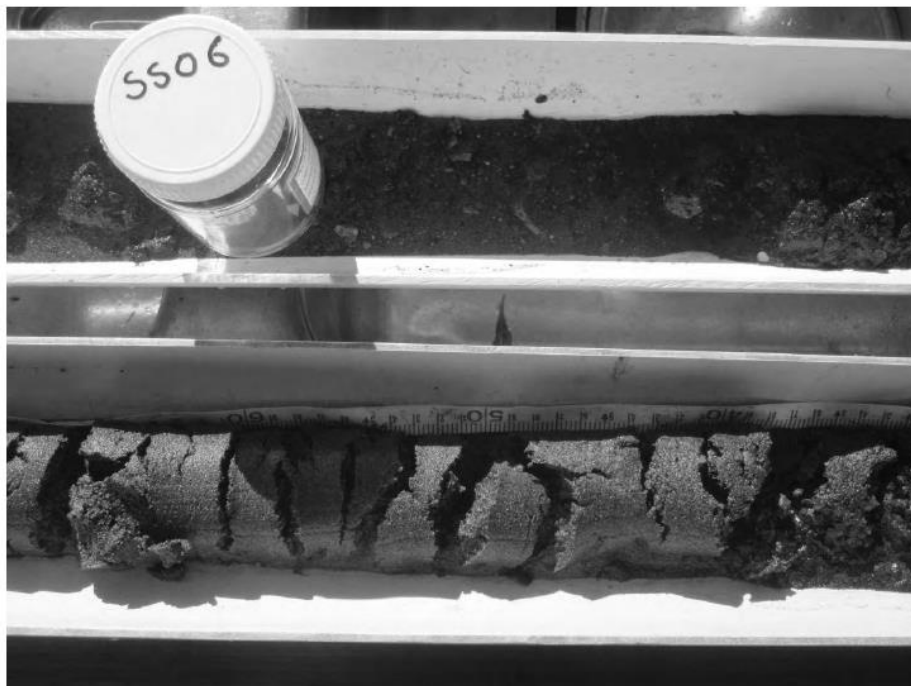


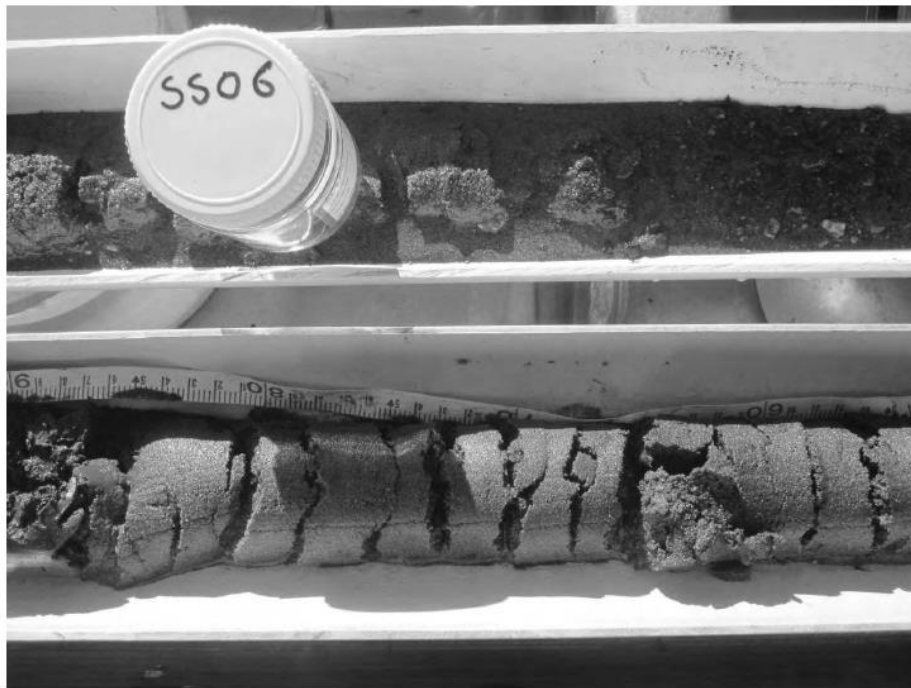




LOCATION: SS06









LOCATION: SS07







LOCATION: SS08





LOCATION: SS09







LOCATION: SS10







LOCATION: SS11









LOCATION: SS12





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Project related



## Appendix B – NPWS Atlas search results

**Fauna and Flora Coding Sheet for Atlas of NSW Wildlife Reports**

The following tables explain the coding used in the results of searches from the Atlas of NSW Wildlife database for fauna and flora data. Please note that not all fields may be populated in your data supply. This is dependent on both the information supplied by the observer, as well as your user level.

Please see Page 7 for information regarding sensitive species data.

To use this data in GIS, database or spreadsheet software, first open in Notepad (open the zipfile, right-click on the filename and select 'Open with > Notepad') and remove the disclaimer information at the top of the dataset, save and close. This will enable your software to recognise the header row as the field names for the data.

Please be aware Atlas data can exceed the row limit in Excel (65,536 records) which may result in truncation and data loss if you open and/or resave the data. Excel may also reformat some of the fields, such as the dates.

Atlas data can exceed the ArcGIS .dbf file size limit of 2 gigabytes when converting to a shapefile.

If you are renaming the files to use in ArcGIS you should avoid using spaces or non-alphanumeric characters (such as &, \$, @, # ).

FIELD	DESCRIPTION AND RELEVANT CODING
<b>DatasetName</b>	Refers to the dataset the observation is linked to. The most common type for this field is 'Default Incidental Sightings'.
<b>SightingKey</b>	A unique code automatically assigned to each sighting. If you would like to query a particular record please supply us with this unique identifier.
<b>SpeciesCode</b>	A unique code attributed to an individual species, genus or family.
<b>KingdomName</b>	Refers to whether the organism is flora (FL) or fauna (FA).
<b>ClassName</b>	Refers to the Class name.
<b>FamilyName</b>	Refers to the Family name.
<b>SortOrder</b>	Systematic placement of taxonomic hierarchy.
<b>ScientificName</b>	The internationally recognised Latin name given to an organism, following the International Codes of Botanical and Zoological Nomenclature.
<b>Exotic</b>	Denoted by * for all non-native species.
<b>CommonName</b>	Refers to the common name of an organism.
<b>NSWStatus</b>	This code identifies the Legal Status of the species within NSW under the Threatened Species Conservation Act (TSC Act 1995), the National Parks & Wildlife Act 1974 (NPW Act 1974), the Fisheries Management Act 1994 No. 38 (FM Act 1994) and the Sensitive Species Data Policy (SSDP).

Code	Description	Definition under the NPW Act 1974, the TSC Act 1995, the FM Act 1994 No. 38, or the SSDP.
P	Protected	Refers to fauna not listed in Schedule 11 of the NPW Act 1974.
P 13	Protected Native Plants	Refers to flora listed in Schedule 13 of the NPW Act 1974.
V	Vulnerable	Refers to fauna and flora species that are likely to become endangered unless the circumstances & factors threatening its survival or evolutionary development cease to operate (Schedule 2, TSC Act 1995).
E1	Endangered	Refers to fauna and flora species that are likely to become extinct in nature in NSW unless the circumstances and factors threatening its survival or evolutionary developments cease to operate; or, its numbers have been reduced to such a critical level, or its habitats have been so drastically reduced, that it is in immediate danger of extinction; or, it might already be extinct, but it is not presumed extinct (Schedule 1, part 1, TSC Act 1995).
E2	Endangered Population	Refers to a population where, in the opinion of the Scientific Committee, its numbers have been reduced to such a critical level, or its habitat has been so drastically reduced, that it is in immediate danger of extinction and it is not a population of a species already listed in Schedule 1, and: (a) it is disjunct and at or near the limit of its geographic range, or (b) it is or is likely to be genetically distinct, or (c) it is otherwise of significant conservation value. (Schedule 1, part 2, TSC Act 1995).
E4	Extinct	Refers to fauna and flora species that have not been located in nature during the preceding 50 years despite searching of known and likely habitats of that period (Schedule 1, part 4, TSC Act 1995).
E4A	Critically Endangered Species	Refers to a species that is eligible to be listed as a critically endangered species if, in the opinion of the Scientific Committee, it is facing an extremely high risk of extinction in New South Wales in the immediate future, as determined in accordance with criteria prescribed by the regulations. (Schedule 1a, part 1, TSC Act 1995).
FCE	Critically Endangered Fish Species	Refers to fish species that, in the opinion of the Fisheries Scientific Committee, are facing an extremely high risk of extinction in New South Wales in the immediate future, as determined in accordance with criteria prescribed by the regulations (Part 1 of Schedule 4A, FM Act 1994).
FE	Endangered Fish Species	Re Refers to fish species that, in the opinion of the Fisheries Scientific Committee: (a) are facing a very high risk of extinction in New South Wales in the near future, as determined in accordance with criteria prescribed by the regulations, and (b) are not eligible to be listed as a critically endangered species (Part 1 of Schedule 4, FM Act 1994).
FP	Protected Fish Species	The regulations may declare that fish of a specified species are protected fish (Part 2, Division 2, Section 19, FM Act 1994).
FV	Vulnerable Fish Species	Refers to fish species that, in the opinion of the Fisheries Scientific Committee: (a) are facing a high risk of extinction in New South Wales in the medium-term future, as determined in accordance



		with criteria prescribed by the regulations, and (b) are not eligible to be listed as an endangered or critically endangered species (Part 1 of Schedule 5, FM Act 1994).
	FX Extinct Fish	Refers to a species that is eligible to be listed if, in the opinion of the Fisheries Scientific Committee, it has not been recorded in its known or expected habitat in New South Wales, despite targeted surveys, over a time frame appropriate, in the opinion of the Fisheries Scientific Committee, to its life cycle and form (Part 4 of Schedule 4, FM Act 1994).
	FEP Endangered Population of Fish	Refers to a population that, in the opinion of the Fisheries Scientific Committee, is facing a very high risk of extinction in New South Wales in the near future, as determined in accordance with criteria prescribed by the regulations (Part 2 of Schedule 4, FM Act 1994).
	FKTP Key Threatening Process of Fish	Refers to a threatening process that, in the opinion of the Fisheries Scientific Committee: (a) adversely affects threatened species, populations or ecological communities, or (b) could cause species, populations or ecological communities that are not threatened to become threatened (Schedule 6, FM Act 1994).
	2 Category 2 sensitive species	Refers to species for which Atlas sightings' coordinates will be supplied denatured to public web applications, and denatured to licensed clients. Such species are classed as highly sensitive, and provision of precise locations would subject the species to high risk from threats such as disturbance and collection.
	3 Category 3 sensitive species	Refers to species for which sightings' coordinates will be supplied denatured to public web applications, but supplied 'as-held' to licensed clients. Current denaturing specifications are set out in Appendix 2. Such species are classed as of medium sensitivity, and provision of precise locations would subject the species to medium risk from threats such as collection/deliberate damage.  Data are supplied under the conditions of a written data agreement, usually a Data Licence Agreement.
CommStatus	This code identifies the Legal Status of the species under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act), and Migratory Bird agreements (JAMBA, CAMBA and ROKAMBA).	
	Code Description	Definition under the EPBC Act 1999, and Migratory Birds agreement.
	C CAMBA	China-Australia Migratory Bird Agreement: Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the People's Republic of China for the protection of Migratory Birds and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).
	CD Conservation Dependent	Refers to A native species is eligible to be included in the conservation dependent category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following subparagraphs are satisfied: (i) the species is a species of fish; (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of

		<p>long term survival in nature are maximised; (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory; (iv) cessation of the plan of management would adversely affect the conservation status of the species (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).</p>
CE	Critically Endangered	Refers to a native species is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
E	Endangered	Refers to a native species is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria (Subdivision A of Division 2 of Part 13, Commonwealth EPBC Act 1999).
J	JAMBA	Japan-Australia Migratory Bird Agreement: Refers to species listed in the Bilateral Agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).
K	ROKAMBA	Republic of Korea-Australia Migratory Bird Agreement: Refers to species listed in the Bilateral Agreement between the Government of Australia and the Government of the Republic of Korea for the protection of Migratory Birds and their Environment (Subdivision A of Division 1 of Part 5, Commonwealth EPBC Act 1999).
KTP	Key Threatening Process	Refers to a key process that threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
V	Vulnerable	Refers to a native species is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
X	Extinct	Refers to a native species is eligible to be included in the extinct category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
XW	Extinct in the Wild	Refers to a native species is eligible to be included in the extinct in the wild category at a particular time if, at that time: (a) it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or (b) it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form (Subdivision A of Division 1 of Part 13, Commonwealth EPBC Act 1999).
<b>SensitivityClass</b>	Indicates whether a species is listed in the Sensitive Species data policy. Geographic co-ordinates for sensitive species may be denatured, or with-held, depending on user access permissions.	

	<p>Denatured records will be flagged with:</p> <p>^^ - coordinates rounded to 0.01°</p> <p>^ - coordinates rounded to 0.1°</p> <p>The policy in full including the sensitive species listings can be located at <a href="http://www.environment.nsw.gov.au/policiesandguidelines/SensitiveSpeciesPolicy.htm">http://www.environment.nsw.gov.au/policiesandguidelines/SensitiveSpeciesPolicy.htm</a>.</p>																										
<b>DateFirst</b>	Refers to the date (dd/mm/yyyy) the species was sighted at a particular location. If the date that the species was sighted is uncertain, then First Date will indicate the earliest date on which the sighting may have occurred.																										
<b>DateLast</b>	Where the exact date of a sighting is known, DateLast will be equal to DateFirst. If the date that the species was sighted is uncertain, then Last Date will indicate the latest date on which the sighting may have occurred.																										
<b>NumberIndividuals</b>	Refers to the number of individuals recorded.																										
<b>EstimateTypeCode</b>	<p>Refers to the accuracy of the <b>NumberIndividuals</b> field.</p> <table border="1"> <thead> <tr> <th>Code</th><th>Definition of Code</th></tr> </thead> <tbody> <tr> <td>+</td><td>At least</td></tr> <tr> <td>&lt;</td><td>Less than</td></tr> <tr> <td>&gt;</td><td>Greater than</td></tr> <tr> <td>E</td><td>Estimate</td></tr> <tr> <td>X</td><td>Exactly</td></tr> </tbody> </table>	Code	Definition of Code	+	At least	<	Less than	>	Greater than	E	Estimate	X	Exactly														
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Latitude_GDA94	The position South of the Equator, measured in decimal degrees.																																			
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Zone	<p>A 6° band of longitude, divided according to the Universal Transverse Mercator (UTM) coordinate system.</p> <p>NSW is divided into 4 Zones;</p> <p>Zone 56 is 150 ° – 156 ° longitude, which encompasses much of eastern NSW.</p> <p>Zone 55 is 144 ° – 150 ° longitude.</p> <p>Zone 54 is 138 ° – 144 ° longitude, encompassing most of Western NSW.</p> <p>Zone 57 covers Lord Howe Island.</p> <p>The Zone in Atlas reports has been calculated from the Latitude and Longitude values. Data provided in MGA.</p>																																			
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**Sensitive Species Information**

The full Sensitive Species Data policy including the sensitive species listings is located at:  
<http://www.environment.nsw.gov.au/policiesandguidelines/SensitiveSpeciesPolicy.htm>

To further protect sensitive species, OEH requests that clients with their own location data for sensitive species consider not publishing precise locations, or detailed location descriptions, for these species.

**Please note - the Atlas of NSW Wildlife database is only one of a number of sources of fauna & flora information for NSW. Other sources include the CSIRO and Birds Australia.**

Data from the BioNet Atlas of NSW Wildlife website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1Å; ^^ rounded to 0.01Å). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Public Report of all Valid Records of Plants in PORT MACQUARIE-HASTINGS LGA returned a total of 47,838 records of 2,302 species.

Report generated on 6/07/2016 1:08 PM

Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Plantae	Flora	Acanthaceae	10427	<i>Avicennia marina subsp. australasica</i>		Grey Mangrove			12	
Plantae	Flora	Acanthaceae	1003	<i>Brunoniella australis</i>		Blue Trumpet			40	
Plantae	Flora	Acanthaceae	1004	<i>Brunoniella pumilio</i>		Dwarf Blue Trumpet			16	
Plantae	Flora	Acanthaceae	10771	<i>Hypoestes phyllostachya</i>	*				2	
Plantae	Flora	Acanthaceae	12259	<i>Justicia caudata</i>	*				1	
Plantae	Flora	Acanthaceae	12419	<i>Odontonema tubaeforme</i>	*				1	
Plantae	Flora	Acanthaceae	1010	<i>Pseuderanthemum variabile</i>		Pastel Flower			197	
Plantae	Flora	Acanthaceae	12348	<i>Rostellularia adscendens var. latifolia</i>					2	
Plantae	Flora	Adiantaceae	7997	<i>Adiantum aethiopicum</i>		Common Maidenhair	P		51	
Plantae	Flora	Adiantaceae	7998	<i>Adiantum diaphanum</i>		Filmy Maidenhair	P		1	
Plantae	Flora	Adiantaceae	7999	<i>Adiantum formosum</i>		Giant Maidenhair	P		47	
Plantae	Flora	Adiantaceae	8000	<i>Adiantum hispidulum</i>		Rough Maidenhair	P		38	
Plantae	Flora	Adiantaceae	11226	<i>Adiantum hispidulum var. hispidulum</i>		Rough Maidenhair	P		2	
Plantae	Flora	Adiantaceae	8001	<i>Adiantum silvaticum</i>			P		33	
Plantae	Flora	Adiantaceae	ADIA	<i>Adiantum spp.</i>			P		4	
Plantae	Flora	Adiantaceae	8444	<i>Pellaea falcata</i>		Sickle Fern			42	
Plantae	Flora	Adiantaceae	10488	<i>Pellaea nana</i>		Dwarf Sickle Fern			18	
Plantae	Flora	Adiantaceae	8010	<i>Pellaea paradoxa</i>					36	
Plantae	Flora	Adoxaceae	1953	<i>Sambucus australasica</i>		Native Elderberry			10	
Plantae	Flora	Aizoaceae	1025	<i>Carpobrotus glaucescens</i>		Pigface			1	
Plantae	Flora	Aizoaceae	3907	<i>Macarthuria neocambrica</i>					1	
Plantae	Flora	Aizoaceae	6574	<i>Sesuvium portulacastrum</i>					1	
Plantae	Flora	Aizoaceae	11185	<i>Tetragonia tetragonioides</i>		New Zealand Spinach			2	
Plantae	Flora	Akaniaceae	8978	<i>Akania bidwillii</i>		Turnipwood			13	
Plantae	Flora	Alismataceae	1043	<i>Alisma plantago-aquatica</i>		Water Plantain			4	
Plantae	Flora	Alismataceae	1044	<i>Damasium minus</i>		Starfruit			2	
Plantae	Flora	Alliaceae	10418	<i>Agapanthus praecox subsp. orientalis</i>	*				4	
Plantae	Flora	Alstroemeriaceae	6970	<i>Alstroemeria pulchella</i>	*	Parrot Alstroemeria			1	
Plantae	Flora	Amaranthaceae	6478	<i>Alternanthera denticulata</i>		Lesser Joyweed			21	
Plantae	Flora	Amaranthaceae	1055	<i>Amaranthus hybridus</i>	*	Slim Amaranth			1	
Plantae	Flora	Amaranthaceae	7896	<i>Deeringia amaranthoides</i>					1	
Plantae	Flora	Amaranthaceae	1065	<i>Deeringia arborescens</i>					5	
Plantae	Flora	Amaranthaceae	1067	<i>Nyssanthus diffusa</i>		Barbwire Weed			5	
Plantae	Flora	Amaryllidaceae	3539	<i>Crinum pedunculatum</i>		Swamp Lily			18	
Plantae	Flora	Amygdalaceae	5625	<i>Prunus persica</i>	*				2	
Plantae	Flora	Amygdalaceae	PRUN	<i>Prunus spp.</i>	*				2	

Plantae	Flora	Anacardiaceae	7734	<i>Euroschinus falcatus</i> var. <i>falcatus</i>	Ribbonwood	27
Plantae	Flora	Anacardiaceae	9351	<i>Mangifera indica</i> *	Mango	3
Plantae	Flora	Anacardiaceae	1085	<i>Rhodospaera rhodanthema</i>	Deep Yellowwood	1
Plantae	Flora	Anthericaceae	3517	<i>Arthropodium milleflorum</i>	Pale Vanilla-lily	5
Plantae	Flora	Anthericaceae	3518	<i>Arthropodium minus</i>	Small Vanilla Lily	5
Plantae	Flora	Anthericaceae	9097	<i>Arthropodium</i> sp. B		1
Plantae	Flora	Anthericaceae	ARTR	<i>Arthropodium</i> spp.		1
Plantae	Flora	Anthericaceae	3535	<i>Caesia parviflora</i>	Pale Grass-lily	9
Plantae	Flora	Anthericaceae	7183	<i>Caesia parviflora</i> var. <i>parviflora</i>		2
Plantae	Flora	Anthericaceae	7333	<i>Caesia parviflora</i> var. <i>vittata</i>		1
Plantae	Flora	Anthericaceae	3538	<i>Chlorophytum comosum</i> *	Spider Plant	1
Plantae	Flora	Anthericaceae	6752	<i>Laxmannia compacta</i>		2
Plantae	Flora	Anthericaceae	3556	<i>Laxmannia gracilis</i>	Slender Wire Lily	15
Plantae	Flora	Anthericaceae	3567	<i>Sowerbaea juncea</i>	Vanilla Plant	2
Plantae	Flora	Anthericaceae	3572	<i>Thysanotus juncifolius</i>		9
Plantae	Flora	Anthericaceae	THYS	<i>Thysanotus</i> spp.		2
Plantae	Flora	Anthericaceae	3574	<i>Thysanotus tuberosus</i>	Common Fringe-lily	11
Plantae	Flora	Anthericaceae	6427	<i>Thysanotus tuberosus</i> subsp. <i>tuberosus</i>		1
Plantae	Flora	Anthericaceae	7355	<i>Tricoryne elatior</i>	Yellow Autumn-lily	28
Plantae	Flora	Anthericaceae	3577	<i>Tricoryne simplex</i>		2
Plantae	Flora	Aphanopetalaceae	2266	<i>Aphanopetalum resinosum</i>	Gum Vine	46
Plantae	Flora	Apiaceae	1094	<i>Actinotus helianthi</i>	Flannel Flower P	13
Plantae	Flora	Apiaceae	1104	<i>Apium prostratum</i>	Sea Celery	1
Plantae	Flora	Apiaceae	11823	<i>Apium prostratum</i> var. <i>filiforme</i>		1
Plantae	Flora	Apiaceae	11824	<i>Apium prostratum</i> var. <i>prostratum</i>		1
Plantae	Flora	Apiaceae	1106	<i>Centella asiatica</i>	Indian Pennywort	141
Plantae	Flora	Apiaceae	CENE	<i>Centella</i> spp.		3
Plantae	Flora	Apiaceae	11195	<i>Cyclospermum leptophyllum</i> *	Slender Celery	9
Plantae	Flora	Apiaceae	1108	<i>Daucus carota</i> *	Wild Carrot	3
Plantae	Flora	Apiaceae	1109	<i>Daucus glochidiatus</i>	Native Carrot	6
Plantae	Flora	Apiaceae	10109	<i>Daucus glochidiatus</i> f. A		1
Plantae	Flora	Apiaceae	1118	<i>Foeniculum vulgare</i> *	Fennel	8
Plantae	Flora	Apiaceae	7959	<i>Hydrocotyle acutiloba</i>		30
Plantae	Flora	Apiaceae	1123	<i>Hydrocotyle bonariensis</i> *		48
Plantae	Flora	Apiaceae	1126	<i>Hydrocotyle geraniifolia</i>	Forest Pennywort	30
Plantae	Flora	Apiaceae	8461	<i>Hydrocotyle hirta</i>	Hairy Pennywort	4
Plantae	Flora	Apiaceae	1128	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort	17
Plantae	Flora	Apiaceae	1129	<i>Hydrocotyle pedicellosa</i>		5
Plantae	Flora	Apiaceae	7961	<i>Hydrocotyle sibthorpioides</i>		80

Plantae	Flora	Apiaceae	8572	<i>Hydrocotyle sp. aff. acutiloba</i>					5	
Plantae	Flora	Apiaceae	HYDR	<i>Hydrocotyle spp.</i>	*				2	
Plantae	Flora	Apiaceae	1132	<i>Hydrocotyle tripartita</i>				Pennywort	27	
Plantae	Flora	Apiaceae	1133	<i>Hydrocotyle verticillata</i>				Shield Pennywort	1	
Plantae	Flora	Apiaceae	1143	<i>Platysace ericoides</i>					1	
Plantae	Flora	Apiaceae	1144	<i>Platysace lanceolata</i>				Shrubby Platysace	8	
Plantae	Flora	Apiaceae	1154	<i>Trachymene incisa</i>				Trachymene	17	
Plantae	Flora	Apiaceae	8785	<i>Trachymene incisa subsp. incisa</i>					5	
Plantae	Flora	Apiaceae	1157	<i>Trachymene procumbens</i>					1	
Plantae	Flora	Apiaceae	1162	<i>Xanthosia pilosa</i>				Woolly Xanthosia	22	
Plantae	Flora	Apiaceae	1163	<i>Xanthosia tridentata</i>				Rock Xanthosia	2	
Plantae	Flora	Apocynaceae	1167	<i>Alyxia ruscifolia</i>				Prickly Alyxia	59	
Plantae	Flora	Apocynaceae	11047	<i>Araujia sericifera</i>	*			Moth Vine	30	
Plantae	Flora	Apocynaceae	1224	<i>Asclepias curassavica</i>	*			Blood Flower	5	
Plantae	Flora	Apocynaceae	1225	<i>Cynanchum carnosum</i>					2	
Plantae	Flora	Apocynaceae	1226	<i>Cynanchum elegans</i>				White-flowered Wax Plant	E1,P E 33	
Plantae	Flora	Apocynaceae	1227	<i>Gomphocarpus fruticosus</i>	*			Narrow-leaved Cotton Bush	34	
Plantae	Flora	Apocynaceae	1228	<i>Gomphocarpus physocarpus</i>	*			Balloon Cotton Bush	18	
Plantae	Flora	Apocynaceae	7742	<i>Hoya australis subsp. australis</i>				Native Hoya	2	
Plantae	Flora	Apocynaceae	7005	<i>Mandevilla laxa</i>	*			Chilean Jasmine	2	
Plantae	Flora	Apocynaceae	1231	<i>Marsdenia flavescens</i>				Hairy Milk Vine	14	
Plantae	Flora	Apocynaceae	8662	<i>Marsdenia lilae</i>				Large-flowered Milk Vine	10	
Plantae	Flora	Apocynaceae	8702	<i>Marsdenia lloydii</i>				Corky Marsdenia	14	
Plantae	Flora	Apocynaceae	1233	<i>Marsdenia longiloba</i>				Slender Marsdenia	E1,P V 4	
Plantae	Flora	Apocynaceae	10895	<i>Marsdenia pleiadenia</i>					2	
Plantae	Flora	Apocynaceae	1234	<i>Marsdenia rostrata</i>				Milk Vine	67	
Plantae	Flora	Apocynaceae	MARS	<i>Marsdenia spp.</i>					4	
Plantae	Flora	Apocynaceae	1235	<i>Marsdenia suaveolens</i>				Scented Marsdenia	3	
Plantae	Flora	Apocynaceae	1172	<i>Melodinus australis</i>				Southern Melodinus	49	
Plantae	Flora	Apocynaceae	1173	<i>Melodinus guilfoylei</i>				Bellbird Vine	2	
Plantae	Flora	Apocynaceae	10204	<i>Nerium oleander</i>	*			Oleander	3	
Plantae	Flora	Apocynaceae	1177	<i>Parsonsia brownii</i>				Mountain Silkpod	8	
Plantae	Flora	Apocynaceae	9505	<i>Parsonsia dorrigoensis</i>				Milky Silkpod	V,P E 20	
Plantae	Flora	Apocynaceae	1179	<i>Parsonsia fulva</i>				Furry Silkpod	2	
Plantae	Flora	Apocynaceae	1180	<i>Parsonsia induplicata</i>				Thin-leaved Silkpod	13	
Plantae	Flora	Apocynaceae	1181	<i>Parsonsia lanceolata</i>				Rough Silkpod	1	
Plantae	Flora	Apocynaceae	9908	<i>Parsonsia purpurascens</i>				Black Silkpod	10	
Plantae	Flora	Apocynaceae	1184	<i>Parsonsia rotata</i>				Veinless Silkpod	5	
Plantae	Flora	Apocynaceae	PARS	<i>Parsonsia spp.</i>					2	
Plantae	Flora	Apocynaceae	1185	<i>Parsonsia straminea</i>				Common Silkpod	263	
Plantae	Flora	Apocynaceae	7039	<i>Parsonsia velutina</i>					24	
Plantae	Flora	Apocynaceae	1187	<i>Parsonsia ventricosa</i>				Acuminate Silkpod	4	
Plantae	Flora	Apocynaceae	PLMR	<i>Plumeria spp.</i>	*			Frangipani	1	
Plantae	Flora	Apocynaceae	8620	<i>Tabernaemontana pandacqui</i>				Banana Bush	60	
Plantae	Flora	Apocynaceae	1240	<i>Tylophora barbata</i>				Bearded Tylophora	4	
Plantae	Flora	Apocynaceae	1243	<i>Tylophora grandiflora</i>				Small-leaved Tylophora	4	
Plantae	Flora	Apocynaceae	1244	<i>Tylophora paniculata</i>				Thin-leaved Tylophora	44	
Plantae	Flora	Apocynaceae	TYLO	<i>Tylophora spp.</i>					1	
Plantae	Flora	Apocynaceae	1245	<i>Tylophora woollsi</i>				Cryptic Forest Twiner	E1,P E 1	
Plantae	Flora	Apocynaceae	1189	<i>Vinca major</i>	*			Periwinkle	1	
Plantae	Flora	Aponogetonaceae	10854	<i>Aponogeton elongatus subsp. elongatus</i>					1	
Plantae	Flora	Araceae	8672	<i>Alocasia brisbanensis</i>				Cunjevoi	44	
Plantae	Flora	Araceae	1194	<i>Colocasia esculenta</i>	*			Taro	8	
Plantae	Flora	Araceae	1195	<i>Gymnostachys anceps</i>				Settler's Twine	208	
Plantae	Flora	Araceae	11289	<i>Monstera deliciosa</i>	*			Fruit Salad Plant	4	





Plantae	Flora	Araceae	11329	<i>Philodendron bipinnatifidum</i>	*	Philodendron		1
Plantae	Flora	Araceae	1196	<i>Pothos longipes</i>				19
Plantae	Flora	Araceae	7155	<i>Typhonium brownii</i>				6
Plantae	Flora	Araceae	12674	<i>Typhonium clemenshae</i>				1
Plantae	Flora	Araliaceae	1202	<i>Astrotricha latifolia</i>				16
Plantae	Flora	Araliaceae	1205	<i>Astrotricha longifolia</i>				10
Plantae	Flora	Araliaceae	12091	<i>Astrotricha longifolia f. 'Coastal'</i>				4
Plantae	Flora	Araliaceae	12676	<i>Astrotricha sp. Mount Boss</i>				7
Plantae	Flora	Araliaceae	1206	<i>Cephaalaria cephalobotrys</i>		Climbing Panax		80
Plantae	Flora	Araliaceae	1209	<i>Polyscias elegans</i>		Celery Wood		42
Plantae	Flora	Araliaceae	1210	<i>Polyscias murrayi</i>		Pencil Cedar		28
Plantae	Flora	Araliaceae	1211	<i>Polyscias sambucifolia</i>		Elderberry Panax		231
Plantae	Flora	Araliaceae	12373	<i>Polyscias sambucifolia subsp. sambucifolia</i>				8
Plantae	Flora	Araliaceae	8701	<i>Schefflera actinophylla</i>	*	Umbrella Tree		15
Plantae	Flora	Araucariaceae	1213	<i>Araucaria cunninghamii</i>		Hoop Pine		3
Plantae	Flora	Araucariaceae	1214	<i>Araucaria heterophylla</i>	*	Norfolk Island Pine		3
Plantae	Flora	Arecaceae	6458	<i>Archontophoenix cunninghamiana</i>		Bangalow Palm	P	98
Plantae	Flora	Arecaceae	11671	<i>Dypsis lutescens</i>	*	Yellow Butterfly Palm		1
Plantae	Flora	Arecaceae	1220	<i>Linospadix monostachyos</i>		Walking-stick Palm	P	52
Plantae	Flora	Arecaceae	1221	<i>Livistona australis</i>		Cabbage Palm	P	45
Plantae	Flora	Arecaceae	11354	<i>Phoenix canariensis</i>	*	Canary Island Date Palm		3
Plantae	Flora	Arecaceae	11731	<i>Syagrus romanzoffiana</i>	*	Cocos Palm		9
Plantae	Flora	Asparagaceae	11784	<i>Asparagus aethiopicus</i>	*	Asparagus Fern		57
Plantae	Flora	Asparagaceae	12136	<i>Asparagus africanus</i>	*			1
Plantae	Flora	Asparagaceae	11785	<i>Asparagus plumosus</i>	*	Climbing Asparagus Fern		5
Plantae	Flora	Asparagaceae	8984	<i>Sansevieria trifasciata</i>	*	Mother-in-law's Tongue		1
Plantae	Flora	Asphodelaceae	ALOE	<i>Aloe spp.</i>	*			1
Plantae	Flora	Asphodelaceae	11778	<i>Aloe vera</i>	*			2
Plantae	Flora	Aspleniaceae	8029	<i>Asplenium aethiopicum</i>		Shredded Spleenwort		2
Plantae	Flora	Aspleniaceae	10643	<i>Asplenium attenuatum var. attenuatum</i>				2
Plantae	Flora	Aspleniaceae	8031	<i>Asplenium australasicum</i>		Bird's Nest Fern	P	88
Plantae	Flora	Aspleniaceae	8866	<i>Asplenium bulbiferum subsp. gracillimum</i>		Mother Spleenwort		8
Plantae	Flora	Aspleniaceae	7415	<i>Asplenium difforme</i>				7
Plantae	Flora	Aspleniaceae	8033	<i>Asplenium flabellifolium</i>		Necklace Fern		15
Plantae	Flora	Aspleniaceae	8883	<i>Asplenium flaccidum subsp. flaccidum</i>		Weeping Spleenwort		15
Plantae	Flora	Aspleniaceae	8037	<i>Asplenium polyodon</i>		Sickle Spleenwort		23
Plantae	Flora	Asteliaceae	7527	<i>Cordyline congesta</i>				8
Plantae	Flora	Asteliaceae	7873	<i>Cordyline rubra</i>		Palm-Lily		7
Plantae	Flora	Asteliaceae	CORD	<i>Cordyline spp.</i>	*			3
Plantae	Flora	Asteliaceae	1018	<i>Cordyline stricta</i>		Narrow-leaved Palm Lily	P	215
Plantae	Flora	Asteraceae	1250	<i>Achillea millefolium</i>	*	Yarrow		1
Plantae	Flora	Asteraceae	1251	<i>Acomis acoma</i>				2
Plantae	Flora	Asteraceae	9242	<i>Adenostemma lavenia var. lavenia</i>		Sticky Daisy		1
Plantae	Flora	Asteraceae	1255	<i>Ageratina adenophora</i>	*	Crofton Weed		44
Plantae	Flora	Asteraceae	1256	<i>Ageratina riparia</i>	*	Mistflower		6

Plantae	Flora	Asteraceae	AGER	<i>Ageratina</i> spp.	*		1
Plantae	Flora	Asteraceae	9370	<i>Ageratum conyzoides</i>	*	Goatweed	2
				subsp. <i>conyzoides</i>			
Plantae	Flora	Asteraceae	1258	<i>Ageratum houstonianum</i>	*		51
Plantae	Flora	Asteraceae	1259	<i>Ambrosia artemisiifolia</i>	*	Annual Ragweed	6
Plantae	Flora	Asteraceae	1262	<i>Ambrosia tenuifolia</i>	*	Lacy Ragweed	4
Plantae	Flora	Asteraceae	1273	<i>Arctotheca calendula</i>	*	Capeweed	1
Plantae	Flora	Asteraceae	7391	<i>Arctotheca populifolia</i>	*	Beach Daisy	1
Plantae	Flora	Asteraceae	1275	<i>Arctotis stoechadifolia</i>	*	White Arctotis	1
Plantae	Flora	Asteraceae	1276	<i>Arrhenechthites mixta</i>		Purple Fireweed	2
Plantae	Flora	Asteraceae	1280	<i>Aster subulatus</i>	*	Wild Aster	8
Plantae	Flora	Asteraceae	1281	<i>Baccharis halimifolia</i>	*	Groundsel Bush	4
Plantae	Flora	Asteraceae	1283	<i>Bidens pilosa</i>	*	Cobbler's Pegs	136
Plantae	Flora	Asteraceae	1284	<i>Bidens subalternans</i>	*	Greater Beggar's Ticks	2
Plantae	Flora	Asteraceae	1285	<i>Bidens tripartita</i>	*	Burr Marigold	1
Plantae	Flora	Asteraceae	7218	<i>Brachyscome aculeata</i>		Hill Daisy	1
Plantae	Flora	Asteraceae	7244	<i>Brachyscome diversifolia</i>			1
				var. <i>dissecta</i>			
Plantae	Flora	Asteraceae	6872	<i>Brachyscome microcarpa</i>			4
Plantae	Flora	Asteraceae	7911	<i>Brachyscome nova-anglica</i>			1
Plantae	Flora	Asteraceae	BRAC	<i>Brachyscome</i> spp.			1
Plantae	Flora	Asteraceae	1339	<i>Calotis dentex</i>		Burr-daisy	3
Plantae	Flora	Asteraceae	CALI	<i>Calotis</i> spp.		A Burr-daisy	1
Plantae	Flora	Asteraceae	1350	<i>Camptacra barbata</i>			1
Plantae	Flora	Asteraceae	1358	<i>Carthamus lanatus</i>	*	Saffron Thistle	1
Plantae	Flora	Asteraceae	1362	<i>Cassinia arcuata</i>		Sifton Bush	1
Plantae	Flora	Asteraceae	1368	<i>Cassinia leptocephala</i>			1
Plantae	Flora	Asteraceae	9246	<i>Cassinia leptocephala</i>			1
				subsp. <i>leptocephala</i>			
Plantae	Flora	Asteraceae	CASI	<i>Cassinia</i> spp.			5
Plantae	Flora	Asteraceae	12425	<i>Cassinia telfordii</i>			3
Plantae	Flora	Asteraceae	1374	<i>Cassinia trinerva</i>			5
Plantae	Flora	Asteraceae	1375	<i>Cassinia uncatata</i>		Sticky Cassinia	9
Plantae	Flora	Asteraceae	14360	<i>Centipeda minima</i> subsp. <i>minima</i>		spreading sneezeweed	2
Plantae	Flora	Asteraceae	13957	<i>Centratherum australium</i>			14
Plantae	Flora	Asteraceae	8945	<i>Centratherum punctatum</i>	*		1
Plantae	Flora	Asteraceae	1392	<i>Chrysanthemoides monilifera</i>	*		39
Plantae	Flora	Asteraceae	9400	<i>Chrysanthemoides monilifera</i> subsp. <i>monilifera</i>	*	Boneseed	3
Plantae	Flora	Asteraceae	8686	<i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i>	*	Bitou Bush	40
Plantae	Flora	Asteraceae	8562	<i>Chrysocephalum semipapposum</i>		Clustered Everlasting	1
Plantae	Flora	Asteraceae	1400	<i>Cirsium vulgare</i>	*	Spear Thistle	78
Plantae	Flora	Asteraceae	1404	<i>Conyza bonariensis</i>	*	Flaxleaf Fleabane	56
Plantae	Flora	Asteraceae	10138	<i>Conyza canadensis</i> var. <i>canadensis</i>	*	Canadian Fleabane	5
Plantae	Flora	Asteraceae	1408	<i>Conyza parva</i>	*	Fleabane	4
Plantae	Flora	Asteraceae	CONY	<i>Conyza</i> spp.	*	A Fleabane	25
Plantae	Flora	Asteraceae	10442	<i>Conyza sumatrensis</i>	*	Tall fleabane	23
Plantae	Flora	Asteraceae	1409	<i>Coreopsis lanceolata</i>	*	Coreopsis	1
Plantae	Flora	Asteraceae	13745	<i>Coronidium elatum</i>			27
Plantae	Flora	Asteraceae	13836	<i>Coronidium scorpioides</i>		Button Everlasting	5
Plantae	Flora	Asteraceae	1412	<i>Cotula australis</i>		Common Cotula	3
Plantae	Flora	Asteraceae	1414	<i>Cotula coronopifolia</i>	*	Water Buttons	5
Plantae	Flora	Asteraceae	8634	<i>Craspedia variabilis</i>		Common Billy-buttons	2

Plantae	Flora	Asteraceae	1421	<i>Crassocephalum crepidioides</i>	*	Thickhead	6
Plantae	Flora	Asteraceae	1426	<i>Cymbonotus lawsonianus</i>		Bear's Ear	1
Plantae	Flora	Asteraceae	14577	<i>Dimorphotheca ecklonis</i>	*	Cape Daisy	1
Plantae	Flora	Asteraceae	7903	<i>Eclipta platyglossa</i>		Yellow Twin-heads	8
Plantae	Flora	Asteraceae	1435	<i>Eclipta prostrata</i>			2
Plantae	Flora	Asteraceae	1437	<i>Enydra fluctuans</i>			5
Plantae	Flora	Asteraceae	7425	<i>Epilates australis</i>		Spreading Nut-heads	2
Plantae	Flora	Asteraceae	1439	<i>Erechtites valerianifolia</i>	*	Brazilian Fireweed	18
Plantae	Flora	Asteraceae	1441	<i>Erigeron karvinskianus</i>	*	Bony-tip Fleabane	6
Plantae	Flora	Asteraceae	9904	<i>Euchiton involucrat</i>		Star Cudweed	2
Plantae	Flora	Asteraceae	11439	<i>Euchiton japonicus</i>			21
Plantae	Flora	Asteraceae	9690	<i>Euchiton sphaericus</i>		Star Cudweed	10
Plantae	Flora	Asteraceae	EUCH	<i>Euchiton spp.</i>		A Cudweed	2
Plantae	Flora	Asteraceae	1449	<i>Facelis retusa</i>	*		3
Plantae	Flora	Asteraceae	1450	<i>Galinsoga parviflora</i>	*	Potato Weed	7
Plantae	Flora	Asteraceae	14493	<i>Gamochaeta coarctata</i>	*		5
Plantae	Flora	Asteraceae	12748	<i>Gamochaeta purpurea</i>	*	Purple Cudweed	16
Plantae	Flora	Asteraceae	9111	<i>Gazania rigens</i>	*		1
Plantae	Flora	Asteraceae	13989	<i>Glossocardia bidens</i>		Cobbler's Tack	4
Plantae	Flora	Asteraceae	1472	<i>Helianthus annuus</i>	*	Common Sunflower	1
Plantae	Flora	Asteraceae	HELI	<i>Helichrysum spp.</i>			3
Plantae	Flora	Asteraceae	7163	<i>Hemisteptia lyrata</i>			2
Plantae	Flora	Asteraceae	1540	<i>Hypochaeris glabra</i>	*	Smooth Catsear	13
Plantae	Flora	Asteraceae	8788	<i>Hypochaeris radicata</i>	*	Catsear	87
Plantae	Flora	Asteraceae	HVPC	<i>Hypochaeris spp.</i>	*	A Catsear	1
Plantae	Flora	Asteraceae	1550	<i>Lactuca serriola</i>	*	Prickly Lettuce	1
Plantae	Flora	Asteraceae	1551	<i>Lagenifera stipitata</i>		Blue Bottle-daisy	17
Plantae	Flora	Asteraceae	11959	<i>Lagenophora gracilis</i>		Slender Lagenophora	33
Plantae	Flora	Asteraceae	11960	<i>Lagenophora stipitata</i>		Common Lagenophora	3
Plantae	Flora	Asteraceae	8703	<i>Leptinella filicula</i>			2
Plantae	Flora	Asteraceae	9203	<i>Leptinella longipes</i>			2
Plantae	Flora	Asteraceae	12770	<i>Leptinella reptans</i>			1
Plantae	Flora	Asteraceae	1565	<i>Melanthera biflora</i>			9
Plantae	Flora	Asteraceae	1579	<i>Olearia alpicola</i>		Alpine Daisy-bush	1
Plantae	Flora	Asteraceae	1601	<i>Olearia microphylla</i>			1
Plantae	Flora	Asteraceae	1605	<i>Olearia nemstii</i>			7
Plantae	Flora	Asteraceae	8635	<i>Olearia oppositifolia</i>			1
Plantae	Flora	Asteraceae	1617	<i>Olearia tomentosa</i>		Toothed Daisy-bush	12
Plantae	Flora	Asteraceae	1618	<i>Olearia viscidula</i>		Wallaby Weed	3
Plantae	Flora	Asteraceae	8884	<i>Onopordum acanthium subsp. acanthium</i>	*	Scotch Thistle	9
Plantae	Flora	Asteraceae	9404	<i>Ozothamnus argophyllus</i>			2
Plantae	Flora	Asteraceae	8663	<i>Ozothamnus bidwillii</i>			2
Plantae	Flora	Asteraceae	9206	<i>Ozothamnus cassinioides</i>			1
Plantae	Flora	Asteraceae	8557	<i>Ozothamnus diosmifolius</i>		White Dogwood	142
Plantae	Flora	Asteraceae	8885	<i>Ozothamnus ferrugineus</i>		Tree Everlasting	1
Plantae	Flora	Asteraceae	8706	<i>Ozothamnus obcordatus subsp. major</i>		Grey Everlasting	2
Plantae	Flora	Asteraceae	8817	<i>Ozothamnus obovatus</i>			10
Plantae	Flora	Asteraceae	8665	<i>Ozothamnus rufescens</i>			16
Plantae	Flora	Asteraceae	OZOT	<i>Ozothamnus spp.</i>			1
Plantae	Flora	Asteraceae	8666	<i>Ozothamnus whitei</i>			1
Plantae	Flora	Asteraceae	10684	<i>Picris angustifolia subsp. angustifolia</i>			1

Plantae	Flora	Asteraceae	1633	<i>Podolepis jaceoides</i>	Showy Copper-wire Daisy	2
Plantae	Flora	Asteraceae	1636	<i>Podolepis neglecta</i>		1
Plantae	Flora	Asteraceae	7780	<i>Pseudognaphalium luteoalbum</i>	Jersey Cudweed	3
Plantae	Flora	Asteraceae	14267	<i>Psilidia altissima</i>	*	1
Plantae	Flora	Asteraceae	8563	<i>Rhodanthe anthemoides</i>		1
Plantae	Flora	Asteraceae	1651	<i>Senecio amygdalifolius</i>		42
Plantae	Flora	Asteraceae	7914	<i>Senecio diaschides</i>		10
Plantae	Flora	Asteraceae	1664	<i>Senecio hispidulus</i>	Hill Fireweed	1
Plantae	Flora	Asteraceae	1666	<i>Senecio laetus</i>	Variable Groundsel	3
Plantae	Flora	Asteraceae	1667	<i>Senecio linearifolius</i>	Fireweed Groundsel	3
Plantae	Flora	Asteraceae	12804	<i>Senecio linearifolius</i> var. <i>arachnoideus</i>		1
Plantae	Flora	Asteraceae	6465	<i>Senecio madagascariensis</i>	*	155
Plantae	Flora	Asteraceae	1671	<i>Senecio minimus</i>		3
Plantae	Flora	Asteraceae	12221	<i>Senecio pinnatifolius</i>		4
Plantae	Flora	Asteraceae	14040	<i>Senecio pinnatifolius</i> var. <i>lanceolatus</i>		2
Plantae	Flora	Asteraceae	12811	<i>Senecio pinnatifolius</i> var. <i>pinnatifolius</i>		8
Plantae	Flora	Asteraceae	11634	<i>Senecio prenanthoides</i>		1
Plantae	Flora	Asteraceae	1675	<i>Senecio quadridentatus</i>	Cotton Fireweed	1
Plantae	Flora	Asteraceae	SENE	<i>Senecio</i> spp.	*	5
Plantae	Flora	Asteraceae	10171	<i>Senecio tamoides</i>	*	1
Plantae	Flora	Asteraceae	8589	<i>Senecio tenuiflorus</i>	A fireweed	1
Plantae	Flora	Asteraceae	1679	<i>Senecio vagus</i>		2
Plantae	Flora	Asteraceae	11237	<i>Senecio vagus</i> subsp. <i>eglandulosus</i>		3
Plantae	Flora	Asteraceae	1680	<i>Senecio velleioides</i>		1
Plantae	Flora	Asteraceae	8781	<i>Sigesbeckia australiensis</i>		1
Plantae	Flora	Asteraceae	8789	<i>Sigesbeckia orientalis</i> subsp. <i>orientalis</i>	Indian Weed	33
Plantae	Flora	Asteraceae	1686	<i>Siliva anthemifolia</i>	*	1
Plantae	Flora	Asteraceae	7851	<i>Siliva sessilis</i>	*	11
Plantae	Flora	Asteraceae	1689	<i>Sonchus asper</i>	*	1
Plantae	Flora	Asteraceae	1690	<i>Sonchus oleraceus</i>	*	50
Plantae	Flora	Asteraceae	12815	<i>Sphagnetocola trilobata</i>	*	2
Plantae	Flora	Asteraceae	1695	<i>Tagetes minuta</i>	*	20
Plantae	Flora	Asteraceae	1698	<i>Taraxacum officinale</i>	*	95
Plantae	Flora	Asteraceae	TARA	<i>Taraxacum</i> spp.		2
Plantae	Flora	Asteraceae	7433	<i>Vernonia cinerea</i>		63
Plantae	Flora	Asteraceae	9254	<i>Vernonia cinerea</i> var. <i>cinerea</i>		29
Plantae	Flora	Asteraceae	1711	<i>Vittadinia cuneata</i>	A Fuzzweed	1
Plantae	Flora	Asteraceae	VITT	<i>Vittadinia</i> spp.		1
Plantae	Flora	Asteraceae	1724	<i>Wedelia spilanthes</i>		1
Plantae	Flora	Asteraceae	7130	<i>Xanthium occidentale</i>	*	4
Plantae	Flora	Asteraceae	XANH	<i>Xanthium</i> spp.	*	1
Plantae	Flora	Asteraceae	11377	<i>Xerochrysium bracteatum</i>	Golden Everlasting	6
Plantae	Flora	Asteraceae	1730	<i>Youngia japonica</i>		2
Plantae	Flora	Athyriaceae	10702	<i>Deparia petersenii</i> subsp. <i>congrua</i>		6
Plantae	Flora	Athyriaceae	8043	<i>Diplazium assimile</i>		3
Plantae	Flora	Athyriaceae	8351	<i>Diplazium australe</i>	Austral Lady Fern	10
Plantae	Flora	Athyriaceae	8044	<i>Diplazium dilatatum</i>		5
Plantae	Flora	Azollaceae	9260	<i>Azolla filiculoides</i>	Pacific Azolla	2
Plantae	Flora	Azollaceae	8049	<i>Azolla pinnata</i>		3
Plantae	Flora	Azollaceae	AZOL	<i>Azolla</i> spp.		6
Plantae	Flora	Balsaminaceae	9112	<i>Impatiens walleriana</i>	*	1
Plantae	Flora	Basellaceae	1733	<i>Anredera cordifolia</i>	*	3

Plantae	Flora	Bignoniaceae	8688	<i>Jacaranda mimosifolia</i>	*	Jacaranda	3
Plantae	Flora	Bignoniaceae	1739	<i>Pandorea jasminoides</i>		Bower Vine	5
Plantae	Flora	Bignoniaceae	1740	<i>Pandorea pandorana</i>		Wonga Wonga Vine	192
Plantae	Flora	Bignoniaceae	10485	<i>Pandorea pandorana</i> <i>subsp. pandorana</i>		Wonga Wonga Vine	12
Plantae	Flora	Bignoniaceae	10205	<i>Tecoma capensis</i>	*	Cape Honeysuckle	1
Plantae	Flora	Bignoniaceae	10206	<i>Tecoma stans</i>	*	Yellow Bignonia	2
Plantae	Flora	Blandfordiaceae	3528	<i>Blandfordia grandiflora</i>		Christmas Bells	P 4
Plantae	Flora	Blechnaceae	8051	<i>Blechnum camfieldii</i>			5
Plantae	Flora	Blechnaceae	8052	<i>Blechnum cartilagineum</i>		Gristle Fern	238
Plantae	Flora	Blechnaceae	8057	<i>Blechnum indicum</i>		Swamp Water Fern	84
Plantae	Flora	Blechnaceae	7760	<i>Blechnum minus</i>		Soft Water Fern	1
Plantae	Flora	Blechnaceae	8058	<i>Blechnum nudum</i>		Fishbone Water Fern	18
Plantae	Flora	Blechnaceae	8060	<i>Blechnum patersonii</i>		Strap Water Fern	21
Plantae	Flora	Blechnaceae	10519	<i>Blechnum patersonii</i> <i>subsp. patersonii</i>			7
Plantae	Flora	Blechnaceae	BLEC	<i>Blechnum spp.</i>			1
Plantae	Flora	Blechnaceae	8063	<i>Blechnum wattsii</i>		Hard Water Fern	46
Plantae	Flora	Blechnaceae	8064	<i>Doodia aspera</i>		Prickly Rasp Fern	175
Plantae	Flora	Blechnaceae	8065	<i>Doodia caudata</i>		Small Rasp Fern	5
Plantae	Flora	Blechnaceae	10522	<i>Doodia linearis</i>		Small Rasp Fern	1
Plantae	Flora	Boraginaceae	8667	<i>Austrocynoglossum latifolium</i>			8
Plantae	Flora	Boraginaceae	1751	<i>Echium plantagineum</i>	*	Patterson's Curse	1
Plantae	Flora	Boraginaceae	7370	<i>Ehretia acuminata</i> var. <i>acuminata</i>		Koda	33
Plantae	Flora	Boraginaceae	1758	<i>Heliotropium amplexicaule</i>	*	Blue Heliotrope	1
Plantae	Flora	Brassicaceae	9732	<i>Brassica rapa</i> subsp. <i>sylvestris</i>	*	Turnip	1
Plantae	Flora	Brassicaceae	BRAS	<i>Brassica spp.</i>	*	Brassica	1
Plantae	Flora	Brassicaceae	1794	<i>Capsella bursa-pastoris</i>	*	Shepherd's Purse	1
Plantae	Flora	Brassicaceae	CAPS	<i>Capsella spp.</i>	*		1
Plantae	Flora	Brassicaceae	1795	<i>Cardamine hirsuta</i>	*	Common Bittercress	1
Plantae	Flora	Brassicaceae	10568	<i>Cardamine microthrix</i>		Eastern Bitter-cress	3
Plantae	Flora	Brassicaceae	1800	<i>Coronopus didymus</i>	*	Lesser Swinecress	1
Plantae	Flora	Brassicaceae	1844	<i>Rorippa gigantea</i>			1
Plantae	Flora	Brassicaceae	1848	<i>Rorippa nasturtium-aquaticum</i>	*	Watercress	1
Plantae	Flora	Brassicaceae	1850	<i>Sinapis arvensis</i>	*	Charlock	1
Plantae	Flora	Burmanniaceae	7104	<i>Burmannia disticha</i>			2
Plantae	Flora	Cabombaceae	1867	<i>Cabomba caroliniana</i>	*	Cabomba	2
Plantae	Flora	Cactaceae	1875	<i>Opuntia stricta</i>	*	Common Prickly Pear	1
Plantae	Flora	Callitricheae	1907	<i>Callitriche muelleri</i>			3
Plantae	Flora	Callitricheae	1909	<i>Callitriche stagnalis</i>	*	Common Starwort	1
Plantae	Flora	Campanulaceae	1929	<i>Wahlenbergia communis</i>		Tufted Bluebell	3
Plantae	Flora	Campanulaceae	1934	<i>Wahlenbergia gracilis</i>		Sprawling Bluebell	9
Plantae	Flora	Campanulaceae	WAHL	<i>Wahlenbergia spp.</i>		Bluebell	1
Plantae	Flora	Campanulaceae	1938	<i>Wahlenbergia stricta</i>		Tall Bluebell	1
Plantae	Flora	Campanulaceae	8708	<i>Wahlenbergia stricta</i> <i>subsp. stricta</i>		Tall Bluebell	3
Plantae	Flora	Cannaceae	10436	<i>Canna x generalis</i>	*		1
Plantae	Flora	Capparaceae	1943	<i>Capparis arborea</i>		Native Pomegranate	16
Plantae	Flora	Capparaceae	7353	<i>Cleome hassleriana</i>	*	Giant Spider-flower	1
Plantae	Flora	Caprifoliaceae	1952	<i>Lonicera japonica</i>	*	Japanese Honeysuckle	12
Plantae	Flora	Cardiopteridaceae	3275	<i>Citronella moorei</i>			32

Plantae	Flora	Caryophyllaceae	1960	<i>Cerastium glomeratum</i>	*	Mouse-ear Chickweed				3	
Plantae	Flora	Caryophyllaceae	13845	<i>Petrorhagia dubia</i>	*					1	
Plantae	Flora	Caryophyllaceae	10547	<i>Silene latifolia subsp. alba</i>	*	White Campion				1	
Plantae	Flora	Caryophyllaceae	2004	<i>Stellaria flaccida</i>						1	
Plantae	Flora	Caryophyllaceae	2006	<i>Stellaria media</i>	*	Common Chickweed				6	
Plantae	Flora	Casuarinaceae	8980	<i>Allocasuarina defungens</i>		Dwarf Heath Casuarina	E1,P	E		32	
Plantae	Flora	Casuarinaceae	2012	<i>Allocasuarina littoralis</i>		Black She-Oak				220	
Plantae	Flora	Casuarinaceae	9011	<i>Allocasuarina simulans</i>		Nabiac Casuarina	V,P	V		K	
Plantae	Flora	Casuarinaceae	ALLC	<i>Allocasuarina spp.</i>						6	
Plantae	Flora	Casuarinaceae	14655	<i>Allocasuarina thalassoscopia</i>						1	
Plantae	Flora	Casuarinaceae	2017	<i>Allocasuarina torulosa</i>		Forest Oak				517	
Plantae	Flora	Casuarinaceae	9006	<i>Casuarina cunninghamiana subsp. cunninghamiana</i>		River Oak	P			15	
Plantae	Flora	Casuarinaceae	9247	<i>Casuarina equisetifolia subsp. incana</i>		Coastal She-oak				4	
Plantae	Flora	Casuarinaceae	2022	<i>Casuarina glauca</i>		Swamp Oak				158	
Plantae	Flora	Casuarinaceae	CASU	<i>Casuarina spp.</i>						1	
Plantae	Flora	Celastraceae	2026	<i>Celastrus australis</i>		Staff Climber				8	
Plantae	Flora	Celastraceae	6794	<i>Celastrus subspicata</i>		Large-leaved Staff Vine				42	
Plantae	Flora	Celastraceae	14671	<i>Denhamia bilocularis</i>						2	
Plantae	Flora	Celastraceae	8387	<i>Denhamia celastroides</i>		Denhamia				17	
Plantae	Flora	Celastraceae	7278	<i>Denhamia pittosporoides subsp. pittosporoides</i>		Veiny Denhamia				1	
Plantae	Flora	Celastraceae	14670	<i>Denhamia silvestris</i>		Narrow-leaved Orangebark				44	
Plantae	Flora	Celastraceae	2029	<i>Elaeodendron australe</i>						27	
Plantae	Flora	Celastraceae	12523	<i>Elaeodendron australe var. australe</i>						10	
Plantae	Flora	Ceratophyllaceae	2042	<i>Ceratophyllum demersum</i>		Hornwort				2	
Plantae	Flora	Chenopodiaceae	2065	<i>Atriplex patula</i>	*					1	
Plantae	Flora	Chenopodiaceae	9614	<i>Atriplex prostrata</i>	*					1	
Plantae	Flora	Chenopodiaceae	2084	<i>Chenopodium album</i>	*	Fat Hen				1	
Plantae	Flora	Chenopodiaceae	2094	<i>Chenopodium glaucum</i>						1	
Plantae	Flora	Chenopodiaceae	2110	<i>Einadia hastata</i>		Berry Saltbush				8	
Plantae	Flora	Chenopodiaceae	6481	<i>Einadia nutans subsp. linifolia</i>		Climbing Saltbush				1	
Plantae	Flora	Chenopodiaceae	2114	<i>Enchylaena tomentosa</i>		Ruby Saltbush				1	
Plantae	Flora	Chenopodiaceae	11156	<i>Salsola tragus 'strobilifera'</i>						1	
Plantae	Flora	Chenopodiaceae	9423	<i>Sarcocornia quinqueflora subsp. quinqueflora</i>						17	
Plantae	Flora	Chenopodiaceae	2200	<i>Suaeda australis</i>						2	

Plantae	Flora	Clusiaceae	7240	<i>Hypericum gramineum</i>	Small St John's Wort	17
Plantae	Flora	Clusiaceae	2203	<i>Hypericum japonicum</i>		4
Plantae	Flora	Clusiaceae	2204	<i>Hypericum perforatum</i> *	St. Johns Wort	1
Plantae	Flora	Colchicaceae	3533	<i>Burchardia umbellata</i>	Milkmaids	7
Plantae	Flora	Colchicaceae	3578	<i>Wurmbea biglandulosa</i>		7
Plantae	Flora	Colchicaceae	7699	<i>Wurmbea dioica subsp. dioica</i>	Early Nancy	2
Plantae	Flora	Commelinaceae	2206	<i>Aneilema acuminatum</i>		4
Plantae	Flora	Commelinaceae	2207	<i>Aneilema biflorum</i>		2
Plantae	Flora	Commelinaceae	2209	<i>Commelina cyanea</i>	Native Wandering Jew	73
Plantae	Flora	Commelinaceae	6788	<i>Murdannia graminea</i>		4
Plantae	Flora	Commelinaceae	2211	<i>Polia crispata</i>		11
Plantae	Flora	Commelinaceae	10508	<i>Tradescantia fluminensis</i> *	Wandering Jew	38
Plantae	Flora	Commelinaceae	12262	<i>Tradescantia pallida</i> *	Purple Queen	1
Plantae	Flora	Commelinaceae	8969	<i>Tradescantia zebrina</i> *	Silvery Inch Plant	1
Plantae	Flora	Convolvulaceae	2215	<i>Calystegia marginata</i>		20
Plantae	Flora	Convolvulaceae	2219	<i>Convolvulus arvensis</i> *	Field Bindweed	1
Plantae	Flora	Convolvulaceae	2220	<i>Convolvulus erubescens</i>	Pink Bindweed	17
Plantae	Flora	Convolvulaceae	CONV	<i>Convolvulus spp.</i> *	A Bindweed	1
Plantae	Flora	Convolvulaceae	2286	<i>Cuscuta australis</i>	Australian Dodder	1
Plantae	Flora	Convolvulaceae	2287	<i>Cuscuta campestris</i> *	Golden Dodder	3
Plantae	Flora	Convolvulaceae	2222	<i>Dichondra repens</i>	Kidney Weed	115
Plantae	Flora	Convolvulaceae	8727	<i>Dichondra sp. A</i>	Kidney Weed	2
Plantae	Flora	Convolvulaceae	8278	<i>Evolvulus alsinoides var. decumbens</i>		2
Plantae	Flora	Convolvulaceae	12139	<i>Ipomoea brasiliensis</i>		2
Plantae	Flora	Convolvulaceae	2225	<i>Ipomoea cairica</i> *		33
Plantae	Flora	Convolvulaceae	2227	<i>Ipomoea indica</i> *	Morning Glory	13
Plantae	Flora	Convolvulaceae	2229	<i>Ipomoea purpurea</i> *	Common Morning Glory	1
Plantae	Flora	Convolvulaceae	2231	<i>Polymeria calycina</i>		69
Plantae	Flora	Cornaceae	6469	<i>Alangium villosum subsp. polyasmoides</i>	Muskwood	23
Plantae	Flora	Crassulaceae	8813	<i>Bryophyllum delagoense</i> *	Mother of millions	1
Plantae	Flora	Crassulaceae	6827	<i>Bryophyllum pinnatum</i> *	Resurrection Plant	1
Plantae	Flora	Crassulaceae	2242	<i>Crassula sieberiana</i>	Australian Stonecrop	2
Plantae	Flora	Cucurbitaceae	2261	<i>Sicyos australis</i>		1
Plantae	Flora	Cucurbitaceae	2263	<i>Zehneria cunninghamii</i>	Slender Cucumber	5
Plantae	Flora	Cunoniaceae	2267	<i>Bauera capitata</i>		8
Plantae	Flora	Cunoniaceae	2268	<i>Bauera rubioides</i>	River Rose	1
Plantae	Flora	Cunoniaceae	2269	<i>Caldcluvia paniculosa</i>	Soft Corkwood	166



Plantae	Flora	Cunoniaceae	2270	<i>Callicoma serratifolia</i>	Black Wattle			132
Plantae	Flora	Cunoniaceae	2271	<i>Ceratopetalum apetalum</i>	Coachwood			103
Plantae	Flora	Cunoniaceae	2272	<i>Ceratopetalum gummiferum</i>	Christmas Bush	P		24
Plantae	Flora	Cunoniaceae	2273	<i>Geissois benthamiana</i>	Red Carabeen			34
Plantae	Flora	Cunoniaceae	2275	<i>Schizomeria ovata</i>	Crabapple			183
Plantae	Flora	Cunoniaceae	2276	<i>Vesselowskyia rubifolia</i>	Southern Marara			8
Plantae	Flora	Cunoniaceae	11685	<i>Vesselowskyia venusta</i>				4
Plantae	Flora	Cupressaceae	2280	<i>Callitris macleayana</i>	Stringybark Pine			14
Plantae	Flora	Cupressaceae	2283	<i>Callitris oblonga</i>	Pygmy Cypress Pine	V,P	V	K
Plantae	Flora	Cupressaceae	2285	<i>Callitris rhomboidea</i>	Port Jackson Pine			13
Plantae	Flora	Cupressaceae	12449	<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress			1
Plantae	Flora	Cyatheaceae	8074	<i>Cyathe australis</i>	Rough Treefern	P		122
Plantae	Flora	Cyatheaceae	8076	<i>Cyathe cooperi</i>	Straw Treefern	P		13
Plantae	Flora	Cyatheaceae	8079	<i>Cyathe leichhardtiana</i>	Prickly Treefern	P		57
Plantae	Flora	Cyatheaceae	CYAT	<i>Cyathe spp.</i>		P		7
Plantae	Flora	Cyperaceae	8856	<i>Abildgaardia ovata</i>				6
Plantae	Flora	Cyperaceae	2294	<i>Baumea acuta</i>				2
Plantae	Flora	Cyperaceae	2295	<i>Baumea arthropophylla</i>				1
Plantae	Flora	Cyperaceae	2296	<i>Baumea articulata</i>	Jointed Twig-rush			38
Plantae	Flora	Cyperaceae	2299	<i>Baumea juncea</i>				30
Plantae	Flora	Cyperaceae	2300	<i>Baumea muelleri</i>				6
Plantae	Flora	Cyperaceae	2301	<i>Baumea nuda</i>				1
Plantae	Flora	Cyperaceae	9016	<i>Baumea planifolia</i>				1
Plantae	Flora	Cyperaceae	2302	<i>Baumea rubiginosa</i>				40
Plantae	Flora	Cyperaceae	BAUM	<i>Baumea spp.</i>				1
Plantae	Flora	Cyperaceae	2303	<i>Baumea teretifolia</i>				15
Plantae	Flora	Cyperaceae	2305	<i>Bolboschoenus caldwelii</i>				3
Plantae	Flora	Cyperaceae	BOLB	<i>Bolboschoenus spp.</i>				2
Plantae	Flora	Cyperaceae	2310	<i>Carex appressa</i>	Tall Sedge			65
Plantae	Flora	Cyperaceae	2313	<i>Carex breviculmis</i>				18
Plantae	Flora	Cyperaceae	2314	<i>Carex brownii</i>				4
Plantae	Flora	Cyperaceae	9019	<i>Carex brunnea</i>	Greater Brown Sedge			9
Plantae	Flora	Cyperaceae	2319	<i>Carex declinata</i>				1
Plantae	Flora	Cyperaceae	2321	<i>Carex fascicularis</i>	Tassel Sedge			16
Plantae	Flora	Cyperaceae	2322	<i>Carex gaudichaudiana</i>				6
Plantae	Flora	Cyperaceae	2325	<i>Carex hubbardii</i>				2
Plantae	Flora	Cyperaceae	7898	<i>Carex incomitata</i>				1
Plantae	Flora	Cyperaceae	2327	<i>Carex inversa</i>	Knob Sedge			9
Plantae	Flora	Cyperaceae	2330	<i>Carex lobolepis</i>				1
Plantae	Flora	Cyperaceae	2331	<i>Carex longibrachiata</i>				39
Plantae	Flora	Cyperaceae	8855	<i>Carex maculata</i>				23
Plantae	Flora	Cyperaceae	CARE	<i>Carex spp.</i>				21
Plantae	Flora	Cyperaceae	11001	<i>Caustis blakei subsp. blakei</i>		P		9
Plantae	Flora	Cyperaceae	2341	<i>Caustis flexuosa</i>	Curly Wig	P		4
Plantae	Flora	Cyperaceae	2343	<i>Caustis recurvata</i>		P		9
Plantae	Flora	Cyperaceae	9315	<i>Caustis recurvata var. recurvata</i>		P		5
Plantae	Flora	Cyperaceae	2344	<i>Chorizandra cymbaria</i>				25
Plantae	Flora	Cyperaceae	2345	<i>Chorizandra sphaerocephala</i>	Roundhead Bristle-sedge			17
Plantae	Flora	Cyperaceae	2346	<i>Cladium procerum</i>				4
Plantae	Flora	Cyperaceae	2353	<i>Cyperus brevifolius</i>				12
Plantae	Flora	Cyperaceae	2358	<i>Cyperus congestus</i>				5
Plantae	Flora	Cyperaceae	2359	<i>Cyperus cyperoides</i>				2
Plantae	Flora	Cyperaceae	7143	<i>Cyperus difformis</i>	Dirty Dora			5
Plantae	Flora	Cyperaceae	2360	<i>Cyperus disjunctus</i>				15
Plantae	Flora	Cyperaceae	9144	<i>Cyperus eglobosus</i>				1
Plantae	Flora	Cyperaceae	2363	<i>Cyperus enervis</i>				3
Plantae	Flora	Cyperaceae	2364	<i>Cyperus eragrostis</i>	Umbrella Sedge			43
Plantae	Flora	Cyperaceae	2365	<i>Cyperus esculentus</i>	Yellow Nutgrass			1
Plantae	Flora	Cyperaceae	2366	<i>Cyperus exaltatus</i>				2





Plantae	Flora	Cyperaceae	2367	<i>Cyperus filipes</i>		1
Plantae	Flora	Cyperaceae	2368	<i>Cyperus flaccidus</i>	Lax Flat-sedge	1
Plantae	Flora	Cyperaceae	2374	<i>Cyperus gracilis</i>	Slender Flat-sedge	9
Plantae	Flora	Cyperaceae	7535	<i>Cyperus haspan</i>		4
Plantae	Flora	Cyperaceae	9146	<i>Cyperus haspan subsp. haspan</i>		4
Plantae	Flora	Cyperaceae	9147	<i>Cyperus haspan subsp. juncooides</i>		1
Plantae	Flora	Cyperaceae	2377	<i>Cyperus imbecillis</i>		1
Plantae	Flora	Cyperaceae	2378	<i>Cyperus involucratus</i>	* Umbrella Plant	2
Plantae	Flora	Cyperaceae	2379	<i>Cyperus laevigatus</i>		5
Plantae	Flora	Cyperaceae	2380	<i>Cyperus laevis</i>		4
Plantae	Flora	Cyperaceae	2381	<i>Cyperus leiocaulon</i>		2
Plantae	Flora	Cyperaceae	2383	<i>Cyperus lucidus</i>	Leafy Flat Sedge	6
Plantae	Flora	Cyperaceae	2385	<i>Cyperus odoratus</i>		2
Plantae	Flora	Cyperaceae	2386	<i>Cyperus papyrus</i>	*	3
Plantae	Flora	Cyperaceae	8483	<i>Cyperus polystachyos</i>		40
Plantae	Flora	Cyperaceae	2393	<i>Cyperus rotundus</i>	* Nutgrass	10
Plantae	Flora	Cyperaceae	2395	<i>Cyperus sanguinolentus</i>		4
Plantae	Flora	Cyperaceae	2398	<i>Cyperus sesquiflorus</i>	*	4
Plantae	Flora	Cyperaceae	2399	<i>Cyperus sphaeroideus</i>		2
Plantae	Flora	Cyperaceae	CYP	<i>Cyperus spp.</i>		9
Plantae	Flora	Cyperaceae	2403	<i>Cyperus tetraphyllus</i>		15
Plantae	Flora	Cyperaceae	2404	<i>Cyperus trinervis</i>		10
Plantae	Flora	Cyperaceae	2408	<i>Eleocharis acuta</i>		8
Plantae	Flora	Cyperaceae	2411	<i>Eleocharis cylindrostachys</i>		2
Plantae	Flora	Cyperaceae	2413	<i>Eleocharis equisetina</i>		35
Plantae	Flora	Cyperaceae	2415	<i>Eleocharis minuta</i>	*	5
Plantae	Flora	Cyperaceae	6988	<i>Eleocharis sphacelata</i>	Tall Spike Rush	39
Plantae	Flora	Cyperaceae	ELEO	<i>Eleocharis spp.</i>	Spike-rush, Spike-sedge	8
Plantae	Flora	Cyperaceae	12416	<i>Ficinia nodosa</i>	Knobby Club-rush	11
Plantae	Flora	Cyperaceae	6663	<i>Fimbristylis cinnamometorum</i>		2
Plantae	Flora	Cyperaceae	7435	<i>Fimbristylis dichotoma</i>	Common Fringe-sedge	24
Plantae	Flora	Cyperaceae	7328	<i>Fimbristylis ferruginea</i>		6
Plantae	Flora	Cyperaceae	7870	<i>Fimbristylis polytrichoides</i>		1
Plantae	Flora	Cyperaceae	2428	<i>Fimbristylis tristachya</i>		1
Plantae	Flora	Cyperaceae	2431	<i>Gahnia aspera</i>	Rough Saw-sedge	121
Plantae	Flora	Cyperaceae	2432	<i>Gahnia clarkei</i>	Tall Saw-sedge	173
Plantae	Flora	Cyperaceae	2437	<i>Gahnia insignis</i>		4
Plantae	Flora	Cyperaceae	2439	<i>Gahnia melanocarpa</i>	Black Fruit Saw-sedge	51
Plantae	Flora	Cyperaceae	2442	<i>Gahnia sieberiana</i>	Red-fruit Saw-sedge	P 95
Plantae	Flora	Cyperaceae	GAHN	<i>Gahnia spp.</i>		4
Plantae	Flora	Cyperaceae	2445	<i>Gymnoschoenus sphaerocephalus</i>	Button Grass	2
Plantae	Flora	Cyperaceae	2448	<i>Isolepis cernua</i>	Nodding Club-rush	2
Plantae	Flora	Cyperaceae	2451	<i>Isolepis habra</i>		1
Plantae	Flora	Cyperaceae	2454	<i>Isolepis inundata</i>	Club-rush	32
Plantae	Flora	Cyperaceae	6455	<i>Isolepis sepulcralis</i>	*	1
Plantae	Flora	Cyperaceae	8379	<i>Lepidosperma elatius</i>		8
Plantae	Flora	Cyperaceae	2465	<i>Lepidosperma filiforme</i>		7
Plantae	Flora	Cyperaceae	8749	<i>Lepidosperma gunnii</i>		3
Plantae	Flora	Cyperaceae	9313	<i>Lepidosperma latens</i>		3
Plantae	Flora	Cyperaceae	6402	<i>Lepidosperma laterale</i>	Variable Sword-sedge	179
Plantae	Flora	Cyperaceae	2469	<i>Lepidosperma limicola</i>		6
Plantae	Flora	Cyperaceae	2470	<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge	4
Plantae	Flora	Cyperaceae	2471	<i>Lepidosperma neesii</i>		5
Plantae	Flora	Cyperaceae	2472	<i>Lepidosperma quadrangulatum</i>		16
Plantae	Flora	Cyperaceae	LEPD	<i>Lepidosperma spp.</i>		7
Plantae	Flora	Cyperaceae	2474	<i>Lepidosperma tortuosum</i>		3

Plantae	Flora	Cyperaceae	2475	<i>Lepidosperma urophorum</i>			6
Plantae	Flora	Cyperaceae	2476	<i>Lepironia articulata</i>			36
Plantae	Flora	Cyperaceae	8956	<i>Ptilothrix deusta</i>			39
Plantae	Flora	Cyperaceae	2482	<i>Rhynchospora brownii</i>	Grassy Beak-sedge		2
Plantae	Flora	Cyperaceae	12906	<i>Rhynchospora brownii</i> subsp. <i>brownii</i>			2
Plantae	Flora	Cyperaceae	6707	<i>Schoenoplectus mucronatus</i>			25
Plantae	Flora	Cyperaceae	SCHO	<i>Schoenoplectus spp.</i>			4
Plantae	Flora	Cyperaceae	2490	<i>Schoenoplectus validus</i>			1
Plantae	Flora	Cyperaceae	2491	<i>Schoenus apogon</i>	Fluke Bogrush		20
Plantae	Flora	Cyperaceae	2492	<i>Schoenus brevifolius</i>			23
Plantae	Flora	Cyperaceae	2495	<i>Schoenus ericetorum</i>			2
Plantae	Flora	Cyperaceae	9057	<i>Schoenus lepidosperma</i> subsp. <i>pachylepis</i>			2
Plantae	Flora	Cyperaceae	2499	<i>Schoenus maschalinus</i>			3
Plantae	Flora	Cyperaceae	2500	<i>Schoenus melanostachys</i>			29
Plantae	Flora	Cyperaceae	2504	<i>Schoenus paludosus</i>			2
Plantae	Flora	Cyperaceae	8899	<i>Schoenus vaginatus</i>			1
Plantae	Flora	Cyperaceae	2514	<i>Scleria mackaviensis</i>			4
Plantae	Flora	Cyperaceae	2516	<i>Tetraria capillaris</i>			3
Plantae	Flora	Cyperaceae	2518	<i>Tricostularia pauciflora</i>			1
Plantae	Flora	Cyperaceae	8902	<i>Uncinia nemoralis</i>			1
Plantae	Flora	Davalliaceae	8084	<i>Arthropteris beckeri</i>			15
Plantae	Flora	Davalliaceae	8085	<i>Arthropteris palisotii</i>	Lesser Creeping Fern	E1,P,3	K
Plantae	Flora	Davalliaceae	8086	<i>Arthropteris tenella</i>			49
Plantae	Flora	Davalliaceae	10647	<i>Davallia solida</i> var. <i>pyxidata</i>	Hare's Foot Fern		36
Plantae	Flora	Davalliaceae	8088	<i>Nephrolepis cordifolia</i>	Fishbone Fern		26
Plantae	Flora	Davalliaceae	NEPH	<i>Nephrolepis spp.</i>			3
Plantae	Flora	Dennstaedtiaceae	7411	<i>Dennstaedtia davallioides</i>	Lacy Ground Fern		6
Plantae	Flora	Dennstaedtiaceae	7271	<i>Histiopteris incisa</i>	Bat's Wing Fern		38
Plantae	Flora	Dennstaedtiaceae	7385	<i>Hypolepis glandulifera</i>	Downy Ground Fern		13
Plantae	Flora	Dennstaedtiaceae	7749	<i>Hypolepis muelleri</i>	Harsh Ground Fern		58
Plantae	Flora	Dennstaedtiaceae	7653	<i>Hypolepis rugosula</i>	Ruddy Ground Fern		1
Plantae	Flora	Dennstaedtiaceae	HYPL	<i>Hypolepis spp.</i>			1
Plantae	Flora	Dennstaedtiaceae	6403	<i>Pteridium esculentum</i>	Bracken		314
Plantae	Flora	Dicksoniaceae	8341	<i>Calochlaena dubia</i>	Rainbow Fern		231
Plantae	Flora	Dicksoniaceae	8082	<i>Dicksonia antarctica</i>	Soft Treefern	P	22
Plantae	Flora	Dicksoniaceae	DICK	<i>Dicksonia spp.</i>		P	1
Plantae	Flora	Dilleniaceae	2526	<i>Hibbertia acicularis</i>			4
Plantae	Flora	Dilleniaceae	2527	<i>Hibbertia aspera</i>	Rough Guinea Flower		52
Plantae	Flora	Dilleniaceae	10554	<i>Hibbertia aspera</i> subsp. <i>aspera</i>			8
Plantae	Flora	Dilleniaceae	2532	<i>Hibbertia dentata</i>	Twining Guinea Flower		85
Plantae	Flora	Dilleniaceae	12910	<i>Hibbertia dentata</i> var. <i>dentata</i>			3
Plantae	Flora	Dilleniaceae	2533	<i>Hibbertia diffusa</i>	Wedge Guinea Flower		9
Plantae	Flora	Dilleniaceae	10863	<i>Hibbertia empetrifolia</i> subsp. <i>empetrifolia</i>			33
Plantae	Flora	Dilleniaceae	2536	<i>Hibbertia fasciculata</i>			10
Plantae	Flora	Dilleniaceae	2538	<i>Hibbertia hexandra</i>	Tree Guinea Flower	E1,P	8
Plantae	Flora	Dilleniaceae	9696	<i>Hibbertia incana</i>			1

Plantae	Flora	Dilleniaceae	2539	<i>Hibbertia linearis</i>		10
Plantae	Flora	Dilleniaceae	2542	<i>Hibbertia obtusifolia</i>	Hoary Guinea Flower	17
Plantae	Flora	Dilleniaceae	2543	<i>Hibbertia pedunculata</i>		7
Plantae	Flora	Dilleniaceae	2545	<i>Hibbertia riparia</i>		8
Plantae	Flora	Dilleniaceae	2546	<i>Hibbertia rufa</i>	Brown Guinea Flower	2
Plantae	Flora	Dilleniaceae	7436	<i>Hibbertia salicifolia</i>		2
Plantae	Flora	Dilleniaceae	2548	<i>Hibbertia scandens</i>	Climbing Guinea Flower	267
Plantae	Flora	Dilleniaceae	2550	<i>Hibbertia serpyllifolia</i>	Hairy Guinea Flower	4
Plantae	Flora	Dilleniaceae	H188	<i>Hibbertia spp.</i>		12
Plantae	Flora	Dilleniaceae	11250	<i>Hibbertia superans</i>	E1,P	15
Plantae	Flora	Dilleniaceae	2551	<i>Hibbertia vestita</i>		19
Plantae	Flora	Dilleniaceae	8590	<i>Hibbertia villosa</i>		5
Plantae	Flora	Dioscoreaceae	6446	<i>Dioscorea transversa</i>	Native Yam	159
Plantae	Flora	Droseraceae	2556	<i>Drosera auriculata</i>		1
Plantae	Flora	Droseraceae	2557	<i>Drosera binata</i>	Forked Sundew	3
Plantae	Flora	Droseraceae	12073	<i>Drosera burmanni</i>		3
Plantae	Flora	Droseraceae	2559	<i>Drosera peltata</i>	A Sundew	7
Plantae	Flora	Droseraceae	2561	<i>Drosera spatulata</i>		12
Plantae	Flora	Droseraceae	DROS	<i>Drosera spp.</i>		3
Plantae	Flora	Dryopteridaceae	8012	<i>Arachniodes aristata</i>	Prickly Shield Fern	5
Plantae	Flora	Dryopteridaceae	8014	<i>Lastreopsis acuminata</i>	Shiny Shield Fern	37
Plantae	Flora	Dryopteridaceae	8015	<i>Lastreopsis decomposita</i>	Trim Shield Fern	82
Plantae	Flora	Dryopteridaceae	11102	<i>Lastreopsis microsora</i> subsp. <i>microsora</i>	Creeping Shield Fern	43
Plantae	Flora	Dryopteridaceae	8019	<i>Lastreopsis munita</i>	Naked Shield Fern	9
Plantae	Flora	Dryopteridaceae	LAST	<i>Lastreopsis spp.</i>		5
Plantae	Flora	Dryopteridaceae	8023	<i>Polystichum australiense</i>	Harsh Shield Fern	1
Plantae	Flora	Dryopteridaceae	8024	<i>Polystichum fallax</i>		1
Plantae	Flora	Dryopteridaceae	8025	<i>Polystichum formosum</i>	Broad Shield Fern	2
Plantae	Flora	Dryopteridaceae	8027	<i>Polystichum proliferum</i>	Mother Shield Fern	2
Plantae	Flora	Ebenaceae	2562	<i>Diospyros australis</i>	Black Plum	80
Plantae	Flora	Ebenaceae	2566	<i>Diospyros pentamera</i>	Myrtle Ebony	40
Plantae	Flora	Elaeocarpaceae	2567	<i>Aristotelia australasica</i>	Mountain Wineberry	6
Plantae	Flora	Elaeocarpaceae	2571	<i>Elaeocarpus holopetalus</i>	Black Olive Berry	1
Plantae	Flora	Elaeocarpaceae	2572	<i>Elaeocarpus kirtonii</i>	Silver Quandong	6
Plantae	Flora	Elaeocarpaceae	2573	<i>Elaeocarpus obovatus</i>	Hard Quandong	63
Plantae	Flora	Elaeocarpaceae	2574	<i>Elaeocarpus reticulatus</i>	Blueberry Ash	151
Plantae	Flora	Elaeocarpaceae	ELAE	<i>Elaeocarpus spp.</i>		1
Plantae	Flora	Elaeocarpaceae	2576	<i>Sloanea australis</i>	Maiden's Blush	29
Plantae	Flora	Elaeocarpaceae	2577	<i>Sloanea woollsi</i>	Yellow Carabeen	82
Plantae	Flora	Elaeocarpaceae	6204	<i>Tetradlea ericifolia</i>		3
Plantae	Flora	Elaeocarpaceae	6214	<i>Tetradlea thymifolia</i>	Black-eyed Susan	38
Plantae	Flora	Elatinaceae	2579	<i>Elatine gratioloides</i>	Waterwort	2
Plantae	Flora	Ericaceae	11966	<i>Acrothamnus hookeri</i>		1
Plantae	Flora	Ericaceae	2580	<i>Acrotriche aggregata</i>	Red Cluster Heath	1
Plantae	Flora	Ericaceae	2581	<i>Acrotriche divaricata</i>		1
Plantae	Flora	Ericaceae	12005	<i>Agiortia cicatricata</i>		2
Plantae	Flora	Ericaceae	2584	<i>Astralaria humifusum</i>	Native Cranberry	3

Plantae	Flora	Ericaceae	2586	<i>Brachyloma daphnoides</i>	Daphne Heath		2	
Plantae	Flora	Ericaceae	10690	<i>Brachyloma daphnoides</i> <i>subsp. glabrum</i>			1	
Plantae	Flora	Ericaceae	10837	<i>Dracophyllum</i> <i>macranthum</i>		V,P	2	
Plantae	Flora	Ericaceae	2591	<i>Epacris breviflora</i>			1	
Plantae	Flora	Ericaceae	2592	<i>Epacris calvertiana</i>			1	
Plantae	Flora	Ericaceae	7850	<i>Epacris calvertiana</i> var. <i>calvertiana</i>			3	
Plantae	Flora	Ericaceae	2598	<i>Epacris longiflora</i>	Fuchsia Heath		13	
Plantae	Flora	Ericaceae	2599	<i>Epacris microphylla</i>	Coral Heath		25	
Plantae	Flora	Ericaceae	2602	<i>Epacris obtusifolia</i>	Blunt-leaf Heath		10	
Plantae	Flora	Ericaceae	2605	<i>Epacris pulchella</i>	Wallum Heath		34	
Plantae	Flora	Ericaceae	EPAC	<i>Epacris</i> spp.			2	
Plantae	Flora	Ericaceae	2611	<i>Leucopogon appressus</i>			1	
Plantae	Flora	Ericaceae	2612	<i>Leucopogon attenuatus</i>	A Beard-heath		1	
Plantae	Flora	Ericaceae	2613	<i>Leucopogon biflorus</i>			1	
Plantae	Flora	Ericaceae	2615	<i>Leucopogon deformis</i>			1	
Plantae	Flora	Ericaceae	2616	<i>Leucopogon ericoides</i>	Pink Beard-heath		21	
Plantae	Flora	Ericaceae	2617	<i>Leucopogon esquamatus</i>			6	
Plantae	Flora	Ericaceae	2623	<i>Leucopogon juniperinus</i>	Prickly Beard-heath		113	
Plantae	Flora	Ericaceae	2624	<i>Leucopogon lanceolatus</i>			49	
Plantae	Flora	Ericaceae	12934	<i>Leucopogon lanceolatus</i> <i>subsp. group C</i>			1	
Plantae	Flora	Ericaceae	12937	<i>Leucopogon lanceolatus</i> <i>subsp. group F</i>			1	
Plantae	Flora	Ericaceae	6845	<i>Leucopogon lanceolatus</i> var. <i>gracilis</i>			14	
Plantae	Flora	Ericaceae	6425	<i>Leucopogon lanceolatus</i> var. <i>lanceolatus</i>			30	
Plantae	Flora	Ericaceae	2625	<i>Leucopogon</i> <i>leptospermoides</i>			5	
Plantae	Flora	Ericaceae	2627	<i>Leucopogon margarodes</i>			3	
Plantae	Flora	Ericaceae	2628	<i>Leucopogon</i> <i>melaleucoides</i>			1	
Plantae	Flora	Ericaceae	2629	<i>Leucopogon microphyllus</i>			1	
Plantae	Flora	Ericaceae	2631	<i>Leucopogon neoanglicus</i>			1	
Plantae	Flora	Ericaceae	2632	<i>Leucopogon parviflorus</i>	Coastal Beard-heath		12	
Plantae	Flora	Ericaceae	2636	<i>Leucopogon rodwayi</i>			1	
Plantae	Flora	Ericaceae	LEUC	<i>Leucopogon</i> spp.	A Beard-heath		3	
Plantae	Flora	Ericaceae	2639	<i>Leucopogon virgatus</i>			4	
Plantae	Flora	Ericaceae	2642	<i>Lissanthe strigosa</i>	Peach Heath		3	
Plantae	Flora	Ericaceae	2645	<i>Melichrus procumbens</i>	Jam Tarts		3	
Plantae	Flora	Ericaceae	2647	<i>Monotoca elliptica</i>	Tree Broom-heath		18	
Plantae	Flora	Ericaceae	2649	<i>Monotoca scoparia</i>			20	
Plantae	Flora	Ericaceae	MONO	<i>Monotoca</i> spp.			2	
Plantae	Flora	Ericaceae	2654	<i>Sprengelia incarnata</i>	Pink Swamp Heath	P	6	
Plantae	Flora	Ericaceae	12948	<i>Sprengelia incarnata</i> f. <i>B</i>		P	1	
Plantae	Flora	Ericaceae	2655	<i>Sprengelia</i> <i>sprengelioides</i>			6	
Plantae	Flora	Ericaceae	9058	<i>Styphelia perileuca</i>	Montane Green Five-corners	V,P V	K	



Plantae	Flora	Ericaceae	2663	<i>Trachocarpa laurina</i>	Tree Heath					177
Plantae	Flora	Ericaceae	12593	<i>Trachocarpa montana</i>						2
Plantae	Flora	Eriocaulaceae	2668	<i>Eriocaulon australe</i>						4
Plantae	Flora	Eriocaulaceae	2670	<i>Eriocaulon scariosum</i>						4
Plantae	Flora	Escalloniaceae	3220	<i>Abrophyllum ornans</i>	Native Hydrangea					7
Plantae	Flora	Escalloniaceae	3221	<i>Anopterus macleayanus</i>	Queensland Laurel					36
Plantae	Flora	Escalloniaceae	3225	<i>Cuttsia viburnea</i>	Elderberry					57
Plantae	Flora	Escalloniaceae	3227	<i>Polysma cunninghamii</i>	Featherwood					60
Plantae	Flora	Escalloniaceae	3228	<i>Quintinia sieberi</i>	Possumwood					28
Plantae	Flora	Escalloniaceae	3229	<i>Quintinia verdonii</i>	Grey Possumwood					64
Plantae	Flora	Euphorbiaceae	2674	<i>Acalypha nemorum</i>						3
Plantae	Flora	Euphorbiaceae	8669	<i>Alchornea ilicifolia</i>	Native Holly					20
Plantae	Flora	Euphorbiaceae	9359	<i>Aleurites moluccana</i>	* Candle Nut					1
Plantae	Flora	Euphorbiaceae	2677	<i>Amperea xiphioclada</i>						13
Plantae	Flora	Euphorbiaceae	9713	<i>Amperea xiphioclada</i> var. <i>xiphioclada</i>						4
Plantae	Flora	Euphorbiaceae	8400	<i>Bakoghia inophylla</i>	Brush Bloodwood					59
Plantae	Flora	Euphorbiaceae	7159	<i>Bertya brownii</i>						1
Plantae	Flora	Euphorbiaceae	7735	<i>Bertya ingramii</i>	Narrow-leaved Bertya	E1,P	E	K		
Plantae	Flora	Euphorbiaceae	2691	<i>Beyeria lasiocarpa</i>						4
Plantae	Flora	Euphorbiaceae	2694	<i>Beyeria viscosa</i>	Sticky Wallaby Bush					1
Plantae	Flora	Euphorbiaceae	8560	<i>Chamaesyce drummondii</i>	Caustic Weed					1
Plantae	Flora	Euphorbiaceae	9130	<i>Chamaesyce hirta</i>	* Asthma Plant					1
Plantae	Flora	Euphorbiaceae	8867	<i>Chamaesyce macgillivrayi</i>						1
Plantae	Flora	Euphorbiaceae	9851	<i>Chamaesyce psammogeton</i>	Sand Spurge	E1,P				4
Plantae	Flora	Euphorbiaceae	2698	<i>Claoxylon australe</i>	Brittlewood					68
Plantae	Flora	Euphorbiaceae	2699	<i>Cleistanthus cunninghamii</i>	Cleistanthus					23
Plantae	Flora	Euphorbiaceae	2703	<i>Croton insularis</i>	Silver Croton					6
Plantae	Flora	Euphorbiaceae	2705	<i>Croton stigmatus</i>	White Croton					3
Plantae	Flora	Euphorbiaceae	2706	<i>Croton verreauxii</i>	Green Native Cascarilla					40
Plantae	Flora	Euphorbiaceae	2721	<i>Euphorbia peplus</i>	* Petty Spurge					6
Plantae	Flora	Euphorbiaceae	2726	<i>Euphorbia tannensis</i>						1
Plantae	Flora	Euphorbiaceae	7288	<i>Excoecaria agallocha</i>	Milky Mangrove					5
Plantae	Flora	Euphorbiaceae	11947	<i>Homalanthus populifolius</i>						39
Plantae	Flora	Euphorbiaceae	13994	<i>Homalanthus stillingifolius</i>						4
Plantae	Flora	Euphorbiaceae	2733	<i>Mallotus claoxyloides</i>						3
Plantae	Flora	Euphorbiaceae	2735	<i>Mallotus philippensis</i>	Red Kamala					25

Plantae	Flora	Euphorbiaceae	2756	<i>Pseudanthus orientalis</i>			7	
Plantae	Flora	Euphorbiaceae	12972	<i>Pseudanthus pauciflorus</i> <i>subsp. pauciflorus</i>			1	
Plantae	Flora	Euphorbiaceae	2759	<i>Ricinoscarpos pinifolius</i>		Wedding Bush	8	
Plantae	Flora	Euphorbiaceae	2761	<i>Ricinus communis</i>	*	Castor Oil Plant	18	
Plantae	Flora	Euphorbiaceae	11199	<i>Triadica sebifera</i>	*	Chinese Tallowood	1	
Plantae	Flora	Eupomatiaceae	2768	<i>Eupomatia laurina</i>		Bolwarra	149	
Plantae	Flora	Fabaceae (Caesalpinioideae)	1878	<i>Caesalpinia decapetala</i>	*	Thorny Poinciana	2	
Plantae	Flora	Fabaceae (Caesalpinioideae)	10820	<i>Chamaecrista maritima</i>			2	
Plantae	Flora	Fabaceae (Caesalpinioideae)	10821	<i>Chamaecrista nomame</i> <i>var. nomame</i>			7	
Plantae	Flora	Fabaceae (Caesalpinioideae)	8772	<i>Senna acclinis</i>		Rainforest Cassia	E1,P	11
Plantae	Flora	Fabaceae (Caesalpinioideae)	14602	<i>Senna barronfieldii</i>			2	
Plantae	Flora	Fabaceae (Caesalpinioideae)	6991	<i>Senna clavigera</i>			3	
Plantae	Flora	Fabaceae (Caesalpinioideae)	7377	<i>Senna pendula</i> var. <i>glabrata</i>	*		94	
Plantae	Flora	Fabaceae (Caesalpinioideae)	10505	<i>Senna septemtrionalis</i>	*	Arsenic Bush	39	
Plantae	Flora	Fabaceae (Caesalpinioideae)	SENN	<i>Senna spp.</i>	*		5	
Plantae	Flora	Fabaceae (Faboideae)	2770	<i>Aotus ericoides</i>			5	
Plantae	Flora	Fabaceae (Faboideae)	2771	<i>Aotus lanigera</i>			5	
Plantae	Flora	Fabaceae (Faboideae)	2773	<i>Aotus subglauca</i>			3	
Plantae	Flora	Fabaceae (Faboideae)	10818	<i>Austrosteenisia blackii</i> var. <i>blackii</i>		Blood Vine	18	
Plantae	Flora	Fabaceae (Faboideae)	2780	<i>Bossiaea heterophylla</i>		Variable Bossiaea	7	
Plantae	Flora	Fabaceae (Faboideae)	2783	<i>Bossiaea neo-anglica</i>			9	
Plantae	Flora	Fabaceae (Faboideae)	2787	<i>Bossiaea rhombifolia</i>			2	
Plantae	Flora	Fabaceae (Faboideae)	2790	<i>Bossiaea scortechinii</i>			4	
Plantae	Flora	Fabaceae (Faboideae)	2791	<i>Bossiaea stephensonii</i>			6	
Plantae	Flora	Fabaceae (Faboideae)	10991	<i>Callerya australis</i>		Native Wisteria	19	
Plantae	Flora	Fabaceae (Faboideae)	7248	<i>Canavalia rosea</i>		Coastal Jack Bean	3	
Plantae	Flora	Fabaceae (Faboideae)	2797	<i>Chorizema parviflorum</i>		Eastern Flame Pea	15	
Plantae	Flora	Fabaceae (Faboideae)	11068	<i>Crotalaria brevis</i>			2	
Plantae	Flora	Fabaceae (Faboideae)	9356	<i>Crotalaria lanceolata</i> <i>subsp. lanceolata</i>	*		6	


Plantae	Flora	Fabaceae (Faboideae)	12173	<i>Crotalaria medicaginea</i> <i>var. neglecta</i>	Trefoil Rattlepod	1
Plantae	Flora	Fabaceae (Faboideae)	2807	<i>Crotalaria mitchellii</i>	Yellow Rattlepod	1
Plantae	Flora	Fabaceae (Faboideae)	6664	<i>Crotalaria mitchellii</i> <i>subsp. mitchellii</i>		2
Plantae	Flora	Fabaceae (Faboideae)	12986	<i>Crotalaria virgulata</i> *		1
Plantae	Flora	Fabaceae (Faboideae)	2817	<i>Daviesia arborea</i>		13
Plantae	Flora	Fabaceae (Faboideae)	2821	<i>Daviesia corymbosa</i>		1
Plantae	Flora	Fabaceae (Faboideae)	2822	<i>Daviesia genistifolia</i>	Broom Bitter Pea	42
Plantae	Flora	Fabaceae (Faboideae)	2823	<i>Daviesia latifolia</i>	Bitter-pea	2
Plantae	Flora	Fabaceae (Faboideae)	8774	<i>Daviesia nova-anglica</i>		9
Plantae	Flora	Fabaceae (Faboideae)	2826	<i>Daviesia squarrosa</i>		11
Plantae	Flora	Fabaceae (Faboideae)	2827	<i>Daviesia ulicifolia</i>	Gorse Bitter Pea	34
Plantae	Flora	Fabaceae (Faboideae)	10830	<i>Daviesia ulicifolia subsp.</i> <i>stenophylla</i>		4
Plantae	Flora	Fabaceae (Faboideae)	10831	<i>Daviesia ulicifolia subsp.</i> <i>ulicifolia</i>		5
Plantae	Flora	Fabaceae (Faboideae)	2828	<i>Daviesia umbellulata</i>		22
Plantae	Flora	Fabaceae (Faboideae)	2832	<i>Derris involuta</i>		9
Plantae	Flora	Fabaceae (Faboideae)	2834	<i>Desmodium</i> <i>brachypodum</i>	Large Tick-trefoil	31
Plantae	Flora	Fabaceae (Faboideae)	6621	<i>Desmodium gunnii</i>	Slender Tick-trefoil	33
Plantae	Flora	Fabaceae (Faboideae)	8764	<i>Desmodium</i> <i>heterocarpon var.</i> <i>heterocarpon</i>		2
Plantae	Flora	Fabaceae (Faboideae)	2838	<i>Desmodium nemorosum</i>		24
Plantae	Flora	Fabaceae (Faboideae)	2839	<i>Desmodium</i> <i>rhytidophyllum</i>		117
Plantae	Flora	Fabaceae (Faboideae)	8824	<i>Desmodium uncinatum</i> *	Silver-leaved Desmodium	1
Plantae	Flora	Fabaceae (Faboideae)	2840	<i>Desmodium varians</i>	Slender Tick-trefoil	99
Plantae	Flora	Fabaceae (Faboideae)	2843	<i>Dillwynia floribunda</i>		3
Plantae	Flora	Fabaceae (Faboideae)	7225	<i>Dillwynia phylloides</i>	Parrot-pea	1
Plantae	Flora	Fabaceae (Faboideae)	2850	<i>Dillwynia retorta</i>		22
Plantae	Flora	Fabaceae (Faboideae)	DILL	<i>Dillwynia spp.</i>		2
Plantae	Flora	Fabaceae (Faboideae)	2854	<i>Dipogon lignosus</i> *	Dolichos Pea	1
Plantae	Flora	Fabaceae (Faboideae)	9357	<i>Erythrina crista-galli</i> *	Cockspur Coral Tree	2
Plantae	Flora	Fabaceae (Faboideae)	8689	<i>Erythrina x sykesii</i> *	Coral tree	10
Plantae	Flora	Fabaceae (Faboideae)	FABAC	<i>Fabaceae indeterminate</i> *	Legumes	1
Plantae	Flora	Fabaceae (Faboideae)	12264	<i>Galactia tenuiflora var.</i> <i>villosa</i>		1
Plantae	Flora	Fabaceae (Faboideae)	2858	<i>Genista monspessulana</i> *	Montpellier Broom	1
Plantae	Flora	Fabaceae (Faboideae)	2860	<i>Glycine clandestina</i>	Twining glycine	163

Plantae	Flora	Fabaceae (Faboideae)	8522	<i>Glycine latifolia</i>		1
Plantae	Flora	Fabaceae (Faboideae)	7208	<i>Glycine microphylla</i>	Small-leaf Glycine	78
Plantae	Flora	Fabaceae (Faboideae)	GLYC	<i>Glycine spp.</i>		10
Plantae	Flora	Fabaceae (Faboideae)	2861	<i>Glycine tabacina</i>	Variable Glycine	35
Plantae	Flora	Fabaceae (Faboideae)	7844	<i>Glycine tomentella</i>	Woolly Glycine	7
Plantae	Flora	Fabaceae (Faboideae)	13008	<i>Gompholobium aspalathoides</i>		1
Plantae	Flora	Fabaceae (Faboideae)	2864	<i>Gompholobium glabratum</i>	Dainty Wedge Pea	2
Plantae	Flora	Fabaceae (Faboideae)	2866	<i>Gompholobium latifolium</i>	Golden Glory Pea	7
Plantae	Flora	Fabaceae (Faboideae)	2868	<i>Gompholobium pinnatum</i>	Pinnate Wedge Pea	25
Plantae	Flora	Fabaceae (Faboideae)	GOMP	<i>Gompholobium spp.</i>		1
Plantae	Flora	Fabaceae (Faboideae)	2869	<i>Gompholobium uncinatum</i>	Red Wedge Pea	1
Plantae	Flora	Fabaceae (Faboideae)	2870	<i>Gompholobium virgatum</i>	Leafy Wedge Pea	5
Plantae	Flora	Fabaceae (Faboideae)	2871	<i>Goodia lotifolia</i>		16
Plantae	Flora	Fabaceae (Faboideae)	2873	<i>Hardenbergia violacea</i>	False Sarsaparilla	183
Plantae	Flora	Fabaceae (Faboideae)	2874	<i>Hovea acutifolia</i>		7
Plantae	Flora	Fabaceae (Faboideae)	11015	<i>Hovea heterophylla</i>		5
Plantae	Flora	Fabaceae (Faboideae)	2876	<i>Hovea linearis</i>		6
Plantae	Flora	Fabaceae (Faboideae)	2877	<i>Hovea longifolia</i>	Rusty Pods	4
Plantae	Flora	Fabaceae (Faboideae)	11014	<i>Hovea pedunculata</i>		6
Plantae	Flora	Fabaceae (Faboideae)	2880	<i>Hovea purpurea</i>		3
Plantae	Flora	Fabaceae (Faboideae)	13013	<i>Hovea similis</i>		4
Plantae	Flora	Fabaceae (Faboideae)	HOVE	<i>Hovea spp.</i>		2
Plantae	Flora	Fabaceae (Faboideae)	2882	<i>Indigofera australis</i>	Australian Indigo	49
Plantae	Flora	Fabaceae (Faboideae)	INDI	<i>Indigofera spp.</i>	*	1
Plantae	Flora	Fabaceae (Faboideae)	2892	<i>Jacksonia scoparia</i>	Dogwood	59
Plantae	Flora	Fabaceae (Faboideae)	7729	<i>Jacksonia sternbergiana</i>		1
Plantae	Flora	Fabaceae (Faboideae)	2898	<i>Kennedia rubicunda</i>	Dusky Coral Pea	141
Plantae	Flora	Fabaceae (Faboideae)	8690	<i>Lespedeza juncea subsp. sericea</i>		4
Plantae	Flora	Fabaceae (Faboideae)	7349	<i>Lespedeza striata</i>	* Japanese Clover	2
Plantae	Flora	Fabaceae (Faboideae)	2907	<i>Lotus corniculatus</i>	* Birds-foot Trefoil	1
Plantae	Flora	Fabaceae (Faboideae)	6550	<i>Macroptilium atropurpureum</i>	* Siratro	1
Plantae	Flora	Fabaceae (Faboideae)	2919	<i>Medicago lupulina</i>	* Black Medic	1
Plantae	Flora	Fabaceae (Faboideae)	2922	<i>Medicago polymorpha</i>	* Burr Medic	2
Plantae	Flora	Fabaceae (Faboideae)	2924	<i>Medicago sativa</i>	* Lucerne	1






Plantae	Flora	Fabaceae (Faboideae)	2930	<i>Melilotus officinalis</i>	*	Common Melilot		1
Plantae	Flora	Fabaceae (Faboideae)	2938	<i>Mirbelia rubrifolia</i>		Heathy Mirbelia		11
Plantae	Flora	Fabaceae (Faboideae)	2948	<i>Oxylobium arborescens</i>		Tall Shaggy Pea		5
Plantae	Flora	Fabaceae (Faboideae)	2954	<i>Oxylobium robustum</i>		Tree Shaggy Pea		15
Plantae	Flora	Fabaceae (Faboideae)	2958	<i>Phyllota phyllioides</i>		Heath Phyllota		11
Plantae	Flora	Fabaceae (Faboideae)	2961	<i>Platylobium formosum</i>				43
Plantae	Flora	Fabaceae (Faboideae)	9354	<i>Platylobium formosum</i> <i>subsp. formosum</i>				1
Plantae	Flora	Fabaceae (Faboideae)	10705	<i>Podolobium aciculiferum</i>		Needle Shaggy Pea		3
Plantae	Flora	Fabaceae (Faboideae)	9913	<i>Podolobium aestivum</i>				1
Plantae	Flora	Fabaceae (Faboideae)	9912	<i>Podolobium ilicifolium</i>		Prickly Shaggy Pea		63
Plantae	Flora	Fabaceae (Faboideae)	10708	<i>Podolobium scandens</i>		Netted Shaggy Pea		4
Plantae	Flora	Fabaceae (Faboideae)	2972	<i>Pueraria lobata</i>	*	Kudzu		1
Plantae	Flora	Fabaceae (Faboideae)	2986	<i>Pultenaea dentata</i>				4
Plantae	Flora	Fabaceae (Faboideae)	2993	<i>Pultenaea flexilis</i>				1
Plantae	Flora	Fabaceae (Faboideae)	2994	<i>Pultenaea foliolosa</i>		A Bush Pea		1
Plantae	Flora	Fabaceae (Faboideae)	11644	<i>Pultenaea maritima</i>		Coast Headland Pea	V,P	P 
Plantae	Flora	Fabaceae (Faboideae)	3003	<i>Pultenaea microphylla</i>		A Bush Pea		1
Plantae	Flora	Fabaceae (Faboideae)	3004	<i>Pultenaea myrtoides</i>				11
Plantae	Flora	Fabaceae (Faboideae)	3009	<i>Pultenaea petiolaris</i>				3
Plantae	Flora	Fabaceae (Faboideae)	3013	<i>Pultenaea pycnocephala</i>				1
Plantae	Flora	Fabaceae (Faboideae)	3014	<i>Pultenaea retusa</i>				89
Plantae	Flora	Fabaceae (Faboideae)	12204	<i>Pultenaea rostrata</i>				1
Plantae	Flora	Fabaceae (Faboideae)	3017	<i>Pultenaea spinosa</i>		A Bush Pea		2
Plantae	Flora	Fabaceae (Faboideae)	PULT	<i>Pultenaea spp.</i>				5
Plantae	Flora	Fabaceae (Faboideae)	3023	<i>Pultenaea villosa</i>		Hairy Bush-pea		34
Plantae	Flora	Fabaceae (Faboideae)	3028	<i>Robinia pseudoacacia</i>	*	Black Locust		1
Plantae	Flora	Fabaceae (Faboideae)	7462	<i>Sesbania cannabina</i> var. <i>cannabina</i>		Sesbania Pea		1
Plantae	Flora	Fabaceae (Faboideae)	3032	<i>Sophora tomentosa</i>		Silverbush	E1,P	8 
Plantae	Flora	Fabaceae (Faboideae)	9223	<i>Sphaerolobium minus</i>				1
Plantae	Flora	Fabaceae (Faboideae)	3033	<i>Sphaerolobium</i> <i>vimineum</i>				4
Plantae	Flora	Fabaceae (Faboideae)	3035	<i>Swainsona brachycarpa</i>		Slender Swainson-pea		2
Plantae	Flora	Fabaceae (Faboideae)	3040	<i>Swainsona fraseri</i>				3
Plantae	Flora	Fabaceae (Faboideae)	3041	<i>Swainsona galegifolia</i>		Smooth Darling Pea		5

Plantae	Flora	Fabaceae (Faboideae)	3066	<i>Tephrosia glomeruliflora</i>	*		3
Plantae	Flora	Fabaceae (Faboideae)	3067	<i>Tephrosia grandiflora</i>	*		3
Plantae	Flora	Fabaceae (Faboideae)	3073	<i>Trifolium arvense</i>	*	Haresfoot Clover	2
Plantae	Flora	Fabaceae (Faboideae)	3074	<i>Trifolium campestre</i>	*	Hop Clover	1
Plantae	Flora	Fabaceae (Faboideae)	3076	<i>Trifolium dubium</i>	*	Yellow Suckling Clover	2
Plantae	Flora	Fabaceae (Faboideae)	3084	<i>Trifolium pratense</i>	*	Red Clover	2
Plantae	Flora	Fabaceae (Faboideae)	3085	<i>Trifolium repens</i>	*	White Clover	72
Plantae	Flora	Fabaceae (Faboideae)	TRIF	<i>Trifolium spp.</i>	*	A Clover	2
Plantae	Flora	Fabaceae (Faboideae)	3091	<i>Trifolium tomentosum</i>	*	Woolly Clover	1
Plantae	Flora	Fabaceae (Faboideae)	3097	<i>Vicia sativa</i>	*	Common vetch	1
Plantae	Flora	Fabaceae (Faboideae)	11703	<i>Vicia sativa subsp. nigra</i>	*	Narrow-leaved Vetch	5
Plantae	Flora	Fabaceae (Faboideae)	8794	<i>Vicia sativa subsp. sativa</i>	*	Common Vetch	3
Plantae	Flora	Fabaceae (Faboideae)	3100	<i>Vigna lanceolata</i>		Malaga Pea	1
Plantae	Flora	Fabaceae (Faboideae)	8904	<i>Vigna lanceolata var. lanceolata</i>			1
Plantae	Flora	Fabaceae (Faboideae)	3102	<i>Vigna marina</i>		Dune Bean	4
Plantae	Flora	Fabaceae (Faboideae)	10065	<i>Vigna vexillata var. angustifolia</i>		Wild Cow Pea	3
Plantae	Flora	Fabaceae (Faboideae)	11189	<i>Vigna vexillata var. youngiana</i>			1
Plantae	Flora	Fabaceae (Faboideae)	3105	<i>Viminaria juncea</i>		Native Broom	12
Plantae	Flora	Fabaceae (Faboideae)	11332	<i>Wisteria sinensis</i>	*	Chinese wisteria	1
Plantae	Flora	Fabaceae (Faboideae)	8691	<i>Zornia dyctiocarpa var. dyctiocarpa</i>		Zornia	2
Plantae	Flora	Fabaceae (Mimosoideae)	3710	<i>Acacia baileyana</i>		Cootamundra Wattle	1
Plantae	Flora	Fabaceae (Mimosoideae)	3712	<i>Acacia barringtonensis</i>			5
Plantae	Flora	Fabaceae (Mimosoideae)	7060	<i>Acacia baueri subsp. baueri</i>		Tiny Wattle	1
Plantae	Flora	Fabaceae (Mimosoideae)	3716	<i>Acacia binervata</i>		Two-veined Hickory	74
Plantae	Flora	Fabaceae (Mimosoideae)	3717	<i>Acacia binervia</i>		Coast Myall	6
Plantae	Flora	Fabaceae (Mimosoideae)	10788	<i>Acacia blakei subsp. diphylla</i>			4
Plantae	Flora	Fabaceae (Mimosoideae)	3723	<i>Acacia brownii</i>		Heath Wattle	5
Plantae	Flora	Fabaceae (Mimosoideae)	3742	<i>Acacia cognata</i>		Narrow-leaf Bower Wattle	1
Plantae	Flora	Fabaceae (Mimosoideae)	3745	<i>Acacia concurrens</i>		Curracabah	5

Plantae	Flora	Fabaceae (Mimosoideae)	3750	<i>Acacia costiniana</i>					2	
Plantae	Flora	Fabaceae (Mimosoideae)	555	<i>Acacia courtii</i>	North Brother Wattle	V,P	V		34	
Plantae	Flora	Fabaceae (Mimosoideae)	3768	<i>Acacia elata</i>	Mountain Cedar Wattle				53	
Plantae	Flora	Fabaceae (Mimosoideae)	3769	<i>Acacia elongata</i>	Swamp Wattle				35	
Plantae	Flora	Fabaceae (Mimosoideae)	3771	<i>Acacia falcata</i>					55	
Plantae	Flora	Fabaceae (Mimosoideae)	3772	<i>Acacia falciformis</i>	Broad-leaved Hickory				6	
Plantae	Flora	Fabaceae (Mimosoideae)	3773	<i>Acacia filicifolia</i>	Fern-leaved Wattle				1	
Plantae	Flora	Fabaceae (Mimosoideae)	3774	<i>Acacia fimbriata</i>	Fringed Wattle				39	
Plantae	Flora	Fabaceae (Mimosoideae)	3777	<i>Acacia floribunda</i>	White Sally				164	
Plantae	Flora	Fabaceae (Mimosoideae)	3792	<i>Acacia implexa</i>	Hickory Wattle				78	
Plantae	Flora	Fabaceae (Mimosoideae)	3794	<i>Acacia irrorata</i>	Green Wattle				48	
Plantae	Flora	Fabaceae (Mimosoideae)	6472	<i>Acacia irrorata subsp. irrorata</i>	Green Wattle				21	
Plantae	Flora	Fabaceae (Mimosoideae)	3814	<i>Acacia linifolia</i>	White Wattle				7	
Plantae	Flora	Fabaceae (Mimosoideae)	3816	<i>Acacia longifolia</i>					62	
Plantae	Flora	Fabaceae (Mimosoideae)	10790	<i>Acacia longifolia subsp. longifolia</i>	Sydney Golden Wattle				48	
Plantae	Flora	Fabaceae (Mimosoideae)	10791	<i>Acacia longifolia subsp. sophorae</i>	Coastal Wattle				37	
Plantae	Flora	Fabaceae (Mimosoideae)	3817	<i>Acacia longissima</i>	Long-leaf Wattle				42	
Plantae	Flora	Fabaceae (Mimosoideae)	3821	<i>Acacia maidenii</i>	Maiden's Wattle				136	
Plantae	Flora	Fabaceae (Mimosoideae)	3824	<i>Acacia melanoxylon</i>	Blackwood				169	
Plantae	Flora	Fabaceae (Mimosoideae)	3827	<i>Acacia mitchellii</i>	Mitchell's Wattle				1	
Plantae	Flora	Fabaceae (Mimosoideae)	3834	<i>Acacia myrtifolia</i>	Red-stemmed Wattle				39	
Plantae	Flora	Fabaceae (Mimosoideae)	11005	<i>Acacia nova-anglica</i>	New England Hickory				3	

Plantae	Flora	Fabaceae (Mimosoideae)	13095	<i>Acacia obcordata</i>		1
Plantae	Flora	Fabaceae (Mimosoideae)	3839	<i>Acacia obtusifolia</i>		29
Plantae	Flora	Fabaceae (Mimosoideae)	3842	<i>Acacia oshanesii</i>		1
Plantae	Flora	Fabaceae (Mimosoideae)	3853	<i>Acacia podalyriifolia</i>	Queensland Silver Wattle	2
Plantae	Flora	Fabaceae (Mimosoideae)	3873	<i>Acacia saligna</i>	* Golden Wreath Wattle	3
Plantae	Flora	Fabaceae (Mimosoideae)	ACAC	<i>Acacia spp.</i>	Wattle	13
Plantae	Flora	Fabaceae (Mimosoideae)	3880	<i>Acacia stricta</i>	Straight Wattle	3
Plantae	Flora	Fabaceae (Mimosoideae)	3881	<i>Acacia suaveolens</i>	Sweet Wattle	20
Plantae	Flora	Fabaceae (Mimosoideae)	3885	<i>Acacia terminalis</i>	Sunshine Wattle	2
Plantae	Flora	Fabaceae (Mimosoideae)	9984	<i>Acacia terminalis subsp. longiaxialis</i>		1
Plantae	Flora	Fabaceae (Mimosoideae)	8766	<i>Acacia tessellata</i>		32
Plantae	Flora	Fabaceae (Mimosoideae)	3893	<i>Acacia ulicifolia</i>	Prickly Moses	56
Plantae	Flora	Fabaceae (Mimosoideae)	3899	<i>Acacia viscidula</i>	Sticky Wattle	2
Plantae	Flora	Fabaceae (Mimosoideae)	7894	<i>Archidendron grandiflorum</i>	Pink Lace Flower	13
Plantae	Flora	Fabaceae (Mimosoideae)	7758	<i>Leucaena leucocephala</i>	*	1
Plantae	Flora	Fabaceae (Mimosoideae)	8840	<i>Pararchidendron pruinatum var. pruinatum</i>	Snow Wood	13
Plantae	Flora	Fabaceae (Mimosoideae)	12157	<i>Vachellia farnesiana</i>	Mimosa Bush	1
Plantae	Flora	Fagaceae	14702	<i>Platylobium parviflorum</i>	Small-flowered Flat-pea	8
Plantae	Flora	Flacourtiaceae	8440	<i>Berberidopsis beckeri</i>		10
Plantae	Flora	Flacourtiaceae	3110	<i>Scolopia braunii</i>	Flintwood	39
Plantae	Flora	Flacourtiaceae	3112	<i>Streptothamnus moorei</i>		1
Plantae	Flora	Flagellariaceae	7106	<i>Flagellaria indica</i>	Whip Vine	35
Plantae	Flora	Fumariaceae	9367	<i>Fumaria muralis subsp. muralis</i>	* Wall Fumitory	1
Plantae	Flora	Gentianaceae	3131	<i>Centaurium erythraea</i>	* Common Centaury	10
Plantae	Flora	Gentianaceae	3133	<i>Centaurium tenuiflorum</i>	* Branched Centaury, Slender centaury	1
Plantae	Flora	Gentianaceae	13834	<i>Schenkia spicata</i>	Spike Centaury	8
Plantae	Flora	Geraniaceae	3148	<i>Geranium homeanum</i>		29

Plantae	Flora	Geraniaceae	10093	<i>Geranium molle</i> subsp. * <i>molle</i>	Cranesbill Geranium	1
Plantae	Flora	Geraniaceae	3150	<i>Geranium neglectum</i>		2
Plantae	Flora	Geraniaceae	3152	<i>Geranium potentilloides</i>		1
Plantae	Flora	Geraniaceae	3156	<i>Geranium solanderi</i>	Native Geranium	13
Plantae	Flora	Geraniaceae	8226	<i>Geranium solanderi</i> var. <i>solanderi</i>		10
Plantae	Flora	Geraniaceae	13118	<i>Geranium</i> sp. C		1
Plantae	Flora	Geraniaceae	GERA	<i>Geranium</i> spp. *		4
Plantae	Flora	Gesneriaceae	3163	<i>Fielidia australis</i>		14
Plantae	Flora	Gleicheniaceae	7138	<i>Gleichenia dicarpa</i>	Pouched Coral Fern	48
Plantae	Flora	Gleicheniaceae	11175	<i>Sticherus flabellatus</i> var. <i>flabellatus</i>	Umbrella Fern P	10
Plantae	Flora	Gleicheniaceae	7035	<i>Sticherus lobatus</i>	Spreading Shield Fern	32
Plantae	Flora	Goodeniaceae	3167	<i>Coopernookia chisholmii</i>		22
Plantae	Flora	Goodeniaceae	9745	<i>Dampiera lanceolata</i> var. <i>lanceolata</i>		2
Plantae	Flora	Goodeniaceae	3172	<i>Dampiera purpurea</i>		14
Plantae	Flora	Goodeniaceae	3174	<i>Dampiera stricta</i>		39
Plantae	Flora	Goodeniaceae	6658	<i>Dampiera sylvestris</i>		32
Plantae	Flora	Goodeniaceae	3175	<i>Goodenia bellidifolia</i>		18
Plantae	Flora	Goodeniaceae	9078	<i>Goodenia bellidifolia</i> subsp. <i>argentea</i>		6
Plantae	Flora	Goodeniaceae	8711	<i>Goodenia bellidifolia</i> subsp. <i>bellidifolia</i>		7
Plantae	Flora	Goodeniaceae	8593	<i>Goodenia fordiana</i>		35
Plantae	Flora	Goodeniaceae	3186	<i>Goodenia grandiflora</i>	Large-flowered Goodenia	2
Plantae	Flora	Goodeniaceae	3188	<i>Goodenia hederacea</i>	Ivy Goodenia	43
Plantae	Flora	Goodeniaceae	9279	<i>Goodenia hederacea</i> subsp. <i>hederacea</i>		8
Plantae	Flora	Goodeniaceae	3190	<i>Goodenia heterophylla</i>		2
Plantae	Flora	Goodeniaceae	8755	<i>Goodenia heterophylla</i> subsp. <i>eglandulosa</i>		4
Plantae	Flora	Goodeniaceae	13124	<i>Goodenia lancifolia</i>		4
Plantae	Flora	Goodeniaceae	3192	<i>Goodenia ovata</i>	Hop Goodenia	25
Plantae	Flora	Goodeniaceae	7057	<i>Goodenia paniculata</i>		20
Plantae	Flora	Goodeniaceae	3196	<i>Goodenia rotundifolia</i>		2
Plantae	Flora	Goodeniaceae	GOOD	<i>Goodenia</i> spp.		5
Plantae	Flora	Goodeniaceae	3197	<i>Goodenia stelligera</i>	Spiked Goodenia	7
Plantae	Flora	Goodeniaceae	3201	<i>Scaevola aemula</i>	Fairy Fan-flower	8
Plantae	Flora	Goodeniaceae	3203	<i>Scaevola calendulacea</i>		1
Plantae	Flora	Goodeniaceae	3205	<i>Scaevola hookeri</i>		2
Plantae	Flora	Goodeniaceae	3208	<i>Scaevola ramosissima</i>	Purple Fan-flower	2
Plantae	Flora	Goodeniaceae	3219	<i>Velleia spathulata</i>		8

Plantae	Flora	Grammitidaceae	10518	<i>Grammitis billardierei</i>	Finger Fern				5
Plantae	Flora	Grammitidaceae	GRAM	<i>Grammitis</i> spp.					3
Plantae	Flora	Gyrostemonaceae	3231	<i>Codonocarpus attenuatus</i>	Bell-fruit Tree				6
Plantae	Flora	Haemodoraceae	ANIG	<i>Anigozanthos</i> spp.	*				1
Plantae	Flora	Haemodoraceae	6435	<i>Haemodorum corymbosum</i>					4
Plantae	Flora	Haloragaceae	9266	<i>Gonocarpus chinensis</i> subsp. <i>verrucosus</i>					2
Plantae	Flora	Haloragaceae	3241	<i>Gonocarpus humilis</i>					12
Plantae	Flora	Haloragaceae	3243	<i>Gonocarpus micranthus</i>					16
Plantae	Flora	Haloragaceae	8649	<i>Gonocarpus micranthus</i> subsp. <i>micranthus</i>					6
Plantae	Flora	Haloragaceae	8648	<i>Gonocarpus micranthus</i> subsp. <i>ramosissimus</i>					19
Plantae	Flora	Haloragaceae	3245	<i>Gonocarpus oreophilus</i>					23
Plantae	Flora	Haloragaceae	3246	<i>Gonocarpus salsoloides</i>					5
Plantae	Flora	Haloragaceae	GONO	<i>Gonocarpus</i> spp.	Raspwort				1
Plantae	Flora	Haloragaceae	3247	<i>Gonocarpus tetragynus</i>	Poverty Raspwort				32
Plantae	Flora	Haloragaceae	3248	<i>Gonocarpus teucrioides</i>	Germander Raspwort				66
Plantae	Flora	Haloragaceae	3250	<i>Haloragis exalata</i>					1
Plantae	Flora	Haloragaceae	9512	<i>Haloragis exalata</i> subsp. <i>exalata</i>	Square Raspwort	V,P	V	K	
Plantae	Flora	Haloragaceae	9172	<i>Haloragis exalata</i> subsp. <i>velutina</i>	Tall Velvet Sea-berry	V,P	V	1	
Plantae	Flora	Haloragaceae	3252	<i>Haloragis heterophylla</i>	Variable Raspwort				1
Plantae	Flora	Haloragaceae	3259	<i>Myriophyllum aquaticum</i> *	Parrots Feather				3
Plantae	Flora	Haloragaceae	MYRI	<i>Myriophyllum</i> spp.					3
Plantae	Flora	Haloragaceae	6546	<i>Myriophyllum verrucosum</i>	Red Water-milfoil				2
Plantae	Flora	Hamamelidaceae	11353	<i>Liquidambar styraciflua</i> *	Sweetgum				1
Plantae	Flora	Hydrocharitaceae	3271	<i>Halophila ovalis</i>					1
Plantae	Flora	Hydrocharitaceae	6772	<i>Hydrilla verticillata</i>	Hydrilla				4
Plantae	Flora	Hydrocharitaceae	3272	<i>Hydrocharis dubia</i>	Frogbit			P	
Plantae	Flora	Hydrocharitaceae	10855	<i>Ottelia ovalifolia</i> subsp. <i>ovalifolia</i>	Swamp Lily				12
Plantae	Flora	Hydrocharitaceae	14246	<i>Vallisneria australis</i>	Eelweed				2
Plantae	Flora	Hymenophyllaceae	12034	<i>Cephalomanes caudatum</i>	Jungle Bristle Fern				5
Plantae	Flora	Hymenophyllaceae	12520	<i>Crepidomanes venosum</i>					5
Plantae	Flora	Hymenophyllaceae	8104	<i>Hymenophyllum australe</i>					1
Plantae	Flora	Hymenophyllaceae	8106	<i>Hymenophyllum bivalve</i>					1
Plantae	Flora	Hymenophyllaceae	8107	<i>Hymenophyllum cupressiforme</i>	Common Filmy Fern				6
Plantae	Flora	Hymenophyllaceae	8109	<i>Hymenophyllum marginatum</i>	Bordered Filmy Fern				1
Plantae	Flora	Hypoxidaceae	3553	<i>Hypoxis hygrometrica</i>	Golden Weather-grass				10
Plantae	Flora	Hypoxidaceae	7859	<i>Hypoxis pratensis</i> var. <i>pratensis</i>					1


Plantae	Flora	Hypoxidaceae	HYPO	<i>Hypoxis</i> spp.		1
Plantae	Flora	Iridaceae	GLAD	<i>Gladiolus</i> spp.	*	1
Plantae	Flora	Iridaceae	3289	<i>Gladiolus undulatus</i>	*	1
Plantae	Flora	Iridaceae	9767	<i>Herbertia lahue</i> subsp. <i>caerulea</i>	*	1
Plantae	Flora	Iridaceae	3298	<i>Libertia paniculata</i>		5
Plantae	Flora	Iridaceae	3299	<i>Libertia pulchella</i>		1
Plantae	Flora	Iridaceae	3300	<i>Patersonia fragilis</i>		13
Plantae	Flora	Iridaceae	3301	<i>Patersonia glabrata</i>		42
Plantae	Flora	Iridaceae	3303	<i>Patersonia sericea</i>		35
Plantae	Flora	Iridaceae	PATE	<i>Patersonia</i> spp.		3
Plantae	Flora	Iridaceae	8957	<i>Sisyrinchium</i> sp. A	*	1
Plantae	Flora	Juncaceae	3311	<i>Juncus acuminatus</i>	*	5
Plantae	Flora	Juncaceae	3316	<i>Juncus articulatus</i>	*	1
Plantae	Flora	Juncaceae	3325	<i>Juncus cognatus</i>	*	8
Plantae	Flora	Juncaceae	3326	<i>Juncus continuus</i>		34
Plantae	Flora	Juncaceae	8632	<i>Juncus continuus</i> x <i>usitatus</i>		1
Plantae	Flora	Juncaceae	3334	<i>Juncus imbricatus</i>	*	1
Plantae	Flora	Juncaceae	7430	<i>Juncus kraussii</i> subsp. <i>australiensis</i>		29
Plantae	Flora	Juncaceae	8780	<i>Juncus laevisculus</i> subsp. <i>laevisculus</i>		1
Plantae	Flora	Juncaceae	8998	<i>Juncus mollis</i>		18
Plantae	Flora	Juncaceae	3338	<i>Juncus pallidus</i>		4
Plantae	Flora	Juncaceae	3340	<i>Juncus planifolius</i>		12
Plantae	Flora	Juncaceae	3341	<i>Juncus polyanthemus</i>		9
Plantae	Flora	Juncaceae	3342	<i>Juncus prismatocarpus</i>		46
Plantae	Flora	Juncaceae	JUNC	<i>Juncus</i> spp.		11
Plantae	Flora	Juncaceae	3348	<i>Juncus subsecundus</i>		2
Plantae	Flora	Juncaceae	3350	<i>Juncus usitatus</i>		74
Plantae	Flora	Juncaceae	3351	<i>Juncus vaginatus</i>		1
Plantae	Flora	Juncaceae	3357	<i>Luzula flaccida</i>		1
Plantae	Flora	Juncaginaceae	3363	<i>Maundia triglochinosides</i>	V,P	10
Plantae	Flora	Juncaginaceae	9253	<i>Triglochin microtuberosa</i>		1
Plantae	Flora	Juncaginaceae	9231	<i>Triglochin multifructa</i>		2
Plantae	Flora	Juncaginaceae	3368	<i>Triglochin procera</i>	Water Ribbons	15
Plantae	Flora	Juncaginaceae	TRIG	<i>Triglochin</i> spp.		3
Plantae	Flora	Juncaginaceae	3369	<i>Triglochin striata</i>	Streaked Arrowgrass	10
Plantae	Flora	Lamiaceae	3371	<i>Ajuga australis</i>	Austral Bugle	8
Plantae	Flora	Lamiaceae	6240	<i>Callicarpa pedunculata</i>	Velvet Leaf	1
Plantae	Flora	Lamiaceae	12201	<i>Clerodendrum floribundum</i> var. <i>floribundum</i>		9
Plantae	Flora	Lamiaceae	CLER	<i>Clerodendrum</i> spp.		1
Plantae	Flora	Lamiaceae	6484	<i>Clerodendrum tomentosum</i>	Hairy Clerodendrum	60
Plantae	Flora	Lamiaceae	6247	<i>Gmelina leichhardtii</i>	White Beech	30
Plantae	Flora	Lamiaceae	12158	<i>Leonurus japonicus</i>	*	2
Plantae	Flora	Lamiaceae	3384	<i>Mentha diemenica</i>	Slender Mint	1
Plantae	Flora	Lamiaceae	3387	<i>Mentha satereioides</i>	Native Pennyroyal	1
Plantae	Flora	Lamiaceae	MENT	<i>Mentha</i> spp.	*	1
Plantae	Flora	Lamiaceae	3393	<i>Plectranthus argentatus</i>		2
Plantae	Flora	Lamiaceae	9050	<i>Plectranthus cremnus</i>		6
Plantae	Flora	Lamiaceae	3396	<i>Plectranthus graveolens</i>		11
Plantae	Flora	Lamiaceae	3397	<i>Plectranthus parviflorus</i>		56
Plantae	Flora	Lamiaceae	PLEC	<i>Plectranthus</i> spp.		1

Plantae	Flora	Lamiaceae	3398	<i>Plectranthus suaveolens</i>					1
Plantae	Flora	Lamiaceae	3400	<i>Prostanthera caerulea</i>					2
Plantae	Flora	Lamiaceae	3401	<i>Prostanthera cineolifera</i>	Singleton Mint Bush	V,P	V	K	
Plantae	Flora	Lamiaceae	3411	<i>Prostanthera howelliae</i>	Prostanthera				1
Plantae	Flora	Lamiaceae	3413	<i>Prostanthera incisa</i>	Cut-leaved Mint-bush				17
Plantae	Flora	Lamiaceae	3415	<i>Prostanthera lasianthos</i>	Victorian Christmas Bush				8
Plantae	Flora	Lamiaceae	3417	<i>Prostanthera linearis</i>	Narrow-leaved Mint-bush				2
Plantae	Flora	Lamiaceae	3421	<i>Prostanthera nivea</i>	Snowy Mint-bush				1
Plantae	Flora	Lamiaceae	3423	<i>Prostanthera ovalifolia</i>					3
Plantae	Flora	Lamiaceae	3426	<i>Prostanthera rhombea</i>					7
Plantae	Flora	Lamiaceae	3427	<i>Prostanthera rotundifolia</i>	Round-leaved Mint-bush				1
Plantae	Flora	Lamiaceae	3430	<i>Prostanthera scutellarioides</i>					8
Plantae	Flora	Lamiaceae	PROS	<i>Prostanthera spp.</i>					2
Plantae	Flora	Lamiaceae	3440	<i>Prunella vulgaris</i>	* Self-heal				3
Plantae	Flora	Lamiaceae	3442	<i>Salvia coccinea</i>	*				3
Plantae	Flora	Lamiaceae	3445	<i>Salvia reflexa</i>	* Mintweed				1
Plantae	Flora	Lamiaceae	6254	<i>Spartothamnella juncea</i>	Bead Bush				3
Plantae	Flora	Lamiaceae	3450	<i>Stachys arvensis</i>	* Stagger Weed				2
Plantae	Flora	Lamiaceae	3452	<i>Teucrium corymbosum</i>	Forest Germander				3
Plantae	Flora	Lamiaceae	3455	<i>Westringia amabilis</i>					6
Plantae	Flora	Lamiaceae	3459	<i>Westringia fruticosa</i>	Coastal Rosemary				1
Plantae	Flora	Lamiaceae	3460	<i>Westringia glabra</i>					1
Plantae	Flora	Lauraceae	3465	<i>Beilschmiedia elliptica</i>	Grey Walnut				7
Plantae	Flora	Lauraceae	3466	<i>Beilschmiedia obtusifolia</i>	Blush Walnut				6
Plantae	Flora	Lauraceae	BEIL	<i>Beilschmiedia spp.</i>					1
Plantae	Flora	Lauraceae	7220	<i>Cassytha filiformis</i>					3
Plantae	Flora	Lauraceae	3467	<i>Cassytha glabella</i>					80
Plantae	Flora	Lauraceae	9274	<i>Cassytha glabella f. glabella</i>					1
Plantae	Flora	Lauraceae	3469	<i>Cassytha pubescens</i>	Downy Dodder-laurel				80
Plantae	Flora	Lauraceae	CASY	<i>Cassytha spp.</i>					6
Plantae	Flora	Lauraceae	13650	<i>Cinnamomum baileyianum</i>	*				1
Plantae	Flora	Lauraceae	3471	<i>Cinnamomum camphora</i>	* Camphor Laurel				112
Plantae	Flora	Lauraceae	3472	<i>Cinnamomum oliveri</i>	Oliver's Sassafras				22
Plantae	Flora	Lauraceae	3473	<i>Cinnamomum virens</i>	Red-barked Sassafras				42
Plantae	Flora	Lauraceae	3475	<i>Cryptocarya erythroxylon</i>	Pigeonberry Ash				6
Plantae	Flora	Lauraceae	3478	<i>Cryptocarya foveolata</i>	Mountain Walnut				23
Plantae	Flora	Lauraceae	3479	<i>Cryptocarya glaucescens</i>	Jackwood				103
Plantae	Flora	Lauraceae	8756	<i>Cryptocarya meissneriana</i>	Thick-leaved Laurel				100
Plantae	Flora	Lauraceae	3483	<i>Cryptocarya microneura</i>	Murrogun				123
Plantae	Flora	Lauraceae	8475	<i>Cryptocarya nova-anglica</i>	Mountain Laurel				8
Plantae	Flora	Lauraceae	3484	<i>Cryptocarya obovata</i>	Pepperberry				18
Plantae	Flora	Lauraceae	3485	<i>Cryptocarya rigida</i>	Forest Maple				165
Plantae	Flora	Lauraceae	11420	<i>Cryptocarya spp.</i>					3
Plantae	Flora	Lauraceae	3486	<i>Cryptocarya triplinervis</i>	Three-veined Cryptocarya				1
Plantae	Flora	Lauraceae	3488	<i>Endiandra crassiflora</i>	Dorrigo Maple				13
Plantae	Flora	Lauraceae	3489	<i>Endiandra discolor</i>	Rose Walnut				21
Plantae	Flora	Lauraceae	3493	<i>Endiandra muelleri</i>	Green-leaved Rose Walnut				48



Plantae	Flora	Lauraceae	9364	<i>Endiandra muelleri</i> <i>subsp. muelleri</i>		13
Plantae	Flora	Lauraceae	3495	<i>Endiandra sieberi</i>	Hard Corkwood	69
Plantae	Flora	Lauraceae	3496	<i>Endiandra virens</i>	White Apple	1
Plantae	Flora	Lauraceae	8675	<i>Litsea australis</i>	Brown Bolly Gum	1
Plantae	Flora	Lauraceae	3498	<i>Litsea reticulata</i>	Bolly Gum	51
Plantae	Flora	Lauraceae	8386	<i>Neolitsea australiensis</i>	Green Bolly Gum	16
Plantae	Flora	Lauraceae	3499	<i>Neolitsea dealbata</i>	Hairy-leaved Bolly Gum	87
Plantae	Flora	Lentibulariaceae	3505	<i>Utricularia australis</i>	Yellow Bladderwort	4
Plantae	Flora	Lentibulariaceae	3507	<i>Utricularia dichotoma</i>	Fairy Aprons	1
Plantae	Flora	Lentibulariaceae	9234	<i>Utricularia gibba</i>	Floating Bladderwort	1
Plantae	Flora	Lentibulariaceae	3508	<i>Utricularia lateriflora</i>	Small Bladderwort	1
Plantae	Flora	Lentibulariaceae	9235	<i>Utricularia uniflora</i>		1
Plantae	Flora	Liliaceae	3559	<i>Lilium formosanum</i>	* Formosan Lily	5
Plantae	Flora	Linaceae	3585	<i>Linum usitatissimum</i>	* Flax	1
Plantae	Flora	Lindsaeaceae	6406	<i>Lindsaea linearis</i>	Screw Fern	30
Plantae	Flora	Lindsaeaceae	6401	<i>Lindsaea microphylla</i>	Lacy Wedge Fern	27
Plantae	Flora	Lindsaeaceae	LIND	<i>Lindsaea spp.</i>		1
Plantae	Flora	Lobeliaceae	1913	<i>Isotoma axillaris</i>	Showy Isotome	2
Plantae	Flora	Lobeliaceae	10465	<i>Lobelia anceps</i>		24
Plantae	Flora	Lobeliaceae	7072	<i>Lobelia dentata</i>		1
Plantae	Flora	Lobeliaceae	1917	<i>Lobelia gibbosa</i>	Tall Lobelia	2
Plantae	Flora	Lobeliaceae	LOBE	<i>Lobelia spp.</i>		9
Plantae	Flora	Lobeliaceae	1919	<i>Lobelia trigonocaulis</i>	Forest Lobelia	26
Plantae	Flora	Lobeliaceae	1925	<i>Pratia purpurascens</i>	Whiteroot	235
Plantae	Flora	Loganiaceae	3588	<i>Logania albiflora</i>		20
Plantae	Flora	Loganiaceae	13184	<i>Logania albiflora subsp.</i> <i>A</i>		4
Plantae	Flora	Loganiaceae	3590	<i>Logania pusilla</i>		1
Plantae	Flora	Loganiaceae	3591	<i>Mitrasacme alsinoides</i>		10
Plantae	Flora	Loganiaceae	3592	<i>Mitrasacme paludosa</i>		2
Plantae	Flora	Loganiaceae	3595	<i>Mitrasacme polymorpha</i>		5
Plantae	Flora	Loganiaceae	3596	<i>Mitrasacme serpyllifolia</i>		2
Plantae	Flora	Loganiaceae	MITR	<i>Mitrasacme spp.</i>		1
Plantae	Flora	Lomandraceae	6297	<i>Lomandra confertifolia</i>	Matrush	3
Plantae	Flora	Lomandraceae	7709	<i>Lomandra confertifolia</i> <i>subsp. pallida</i>	Matrush	5
Plantae	Flora	Lomandraceae	6301	<i>Lomandra elongata</i>		1
Plantae	Flora	Lomandraceae	6302	<i>Lomandra filiformis</i>	Wattle Matt-rush	56
Plantae	Flora	Lomandraceae	6511	<i>Lomandra filiformis</i> <i>subsp. coriacea</i>	Wattle Matt-rush	9
Plantae	Flora	Lomandraceae	7931	<i>Lomandra filiformis</i> <i>subsp. filiformis</i>		26
Plantae	Flora	Lomandraceae	6304	<i>Lomandra glauca</i>	Pale Mat-rush	10
Plantae	Flora	Lomandraceae	8776	<i>Lomandra hystrix</i>		22
Plantae	Flora	Lomandraceae	6308	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	495
Plantae	Flora	Lomandraceae	9082	<i>Lomandra micrantha</i> <i>subsp. tuberculata</i>	Small-flowered Mat-rush	1
Plantae	Flora	Lomandraceae	8802	<i>Lomandra multiflora</i> <i>subsp. multiflora</i>	Many-flowered Mat-rush	56
Plantae	Flora	Lomandraceae	6314	<i>Lomandra spicata</i>		98
Plantae	Flora	Lomandraceae	LOMA	<i>Lomandra spp.</i>	Mat-rush	1



Plantae	Flora	Loranthaceae	6856	<i>Amyema congener</i>			28
				<i>subsp. congener</i>			
Plantae	Flora	Loranthaceae	3602	<i>Amyema gaudichaudii</i>			1
Plantae	Flora	Loranthaceae	6394	<i>Amyema miquelii</i>	Box Mistletoe		1
Plantae	Flora	Loranthaceae	3607	<i>Amyema pendula</i>			11
Plantae	Flora	Loranthaceae	7308	<i>Amyema pendula subsp. pendula</i>			5
Plantae	Flora	Loranthaceae	AMYE	<i>Amyema spp.</i>	Mistletoe		27
Plantae	Flora	Loranthaceae	3610	<i>Amylotheca dictyophleba</i>			10
Plantae	Flora	Loranthaceae	3612	<i>Benthamina alyxifolia</i>			6
Plantae	Flora	Loranthaceae	3613	<i>Dendrophthoe vitellina</i>			4
Plantae	Flora	Loranthaceae	3619	<i>Muellerina celastroides</i>			6
Plantae	Flora	Loranthaceae	3620	<i>Muellerina eucalyptoides</i>			2
Plantae	Flora	Loranthaceae	MUEL	<i>Muellerina spp.</i>			1
Plantae	Flora	Luzuriagaceae	3547	<i>Drymophila moorei</i>	Orange Berry		92
Plantae	Flora	Luzuriagaceae	6015	<i>Eustrephus latifolius</i>	Wombat Berry		206
Plantae	Flora	Luzuriagaceae	6016	<i>Geitonoplesium cymosum</i>	Scrambling Lily		307
Plantae	Flora	Lycopodiaceae	10641	<i>Lycopodiella cernua</i>	Scrambling Clubmoss		1
Plantae	Flora	Lycopodiaceae	9293	<i>Lycopodiella lateralis</i>	Slender Clubmoss		1
Plantae	Flora	Lycopodiaceae	6409	<i>Lycopodium deuterodensum</i>	Bushy Clubmoss	P	5
Plantae	Flora	Lycopodiaceae	LYCO	<i>Lycopodium spp.</i>		P	13
Plantae	Flora	Malvaceae	5614	<i>Cotoneaster pannosus</i>	*		2
Plantae	Flora	Malvaceae	5618	<i>Eriobotrya japonica</i>	*	Loquat	1
Plantae	Flora	Malvaceae	3632	<i>Abutilon oxycarpum</i>	Straggly Lantern-bush		5
Plantae	Flora	Malvaceae	6126	<i>Brachychiton acerifolius</i>	Illawarra Flame Tree		28
Plantae	Flora	Malvaceae	6127	<i>Brachychiton discolor</i>	Lacebark Tree		3
Plantae	Flora	Malvaceae	6128	<i>Brachychiton populneus</i>	Kurrajong		9
Plantae	Flora	Malvaceae	8961	<i>Brachychiton populneus subsp. populneus</i>			1
Plantae	Flora	Malvaceae	6129	<i>Commersonia bartramia</i>	Brown Kurrajong		4
Plantae	Flora	Malvaceae	14590	<i>Commersonia dasyphylla</i>			13
Plantae	Flora	Malvaceae	6130	<i>Commersonia fraseri</i>	Brush Kurrajong		37
Plantae	Flora	Malvaceae	6133	<i>Heritiera actinophylla</i>	Black Booyong		91
Plantae	Flora	Malvaceae	3641	<i>Hibiscus diversifolius</i>	Swamp Hibiscus		5
Plantae	Flora	Malvaceae	8877	<i>Hibiscus heterophyllus subsp. heterophyllus</i>	Native Rosella		46
Plantae	Flora	Malvaceae	3645	<i>Hibiscus splendens</i>	Pink Hibiscus		7
Plantae	Flora	Malvaceae	HIBI	<i>Hibiscus spp.</i>			6
Plantae	Flora	Malvaceae	3647	<i>Hibiscus tiliaceus</i>	Cottonwood Hibiscus		7
Plantae	Flora	Malvaceae	3649	<i>Howittia trilocularis</i>			5
Plantae	Flora	Malvaceae	9871	<i>Keraudrenia hillii var. hillii</i>			1
Plantae	Flora	Malvaceae	3650	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus		2
Plantae	Flora	Malvaceae	6139	<i>Lasiopetalum ferrugineum</i>			2
Plantae	Flora	Malvaceae	9175	<i>Lasiopetalum ferrugineum var. cordatum</i>			1
Plantae	Flora	Malvaceae	9008	<i>Lasiopetalum ferrugineum var. ferrugineum</i>			1
Plantae	Flora	Malvaceae	6143	<i>Lasiopetalum parviflorum</i>			3
Plantae	Flora	Malvaceae	3657	<i>Malva parviflora</i>	*	Small-flowered Mallow	1

Plantae	Flora	Malvaceae	3660	<i>Modiola caroliniana</i>	*	Red-flowered Mallow	3
Plantae	Flora	Malvaceae	7267	<i>Pavonia hastata</i>	*		2
Plantae	Flora	Malvaceae	6151	<i>Seringia arborescens</i>			2
Plantae	Flora	Malvaceae	3673	<i>Sida rhombifolia</i>	*	Paddy's Lucerne	110
Plantae	Flora	Marsileaceae	8139	<i>Marsilea mutica</i>			2
Plantae	Flora	Melastomataceae	3675	<i>Melastoma affine</i>		Blue Tongue	2
Plantae	Flora	Melastomataceae	11738	<i>Tibouchina urvilleana</i>	*	Lasiandra	4
Plantae	Flora	Meliaceae	3676	<i>Dysoxylum fraserianum</i>		Rosewood	55
Plantae	Flora	Meliaceae	11079	<i>Dysoxylum mollissimum</i> subsp. <i>molle</i>		Red Bean	1
Plantae	Flora	Meliaceae	3679	<i>Dysoxylum rufum</i>		Hairy Rosewood	58
Plantae	Flora	Meliaceae	3680	<i>Melia azedarach</i>		White Cedar	22
Plantae	Flora	Meliaceae	11178	<i>Synoum glandulosum</i> subsp. <i>glandulosum</i>		Scentless Rosewood	241
Plantae	Flora	Meliaceae	8839	<i>Toona ciliata</i>		Red Cedar	22
Plantae	Flora	Menispermaceae	3686	<i>Legnephora moorei</i>		Round-leaf Vine	31
Plantae	Flora	Menispermaceae	3688	<i>Sarcopetalum harveyanum</i>		Pearl Vine	111
Plantae	Flora	Menispermaceae	3690	<i>Stephania japonica</i>		Snake vine	93
Plantae	Flora	Menispermaceae	8428	<i>Stephania japonica</i> var. <i>discolor</i>		Snake Vine	67
Plantae	Flora	Menispermaceae	7167	<i>Tinospora smilacina</i>		Tinospora Vine	E1,P K 
Plantae	Flora	Menyanthaceae	7615	<i>Nymphoides geminata</i>		Entire Marshwort	2
Plantae	Flora	Menyanthaceae	7891	<i>Nymphoides indica</i>		Water Snowflake	1
Plantae	Flora	Menyanthaceae	3692	<i>Villarsia exaltata</i>		Yellow Marsh Flower	17
Plantae	Flora	Monimiaceae	13218	<i>Daphnandra apatela</i>			18
Plantae	Flora	Monimiaceae	3911	<i>Daphnandra micrantha</i>			48
Plantae	Flora	Monimiaceae	DAPH	<i>Daphnandra</i> spp.			3
Plantae	Flora	Monimiaceae	3912	<i>Daphnandra tenuipes</i>		Red-flowered Socketwood	9
Plantae	Flora	Monimiaceae	3913	<i>Doryphora sassafras</i>		Sassafras	102
Plantae	Flora	Monimiaceae	3914	<i>Hedycarya angustifolia</i>		Native Mulberry	20
Plantae	Flora	Monimiaceae	3915	<i>Palmeria scandens</i>		Anchor Vine	96
Plantae	Flora	Monimiaceae	3918	<i>Wilkiea huegeliana</i>		Veiny Wilkiea	125
Plantae	Flora	Monimiaceae	3919	<i>Wilkiea macrophylla</i>		Large-leaved Wilkiea	2
Plantae	Flora	Moraceae	11662	<i>Ficus carica</i>	*	Common Fig	1
Plantae	Flora	Moraceae	7479	<i>Ficus coronata</i>		Creek Sandpaper Fig	131
Plantae	Flora	Moraceae	8778	<i>Ficus elastica</i>	*		1
Plantae	Flora	Moraceae	3921	<i>Ficus fraseri</i>		Sandpaper Fig	27
Plantae	Flora	Moraceae	3922	<i>Ficus macrophylla</i>			9
Plantae	Flora	Moraceae	8841	<i>Ficus macrophylla</i> subsp. <i>macrophylla</i>		Moreton Bay Fig	7
Plantae	Flora	Moraceae	7301	<i>Ficus obliqua</i>		Small-leaved Fig	23
Plantae	Flora	Moraceae	7788	<i>Ficus obliqua</i> var. <i>obliqua</i>			3
Plantae	Flora	Moraceae	3924	<i>Ficus rubiginosa</i>		Port Jackson Fig	39
Plantae	Flora	Moraceae	11720	<i>Ficus rubiginosa</i> f. <i>rubiginosa</i>			3
Plantae	Flora	Moraceae	FICU	<i>Ficus</i> spp.	*		2
Plantae	Flora	Moraceae	8407	<i>Ficus superba</i> var. <i>henniana</i>		Deciduous Fig	14
Plantae	Flora	Moraceae	3927	<i>Ficus watkinsiana</i>		Strangling Fig	22
Plantae	Flora	Moraceae	3928	<i>Maclura cochinchinensis</i>		Cockspur Thorn	63
Plantae	Flora	Moraceae	3930	<i>Morus alba</i>	*	White Mulberry	1
Plantae	Flora	Moraceae	3931	<i>Streblus brunonianus</i>		Whalebone Tree	21

Plantae	Flora	Moraceae	10416	<i>Trophis scandens</i>	Burny Vine				32
Plantae	Flora	Moraceae	10417	<i>Trophis scandens</i> subsp. <i>scandens</i>	Burny Vine				4
Plantae	Flora	Musaceae	11327	<i>Musa acuminata</i>	*				2
Plantae	Flora	Musaceae	MUSA	<i>Musa</i> spp.	*				1
Plantae	Flora	Myoporaceae	8602	<i>Eremophila debilis</i>	Amulla				2
Plantae	Flora	Myoporaceae	7906	<i>Myoporum acuminatum</i>	Boobialla				9
Plantae	Flora	Myoporaceae	9043	<i>Myoporum boninense</i> subsp. <i>australe</i>					4
Plantae	Flora	Myoporaceae	3954	<i>Myoporum insulare</i>	Common Boobialla				1
Plantae	Flora	Myrsinaceae	7459	<i>Aegiceras corniculatum</i>	River Mangrove				9
Plantae	Flora	Myrsinaceae	10694	<i>Ardisia crenata</i>	*				2
Plantae	Flora	Myrsinaceae	3959	<i>Embelia australiana</i>					46
Plantae	Flora	Myrsinaceae	14614	<i>Lysimachia arvensis</i>	*				18
Plantae	Flora	Myrsinaceae	11948	<i>Myrsine howittiana</i>	Brush Muttonwood				83
Plantae	Flora	Myrsinaceae	11953	<i>Myrsine variabilis</i>					109
Plantae	Flora	Myrtaceae	3968	<i>Acmena smithii</i>	Lilly Pilly				255
Plantae	Flora	Myrtaceae	11432	<i>Agonis flexuosa</i>	*				1
Plantae	Flora	Myrtaceae	3970	<i>Angophora costata</i>	Sydney Red Gum				6
Plantae	Flora	Myrtaceae	3971	<i>Angophora floribunda</i>	Rough-barked Apple				20
Plantae	Flora	Myrtaceae	ANGO	<i>Angophora</i> spp.					1
Plantae	Flora	Myrtaceae	3974	<i>Angophora subvelutina</i>	Broad-leaved Apple				19
Plantae	Flora	Myrtaceae	3976	<i>Archirhodomyrtus beckleri</i>	Rose Myrtle				72
Plantae	Flora	Myrtaceae	3984	<i>Backhousia myrtifolia</i>	Grey Myrtle				42
Plantae	Flora	Myrtaceae	3985	<i>Backhousia sciadophora</i>	Shatterwood				24
Plantae	Flora	Myrtaceae	3993	<i>Baeckea diosmifolia</i>	Fringed Baeckea				1
Plantae	Flora	Myrtaceae	3995	<i>Baeckea imbricata</i>					2
Plantae	Flora	Myrtaceae	3997	<i>Baeckea linifolia</i>	Weeping Baeckea	P			2
Plantae	Flora	Myrtaceae	9836	<i>Baeckea omisa</i>					6
Plantae	Flora	Myrtaceae	BAEC	<i>Baeckea</i> spp.					1
Plantae	Flora	Myrtaceae	4002	<i>Callistemon acuminatus</i>	Tapering-leaved Bottlebrush				5
Plantae	Flora	Myrtaceae	4004	<i>Callistemon citrinus</i>	Crimson Bottlebrush				3
Plantae	Flora	Myrtaceae	4005	<i>Callistemon comboyensis</i>	Cliff Bottlebrush				2
Plantae	Flora	Myrtaceae	4007	<i>Callistemon linearifolius</i>	Netted Bottle Brush	V,P,3			1
Plantae	Flora	Myrtaceae	4010	<i>Callistemon pachyphyllus</i>	Wallum Bottlebrush				66
Plantae	Flora	Myrtaceae	4011	<i>Callistemon pallidus</i>	Lemon Bottlebrush				2
Plantae	Flora	Myrtaceae	9126	<i>Callistemon pungens</i>		P	V	K	4
Plantae	Flora	Myrtaceae	4014	<i>Callistemon rigidus</i>	Stiff Bottlebrush				4
Plantae	Flora	Myrtaceae	4015	<i>Callistemon salignus</i>	Willow Bottlebrush				208
Plantae	Flora	Myrtaceae	CALL	<i>Callistemon</i> spp.					13
Plantae	Flora	Myrtaceae	4019	<i>Callistemon viminalis</i>	Weeping Bottlebrush				3
Plantae	Flora	Myrtaceae	4021	<i>Calytrix tetragona</i>	Common Fringe-myrtle				1
Plantae	Flora	Myrtaceae	4022	<i>Choricarpia leptopetala</i>	Brush Turpentine				10
Plantae	Flora	Myrtaceae	11748	<i>Corymbia citriodora</i>	*				5
Plantae	Flora	Myrtaceae	9687	<i>Corymbia gummifera</i>	Red Bloodwood				79
Plantae	Flora	Myrtaceae	9601	<i>Corymbia intermedia</i>	Pink Bloodwood				423
Plantae	Flora	Myrtaceae	9692	<i>Corymbia maculata</i>	Spotted Gum				28
Plantae	Flora	Myrtaceae	CRYM	<i>Corymbia</i> spp.					1
Plantae	Flora	Myrtaceae	9744	<i>Corymbia tessellaris</i>	Carbeen				2
Plantae	Flora	Myrtaceae	12526	<i>Corymbia torelliana</i>	*				4
Plantae	Flora	Myrtaceae	4030	<i>Darwinia leptantha</i>					5
Plantae	Flora	Myrtaceae	8442	<i>Decaspermum humile</i>	Silky Myrtle				7
Plantae	Flora	Myrtaceae	4035	<i>Eucalyptus acaciiformis</i>	Wattle-leaved Peppermint				12
Plantae	Flora	Myrtaceae	7027	<i>Eucalyptus acmenoides</i>	White Mahogany				198
Plantae	Flora	Myrtaceae	4037	<i>Eucalyptus agglomerata</i>	Blue-leaved Stringybark				13

Plantae	Flora	Myrtaceae	4040	<i>Eucalyptus amplifolia</i>	Cabbage Gum				12
Plantae	Flora	Myrtaceae	9007	<i>Eucalyptus amplifolia</i> subsp. <i>amplifolia</i>					6
Plantae	Flora	Myrtaceae	8617	<i>Eucalyptus ancophila</i>					5
Plantae	Flora	Myrtaceae	4041	<i>Eucalyptus andrewsii</i>	Gum-topped Peppermint				4
Plantae	Flora	Myrtaceae	4050	<i>Eucalyptus bancroftii</i>	Orange Gum				15
Plantae	Flora	Myrtaceae	7585	<i>Eucalyptus biturbinata</i>	Grey Gum				43
Plantae	Flora	Myrtaceae	4066	<i>Eucalyptus cameronii</i>	Diehard Stringybark				49
Plantae	Flora	Myrtaceae	8652	<i>Eucalyptus campanulata</i>	New England Blackbutt				121
Plantae	Flora	Myrtaceae	8599	<i>Eucalyptus carnea</i>	Thick-leaved Mahogany				99
Plantae	Flora	Myrtaceae	4074	<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark				1
Plantae	Flora	Myrtaceae	7361	<i>Eucalyptus dalrympleana</i> subsp. <i>heptantha</i>					14
Plantae	Flora	Myrtaceae	4082	<i>Eucalyptus dives</i>	Broad-leaved Peppermint				10
Plantae	Flora	Myrtaceae	4084	<i>Eucalyptus dunni</i>	Dunn's White Gum				1
Plantae	Flora	Myrtaceae	4087	<i>Eucalyptus eugenoides</i>	Thin-leaved Stringybark				31
Plantae	Flora	Myrtaceae	9820	<i>Eucalyptus fergusonii</i>					1
Plantae	Flora	Myrtaceae	8355	<i>Eucalyptus fergusonii</i> subsp. <i>fergusonii</i>					5
Plantae	Flora	Myrtaceae	4091	<i>Eucalyptus fibrosa</i>	Red Ironbark				2
Plantae	Flora	Myrtaceae	8329	<i>Eucalyptus fusiformis</i>	Grey Ironbark				2
Plantae	Flora	Myrtaceae	4097	<i>Eucalyptus globoides</i>	White Stringybark				110
Plantae	Flora	Myrtaceae	4101	<i>Eucalyptus grandis</i>	Flooded Gum				105
Plantae	Flora	Myrtaceae	4104	<i>Eucalyptus haemastoma</i>	Broad-leaved Scribbly Gum				1
Plantae	Flora	Myrtaceae	4112	<i>Eucalyptus laevopinea</i>	Silver-top Stringybark				25
Plantae	Flora	Myrtaceae	4117	<i>Eucalyptus ligustrina</i>	Privet-leaved Stringybark				8
Plantae	Flora	Myrtaceae	8713	<i>Eucalyptus magnificata</i>	Northern Blue Box	E1,P			K 
Plantae	Flora	Myrtaceae	4128	<i>Eucalyptus microcorys</i>	Tallowwood				670
Plantae	Flora	Myrtaceae	4129	<i>Eucalyptus moluccana</i>	Grey Box				9
Plantae	Flora	Myrtaceae	4134	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	V,P	V		5 
Plantae	Flora	Myrtaceae	8618	<i>Eucalyptus nobilis</i>	Forest Ribbon Gum				20
Plantae	Flora	Myrtaceae	4138	<i>Eucalyptus notabilis</i>	Mountain Mahogany				4
Plantae	Flora	Myrtaceae	4140	<i>Eucalyptus obliqua</i>	Messmate				43
Plantae	Flora	Myrtaceae	4145	<i>Eucalyptus oreades</i>	Blue Mountains Ash				19
Plantae	Flora	Myrtaceae	4149	<i>Eucalyptus paniculata</i>	Grey Ironbark				23
Plantae	Flora	Myrtaceae	4151	<i>Eucalyptus pauciflora</i>	White Sally				10
Plantae	Flora	Myrtaceae	4155	<i>Eucalyptus pilularis</i>	Blackbutt				477
Plantae	Flora	Myrtaceae	4156	<i>Eucalyptus piperita</i>	Sydney Peppermint				3
Plantae	Flora	Myrtaceae	8853	<i>Eucalyptus placita</i>	A Grey Ironbark				9
Plantae	Flora	Myrtaceae	4157	<i>Eucalyptus planchoniana</i>	Bastard Tallowwood				20
Plantae	Flora	Myrtaceae	4162	<i>Eucalyptus propinqua</i>	Small-fruited Grey Gum				270
Plantae	Flora	Myrtaceae	4165	<i>Eucalyptus punctata</i>	Grey Gum				5
Plantae	Flora	Myrtaceae	4166	<i>Eucalyptus pyrocarpa</i>	Large-fruited Blackbutt				11
Plantae	Flora	Myrtaceae	4167	<i>Eucalyptus quadrangulata</i>	White-topped Box				1
Plantae	Flora	Myrtaceae	4168	<i>Eucalyptus racemosa</i>	Narrow-leaved Scribbly Gum				4
Plantae	Flora	Myrtaceae	4169	<i>Eucalyptus radiata</i>	Narrow-leaved Peppermint				14
Plantae	Flora	Myrtaceae	8696	<i>Eucalyptus radiata</i> subsp. <i>sejuncta</i>					14
Plantae	Flora	Myrtaceae	4170	<i>Eucalyptus resinifera</i>	Red Mahogany				107
Plantae	Flora	Myrtaceae	8694	<i>Eucalyptus resinifera</i> subsp. <i>hemilampra</i>					19
Plantae	Flora	Myrtaceae	9450	<i>Eucalyptus resinifera</i> subsp. <i>resinifera</i>					21
Plantae	Flora	Myrtaceae	4171	<i>Eucalyptus robusta</i>	Swamp Mahogany				161
Plantae	Flora	Myrtaceae	4177	<i>Eucalyptus saligna</i>	Sydney Blue Gum				265
Plantae	Flora	Myrtaceae	8950	<i>Eucalyptus scias</i>	Large-fruited Red Mahogany				2

Plantae	Flora	Myrtaceae	8832	<i>Eucalyptus scias subsp. apoda</i>		2
Plantae	Flora	Myrtaceae	4179	<i>Eucalyptus seeana</i>	Narrow-leaved Red Gum	32
Plantae	Flora	Myrtaceae	4180	<i>Eucalyptus siderophloia</i>	Grey Ironbark	230
Plantae	Flora	Myrtaceae	4181	<i>Eucalyptus sideroxylon</i>	Mugga Ironbark	1
Plantae	Flora	Myrtaceae	4183	<i>Eucalyptus signata</i>	Scribbly Gum	49
Plantae	Flora	Myrtaceae	EUCA	<i>Eucalyptus spp.</i>		1
Plantae	Flora	Myrtaceae	4191	<i>Eucalyptus tereticornis</i>	Forest Red Gum	134
Plantae	Flora	Myrtaceae	4196	<i>Eucalyptus umbra</i>	Broad-leaved White Mahogany	84
Plantae	Flora	Myrtaceae	8683	<i>Eucalyptus williamsiana</i>		6
Plantae	Flora	Myrtaceae	14137	<i>Eucalyptus x kirtoniana</i>		12
Plantae	Flora	Myrtaceae	14166	<i>Eucalyptus x vitrea</i>		2
Plantae	Flora	Myrtaceae	11217	<i>Euryomyrtus ramosissima</i>	Rosy Baeckea	2
Plantae	Flora	Myrtaceae	11218	<i>Euryomyrtus ramosissima subsp. ramosissima</i>		8
Plantae	Flora	Myrtaceae	11397	<i>Gossia acmenoides</i>	Scrub Ironwood	7
Plantae	Flora	Myrtaceae	11398	<i>Gossia bidwillii</i>	Python Tree	18
Plantae	Flora	Myrtaceae	4203	<i>Homoranthus virgatus</i>		4
Plantae	Flora	Myrtaceae	4204	<i>Kunzea ambigua</i>	Tick Bush	P 1
Plantae	Flora	Myrtaceae	4207	<i>Kunzea capitata</i>		P 9
Plantae	Flora	Myrtaceae	12379	<i>Kunzea sp. 'Middle Brother Mtn'</i>		11
Plantae	Flora	Myrtaceae	KUNZ	<i>Kunzea spp.</i>		1
Plantae	Flora	Myrtaceae	4215	<i>Leptospermum brachyandrum</i>		5
Plantae	Flora	Myrtaceae	4216	<i>Leptospermum brevipes</i>	Slender Tea-tree	3
Plantae	Flora	Myrtaceae	8647	<i>Leptospermum gregarium</i>		2
Plantae	Flora	Myrtaceae	4221	<i>Leptospermum juniperinum</i>	Prickly Tea-tree	62
Plantae	Flora	Myrtaceae	4222	<i>Leptospermum laevigatum</i>	Coast Teatree	13
Plantae	Flora	Myrtaceae	4224	<i>Leptospermum liversidgei</i>	Olive Tea-tree	27
Plantae	Flora	Myrtaceae	4225	<i>Leptospermum microcarpum</i>		1
Plantae	Flora	Myrtaceae	8478	<i>Leptospermum novae-angliae</i>		1
Plantae	Flora	Myrtaceae	4234	<i>Leptospermum petersonii</i>	Lemon-scented Teatree	8
Plantae	Flora	Myrtaceae	9080	<i>Leptospermum polyanthum</i>		2
Plantae	Flora	Myrtaceae	7245	<i>Leptospermum polygalifolium</i>	Tantoon	95
Plantae	Flora	Myrtaceae	8199	<i>Leptospermum polygalifolium subsp. cismontanum</i>		33
Plantae	Flora	Myrtaceae	8198	<i>Leptospermum polygalifolium subsp. montanum</i>		3
Plantae	Flora	Myrtaceae	8197	<i>Leptospermum polygalifolium subsp. polygalifolium</i>		2
Plantae	Flora	Myrtaceae	8201	<i>Leptospermum polygalifolium subsp. transmontanum</i>		1
Plantae	Flora	Myrtaceae	4236	<i>Leptospermum semibaccatum</i>		3
Plantae	Flora	Myrtaceae	LEPT	<i>Leptospermum spp.</i>	Tea-tree	19

Plantae	Flora	Myrtaceae	8486	<i>Leptospermum trinervium</i>	Slender Tea-tree	13	
Plantae	Flora	Myrtaceae	8600	<i>Leptospermum variabile</i>		5	
Plantae	Flora	Myrtaceae	4242	<i>Lophostemon confertus</i>	Brush Box	361	
Plantae	Flora	Myrtaceae	4243	<i>Lophostemon suaveolens</i>	Swamp Mahogany, Swamp Turpentine	3	
Plantae	Flora	Myrtaceae	4245	<i>Melaleuca alternifolia</i>		2	
Plantae	Flora	Myrtaceae	11117	<i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Bracelet Honey-myrtle	1	
Plantae	Flora	Myrtaceae	6809	<i>Melaleuca biconvexa</i>	Biconvex Paperbark	V,P V 32	
Plantae	Flora	Myrtaceae	4249	<i>Melaleuca decora</i>		5	
Plantae	Flora	Myrtaceae	6391	<i>Melaleuca ericifolia</i>	Swamp Paperbark	1	
Plantae	Flora	Myrtaceae	4252	<i>Melaleuca groveana</i>	Grove's Paperbark	V,P 69	
Plantae	Flora	Myrtaceae	4257	<i>Melaleuca linariifolia</i>	Flax-leaved Paperbark	179	
Plantae	Flora	Myrtaceae	4258	<i>Melaleuca nodosa</i>		49	
Plantae	Flora	Myrtaceae	4260	<i>Melaleuca quinqueruvia</i>	Broad-leaved Paperbark	240	
Plantae	Flora	Myrtaceae	4261	<i>Melaleuca sieberi</i>		87	
Plantae	Flora	Myrtaceae	MELA	<i>Melaleuca</i> spp.		4	
Plantae	Flora	Myrtaceae	4264	<i>Melaleuca styphelioides</i>	Prickly-leaved Tea Tree	184	
Plantae	Flora	Myrtaceae	4266	<i>Melaleuca thymifolia</i>	Thyme Honey-myrtle	28	
Plantae	Flora	Myrtaceae	11326	<i>Metrosideros excelsa</i>	New Zealand Christmas Bush	1	
Plantae	Flora	Myrtaceae	METR	<i>Metrosideros</i> spp.		1	
Plantae	Flora	Myrtaceae	4272	<i>Micromyrtus ciliata</i>	Fringed Heath-myrtle	1	
Plantae	Flora	Myrtaceae	6949	<i>Ochrosperma citriodorum</i>		3	
Plantae	Flora	Myrtaceae	6474	<i>Ochrosperma lineare</i>		4	
Plantae	Flora	Myrtaceae	4277	<i>Ptilidostigma glabrum</i>		12	
Plantae	Flora	Myrtaceae	10495	<i>Psidium cattleianum</i> var. <i>cattleianum</i>	Strawberry Guava	1	
Plantae	Flora	Myrtaceae	4280	<i>Rhodamnia argentea</i>	Silver Myrtle	4	
Plantae	Flora	Myrtaceae	4283	<i>Rhodamnia rubescens</i>	Scrub Turpentine	102	
Plantae	Flora	Myrtaceae	4284	<i>Rhodomyrtus psidioides</i>	Native Guava	42	
Plantae	Flora	Myrtaceae	13297	<i>Sannantha collina</i>		1	
Plantae	Flora	Myrtaceae	13751	<i>Sannantha pluriflora</i>		17	
Plantae	Flora	Myrtaceae	13299	<i>Sannantha similis</i>		14	
Plantae	Flora	Myrtaceae	6688	<i>Syncarpia glomulifera</i>	Turpentine	388	
Plantae	Flora	Myrtaceae	10747	<i>Syncarpia glomulifera</i> subsp. <i>glabra</i>		2	
Plantae	Flora	Myrtaceae	10748	<i>Syncarpia glomulifera</i> subsp. <i>glomulifera</i>		8	
Plantae	Flora	Myrtaceae	6778	<i>Syzygium australe</i>	Brush Cherry	29	
Plantae	Flora	Myrtaceae	4286	<i>Syzygium corynanthum</i>	Sour Cherry	10	
Plantae	Flora	Myrtaceae	4287	<i>Syzygium crebrinerve</i>	Rose Satinash	4	
Plantae	Flora	Myrtaceae	4289	<i>Syzygium francisii</i>	Giant Water Gum	8	
Plantae	Flora	Myrtaceae	4291	<i>Syzygium luehmannii</i>	Small-leaved Lilly Pilly	5	
Plantae	Flora	Myrtaceae	7201	<i>Syzygium oleosum</i>	Blue Lilly Pilly	29	
Plantae	Flora	Myrtaceae	SYZY	<i>Syzygium</i> spp.		1	
Plantae	Flora	Myrtaceae	4296	<i>Tristaniopsis collina</i>	Mountain Water Gum	14	
Plantae	Flora	Myrtaceae	4297	<i>Tristaniopsis laurina</i>	Kanooka	48	
Plantae	Flora	Myrtaceae	6799	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	11	
Plantae	Flora	Najadaceae	9185	<i>Najas marina</i> subsp. <i>armata</i>		1	
Plantae	Flora	Nothofagaceae	3107	<i>Nothofagus moorei</i>	Antarctic Beech	38	
Plantae	Flora	Nyctaginaceae	4302	<i>Pisonia umbellifera</i>	Birdlime Tree	1	
Plantae	Flora	Nymphaeaceae	10779	<i>Nymphaea caerulea</i> subsp. <i>zanzibarensis</i>	Cape Waterlily	15	
Plantae	Flora	Nymphaeaceae	7460	<i>Nymphaea gigantea</i>	Giant Waterlily	5	

Plantae	Flora	Nymphaeaceae	NYMP	<i>Nymphaea</i> spp.	*		18
Plantae	Flora	Ochnaceae	4306	<i>Ochna serrulata</i>	*	Mickey Mouse Plant	51
Plantae	Flora	Ochnaceae	OCHN	<i>Ochna</i> spp.	*		5
Plantae	Flora	Oleaceae	6407	<i>Olax stricta</i>			2
Plantae	Flora	Oleaceae	10913	<i>Jasminum polyanthum</i>	*	White Jasmine	1
Plantae	Flora	Oleaceae	4311	<i>Jasminum volubile</i>			12
Plantae	Flora	Oleaceae	4312	<i>Ligustrum lucidum</i>	*	Large-leaved Privet	29
Plantae	Flora	Oleaceae	4313	<i>Ligustrum sinense</i>	*	Small-leaved Privet	44
Plantae	Flora	Oleaceae	4318	<i>Notelaea longifolia</i>		Large Mock-olive	130
Plantae	Flora	Oleaceae	6653	<i>Notelaea longifolia</i> f. <i>glabra</i>			1
Plantae	Flora	Oleaceae	6909	<i>Notelaea longifolia</i> f. <i>intermedia</i>			12
Plantae	Flora	Oleaceae	6423	<i>Notelaea longifolia</i> f. <i>longifolia</i>			17
Plantae	Flora	Oleaceae	4319	<i>Notelaea microcarpa</i>		Native Olive	2
Plantae	Flora	Oleaceae	4321	<i>Notelaea ovata</i>			26
Plantae	Flora	Oleaceae	8670	<i>Notelaea</i> sp. A			3
Plantae	Flora	Oleaceae	NOTE	<i>Notelaea</i> spp.			3
Plantae	Flora	Oleaceae	4322	<i>Notelaea venosa</i>		Veined Mock-olive	28
Plantae	Flora	Oleaceae	4324	<i>Olea europaea</i>	*	Common Olive	1
Plantae	Flora	Oleaceae	7688	<i>Olea europaea</i> subsp. <i>europaea</i>	*	Olive	1
Plantae	Flora	Oleaceae	4325	<i>Olea paniculata</i>		Native Olive	17
Plantae	Flora	Onagraceae	7952	<i>Epilobium billardierianum</i> subsp. <i>cinereum</i>			2
Plantae	Flora	Onagraceae	7297	<i>Ludwigia octovalvis</i>		Willow Primrose	1
Plantae	Flora	Onagraceae	7375	<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>		Water Primrose	17
Plantae	Flora	Onagraceae	8808	<i>Oenothera stricta</i> subsp. <i>stricta</i>	*		1
Plantae	Flora	Ophioglossaceae	8144	<i>Botrychium australe</i>		Parsley Fern	10
Plantae	Flora	Ophioglossaceae	8146	<i>Ophioglossum pendulum</i>			1
Plantae	Flora	Orchidaceae	13308	<i>Acianthella amplexicaulis</i>			P 4
Plantae	Flora	Orchidaceae	4351	<i>Acianthus caudatus</i>		Mayfly Orchid	P 1
Plantae	Flora	Orchidaceae	4352	<i>Acianthus exsertus</i>		Mosquito Orchid	P 2
Plantae	Flora	Orchidaceae	4353	<i>Acianthus fornicatus</i>		Pixie Caps	P 15
Plantae	Flora	Orchidaceae	9088	<i>Acianthus pusillus</i>		Gnat Orchid	P 2
Plantae	Flora	Orchidaceae	ACIA	<i>Acianthus</i> spp.		Mosquito Orchid	P 7
Plantae	Flora	Orchidaceae	9014	<i>Arthrochilus prolixus</i>			P 5
Plantae	Flora	Orchidaceae	4362	<i>Bulbophyllum elisae</i>		Pineapple Orchid	P 2
Plantae	Flora	Orchidaceae	4363	<i>Bulbophyllum exiguum</i>			P 27
Plantae	Flora	Orchidaceae	4365	<i>Bulbophyllum minutissimum</i>			P 1
Plantae	Flora	Orchidaceae	9018	<i>Bulbophyllum schillerianum</i>		Red Rope Orchid	P 1
Plantae	Flora	Orchidaceae	6859	<i>Bulbophyllum shepherdii</i>		Wheat-leaved Orchid	P 13
Plantae	Flora	Orchidaceae	4373	<i>Caladenia carnea</i>		Pink Fingers	P 6
Plantae	Flora	Orchidaceae	6703	<i>Caladenia catenata</i>		White Caladenia	P 11
Plantae	Flora	Orchidaceae	7588	<i>Caladenia picta</i>			P 1
Plantae	Flora	Orchidaceae	9124	<i>Caladenia quadrifaria</i>			P 4
Plantae	Flora	Orchidaceae	4388	<i>Calanthe triplicata</i>		Christmas Orchid	P 17
Plantae	Flora	Orchidaceae	4389	<i>Caleana major</i>		Large Duck Orchid	P 3
Plantae	Flora	Orchidaceae	4390	<i>Calochilus campestris</i>		Copper Beard Orchid	P 4
Plantae	Flora	Orchidaceae	4394	<i>Calochilus paludosus</i>		Red Beard Orchid	P 3
Plantae	Flora	Orchidaceae	14090	<i>Cestichis coelogyoides</i>			P 5
Plantae	Flora	Orchidaceae	14091	<i>Cestichis reflexa</i>			P 5
Plantae	Flora	Orchidaceae	14092	<i>Cestichis swenssonii</i>			P 1
Plantae	Flora	Orchidaceae	9020	<i>Chiloglottis anaticeps</i>		Bird Orchid	E1,P,2 3



Plantae	Flora	Orchidaceae	7814	<i>Chiloglottis diphylla</i>		P	2	
Plantae	Flora	Orchidaceae	9022	<sup>A</sup> <i>Chiloglottis platyptera</i>	Barrington Tops Ant Orchid	V,P,2	K	
Plantae	Flora	Orchidaceae	4402	<i>Chiloglottis reflexa</i>		P	4	
Plantae	Flora	Orchidaceae	8868	<i>Chiloglottis sphynoides</i>		P	3	
Plantae	Flora	Orchidaceae	CHIL	<i>Chiloglottis spp.</i>		P	7	
Plantae	Flora	Orchidaceae	6881	<i>Chiloglottis sylvestris</i>		P	1	
Plantae	Flora	Orchidaceae	4403	<i>Chiloglottis trapeziformis</i>	Thick-lip Bird Orchid	P	2	
Plantae	Flora	Orchidaceae	4404	<i>Corybas aconitiflorus</i>	Spurred Helmet Orchid	P	5	
Plantae	Flora	Orchidaceae	7444	<i>Corybas barbarae</i>		P	3	
Plantae	Flora	Orchidaceae	4408	<i>Corybas ferdinandi</i>	Banded Helmet Orchid	P	2	
Plantae	Flora	Orchidaceae	4410	<i>Corybas pruinatus</i>	Toothed Helmet Orchid	P	3	
Plantae	Flora	Orchidaceae	CORY	<i>Corybas spp.</i>		P	4	
Plantae	Flora	Orchidaceae	4411	<i>Corybas undulatus</i>	Tailed Helmet Orchid	P	2	
Plantae	Flora	Orchidaceae	4414	<i>Cryptostylis erecta</i>	Tartan Tongue Orchid	P	29	
Plantae	Flora	Orchidaceae	4415	<sup>A</sup> <i>Cryptostylis hunteriana</i>	Leafless Tongue Orchid	V,P,2 V	K	
Plantae	Flora	Orchidaceae	4416	<i>Cryptostylis leptochila</i>	Small Tongue Orchid	P	1	
Plantae	Flora	Orchidaceae	CRYT	<i>Cryptostylis spp.</i>		P	7	
Plantae	Flora	Orchidaceae	4417	<i>Cryptostylis subulata</i>	Large Tongue Orchid	P	21	
Plantae	Flora	Orchidaceae	4418	<i>Cymbidium madidum</i>		P	1	
Plantae	Flora	Orchidaceae	4419	<i>Cymbidium suave</i>	Snake Orchid	P	51	
Plantae	Flora	Orchidaceae	4420	<i>Dendrobium aemulatum</i>	Ironbark Orchid	P	29	
Plantae	Flora	Orchidaceae	6945	<i>Dendrobium bowmanii</i>		P	1	
Plantae	Flora	Orchidaceae	7387	<i>Dendrobium fairfaxii</i>	Rat's Tail Orchid	P	22	
Plantae	Flora	Orchidaceae	4423	<i>Dendrobium falcifolium</i>	Beech Orchid	P	6	
Plantae	Flora	Orchidaceae	4424	<i>Dendrobium gracile</i>		P	22	
Plantae	Flora	Orchidaceae	4425	<i>Dendrobium kingianum</i>	Pink Rock Orchid	P	11	
Plantae	Flora	Orchidaceae	4426	<i>Dendrobium linguiforme</i>	Tongue Orchid	P	18	
Plantae	Flora	Orchidaceae	6630	<sup>A</sup> <i>Dendrobium melaleucaphilum</i>	Spider orchid	E1,P,2	4	
Plantae	Flora	Orchidaceae	4429	<i>Dendrobium mortii</i>		P	11	
Plantae	Flora	Orchidaceae	4430	<i>Dendrobium pugioniforme</i>	Dagger Orchid	P	46	
Plantae	Flora	Orchidaceae	6697	<i>Dendrobium schoenanthum</i>	Pencil Orchid	P	15	
Plantae	Flora	Orchidaceae	4432	<i>Dendrobium speciosum</i>	Rock Lily	P	15	
Plantae	Flora	Orchidaceae	8943	<i>Dendrobium speciosum</i> var. <i>hillii</i>	King Orchid	P	6	
Plantae	Flora	Orchidaceae	DEND	<i>Dendrobium spp.</i>		P	7	
Plantae	Flora	Orchidaceae	4435	<i>Dendrobium teretifolium</i>	Rat's Tail Orchid	P	20	
Plantae	Flora	Orchidaceae	4436	<i>Dendrobium tetragonum</i>	Tree Spider Orchid	P	9	
Plantae	Flora	Orchidaceae	9120	<i>Dendrobium x gracillimum</i>		P	2	
Plantae	Flora	Orchidaceae	7887	<i>Dipodium punctatum</i>		P	13	
Plantae	Flora	Orchidaceae	DIPO	<i>Dipodium spp.</i>		P	1	
Plantae	Flora	Orchidaceae	7888	<i>Dipodium variegatum</i>		P	9	
Plantae	Flora	Orchidaceae	4441	<i>Diuris aurea</i>		P	1	
Plantae	Flora	Orchidaceae	7473	<i>Diuris chrysanthra</i>		P	1	
Plantae	Flora	Orchidaceae	9025	<sup>A</sup> <i>Diuris disposita</i>	Willawarrin Doubletail	E1,P,2	K	
Plantae	Flora	Orchidaceae	14212	<sup>A</sup> <i>Diuris eborensis</i>		E1,P,2	K	
Plantae	Flora	Orchidaceae	4450	<sup>A</sup> <i>Diuris pedunculata</i>	Small Snake Orchid	E1,P,2 E	1	
Plantae	Flora	Orchidaceae	4453	<i>Diuris punctata</i>	Purple Donkey Orchid	P	1	
Plantae	Flora	Orchidaceae	10936	<sup>A</sup> <i>Diuris sp. aff. chrysanthra</i>	Byron Bay Diuris	E1,P,2	1	
Plantae	Flora	Orchidaceae	4456	<i>Diuris sulphurea</i>	Tiger Orchid	P	1	
Plantae	Flora	Orchidaceae	4460	<i>Eriochilus cucullatus</i>	Parson's Bands	P	3	

Plantae	Flora	Orchidaceae	8949	<i>Erythrorchis cassythoides</i>	Climbing Orchid	P	6	
Plantae	Flora	Orchidaceae	4463	<i>Gastrodia sesamoides</i>	Cinnamon Bells	P	3	
Plantae	Flora	Orchidaceae	9196	<i>Genoplesium acuminatum</i>		P	2	
Plantae	Flora	Orchidaceae	9197	<i>Genoplesium archeri</i>	Variable Midge Orchid	P	1	
Plantae	Flora	Orchidaceae	8872	<i>Genoplesium fimbriatum</i>	Fringed Midge Orchid	P	1	
Plantae	Flora	Orchidaceae	8873	<i>Genoplesium nudiscapum</i>	Dense Midge Orchid	P	1	
Plantae	Flora	Orchidaceae	9200	<i>Genoplesium pumilum</i>	Green Midge Orchid	P	1	
Plantae	Flora	Orchidaceae	4465	<i>Glossodia major</i>	Waxlip Orchid	P	3	
Plantae	Flora	Orchidaceae	7622	<i>Microtis parviflora</i>	Slender Onion Orchid	P	2	
Plantae	Flora	Orchidaceae	4473	<i>Microtis unifolia</i>	Common Onion Orchid	P	1	
Plantae	Flora	Orchidaceae	7077	<i>^Oberonia titania</i>	Red-flowered King of the Fairies	V,P,2	4	
Plantae	Flora	Orchidaceae	4477	<i>Papillilabium beckeri</i>		P	3	
Plantae	Flora	Orchidaceae	4479	<i>^Peristeranthus hillii</i>	Brown Fairy-chain Orchid	V,P,2	1	
Plantae	Flora	Orchidaceae	4480	<i>^Phaius australis</i>	Southern Swamp Orchid	E1,P,2	E	1
Plantae	Flora	Orchidaceae	4483	<i>Plectorrhiza tridentata</i>	Tangle Orchid	P	25	
Plantae	Flora	Orchidaceae	4494	<i>Prasophyllum breviliabre</i>	Short-lipped Leek Orchid	P	2	
Plantae	Flora	Orchidaceae	8965	<i>Pseudovanilla foliata</i>	Great Climbing Orchid	P	2	
Plantae	Flora	Orchidaceae	4539	<i>Pterostylis baptistii</i>	King Greenhood	P	2	
Plantae	Flora	Orchidaceae	4545	<i>Pterostylis curta</i>	Blunt Greenhood	P	1	
Plantae	Flora	Orchidaceae	4546	<i>Pterostylis daintreana</i>		P	1	
Plantae	Flora	Orchidaceae	4547	<i>Pterostylis decurva</i>	Summer Grasshood	P	2	
Plantae	Flora	Orchidaceae	9914	<i>^Pterostylis elegans</i>	Elegant Greenhood	V,P,2	K	
Plantae	Flora	Orchidaceae	7025	<i>Pterostylis erecta</i>	Erect Maroonhood	P	3	
Plantae	Flora	Orchidaceae	4554	<i>Pterostylis grandiflora</i>	Cobra Greenhood	P	5	
Plantae	Flora	Orchidaceae	4559	<i>Pterostylis longifolia</i>	Tall Greenhood	P	4	
Plantae	Flora	Orchidaceae	4562	<i>Pterostylis nutans</i>	Nodding Greenhood	P	9	
Plantae	Flora	Orchidaceae	4564	<i>Pterostylis ophioglossa</i>	Snake Tongue Greenhood	P	1	
Plantae	Flora	Orchidaceae	4568	<i>Pterostylis pedunculata</i>	Maroonhood	P	4	
Plantae	Flora	Orchidaceae	13356	<i>Pterostylis rubescens</i>		P	1	
Plantae	Flora	Orchidaceae	PTER	<i>Pterostylis spp.</i>	Greenhood	P	16	
Plantae	Flora	Orchidaceae	4577	<i>Rhinerrhiza divitiflora</i>	Raspy Root Orchid	P	3	
Plantae	Flora	Orchidaceae	9219	<i>Sarcochilus aequalis</i>	Boulder Orchid	P	1	
Plantae	Flora	Orchidaceae	4582	<i>Sarcochilus falcatus</i>	Orange Blossom Orchid	P	40	
Plantae	Flora	Orchidaceae	4583	<i>^Sarcochilus fitzgeraldii</i>	Ravine Orchid	V,P,2	V	K
Plantae	Flora	Orchidaceae	4585	<i>Sarcochilus hillii</i>		P	3	
Plantae	Flora	Orchidaceae	7144	<i>Sarcochilus spathulatus</i>	Small Butterfly Orchid	P	7	
Plantae	Flora	Orchidaceae	4588	<i>Schistotylus purpuratus</i>		P	2	
Plantae	Flora	Orchidaceae	11877	<i>Spiranthes australis</i>	Ladies' Tresses	P	13	
Plantae	Flora	Orchidaceae	7110	<i>Taeniophyllum muelleri</i>		P	1	
Plantae	Flora	Orchidaceae	11449	<i>Thelymitra angustifolia</i>		P	2	
Plantae	Flora	Orchidaceae	7334	<i>Thelymitra fragrans</i>		P	5	
Plantae	Flora	Orchidaceae	8968	<i>Thelymitra ixioides</i> var. <i>ixioides</i>	Dotted Sun Orchid	P	1	
Plantae	Flora	Orchidaceae	4602	<i>Thelymitra pauciflora</i>	Slender Sun Orchid	P	4	
Plantae	Flora	Orchidaceae	12506	<i>Thelymitra sp. aff. malvina</i>		P	1	
Plantae	Flora	Osmundaceae	8150	<i>Leptopteris fraseri</i>	Crepe Fern		9	
Plantae	Flora	Osmundaceae	8151	<i>Todea barbara</i>	King Fern	P	11	
Plantae	Flora	Oxalidaceae	4608	<i>Oxalis articulata</i>	*		1	
Plantae	Flora	Oxalidaceae	4612	<i>Oxalis chnoodes</i>			21	
Plantae	Flora	Oxalidaceae	4613	<i>Oxalis corniculata</i>	*	Creeping Oxalis	29	
Plantae	Flora	Oxalidaceae	9250	<i>Oxalis debilis</i> var. <i>corymbosa</i>	*		1	

Plantae	Flora	Oxalidaceae	4615	<i>Oxalis exilis</i>			38
Plantae	Flora	Oxalidaceae	4621	<i>Oxalis perennans</i>			13
Plantae	Flora	Oxalidaceae	4622	<i>Oxalis pes-caprae</i>	*	Soursob	2
Plantae	Flora	Oxalidaceae	4624	<i>Oxalis radicata</i>			3
Plantae	Flora	Oxalidaceae	4625	<i>Oxalis rubens</i>			2
Plantae	Flora	Oxalidaceae	OXAL	<i>Oxalis spp.</i>			21
Plantae	Flora	Pandanaceae	PANA	<i>Pandanus spp.</i>		P	1
Plantae	Flora	Pandanaceae	9349	<i>Pandanus tectorius var. australianus</i>		P	3
Plantae	Flora	Papaveraceae	7115	<i>Argemone ochroleuca subsp. ochroleuca</i>	*	Mexican Poppy	1
Plantae	Flora	Passifloraceae	4643	<i>Passiflora edulis</i>	*	Common Passionfruit	35
Plantae	Flora	Passifloraceae	4646	<i>Passiflora herbertaina</i>			8
Plantae	Flora	Passifloraceae	8886	<i>Passiflora herbertaina subsp. herbertaina</i>		Native Passionfruit	3
Plantae	Flora	Passifloraceae	PASS	<i>Passiflora spp.</i>	*		2
Plantae	Flora	Passifloraceae	4649	<i>Passiflora suberosa</i>	*	Cork Passionfruit	4
Plantae	Flora	Passifloraceae	4650	<i>Passiflora subpeltata</i>	*	White Passionflower	48
Plantae	Flora	Passifloraceae	12133	<i>Passiflora tarminiana</i>	*	Banana Passionfruit	1
Plantae	Flora	Pennantiaceae	3276	<i>Pennantia cunninghamii</i>		Brown Beech	36
Plantae	Flora	Peperomiaceae	11131	<i>Peperomia blanda var. floribunda</i>			6
Plantae	Flora	Peperomiaceae	4664	<i>Peperomia tetraphylla</i>		Four-leaved Peperomia	21
Plantae	Flora	Petermanniaceae	6017	<i>Petermannia cirrosa</i>			1
Plantae	Flora	Philydraceae	7065	<i>Philydrum lanuginosum</i>		Frogsmouth	88
Plantae	Flora	Phormiaceae	3540	<i>Dianella caerulea</i>		Blue Flax-lily	316
Plantae	Flora	Phormiaceae	6811	<i>Dianella caerulea var. aspera</i>			7
Plantae	Flora	Phormiaceae	6700	<i>Dianella caerulea var. caerulea</i>			19
Plantae	Flora	Phormiaceae	7337	<i>Dianella caerulea var. producta</i>			46
Plantae	Flora	Phormiaceae	7344	<i>Dianella caerulea var. vannata</i>			6
Plantae	Flora	Phormiaceae	7864	<i>Dianella congesta</i>			6
Plantae	Flora	Phormiaceae	7865	<i>Dianella crinoides</i>			8
Plantae	Flora	Phormiaceae	7783	<i>Dianella longifolia</i>		Blueberry Lily	5
Plantae	Flora	Phormiaceae	8725	<i>Dianella longifolia var. longifolia</i>		A Blue Flax Lily	5
Plantae	Flora	Phormiaceae	3542	<i>Dianella revoluta</i>		Blueberry Lily	9
Plantae	Flora	Phormiaceae	7580	<i>Dianella revoluta var. revoluta</i>		A Blue Flax Lily	2
Plantae	Flora	Phormiaceae	DIAN	<i>Dianella spp.</i>			2
Plantae	Flora	Phormiaceae	3543	<i>Dianella tasmanica</i>			4
Plantae	Flora	Phormiaceae	7664	<i>Thelionema caespitosum</i>		Tufted Blue-lily	12
Plantae	Flora	Phormiaceae	8301	<i>Thelionema grande</i>			1
Plantae	Flora	Phyllanthaceae	2675	<i>Actephila lindleyi</i>		Actephila	7
Plantae	Flora	Phyllanthaceae	2695	<i>Breynia oblongifolia</i>		Coffee Bush	299
Plantae	Flora	Phyllanthaceae	2696	<i>Bridelia exaltata</i>		Brush Ironbark	5
Plantae	Flora	Phyllanthaceae	7866	<i>Glochidion ferdinandi</i>		Cheese Tree	224
Plantae	Flora	Phyllanthaceae	9360	<i>Glochidion ferdinandi var. ferdinandi</i>		Cheese Tree	57

Plantae	Flora	Phyllanthaceae	8821	<i>Glochidion ferdinandii</i> var. <i>pubens</i>	Hairy Cheese Tree	2
Plantae	Flora	Phyllanthaceae	2746	<i>Phyllanthus gunnii</i>		26
Plantae	Flora	Phyllanthaceae	8216	<i>Phyllanthus hirtellus</i>	Thyme Spurge	2
Plantae	Flora	Phyllanthaceae	6676	<i>Phyllanthus similis</i>		5
Plantae	Flora	Phyllanthaceae	PHYL	<i>Phyllanthus spp.</i>	*	2
Plantae	Flora	Phyllanthaceae	2751	<i>Phyllanthus tenellus</i>	*	Hen and Chicken 2
Plantae	Flora	Phyllanthaceae	2753	<i>Poranthera corymbosa</i>		1
Plantae	Flora	Phyllanthaceae	7395	<i>Poranthera microphylla</i>	Small Poranthera	18
Plantae	Flora	Phytolaccaceae	4657	<i>Phytolacca americana</i>	*	Poke Root 1
Plantae	Flora	Phytolaccaceae	4658	<i>Phytolacca octandra</i>	*	Inkweed 23
Plantae	Flora	Phytolaccaceae	4659	<i>Rivina humilis</i>	*	Coral Berry 1
Plantae	Flora	Pinaceae	11138	<i>Pinus elliotii</i>	*	Slash Pine 10
Plantae	Flora	Pinaceae	4661	<i>Pinus radiata</i>	*	Radiata Pine 5
Plantae	Flora	Pinaceae	PINU	<i>Pinus spp.</i>	*	3
Plantae	Flora	Piperaceae	13385	<i>Piper hederaceum</i> var. <i>hederaceum</i>	Giant Pepper Vine	25
Plantae	Flora	Pittosporaceae	12233	<i>Billardiera rubens</i>		1
Plantae	Flora	Pittosporaceae	4671	<i>Billardiera scandens</i>	Hairy Apple Berry	191
Plantae	Flora	Pittosporaceae	4673	<i>Bursaria longisepala</i>		1
Plantae	Flora	Pittosporaceae	4674	<i>Bursaria spinosa</i>	Native Blackthorn	12
Plantae	Flora	Pittosporaceae	11018	<i>Bursaria spinosa</i> subsp. <i>spinosa</i>	Native Blackthorn	5
Plantae	Flora	Pittosporaceae	4678	<i>Hymenosporum flavum</i>	Native Frangipani	21
Plantae	Flora	Pittosporaceae	11204	<i>Pittosporum multiflorum</i>	Orange Thorn	166
Plantae	Flora	Pittosporaceae	4683	<i>Pittosporum revolutum</i>	Rough Fruit Pittosporum	176
Plantae	Flora	Pittosporaceae	11205	<i>Pittosporum spinescens</i>	Wallaby Apple	4
Plantae	Flora	Pittosporaceae	4685	<i>Pittosporum undulatum</i>	Sweet Pittosporum	153
Plantae	Flora	Plantaginaceae	4691	<i>Plantago debilis</i>	Shade Plantain	21
Plantae	Flora	Plantaginaceae	4699	<i>Plantago lanceolata</i>	*	Lamb's Tongues 67
Plantae	Flora	Plantaginaceae	4700	<i>Plantago major</i>	*	Large Plantain 1
Plantae	Flora	Plantaginaceae	6003	<i>Veronica calycina</i>	Hairy Speedwell	1
Plantae	Flora	Plantaginaceae	13397	<i>Veronica grosseserrata</i>		4
Plantae	Flora	Plantaginaceae	6008	<i>Veronica persica</i>	*	Creeping Speedwell 1
Plantae	Flora	Plantaginaceae	6009	<i>Veronica plebeia</i>	Trailing Speedwell	8
Plantae	Flora	Poaceae	4721	<i>Agrostis capillaris</i>	*	Browntop Bent 2
Plantae	Flora	Poaceae	4728	<i>Agrostis stolonifera</i>	*	Creeping Bent 1
Plantae	Flora	Poaceae	AIRA	<i>Aira spp.</i>	*	A Hairgrass 1
Plantae	Flora	Poaceae	8979	<i>Alexfloydia repens</i>	Floyd's Grass	E1,P K
Plantae	Flora	Poaceae	4748	<i>Andropogon virginicus</i>	*	Whisky Grass 152
Plantae	Flora	Poaceae	4759	<i>Aristida gracilipes</i>	Three-awn Speargrass	1
Plantae	Flora	Poaceae	4770	<i>Aristida ramosa</i>	Purple Wiregrass	3





Plantae	Flora	Poaceae	ARIS	<i>Aristida spp.</i>	A Wiregrass	6	
Plantae	Flora	Poaceae	4773	<i>Aristida vagans</i>	Threeawn Speargrass	40	
Plantae	Flora	Poaceae	4774	<i>Aristida warburgii</i>		3	
Plantae	Flora	Poaceae	4777	<i>Arundo donax</i> *	Giant Reed	3	
Plantae	Flora	Poaceae	9603	<i>Austrostipa pubescens</i>		19	
Plantae	Flora	Poaceae	9918	<i>Austrostipa ramosissima</i>	Stout Bamboo Grass	4	
Plantae	Flora	Poaceae	10396	<i>Austrostipa rudis</i>		3	
Plantae	Flora	Poaceae	10398	<i>Austrostipa rudis subsp. nervosa</i>	A Speargrass	6	
Plantae	Flora	Poaceae	10377	<i>Austrostipa scabra</i>	Speargrass	1	
Plantae	Flora	Poaceae	AUSO	<i>Austrostipa spp.</i>	A Speargrass	1	
Plantae	Flora	Poaceae	10371	<i>Austrostipa verticillata</i>	Slender Bamboo Grass	1	
Plantae	Flora	Poaceae	4780	<i>Avena fatua</i> *	Wild Oats	2	
Plantae	Flora	Poaceae	4785	<i>Axonopus compressus</i> *	Broad-leaved Carpet Grass	3	
Plantae	Flora	Poaceae	11194	<i>Axonopus fissifolius</i> *	Narrow-leaved Carpet Grass	118	
Plantae	Flora	Poaceae	4787	<i>Bothriochloa biloba</i>	Lobed Bluegrass	K	
Plantae	Flora	Poaceae	10346	<i>Bothriochloa bladhii subsp. bladhii</i>	Forest Bluegrass	1	
Plantae	Flora	Poaceae	4790	<i>Bothriochloa macra</i>	Red Grass	7	
Plantae	Flora	Poaceae	4800	<i>Briza maxima</i> *	Quaking Grass	26	
Plantae	Flora	Poaceae	4801	<i>Briza minor</i> *	Shivery Grass	30	
Plantae	Flora	Poaceae	7813	<i>Bromus catharticus</i> *	Prairie Grass	21	
Plantae	Flora	Poaceae	4807	<i>Bromus hordeaceus</i> *	Soft Brome	1	
Plantae	Flora	Poaceae	4811	<i>Bromus molliformis</i> *	Soft Brome	1	
Plantae	Flora	Poaceae	4821	<i>Capillipedium spicigerum</i>	Scented-top Grass	3	
Plantae	Flora	Poaceae	4823	<i>Cenchrus caliculatus</i>	Hillside Burrgrass	5	
Plantae	Flora	Poaceae	9129	<i>Cenchrus species A</i>		2	
Plantae	Flora	Poaceae	4831	<i>Chloris gayana</i> *	Rhodes Grass	87	
Plantae	Flora	Poaceae	4833	<i>Chloris truncata</i>	Windmill Grass	1	
Plantae	Flora	Poaceae	4834	<i>Chloris ventricosa</i>	Tall Chloris	2	
Plantae	Flora	Poaceae	6655	<i>Chloris virgata</i> *	Feathertop Rhodes Grass	1	
Plantae	Flora	Poaceae	4838	<i>Coix lacryma-jobi</i> *	Job's Tears	1	
Plantae	Flora	Poaceae	4841	<i>Cymbopogon refractus</i>	Barbed Wire Grass	113	
Plantae	Flora	Poaceae	6540	<i>Cynodon dactylon</i>	Common Couch	105	
Plantae	Flora	Poaceae	CYND	<i>Cynodon spp.</i> *		11	
Plantae	Flora	Poaceae	4881	<i>Deyeuxia decipiens</i>	Devious Bent-grass	2	
Plantae	Flora	Poaceae	4883	<i>Deyeuxia gunniana</i>		3	
Plantae	Flora	Poaceae	4885	<i>Deyeuxia mckiei</i>		1	
Plantae	Flora	Poaceae	4890	<i>Deyeuxia parviseta</i>		5	
Plantae	Flora	Poaceae	4891	<i>Deyeuxia quadriseta</i>		1	
Plantae	Flora	Poaceae	4892	<i>Deyeuxia reflexa</i>		1	
Plantae	Flora	Poaceae	4893	<i>Deyeuxia rodwayi</i>		1	
Plantae	Flora	Poaceae	7485	<i>Dichanthium sericeum</i>	Queensland Bluegrass	2	
Plantae	Flora	Poaceae	7645	<i>Dichanthium sericeum subsp. sericeum</i>	Queensland Bluegrass	2	
Plantae	Flora	Poaceae	4895	<i>Dichanthium setosum</i>	Bluegrass	V,P	V
Plantae	Flora	Poaceae	4896	<i>Dichanthium tenue</i>	Small Bluegrass	1	
Plantae	Flora	Poaceae	4898	<i>Dichelachne micrantha</i>	Shorthair Plume-grass	33	
Plantae	Flora	Poaceae	4902	<i>Digitaria breviglumis</i>		5	
Plantae	Flora	Poaceae	6554	<i>Digitaria ciliaris</i> *	Summer Grass	1	
Plantae	Flora	Poaceae	4904	<i>Digitaria didactyla</i>	Queensland Blue Couch	6	
Plantae	Flora	Poaceae	4905	<i>Digitaria diffusa</i>	Open Summer-grass	1	
Plantae	Flora	Poaceae	4913	<i>Digitaria parviflora</i>	Small-flowered Finger Grass	76	
Plantae	Flora	Poaceae	4915	<i>Digitaria ramularis</i>	Finger Panic Grass	1	
Plantae	Flora	Poaceae	6937	<i>Digitaria sanguinalis</i> *	Crab Grass	1	
Plantae	Flora	Poaceae	DIGI	<i>Digitaria spp.</i> *	A Finger Grass	8	
Plantae	Flora	Poaceae	4918	<i>Digitaria violascens</i> *		3	
Plantae	Flora	Poaceae	4923	<i>Echinochloa crus-galli</i> *	Barnyard Grass	2	
Plantae	Flora	Poaceae	9330	<i>Echinochloa esculenta</i> *	Japanese Millet	2	
Plantae	Flora	Poaceae	4929	<i>Echinopogon caespitosus</i>	Bushy Hedgehog-grass	42	



Plantae	Flora	Poaceae	7593	<i>Echinopogon caespitosus</i> <i>var. caespitosus</i>	Tufted Hedgehog Grass	37
Plantae	Flora	Poaceae	4932	<i>Echinopogon mckiei</i>		1
Plantae	Flora	Poaceae	4933	<i>Echinopogon nutans</i>		2
Plantae	Flora	Poaceae	4934	<i>Echinopogon ovatus</i>	Forest Hedgehog Grass	57
Plantae	Flora	Poaceae	ECHN	<i>Echinopogon spp.</i>	A Hedgehog Grass	4
Plantae	Flora	Poaceae	4937	<i>Ehrharta erecta</i> *	Panic Veldtgrass	7
Plantae	Flora	Poaceae	EHRH	<i>Ehrharta spp.</i> *	Veldtgrass	1
Plantae	Flora	Poaceae	7196	<i>Eleusine indica</i> *	Crowsfoot Grass	2
Plantae	Flora	Poaceae	4940	<i>Eleusine tristachya</i> *	Goose Grass	1
Plantae	Flora	Poaceae	13431	<i>Elymus repens</i> *	English Couch	1
Plantae	Flora	Poaceae	4946	<i>Entolasia marginata</i>	Bordered Panic	144
Plantae	Flora	Poaceae	ENTO	<i>Entolasia spp.</i>		2
Plantae	Flora	Poaceae	4947	<i>Entolasia stricta</i>	Wiry Panic	287
Plantae	Flora	Poaceae	7578	<i>Eragrostis benthamii</i>		6
Plantae	Flora	Poaceae	7921	<i>Eragrostis brownii</i>	Brown's Lovegrass	59
Plantae	Flora	Poaceae	6387	<i>Eragrostis cilianensis</i> *	Stinkgrass	1
Plantae	Flora	Poaceae	4952	<i>Eragrostis curvula</i> *	African Lovegrass	6
Plantae	Flora	Poaceae	4955	<i>Eragrostis elongata</i>	Clustered Lovegrass	5
Plantae	Flora	Poaceae	7483	<i>Eragrostis leptocarpa</i>	Drooping Lovegrass	2
Plantae	Flora	Poaceae	4960	<i>Eragrostis leptostachya</i>	Paddock Lovegrass	16
Plantae	Flora	Poaceae	4967	<i>Eragrostis parviflora</i>	Weeping Lovegrass	2
Plantae	Flora	Poaceae	4972	<i>Eragrostis sororia</i>		1
Plantae	Flora	Poaceae	9693	<i>Eragrostis spartinoides</i>		2
Plantae	Flora	Poaceae	ERAG	<i>Eragrostis spp.</i> *	A Lovegrass	18
Plantae	Flora	Poaceae	4974	<i>Eragrostis tenuifolia</i> *	Elastic Grass	13
Plantae	Flora	Poaceae	7228	<i>Eriochloa procera</i>	Spring Grass	1
Plantae	Flora	Poaceae	7335	<i>Eriochloa pseudoacrotirica</i>	Early Spring Grass	1
Plantae	Flora	Poaceae	FEST	<i>Festuca spp.</i> *		3
Plantae	Flora	Poaceae	5001	<i>Hemarthria uncinata</i>	Matgrass	8
Plantae	Flora	Poaceae	7871	<i>Hemarthria uncinata var. uncinata</i>		4
Plantae	Flora	Poaceae	5002	<i>Hierochloa rariflora</i>	Scented Holygrass	6
Plantae	Flora	Poaceae	13882	<i>Hordeum murinum</i> *	Barley-grass	1
Plantae	Flora	Poaceae	6803	<i>Imperata cylindrica</i>	Blady Grass	341
Plantae	Flora	Poaceae	5017	<i>Isachne globosa</i>	Swamp Millet	17
Plantae	Flora	Poaceae	6867	<i>Ischaemum australe</i>		15
Plantae	Flora	Poaceae	9278	<i>Ischaemum australe var. australe</i>		2
Plantae	Flora	Poaceae	9320	<i>Ischaemum australe var. villosum</i>		1
Plantae	Flora	Poaceae	5018	<i>Ischaemum triticeum</i>		10
Plantae	Flora	Poaceae	11394	<i>Lachnagrostis aemula</i>	Blowngrass	3
Plantae	Flora	Poaceae	11387	<i>Lachnagrostis billardierei</i> <i>subsp. billardierei</i>		3
Plantae	Flora	Poaceae	11388	<i>Lachnagrostis filiformis</i>		12
Plantae	Flora	Poaceae	LACH	<i>Lachnagrostis spp.</i>		1
Plantae	Flora	Poaceae	5024	<i>Leersia hexandra</i>	Swamp Ricegrass	7
Plantae	Flora	Poaceae	9414	<i>Lepturus repens</i>		4
Plantae	Flora	Poaceae	5032	<i>Lolium perenne</i> *	Perennial Ryegrass	2
Plantae	Flora	Poaceae	5033	<i>Lolium rigidum</i> *	Wimmera Ryegrass	1
Plantae	Flora	Poaceae	LOLI	<i>Lolium spp.</i> *	A Ryegrass	4
Plantae	Flora	Poaceae	14001	<i>Megathyrsus maximus</i> *		3
Plantae	Flora	Poaceae	12592	<i>Megathyrsus maximus var. maximus</i>		2
Plantae	Flora	Poaceae	7291	<i>Melinis minutiflora</i> *	Molasses Grass	1
Plantae	Flora	Poaceae	10904	<i>Melinis repens</i> *	Red Natal Grass	14
Plantae	Flora	Poaceae	5037	<i>Microlaena stipoides</i>	Weeping Grass	59
Plantae	Flora	Poaceae	7707	<i>Microlaena stipoides var. stipoides</i>	Weeping Grass	40

Plantae	Flora	Poaceae	5038	<i>Microstegium nudum</i>	*		1
Plantae	Flora	Poaceae	12038	<i>Monachather paradoxus</i>		Bandicoot Grass	2
Plantae	Flora	Poaceae	5041	<i>Nassella trichotoma</i>	*	Serrated Tussock	1
Plantae	Flora	Poaceae	5044	<i>Oplismenus aemulus</i>			169
Plantae	Flora	Poaceae	5045	<i>Oplismenus imbecillis</i>			175
Plantae	Flora	Poaceae	OPLI	<i>Oplismenus spp.</i>			1
Plantae	Flora	Poaceae	5048	<i>Ottolochloa gracillima</i>			77
Plantae	Flora	Poaceae	5055	<i>Panicum effusum</i>		Hairy Panic	5
Plantae	Flora	Poaceae	5056	<i>Panicum lachnophyllum</i>		Don't Panic	1
Plantae	Flora	Poaceae	5059	<i>Panicum miliaceum</i>	*	French Millet	1
Plantae	Flora	Poaceae	5063	<i>Panicum pygmaeum</i>		Pygmy Panic	17
Plantae	Flora	Poaceae	5064	<i>Panicum queenslandicum</i>		Yadbila Grass	1
Plantae	Flora	Poaceae	9331	<i>Panicum queenslandicum</i> var. <i>queenslandicum</i>		Yabila Grass	1
Plantae	Flora	Poaceae	5065	<i>Panicum repens</i>	*	Torpedo Grass	7
Plantae	Flora	Poaceae	5066	<i>Panicum simile</i>		Two-colour Panic	77
Plantae	Flora	Poaceae	PANI	<i>Panicum spp.</i>		Panicum	4
Plantae	Flora	Poaceae	5078	<i>Paspalidium criniforme</i>			2
Plantae	Flora	Poaceae	7172	<i>Paspalidium distans</i>			27
Plantae	Flora	Poaceae	PASA	<i>Paspalidium spp.</i>			1
Plantae	Flora	Poaceae	5086	<i>Paspalum dilatatum</i>	*	Paspalum	149
Plantae	Flora	Poaceae	5087	<i>Paspalum distichum</i>		Water Couch	12
Plantae	Flora	Poaceae	12421	<i>Paspalum mandiocanum</i>	*	Broadleaf Paspalum	59
Plantae	Flora	Poaceae	5088	<i>Paspalum notatum</i>	*	Bahia Grass	2
Plantae	Flora	Poaceae	5089	<i>Paspalum orbiculare</i>		Ditch Millet	22
Plantae	Flora	Poaceae	5092	<i>Paspalum quadrifarium</i>	*	Tussock Paspalum	1
Plantae	Flora	Poaceae	PASP	<i>Paspalum spp.</i>	*		10
Plantae	Flora	Poaceae	5093	<i>Paspalum urvillei</i>	*	Vasey Grass	76
Plantae	Flora	Poaceae	6563	<i>Paspalum vaginatum</i>		Salt-water Couch	1
Plantae	Flora	Poaceae	5096	<i>Pennisetum clandestinum</i>	*	Kikuyu Grass	88
Plantae	Flora	Poaceae	5108	<i>Phalaris canariensis</i>	*	Canary Grass	1
Plantae	Flora	Poaceae	5113	<i>Phragmites australis</i>		Common Reed	28
Plantae	Flora	Poaceae	5120	<i>Poa affinis</i>			1
Plantae	Flora	Poaceae	5121	<i>Poa annua</i>	*	Winter Grass	4
Plantae	Flora	Poaceae	11196	<i>Poa labillardierei</i> var. <i>labillardierei</i>		Tussock	36
Plantae	Flora	Poaceae	5134	<i>Poa meionectes</i>			4
Plantae	Flora	Poaceae	11143	<i>Poa poliformis</i> var. <i>poliformis</i>			1
Plantae	Flora	Poaceae	5139	<i>Poa queenslandica</i>		Queensland Grass	4
Plantae	Flora	Poaceae	5141	<i>Poa sieberiana</i>		Snowgrass	99
Plantae	Flora	Poaceae	8742	<i>Poa sieberiana</i> var. <i>sieberiana</i>		Snowgrass	15
Plantae	Flora	Poaceae	POA	<i>Poa spp.</i>	*		13
Plantae	Flora	Poaceae	13463	<i>Polypogon lutosus</i>	*	Perennial Beardgrass	1
Plantae	Flora	Poaceae	5145	<i>Polypogon monspeliensis</i>	*	Annual Beardgrass	1
Plantae	Flora	Poaceae	5146	<i>Potamophila parviflora</i>			9
Plantae	Flora	Poaceae	5147	<i>Pseudoraphis paradoxa</i>		Slender Mudgrass	1
Plantae	Flora	Poaceae	7878	<i>Rostraria cristata</i>	*	Annual Cat's Tail	1
Plantae	Flora	Poaceae	14304	<i>Rytidosperma bipartitum</i>		Wallaby Grass	1
Plantae	Flora	Poaceae	14305	<i>Rytidosperma caespitosum</i>		Ringed Wallaby Grass	1
Plantae	Flora	Poaceae	14312	<i>Rytidosperma longifolium</i>		Long-leaved Wallaby Grass	3
Plantae	Flora	Poaceae	14313	<i>Rytidosperma monticola</i>		Mountain Wallaby Grass	2

Plantae	Flora	Poaceae	14317	<i>Rytidosperma racemosum</i>	Wallaby Grass	2
Plantae	Flora	Poaceae	RYTI	<i>Rytidosperma spp.</i>		2
Plantae	Flora	Poaceae	5155	<i>Sacciolepis indica</i>	Indian Cupscale Grass	9
Plantae	Flora	Poaceae	5165	<i>Setaria palmifolia</i>	* Palm Grass	4
Plantae	Flora	Poaceae	13468	<i>Setaria parviflora</i>	*	10
Plantae	Flora	Poaceae	7842	<i>Setaria pumila</i>	* Pale Pigeon Grass	25
Plantae	Flora	Poaceae	5167	<i>Setaria sphacelata</i>	* South African Pigeon Grass	103
Plantae	Flora	Poaceae	SETA	<i>Setaria spp.</i>	*	15
Plantae	Flora	Poaceae	5169	<i>Setaria verticillata</i>	* Whorled Pigeon Grass	10
Plantae	Flora	Poaceae	5172	<i>Sorghum halepense</i>	* Johnson Grass	2
Plantae	Flora	Poaceae	5173	<i>Sorghum leiocladum</i>	Wild Sorghum	5
Plantae	Flora	Poaceae	7843	<i>Spinifex sericeus</i>	Hairy Spinifex	1
Plantae	Flora	Poaceae	5176	<i>Sporobolus africanus</i>	* Parramatta Grass	31
Plantae	Flora	Poaceae	5179	<i>Sporobolus creber</i>	Slender Rat's Tail Grass	4
Plantae	Flora	Poaceae	5180	<i>Sporobolus diander</i>		1
Plantae	Flora	Poaceae	5181	<i>Sporobolus elongatus</i>	Slender Rat's Tail Grass	3
Plantae	Flora	Poaceae	11172	<i>Sporobolus fertilis</i>	* Giant Parramatta Grass	10
Plantae	Flora	Poaceae	6543	<i>Sporobolus indicus</i>	* Parramatta Grass	11
Plantae	Flora	Poaceae	12529	<i>Sporobolus laxus</i>		1
Plantae	Flora	Poaceae	SPOR	<i>Sporobolus spp.</i>	* Rat's Tail Couch	10
Plantae	Flora	Poaceae	5184	<i>Sporobolus virginicus</i>		8
Plantae	Flora	Poaceae	9224	<i>Sporobolus virginicus</i>	Marine Couch	7
Plantae	Flora	Poaceae	5185	<i>Stenotaphrum secundatum</i>	* Buffalo Grass	13
Plantae	Flora	Poaceae	5217	<i>Tetrarrhena juncea</i>	Wiry Ricegrass	1
Plantae	Flora	Poaceae	7993	<i>Tetrarrhena turfosa</i>		2
Plantae	Flora	Poaceae	7770	<i>Themeda triandra</i>		233
Plantae	Flora	Poaceae	5237	<i>Urochloa panicoides</i>	* Urochloa Grass	1
Plantae	Flora	Poaceae	5239	<i>Vulpia bromoides</i>	* Squirrel Tail Fesque	1
Plantae	Flora	Poaceae	5243	<i>Zoysia macrantha</i>	Prickly Couch	9
Plantae	Flora	Podocarpaceae	5246	<i>Podocarpus elatus</i>	Plum Pine	10
Plantae	Flora	Podocarpaceae	5248	<i>Podocarpus spinulosus</i>	Spiny-leaf Podocarp	1
Plantae	Flora	Polygalaceae	5252	<i>Comesperma defoliatum</i>		2
Plantae	Flora	Polygalaceae	5253	<i>Comesperma ericinum</i>	Pyramid Flower	26
Plantae	Flora	Polygalaceae	5256	<i>Comesperma sphaerocarpum</i>		2
Plantae	Flora	Polygalaceae	5257	<i>Comesperma valubile</i>		6
Plantae	Flora	Polygalaceae	5259	<i>Polygala japonica</i>	Dwarf Milkwort	2
Plantae	Flora	Polygalaceae	5261	<i>Polygala myrtifolia</i>	*	7
Plantae	Flora	Polygalaceae	8894	<i>Polygala paniculata</i>	*	1
Plantae	Flora	Polygalaceae	5262	<i>Polygala virgata</i>	*	2
Plantae	Flora	Polygonaceae	5263	<i>Acetosa sagittata</i>	* Rambling Dock	2
Plantae	Flora	Polygonaceae	5265	<i>Acetosella vulgaris</i>	* Sheep Sorrel	2
Plantae	Flora	Polygonaceae	5266	<i>Emex australis</i>	* Spiny Emex	1
Plantae	Flora	Polygonaceae	5268	<i>Fallopia convolvulus</i>	* Black Bindweed	3
Plantae	Flora	Polygonaceae	5274	<i>Muehlenbeckia gracillima</i>	Slender Lignum	5
Plantae	Flora	Polygonaceae	5276	<i>Muehlenbeckia rhyticarya</i>	Wrinkle-nut Lignum	1
Plantae	Flora	Polygonaceae	7568	<i>Persicaria decipiens</i>	Slender Knotweed	24
Plantae	Flora	Polygonaceae	5279	<i>Persicaria dichotoma</i>		8
Plantae	Flora	Polygonaceae	5281	<i>Persicaria hydropiper</i>	Water Pepper	15
Plantae	Flora	Polygonaceae	5282	<i>Persicaria lapathifolia</i>	Pale Knotweed	4
Plantae	Flora	Polygonaceae	5284	<i>Persicaria orientalis</i>	Princes Feathers	3
Plantae	Flora	Polygonaceae	8887	<i>Persicaria praetermissa</i>		10
Plantae	Flora	Polygonaceae	PERC	<i>Persicaria spp.</i>	* Knotweed	2
Plantae	Flora	Polygonaceae	5286	<i>Persicaria strigosa</i>		48
Plantae	Flora	Polygonaceae	POLG	<i>Polygonum spp.</i>	*	1
Plantae	Flora	Polygonaceae	5296	<i>Rumex brownii</i>	Swamp Dock	4
Plantae	Flora	Polygonaceae	5297	<i>Rumex conglomeratus</i>	* Clustered Dock	1
Plantae	Flora	Polygonaceae	5298	<i>Rumex crispus</i>	* Curled Dock	2







Plantae	Flora	Polygonaceae	RUME	<i>Rumex spp.</i>	*	Dock			5
Plantae	Flora	Polypodiaceae	8155	<i>Dictymia brownii</i>		Strap Fern			40
Plantae	Flora	Polypodiaceae	9041	<i>Microsorium pustulatum</i>		Kangaroo Fern			5
Plantae	Flora	Polypodiaceae	11009	<i>Microsorium pustulatum</i> <i>subsp. pustulatum</i>					2
Plantae	Flora	Polypodiaceae	8158	<i>Microsorium scandens</i>		Fragrant Fern			43
Plantae	Flora	Polypodiaceae	8159	<i>Platyserium bifurcatum</i>		Elkhorn Fern	P		104
Plantae	Flora	Polypodiaceae	8161	<i>Platyserium superbum</i>		Staghorn	P		21
Plantae	Flora	Polypodiaceae	11148	<i>Pyrrosia confluens</i> var. <i>confluens</i>		Horseshoe Felt Fern			55
Plantae	Flora	Polypodiaceae	8163	<i>Pyrrosia rupestris</i>		Rock Felt Fern			49
Plantae	Flora	Polypodiaceae	PYRR	<i>Pyrrosia spp.</i>					4
Plantae	Flora	Pontederiaceae	5305	<i>Eichhornia crassipes</i>	*	Water Hyacinth			1
Plantae	Flora	Portulacaceae	5324	<i>Portulaca oleracea</i>		Pigweed			2
Plantae	Flora	Potamogetonaceae	5331	<i>Potamogeton ochreatus</i>		Blunt Pondweed			4
Plantae	Flora	Potamogetonaceae	13488	<i>Potamogeton octandrus</i>					3
Plantae	Flora	Potamogetonaceae	5333	<i>Potamogeton perfoliatus</i>		Clasped Pondweed			1
Plantae	Flora	Potamogetonaceae	7023	<i>Potamogeton</i> <i>tricarlinatus</i>		Floating Pondweed			4
Plantae	Flora	Primulaceae	5337	<i>Samolus repens</i>		Creeping Brookweed			3
Plantae	Flora	Proteaceae	5339	<i>Banksia aemula</i>		Wallum Banksia			26
Plantae	Flora	Proteaceae	11822	<i>Banksia conferta</i> subsp. <i>conferta</i>			E4A,P,2	K	
Plantae	Flora	Proteaceae	8595	<i>Banksia cunninghamii</i>					2
Plantae	Flora	Proteaceae	5342	<i>Banksia ericifolia</i>		Heath-leaved Banksia			24
Plantae	Flora	Proteaceae	11050	<i>Banksia ericifolia</i> subsp. <i>macrantha</i>					19
Plantae	Flora	Proteaceae	5343	<i>Banksia integrifolia</i>		Coast Banksia			66
Plantae	Flora	Proteaceae	6603	<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>		Coastal Banksia			26
Plantae	Flora	Proteaceae	10817	<i>Banksia integrifolia</i> subsp. <i>monticola</i>					27
Plantae	Flora	Proteaceae	5344	<i>Banksia marginata</i>		Silver Banksia			7
Plantae	Flora	Proteaceae	14554	<i>Banksia neoanglica</i>		New England Banksia			1
Plantae	Flora	Proteaceae	5345	<i>Banksia oblongifolia</i>		Fern-leaved Banksia			31
Plantae	Flora	Proteaceae	5347	<i>Banksia robur</i>		Swamp Banksia			26
Plantae	Flora	Proteaceae	5348	<i>Banksia serrata</i>		Old-man Banksia			20
Plantae	Flora	Proteaceae	5349	<i>Banksia spinulosa</i>		Hairpin Banksia	P		34
Plantae	Flora	Proteaceae	7509	<i>Banksia spinulosa</i> var. <i>collina</i>			P		43
Plantae	Flora	Proteaceae	7488	<i>Banksia spinulosa</i> var. <i>spinulosa</i>			P		1
Plantae	Flora	Proteaceae	BANK	<i>Banksia spp.</i>					5
Plantae	Flora	Proteaceae	5352	<i>Conospermum taxifolium</i>		Variable Smoke-bush			13
Plantae	Flora	Proteaceae	8768	<i>Grevillea acanthifolia</i> subsp. <i>stenomera</i>					2
Plantae	Flora	Proteaceae	5365	<i>Grevillea caleyi</i>		Caley's Grevillea	E4A,P,3	E	1 
Plantae	Flora	Proteaceae	9480	<i>Grevillea guthrieana</i>		Guthrie's Grevillea	E1,P	E	K 
Plantae	Flora	Proteaceae	8306	<i>Grevillea linsmithii</i>					16
Plantae	Flora	Proteaceae	5396	<i>Grevillea robusta</i>		Silky Oak			18
Plantae	Flora	Proteaceae	GREV	<i>Grevillea spp.</i>					8
Plantae	Flora	Proteaceae	10801	<i>Hakea archaoides</i>		Big Nellie Hakea	V,P,3	V	14 
Plantae	Flora	Proteaceae	5409	<i>Hakea dactyloides</i>		Finger Hakea			3
Plantae	Flora	Proteaceae	5412	<i>Hakea eriantha</i>					13

Plantae	Flora	Proteaceae	5414	<i>Hakea fraseri</i>	Gorge Hakea	V,P	V	K	
Plantae	Flora	Proteaceae	11254	<i>Hakea laevipes</i>				2	
Plantae	Flora	Proteaceae	10804	<i>Hakea laevipes</i> subsp. <i>laevipes</i>				1	
Plantae	Flora	Proteaceae	5420	<i>Hakea microcarpa</i>	Small-fruited Hakea			3	
Plantae	Flora	Proteaceae	5424	<i>Hakea salicifolia</i>	Willow-leaved Hakea			18	
Plantae	Flora	Proteaceae	10806	<i>Hakea salicifolia</i> subsp. <i>salicifolia</i>				5	
Plantae	Flora	Proteaceae	5427	<i>Hakea teretifolia</i>	Needlebush			26	
Plantae	Flora	Proteaceae	10808	<i>Hakea teretifolia</i> subsp. <i>teretifolia</i>				8	
Plantae	Flora	Proteaceae	5431	<i>Helicia glabriflora</i>	Smooth Helicia			3	
Plantae	Flora	Proteaceae	5433	<i>Isopogon anemonifolius</i>	Broad-leaf Drumsticks	P		12	
Plantae	Flora	Proteaceae	5441	<i>Lomatia arborescens</i>	Tree Lomatia			9	
Plantae	Flora	Proteaceae	5442	<i>Lomatia fraseri</i>	Silky Lomatia			5	
Plantae	Flora	Proteaceae	5444	<i>Lomatia myricoides</i>	River Lomatia			1	
Plantae	Flora	Proteaceae	5445	<i>Lomatia silaifolia</i>	Crinkle Bush	P		104	
Plantae	Flora	Proteaceae	9680	<i>Macadamia integrifolia</i>	Macadamia Nut	P	V	1	
Plantae	Flora	Proteaceae	5448	<i>Orites excelsus</i>	Prickly Ash			96	
Plantae	Flora	Proteaceae	8716	<i>Persoonia acuminata</i>		P		3	
Plantae	Flora	Proteaceae	5452	<i>Persoonia chamaepeuce</i>		P		1	
Plantae	Flora	Proteaceae	8597	<i>Persoonia conjuncta</i>		P		44	
Plantae	Flora	Proteaceae	5455	<i>Persoonia cornifolia</i>		P		12	
Plantae	Flora	Proteaceae	9598	<i>Persoonia katerae</i>		P		8	
Plantae	Flora	Proteaceae	5460	<i>Persoonia lanceolata</i>	Lance Leaf Geebung	P		7	
Plantae	Flora	Proteaceae	5462	<i>Persoonia levis</i>	Broad-leaved Geebung	P		77	
Plantae	Flora	Proteaceae	5463	<i>Persoonia linearis</i>	Narrow-leaved Geebung	P		147	
Plantae	Flora	Proteaceae	8684	<i>Persoonia media</i>		P		79	
Plantae	Flora	Proteaceae	8698	<i>Persoonia oleoides</i>		P		1	
Plantae	Flora	Proteaceae	5472	<i>Persoonia sericea</i>		P		2	
Plantae	Flora	Proteaceae	PERS	<i>Persoonia</i> spp.		P		5	
Plantae	Flora	Proteaceae	8596	<i>Persoonia stradbrokeensis</i>		P		55	
Plantae	Flora	Proteaceae	5476	<i>Persoonia virgata</i>		P		9	
Plantae	Flora	Proteaceae	5477	<i>Petrophile canescens</i>	Conesticks	P		8	
Plantae	Flora	Proteaceae	5479	<i>Petrophile pulchella</i>	Conesticks	P		6	
Plantae	Flora	Proteaceae	PETO	<i>Petrophile</i> spp.		P		1	
Plantae	Flora	Proteaceae	5481	<i>Stenocarpus salignus</i>	Scrub Beefwood			23	
Plantae	Flora	Proteaceae	5485	<i>Symphionema paludosum</i>				2	
Plantae	Flora	Proteaceae	5490	<i>Xylomelum pyriforme</i>	Woody Pear	P		22	
Plantae	Flora	Psilotaceae	8165	<i>Psilotum nudum</i>	Skeleton Fork-Fern			7	
Plantae	Flora	Psilotaceae	8168	<i>Tmesipteris ovata</i>		P		2	
Plantae	Flora	Psilotaceae	8169	<i>Tmesipteris parva</i>		P		1	
Plantae	Flora	Pteridaceae	8005	<i>Cheilanthes austrotenuifolia</i>	Rock Fern			10	
Plantae	Flora	Pteridaceae	6382	<i>Cheilanthes distans</i>	Bristly Cloak Fern			4	
Plantae	Flora	Pteridaceae	10439	<i>Cheilanthes sieberi</i>	Rock Fern			19	
Plantae	Flora	Pteridaceae	8007	<i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>	Rock Fern			16	
Plantae	Flora	Pteridaceae	8457	<i>Pteris comans</i>	Hairy Bracken			2	
Plantae	Flora	Pteridaceae	8175	<i>Pteris tremula</i>	Tender Brake			13	
Plantae	Flora	Pteridaceae	8176	<i>Pteris umbrosa</i>	Jungle Brake			22	
Plantae	Flora	Pucciniaceae	F044	<i>Uredo rangellii</i>	Myrtle Rust			19	
Plantae	Flora	Putranjivaceae	11864	<i>Drypetes deplanchei</i>	Yellow Tulipwood			50	
Plantae	Flora	Ranunculaceae	5493	<i>Clematis aristata</i>	Old Man's Beard			94	
Plantae	Flora	Ranunculaceae	5495	<i>Clematis glycinoides</i>	Headache Vine			35	
Plantae	Flora	Ranunculaceae	13522	<i>Clematis pickeringii</i>				1	
Plantae	Flora	Ranunculaceae	CLEM	<i>Clematis</i> spp.				1	

Plantae	Flora	Ranunculaceae	5507	<i>Ranunculus inundatus</i>	River Buttercup				34
Plantae	Flora	Ranunculaceae	5508	<i>Ranunculus lappaceus</i>	Common Buttercup				14
Plantae	Flora	Ranunculaceae	5518	<i>Ranunculus plebeius</i>	Forest Buttercup				9
Plantae	Flora	Ranunculaceae	5521	<i>Ranunculus repens</i>	* Creeping Buttercup				3
Plantae	Flora	Ranunculaceae	5524	<i>Ranunculus sceleratus</i>	* Celery Buttercup				1
Plantae	Flora	Ranunculaceae	RANU	<i>Ranunculus spp.</i>					4
Plantae	Flora	Restionaceae	10609	<i>Baloskion pallens</i>					8
Plantae	Flora	Restionaceae	10610	<i>Baloskion stenocoleum</i>					3
Plantae	Flora	Restionaceae	10612	<i>Baloskion tetraphyllum</i>					19
Plantae	Flora	Restionaceae	10614	<i>Baloskion tetraphyllum</i> <i>subsp. meiotachyum</i>	Plume Rush				18
Plantae	Flora	Restionaceae	5532	<i>Empodisma minus</i>					29
Plantae	Flora	Restionaceae	10615	<i>Eurychorda complanata</i>					5
Plantae	Flora	Restionaceae	5533	<i>Hypolaena fastigiata</i>					12
Plantae	Flora	Restionaceae	5534	<i>Leptocarpus tenax</i>					21
Plantae	Flora	Restionaceae	1353.1	<i>Lepyrodia imitans</i>					8
Plantae	Flora	Restionaceae	5540	<i>Lepyrodia muelleri</i>					14
Plantae	Flora	Restionaceae	5541	<i>Lepyrodia scariosa</i>					10
Plantae	Flora	Restionaceae	LEPY	<i>Lepyrodia spp.</i>					1
Plantae	Flora	Restionaceae	10604	<i>Sporadanthus interruptus</i>					8
Plantae	Flora	Rhamnaceae	7686	<i>Alphitonia excelsa</i>	Red Ash				115
Plantae	Flora	Rhamnaceae	5557	<i>Cryptandra lanosiflora</i>	Woolly Cryptandra				2
Plantae	Flora	Rhamnaceae	5560	<i>Cryptandra propinqua</i>					3
Plantae	Flora	Rhamnaceae	CRYP	<i>Cryptandra spp.</i>					1
Plantae	Flora	Rhamnaceae	5565	<i>Emmenosperma alphitonioides</i>	Yellow Ash				14
Plantae	Flora	Rhamnaceae	9863	<i>Pomaderris andromedifolia</i> subsp. <i>andromedifolia</i>					1
Plantae	Flora	Rhamnaceae	5570	<i>Pomaderris argrophylla</i>	Silver Pomaderris				1
Plantae	Flora	Rhamnaceae	5571	<i>Pomaderris aspera</i>	Hazel Pomaderris				1
Plantae	Flora	Rhamnaceae	5573	<i>Pomaderris brunnea</i>	Brown Pomaderris	E1,P	V	K	1
Plantae	Flora	Rhamnaceae	5577	<i>Pomaderris discolor</i>					1
Plantae	Flora	Rhamnaceae	9868	<i>Pomaderris elliptica</i> subsp. <i>elliptica</i>					1
Plantae	Flora	Rhamnaceae	5579	<i>Pomaderris ferruginea</i>					7
Plantae	Flora	Rhamnaceae	7979	<i>Pomaderris intermedia</i>					2
Plantae	Flora	Rhamnaceae	5581	<i>Pomaderris lanigera</i>	Woolly Pomaderris				15
Plantae	Flora	Rhamnaceae	5583	<i>Pomaderris ligustrina</i>	Privet Pomaderris				8
Plantae	Flora	Rhamnaceae	9867	<i>Pomaderris ligustrina</i> subsp. <i>ligustrina</i>					4
Plantae	Flora	Rhamnaceae	5585	<i>Pomaderris nitidula</i>	Shining Pomaderris				4
Plantae	Flora	Rhamnaceae	5592	<i>Pomaderris queenslandica</i>	Scant Pomaderris	E1,P			1
Plantae	Flora	Rhamnaceae	POMA	<i>Pomaderris spp.</i>					3
Plantae	Flora	Rhamnaceae	1232.3	<i>Spyridium scortechinii</i>					7
Plantae	Flora	Ripogonaceae	6018	<i>Ripogonum album</i>	White Supplejack				35
Plantae	Flora	Ripogonaceae	7368	<i>Ripogonum brevifolium</i>	Small-leaved Supplejack				2
Plantae	Flora	Ripogonaceae	6019	<i>Ripogonum discolor</i>	Prickly Supplejack				94
Plantae	Flora	Ripogonaceae	6020	<i>Ripogonum elseyanum</i>	Hairy Supplejack				2
Plantae	Flora	Ripogonaceae	6021	<i>Ripogonum fawcettianum</i>	Small Supplejack				19

Plantae	Flora	Rosaceae	5604	<i>Acaena novae-zelandiae</i>	Bidgee-widgee		1	
Plantae	Flora	Rosaceae	ACAE	<i>Acaena</i> spp.	Sheep's Burr		1	
Plantae	Flora	Rosaceae	9938	<i>Rosa roxburghii</i>	Chestnut Rose		1	
Plantae	Flora	Rosaceae	11733	<i>Rubus anglocandicans</i>	Blackberry		4	
Plantae	Flora	Rosaceae	11303	<i>Rubus fruticosus</i> sp. agg.	Blackberry complex		10	
Plantae	Flora	Rosaceae	11587	<i>Rubus moluccanus</i>	Molucca Bramble		32	
Plantae	Flora	Rosaceae	10811	<i>Rubus moluccanus</i> var. <i>moluccanus</i>			1	
Plantae	Flora	Rosaceae	11236	<i>Rubus moluccanus</i> var. <i>trilobus</i>	Molucca Bramble		170	
Plantae	Flora	Rosaceae	9917	<i>Rubus nebulosus</i>	Green-leaved Bramble		60	
Plantae	Flora	Rosaceae	5642	<i>Rubus parvifolius</i>	Native Raspberry		102	
Plantae	Flora	Rosaceae	5645	<i>Rubus rosifolius</i>	Rose-leaf Bramble		60	
Plantae	Flora	Rosaceae	10813	<i>Rubus rosifolius</i> var. <i>rosifolius</i>			7	
Plantae	Flora	Rosaceae	12272	<i>Rubus rugosus</i>	Keribery		1	
Plantae	Flora	Rosaceae	RUBU	<i>Rubus</i> spp.			1	
Plantae	Flora	Rosaceae	5646	<i>Rubus ulmifolius</i>	Blackberry		13	
Plantae	Flora	Rosaceae	10573	<i>Rubus x novus</i>			1	
Plantae	Flora	Rubiaceae	6744	<i>Asperula asthenes</i>	Trailing Woodruff	V,P	V	4
Plantae	Flora	Rubiaceae	5653	<i>Asperula conferta</i>	Common Woodruff		2	
Plantae	Flora	Rubiaceae	5657	<i>Asperula gunnii</i>	Mountain Woodruff		1	
Plantae	Flora	Rubiaceae	10865	<i>Atractocarpus benthamianus</i>			6	
Plantae	Flora	Rubiaceae	5670	<i>Coprosma hirtella</i>	Coffee-berry		1	
Plantae	Flora	Rubiaceae	5675	<i>Coprosma quadrifida</i>	Prickly Currant Bush		1	
Plantae	Flora	Rubiaceae	11599	<i>Cyclophyllum longipetalum</i>	Coast Canthium		24	
Plantae	Flora	Rubiaceae	6571	<i>Duringtonia paludosa</i>			10	
Plantae	Flora	Rubiaceae	12427	<i>Everistia vacciniifolia</i> var. <i>nervosa</i>			8	
Plantae	Flora	Rubiaceae	5679	<i>Galium aparine</i>	Goosegrass		1	
Plantae	Flora	Rubiaceae	5680	<i>Galium australe</i>	Tangled Bedstraw	E1,P	K	
Plantae	Flora	Rubiaceae	5681	<i>Galium binifolium</i>			7	
Plantae	Flora	Rubiaceae	5684	<i>Galium gaudichaudii</i>	Rough Bedstraw		1	
Plantae	Flora	Rubiaceae	13838	<i>Galium leiocarpum</i>			1	
Plantae	Flora	Rubiaceae	13893	<i>Galium leptogonium</i>			1	
Plantae	Flora	Rubiaceae	5688	<i>Galium propinquum</i>	Maori Bedstraw		9	
Plantae	Flora	Rubiaceae	5691	<i>Hodgkinsonia ovatiflora</i>			6	
Plantae	Flora	Rubiaceae	11958	<i>Morinda canthoides</i>	Veiny Morinda		7	
Plantae	Flora	Rubiaceae	6860	<i>Morinda jasminoides</i>	Sweet Morinda		167	
Plantae	Flora	Rubiaceae	12125	<i>Oldenlandia corymbosa</i> var. <i>corymbosa</i>			1	
Plantae	Flora	Rubiaceae	5697	<i>Opercularia aspera</i>	Coarse Stinkweed		13	
Plantae	Flora	Rubiaceae	5698	<i>Opercularia diphylla</i>	Stinkweed		6	
Plantae	Flora	Rubiaceae	5699	<i>Opercularia hispida</i>	Hairy Stinkweed		6	
Plantae	Flora	Rubiaceae	5703	<i>Pomax umbellata</i>	Pomax		66	
Plantae	Flora	Rubiaceae	5706	<i>Psychotria loniceroides</i>	Hairy Psychotria		120	
Plantae	Flora	Rubiaceae	11942	<i>Psydrax odorata</i>	Shiny-leaved Canthium		1	
Plantae	Flora	Rubiaceae	12315	<i>Psydrax odorata</i> subsp. <i>buxifolia</i> f. <i>buxifolia</i>			1	
Plantae	Flora	Rubiaceae	5711	<i>Richardia brasiliensis</i>	Mexican Clover		2	
Plantae	Flora	Rubiaceae	6682	<i>Richardia humistrata</i>			4	
Plantae	Flora	Rutaceae	5719	<i>Acradenia euodiiformis</i>	Yellow Satinheart		37	
Plantae	Flora	Rutaceae	8418	<i>Acronychia imperforata</i>	Logan Apple		12	
Plantae	Flora	Rutaceae	6457	<i>Acronychia littoralis</i>	Scented Acronychia	E1,P	E	7
Plantae	Flora	Rutaceae	5722	<i>Acronychia oblongifolia</i>	White Aspen		74	
Plantae	Flora	Rutaceae	12572	<i>Acronychia</i> spp.			1	
Plantae	Flora	Rutaceae	5726	<i>Acronychia wilcoxiana</i>	Silver Aspen		7	

Plantae	Flora	Rutaceae	5733	<i>Boronia anemonifolia</i>		P	1	
Plantae	Flora	Rutaceae	11607	<i>Boronia anemonifolia</i> subsp. <i>variabilis</i>	Coast Boronia	P	2	
Plantae	Flora	Rutaceae	9098	<i>Boronia chartacea</i>		P	7	
Plantae	Flora	Rutaceae	5739	<i>Boronia falcatifolia</i>	Wallum Boronia	P	9	
Plantae	Flora	Rutaceae	5745	<i>Boronia microphylla</i>	Small-leaved Boronia	P	9	
Plantae	Flora	Rutaceae	5746	<i>Boronia mollis</i>	Soft Boronia	P	6	
Plantae	Flora	Rutaceae	5749	<i>Boronia parviflora</i>	Swamp Boronia	P	2	
Plantae	Flora	Rutaceae	5750	<i>Boronia pinnata</i>		P	30	
Plantae	Flora	Rutaceae	5751	<i>Boronia polygalifolia</i>	Dwarf Boronia	P	14	
Plantae	Flora	Rutaceae	5758	<i>Boronia saffrolifera</i>		P	3	
Plantae	Flora	Rutaceae	BORO	<i>Boronia</i> spp.		P	1	
Plantae	Flora	Rutaceae	5762	<i>Bosistoa floydii</i>	Five-leaved Bosistoa		6	
Plantae	Flora	Rutaceae	10758	<i>Citrus x taitensis</i> *	Rough Lemon		13	
Plantae	Flora	Rutaceae	11023	<i>Correa lawrenceana</i> var. <i>macrocalyx</i>			3	
Plantae	Flora	Rutaceae	8801	<i>Correa reflexa</i> var. <i>reflexa</i>	Native Fuschia		2	
Plantae	Flora	Rutaceae	5776	<i>Eriostemon australasius</i>		P	3	
Plantae	Flora	Rutaceae	5792	<i>Flindersia australis</i>	Crow's Ash		1	
Plantae	Flora	Rutaceae	5796	<i>Flindersia schottiana</i>	Cudgerie		5	
Plantae	Flora	Rutaceae	5801	<i>Geijera salicifolia</i>	Brush Wilga		12	
Plantae	Flora	Rutaceae	10729	<i>Leionema elatius</i>	Tall Phebalium		1	
Plantae	Flora	Rutaceae	10731	<i>Leionema elatius</i> subsp. <i>beckleri</i>			5	
Plantae	Flora	Rutaceae	10730	<i>Leionema elatius</i> subsp. <i>elatius</i>			2	
Plantae	Flora	Rutaceae	8585	<i>Melicope hayesii</i>	Small-leaved Doughwood		5	
Plantae	Flora	Rutaceae	8625	<i>Melicope micrococca</i>	Hairy-leaved Doughwood		35	
Plantae	Flora	Rutaceae	9042	<i>Murraya paniculata</i> *			1	
Plantae	Flora	Rutaceae	10742	<i>Nematolepis squamea</i> subsp. <i>squamea</i>	Satinwood		24	
Plantae	Flora	Rutaceae	10584	<i>Philotheca difformis</i> subsp. <i>smithiana</i>		P	2	
Plantae	Flora	Rutaceae	10989	<i>Philotheca myoporoides</i> subsp. <i>obovatifolia</i>	Mountain Wax-flower	E1,P	12	
Plantae	Flora	Rutaceae	5831	<i>Philotheca salsolifolia</i>		P	5	
Plantae	Flora	Rutaceae	10596	<i>Philotheca salsolifolia</i> subsp. <i>salsolifolia</i>		P	3	
Plantae	Flora	Rutaceae	PHIL	<i>Philotheca</i> spp.		P	1	
Plantae	Flora	Rutaceae	8842	<i>Sarcomelicope</i> <i>simplicifolia</i> subsp. <i>simplicifolia</i>	Big Yellow Wood		24	
Plantae	Flora	Rutaceae	5834	<i>Zieria arborescens</i>	Stinkwood		4	
Plantae	Flora	Rutaceae	9994	<i>Zieria arborescens</i> subsp. <i>arborescens</i>			5	
Plantae	Flora	Rutaceae	5836	<i>Zieria cytisioides</i>	Downy Zieria		1	
Plantae	Flora	Rutaceae	5838	<i>Zieria furfuracea</i>			19	
Plantae	Flora	Rutaceae	5841	<i>Zieria laevigata</i>	Smooth Zieria		2	
Plantae	Flora	Rutaceae	9494	<i>Zieria lasiocaulis</i>	Willi Willi Zieria	E1,P	17	
Plantae	Flora	Rutaceae	8834	<i>Zieria laxiflora</i>	Wallum Zieria		5	
Plantae	Flora	Rutaceae	5845	<i>Zieria pilosa</i>	Pilose-leaved Zieria		1	
Plantae	Flora	Rutaceae	5847	<i>Zieria smithii</i>	Sandfly Zieria		71	
Plantae	Flora	Rutaceae	10045	<i>Zieria southwellii</i>			8	
Plantae	Flora	Salicaceae	5848	<i>Populus alba</i> *	White Poplar		1	
Plantae	Flora	Salicaceae	5849	<i>Populus nigra</i> *	Lombardy Poplar		1	
Plantae	Flora	Salicaceae	5851	<i>Salix babylonica</i> *	Weeping Willow		4	
Plantae	Flora	Salicaceae	SALI	<i>Salix</i> spp.			1	
Plantae	Flora	Salviniaceae	8178	<i>Salvinia molesta</i> *			3	
Plantae	Flora	Santalaceae	5860	<i>Exocarpos cupressiformis</i>	Cherry Ballart		88	
Plantae	Flora	Santalaceae	5864	<i>Exocarpos strictus</i>	Dwarf Cherry		4	
Plantae	Flora	Santalaceae	5865	<i>Leptomeria acida</i>	Sour Currant Bush		4	
Plantae	Flora	Santalaceae	5866	<i>Leptomeria drupacea</i>			1	
Plantae	Flora	Santalaceae	5870	<i>Santalum obtusifolium</i>	Sandalwood		3	


Plantae	Flora	Santalaceae	5871	<i>Thesium australe</i>	Austral Toadflax	V,P	V	7	
Plantae	Flora	Sapindaceae	5872	<i>Alectryon coriaceus</i>	Beach Alectryon			10	
Plantae	Flora	Sapindaceae	ALEC	<i>Alectryon spp.</i>				2	
Plantae	Flora	Sapindaceae	5875	<i>Alectryon subcinerus</i>	Wild Quince			63	
Plantae	Flora	Sapindaceae	7358	<i>Alectryon subdentatus f. subdentatus</i>				5	
Plantae	Flora	Sapindaceae	5877	<i>Alectryon tomentosus</i>	Hairy Bird's Eye			1	
Plantae	Flora	Sapindaceae	5879	<i>Arytera divaricata</i>	Coogera			15	
Plantae	Flora	Sapindaceae	5882	<i>Cardiospermum grandiflorum</i>	Balloon Vine			1	
Plantae	Flora	Sapindaceae	5884	<i>Cupaniopsis anacardioides</i>	Tuckeroo			38	
Plantae	Flora	Sapindaceae	11073	<i>Cupaniopsis baileyana</i>				7	
Plantae	Flora	Sapindaceae	5886	<i>Cupaniopsis parvifolia</i>	Small-leaved Tuckeroo			14	
Plantae	Flora	Sapindaceae	CUPA	<i>Cupaniopsis spp.</i>				3	
Plantae	Flora	Sapindaceae	7432	<i>Diploglottis australis</i>	Native Tamarind			71	
Plantae	Flora	Sapindaceae	5899	<i>Dodonaea megazyga</i>				16	
Plantae	Flora	Sapindaceae	5901	<i>Dodonaea multijuga</i>				2	
Plantae	Flora	Sapindaceae	DODO	<i>Dodonaea spp.</i>	A Hopbush			1	
Plantae	Flora	Sapindaceae	5911	<i>Dodonaea triquetra</i>	Large-leaf Hop-bush			117	
Plantae	Flora	Sapindaceae	7690	<i>Dodonaea viscosa subsp. angustifolia</i>				1	
Plantae	Flora	Sapindaceae	6541	<i>Dodonaea viscosa subsp. viscosa</i>				5	
Plantae	Flora	Sapindaceae	5914	<i>Elatostachys nervosa</i>	Beetroot Tree			24	
Plantae	Flora	Sapindaceae	5917	<i>Guioa semiglaucula</i>	Guioa			108	
Plantae	Flora	Sapindaceae	GUIO	<i>Guioa spp.</i>				1	
Plantae	Flora	Sapindaceae	5919	<i>Harpullia hillii</i>				4	
Plantae	Flora	Sapindaceae	12514	<i>Jagera pseudorhus var. pseudorhus</i>	Foambark Tree			40	
Plantae	Flora	Sapindaceae	5925	<i>Mischocarpus anodontus</i>				1	
Plantae	Flora	Sapindaceae	8447	<i>Mischocarpus australis</i>				9	
Plantae	Flora	Sapindaceae	5926	<i>Mischocarpus pyriformis</i>	Yellow Pear-fruit			19	
Plantae	Flora	Sapindaceae	10870	<i>Rhysotoechia bifoliolata subsp. bifoliolata</i>	Two-leaved Tuckeroo			28	
Plantae	Flora	Sapindaceae	6452	<i>Sarcopteryx stipata</i>	Steelwood			70	
Plantae	Flora	Sapotaceae	11957	<i>Niemeyera whitei</i>	Rusty Plum, Plum Boxwood	V,P		K	
Plantae	Flora	Sapotaceae	5936	<i>Planchonella australis</i>	Black Apple			53	
Plantae	Flora	Schizaeaceae	8181	<i>Schizaea bifida</i>	Forked Comb Fern			15	
Plantae	Flora	Schizaeaceae	8182	<i>Schizaea dichotoma</i>	Branched Comb Fern			1	
Plantae	Flora	Scrophulariaceae	5943	<i>Artanema fimbriatum</i>				6	
Plantae	Flora	Scrophulariaceae	5945	<i>Bacopa mannieri</i>	Bacopa			5	
Plantae	Flora	Scrophulariaceae	5958	<i>Euphrasia collina</i>				1	
Plantae	Flora	Scrophulariaceae	7778	<i>Euphrasia collina subsp. paludosa</i>	Eyebright			4	
Plantae	Flora	Scrophulariaceae	5966	<i>Gratiola pedunculata</i>				1	
Plantae	Flora	Scrophulariaceae	5967	<i>Gratiola pubescens</i>	Hairy Brooklime			2	
Plantae	Flora	Scrophulariaceae	GRAT	<i>Gratiola spp.</i>				1	
Plantae	Flora	Scrophulariaceae	7558	<i>Kickxia elatine subsp. crinita</i>	Twining Toadflax			1	
Plantae	Flora	Scrophulariaceae	10216	<i>Kickxia spuria subsp. integrifolia</i>	Round-leaved Toadflax			1	
Plantae	Flora	Scrophulariaceae	5980	<i>Lophospermum erubescens</i>				1	
Plantae	Flora	Scrophulariaceae	5999	<i>Verbascum virgatum</i>	Twiggy Mullein			1	

Plantae	Flora	Selaginellaceae	8187	<i>Selaginella uliginosa</i>	Swamp Selaginella	56
Plantae	Flora	Smilacaceae	7592	<i>Smilax australis</i>	Lawyer Vine	268
Plantae	Flora	Smilacaceae	6022	<i>Smilax glycyphylla</i>	Sweet Sarsparilla	156
Plantae	Flora	Smilacaceae	SMIL	<i>Smilax spp.</i>		3
Plantae	Flora	Solanaceae	6027	<i>Cestrum parqui</i>	Green Cestrum	3
Plantae	Flora	Solanaceae	6033	<i>Datura stramonium</i>	Common Thornapple	1
Plantae	Flora	Solanaceae	6036	<i>Duboisia myoporoides</i>	Corkwood	52
Plantae	Flora	Solanaceae	6039	<i>Lycium barbarum</i>	Chinese Boxthorn	1
Plantae	Flora	Solanaceae	10477	<i>Nicotiana forsteri</i>		1
Plantae	Flora	Solanaceae	6045	<i>Nicotiana glauca</i>	Tree Tobacco	2
Plantae	Flora	Solanaceae	6050	<i>Nicotiana suaveolens</i>	Native Tobacco	1
Plantae	Flora	Solanaceae	6056	<i>Physalis ixocarpa</i>	Ground Cherry	1
Plantae	Flora	Solanaceae	7823	<i>Physalis minima</i>	Wild Gooseberry	1
Plantae	Flora	Solanaceae	6058	<i>Physalis peruviana</i>	Cape Gooseberry	10
Plantae	Flora	Solanaceae	6064	<i>Solanum amblymerum</i>		1
Plantae	Flora	Solanaceae	7043	<i>Solanum americanum</i>	Glossy Nightshade	2
Plantae	Flora	Solanaceae	6065	<i>Solanum aviculare</i>	Kangaroo Apple	14
Plantae	Flora	Solanaceae	6067	<i>Solanum brownii</i>	Violet Nightshade	9
Plantae	Flora	Solanaceae	6069	<i>Solanum campanulatum</i>		2
Plantae	Flora	Solanaceae	7325	<i>Solanum capsicoides</i>	Devil's Apple	4
Plantae	Flora	Solanaceae	12137	<i>Solanum curvicaule</i>		11
Plantae	Flora	Solanaceae	6076	<i>Solanum densevestitum</i>		57
Plantae	Flora	Solanaceae	12294	<i>Solanum hapalum</i>		7
Plantae	Flora	Solanaceae	6084	<i>Solanum inaequilaterum</i>		1
Plantae	Flora	Solanaceae	6090	<i>Solanum mauritianum</i>	Wild Tobacco Bush	156
Plantae	Flora	Solanaceae	6091	<i>Solanum nigrum</i>	Black-berry Nightshade	42
Plantae	Flora	Solanaceae	6095	<i>Solanum opacum</i>	Green-berry Nightshade	1
Plantae	Flora	Solanaceae	6100	<i>Solanum prinophyllum</i>	Forest Nightshade	35
Plantae	Flora	Solanaceae	6101	<i>Solanum pseudocapsicum</i>	Madeira Winter Cherry	13
Plantae	Flora	Solanaceae	6102	<i>Solanum pungetium</i>	Eastern Nightshade	1
Plantae	Flora	Solanaceae	SOLA	<i>Solanum spp.</i>		10
Plantae	Flora	Solanaceae	6109	<i>Solanum stelligerum</i>	Devil's Needles	15
Plantae	Flora	Solanaceae	14341	<i>Solanum sulphureum</i>		P
Plantae	Flora	Solanaceae	6115	<i>Solanum vescum</i>		1
Plantae	Flora	Solanaceae	12299	<i>Solanum vicinum</i>		2
Plantae	Flora	Sparganiaceae	6767	<i>Sparganium subglobosum</i>	Floating Bur-reed	5
Plantae	Flora	Stackhousiaceae	6120	<i>Stackhousia monogyna</i>	Creamy Candles	1
Plantae	Flora	Stackhousiaceae	6122	<i>Stackhousia nuda</i>		1
Plantae	Flora	Stackhousiaceae	6125	<i>Stackhousia viminea</i>	Slender Stackhousia	9
Plantae	Flora	Strelitziaceae	11725	<i>Strelitzia nicolai</i>		1
Plantae	Flora	Stylidiaceae	6154	<i>Stylidium debile</i>	Frail Triggerplant	2
Plantae	Flora	Stylidiaceae	6157	<i>Stylidium graminifolium</i>	Grass Triggerplant	10
Plantae	Flora	Stylidiaceae	6158	<i>Stylidium laricifolium</i>	Tree Triggerplant	2
Plantae	Flora	Stylidiaceae	6160	<i>Stylidium productum</i>		1
Plantae	Flora	Stylidiaceae	STYL	<i>Stylidium spp.</i>		1
Plantae	Flora	Surianaceae	6162	<i>Gulifaylia monostylis</i>		12
Plantae	Flora	Symplocaceae	SYMP	<i>Symplocos spp.</i>		1
Plantae	Flora	Symplocaceae	6165	<i>Symplocos stawellii</i>	White Hazelwood	6
Plantae	Flora	Symplocaceae	6166	<i>Symplocos thwaitesii</i>	Buff Hazelwood	10
Plantae	Flora	Theaceae	CAML	<i>Camellia spp.</i>		1
Plantae	Flora	Thelypteridaceae	8189	<i>Christella hispidula</i>		1
Plantae	Flora	Thelypteridaceae	CHRI	<i>Christella spp.</i>		1











Plantae	Flora	Thelypteridaceae	14610	<i>Cyclosorus dentatus</i>	Binung	45
Plantae	Flora	Thelypteridaceae	8190	<i>Cyclosorus interruptus</i>		5
Plantae	Flora	Thymelaeaceae	PHAL	<i>Phaleria spp.</i>		1
Plantae	Flora	Thymelaeaceae	6180	<i>Pimelea latifolia</i>		2
Plantae	Flora	Thymelaeaceae	6634	<i>Pimelea latifolia subsp. altior</i>		13
Plantae	Flora	Thymelaeaceae	6475	<i>Pimelea latifolia subsp. hirsuta</i>		1
Plantae	Flora	Thymelaeaceae	6181	<i>Pimelea ligustrina</i>		15
Plantae	Flora	Thymelaeaceae	7643	<i>Pimelea ligustrina subsp. hypericina</i>		5
Plantae	Flora	Thymelaeaceae	8676	<i>Pimelea ligustrina subsp. ligustrina</i>		4
Plantae	Flora	Thymelaeaceae	6182	<i>Pimelea linifolia</i>	Slender Rice Flower	68
Plantae	Flora	Thymelaeaceae	6814	<i>Pimelea linifolia subsp. linifolia</i>		38
Plantae	Flora	Thymelaeaceae	6184	<i>Pimelea neo-anglica</i>	Poison Pimelea	1
Plantae	Flora	Thymelaeaceae	PIME	<i>Pimelea spp.</i>		4
Plantae	Flora	Thymelaeaceae	6197	<i>Wikstroemia indica</i>		14
Plantae	Flora	Trimeniaceae	9061	<i>Trimenia moorei</i>	Bitter Vine	35
Plantae	Flora	Tropaeolaceae	6215	<i>Tropaeolum majus</i>	* Nasturtium	3
Plantae	Flora	Typhaceae	7224	<i>Typha domingensis</i>	Narrow-leaved Cumbungi	1
Plantae	Flora	Typhaceae	6217	<i>Typha orientalis</i>	Broad-leaved Cumbungi	21
Plantae	Flora	Typhaceae	TYPH	<i>Typha spp.</i>	*	8
Plantae	Flora	Ulmaceae	6218	<i>Aphananthe philippinensis</i>	Rough-leaved Elm	24
Plantae	Flora	Ulmaceae	6222	<i>Celtis paniculata</i>	Native Celtis	5
Plantae	Flora	Ulmaceae	6761	<i>Trema tomentosa var. aspera</i>	Native Peach	45
Plantae	Flora	Winteraceae	6290	<i>Tasmannia insipida</i>	Brush Pepperbush	110
Plantae	Flora	Winteraceae	6293	<i>Tasmannia stipitata</i>	Northern Pepperbush	7
Plantae	Flora	Urticaceae	6223	<i>Australina pusilla</i>		1
Plantae	Flora	Urticaceae	11052	<i>Boehmeria macrophylla</i>	Native Ramie	1
Plantae	Flora	Urticaceae	6226	<i>Dendrocnide excelsa</i>	Giant Stinging Tree	48
Plantae	Flora	Urticaceae	6228	<i>Dendrocnide photinophylla</i>	Shiny-leaved Stinging Tree	11
Plantae	Flora	Urticaceae	6229	<i>Elatostema reticulatum</i>		15
Plantae	Flora	Urticaceae	6230	<i>Elatostema stipitatum</i>		6
Plantae	Flora	Urticaceae	6236	<i>Urtica dioica</i>	* Giant Nettle	2
Plantae	Flora	Urticaceae	6237	<i>Urtica incisa</i>	Stinging Nettle	6
Plantae	Flora	Xanthorrhoeaceae	6315	<i>Xanthorrhoea arborea</i>		P 3
Plantae	Flora	Xanthorrhoeaceae	6316	<i>Xanthorrhoea australis</i>		P 1
Plantae	Flora	Xanthorrhoeaceae	8771	<i>Xanthorrhoea fulva</i>		P 34
Plantae	Flora	Xanthorrhoeaceae	8750	<i>Xanthorrhoea glauca</i>		P 5
Plantae	Flora	Xanthorrhoeaceae	8751	<i>Xanthorrhoea glauca subsp. glauca</i>		P 9
Plantae	Flora	Xanthorrhoeaceae	6317	<i>Xanthorrhoea johnsonii</i>	Johnson's Grass Tree	P 13
Plantae	Flora	Xanthorrhoeaceae	8770	<i>Xanthorrhoea latifolia</i>		P 1
Plantae	Flora	Xanthorrhoeaceae	9309	<i>Xanthorrhoea latifolia subsp. latifolia</i>		P 6



Plantae	Flora	Xanthorrhoeaceae	6318	<i>Xanthorrhoea macronema</i>		P	40
Plantae	Flora	Xanthorrhoeaceae	8843	<i>Xanthorrhoea malacophylla</i>		P	11
Plantae	Flora	Xanthorrhoeaceae	6319	<i>Xanthorrhoea media</i>		P	5
Plantae	Flora	Xanthorrhoeaceae	6321	<i>Xanthorrhoea resinosa</i>		P	1
Plantae	Flora	Xanthorrhoeaceae	XANT	<i>Xanthorrhoea spp.</i>		P	18
Plantae	Flora	Xyridaceae	7247	<i>Xyris complanata</i>			4
Plantae	Flora	Xyridaceae	6322	<i>Xyris gracilis</i>			4
Plantae	Flora	Xyridaceae	6324	<i>Xyris operculata</i>			6
Plantae	Flora	Uvulariaceae	3566	<i>Schelhameria undulata</i>			1
Plantae	Flora	Uvulariaceae	7346	<i>Tripladenia cunninghamii</i>			86
Plantae	Flora	Zamiaceae	6326	<i>Lepidozamia peroffskyana</i>		P	18
Plantae	Flora	Zamiaceae	6327	<i>Macrozamia communis</i>	Burrawang	P	2
Plantae	Flora	Verbenaceae	6248	<i>Lantana camara</i>	*	Lantana	322
Plantae	Flora	Verbenaceae	6256	<i>Verbena bonariensis</i>	*	Purpletop	110
Plantae	Flora	Verbenaceae	10718	<i>Verbena incompta</i>	*		4
Plantae	Flora	Verbenaceae	6258	<i>Verbena litoralis</i>	*		2
Plantae	Flora	Verbenaceae	10720	<i>Verbena quadrangulata</i>	*		2
Plantae	Flora	Verbenaceae	11406	<i>Verbena rigida</i> var. <i>rigida</i>	*	Veined Verbena	20
Plantae	Flora	Verbenaceae	VERE	<i>Verbena spp.</i>	*		5
Plantae	Flora	Zingiberaceae	6913	<i>Alpinia arundelliana</i>		Native Ginger	26
Plantae	Flora	Zingiberaceae	6340	<i>Alpinia caerulea</i>		Native Ginger	42
Plantae	Flora	Zingiberaceae	6787	<i>Hedychium gardnerianum</i>	*	Ginger Lily	5
Plantae	Flora	Violaceae	6266	<i>Hybanthus monopetalus</i>		Slender Violet-bush	4
Plantae	Flora	Violaceae	HYBA	<i>Hybanthus spp.</i>			2
Plantae	Flora	Violaceae	9769	<i>Hybanthus stellarioides</i>			49
Plantae	Flora	Violaceae	6792	<i>Hybanthus vernonii</i> subsp. <i>scaber</i>			1
Plantae	Flora	Violaceae	12061	<i>Meliclytus dentatus</i>		Tree Violet	2
Plantae	Flora	Violaceae	11863	<i>Viola banksii</i>			10
Plantae	Flora	Violaceae	6270	<i>Viola betonicifolia</i>		Native Violet	49
Plantae	Flora	Violaceae	6271	<i>Viola caleyana</i>		Swamp Violet	2
Plantae	Flora	Violaceae	10565	<i>Viola fuscoviolacea</i>			2
Plantae	Flora	Violaceae	6272	<i>Viola hederacea</i>		Ivy-leaved Violet	204
Plantae	Flora	Violaceae	6963	<i>Viola hederacea</i> subsp. <i>perreniformis</i>			2
Plantae	Flora	Violaceae	11190	<i>Viola sieberiana</i>			1
Plantae	Flora	Zosteraceae	13649	<i>Zostera muelleri</i> subsp. <i>capricorni</i>			1
Plantae	Flora	Viscaceae	6442	<i>Korthalsella rubra</i> subsp. <i>geijericola</i>			1
Plantae	Flora	Viscaceae	6973	<i>Korthalsella rubra</i> subsp. <i>rubra</i>		Jointed Mistletoe	1
Plantae	Flora	Viscaceae	6278	<i>Notothixos incanus</i>			12
Plantae	Flora	Viscaceae	6279	<i>Notothixos subaureus</i>		Golden Mistletoe	4
Plantae	Flora	Vitaceae	6281	<i>Cayratia clematidea</i>		Native Grape	77
Plantae	Flora	Vitaceae	8462	<i>Cayratia eurycnema</i>			13
Plantae	Flora	Vitaceae	6282	<i>Cissus antarctica</i>		Water Vine	162
Plantae	Flora	Vitaceae	6283	<i>Cissus hypoglauca</i>		Giant Water Vine	221
Plantae	Flora	Vitaceae	6286	<i>Cissus sterculiifolia</i>		Yaroong	6
Plantae	Flora	Vitaceae	14093	<i>Clematicissus opaca</i>		Pepper Vine	12
Plantae	Flora	Vitaceae	6288	<i>Tetrastigma nitens</i>			70
Plantae	Flora	Vitaceae	8193	<i>Vittaria elongata</i>		Tape Fern	3
Plantae	Flora	Orobanchaceae	5954	<i>Euphrasia arguta</i>		E4A,P CE P	

Plantae	Flora	Orobanchaceae	5957	<i>Euphrasia ciliolata</i>	Poibblue Eyebright	V,P	K	
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Data from the BioNet Atlas of NSW Wildlife website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1Å; ^^ rounded to 0.01Å). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Public Report of all Valid Records of Communities in PORT MACQUARIE-HASTINGS LGA returned 0 records for 15 entities.  
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Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Community				<i>Carex Sedgeland of the New England Tableland, Nandewar, Brigalow Belt South and NSW North Coast Bioregions</i>		Carex Sedgeland of the New England Tableland, Nandewar, Brigalow Belt South and NSW North Coast Bioregions	E3		K	
Community				<i>Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	V	K	
Community				<i>Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3		K	
Community				<i>Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>		Littoral Rainforest in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	CE	K	
Community				<i>Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions</i>		Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions	E3	CE	K	
Community				<i>Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion</i>		Lowland Rainforest on Floodplain in the New South Wales North Coast Bioregion	E3	CE	K	
Community				<i>Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions</i>		Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions	E3	E	K	
Community				<i>New England Peppermint (Eucalyptus nova-anglica) Woodland on Basalts and Sediments in the New England Tableland Bioregion</i>		New England Peppermint (Eucalyptus nova-anglica) Woodland on Basalts and Sediments in the New England Tableland Bioregion	E4B	CE	K	
Community				<i>Ribbon Gum-Mountain Gum-Snow Gum Grassy Forest/Woodland of the New England Tableland Bioregion</i>		Ribbon Gum-Mountain Gum-Snow Gum Grassy Forest/Woodland of the New England Tableland Bioregion	E3		K	
Community				<i>Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion</i>		Subtropical Coastal Floodplain Forest of the New South Wales North Coast Bioregion	E3		K	

Community	<i>Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>	Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	K	
Community	<i>Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions</i>	Swamp Sclerophyll Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	E3	K	
Community	<i>Themeda grassland on seaciffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions</i>	Themeda grassland on seaciffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner Bioregions	E3	K	
Community	<i>Upland Wetlands of the Drainage Divide of the New England Tableland Bioregion</i>	Upland Wetlands of the Drainage Divide of the New England Tableland Bioregion	E3	E	K 
Community	<i>White Box Yellow Box Blakely's Red Gum Woodland</i>	White Box Yellow Box Blakely's Red Gum Woodland	E3	CE	K 






Data from the BioNet Atlas of NSW Wildlife website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1Å; ^^ rounded to 0.01Å). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Public Report of all Valid Records of Animals in PORT MACQUARIE-HASTINGS LGA returned a total of 53,366 records of 654 species.

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Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Chondrichthyes	Centrophoridae	T321	<i>Centrophorus harrissoni</i>		Harrisson's Dogfish			K	
Animalia	Chondrichthyes	Centrophoridae	T322	<i>Centrophorus zeehaani</i>		Southern Dogfish			P	
Animalia	Actinopterygii	Anguillidae	T056	<i>Anguilla reinhardtii</i>		Longfin eel			5	
Animalia	Actinopterygii	Anguillidae	T075	<i>Anguilla sp.</i>		Shortfin Eel			2	
Animalia	Actinopterygii	Cyprinidae	T044	<i>Cyprinus carpio</i>	*	Carp			1	
Animalia	Actinopterygii	Eleotridae	T189	<i>Gobiomorphus australis</i>		Striped Gudgeon			4	
Animalia	Actinopterygii	Eleotridae	T1003	<i>Hypseleotris compressa</i>		Empire Gudgeon			3	
Animalia	Actinopterygii	Eleotridae	T1002	<i>Hypseleotris galii</i>		Firetail Gudgeon			5	
Animalia	Actinopterygii	Eleotridae	T055	<i>Philypnodon grandiceps</i>		Flathead gudgeon			2	
Animalia	Malacostraca	Parastacidae	T324	<i>Cherax aspidatus</i>					14	
Animalia	Malacostraca	Parastacidae	T904	<i>Cherax destructor</i>		Dam Yabby			1	
Animalia	Malacostraca	Parastacidae	T939	<i>Euastacus sp.</i>					36	
Animalia	Actinopterygii	Poeciliidae	T013	<i>Gambusia holbrooki</i>	*	Mosquito Fish			32	
Animalia	Actinopterygii	Mugilidae	T1017	<i>Trachystoma petardi</i>		Pinkeye Mullet, Fresh Water Mullet			1	
Animalia	Amphibia	Myobatrachidae	3001	<i>Adelotus brevis</i>		Tusked Frog population in the Nandewar and New England Tableland Bioregions	E2,P		K	
Animalia	Amphibia	Myobatrachidae	3001	<i>Adelotus brevis</i>		Tusked Frog	P		164	
Animalia	Amphibia	Myobatrachidae	3131	<i>Crinia parvisignifera</i>		Eastern Sign-bearing Froglet	P		4	
Animalia	Amphibia	Myobatrachidae	3134	<i>Crinia signifera</i>		Common Eastern Froglet	P		296	
Animalia	Amphibia	Myobatrachidae	3137	<i>Crinia tinnula</i>		Wallum Froglet	V,P		73	
Animalia	Amphibia	Myobatrachidae	3052	<i>Lechriodus fletcheri</i>		Fletcher's Frog	P		30	
Animalia	Amphibia	Myobatrachidae	3058	<i>Limnodynastes dumerilii</i>		Eastern Banjo Frog	P		24	
Animalia	Amphibia	Myobatrachidae	3902	<i>Limnodynastes dumerilii grayi</i>			P		2	
Animalia	Amphibia	Myobatrachidae	3059	<i>Limnodynastes fletcheri</i>		Long-thumbed Frog	P		1	
Animalia	Amphibia	Myobatrachidae	3061	<i>Limnodynastes peronii</i>		Brown-striped Frog	P		247	
Animalia	Amphibia	Myobatrachidae	3063	<i>Limnodynastes tasmaniensis</i>		Spotted Grass Frog	P		7	
Animalia	Amphibia	Myobatrachidae	3064	<i>Limnodynastes terraereginae</i>		Northern Banjo Frog	P		1	
Animalia	Amphibia	Myobatrachidae	3073	<i>Mixophyes balbus</i>		Stuttering Frog	E1,P,2	V	108	
Animalia	Amphibia	Myobatrachidae	3074	<i>Mixophyes fasciolatus</i>		Great Barred Frog	P		275	
Animalia	Amphibia	Myobatrachidae	3075	<i>Mixophyes iteratus</i>		Giant Barred Frog	E1,P,2	E	81	
Animalia	Amphibia	Myobatrachidae	T120	<i>Mixophyes sp.</i>			P		2	

Animalia	Amphibia	Myobatrachidae	3103	<i>Paracrinia haswelli</i>	Haswell's Froglet	P		12	
Animalia	Amphibia	Myobatrachidae	3109	<i>Philoria sphagnicolus</i>	Sphagnum Frog	V,P		124	
Animalia	Amphibia	Myobatrachidae	3112	<i>Platyplectrum ornatum</i>	Ornate Burrowing Frog	P		1	
Animalia	Amphibia	Myobatrachidae	3117	<i>Pseudophryne bibronii</i>	Bibron's Toadlet	P		7	
Animalia	Amphibia	Myobatrachidae	3118	<i>Pseudophryne coriacea</i>	Red-backed Toadlet	P		431	
Animalia	Amphibia	Myobatrachidae	T119	<i>Pseudophryne sp.</i>		P		4	
Animalia	Amphibia	Myobatrachidae	3035	<i>Uperoleia fusca</i>	Dusky Toadlet	P		56	
Animalia	Amphibia	Myobatrachidae	3158	<i>Uperoleia laevigata</i>	Smooth Toadlet	P		21	
Animalia	Amphibia	Myobatrachidae	3329	<i>Uperoleia sp.</i>		P		5	
Animalia	Amphibia	Myobatrachidae	3302	<i>Uperoleia tyleri</i>	Tyler's Toadlet	P		2	
Animalia	Amphibia	Hylidae	3166	<i>Litoria aurea</i>	Green and Golden Bell Frog	E1,P	V	7	
Animalia	Amphibia	Hylidae	3168	<i>Litoria booroolongensis</i>	Booroolong Frog	E1,P	E	K	
Animalia	Amphibia	Hylidae	3169	<i>Litoria brevipalmata</i>	Green-thighed Frog	V,P		24	
Animalia	Amphibia	Hylidae	3171	<i>Litoria caerulea</i>	Green Tree Frog	P		43	
Animalia	Amphibia	Hylidae	3174	<i>Litoria chloris</i>	Red-eyed Tree Frog	P		36	
Animalia	Amphibia	Hylidae	3303	<i>Litoria daviesae</i>	Davies' Tree Frog	V,P		15	
Animalia	Amphibia	Hylidae	3180	<i>Litoria dentata</i>	Bleating Tree Frog	P		71	
Animalia	Amphibia	Hylidae	3182	<i>Litoria ewingii</i>	Brown Tree Frog	P		2	
Animalia	Amphibia	Hylidae	3183	<i>Litoria fallax</i>	Eastern Dwarf Tree Frog	P		254	
Animalia	Amphibia	Hylidae	3184	<i>Litoria freycineti</i>	Freycinet's Frog	P		28	
Animalia	Amphibia	Hylidae	3187	<i>Litoria gracilentia</i>	Dainty Green Tree Frog	P		26	
Animalia	Amphibia	Hylidae	3190	<i>Litoria jervisiensis</i>	Jervis Bay Tree Frog	P		4	
Animalia	Amphibia	Hylidae	3191	<i>Litoria latopalmata</i>	Broad-palmed Frog	P		11	
Animalia	Amphibia	Hylidae	3316	<i>Litoria lesueuri</i>	Lesueur's Frog	P		140	
Animalia	Amphibia	Hylidae	3199	<i>Litoria nasuta</i>	Rocket Frog	P		28	
Animalia	Amphibia	Hylidae	3003	<i>Litoria pearsoniana</i>	Pearson's Green Tree Frog	P		97	
Animalia	Amphibia	Hylidae	T121	<i>Litoria pearsoniana/phyllachroa</i>	Leaf Green Tree Frog species complex	P		12	
Animalia	Amphibia	Hylidae	3204	<i>Litoria peronii</i>	Peron's Tree Frog	P		141	
Animalia	Amphibia	Hylidae	3206	<i>Litoria phyllachroa</i>	Leaf-green Tree Frog	P		138	
Animalia	Amphibia	Hylidae	3219	<i>Litoria revelata</i>	Revealed Frog	P		6	
Animalia	Amphibia	Hylidae	3186	<i>Litoria subglandulosa</i>	Glandular Frog	V,P		1	
Animalia	Amphibia	Hylidae	3214	<i>Litoria tyleri</i>	Tyler's Tree Frog	P		55	
Animalia	Amphibia	Hylidae	3215	<i>Litoria verreauxii</i>	Verreaux's Frog	P		12	
Animalia	Amphibia	Bufonidae	3269	<i>Rhinella marina</i>	Cane Toad			27	
Animalia	Reptilia	Cheloniidae	2004	<i>Caretta caretta</i>	Loggerhead Turtle	E1,P	E	8	
Animalia	Reptilia	Cheloniidae	2007	<i>Chelonia mydas</i>	Green Turtle	V,P	V	2	
Animalia	Reptilia	Cheloniidae	T110	<i>Cheloniidae sp.</i>	unidentified sea turtle	P		1	
Animalia	Reptilia	Cheloniidae	2008	<i>Eretmochelys imbricata</i>	Hawksbill Turtle	P		7	
Animalia	Reptilia	Dermochelyidae	2013	<i>Dermochelys coriacea</i>	Leatherback Turtle	E1,P	E	1	
Animalia	Reptilia	Chelidae	2017	<i>Chelodina longicollis</i>	Eastern Snake-necked Turtle	P		10	
Animalia	Reptilia	Chelidae	2034	<i>Emydura macquarii</i>	Macquarie Turtle	P		3	
Animalia	Reptilia	Chelidae	2951	<i>Emydura macquarii macquarii</i>	Macquarie River Turtle	P		21	
Animalia	Reptilia	Gekkonidae	2687	<i>Saltuarius swaini</i>	Southern Leaf-tailed Gecko	P		17	
Animalia	Reptilia	Pygopodidae	2170	<i>Lialis burtonis</i>	Burton's Snake-lizard	P		13	
Animalia	Reptilia	Pygopodidae	2174	<i>Pygopus lepidopodus</i>	Common Scaly-foot	P		3	
Animalia	Reptilia	Scincidae	2417	<i>Bellatorias major</i>	Land Mullet	P		58	
Animalia	Reptilia	Scincidae	2031	<i>Calyptotis ruficauda</i>	Red-tailed Calyptotis	P		25	
Animalia	Reptilia	Scincidae	2293	<i>Coeranoscincus reticulatus</i>	Three-toed Snake-tooth Skink	V,P	V	K	
Animalia	Reptilia	Scincidae	2375	<i>Ctenotus robustus</i>	Robust Ctenotus	P		20	
















Animalia	Reptilia	Scincidae	2386	<i>Ctenotus taeniolatus</i>	Copper-tailed Skink	P	2
Animalia	Reptilia	Scincidae	2575	<i>Cyclodomorphus gerrardii</i>	Pink-tongued Lizard	P	5
Animalia	Reptilia	Scincidae	2408	<i>Egernia cunninghami</i>	Cunningham's Skink	P	2
Animalia	Reptilia	Scincidae	2213	<i>Egernia mcpheeii</i>	Eastern Crevice Skink	P	11
Animalia	Reptilia	Scincidae	2429	<i>Egernia striolata</i>	Tree Skink	P	2
Animalia	Reptilia	Scincidae	2214	<i>Eulamprus heatwolei</i>	Yellow-bellied Water-skink	P	7
Animalia	Reptilia	Scincidae	2550	<i>Eulamprus kosciuskoi</i>	Alpine Water Skink	P	1
Animalia	Reptilia	Scincidae	2552	<i>Eulamprus murrayi</i>	Murray's Skink	P	39
Animalia	Reptilia	Scincidae	2557	<i>Eulamprus quoyii</i>	Eastern Water-skink	P	30
Animalia	Reptilia	Scincidae	2559	<i>Eulamprus tenuis</i>	Barred-sided Skink	P	6
Animalia	Reptilia	Scincidae	T116	<i>Eulamprus tenuis\martini</i>	Barred-sided Skink	P	1
Animalia	Reptilia	Scincidae	2561	<i>Eulamprus tympanum</i>	Southern Water-skink	P	2
Animalia	Reptilia	Scincidae	2447	<i>Lampropholis amicala</i>	Friendly Sunskink	P	1
Animalia	Reptilia	Scincidae	2450	<i>Lampropholis delicata</i>	Dark-flecked Garden Sunskink	P	181
Animalia	Reptilia	Scincidae	2451	<i>Lampropholis guichenoti</i>	Pale-flecked Garden Sunskink	P	64
Animalia	Reptilia	Scincidae	T117	<i>Lampropholis sp.</i>	unidentified grass skink	P	8
Animalia	Reptilia	Scincidae	2430	<i>Liopholis whitii</i>	White's Skink	P	3
Animalia	Reptilia	Scincidae	2307	<i>Lygisaurus foliorum</i>	Tree-base Litter-skink	P	1
Animalia	Reptilia	Scincidae	2542	<i>Saiphos equalis</i>	Three-toed Skink	P	17
Animalia	Reptilia	Scincidae	2449	<i>Saproscincus challengerii</i>	Orange-tailed Shadyskink	P	26
Animalia	Reptilia	Scincidae	2452	<i>Saproscincus mustelinus</i>	Weasel Skink	P	4
Animalia	Reptilia	Scincidae	2765	<i>Saproscincus rosei</i>	Orange-tailed Shadyskink	P	6
Animalia	Reptilia	Scincidae	2580	<i>Tiliqua scincoides</i>	Eastern Blue-tongue	P	52
Animalia	Reptilia	Scincidae	5056	<i>Tiliqua scincoides scincoides</i>		P	1
Animalia	Reptilia	Agamidae	2194	<i>Amphibolurus muricatus</i>	Jacky Lizard	P	17
Animalia	Reptilia	Agamidae	2245	<i>Hypsilurus spinipes</i>	Southern Angle-headed Dragon	P	15
Animalia	Reptilia	Agamidae	2252	<i>Intellagama lesueurii</i>	Eastern Water Dragon	P	75
Animalia	Reptilia	Agamidae	5075	<i>Intellagama lesueurii lesueurii</i>	Eastern Water Dragon	P	3
Animalia	Reptilia	Agamidae	2177	<i>Pogona barbata</i>	Bearded Dragon	P	6
Animalia	Reptilia	Agamidae	2182	<i>Rankinia diemensis</i>	Mountain Dragon	P	2
Animalia	Reptilia	Varanidae	9056	<i>Varanus sp.</i>	Unidentified Goanna	P	2
Animalia	Reptilia	Varanidae	2283	<i>Varanus varius</i>	Lace Monitor	P	190
Animalia	Reptilia	Typhlopidae	2599	<i>Ramphotyphlops nigrescens</i>	Blackish Blind Snake	P	6
Animalia	Reptilia	Typhlopidae	T112	<i>Ramphotyphlops sp.</i>	blind snake	P	1
Animalia	Reptilia	Boidae	2625	<i>Morelia spilota</i>	Carpet & Diamond Pythons	P	23
Animalia	Reptilia	Boidae	5095	<i>Morelia spilota mcdowelli</i>	Eastern Carpet Python	P	4
Animalia	Reptilia	Boidae	5096	<i>Morelia spilota spilota</i>	Diamond Python	P	5
Animalia	Reptilia	Colubridae	2630	<i>Boiga irregularis</i>	Brown Tree Snake	P	1
Animalia	Reptilia	Colubridae	2633	<i>Dendrelaphis punctulatus</i>	Common Tree Snake	P	17
Animalia	Reptilia	Elapidae	2640	<i>Acanthophis antarcticus</i>	Common Death Adder	P	2
Animalia	Reptilia	Elapidae	2744	<i>Astratia stokesii</i>	Stokes's Seasnake	P	1
Animalia	Reptilia	Elapidae	2646	<i>Cacophis krefftii</i>	Southern Dwarf Crowned Snake	P	4
Animalia	Reptilia	Elapidae	2647	<i>Cacophis squamulosus</i>	Golden-crowned Snake	P	12
Animalia	Reptilia	Elapidae	5136	<i>Cryptophis nigrescens</i>	Eastern Small-eyed Snake	P	22
Animalia	Reptilia	Elapidae	2655	<i>Demansia psammophis</i>	Yellow-faced Whip Snake	P	10
Animalia	Reptilia	Elapidae	2665	<i>Drysdalia coronoides</i>	White-lipped Snake	P	2
Animalia	Reptilia	Elapidae	2674	<i>Hemiaspis signata</i>	Black-bellied Swamp Snake	P	22
Animalia	Reptilia	Elapidae	2675	<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake	V,P	P









Animalia	Reptilia	Elapidae	2677	<i>Hoplocephalus stephensi</i>	Stephens' Banded Snake	V,P	10	
Animalia	Reptilia	Elapidae	2681	<i>Notechis scutatus</i>	Tiger Snake	P	5	
Animalia	Reptilia	Elapidae	2770	<i>Pelamis platurus</i>	Yellow-bellied Seasnake	P	1	
Animalia	Reptilia	Elapidae	2693	<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake	P	69	
Animalia	Reptilia	Elapidae	2699	<i>Pseudonaja textilis</i>	Eastern Brown Snake	P	17	
Animalia	Reptilia	Elapidae	2723	<i>Tropidechis carinatus</i>	Rough-scaled Snake	P	1	
Animalia	Reptilia	Elapidae	2734	<i>Vermicella annulata</i>	Bandy-bandy	P	10	
Animalia	Aves	Casuariidae	0001	<i>Dromaius novaehollandiae</i>	Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area	E2,P	1	
Animalia	Aves	Casuariidae	0001	<i>Dromaius novaehollandiae</i>	Emu	P	1	
Animalia	Aves	Megapodiidae	0008	<i>Alectura lathami</i>	Australian Brush-turkey	P	2986	
Animalia	Aves	Phasianidae	0009	<i>Coturnix pectoralis</i>	Stubble Quail	P	5	
Animalia	Aves	Phasianidae	9046	<i>Coturnix sp.</i>	Unidentified Quail	P	2	
Animalia	Aves	Phasianidae	0011	<i>Coturnix ypsilophora</i>	Brown Quail	P	41	
Animalia	Aves	Phasianidae	0012	<i>Excalfactoria chinensis</i>	King Quail	P	3	
Animalia	Aves	Phasianidae	0902	<i>Gallus gallus</i>	Red Junglefowl	*	1	
Animalia	Aves	Phasianidae	0950	<i>Phasianus colchicus</i>	Common Pheasant	*	1	
Animalia	Aves	Anseranatidae	0199	<i>Anseranas semipalmata</i>	Maggie Goose	V,P	1	
Animalia	Aves	Anatidae	0210	<i>Anas castanea</i>	Chestnut Teal	P	54	
Animalia	Aves	Anatidae	0211	<i>Anas gracilis</i>	Grey Teal	P	33	
Animalia	Aves	Anatidae	0948	<i>Anas platyrhynchos</i>	Mallard	*	11	
Animalia	Aves	Anatidae	0212	<i>Anas rhynchotis</i>	Australasian Shoveler	P	8	
Animalia	Aves	Anatidae	0208	<i>Anas superciliosa</i>	Pacific Black Duck	P	110	
Animalia	Aves	Anatidae	0215	<i>Aythya australis</i>	Hardhead	P	39	
Animalia	Aves	Anatidae	0217	<i>Biziura lobata</i>	Musk Duck	P	14	
Animalia	Aves	Anatidae	0202	<i>Chenonetta jubata</i>	Australian Wood Duck	P	114	
Animalia	Aves	Anatidae	0203	<i>Cygnus atratus</i>	Black Swan	P	29	
Animalia	Aves	Anatidae	0204	<i>Dendrocygna arcuata</i>	Wandering Whistling-Duck	P	11	
Animalia	Aves	Anatidae	0205	<i>Dendrocygna eytoni</i>	Plumed Whistling-Duck	P	3	
Animalia	Aves	Anatidae	0213	<i>Malacorhynchus membranaeus</i>	Pink-eared Duck	P	1	
Animalia	Aves	Anatidae	0216	<i>Oxyura australis</i>	Blue-billed Duck	V,P	2	
Animalia	Aves	Anatidae	0214	<i>Stictonetta naevosa</i>	Freckled Duck	V,P	3	
Animalia	Aves	Phaethontidae	0108	<i>Phaethon lepturus</i>	White-tailed Tropicbird	P	C,J	1
Animalia	Aves	Podicipedidae	0060	<i>Podiceps cristatus</i>	Great Crested Grebe	P	1	
Animalia	Aves	Podicipedidae	0062	<i>Poliocephalus poliocephalus</i>	Hoary-headed Grebe	P	3	
Animalia	Aves	Podicipedidae	0061	<i>Tachybaptus novaehollandiae</i>	Australasian Grebe	P	25	
Animalia	Aves	Columbidae	0033	<i>Chalcophaps indica</i>	Emerald Dove	P	33	
Animalia	Aves	Columbidae	0028	<i>Columba leucomela</i>	White-headed Pigeon	P	134	
Animalia	Aves	Columbidae	0957	<i>Columba livia</i>	Rock Dove	*	6	
Animalia	Aves	Columbidae	0031	<i>Geopelia cuneata</i>	Diamond Dove	P	1	
Animalia	Aves	Columbidae	0032	<i>Geopelia humeralis</i>	Bar-shouldered Dove	P	89	
Animalia	Aves	Columbidae	9931	<i>Geopelia striata</i>	Peaceful Dove	P	61	
Animalia	Aves	Columbidae	0044	<i>Leucosarcia melanoleuca</i>	Wonga Pigeon	P	249	
Animalia	Aves	Columbidae	0027	<i>Lopholaimus antarcticus</i>	Topknot Pigeon	P	42	
Animalia	Aves	Columbidae	0029	<i>Macropygia amboinensis</i>	Brown Cuckoo-Dove	P	353	
Animalia	Aves	Columbidae	0043	<i>Ocyphaps lophotes</i>	Crested Pigeon	P	116	
Animalia	Aves	Columbidae	0034	<i>Phaps chalcoptera</i>	Common Bronzewing	P	7	
Animalia	Aves	Columbidae	0035	<i>Phaps elegans</i>	Brush Bronzewing	P	8	
Animalia	Aves	Columbidae	0025	<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V,P	55	
Animalia	Aves	Columbidae	0021	<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V,P	15	
Animalia	Aves	Columbidae	0023	<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V,P	1	
Animalia	Aves	Columbidae	0989	<i>Streptopelia chinensis</i>	Spotted Turtle-Dove	*	63	
Animalia	Aves	Podargidae	0313	<i>Podargus strigoides</i>	Tawny Frogmouth	P	211	









Animalia	Aves	Caprimulgidae	0330	<i>Eurostopodus mystacalis</i>	White-throated Nightjar	P		114	
Animalia	Aves	Aegothelidae	0317	<i>Aegothales cristatus</i>	Australian Owllet-nightjar	P		466	
Animalia	Aves	Apodidae	0335	<i>Apus pacificus</i>	Fork-tailed Swift	P	C,J,K	13	
Animalia	Aves	Apodidae	0334	<i>Hirundapus caudacutus</i>	White-throated Needletail	P	C,J,K	68	
Animalia	Aves	Oceanitidae	0944	<i>Fregetta grallaria</i>	White-bellied Storm-Petrel	V,P	V	K	
Animalia	Aves	Diomedidae	0846	<i>Diomedea antipodensis</i>	Antipodean Albatross	V,P	V	K	
Animalia	Aves	Diomedidae	0086	<i>Diomedea exulans</i>	Wandering Albatross	E1,P	E,J	K	
Animalia	Aves	Diomedidae	0847	<i>Diomedea gibsoni</i>	Gibson's Albatross	V,P	V	K	
Animalia	Aves	Diomedidae	0092	<i>Phoebastria fusca</i>	Sooty Albatross	V,P	V	K	
Animalia	Aves	Diomedidae	0091	<i>Thalassarche cauta</i>	Shy Albatross	V,P	V	K	
Animalia	Aves	Diomedidae	0088	<i>Thalassarche melanophrys</i>	Black-browed Albatross	V,P	V	K	
Animalia	Aves	Procellariidae	0072	<i>Ardenna carneipes</i>	Flesh-footed Shearwater	V,P	J,K	1	
Animalia	Aves	Procellariidae	0070	<i>Ardenna grisea</i>	Sooty Shearwater	P	C,J	1	
Animalia	Aves	Procellariidae	0069	<i>Ardenna pacificus</i>	Wedge-tailed Shearwater	P	J	5	
Animalia	Aves	Procellariidae	0071	<i>Ardenna tenuirostris</i>	Short-tailed Shearwater	P	J,K	4	
Animalia	Aves	Procellariidae	0074	<i>Fulmarus glacialis</i>	Southern Fulmar	P		2	
Animalia	Aves	Procellariidae	0929	<i>Macronectes giganteus</i>	Southern Giant Petrel	E1,P	E	K	
Animalia	Aves	Procellariidae	0937	<i>Macronectes halli</i>	Northern Giant-Petrel	V,P	V	P	
Animalia	Aves	Procellariidae	0083	<i>Pachyptila turtur</i>	Fairy Prion	P		1	
Animalia	Aves	Procellariidae	8684	<i>Pterodroma leucoptera leucoptera</i>	Gould's Petrel	V,P	E	K	
Animalia	Aves	Procellariidae	0075	<i>Pterodroma macroptera</i>	Great-winged Petrel	P		1	
Animalia	Aves	Procellariidae	8993	<i>Pterodroma neglecta neglecta</i>	Kermadec Petrel (west Pacific subspecies)	V,P	V	K	
Animalia	Aves	Procellariidae	0955	<i>Pterodroma nigripennis</i>	Black-winged Petrel	V,P		K	
Animalia	Aves	Procellariidae	0971	<i>Pterodroma solandri</i>	Providence Petrel	V,P	J	K	
Animalia	Aves	Procellariidae	0067	<i>Puffinus assimilis</i>	Little Shearwater	V,P		K	
Animalia	Aves	Sulidae	0104	<i>Morus serrator</i>	Australasian Gannet	P		13	
Animalia	Aves	Sulidae	0105	<i>Sula dactylatra</i>	Masked Booby	V,P	J,K	K	
Animalia	Aves	Anhingidae	8731	<i>Anhinga novaehollandiae</i>	Australasian Darter	P		20	
Animalia	Aves	Phalacrocoracidae	0100	<i>Microcarbo melanoleucos</i>	Little Pied Cormorant	P		44	
Animalia	Aves	Phalacrocoracidae	0096	<i>Phalacrocorax carbo</i>	Great Cormorant	P		25	
Animalia	Aves	Phalacrocoracidae	0097	<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant	P		56	
Animalia	Aves	Phalacrocoracidae	0099	<i>Phalacrocorax varius</i>	Pied Cormorant	P		28	
Animalia	Aves	Pelecanidae	0106	<i>Pelecanus conspicillatus</i>	Australian Pelican	P		49	
Animalia	Aves	Ciconiidae	0183	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E1,P		113	
Animalia	Aves	Ardeidae	0977	<i>Ardea ibis</i>	Cattle Egret	P	C,J	57	
Animalia	Aves	Ardeidae	0186	<i>Ardea intermedia</i>	Intermediate Egret	P		8	
Animalia	Aves	Ardeidae	8712	<i>Ardea modesta</i>	Eastern Great Egret	P		28	
Animalia	Aves	Ardeidae	0189	<i>Ardea pacifica</i>	White-necked Heron	P		25	
Animalia	Aves	Ardeidae	0197	<i>Botaurus poeciloptilus</i>	Australasian Bittern	E1,P	E	6	
Animalia	Aves	Ardeidae	0193	<i>Butorides striatus</i>	Striated Heron	P		6	
Animalia	Aves	Ardeidae	0185	<i>Egretta garzetta</i>	Little Egret	P		5	
Animalia	Aves	Ardeidae	0188	<i>Egretta novaehollandiae</i>	White-faced Heron	P		76	
Animalia	Aves	Ardeidae	0191	<i>Egretta sacra</i>	Eastern Reef Egret	P	C	8	
Animalia	Aves	Ardeidae	0196	<i>Ixobrychus flavicollis</i>	Black Bittern	V,P		1	
Animalia	Aves	Ardeidae	0192	<i>Nycticorax caledonicus</i>	Nankeen Night Heron	P		11	
Animalia	Aves	Threskiornithidae	0182	<i>Platalea flavipes</i>	Yellow-billed Spoonbill	P		6	
Animalia	Aves	Threskiornithidae	0181	<i>Platalea regia</i>	Royal Spoonbill	P		12	
Animalia	Aves	Threskiornithidae	T029	<i>Platalea sp.</i>	Spoonbill sp	P		1	

Animalia	Aves	Threskiornithidae	0178	<i>Plegadis falcinellus</i>	Glossy Ibis	P	C	1	
Animalia	Aves	Threskiornithidae	0179	<i>Threskiornis molucca</i>	Australian White Ibis	P		64	
Animalia	Aves	Threskiornithidae	0180	<i>Threskiornis spinicollis</i>	Straw-necked Ibis	P		52	
Animalia	Aves	Accipitridae	0222	<i>Accipiter cirrocephalus</i>	Collared Sparrowhawk	P		19	
Animalia	Aves	Accipitridae	0221	<i>Accipiter fasciatus</i>	Brown Goshawk	P		42	
Animalia	Aves	Accipitridae	0220	<i>Accipiter novaehollandiae</i>	Grey Goshawk	P		27	
Animalia	Aves	Accipitridae	0224	<i>Aquila audax</i>	Wedge-tailed Eagle	P		56	
Animalia	Aves	Accipitridae	0234	<i>Aviceda subcristata</i>	Pacific Baza	P		31	
Animalia	Aves	Accipitridae	0219	<i>Circus approximans</i>	Swamp Harrier	P		29	
Animalia	Aves	Accipitridae	0218	<i>Circus assimilis</i>	Spotted Harrier	V,P		5	
Animalia	Aves	Accipitridae	0232	<i>Elanus axillaris</i>	Black-shouldered Kite	P		48	
Animalia	Aves	Accipitridae	0226	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	P	C	77	
Animalia	Aves	Accipitridae	0227	<i>Haliastur indus</i>	Brahminy Kite	P		45	
Animalia	Aves	Accipitridae	0228	<i>Haliastur sphenurus</i>	Whistling Kite	P		69	
Animalia	Aves	Accipitridae	0225	<i>Hieraaetus morphnoides</i>	Little Eagle	V,P		11	
Animalia	Aves	Accipitridae	0230	<i>^^Lophoictinia isura</i>	Square-tailed Kite	V,P,3		62	
Animalia	Aves	Accipitridae	0229	<i>Milvus migrans</i>	Black Kite	P		3	
Animalia	Aves	Accipitridae	8739	<i>^^Pandion cristatus</i>	Eastern Osprey	V,P,3		81	
Animalia	Aves	Falconidae	0239	<i>Falco berigora</i>	Brown Falcon	P		16	
Animalia	Aves	Falconidae	0240	<i>Falco cenchroides</i>	Nankeen Kestrel	P		32	
Animalia	Aves	Falconidae	0235	<i>Falco longipennis</i>	Australian Hobby	P		10	
Animalia	Aves	Falconidae	0237	<i>Falco peregrinus</i>	Peregrine Falcon	P		18	
Animalia	Aves	Gruidae	0177	<i>Grus rubicunda</i>	Brolga	V,P		3	
Animalia	Aves	Rallidae	0053	<i>Amaurornis moluccana</i>	Pale-vented Bush-hen	V,P		K	
Animalia	Aves	Rallidae	0059	<i>Fulica atra</i>	Eurasian Coot	P		33	
Animalia	Aves	Rallidae	0056	<i>Gallinula tenebrosa</i>	Dusky Moorhen	P		35	
Animalia	Aves	Rallidae	0046	<i>Gallirallus philippensis</i>	Buff-banded Rail	P		17	
Animalia	Aves	Rallidae	0045	<i>Lewinia pectoralis</i>	Lewin's Rail	P		9	
Animalia	Aves	Rallidae	0058	<i>Porphyrio porphyrio</i>	Purple Swamphen	P		60	
Animalia	Aves	Rallidae	0049	<i>Porzana fluminea</i>	Australian Spotted Crane	P		1	
Animalia	Aves	Rallidae	0050	<i>Porzana pusilla</i>	Baillon's Crane	P		1	
Animalia	Aves	Rallidae	0051	<i>Porzana tabuensis</i>	Spotless Crane	P		1	
Animalia	Aves	Burhinidae	0174	<i>Burhinus grallarius</i>	Bush Stone-curlew	E1,P		3	
Animalia	Aves	Burhinidae	0175	<i>Esacus magnirostris</i>	Beach Stone-curlew	E4A,P		2	
Animalia	Aves	Haematopodidae	0131	<i>Haematopus fuliginosus</i>	Sooty Oystercatcher	V,P		21	
Animalia	Aves	Haematopodidae	0130	<i>Haematopus longirostris</i>	Pied Oystercatcher	E1,P		22	
Animalia	Aves	Recurvirostridae	0146	<i>Himantopus himantopus</i>	Black-winged Stilt	P		3	
Animalia	Aves	Charadriidae	0140	<i>Charadrius bicinctus</i>	Double-banded Plover	P		21	
Animalia	Aves	Charadriidae	0141	<i>Charadrius leschenaultii</i>	Greater Sand-plover	V,P	V,C,J,K	K	
Animalia	Aves	Charadriidae	0139	<i>Charadrius mongolus</i>	Lesser Sand-plover	V,P	E,C,J,K	56	
Animalia	Aves	Charadriidae	0143	<i>Charadrius ruficapillus</i>	Red-capped Plover	P		38	
Animalia	Aves	Charadriidae	0132	<i>Erythronyx dinctus</i>	Red-kneed Dotterel	P		1	
Animalia	Aves	Charadriidae	8006	<i>Pluvialis fulva</i>	Pacific Golden Plover	P	C,J,K	32	
Animalia	Aves	Charadriidae	0133	<i>Vanellus miles</i>	Masked Lapwing	P		112	
Animalia	Aves	Charadriidae	0134	<i>Vanellus miles novaeollandiae</i>	[Spur-winged Plover]	P		2	
Animalia	Aves	Charadriidae	0135	<i>Vanellus tricolor</i>	Banded Lapwing	P		1	
Animalia	Aves	Jacaniidae	0171	<i>Irediparra gallinacea</i>	Comb-crested Jacana	V,P		2	
Animalia	Aves	Rostratulidae	0170	<i>Rostratula australis</i>	Australian Painted Snipe	E1,P	E	K	
Animalia	Aves	Scolopacidae	0157	<i>Actitis hypoleucos</i>	Common Sandpiper	P	C,J,K	7	
Animalia	Aves	Scolopacidae	0129	<i>Arenaria interpres</i>	Ruddy Turnstone	P	C,J,K	1	
Animalia	Aves	Scolopacidae	0163	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	P	C,J,K	2	
Animalia	Aves	Scolopacidae	0166	<i>Calidris alba</i>	Sanderling	V,P	C,J,K	2	
Animalia	Aves	Scolopacidae	0164	<i>Calidris canutus</i>	Red Knot	P	C,J,K	5	
Animalia	Aves	Scolopacidae	0161	<i>Calidris ferruginea</i>	Curlew Sandpiper	E1,P	CE,C,J,K	1	
Animalia	Aves	Scolopacidae	0162	<i>Calidris ruficollis</i>	Red-necked Stint	P	C,J,K	48	
Animalia	Aves	Scolopacidae	0165	<i>Calidris tenuirostris</i>	Great Knot	V,P	CE,C,J,K	K	
Animalia	Aves	Scolopacidae	0168	<i>Gallinago hardwickii</i>	Latham's Snipe	P	C,J,K	8	







Animalia	Aves	Scolopacidae	0167	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	V,P	C,J,K	1	
Animalia	Aves	Scolopacidae	0153	<i>Limosa lapponica</i>	Bar-tailed Godwit	P	C,J,K	116	
Animalia	Aves	Scolopacidae	0152	<i>Limosa limosa</i>	Black-tailed Godwit	V,P	C,J,K	K	
Animalia	Aves	Scolopacidae	0149	<i>Numenius madagascariensis</i>	Eastern Curlew	P	CE,C,J,K	20	
Animalia	Aves	Scolopacidae	0150	<i>Numenius phaeopus</i>	Whimbrel	P	C,J,K	40	
Animalia	Aves	Scolopacidae	0155	<i>Tringa brevipes</i>	Grey-tailed Tattler	P	C,J,K	53	
Animalia	Aves	Scolopacidae	0158	<i>Tringa nebularia</i>	Common Greenshank	P	C,J,K	7	
Animalia	Aves	Scolopacidae	0160	<i>Xenus cinereus</i>	Terek Sandpiper	V,P	C,J,K	4	
Animalia	Aves	Turnicidae	0013	<i>Turnix maculosus</i>	Red-backed Button-quail	V,P		K	
Animalia	Aves	Turnicidae	0017	<i>Turnix melanogaster</i>	Black-breasted Button-quail	E4A,P	V	K	
Animalia	Aves	Turnicidae	0019	<i>Turnix pyrrhorostris</i>	Red-chested Button-quail	P		1	
Animalia	Aves	Turnicidae	0014	<i>Turnix varius</i>	Painted Button-quail	P		13	
Animalia	Aves	Stercorariidae	0128	<i>Stercorarius parasiticus</i>	Arctic Jaeger	P	J,K	1	
Animalia	Aves	Laridae	0110	<i>Chlidonias hybrida</i>	Whiskered Tern	P		1	
Animalia	Aves	Laridae	0125	<i>Chroicocephalus novaehollandiae</i>	Silver Gull	P		43	
Animalia	Aves	Laridae	0111	<i>Gelochelidon nilotica</i>	Gull-billed Tern	P	C	3	
Animalia	Aves	Laridae	0972	<i>Gygis alba</i>	White Tern	V,P		K	
Animalia	Aves	Laridae	0112	<i>Hydroprogne caspia</i>	Caspian Tern	P	C,J	5	
Animalia	Aves	Laridae	0120	<i>Onychoprion fuscata</i>	Sooty Tern	V,P		K	
Animalia	Aves	Laridae	9926	<i>Procelsterna cerulea</i>	Grey Ternlet	V,P		K	
Animalia	Aves	Laridae	0953	<i>Sterna hirundo</i>	Common Tern	P	C,J,K	23	
Animalia	Aves	Laridae	0114	<i>Sterna striata</i>	White-fronted Tern	P		1	
Animalia	Aves	Laridae	0117	<i>Sternula albifrons</i>	Little Tern	E1,P	C,J,K	19	
Animalia	Aves	Laridae	0116	<i>Thalasseus bengalensis</i>	Lesser Crested Tern	P	C	1	
Animalia	Aves	Laridae	0115	<i>Thalasseus bergii</i>	Crested Tern	P		98	
Animalia	Aves	Cacatuidae	0269	<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	P		66	
Animalia	Aves	Cacatuidae	0271	<i>Cacatua sanguinea</i>	Little Corella	P		9	
Animalia	Aves	Cacatuidae	0272	<i>Cacatua tenuirostris</i>	Long-billed Corella	P		8	
Animalia	Aves	Cacatuidae	0268	<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	V,P,3		K	
Animalia	Aves	Cacatuidae	0267	<i>Calyptorhynchus funereus</i>	Yellow-tailed Black-Cockatoo	P		230	
Animalia	Aves	Cacatuidae	0265	<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	V,P,2		713	
Animalia	Aves	Cacatuidae	0273	<i>Eolophus roseicapillus</i>	Galah	P		125	
Animalia	Aves	Psittacidae	0281	<i>Alisterus scapularis</i>	Australian King-Parrot	P		308	
Animalia	Aves	Psittacidae	0258	<i>Glossopsitta concinna</i>	Musk Lorikeet	P		11	
Animalia	Aves	Psittacidae	0260	<i>Glossopsitta pusilla</i>	Little Lorikeet	V,P		67	
Animalia	Aves	Psittacidae	0309	<i>Lathamus discolor</i>	Swift Parrot	E1,P,3	CE	32	
Animalia	Aves	Psittacidae	M/SH	Lorikeet Hybrid	Musk/Scaly Lorikeet	P		1	
Animalia	Aves	Psittacidae	0302	<i>Neophema pulchella</i>	Turquoise Parrot	V,P,3		1	
Animalia	Aves	Psittacidae	8913	<i>Pezoporus wallicus</i>	Eastern Ground Parrot	V,P,3		7	
Animalia	Aves	Psittacidae	0282	<i>Platycercus elegans</i>	Crimson Rosella	P		324	
Animalia	Aves	Psittacidae	0288	<i>Platycercus eximius</i>	Eastern Rosella	P		148	
Animalia	Aves	Psittacidae	0256	<i>Trichoglossus chlorolepidotus</i>	Scaly-breasted Lorikeet	P		144	
Animalia	Aves	Psittacidae	9947	<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	P		425	
Animalia	Aves	Psittacidae	8882	<i>Trichoglossus haematodus moluccanus</i>		P		4	
Animalia	Aves	Centropodidae	0349	<i>Centropus phasianinus</i>	Pheasant Coucal	P		63	
Animalia	Aves	Cuculidae	0338	<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo	P		269	
Animalia	Aves	Cuculidae	0337	<i>Cacomantis pallidus</i>	Pallid Cuckoo	P		11	
Animalia	Aves	Cuculidae	0339	<i>Cacomantis variolosus</i>	Brush Cuckoo	P		52	
Animalia	Aves	Cuculidae	0342	<i>Chalcites basal</i>	Horsfield's Bronze-Cuckoo	P		7	
Animalia	Aves	Cuculidae	0343	<i>Chalcites lucidus</i>	Shining Bronze-Cuckoo	P		106	
Animalia	Aves	Cuculidae	0345	<i>Chalcites minutillus</i>	Little Bronze-Cuckoo	P		1	
Animalia	Aves	Cuculidae	0347	<i>Eudynamys orientalis</i>	Eastern Koel	P		91	

Animalia	Aves	Cuculidae	0348	<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo	P	26	
Animalia	Aves	Strigidae	0246	<i>Ninox connivens</i>	Barking Owl	V,P,3	8	
Animalia	Aves	Strigidae	9922	<i>Ninox novaeseelandiae</i>	Southern Boobook	P	304	
Animalia	Aves	Strigidae	0248	<i>Ninox strenua</i>	Powerful Owl	V,P,3	85	
Animalia	Aves	Tytonidae	9923	<i>Tyto javanica</i>	Eastern Barn Owl	P	32	
Animalia	Aves	Tytonidae	0252	<i>Tyto longimembris</i>	Eastern Grass Owl	V,P,3	25	
Animalia	Aves	Tytonidae	0250	<i>Tyto novaehollandiae</i>	Masked Owl	V,P,3	103	
Animalia	Aves	Tytonidae	9025	<i>Tyto sp.</i>	Unidentified 'Barn' Owl	P	1	
Animalia	Aves	Tytonidae	9924	<i>Tyto tenebricosa</i>	Sooty Owl	V,P,3	165	
Animalia	Aves	Alcedinidae	0319	<i>Ceyx azureus</i>	Azure Kingfisher	P	45	
Animalia	Aves	Alcedinidae	0322	<i>Dacelo novaeguineae</i>	Laughing Kookaburra	P	504	
Animalia	Aves	Alcedinidae	0324	<i>Todiramphus macleayii</i>	Forest Kingfisher	P	93	
Animalia	Aves	Alcedinidae	0326	<i>Todiramphus sanctus</i>	Sacred Kingfisher	P	130	
Animalia	Aves	Meropidae	0329	<i>Merops ornatus</i>	Rainbow Bee-eater	P	24	J
Animalia	Aves	Coraciidae	0318	<i>Eurystomus orientalis</i>	Dollarbird	P	100	
Animalia	Aves	Pittidae	0352	<i>Pitta versicolor</i>	Noisy Pitta	P	84	
Animalia	Aves	Menuridae	0350	<i>Menura novaehollandiae</i>	Superb Lyrebird	P	454	
Animalia	Aves	Atrichornithidae	0355	<i>Atrichornis rufescens</i>	Rufous Scrub-bird	V,P	42	
Animalia	Aves	Climacteridae	0560	<i>Climacteris erythrops</i>	Red-browed Treecreeper	P	60	
Animalia	Aves	Climacteridae	8127	<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	V,P	6	
Animalia	Aves	Climacteridae	0558	<i>Cormobates leucophaea</i>	White-throated Treecreeper	P	635	
Animalia	Aves	Ptilonorhynchidae	0676	<i>Ailuroedus crassirostris</i>	Green Catbird	P	223	
Animalia	Aves	Ptilonorhynchidae	0679	<i>Ptilonorhynchus violaceus</i>	Satin Bowerbird	P	337	
Animalia	Aves	Ptilonorhynchidae	0684	<i>Sericalus chrysocephalus</i>	Regent Bowerbird	P	86	
Animalia	Aves	Maluridae	0529	<i>Malurus cyaneus</i>	Superb Fairy-wren	P	553	
Animalia	Aves	Maluridae	0536	<i>Malurus lamberti</i>	Variegated Fairy-wren	P	209	
Animalia	Aves	Maluridae	0541	<i>Malurus melanocephalus</i>	Red-backed Fairy-wren	P	16	
Animalia	Aves	Maluridae	0526	<i>Stipiturus malachurus</i>	Southern Emu-wren	P	29	
Animalia	Aves	Acanthizidae	0486	<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill	P	17	
Animalia	Aves	Acanthizidae	0470	<i>Acanthiza lineata</i>	Striated Thornbill	P	296	
Animalia	Aves	Acanthizidae	0471	<i>Acanthiza nana</i>	Yellow Thornbill	P	118	
Animalia	Aves	Acanthizidae	0475	<i>Acanthiza pusilla</i>	Brown Thornbill	P	757	
Animalia	Aves	Acanthizidae	0484	<i>Acanthiza reguloides</i>	Buff-rumped Thornbill	P	17	
Animalia	Aves	Acanthizidae	9042	<i>Acanthiza sp.</i>	Unidentified Thornbill	P	1	
Animalia	Aves	Acanthizidae	0504	<i>Chthonicola sagittata</i>	Speckled Warbler	V,P	K	
Animalia	Aves	Acanthizidae	0460	<i>Gerygone levigaster</i>	Mangrove Gerygone	P	4	
Animalia	Aves	Acanthizidae	0454	<i>Gerygone mouki</i>	Brown Gerygone	P	486	
Animalia	Aves	Acanthizidae	0453	<i>Gerygone olivacea</i>	White-throated Gerygone	P	63	
Animalia	Aves	Acanthizidae	0498	<i>Hylacola pyrrhopygia</i>	Chestnut-rumped Heathwren	P	1	
Animalia	Aves	Acanthizidae	0493	<i>Sericornis citreogularis</i>	Yellow-throated Scrubwren	P	472	
Animalia	Aves	Acanthizidae	0488	<i>Sericornis frontalis</i>	White-browed Scrubwren	P	849	
Animalia	Aves	Acanthizidae	T354	<i>Sericornis frontalis/citreogularis</i>			1	
Animalia	Aves	Acanthizidae	0494	<i>Sericornis magnirostra</i>	Large-billed Scrubwren	P	295	
Animalia	Aves	Acanthizidae	0465	<i>Smicromis brevirostris</i>	Weebill	P	9	
Animalia	Aves	Pardalotidae	0565	<i>Pardalotus punctatus</i>	Spotted Pardalote	P	353	
Animalia	Aves	Pardalotidae	0976	<i>Pardalotus striatus</i>	Striated Pardalote	P	45	
Animalia	Aves	Meliphagidae	0640	<i>Acanthagenys rufogularis</i>	Spiny-cheeked Honeyeater	P	1	
Animalia	Aves	Meliphagidae	0591	<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill	P	428	
Animalia	Aves	Meliphagidae	0638	<i>Anthochaera carunculata</i>	Red Wattlebird	P	69	
Animalia	Aves	Meliphagidae	0710	<i>Anthochaera chrysoptera</i>	Little Wattlebird	P	105	
Animalia	Aves	Meliphagidae	0603	<i>Anthochaera phrygia</i>	Regent Honeyeater	E4A,P CE	6	










Animalia	Aves	Meliphagidae	0614	<i>Caligavis chrysops</i>	Yellow-faced Honeyeater	P	417	
Animalia	Aves	Meliphagidae	0641	<i>Entomyzon cyanotis</i>	Blue-faced Honeyeater	P	2	
Animalia	Aves	Meliphagidae	0448	<i>Epthianura albifrons</i>	White-fronted Chat	V,P	K	
Animalia	Aves	Meliphagidae	0610	<i>Gavicalis fasciogularis</i>	Mangrove Honeyeater	V,P	K	
Animalia	Aves	Meliphagidae	0593	<i>Gliciphila melanops</i>	Tawny-crowned Honeyeater	P	6	
Animalia	Aves	Meliphagidae	0598	<i>Grantella picta</i>	Painted Honeyeater	V,P	V	P
Animalia	Aves	Meliphagidae	0619	<i>Lichenostomus melanops</i>	Yellow-tufted Honeyeater	P	1	
Animalia	Aves	Meliphagidae	0597	<i>Lichmera indistincta</i>	Brown Honeyeater	P	45	
Animalia	Aves	Meliphagidae	0634	<i>Manorina melanocephala</i>	Noisy Miner	P	139	
Animalia	Aves	Meliphagidae	0633	<i>Manorina melanophrys</i>	Bell Miner	P	53	
Animalia	Aves	Meliphagidae	0605	<i>Meliphaga lewinii</i>	Lewin's Honeyeater	P	1151	
Animalia	Aves	Meliphagidae	0583	<i>Melithreptus brevirostris</i>	Brown-headed Honeyeater	P	2	
Animalia	Aves	Meliphagidae	8303	<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subspecies)	V,P	P	
Animalia	Aves	Meliphagidae	0578	<i>Melithreptus lunatus</i>	White-naped Honeyeater	P	140	
Animalia	Aves	Meliphagidae	0586	<i>Myzomela sanguinolenta</i>	Scarlet Honeyeater	P	233	
Animalia	Aves	Meliphagidae	0617	<i>Nesoptilotis leucotis</i>	White-eared Honeyeater	P	6	
Animalia	Aves	Meliphagidae	0646	<i>Philemon citreogularis</i>	Little Friarbird	P	5	
Animalia	Aves	Meliphagidae	0645	<i>Philemon corniculatus</i>	Noisy Friarbird	P	242	
Animalia	Aves	Meliphagidae	0632	<i>Phylidonyris niger</i>	White-cheeked Honeyeater	P	125	
Animalia	Aves	Meliphagidae	0631	<i>Phylidonyris novaeollandiae</i>	New Holland Honeyeater	P	12	
Animalia	Aves	Meliphagidae	0585	<i>Plectorhyncha lanceolata</i>	Striped Honeyeater	P	29	
Animalia	Aves	Meliphagidae	0613	<i>Ptilotula fuscus</i>	Fuscous Honeyeater	P	1	
Animalia	Aves	Meliphagidae	0622	<i>Ptilotula ornatus</i>	Yellow-plumed Honeyeater	P	2	
Animalia	Aves	Meliphagidae	0625	<i>Ptilotula penicillatus</i>	White-plumed Honeyeater	P	1	
Animalia	Aves	Meliphagidae	0594	<i>Purnella albifrons</i>	White-fronted Honeyeater	P	1	
Animalia	Aves	Pomatostomidae	8388	<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)	V,P	K	
Animalia	Aves	Orthonychidae	0434	<i>Orthonyx temminckii</i>	Logrunner	P	107	
Animalia	Aves	Psophodidae	0436	<i>Cinclosoma punctatum</i>	Spotted Quail-thrush	P	15	
Animalia	Aves	Psophodidae	0421	<i>Psophodes olivaceus</i>	Eastern Whipbird	P	737	
Animalia	Aves	Neosittidae	0549	<i>Daphoenositta chrysoptera</i>	Varied Sittella	V,P	54	
Animalia	Aves	Campephagidae	0428	<i>Coracina lineata</i>	Barred Cuckoo-shrike	V,P	25	
Animalia	Aves	Campephagidae	0424	<i>Coracina novaeollandiae</i>	Black-faced Cuckoo-shrike	P	260	
Animalia	Aves	Campephagidae	8525	<i>Coracina novaeollandiae melanops</i>		P	1	
Animalia	Aves	Campephagidae	0425	<i>Coracina papuensis</i>	White-bellied Cuckoo-shrike	P	25	
Animalia	Aves	Campephagidae	0429	<i>Coracina tenuirostris</i>	Cicadabird	P	101	
Animalia	Aves	Campephagidae	0431	<i>Lalage leucomela</i>	Varied Triller	P	7	
Animalia	Aves	Campephagidae	0430	<i>Lalage sueurii</i>	White-winged Triller	P	2	
Animalia	Aves	Pachycephalidae	0408	<i>Colluricincla harmonica</i>	Grey Shrike-thrush	P	541	
Animalia	Aves	Pachycephalidae	0413	<i>Colluricincla megarrhyncha</i>	Little Shrike-thrush	P	2	
Animalia	Aves	Pachycephalidae	0416	<i>Falcunculus frontatus frontatus</i>	Eastern Shrike-tit	P	79	







Animalia	Aves	Pachycephalidae	0403	<i>Pachycephala inornata</i>	Gilbert's Whistler	V,P	1	
Animalia	Aves	Pachycephalidae	0405	<i>Pachycephala olivacea</i>	Olive Whistler	V,P	25	
Animalia	Aves	Pachycephalidae	0398	<i>Pachycephala pectoralis</i>	Golden Whistler	P	659	
Animalia	Aves	Pachycephalidae	0401	<i>Pachycephala rufiventris</i>	Rufous Whistler	P	176	
Animalia	Aves	Oriolidae	0671	<i>Oriolus sagittatus</i>	Olive-backed Oriole	P	142	
Animalia	Aves	Oriolidae	0432	<i>Sphecotheres vieillotii</i>	Australasian Figbird	P	56	
Animalia	Aves	Artamidae	0547	<i>Artamus cyanopterus</i>	Dusky Woodswallow	P	19	
Animalia	Aves	Artamidae	0543	<i>Artamus leucorhynchus</i>	White-breasted Woodswallow	P	28	
Animalia	Aves	Artamidae	0544	<i>Artamus personatus</i>	Masked Woodswallow	P	5	
Animalia	Aves	Artamidae	T040	<i>Artamus sp.</i>		P	2	
Animalia	Aves	Artamidae	0545	<i>Artamus superciliosus</i>	White-browed Woodswallow	P	6	
Animalia	Aves	Artamidae	0700	<i>Cracticus nigrogularis</i>	Pied Butcherbird	P	115	
Animalia	Aves	Artamidae	8495	<i>Cracticus nigrogularis nigrogularis</i>		P	1	
Animalia	Aves	Artamidae	0705	<i>Cracticus tibicen</i>	Australian Magpie	P	294	
Animalia	Aves	Artamidae	8499	<i>Cracticus tibicen tibicen</i>		P	3	
Animalia	Aves	Artamidae	0702	<i>Cracticus torquatus</i>	Grey Butcherbird	P	255	
Animalia	Aves	Artamidae	8489	<i>Cracticus torquatus torquatus</i>		P	3	
Animalia	Aves	Artamidae	0696	<i>Strepera fuliginosa</i>	Black Currawong	P	1	
Animalia	Aves	Artamidae	0694	<i>Strepera graculina</i>	Pied Currawong	P	450	
Animalia	Aves	Dicruridae	0673	<i>Dicrurus bracteatus</i>	Spangled Drongo	P	94	
Animalia	Aves	Rhipiduridae	0361	<i>Rhipidura albiscapa</i>	Grey Fantail	P	818	
Animalia	Aves	Rhipiduridae	8447	<i>Rhipidura albiscapa alisteri</i>		P	3	
Animalia	Aves	Rhipiduridae	0364	<i>Rhipidura leucophrys</i>	Willie Wagtail	P	147	
Animalia	Aves	Rhipiduridae	0362	<i>Rhipidura rufifrons</i>	Rufous Fantail	P	273	
Animalia	Aves	Corvidae	0930	<i>Corvus coronoides</i>	Australian Raven	P	211	
Animalia	Aves	Corvidae	9902	<i>Corvus orru</i>	Torresian Crow	P	99	
Animalia	Aves	Corvidae	9067	<i>Corvus sp.</i>	Unidentified Corvid	P	12	
Animalia	Aves	Corvidae	0868	<i>Corvus tasmanicus</i>	Forest Raven	P	39	
Animalia	Aves	Monarchidae	0376	<i>Carterornis leucotis</i>	White-eared Monarch	V,P	1	
Animalia	Aves	Monarchidae	0415	<i>Grallina cyanoleuca</i>	Magpie-lark	P	185	
Animalia	Aves	Monarchidae	0373	<i>Monarcha melanopsis</i>	Black-faced Monarch	P	238	
Animalia	Aves	Monarchidae	0366	<i>Myiagra cyanoleuca</i>	Satin Flycatcher	P	14	
Animalia	Aves	Monarchidae	9955	<i>Myiagra inquieta</i>	Restless Flycatcher	P	13	
Animalia	Aves	Monarchidae	0365	<i>Myiagra rubecula</i>	Leaden Flycatcher	P	68	
Animalia	Aves	Monarchidae	9078	<i>Myiagra sp.</i>	unidentified Flycatcher	P	7	
Animalia	Aves	Monarchidae	0375	<i>Symposiachrus trivirgatus</i>	Spectacled Monarch	P	73	
Animalia	Aves	Corcoracidae	0693	<i>Corcorax melanorhamphos</i>	White-winged Chough	P	1	
Animalia	Aves	Paradisaeidae	0686	<i>Ptiloris paradiseus</i>	Paradise Riflebird	P	37	
Animalia	Aves	Petroicidae	0392	<i>Eopsaltria australis</i>	Eastern Yellow Robin	P	996	
Animalia	Aves	Petroicidae	8367	<i>Melanodryas cucullata cucullata</i>	Hooded Robin (south-eastern form)	V,P	P	
Animalia	Aves	Petroicidae	0377	<i>Microeca fascians</i>	Jacky Winter	P	39	
Animalia	Aves	Petroicidae	0380	<i>Petroica boodang</i>	Scarlet Robin	V,P	13	
Animalia	Aves	Petroicidae	0381	<i>Petroica goodenovii</i>	Red-capped Robin	P	1	
Animalia	Aves	Petroicidae	0382	<i>Petroica phoenicea</i>	Flame Robin	V,P	13	
Animalia	Aves	Petroicidae	0384	<i>Petroica rosea</i>	Rose Robin	P	176	
Animalia	Aves	Petroicidae	0396	<i>Tregellasia capito</i>	Pale-yellow Robin	P	65	
Animalia	Aves	Alaudidae	0648	<i>Mirafra javanica</i>	Horsfield's Bushlark	P	1	
Animalia	Aves	Cisticolidae	0525	<i>Cisticola exilis</i>	Golden-headed Cisticola	P	18	
Animalia	Aves	Acrocephalidae	0524	<i>Acrocephalus australis</i>	Australian Reed-Warbler	P	50	
Animalia	Aves	Acrocephalidae	0872	<i>Acrocephalus orientalis</i>	Oriental Reed-Warbler	P	C,K	1
Animalia	Aves	Megaluridae	0508	<i>Cincloramphus cruralis</i>	Brown Songlark	P	1	
Animalia	Aves	Megaluridae	0509	<i>Cincloramphus mathewsi</i>	Rufous Songlark	P	2	
Animalia	Aves	Megaluridae	0522	<i>Megalurus grammurus</i>	Little Grassbird	P	14	
Animalia	Aves	Megaluridae	0523	<i>Megalurus timoriensis</i>	Tawny Grassbird	P	11	

Animalia	Aves	Timaliidae	0574	<i>Zosterops lateralis</i>	Silvereye	P		354
Animalia	Aves	Hirundinidae	0358	<i>Ceramoeca leucosterna</i>	White-backed Swallow	P		2
Animalia	Aves	Hirundinidae	0357	<i>Hirundo neoxena</i>	Welcome Swallow	P		150
Animalia	Aves	Hirundinidae	8568	<i>Hirundo neoxena neoxena</i>		P		2
Animalia	Aves	Hirundinidae	0360	<i>Petrochelidon ariel</i>	Fairy Martin	P		22
Animalia	Aves	Hirundinidae	0359	<i>Petrochelidon nigricans</i>	Tree Martin	P		19
Animalia	Aves	Turdidae	0780	<i>Zoothera heinei</i>	Russet-tailed Thrush	P		2
Animalia	Aves	Turdidae	0779	<i>Zoothera lunulata</i>	Bassian Thrush	P		19
Animalia	Aves	Turdidae	7000	<i>Zoothera sp.</i>	unidentified ground thrush	P		152
Animalia	Aves	Sturnidae	0998	<i>Sturnus tristis</i>	* Common Myna			32
Animalia	Aves	Sturnidae	0999	<i>Sturnus vulgaris</i>	* Common Starling			26
Animalia	Aves	Nectariniidae	0564	<i>Dicaeum hirundinaceum</i>	Mistletoebird	P		134
Animalia	Aves	Estrildidae	0657	<i>Lonchura castaneothorax</i>	Chestnut-breasted Mannikin	P		10
Animalia	Aves	Estrildidae	0662	<i>Neochmia temporalis</i>	Red-browed Finch	P		1104
Animalia	Aves	Estrildidae	8621	<i>Neochmia temporalis temporalis</i>		P		1
Animalia	Aves	Estrildidae	0652	<i>Stagonopleura guttata</i>	Diamond Firetail	V,P		K
Animalia	Aves	Estrildidae	0655	<i>Taeniopygia bichenovii</i>	Double-barred Finch	P		3
Animalia	Aves	Passeridae	0995	<i>Passer domesticus</i>	* House Sparrow			25
Animalia	Aves	Motacillidae	0647	<i>Anthus novaeseelandiae</i>	Australian Pipit	P		22
Animalia	Mammalia	Ornithorhynchidae	1001	<i>Ornithorhynchus anatinus</i>	Platypus	P		127
Animalia	Mammalia	Tachyglossidae	1003	<i>Tachyglossus aculeatus</i>	Short-beaked Echidna	P		237
Animalia	Mammalia	Dasyuridae	1027	<i>Antechinus flavipes</i>	Yellow-footed Antechinus	P		17
Animalia	Mammalia	Dasyuridae	T093	<i>Antechinus sp.</i>	Unidentified Antechinus	P		8
Animalia	Mammalia	Dasyuridae	1674	<i>Antechinus stuartii</i>	Brown Antechinus	P		298
Animalia	Mammalia	Dasyuridae	1033	<i>Antechinus swainsonii</i>	Dusky Antechinus	P		22
Animalia	Mammalia	Dasyuridae	T105	<i>Dasyuridae sp.</i>	unidentified dasyurid	P		15
Animalia	Mammalia	Dasyuridae	1008	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E	543
Animalia	Mammalia	Dasyuridae	1017	<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	V,P		47
Animalia	Mammalia	Dasyuridae	1045	<i>Planigale maculata</i>	Common Planigale	V,P		9
Animalia	Mammalia	Dasyuridae	1061	<i>Sminthopsis murina</i>	Common Dunnart	P		8
Animalia	Mammalia	Dasyuridae	1800	<i>Sminthopsis sp.</i>	Dunnart	P		1
Animalia	Mammalia	Peramelidae	1093	<i>Isodon macrourus</i>	Northern Brown Bandicoot	P		121
Animalia	Mammalia	Peramelidae	9047	<i>Isodon sp.</i>	Unidentified Brown Bandicoot	P		2
Animalia	Mammalia	Peramelidae	T081	<i>Isodon/Perameles sp.</i>	unidentified Bandicoot	P		88
Animalia	Mammalia	Peramelidae	1097	<i>Perameles nasuta</i>	Long-nosed Bandicoot	P		347
Animalia	Mammalia	Phascolarctidae	1162	<i>Phascolarctos cinereus</i>	Koala	V,P	V	2418
Animalia	Mammalia	Vombatidae	1165	<i>Vombatus ursinus</i>	Common Wombat	P		34
Animalia	Mammalia	Burramyidae	1150	<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V,P		6
Animalia	Mammalia	Petauridae	1136	<i>Petaurus australis</i>	Yellow-bellied Glider	V,P		449
Animalia	Mammalia	Petauridae	1138	<i>Petaurus breviceps</i>	Sugar Glider	P		401
Animalia	Mammalia	Petauridae	T103	<i>Petaurus breviceps/norfolcensis</i>	Sugar/Squirrel Glider	P		1
Animalia	Mammalia	Petauridae	1137	<i>Petaurus norfolcensis</i>	Squirrel Glider	V,P		55
Animalia	Mammalia	Petauridae	T107	<i>Petaurus/Petauroides sp.</i>	unidentified glider	P		1
Animalia	Mammalia	Pseudocheiridae	1133	<i>Petauroides volans</i>	Greater Glider	P		481
Animalia	Mammalia	Pseudocheiridae	1129	<i>Pseudocheirus peregrinus</i>	Common Ringtail Possum	P		206
Animalia	Mammalia	Acrobatidae	1147	<i>Acrobates pygmaeus</i>	Feathertail Glider	P		41
Animalia	Mammalia	Phalangeridae	1735	<i>Trichosurus caninus</i>	Short-eared Possum	P		471

Animalia	Mammalia	Phalangeridae	T082	<i>Trichosurus sp.</i>	brushtail possum	P		175	
Animalia	Mammalia	Phalangeridae	1113	<i>Trichosurus vulpecula</i>	Common Brushtail Possum	P		341	
Animalia	Mammalia	Potoroidae	1187	<i>Aepyprymnus rufescens</i>	Rufous Bettong	V,P		8	
Animalia	Mammalia	Potoroidae	1175	<i>Potorous tridactylus</i>	Long-nosed Potoroo	V,P	V	11	
Animalia	Mammalia	Macropodidae	T108	<i>Macropod sp.</i>	unidentified macropod	P		12	
Animalia	Mammalia	Macropodidae	1265	<i>Macropus giganteus</i>	Eastern Grey Kangaroo	P		213	
Animalia	Mammalia	Macropodidae	1245	<i>Macropus parma</i>	Parma Wallaby	V,P		29	
Animalia	Mammalia	Macropodidae	1266	<i>Macropus robustus</i>	Common Wallaroo	P		1	
Animalia	Mammalia	Macropodidae	1261	<i>Macropus rufogriseus</i>	Red-necked Wallaby	P		185	
Animalia	Mammalia	Macropodidae	1789	<i>Macropus rufogriseus banksianus</i>		P		2	
Animalia	Mammalia	Macropodidae	T085	<i>Macropus sp.</i>	kangaroo / wallaby	P		6	
Animalia	Mammalia	Macropodidae	1215	<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	E1,P	V	1	
Animalia	Mammalia	Macropodidae	T102	<i>Thylogale sp.</i>	Unidentified Pademelon	P		2	
Animalia	Mammalia	Macropodidae	1234	<i>Thylogale stigmatica</i>	Red-legged Pademelon	V,P		1	
Animalia	Mammalia	Macropodidae	1236	<i>Thylogale thetis</i>	Red-necked Pademelon	P		322	
Animalia	Mammalia	Macropodidae	1242	<i>Wallabia bicolor</i>	Swamp Wallaby	P		2781	
Animalia	Mammalia	Pteropodidae	1282	<i>Pteropus alecto</i>	Black Flying-fox	P		13	
Animalia	Mammalia	Pteropodidae	1280	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V,P	V	288	
Animalia	Mammalia	Pteropodidae	1281	<i>Pteropus scapulatus</i>	Little Red Flying-fox	P		20	
Animalia	Mammalia	Pteropodidae	T087	<i>Pteropus sp.</i>	Flying-fox	P		2	
Animalia	Mammalia	Pteropodidae	1294	<i>Syconycteris australis</i>	Common Blossom-bat	V,P		7	
Animalia	Mammalia	Rhinolophidae	1303	<i>Rhinolophus megaphyllus</i>	Eastern Horseshoe-bat	P		120	
Animalia	Mammalia	Emballonuridae	1321	<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	V,P		4	
Animalia	Mammalia	Molossidae	1324	<i>Austronomus australis</i>	White-striped Freetail-bat	P		34	
Animalia	Mammalia	Molossidae	1329	<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	V,P		33	
Animalia	Mammalia	Molossidae	9065	<i>Mormopterus norfolkensis/sp 1</i>	Unidentified Mastiff-bat	P		4	
Animalia	Mammalia	Molossidae	1326	<i>Mormopterus planiceps</i>	Little Mastiff-bat	P		2	
Animalia	Mammalia	Molossidae	1938	<i>Mormopterus ridei</i>	Eastern Free-tailed Bat			32	
Animalia	Mammalia	Molossidae	T091	<i>Mormopterus sp.</i>	mastiff-bat	P		3	
Animalia	Mammalia	Vespertilionidae	1353	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V,P	V	K	
Animalia	Mammalia	Vespertilionidae	1349	<i>Chalinolobus gouldii</i>	Gould's Wattled Bat	P		81	
Animalia	Mammalia	Vespertilionidae	1351	<i>Chalinolobus morio</i>	Chocolate Wattled Bat	P		129	
Animalia	Mammalia	Vespertilionidae	1354	<i>Chalinolobus nigrogriseus</i>	Hoary Wattled Bat	V,P		2	
Animalia	Mammalia	Vespertilionidae	1372	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V,P		15	
Animalia	Mammalia	Vespertilionidae	1369	<i>Kerivoula papuensis</i>	Golden-tipped Bat	V,P		46	
Animalia	Mammalia	Vespertilionidae	1346	<i>Miniopterus australis</i>	Little Bentwing-bat	V,P		178	
Animalia	Mammalia	Vespertilionidae	1834	<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	V,P		98	
Animalia	Mammalia	Vespertilionidae	1357	<i>Myotis macropus</i>	Southern Myotis	V,P		548	



Animalia	Mammalia	Vespertilionidae	T315	<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat	V,P	V	K	
Animalia	Mammalia	Vespertilionidae	1335	<i>Nyctophilus geoffroyi</i>	Lesser Long-eared Bat	P		54	
Animalia	Mammalia	Vespertilionidae	1334	<i>Nyctophilus gouldi</i>	Gould's Long-eared Bat	P		191	
Animalia	Mammalia	Vespertilionidae	T092	<i>Nyctophilus sp.</i>	long-eared bat	P		25	
Animalia	Mammalia	Vespertilionidae	1361	<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V,P		49	
Animalia	Mammalia	Vespertilionidae	1365	<i>Scotorepens orion</i>	Eastern Broad-nosed Bat	P		51	
Animalia	Mammalia	Vespertilionidae	9029	<i>Scotorepens sp 1</i>	Central-eastern Broad-nosed Bat	P		4	
Animalia	Mammalia	Vespertilionidae	T089	<i>Scotorepens sp.</i>	Unidentified broad-nosed bat	P		19	
Animalia	Mammalia	Vespertilionidae	1022	<i>Vespadelus darlingtoni</i>	Large Forest Bat	P		65	
Animalia	Mammalia	Vespertilionidae	1377	<i>Vespadelus pumilus</i>	Eastern Forest Bat	P		370	
Animalia	Mammalia	Vespertilionidae	1378	<i>Vespadelus regulus</i>	Southern Forest Bat	P		63	
Animalia	Mammalia	Vespertilionidae	T088	<i>Vespadelus sp.</i>	Unidentified Eptesicus	P		59	
Animalia	Mammalia	Vespertilionidae	1025	<i>Vespadelus troungtoni</i>	Eastern Cave Bat	V,P		24	
Animalia	Mammalia	Vespertilionidae	1379	<i>Vespadelus vulturinus</i>	Little Forest Bat	P		283	
Animalia	Mammalia	Muridae	1415	<i>Hydromys chrysogaster</i>	Water-rat	P		12	
Animalia	Mammalia	Muridae	1500	<i>Melomys burtoni</i>	Grassland Melomys	P		7	
Animalia	Mammalia	Muridae	1497	<i>Melomys cervinipes</i>	Fawn-footed Melomys	P		8	
Animalia	Mammalia	Muridae	T104	<i>Muridae sp.</i>	unidentified murid rodent	P		1	
Animalia	Mammalia	Muridae	1412	<i>Mus musculus</i>	House Mouse			106	
Animalia	Mammalia	Muridae	1466	<i>Pseudomys gracilicaudatus</i>	Eastern Chestnut Mouse	V,P		29	
Animalia	Mammalia	Muridae	1455	<i>Pseudomys novaehollandiae</i>	New Holland Mouse	P	V	K	
Animalia	Mammalia	Muridae	1464	<i>Pseudomys oralis</i>	Hastings River Mouse	E1,P	E	8	
Animalia	Mammalia	Muridae	1395	<i>Rattus fuscipes</i>	Bush Rat	P		255	
Animalia	Mammalia	Muridae	1398	<i>Rattus lutreolus</i>	Swamp Rat	P		285	
Animalia	Mammalia	Muridae	1409	<i>Rattus norvegicus</i>	Brown Rat			3	
Animalia	Mammalia	Muridae	1408	<i>Rattus rattus</i>	Black Rat			71	
Animalia	Mammalia	Muridae	T094	<i>Rattus sp.</i>	rat	P		383	
Animalia	Mammalia	Dugongidae	1558	<i>Dugong dugon</i>	Dugong	E1,P		4	
Animalia	Mammalia	Otariidae	1543	<i>Arctocephalus forsteri</i>	New Zealand Fur-seal	V,P		1	
Animalia	Mammalia	Otariidae	1882	<i>Arctocephalus pusillus doriferus</i>	Australian Fur-seal	V,P		3	
Animalia	Mammalia	Otariidae	1013	<i>Arctocephalus tropicalis</i>	Subantarctic Fur-seal	P		2	
Animalia	Mammalia	Phocidae	1549	<i>Hydrurga leptonyx</i>	Leopard Seal	P		5	
Animalia	Mammalia	Canidae	T106	<i>Canidae sp.</i>	unidentified canid			7	
Animalia	Mammalia	Canidae	1531	<i>Canis lupus</i>	Dingo, domestic dog			328	
Animalia	Mammalia	Canidae	1904	<i>Canis lupus dingo</i>	Dingo			22	
Animalia	Mammalia	Canidae	1905	<i>Canis lupus familiaris</i>	Dog			36	
Animalia	Mammalia	Canidae	1532	<i>Vulpes vulpes</i>	Fox			575	
Animalia	Mammalia	Felidae	1536	<i>Felis catus</i>	Cat			65	
Animalia	Mammalia	Leporidae	1511	<i>Lepus capensis</i>	Brown Hare			19	
Animalia	Mammalia	Leporidae	1510	<i>Oryctolagus cuniculus</i>	Rabbit			27	
Animalia	Mammalia	Equidae	1513	<i>Equus asinus</i>	Donkey			1	
Animalia	Mammalia	Equidae	1512	<i>Equus caballus</i>	Horse			4	
Animalia	Mammalia	Suidae	1514	<i>Sus scrofa</i>	Pig			6	
Animalia	Mammalia	Bovidae	1518	<i>Bos taurus</i>	European cattle			7	
Animalia	Mammalia	Bovidae	1521	<i>Capra hircus</i>	Goat			6	
Animalia	Mammalia	Cervidae	1526	<i>Cervus elaphus</i>	Red Deer			13	
Animalia	Mammalia	Cervidae	9112	<i>Cervus sp.</i>	Unidentified Deer			230	
Animalia	Mammalia	Cervidae	1528	<i>Cervus timorensis</i>	Rusa Deer			32	
Animalia	Mammalia	Cervidae	1523	<i>Dama dama</i>	Fallow Deer			14	
Animalia	Mammalia	Balaenidae	1561	<i>Eubalaena australis</i>	Southern Right Whale	E1,P	E	K	

Animalia	Mammalia	Balaenopteridae	1567	<i>Balaenoptera musculus</i>	Blue Whale	E1,P	E	K	
Animalia	Mammalia	Balaenopteridae	1575	<i>Megaptera novaeangliae</i>	Humpback Whale	V,P	V	1	
Animalia	Mammalia	Physeteridae	1578	<i>Physeter macrocephalus</i>	Sperm Whale	V,P		K	
Animalia	Mammalia	Kogiidae	1581	<i>Kogia breviceps</i>	Pygmy Sperm Whale	P		2	
Animalia	Mammalia	Delphinidae	9039	<i>Dolphin sp.</i>	Unidentified Dolphin	P		1	
Animalia	Mammalia	Delphinidae	1609	<i>Grampus griseus</i>	Risso's Dolphin	P		1	
Animalia	Mammalia	Delphinidae	1600	<i>Orcinus orca</i>	Killer Whale	P		1	
Animalia	Mammalia	Delphinidae	1639	<i>Peponocephala electra</i>	Melon-headed Whale	P		4	
Animalia	Mammalia	Delphinidae	1655	<i>Sousa chinensis</i>	Indo-Pacific Hump-backed Dolphin	P		1	
Animalia	Mammalia	Delphinidae	1621	<i>Stenella attenuata</i>	Spotted Dolphin	P		1	
Animalia	Mammalia	Delphinidae	1619	<i>Stenella coeruleoalba</i>	Striped Dolphin	P		1	
Animalia	Mammalia	Delphinidae	1899	<i>Tursiops aduncus</i>	Long-beaked Bottle-nosed Dolphin	P		5	
Animalia	Mammalia	Delphinidae	1900	<i>Tursiops truncatus</i>	Bottlenose Dolphin	P		6	
Animalia	Insecta	Hesperiidae	1023	<i>Ocybadistes knightorum</i>	Black Grass-dart Butterfly	E1		K	
Animalia	Insecta	Nymphalidae	1024	<i>Argynnis hyperbius</i>	Laced Fritillary	E1		K	
Animalia	Insecta	Nymphalidae	1027	<i>Danaus plexippus</i>	Monarch Butterfly			1	
Animalia	Insecta	Nymphalidae	1139	<i>Dolerichia bisaltide</i>	Leafwing			1	
Animalia	Insecta	Nymphalidae	1032	<i>Junonia villida calybe</i>	Meadow Argus Butterfly			1	
Animalia	Insecta	Papilionidae	1030	<i>Papilio aegaeus</i>	Large Citrus Butterfly			1	
Animalia	Insecta	Pieridae	1105	<i>Delias nigrina</i>	common jezebel			1	
Animalia	Insecta	Petaluridae	1007	<i>Petalura gigantea</i>	Giant Dragonfly	E1		2	
Animalia	Insecta	Aeshnidae	1513	<i>Adversaeschna brevistyla</i>	Bluespotted Hawker			1	
Animalia	Insecta	Lindenidae	T334	<i>Ictinogomphus sp.</i>				1	
Animalia	Unknown	Unknown Fauna	T355	<i>Bird sp.</i>	Unidentified Bird			38	
Animalia	Unknown	Unknown Fauna	T350	<i>Fauna sp.</i>	Unidentified Fauna			17	
Animalia	Unknown	Unknown Fauna	T351	<i>Mammal sp.</i>	Unidentified Mammal			9	
Animalia	Unknown	Unknown Fauna	T353	<i>Small mammal sp.</i>	Unidentified small mammal (<500g)			91	
Animalia	Malacostraca	Atyidae	T326	<i>Australatya striolata</i>	Riffle Shrimp			2	
Animalia	Insecta	Eriococcidae	I475	<i>Apiomorpha annulata</i>				1	
Animalia	Insecta	Eriococcidae	I477	<i>Apiomorpha nookara</i>				1	
Animalia	Insecta	Belostomatidae	T329	<i>Diplonchus eques</i>				3	
Animalia	Insecta	Belostomatidae	I413	<i>Lethocerus insulanus</i>				3	
Animalia	Insecta	Dytiscidae	T344	<i>Hydaticus sp.</i>				1	
Animalia	Insecta	Dytiscidae	T338	<i>Hyphydrus sp.</i>				1	
Animalia	Insecta	Dytiscidae	T325	<i>Rhantus suturalis</i>				7	
Animalia	Gastropoda	Planorbidae	T336	<i>Glyptophysa gibbosa</i>				1	
Animalia	Gastropoda	Planorbidae	T342	<i>Glyptophysa sp.</i>				4	
Animalia	Insecta	Hygrobiidae	T337	<i>Hygrobia sp.</i>				3	



Project related



## Appendix G: Original Canal Design Drawings



# Ordinary Council

## Business Paper

**date of meeting:** Wednesday 18 October 2017

**location:** Laurieton School of Arts Hall  
Cnr Bold & Laurie Streets  
Laurieton

**time:** 5.30pm

**Note:** Council is distributing this agenda on the strict understanding that the publication and/or announcement of any material from the Paper before the meeting not be such as to presume the outcome of consideration of the matters thereon.

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Item: 12.04Subject: SETTLEMENT SHORES ESTATE - FINAL CANAL MAINTENANCE  
PLANPresented by: Infrastructure, Andrew Doig

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**Alignment with Delivery Program**

4.1.6 Develop and implement annual maintenance and renewal programs for stormwater assets.

**RECOMMENDATION****That Council:**

1. Adopt the final Settlement Shores Estate Canal Maintenance Plan as attached to this report.
2. Note the submissions received from the public during the exhibition period.
3. Consider an allocation of \$690,000 from General Fund to the Canal Reserve during the preparation of the 2018/19 Operation Plan to fund works identified within the Settlement Shores Estate Canal Maintenance Plan.
4. Receive a further report within the 2018/19 financial year outlining the canal maintenance undertaken in the 2017/18 financial year, the planned maintenance to be undertaken in 2018/19 and the adjusted cost estimate for the remaining maintenance works.

**Executive Summary**

The draft Settlement Shores Estate Canal Maintenance Plan was placed on public exhibition for a 28 day period in June 2017, following a report to the May 2017 Ordinary Council meeting. During the exhibition period Council received six submissions which resulted in minor changes to the draft plan. The comments received centred on particular properties and the identified maintenance adjacent to those properties. Concerns were also raised regarding the shortfall in funding for the plan over the next ten years.

The final Settlement Shores Estate Canal Maintenance Plan is attached. This plan will guide maintenance planning and activities within the Settlement Shores Canal Estate over the next ten years.

**Discussion**

The Settlement Shores Estate Canals comprises nine separate canal channels and act as key drainage channels for the surrounding areas with several stormwater outlets discharging into the canals. The canals themselves are made up of private land and Council land (drainage reserve) and include several key pieces of infrastructure including the revetment wall, flood mitigation weir, erosion protection



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rock coverings, stormwater outlets, private concrete boat ramps and other boating facilities. The condition of this infrastructure and how it performs is related to the overall condition of the canals, the amount of sediment build-up and how the canals are performing hydraulically. The condition of the canals and how they are performing was largely unknown and there was evidence that several pieces of infrastructure were in poor condition and not operating at an appropriate level of service for the community within the Settlement Shores Estate. The last condition assessment and survey of the canals was undertaken in 2003 with a subsequent maintenance plan being prepared in 2004.

Council undertook a project to review and update the Canal Maintenance Plan over the 2015/16 and 2016/17 financial years.

A hydrographic survey and visual condition assessments were undertaken at the end of 2015. Community engagement was undertaken over April and May 2016 with the draft maintenance plan being produced in October 2016.

The draft maintenance plan was placed on public exhibition for a period of 28 days in June 2017. During this period Council received six submissions. As noted previously, comments received centred on particular properties and the identified maintenance adjacent to those properties. Concerns were also raised regarding the shortfall in funding for the plan over the next ten years. Specific details regarding the submissions are outlined in the Community Engagement & Internal Consultation section below.

The Canal Maintenance Plan will guide maintenance activities within the Settlement Shores estate over the next ten years. This includes maintenance undertaken by both Council and private land owners.

The main maintenance activities identified within the Maintenance Plan are:

- Dredging
- Rock Protection reinstatement
- Beach Zone renourishment
- Drainage Outlet repairs
- Minor revetment wall repairs
- Reactive (flood) Maintenance

**Options**

Council can either adopt the recommendations as presented in this report or adopt alternative resolutions.

**Community Engagement & Internal Consultation**

The draft Canal Maintenance Plan was placed on public exhibition for 28 days from 30 May to 27 June 2017. During this period Council received six submissions. The submissions and associated responses are summarised below. All submissions are attached to this report.

The submissions did result in some minor adjustments to the final plan regarding maintenance responsibilities for some property owners.



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Submission	Issue
1. Deborah & Stephen Ringe	<p>"Port Macquarie Council is responsible for maintaining and dredging of the canals to the property line" – Settlement Shores land release document</p> <p>It is Council's neglect of this responsibility that has/is causing the major problems on the canals.</p> <p>1. <b>Boat Ramps</b></p> <p>A very large percentage of properties require major maintenance or replacement of boat ramps due to undermining/scour of the foundation material. This foundation material is within the waterway vested in Council and the boat ramp owners are not responsible or allowed to interfere with the sediment beyond their property boundaries.</p> <p>It is also noted that a number of new boat ramps have been built and approved recently that do not comply with Council guidelines. They have no toe or edge beams which maximises the possibility of undermining/scouring.</p> <p>2. <b>Revetment Walls and Private Beach Zones</b></p> <p>Lack of maintenance of the beach zone beyond 2.1 metres from the revetment walls causes the private beach zones to erode faster and thus expose the revetment walls to greater overturning forces. The revetment walls were designed to be embedded and retain a height of only 150 mm.</p> <p>As the Council controls the vast majority of the sediment in the canal adjoining any particular private property, no amount of replenishment of the private beach zone will be effective if the Council zone is not maintained – as with any erosion/sediment transportation, Mother Nature starts at the bottom and works up.</p> <p>Clearly, to maintain the canals in their original designed order, more frequent maintenance than that which has been carried out to date, is required. The lack of maintenance over the years has led to the current very poor state of the canal system.</p> <p>3. <b>Vegetation</b></p> <p>Seagrasses, intertidal grasses, mangroves and salt tolerant grasses that spread over revetment walls all help to maintain sediment and hence</p>



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Submission	Issue
	<p>stabilise the system. These elements all need to be encouraged, not discouraged, as per the report. Additionally, these elements help give a more 'natural' feel to the environment and provide habitat for other animals.</p> <p><b>4. Sediment Material Testing</b> There are a number of locations where the revetment walls have been undermined to expose the asbestos corrugated sheeting adjoining the underside. Indeed, in some locations, the asbestos has been snapped off when the revetment concrete headwall has toppled over.</p> <p>These exposed asbestos locations will have released fibres into the waters and some of that will have settled into the sediments. Was the asbestos content of the sediments to be used for replenishing of beaches measured, and if so, what is the content level of asbestos in the sediments?</p> <p><b>Funding of Works</b> All properties that front the canals have higher Unimproved Capital Value than the properties (on the opposite side of some streets) that don't front a canal – e.g. Ballina Cres. These higher values increase the rates paid by those property owners by amounts in excess of \$1000 p.a.</p> <p>This report identifies 430 rateable properties, thus over 10 years an additional minimum of \$4.3M will be paid by these properties to Council (above and beyond normal rates for non-canal properties). Council's expenditure according to this report is approx. \$2.7M over 10 years.</p>
<b>Response/ Comment:</b>	<p>All boat ramps and jetties/pontoons within the canals are private infrastructure. The repair, replacement and continual maintenance of the structure and its surrounds is the responsibility of the resident.</p> <p>Council has allocated funding in the 2017/18 Operational Plan to undertake the first stage of canal dredging in 2018.</p> <p>Prior to any works being carried out, Council will undertake detailed planning to identify if any vegetation removal is required.</p> <p>The sediment sampling that was undertaken did not sample for asbestos. Prior to dredging works Council will undertake additional sampling to ensure there is no risk of asbestos.</p>



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Submission		Issue
		The general rates levied on a property are not specifically applied only to services at that property. General rate income is consolidated and allocated based on all the operational requirements of Council across the entire Port Macquarie-Hastings Local Government Area. General Rates vary across the entire Local Government Area.
2.	Darrell & Lorraine Stibbard	<p>Lack of routine maintenance by Council causing damage to private boat ramp— so we believe that Council is responsible for repairing it.</p> <p>Funding - Over the last 30 years we (and others) have paid rates on our property at a higher level than similar blocks that don't front onto canals. We don't get anything extra from Council for this money and we are unaware of any being spent specifically on the canals. We think it's time we got something for this extra money we pay and there is a need to do it now.</p>
	<b>Response/ Comment:</b>	<p>All boat ramps and jetties/pontoons within the canals are private infrastructure. The repair, replacement and continual maintenance of the structure and its surrounds is the responsibility of the resident.</p> <p>The general rates levied on a property are not specifically applied only to services at that property. General rate income is consolidated and allocated based on all the operational requirements of Council across the entire Port Macquarie-Hastings Local Government Area. General Rates vary across the entire Local Government Area.</p>
3.	Grahame Wilson	<p>Funding, or lack thereof, is the single issue directly impacting on the success of the CMP.</p> <p>If Council identifies and approves a source of funding for the anticipated shortfall in the 2017 CMP, there is no need to comment further. If not, further information / consultation will be required to inform the community of the status of the CMP.</p> <p>Title restriction of Canal Embankment and existing obstructions:</p> <ul style="list-style-type: none"> <li>- Council needs to establish a clear policy regarding enforcement of covenants within the canals.</li> <li>- This policy should be publicised by direct mail to all landowners.</li> </ul>



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Submission	Issue
	<p>Boat Wash - A major impact on the stability and effectiveness of revetment walls, as well as the retention of sand on beaches, is the wash of passing boats.</p> <p>Council should join with Roads and Maritime Services in publicising requirements for boats using the river / canals.</p> <p>Also takes proactive actions such as increased signage on canals, information on websites, pamphlets on safe / responsible boating within the Hastings River provided to tourism operators and boating / fishing competition organisers etc.</p>
<p><b>Response/</b> <b>Comment:</b></p>	<p>Council will continue to review the title restriction on properties within the canals and establish a policy regarding the enforcement of the restrictions.</p> <p>Council has established a good relationship with the RMS boating officer for the Hasting River. The RMS have recently improved the boat signage within the Canals with 14 signs being replaced, including the installation of new signs. Council will continue to work with the RMS to promote the appropriate use of boating craft within the canals.</p>
<p>4. Raymond Cleary &amp; Rhonda Schouten</p>	<p><b>Number 1.</b> The replacement of pebbles Council estimated cost of \$4,000. As we the landowners are responsible for approx 2 metres of land from the canal wall and Council is responsible for the rest we would like to know what amount of the pebble stabilization cost of \$4,000 would be the landowners cost and what amount would the council be responsible for.</p> <p><b>Number 2.</b> The patchy Vegetation growth on BZ through cobbles. Upon examination, at low tide, we can see only 3 very small patches of vegetation growing between the pebbles which can be removed by hand in an instant. I would have thought any native vegetation (not mangroves of course) would help keep pebbles and sand in place.</p> <p><b>Number 3.</b> Piles need to be replaced. We completely disagree with this as we moved in to 38 Commodore Crescent in 2009 and have had</p>

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Submission		Issue
		the jetty installed since then, our jetty except for next door – Number 40 Commodore Crescent – is the newest jetty to be built in this area and that our piles are not needing replacing, they are in good condition. We would like to bring to your attention the jetty at 44 Commodore Crescent, which by the way has no maintenance issues according to the canal Master CMP Register (xlsx), this jetty has had leaning piles since the first day we moved into 38 Commodore Crescent in 2009.
	<b>Response/ Comment:</b>	<p>Approximately 20% of the beach zone that fronts a property is the responsibility of the owner, therefore out of the estimated \$4000 per property frontage for rock replacement, \$800 would be the responsibility of the owner. A more accurate cost of the works would be determined during detailed planning. Council would work closely with each affected property owner.</p> <p>A review has been conducted of the maintenance activities at 38 Commodore Cres and the Master CMP Register has been updated in line with your information accordingly.</p>
5.	Ken Bainbrigge	<p>We have reviewed the CMP and note 2 actions relating to our property being BZ3 and OB4</p> <p>1. We have no objection to removal of the mangrove tree and note that it lies within Councils area of works. (The tree does provide habitat for bird life.)</p> <p>2. The Council approved low level boat shed requires some form of landscape treatment to maintain access. While technically the retaining walls encroach on the 7.9 meter setback most of the walls would be below the natural embankment gradient and therefore should not be considered an obstruction to flows. An unobstructed 2.6 metre vehicular corridor behind the revetment wall has been maintained for vehicle access of maintenance vehicles should they be required. Retaining walls have been designed with large radius curves to allow free water movement around them. The wall construction is a modular block design enabling dismantling at a future date should it be required. The overall design of the foreshore treatment now accommodates a considerable flood water storage capacity. All landscaping works were in place when Council</p>

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Submission		Issue
		issued the occupation certificate. We request Council reconsider the OB4 status.
	<b>Response/ Comment:</b>	Council will undertake detailed planning at each property prior to undertaking any works where each maintenance activity would be reviewed along with detailed discussion with each property owner. The Canal Maintenance Plan is a high level guiding document.
6.	Bob Pearson	<p>Report: BZ3 Mangrove on the foreshore, seaward of revetment</p> <p>Comment: The tree is more than 6 metres from the revetment wall, thus clearly more than 2.1 metres from the revetment wall and not the responsibility of the Landowner.</p> <p>Report: JE1 Blockwork piers, cracked and rotated. Replace blockwork piers</p> <p>Comment: Only one pier is in the claimed condition</p> <p>Report: T1 Garden bed and small shrubs within 7.9 m from revetment wall.</p> <p>Comment: They would not prevent continuous access along the canal embankment if necessary.</p> <p>Additional Comment: The 2004 maintenance plan also included reference to a covenant that "there be no buildings, fences, trees or other obstructions within 5.4 metres (7.9 metres in the case of the Governors Way) of the revetment wall". It does not appear that this requirement was enacted at that time as there are still many mature trees and palms within these boundaries that would be more than 13 years old.</p> <p>The 2017 master observations identify 148 cases relating to the T field for the 433 properties. The present vegetation is home to many birds and is in almost all cases attractive and it would be a real pity to enforce the requirement based on the need as stated previously and outlined below.</p> <p>The 2004 report states:</p> <p>"It was always considered, that tradespersons and their plant and equipment may one day need to gain access to waterfront properties by means of the bank along the water frontage. While there will seldom be the need for Council workers to use the</p>

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Submission	Issue
	sloping bank on adjoining properties for access, it is in everybody's interest that access via the waterway bank is available when necessary." Why is it in everybody's interest if it is for each landowner?
<b>Response/ Comment:</b>	<p>Council will undertake detailed planning at each property prior to undertaking any works where each maintenance activity would be reviewed along with detailed discussion with each property owner. The Canal Maintenance Plan is a high level guiding document.</p> <p>Council will continue to review the title restriction on properties within the canals and establish a policy regarding the enforcement of the restrictions. Having clear maintenance access does benefit all land owners if they need to get access to the rear of their property.</p>

**Planning & Policy Implications**

The Canal Maintenance Plan will be the guiding document for all maintenance planning for the Settlement Shores Canal Estate over the next ten years.

**Financial & Economic Implications**

The Settlement Shores Estate Canal Maintenance Plan has identified a strategic budget that is required to adequately maintain the Settlement Shores canals. The estimated total budget across the 10 years covered by the plan is \$2,772,040.

This is a strategic estimate and will be continually refined as detailed planning is completed for different maintenance activities. At the completion of each financial year a review of works undertaken versus budget will be undertaken and the forward budget estimate adjusted as necessary.

The estimated financial implications per year are as follows:

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## ANNUAL BUDGET

Year	Council Expense
2017/18	\$594,880
2018/19	\$799,510
2019/20	\$414,510
2020/21	\$913,740
2021/22	\$26,350
2022/23	\$ -
2023/24	\$ -
2024/25	\$ -
2025/26	\$ -
2026/27	\$23,050

**TOTAL \$2,772,040**

The cost per Council maintenance activity is as follows:

Dredging: \$1,652,940  
 Rock Protection reinstatement: \$384,600  
 Beach Zone renourishment: \$688,000  
 Drainage Outlet repairs: \$5,000  
 Minor revetment wall repairs: \$1,500  
 Reactive (flood) Maintenance: \$40,000

Council established an operational reserve (within the General Fund) for canal maintenance in 2003. Revenue collected from the boating structures licence fee is allocated to this reserve.

Council, as part of the maintenance plan review, has undertaken a review of all boating structures within the canals. This review has identified a number of structures for which a licence fee was not being collected and this has resulted in the annual income being increased from approximately \$95,000 to \$110,000.

As at July 2017 the reserve had a balance of \$693,092.

Council has allocated the identified 2017/18 funds of \$594,880 in the 2017/18 Operational Plan for canal major maintenance and dredging.

Based on the annual income of approximately \$110,000 being allocated to the canal maintenance reserve there is a shortfall of approximately \$1.09 million across the ten years for the funding of the Canal Maintenance Plan.

Council will need to consider an allocation of \$799,510 in the 2018/19 Operation Plan to undertake the identified maintenance activities.

In order to fund the 2018/19 maintenance activities, Council will need to consider an allocation of \$690,000 from the General Fund to be transferred to the Canal Reserve to make up the short fall from the Boating Structures Licence fee income.

## AGENDA

ORDINARY COUNCIL  
18/10/2017

As Council can only prepare and adopt an Operational Plan and budget for one financial year at a time the funding for future year's works will need to be considered in the development of each subsequent Operational Plan and corresponding budget.

**Attachments**

1[View](#). Settlement Shores Estate Canal Maintenance Plan Final Report

2[View](#). Combined Submissions - Settlement Shores Estate Canal Maintenance Plan Review\_Redacted

YOUR NATURAL AND  
BUILT ENVIRONMENT

Item 12.04

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Item 13.04  
Attachment 5

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**MINUTES**  
**Ordinary Council Meeting**  
**18/10/2017**

- 
- d) Letter to NSW Office of State Revenue seeking exemption from the payment of Stamp Duty.

**CARRIED:** 7/0

**FOR:** Dixon, Griffiths, Hawkins, Intemann, Levido, Pinson and Turner

**AGAINST:** Nil

Councillor Hawkins left the meeting, the time being 8:12pm.

Councillor Alley returned to the meeting, the time being 8:13pm.

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**12.04 SETTLEMENT SHORES ESTATE - FINAL CANAL MAINTENANCE PLAN**

**RESOLVED:** Griffiths/Intemann

That Council:

1. Adopt the final Settlement Shores Estate Canal Maintenance Plan as attached to this report.
2. Note the submissions received from the public during the exhibition period.
3. Consider an allocation of \$690,000 from General Fund to the Canal Reserve during the preparation of the 2018/19 Operation Plan to fund works identified within the Settlement Shores Estate Canal Maintenance Plan.
4. Receive a further report within the 2018/19 financial year outlining the canal maintenance undertaken in the 2017/18 financial year, the planned maintenance to be undertaken in 2018/19 and the adjusted cost estimate for the remaining maintenance works.

**CARRIED:** 7/0

**FOR:** Alley, Dixon, Griffiths, Intemann, Levido, Pinson and Turner

**AGAINST:** Nil

Councillor Hawkins returned to the meeting, the time being 8:14pm.

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**12.05 SHORT-TERM HOLIDAY LETTING IN NSW: OPTIONS PAPER**

**RESOLVED:** Alley/Turner

That Council make a submission to the Short-Term Holiday Letting in NSW Options Paper based on the issues outlined in this report.

**CARRIED:** 7/1

**FOR:** Alley, Dixon, Hawkins, Intemann, Levido, Pinson and Turner

**AGAINST:** Griffiths



Port Macquarie-Hastings Council  
PO Box 84  
Port Macquarie  
NSW Australia 2444  
DX 7415  
e council@pmhc.nsw.gov.au

ABN 11 236 901 601



9 August 2019

Refers to: D2019/315138  
Parcel No: «Parcel\_No»

«Postal\_Name»  
«Postal\_Address\_1»  
«Postal\_Address\_2»  
«Postal\_Address\_3»

Dear Sir/Madam

#### Settlement Shores Canal Maintenance - Community Update

I am writing to you to provide an update regarding maintenance of the Settlement Shores Estate canal system.

As detailed in the 2016 Canal Maintenance Plan, developed in consultation with canal residents, Council propose to dredge the canal channels to provide sufficient depth for safe boat navigation and restoring the beach shape.

Council have approved just over \$1.1 million in funding for the dredging works and have now secured the necessary environmental approvals to undertake the works. Birdon Pty Ltd have been engaged to undertake the maintenance dredging with works planned to commence in November 2019. Works are expected to be completed by April 2020 including a shutdown over the Christmas/New year period.

Council have also engaged Public Works Advisory (PWA) to undertake the project management role. Both Birdon and PWA have broad experience in maintenance dredging and will provide separate updates throughout the works.

Council is aware that the beach zone approximately 2.1m from the revetment wall is private property. In order to stabilise the revetment wall and reshape the beach zone Council may need to place dredged sand in this zone. We acknowledge that some of these residents may not wish for sand to be placed on their land within this zone. If this is the case with your property, we request that you contact us immediately so that a list of properties that do not wish sand to be placed within the beach area extending 2.1m beyond the revetment wall can be compiled and provided to the Contractor. If you have not contacted us by 27 September 2019, we will assume that you agree to the placement of sand on your beach zone, if required. Responses can be made via email to Tom Ahern, Project Manager Public Works Advisory, at tom.ahern@finance.nsw.gov.au.

If you agree to the placement of sand on your beach, it is suggested that you carry out basic maintenance such as removing bricks or large rocks/debris from the beach to provide a much better result and maintain the stability of the sand.

**pmhc.nsw.gov.au**

Page 1

**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  
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**LAURIETON OFFICE**  
9 Laurie Street, Laurieton NSW 2443  
t 02 6559 9958



Further information can be found at Council's website, including the adopted Canal Maintenance Plan: <https://www.pmhc.nsw.gov.au/Services/Environment/Waterways-and-coastlines/Settlement-Shore-Canal>

Council would like to thank residents and the community for their involvement in developing the maintenance plan and their patience while the funding and environmental approvals were obtained over the last two years.

Yours sincerely

Cameron Hawkins  
Acting Group Manager - Transport & Stormwater Network





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:
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	<ul style="list-style-type: none"> <li>○ scheduled rural roadside slashing programme</li> <li>○ scheduled rural outreach mowing programme</li> <li>○ scheduled weed spraying programme</li> <li>○ scheduled urban vegetation maintenance programme</li> </ul>
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	<p>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.</p> <p>Council may elect to leave timber at the site within the road reserve if it does not pose a high risk.</p> <p>The removal of vegetation for upgrade projects or for the carrying out of roadworks may be subject to other environmental approvals.</p>
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	<p>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.</p> <p>Sensitive receivers with serious health issues adjoining areas to be sprayed shall be notified prior to commencement of spraying.</p> <p>Organic Farms require buffer zones within their property and Council may elect to spray within the road reserve to mitigate public risk.</p>

Stockpiling of Vegetation Waste	<p>Council will stockpile vegetation waste in accordance with the EPA Waste Exemptions.</p> <p>Council will not burn vegetation on Total Fire Ban Days without consent provided by Rural Fire Service (RFS).</p>
Driveways / Road Crossings	<p>Due to the scale of the public road network, vegetation issue 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.</p> <p>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.</p>
Urban verge/nature strip maintenance	<p>Council will not routinely programme vegetation maintenance works along urban local road verge/nature strips fronting properties.</p>
Damage to fencing from fallen vegetation	<p>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.</p> <p>Council will consider applications from adjoining land owner(s) to manage vegetation within the road reserve that is a risk to damaging fencing.</p>
Private Vegetation Maintenance Works on Public Roads	<p>Council acknowledges that some landowners wish to undertake works along their property frontage to provide a higher level of service than what Council resources allow.</p> <p>To facilitate this, this policy authorises exempt development private vegetation maintenance under the Roads Act (Section 138 consent) in certain circumstances with conditions as outlined below.</p> <ul style="list-style-type: none"> <li>• Undertaking works safely is vital. Take personal responsibility for your own safety and assess the potential hazards in the maintenance area (e.g rocks in grass that a mower may fling) and understand how to operate the equipment being used, ensuring it is in good working order.</li> <li>• The property owner is liable for any damages caused by the maintenance works. Discuss with your home/property insurer what Public/Legal Liability cover you may have and whether the maintenance works on the nature strip fronting the property are covered. If unsure or the liability of potential damages cannot be covered do not undertake the works.</li> <li>• Maintenance area must be directly in front of own property (i.e extension of side boundary lines to road edge as limited below). <ul style="list-style-type: none"> <li>○ On roads with kerb and 50km/h or less speed limits - area limit is back of kerb.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ On roads with no kerb but edge line and 50km/h or less speed limits - area limit is 1m from edge line.</li> <li>○ On roads with no kerb and no edge line and 50km/h or less speed limits - area limit is 1.5m from edge of bitumen</li> <li>○ On roads with 60km/h to 80km/h speed limits - area limit is 3m from travel lane (if travel lane not marked (i.e no edge line or parking lane line - 3m from edge of bitumen/kerb)</li> <li>○ On roads with speed limits above 80km/h - area limit is 6m from travel lane (if travel lane not marked (i.e no edge line or parking lane line - 6m from edge of bitumen/kerb)</li> <li>○ On unsealed roads – area limit is 3m from the shoulder hinge point.</li> </ul> <ul style="list-style-type: none"> <li>● Maintenance of grass and shrubs using hand held/push devices only in urban residential areas, ride-on devices may be used in urban commercial and rural areas (a shrub(s) is defined as a plant/group of plant less than 2m tall and has a stem no thicker than 50mm measured at 500mm off the ground).</li> <li>● All waste must be removed from the road reserve.</li> <li>● The area must be left in a tidy condition at the end of the maintenance works.</li> <li>● This policy does not authorise the planting/replanting of vegetation.</li> </ul> <p>This does not apply to the following roads as they are Classified roads and concurrence for works is required from Transport for NSW:</p> <ul style="list-style-type: none"> <li>● Hastings River Drive</li> <li>● Ocean Drive</li> <li>● Kendall Road</li> <li>● Comboyne Road</li> <li>● Gordon Street (between Ocean Drive and Horton Street)</li> <li>● Oxley Highway</li> </ul> <p>Other development consent/environmental approvals may apply in some locations.</p> <p>It is important to discuss your maintenance plans with neighbours.</p> <p>In all other situations, Council will consider applications from adjoining land owner(s) to manage vegetation within the road reserve.</p>
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### 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  Reactive Vegetation Management (risk prioritisation)	429km
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	<ul style="list-style-type: none"> <li>Generally through roads which connect to significant regional centres - Major traffic flow with many branches/feeder roads.</li> <li>Typically support commercial, industrial and residential land use.</li> <li>The running surface is generally &gt; 10.0 metres wide (including shoulders) with two lanes for traffic and generally duplicated in urban areas.</li> <li>Road is formed and generally drained to Council standards.</li> <li>Significant rain events will generally not cause temporary closure.</li> <li>Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>Roads are generally delineated with a centreline and edge lines.</li> <li>Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.</li> </ul>
Sealed Sub -Arterial	<ul style="list-style-type: none"> <li>Traffic count generally more than 3,000 vehicles/day.</li> <li>Generally through roads which connect to local centres or destinations - Main traffic flow with many branches/feeder roads.</li> <li>Typically support commercial, industrial and residential land use.</li> <li>The running surface is generally 8.0 – 10.0 metres wide (including shoulders) with two lanes for traffic and occasionally duplicated in urban areas.</li> <li>Road is formed and generally drained to Council standards.</li> <li>Significant rain events may cause temporary closure.</li> </ul>

	<ul style="list-style-type: none"> <li>• Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>• Roads are generally delineated with a centreline and edge lines.</li> <li>• Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.</li> </ul>
Sealed Collector	<ul style="list-style-type: none"> <li>• Traffic count generally less than 3,000 vehicles/day.</li> <li>• Generally through roads which connect to Arterial or Sub-Arterial Roads – collects traffic flow with many branches/feeder roads.</li> <li>• Typically support some commercial, industrial and residential land use.</li> <li>• The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic.</li> <li>• Road is formed and generally drained to Council standards.</li> <li>• Significant rain events may cause temporary closure.</li> <li>• Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>• Roads are occasionally delineated with a centreline or edge lines or only a centreline.</li> <li>• Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage.</li> </ul>
Sealed Local	<ul style="list-style-type: none"> <li>• Traffic count generally less than 1000 vehicles/day.</li> <li>• 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.</li> <li>• Typically support residential land use.</li> <li>• The running surface is generally &gt; 5.0 metres wide (including shoulders) with one or two lanes for traffic.</li> <li>• Road is formed and generally drained to Council standards.</li> <li>• Significant rain events may cause temporary closure.</li> <li>• Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>• Roads are generally not delineated with line marking.</li> <li>• Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage.</li> </ul>
Car Parks	<ul style="list-style-type: none"> <li>• Car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property.</li> <li>• Generally located close to public reserves, however can also be found in other urban locations.</li> <li>• Car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.</li> </ul>

Unsealed Roads are classified into - five typical classifications, in order of importance:

Road Category	Description
Major Roads	<p>Traffic count generally more than 100 vehicles/day.</p> <p>Generally through roads which connect to significant local community centres or destinations - Main traffic flow with many branches/feeder roads.</p> <p>The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic.</p> <p>Road is formed and generally drained to Council standards.</p> <p>Significant rain events may cause temporary closure.</p> <p>Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these.</p> <p>Roads typically have guideposts located adjacent to culverts and limited advisory signage</p>
Local Roads	<p>Traffic count generally less than 100 vehicles/day.</p> <p>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.</p> <p>The running surface is generally 3 – 6.5 metres wide (including shoulders) with one or two lanes for traffic.</p> <p>Road is formed and generally drained to Council standards</p> <p>Significant rain events may cause temporary closure.</p> <p>Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these.</p> <p>Roads typically have guideposts located adjacent to culverts and limited or no advisory signage</p>
Access Tracks	<p>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.</p> <p>Typically “no through” roads that are open to the public and provide access to a limited number of properties.</p> <p>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.</p> <p>Accessible by 4WD vehicles.</p> <p>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.</p>
Unformed/Paper Road	<p>These are unformed “paper” roads, which are indistinct, inactive or not regularly used as a vehicle access track.</p> <p>No road formation exists as the road is only identified as such on a map.</p>
Unsealed Car Parks	

Road Category	Description
	<p>Unsealed car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property.</p> <p>Generally located close to public reserves, however can also be found in other urban locations.</p> <p>Unsealed car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.</p>

## 8.2 Stormwater Classifications

Stormwater management systems are classified into three typical classifications:

Stormwater Category	Description
Open Drains	<ul style="list-style-type: none"> <li>Open Drains are generally constructed on a road reserve but can be completely on non-road property (drainage easements and reserves).</li> <li>Generally located within urban areas, however can also be found in rural locations.</li> <li>Open Drains generally consist of one drain but may form a network of multiple drains.</li> <li>Open Drains are generally created to control nuisance water derived from Council managed land and may become non-functional during significant rain events.</li> <li>Open Drains are typically earth formed bunds or trenches where water is concentrated and conveyed around property to a natural waterways or localised depression.</li> <li>Open Drains may consist of earth, vegetation, geofabric, jute mesh, matting, concrete, rock or a combination of these.</li> <li>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.</li> <li>Significant rain events may cause the closure of a road or flooding in low lying areas.</li> <li>Road Table Drains are treated as part of Sealed Roads shoulder grading.</li> <li>Conventional overland sheet flow is not considered to be an open drain.</li> <li>The Broadwater and Settlement Shores Canals are classified as Open Drains.</li> </ul>
Pipe and Pits	<ul style="list-style-type: none"> <li>Stormwater pipes and pits are generally constructed on a road reserve but can be completely on non-road property (drainage reserves and easements).</li> <li>Generally located within urban areas, however can also be found in rural locations.</li> <li>Generally consist of one pipe but may form a network of multiple pipes.</li> </ul>

	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Pipes and pits are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression.</li> <li>• Pipes and pits may consist of concrete, steel or polymer materials or a combination of these.</li> <li>• 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.</li> <li>• Significant rain events may cause the closure of a road or flooding in low lying areas.</li> <li>• The kerb and gutters generally convey stormwater from road pavements into kerb inlet pits and into the piped stormwater network.</li> </ul>
Stormwater Quality Improvement Devices (SQIDs) (Gross Pollutant Traps and Detention Basins)	<ul style="list-style-type: none"> <li>• Stormwater Quality Improvement Devices are generally constructed in a drainage reserve but can be completely in road reserves or drainage easements.</li> <li>• Generally located within urban areas, however can also be found in rural locations.</li> <li>• Generally consist of isolated devices but may form a network of devices.</li> <li>• 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.</li> <li>• 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 or infrequent rainfall events.</li> <li>• Stormwater Quality Improvement Devices are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression.</li> <li>• Stormwater Quality Improvement Devices may consist of earth, vegetation, geofabric, jute mesh, matting, rock, concrete, steel or polymer materials or a combination of these.</li> <li>• 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.</li> </ul>



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 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)

### 2.2.32 Management Principles

Council will manage roadside and stormwater vegetation using the following principles:

Classification of Roads Program of Works	<p>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:</p> <ul style="list-style-type: none"> <li>o scheduled rural roadside slashing programme</li> <li>o scheduled rural outreach mowing programme</li> <li>o scheduled weed spraying programme</li> <li>o scheduled urban vegetation maintenance programme</li> </ul> <p>Roads will be categorised, as outlined in the previous section, based on multiple factors including:</p> <ul style="list-style-type: none"> <li>o traffic volumes</li> <li>o number and type of premises accessed</li> <li>o school bus routes</li> <li>o regional tourism value</li> <li>o regional economic value</li> <li>o network and community connectivity.</li> </ul> <p>The classification of a road defines the "Level of Service" provided by Council in maintaining that road.</p>
Reactive Works	<p>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.</p>
Resource Allocation	<p>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 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:</p> <ul style="list-style-type: none"> <li>o scheduled rural roadside slashing programme</li> <li>o scheduled rural outreach mowing programme</li> <li>o scheduled weed spraying programme</li> <li>o scheduled urban vegetation maintenance programme</li> <li>o reactive maintenance to high risk issues identified during programmed works or reactively by the public.</li> </ul>
Removal of Vegetation that is on or overhanging the public road	<p>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.</p> <p>Council may elect to leave timber at the site within the nature strip/road reserve if it does not pose a high risk.</p>

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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 <del>Endangered Threatened</del> Ecological Communities ( <del>EECTEC</del> )	Council will not undertake maintenance activities where an <del>EECTEC</del> shall be harmed, threatened or picked unless a Review of Environmental Factors (REF) has been approved by <del>the Group Manager</del> Council.
Removal of trees within road shoulders	<del>In accordance with Council Road Reactive Risk Procedure,</del> Council will not routinely programme activities to remove trees on road shoulders unless deemed a high risk to the public <del>by an qualified arborist.</del>
Vegetation Management on National Park managed land.	Council will not undertake maintenance activities on National Parks <del>managed</del> land unless consent has been provided by National Parks <del>and Wildlife Services.</del>
Weed spraying	Weed spraying will be completed on roads <del>and stormwater management systems</del> 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	<del>Due to the scale of the public road network, vegetation issue 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.</del>  <del>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.</del>  Council <del>may</del> will consider applications from <del>benefiting</del> land owner(s) to manage vegetation within the road reserve that impedes safe access and egress from their driveway onto Council's road network.
<del>Urban verge/nature strip maintenance</del>	<del>Council will not routinely programme vegetation maintenance works along urban local road verge/nature strips fronting properties.</del>

Damage to fencing from fallen vegetation	<p>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.</p> <p>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.</p>
Private Vegetation Maintenance Works on Public Roads	<p>Council acknowledges that some landowners wish to undertake works along their property frontage to provide a higher level of service than what Council resources allow.</p> <p>To facilitate this, this policy authorises exempt development private vegetation maintenance under the Roads Act (Section 138 consent) in certain circumstances with conditions as outlined below.</p> <ul style="list-style-type: none"> <li>• Undertaking works safely is vital. Take personal responsibility for your own safety and assess the potential hazards in the maintenance area (e.g. rocks in grass that a mower may fling) and understand how to operate the equipment being used, ensuring it is in good working order.</li> <li>• The property owner is liable for any damages caused by the maintenance works. Discuss with your home/property insurer what Public/Legal Liability cover you may have and whether the maintenance works on the nature strip fronting the property are covered. If unsure or the liability of potential damages cannot be covered do not undertake the works.</li> <li>• Maintenance area must be directly in front of own property (i.e. extension of side boundary lines to road edge as limited below).             <ul style="list-style-type: none"> <li>○ On roads with kerb and 50km/h or less speed limits - area limit is back of kerb.</li> <li>○ On roads with no kerb but edge line and 50km/h or less speed limits - area limit is 1m from edge line.</li> <li>○ On roads with no kerb and no edge line and 50km/h or less speed limits - area limit is 1.5m from edge of bitumen</li> <li>○ On roads with 60km/h to 80km/h speed limits - area limit is 3m from travel lane (if travel lane not marked (i.e. no edge line or parking lane line - 3m from edge of bitumen/kerb)</li> <li>○ On roads with roads with speed limits above 80km/h - area limit is 6m from travel lane (if travel lane not marked (i.e. no edge line or parking lane line - 6m from edge of bitumen/kerb)</li> <li>○ On unsealed roads - area limit is 3m from the shoulder hinge point.</li> </ul> </li> </ul>

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<ul style="list-style-type: none"> <li>• Maintenance of grass and shrubs using hand held/push devices only in urban residential areas. ride-on devices may be used in urban commercial and rural areas (a shrub(s) is defined as a plant/group of plant less than 2m tall and has a stem no thicker than 50mm measured at 500mm off the ground).</li> <li>• All waste must be removed from the road reserve.</li> <li>• The area must be left in a tidy condition at the end of the maintenance works.</li> <li>• This policy does not authorise the planting/replanting of vegetation.</li> </ul> <p>This does not apply to the following roads as they are Classified roads and concurrence for works is required from Transport for NSW:</p> <ul style="list-style-type: none"> <li>• Hastings River Drive</li> <li>• Ocean Drive</li> <li>• Kendall Road</li> <li>• Comboyne Road</li> <li>• Gordon Street (between Ocean Drive and Horton Street)</li> <li>• Oxley Highway</li> </ul> <p>Other development consent/environmental approvals may apply in some locations.</p> <p>It is important to discuss your maintenance plans with neighbours.</p> <p>In all other situations, Council will consider applications from adjoining land owner(s) to manage vegetation within the road reserve.</p> <p>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.</p>	<p>Formatted: Font: (Default) Franklin Gothic Book, 11 pt</p> <p>Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm</p> <p>Formatted: Font: (Default) Franklin Gothic Book, 11 pt</p> <p>Formatted: Font: (Default) Franklin Gothic Book, 11 pt</p> <p>Formatted: Font: (Default) Franklin Gothic Book, 11 pt</p> <p>Formatted: Font: (Default) Franklin Gothic Book, 11 pt</p> <p>Formatted: List Paragraph</p> <p>Formatted: Font: (Default) Franklin Gothic Book, 11 pt</p> <p>Formatted: Font: (Default) Franklin Gothic Book, 11 pt</p> <p>Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.63 cm + Indent at: 1.27 cm</p>
<p><b>2.43 Road Classifications</b></p> <p>Roads are classified into 940 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 Unsealed Roads Policy or within the Appendix (Sealed Roads Classifications).</p>	<p>Formatted: Font: Bold</p> <p>Formatted: Font: Bold</p>
<p><b>2.24 Stormwater Classifications</b></p> <p>Stormwater featuresmanagement systems are classified into 3three typical classifications that are used to prioritise the allocation of resources. These definitions are located within the Appendix (Stormwater Classifications).</p>	<p>Formatted: Font: Bold</p> <p>Formatted: Font: Not Bold</p>
<p><b>2.45 Level of Service [2019]Service Provision</b></p> <p>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</p>	<p>Formatted: Not Highlight</p>

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 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 Reactive Vegetation Management (risk prioritisation high-risk only)	482km
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

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- 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 axles 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	<ul style="list-style-type: none"> <li>Generally through roads which connect to significant regional centres - Major traffic flow with many branches/feeder roads.</li> <li>Typically support commercial, industrial and residential land use.</li> <li>The running surface is generally &gt; 10.0 metres wide (including shoulders) with two lanes for traffic and generally duplicated in urban areas.</li> <li>Road is formed and generally drained to Council standards.</li> <li>Significant rain events will generally not cause temporary closure.</li> <li>Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>Roads are generally delineated with a centreline and edge lines.</li> <li>Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.</li> </ul>
Sealed Sub -Arterial	<ul style="list-style-type: none"> <li>Traffic count generally more than 3,000 vehicles/day.</li> <li>Generally through roads which connect to local centres or destinations - Main traffic flow with many branches/feeder roads.</li> <li>Typically support commercial, industrial and residential land use.</li> <li>The running surface is generally 8.0 – 10.0 metres wide (including shoulders) with two lanes for traffic and occasionally duplicated in urban areas.</li> <li>Road is formed and generally drained to Council standards.</li> <li>Significant rain events may cause temporary closure.</li> </ul>



	<ul style="list-style-type: none"> <li>• Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>• Roads are generally delineated with a centreline and edge lines.</li> <li>• Roads typically have guideposts located adjacent to culverts, warning and speed advisory signage where warranted.</li> </ul>
Sealed Collector	<ul style="list-style-type: none"> <li>• Traffic count generally less than 3,000 vehicles/day.</li> <li>• Generally through roads which connect to Arterial or Sub-Arterial Roads – collects traffic flow with many branches/feeder roads.</li> <li>• Typically support some commercial, industrial and residential land use.</li> <li>• The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic.</li> <li>• Road is formed and generally drained to Council standards.</li> <li>• Significant rain events may cause temporary closure.</li> <li>• Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>• Roads are occasionally delineated with a centreline or edge lines or only a centreline.</li> <li>• Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage.</li> </ul>
Sealed Local	<ul style="list-style-type: none"> <li>• Traffic count generally less than 1000 vehicles/day.</li> <li>• 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.</li> <li>• Typically support residential land use.</li> <li>• The running surface is generally &gt; 5.0 metres wide (including shoulders) with one or two lanes for traffic.</li> <li>• Road is formed and generally drained to Council standards.</li> <li>• Significant rain events may cause temporary closure.</li> <li>• Pavement material may be either asphalt or bitumen surfacing or a combination of these.</li> <li>• Roads are generally not delineated with line marking.</li> <li>• Roads typically have guideposts located adjacent to culverts, with limited warning and speed advisory signage.</li> </ul>
Car Parks	<ul style="list-style-type: none"> <li>• Car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property.</li> <li>• Generally located close to public reserves, however can also be found in other urban locations.</li> <li>• Car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.</li> </ul>

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Unsealed Roads are classified into 5- five typical classifications, in order of importance:

Road Category	Description
<u>Major Roads</u>	<p>Traffic count generally more than 100 vehicles/day.</p> <p>Generally through roads which connect to significant local community centres or destinations - Main traffic flow with many branches/feeder roads.</p> <p>The running surface is generally 6.5 – 8.0 metres wide (including shoulders) with two lanes for traffic.</p> <p>Road is formed and generally drained to Council standards.</p> <p>Significant rain events may cause temporary closure.</p> <p>Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these.</p> <p>Roads typically have guideposts located adjacent to culverts and limited advisory signage.</p>
<u>Local Roads</u>	<p>Traffic count generally less than 100 vehicles/day.</p> <p>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.</p> <p>The running surface is generally 3 – 6.5 metres wide (including shoulders) with one or two lanes for traffic.</p> <p>Road is formed and generally drained to Council standards.</p> <p>Significant rain events may cause temporary closure.</p> <p>Pavement material may be either imported gravel, local gravel, recycled materials suitable for road use, in-situ material or a combination of these.</p> <p>Roads typically have guideposts located adjacent to culverts and limited or no advisory signage.</p>
<u>Access Tracks</u>	<p>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.</p> <p>Typically “no through” roads that are open to the public and provide access to a limited number of properties.</p> <p>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.</p> <p>Accessible by 4WD vehicles.</p> <p>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.</p>
<u>Unformed/Paper Road</u>	<p>These are unformed “paper” roads, which are indistinct, inactive or not regularly used as a vehicle access track.</p> <p>No road formation exists as the road is only identified as such on a map.</p>
<u>Unsealed Car Parks</u>	

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Road Category	Description
	<p>Unsealed car parks are generally constructed partly on a road and partly on other property, but can be completely on non-road property.</p> <p>Generally located close to public reserves, however can also be found in other urban locations.</p> <p>Unsealed car parks are a low speed environment and typically hold low risks when compared to the rest of the road network.</p>

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## 8.2 Stormwater Classifications

Stormwater ~~features~~ management systems are classified into ~~3~~three typical classifications:

Stormwater Category	Description
Open Drains	<ul style="list-style-type: none"> <li>Open Drains are generally constructed on a road reserve but can be completely on non-road property (drainage easements and reserves).</li> <li>Generally located within urban areas, however can also be found in rural locations.</li> <li>Open Drains generally consist of one drain but may form a network of multiple drains.</li> <li>Open Drains are generally created to control nuisance water derived from Council managed land and may become non-functional during significant rain events.</li> <li>Open Drains are typically earth formed bunds or trenches where water is concentrated and conveyed around property to a natural waterways or localised depression.</li> <li>Open Drains may consist of earth, vegetation, geofabric, jute mesh, matting, concrete, rock or a combination of these.</li> <li>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.</li> <li>Significant rain events may cause the closure of a road or flooding in low lying areas.</li> <li>Road Table Drains are treated as part of Sealed Roads shoulder grading.</li> <li>Conventional overland sheet flow is not considered to be an open drain.</li> <li>The Broadwater and Settlement Shores Canals are classified as Open Drains.</li> </ul>
Pipe and Pits	<ul style="list-style-type: none"> <li>Stormwater pipes and pits are generally constructed on a road reserve but can be completely on non-road property (drainage reserves and easements).</li> <li>Generally located within urban areas, however can also be found in rural locations.</li> </ul>

	<ul style="list-style-type: none"> <li>• Generally consist of one pipe but may form a network of multiple pipes.</li> <li>• 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.</li> <li>• Pipes and pits are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression.</li> <li>• Pipes and pits may consist of concrete, steel or polymer materials or a combination of these.</li> <li>• 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.</li> <li>• Significant rain events may cause the closure of a road or flooding in low lying areas.</li> <li>• The kerb and gutters generally convey stormwater from road pavements into kerb inlet pits and into the piped stormwater network.</li> </ul>
Stormwater Quality Improvement Devices (SQIDs) (Gross Pollutant Traps and Detention Basins)	<ul style="list-style-type: none"> <li>• Stormwater Quality Improvement Devices are generally constructed in a drainage reserve but can be completely in road reserves or drainage easements.</li> <li>• Generally located within urban areas, however can also be found in rural locations.</li> <li>• Generally consist of isolated devices but may form a network of devices.</li> <li>• 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.</li> <li>• 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 or infrequent rainfall events.</li> <li>• Stormwater Quality Improvement Devices are typically located where water is concentrated and conveyed around property to a natural waterways or localised depression.</li> <li>• Stormwater Quality Improvement Devices may consist of earth, vegetation, geofabric, jute mesh, matting, rock, concrete, steel or polymer materials or a combination of these.</li> <li>• 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.</li> </ul>

## Draft Roadside Vegetation Management Policy

### Community submissions

Submission	Issue
<p>1. Jennifer Hawkins 1140 Comboyne Road, Byabarra</p>	<p>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.</p> <p>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?</p> <p>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?</p> <p>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.</p> <p>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.</p> <p>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 Blanches Road and close to the intersection of Jones Road with Comboyne Road (as</p>

	<p>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.</p> <p>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.</p> <p>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?</p> <p>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?</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>13. Within the Unsealed Roads Policy and the DRVMP, the Access Track (which is defined as less</p>
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	<p>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.</p> <p>14. Responsibilities (3. page 4) – it refers to the Vegetation Management Policy, not Roadside Vegetation Management Policy</p> <p>Further issues were raised regarding the communication and community notification regarding the policy exhibition and usability of Council's website, particularly searching for information.</p>
<b>Response/ Comment:</b>	<ol style="list-style-type: none"> <li>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.</li> <li>2. The reactive risk procedure is outlined in Council Roads Maintenance and Repairs factsheet, which is listed on Council website at: <a href="https://www.pmhc.nsw.gov.au/Services/Roads-and-Bridges/Road-maintenance-and-repairs/Prioritising-road-repairs">https://www.pmhc.nsw.gov.au/Services/Roads-and-Bridges/Road-maintenance-and-repairs/Prioritising-road-repairs</a></li> <li>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 completed each year.</li> <li>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.</li> <li>5. Unsealed Local Roads are currently mowed/slashed with the outreach mower on a 5 year programme. This is</li> </ol>

		<p>dependent on funding which may affect the "Level of Service". There is no intention of changing the service that Council currently provides.</p> <ol style="list-style-type: none"> <li>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".</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>11. As above</li> <li>12. The policy has been amended to be more stand alone.</li> <li>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</li> </ol>
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		<p>management context would be trees fallen across the track blocking access.</p> <p>14. The policy has been updated.</p> <p>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.</p>
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Submission		Issue
2.	<p>John Court</p> <p>127 Lantana Road, Byabarra</p>	<p>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.</p> <p>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.</p> <p>Separate to this issue is the ongoing danger of local fauna coming upon you suddenly due to high growing roadside vegetation.</p> <p>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.</p>
	<b>Response/ Comment:</b>	<p>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.</p>

Submission		Issue
3.	Ross Smith  67 Kendall Crescent, Bonny Hills	<p>Several items are suggested for Section 2.3 Management Principles: -</p> <p>Add</p> <ul style="list-style-type: none"> <li>• Maintenance of vegetated median strips at road intersections. To provide/maintain clear vision to vehicles turning and/or crossing at intersection.</li> </ul> <p>Include</p> <ul style="list-style-type: none"> <li>• at 'Weed spraying' To extend weed spraying to the full width of the road reserve.</li> </ul> <p>And to reduce "risk" for Section 2.4 Level of Service (2019) :-</p> <p>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.</p>
	<b>Response/Comment:</b>	<p>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.</p> <p>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".</p>

Submission		Issue
4.	Sue Proust  10 Bergalia Crescent, Camden Head	<p>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.</p>

		<p>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.</p>
	<b>Response/ Comment:</b>	<p>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.</p> <p>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.</p>

Submission		Issue
5.	<p>Mark Strain</p> <p>1536 Comboyne Road, Byabarra</p>	<p>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.</p> <p>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.</p> <p>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</p>

		<p>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.</p> <p>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 technologies or satellite 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 crying our eyes out at the hospital, police station, morgue or inquest.</p>
	<b>Response/Comment:</b>	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?
	<b>Response/Comment:</b>	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.
	<b>Response/ Comment:</b>	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

	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
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<b>Response/ Comment:</b>	<p>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.</p> <p>The comments regarding upgrading Lighthouse Road are noted. Council does have future plans to upgrade this road and provide improved pedestrian facilities.</p>
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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.
	<b>Response/ Comment:</b>	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 many 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.
	<b>Response/ Comment:</b>	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.	<p>Blair Maxwell</p> <p>1 Allenwood Street, Camden Head</p>	<p>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.</p> <p>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.</p>
	<b>Response/ Comment</b>	<p>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.</p> <p>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.</p>

Submission		Issue
12.	<p>Penny Small</p> <p>Beach to Beach Shared Pathway Committee</p>	<p>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</p>



	1 River Street Dunbogan	<p>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.</p> <p>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</p>
	<b>Response/ Comment:</b>	<p>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.</p>

Submission	Issue
<p>13. Steven Gates  Port Macquarie Hastings Community Against Ratepayer Exploitation Incorporated  43 Thone River Road, Byabarra</p>	<p>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:</p> <ol style="list-style-type: none"> <li>1. The policy be re-drafted to comply with: <ol style="list-style-type: none"> <li>a. Legislation</li> <li>b. Levels of Service previously stated by Council as existing and the Desired Levels of Service agreed by the Community in 2016</li> <li>c. Levels of Service to reflect the SMART criteria, that is Specific, Measurable, Achievable, Realistic and Timeframe for both Routine and Reactive Maintenance <ol style="list-style-type: none"> <li>i. That is to say, to what exact standard should ratepayers expect to what timeframe to measure and hold Council accountable to</li> </ol> </li> <li>d. The Budget be increased to sustain the SMART Levels of Service using Councils \$320 MILLION + Cash Reserves to: <ol style="list-style-type: none"> <li>i. Provide a safe transport network for all users</li> </ol> </li> </ol> </li> </ol>

		<p>ii. Maintain road assets and reserves consistent with the Roads Act 1993 and Local Government Act 1993</p> <p>2. The Proposed Policy be amended to correct all errors in fact</p> <p>3. The Proposed Policy be redrafted to ensure compliance with the Making of Council Policy including:</p> <p>a. Containing a definition of all words so as to be a self-contained document and remove any ambiguity, including but not limited to:</p> <p>i. Access Track- currently defined in the Unsealed Roads Policy as 10 VDM (vehicle movements per day)</p> <p>1. How this is calculated when no actual measurement is completed by Council on the number of vehicles</p> <p>2. What roads are defined as an Access Track</p> <p>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 or better.</p> <p>4. The Proposed Policy be resubmitted for Community consultation consistent with the Making of Council Policy with:</p> <p>a. All Programs referred to in the Policy</p> <p>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</p> <p>c. The Government Grants allocated in that year relevant to the Proposed Policy</p> <p>d. The Amount of the 2000/01, 2004/05, 2005/06, 2012/13 and 2017/18 SRV that is used in the budget</p> <p>e. An accurate set of data showing exactly what roads were slashed, outreach mowed, weeds poisoned</p> <p>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 rationale 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.</p>
	<b>Response/ Comment:</b>	<p>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</p>

		<p>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.</p> <p>The draft policy has been amended to correct any errors and to provide clearer definition for the interpretation of the policy.</p>
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**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, © Neamap, © Port Macquarie-Hastings Council

**Aerial Image Depicting Land to be Acquired**  
**The Ruins Way Shared Pathway**

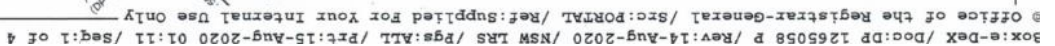
1:2,000 @A3



Printed on 04/09/2020  
Compiled by IR







Unclassified



File Ref. No: BFS19/2102 (7953)  
TRIM Ref. No: D20/14292  
Contact: Edren Ravino

9 March 2020

General Manager  
Port Macquarie-Hastings Council  
PO Box 84  
PORT MACQUARIE NSW 2444

E-mail: [council@pmhc.nsw.gov.au](mailto:council@pmhc.nsw.gov.au)

Attention: Manager Compliance/Fire Safety

Dear General Manager

**Re: INSPECTION REPORT  
'TACKING POINT TAVERN'  
8 EMERALD DRIVE PORT MACQUARIE ("the premises")**

Pursuant to the provisions of Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), an inspection of 'the premises' on 22 June 2019 was conducted by Authorised Fire Officers from the Fire Safety Compliance Unit of Fire and Rescue NSW (FRNSW). The inspection was also conducted in the company of Officers from the NSW Police Force.

The inspection was limited to the following:

- A visual inspection of the essential Fire Safety Measures as identified in this report only.
- A conceptual overview of the building, where an inspection had been conducted without copies of the development consent or copies of the approved floor plans.

On behalf of the Commissioner of FRNSW, the following comments are provided for your information in accordance with Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act. Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting.

Fire and Rescue NSW

ABN 12 593 473 110

[www.fire.nsw.gov.au](http://www.fire.nsw.gov.au)

Community Safety Directorate  
Fire Safety Compliance Unit

1 Amarina Ave  
Greenacre NSW 2190

T (02) 9742 7434  
F (02) 9742 7483

[www.fire.nsw.gov.au](http://www.fire.nsw.gov.au)

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**COMMENTS**

Please be advised that this report is not an exhaustive list of non-compliances however, the proceeding concerns also identifies deviations from the National Construction Code 2019, Volume 1 Building Code of Australia (NCC). Given the concerns are based on observations available at the time FRNSW acknowledges that the deviations may contradict development consent approval. In this regard, it would be at council's discretion as the appropriate regulatory authority to conduct its own investigation and consider the most appropriate action.

The following items were identified as concerns during the inspection:

**1. Essential Fire Safety Measures**

- 1A. Fire Detection Control and Indicating Equipment (FDCIE) – The following comments consider Australian Standard AS1670.1:2015 – 'Fire detection, warning, control and intercom systems—System design, installation and commissioning':
  - A. Zone Block Plan – Clause 3.10 of the Australian Standard 1670.1 -2015 requires a Zone Block Plan to be securely mounted and located adjacent to the fire detection control and indicating equipment (FDCIE). At the time of the inspection, a Zone Block Plan could not be located.
  - B. Heat Detectors – Clause C3.27.1 of Australian Standard AS1670.1 outline the circumstances where smoke detectors can be replaced with heat detectors. Council may need to review its records to confirm whether the circumstances surrounding the installation of heat detectors in various areas of the public area has been approved.
- 1B. Exit signs – Clause 182 of the Environmental Planning and Assessment Regulation 2000 requires that an Essential Fire Safety Measure must be maintained to a standard no less than when it was first installed. A number of exit signs were either not operating when the test button was pressed or were not illuminated.

**2. Access & Egress**

- 2A. Paths of Travel to Fire Exits – Paths of travel from 'the premises' to a fire exit, including the operation of the Fire Exit door must not be obstructed or impeded in accordance with Clause 184 & Clause 186 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation), council may need to review its records to include (but not limited to) the following doors:
  - A. Pub / Bar – The required exit door includes a lever handle that is lockable and appears to prevent egress for persons seeking egress. As it appears that is not readily openable without a key when closed.

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- B. Accordion Doors – The accordion type doors that lead to the beer garden when closed allows a single door to open with a lever type handle. Similarly, this door is lockable and is not readily openable without a key when closed.
  - C. Storeroom – There were a number of items that were stored in the path of egress to the exit.
  - D. Bottle Shop – There were stock items that were displayed and prevented direct egress to the exit.
- 2B. Gaming – The following comments relate to the gaming area of the premises:
- A. Exit Signs – Performance Requirement EP4.2 of the NCC requires that suitable signs be installed to identify the location of exits. At first sight, there are insufficient cues to identify where the exits are located. A review of the exit strategy may be required.
  - B. Sliding exit doors – D2.19(b) of the NCC requires sliding doors that are used as required exits to be able to break open under pressure. The sliding doors that were signposted as required exits did not appear to meet the requirements of opening under pressure.
3. Compartmentation
- 3A. Penetrations – Clause C3.15 and Specification C3.15 of the NCC requires services passing through a building element required to have a Fire Resistance Level (FRL) to be protected by an approved fire stopping system. At the time of the inspection the service pipes in the store room through the ceiling appeared to lack fire collars.
4. Generally
- 4A. Annual Fire Safety Statement (AFSS) – Clause 177(3)(b) of the Environmental Planning and Assessment Regulation 2000 the statement must be prominently displayed in the building, at the time of the inspection the AFSS was produced however it was not displayed. For ease FRNSW prefers the statement be located beside the Fire Indicator Panel. An inspection and a review of council's records may be required.

FRNSW is therefore of the opinion that there are inadequate provisions for fire safety within the building.

**RECOMMENDATIONS**

FRNSW recommends that Council:

- a. Inspect and address any other deficiencies identified on 'the premises', and require item no. 1 through to item no. 4 of this report be addressed appropriately.



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This matter is referred to Council as the appropriate regulatory authority. FRNSW therefore awaits Council's advice regarding its determination in accordance with Schedule 5, Part 8, Section 17(4) of the EP&A Act.

Should you have any enquiries regarding any of the above matters, please do not hesitate to contact Edren Ravino of FRNSW's Fire Safety Compliance Unit on (02) 9742 7434. Please ensure that you refer to file reference BFS19/2102 (7953) for any future correspondence in relation to this matter.

Yours faithfully



Edren Ravino  
Senior Building Surveyor  
Fire Safety Compliance Unit

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**FOR USE BY PLANNERS/SURVEYORS TO PREPARE LIST OF  
PROPOSED CONDITIONS - 2011****NOTE: THESE ARE DRAFT ONLY****DA NO: 2020/252****DATE: 31/08/2020****PRESCRIBED CONDITIONS**

The development is to be undertaken in accordance with the prescribed conditions of Part 6 - Division 8A of the *Environmental Planning & Assessment Regulations 2000*

**A – GENERAL MATTERS**

- (1) (A001) The development is to be carried out in accordance with the plans and supporting documents set out in the following table, as stamped and returned with this consent, except where modified by any conditions of this consent.

Plan / Supporting Document	Reference	Prepared by	Date
Plans	11295	B R Development Consulting	20/2/2020
Statement of Environmental Effects	-	B R Development Consulting	20/3/2020
Bush fire assessment	-	Krisann Johnson	3 August 2020
BASIX Certificate	1084597M, 1085599M, 1086602M	Concept Designs Australia	13 March 2020

In the event of any inconsistency between conditions of this development consent and the plans/supporting documents referred to above, the conditions of this development consent prevail.

- (2) (A002) No building or subdivision work shall commence until a Construction Certificate or Subdivision Works Certificate has been issued and the applicant has notified Council of:
- the appointment of a Principal Certifying Authority; and
  - the date on which work will commence.
- Such notice shall include details of the Principal Certifying Authority and must be submitted to Council at least two (2) days before work commences.
- (3) (A003) The proponent shall submit an application for a Subdivision Certificate for Council certification with all relevant documentation.
- (4) (A005) This consent allows the strata-subdivision of the units, subject to the submission of an application for a Strata Certificate.
- (5) (A008) Any necessary alterations to, or relocations of, public utility services to be carried out at no cost to council and in accordance with the requirements of the relevant authority including the provision of easements over existing and proposed public infrastructure.

- (6) (A009) The development site is to be managed for the entirety of work in the following manner:
1. Erosion and sediment controls are to be implemented to prevent sediment from leaving the site. The controls are to be maintained until the development is complete and the site stabilised with permanent vegetation;
  2. Appropriate dust control measures;
  3. Building equipment and materials shall be contained wholly within the site unless approval to use the road reserve has been obtained. Where work adjoins the public domain, fencing is to be in place so as to prevent public access to the site;
  4. Building waste is to be managed via an appropriate receptacle;
  5. Toilet facilities are to be provided on the work site at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
  6. Building work being limited to the following hours, unless otherwise permitted by Council;
    - Monday to Saturday from 7.00am to 6.00pm
    - No work to be carried out on Sunday or public holidaysThe builder to be responsible to instruct and control his sub-contractors regarding the hours of work.
- (7) (A011) The design and construction of all public infrastructure works shall be in accordance with Council's adopted AUSPEC Specifications.
- (8) (A013) The general terms of approval from the following authorities, as referred to in section 4.50 of the Environmental Planning and Assessment Act 1979, and referenced below, are attached and form part of the consent conditions for this approval.
- **NSW Rural Fire Service** - The General Terms of Approval, Reference DA20200609002022 and dated 14 August 2020, are attached and form part of this consent.
- (9) (A029) The provision, at no cost to Council, of concrete foot paving for the full street frontage of the development along Norman Street. Footpath paving (unless varied in writing by Council) is to be in accordance with AUSPEC and Council Standard drawing ASD103. The design plans must be approved by Council pursuant to Section 138 of the Roads Act.
- (10) (A030) The restoration of any vehicle access or kerb outlet rendered redundant by the development, to standard kerb and footpath formation at no cost to Council, in accordance with Council's current AUSPEC Specifications and Standards. All works must be approved by Council pursuant to Section 138 of the Roads Act.
- (11) (A032) The developer is responsible for any costs relating to minor alterations and extensions to ensure satisfactory transitions of existing roads, drainage and Council services for the purposes of the development.
- (12) (A033) The applicant shall provide security to the Council for the payment of the cost of the following:
- a. making good any damage caused to any property of the Council as a consequence of doing anything to which the consent relates,
  - b. completing any public work (such as road work, kerbing and guttering, footway construction, utility services, stormwater drainage and environmental controls) required in connection with the consent,
  - c. remedying any defects in any such public work that arise within twelve (12) months after the work is completed.

Such security is to be provided to Council prior to the issue of the Subdivision Certificate/Construction Certificate or Section 138 of the Roads Act, 1993.

The security is to be for such reasonable amount as is determined by the consent authority, being an amount that is 10% of the contracted works for Torrens Title subdivision development/the estimated cost plus 30% for building development of public works or \$5000, whichever is the greater of carrying out the development by way of:

- i. deposit with the Council, or
- ii. an unconditional bank guarantee in favour of the Council.

The security may be used to meet any costs referred to above and on application being made to the Council by the person who provided the security any balance remaining is to be refunded to, or at the direction of, that person. Should Council have to call up the bond and the repair costs exceed the bond amount, a separate invoice will be issued. If no application is made to the Council for a refund of any balance remaining of the security within 6 years after the work to which the security relates has been completed the Council may pay the balance to the Chief Commissioner of State Revenue under the Unclaimed Money Act 1995.

- (13) This consent permits the carrying out the development in stages in any order in regards to construction of individual dwellings and/or subdivision of the Torrens title lots.

Unless specified, the conditions of this consent will apply to all stages, with any decision on any discrepancy with conditions and associated staging resting with Council.

#### **B – PRIOR TO ISSUE OF A CONSTRUCTION CERTIFICATE OR SUBDIVISION WORKS CERTIFICATE**

- (1) (B001) Prior to release of the Construction Certificate, approval pursuant to Section 68 of the Local Government Act, 1993 to carry out water supply, stormwater and sewerage works is to be obtained from Port Macquarie-Hastings Council. The following is to be clearly illustrated on the site plan to accompany the application for Section 68 approval:

- Position and depth of the sewer (including junction)
- Stormwater drainage termination point
- Easements
- Water main
- Proposed water meter location

- (2) (B006) An application pursuant to Section 138 of the Roads Act, 1993 to carry out works required by the Development Consent on or within public road is to be submitted to and obtained from Port Macquarie-Hastings Council prior to release of the Construction Certificate.

Such works include, but not be limited to:

- Civil works
- Traffic management
- Work zone areas
- Hoardings
- Concrete foot paving
- Footway and gutter crossing
- Functional vehicular access

- (3) (B003) Submission to the Principal Certifying Authority prior to the issue of a Construction Certificate or Subdivision Works Certificate detailed design plans for

the following works associated with the developments. Public infrastructure works shall be constructed in accordance with Port Macquarie-Hastings Council's current AUSPEC specifications and design plans are to be accompanied by AUSPEC DQS:

1. Road works along frontage.
  2. Sewerage reticulation.
  3. Water supply plans shall include hydraulic plans for internal water supply services and associated works in accordance with AS 3500, Plumbing Code of Australia and Port Macquarie-Hastings Council Policies.
  4. Stormwater systems.
  5. Erosion and sedimentation controls
  6. Location of all existing and proposed utility services including; electricity and communications, water supply, sewerage and stormwater.
  7. Driveway profile and long section in accordance with AS2890, AUSPEC D1 and ASD207/ASD208.
  8. Provision of concrete footpath across the full road frontage of the property along Norman Street, to connect to the existing extents of footpath paving to the north, and to connect into the existing footpath to the south at Laurie Street.
- (4) (B010) Payment to Council, prior to the issue of the Construction or Subdivision Certificate (whichever occurs first) of the Section 7.11 contributions set out in the "Notice of Payment – Developer Charges" schedule attached to this consent unless deferral of payment of contributions has been approved by Council. The contributions are levied, pursuant to the Environmental Planning and Assessment Act 1979 as amended, and in accordance with the provisions of the following plans:
- Port Macquarie-Hastings Administration Building Contributions Plan 2007
  - Hastings S94 Administration Levy Contributions Plan
  - Port Macquarie-Hastings Open Space Contributions Plan 2018
  - Hastings S94 Major Roads Contributions Plan
  - Port Macquarie-Hastings Community Cultural and Emergency Services Contributions Plan 2005

The plans may be viewed during office hours at the Council Chambers located on the corner of Burrawan and Lord Streets, Port Macquarie, 9 Laurie Street, Laurieton, and High Street, Wauchope.

The attached "Notice of Payment" is valid for the period specified on the Notice only. The contribution amounts shown on the Notice are subject to adjustment in accordance with CPI increases adjusted quarterly and the provisions of the relevant plans. Payments can only be made using a current "Notice of Payment" form. Where a new Notice of Payment form is required, an application in writing together with the current Notice of Payment application fee is to be submitted to Council.

- (5) (B011) As part of Notice of Requirements by Port Macquarie-Hastings Council as the Water Authority under Section 306 of the Water Management Act 2000, the payment of a cash contribution, prior to the issue of a Construction or Subdivision Certificate (whichever occurs first), of the Section 64 contributions, as set out in the "Notice of Payment – Developer Charges" schedule attached to this consent unless deferral of payment of contributions has been approved by Council. The contributions are levied in accordance with the provisions of the relevant Section 64 Development Servicing Plan towards the following:

- augmentation of the town water supply headworks
  - augmentation of the town sewerage system headworks
- (6) (B016) Provision to each lot of a separate sewer line to Council's main. All work will need to comply with the requirements of Council's adopted AUSPEC Design and Construction Guidelines and Policies. Any abandoned sewer junctions are to be capped off at Council's sewer main and Council notified to carry out an inspection prior to backfilling of this work.
- Construction details are to be submitted to Port Macquarie-Hastings Council with the application for Subdivision Works Certificate.
- (7) (B024) Submission to Council of an application for water meter hire, which is to be referred to the Water Supply section so that a quotation for the installation can be prepared and paid for prior to the issue of a Construction Certificate. This application is also to include an application for the disconnection of any existing service not required.
- (8) (B037) The finished floor level of the building shall be at least 1050mm above the soffit of Council's sewer main. Details indicating compliance with this are to be submitted to the Principal Certifying Authority with the application for Construction Certificate.
- (9) (B038) Footings and/or concrete slabs of buildings adjacent to sewer lines or stormwater easements are to be designed so that no loads are imposed on the infrastructure. Detailed drawings and specifications prepared by a practising chartered professional civil and/or structural engineer are to be submitted to the Principal Certifying Authority with the application for the Construction Certificate.
- (10) (B071) Prior to the issue of any Construction Certificate, the provision of water and sewer services to the land are to be approved by the relevant Water Authority and relevant payments received.
- (11) (B072) A stormwater drainage design is to be submitted and approved by Council prior to the issue of a Construction Certificate. The design must be prepared in accordance with Council's AUSPEC Specifications and the requirements of Relevant Australian Standards and make provision for the following:

- a) The legal point of discharge for the proposed development is defined as the kerb and gutter of a public road.

In this regard, Council's piped drainage system must be extended by an appropriately sized pipeline (minimum 375mm diameter) to the frontage of the site, where a kerb inlet pit (minimum 2.4m lintel) must be installed, to allow direct piped connection from the development site into the public drainage system.

The pipeline must be designed to have the capacity to convey flows that would be collected at that section of street as generated by a 20 year Average Recurrence Interval storm event.

- b) All allotments must be provided with a direct point of connection to the public piped drainage system. Kerb outlets are not permitted.
- c) The design requires the provision of interallotment drainage in accordance with AUSPEC D5
- d) The design shall incorporate on-site stormwater detention facilities to limit site stormwater discharge to pre development flow rates for all storm events up to and including the 100 year ARI event. Note that pre development discharge shall be calculated assuming that the site is a 'greenfield' development site as per AUSPEC requirements.
- e) Where works are staged, a plan is to be provided which demonstrates which treatment measure/s is/are to be constructed with which civil works stage.

Separate plans are required for any temporary treatment (where applicable e.g. for building phase when a staged construction methodology is adopted) and ultimate design.

- f) An inspection opening or stormwater pit must be installed inside the property, adjacent to the boundary, for all stormwater outlets.
- (13) Prior to the issue of a Construction Certificate, amended plans shall be submitted to the Principal Certifying Authority demonstrating that the combined height of the front fencing and any retaining walls does not exceed 1.8m, and constructed with slat screen infill panels.
- (14) (B195) Prior to issue of the Construction Certificate evidence of lot registration with the lands titles office is to be provided to the Principal Certifying Authority for creation of Lot 2 approved under DA2019 - 392.1.
- (15) Prior to the issue of a Construction Certificate, amended plans shall be submitted to the Principal Certifying Authority removing the "nib" wall from each of the Lounge rooms identified on the floor plans.

#### **C – PRIOR TO ANY WORK COMMENCING ON SITE**

- (1) (C001) A minimum of one (1) week's notice in writing of the intention to commence works on public land is required to be given to Council together with the name of the principal contractor and any major sub-contractors engaged to carry out works. Works shall only be carried out by a contractor accredited with Council.
- (2) (C013) Where a sewer manhole and/or Vertical Inspection Shaft (VIS) exists within a property, access to the manhole/VIS shall be made available at all times. Before during and after construction, the sewer manhole/VIS must not be buried, damaged or act as a stormwater collection pit. No structures, including retaining walls, shall be erected within 1.0 metre of the sewer manhole or located so as to prevent access to the manhole.

#### **D – DURING WORK**

- (1) (D001) Development works on public property or works to be accepted by Council as an infrastructure asset are not to proceed past the following hold points without inspection and approval by Council. Notice of required inspection must be given 24 hours prior to inspection, by contacting Council's Customer Service Centre on (02) 6581 8111. You must quote your Construction Certificate number and property description to ensure your inspection is confirmed:
  - a. at completion of installation of erosion control measures
  - b. at completion of installation of traffic management works
  - c. before commencement of any filling works;
  - d. when trenches are open, stormwater/water/sewer pipes and conduits jointed and prior to backfilling;
  - e. at the completion of each pavement (sub base/base) layer;
  - f. before pouring of kerb and gutter;
  - g. prior to the pouring of concrete for sewerage works and/or works on public property;
  - h. on completion of road gravelling or pavement;
  - i. during construction of sewer infrastructure;
  - j. during construction of water infrastructure;
  - k. prior to sealing and laying of pavement surface course.

All works at each hold point shall be certified as compliant in accordance with the requirements of AUSPEC Specifications for Provision of Public Infrastructure and any other Council approval, prior to proceeding to the next hold point.

- (3) (D006) A copy of the current stamped approved construction plans must be kept on site for the duration of site works and be made available upon request to either the Principal Certifying Authority or an officer of the Council.

**E – PRIOR TO OCCUPATION OR THE ISSUE OF OCCUPATION CERTIFICATE OR SUBDIVISION CERTIFICATE**

- (1) (E001) The premises shall not be occupied or used in whole or in part until an Occupation Certificate has been issued by the Principal Certifying Authority.
- (2) (E005) Prior to the release of any bond securities held by Council for infrastructure works associated with developments, a formal written application is to be submitted to Council specifying detail of works and bond amount.
- (3) (E030) Vehicle ramps, driveways, turning circles and parking spaces being paved, sealed and line marked prior to occupation or the issue of the Occupation Certificate or commencement of the approved land use
- (4) (E051) Prior to occupation or the issuing of any Occupation Certificate a section 68 Certificate of Completion shall be obtained from Port Macquarie-Hastings Council
- (5) (E034) Prior to occupation or the issuing of the Occupation Certificate provision to the Principal Certifying Authority of documentation from Port Macquarie-Hastings Council being the local roads authority certifying that all matters required by the approval issued pursuant to Section 138 of the Roads Act have been satisfactorily completed.
- (6) (E038) Interallotment drainage shall be piped and centrally located within an inter-allotment drainage easement, installed in accordance with Council's current AUSPEC standards (minimum 225mm pipe diameter within a minimum 1.5m easement). Details shall be provided:
- As part of a Local Government Act (s68) application with evidence of registration of the easement with the Land Titles Office provided to Council prior to issue of the s68 Certificate of Completion; or
  - As part of a Subdivision Works Certificate with dedication of the easement as part of any Subdivision Certificate associated with interallotment drainage.
- (7) (E039) An appropriately qualified and practising consultant is to certify the following:
- a. all drainage lines have been located within the respective easements, and
  - b. any other drainage structures are located in accordance with the Construction Certificate.
  - c. all stormwater has been directed to a Council approved drainage system
  - d. all conditions of consent/ construction certificate approval have been complied with.
  - e. Any on site detention system (if applicable) will function hydraulically in accordance with the approved Construction Certificate.
- (8) (E046) Prior to the issue of an Occupation Certificate, a positive covenant is to be created under Section 88E of the Conveyancing Act 1919, burdening the owner(s) with the requirement to maintain the on-site stormwater detention facilities on the property.

The terms of the 88E instrument with positive covenant shall include, but not be limited to, the following:



- a. The Proprietor of the property shall be responsible for maintaining and keeping clear all pits, pipelines, trench barriers and other structures associated with the on-site stormwater detention facilities ("OSD").
- b. The Proprietor shall have the OSD inspected annually by a competent person.
- c. The Council shall have the right to enter upon the land referred to above, at all reasonable times to inspect, construct, install, clean, repair and maintain in good working order all pits, pipelines, trench barriers and other structures in or upon the said land which comprise the OSD or which convey stormwater from the said land; and recover the costs of any such works from the proprietor.
- d. The registered proprietor shall indemnify the Council and any adjoining land owners against damage to their land arising from the failure of any component of the OSD, or failure to clean, maintain and repair the OSD.

The proprietor or successor must bear all costs associated in the preparation of the subject 88E instrument. Evidence of registration with the Lands and Property Information NSW shall be submitted to and approved by the Principal Certifying Authority prior to the issue of an Occupation Certificate.

- (9) (E053) All works relating to public infrastructure shall be certified by a practicing Civil Engineer or Registered Surveyor as compliant with the requirements of AUSPEC prior to issue of Occupation/Subdivision Certificate or release of the security bond, whichever is to occur first.
- (10) (E058) Written confirmation being provided to the Principal Certifying Authority (PCA) from any properly qualified person (eg the builder), stating that all commitments made as part of the BASIX Certificate have been completed in accordance with the certificate.
- (11) (E061) Landscaped areas being completed prior to occupation or issue of the Certificate.
- (12) (E056) A Certificate of Compliance under the provisions of Section 307 of the Water Management Act must be obtained prior to the issue of any occupation or subdivision certificate. The application for the certificate is to include an acceptable Work-As-Executed plan for water and sewer mains and services from a Professional Engineer or Registered Surveyor.
- (13) (E066) Ancillary works shall be undertaken at no cost to Council to make the engineering works required by this Consent effective to the satisfaction of Director of Council's Infrastructure Division. Such works shall include, but are not limited to the following:
  - a. The relocation of underground services where required by civil works being carried out
  - b. The relocation of above ground power and telephone services
  - c. The matching of new infrastructure into existing or future design infrastructure
- (14) (E068) Prior to the issue of a Subdivision or Occupation Certificate, whichever occurs first, evidence to the satisfaction of the Certifying Authority from the electricity and telecommunications providers that satisfactory services arrangements have been made to the lots or dwellings (including street lighting and fibre optic cabling where required).
- (15) Prior to issue of a Subdivision Certificate, an interallotment drainage system, and associated 1.5m wide easement for drainage must be provided. The easement and interallotment system, must comply with the requirements of AUSPEC D5.

- (16) (E072) Lodgement of a security deposit with Council upon practical completion of the subdivision works
- (17) (E079) Submission to the Principal Certifying Authority of certification by a Registered Surveyor prior to the issue of a Subdivision Certificate that all services and domestic drainage lines are wholly contained within the respective lots and easements.
- (18) (E082) Submission of a compliance certificate accompanying Works as Executed plans with detail included as required by Council's current AUSPEC Specifications. The information is to be submitted in electronic format in accordance with Council's "CADCHECK" requirements detailing all infrastructure for Council to bring in to account its assets under the provisions of AAS27. This information is to be approved by Council prior to issue of the Subdivision or Occupation Certificate. The copyright for all information supplied, shall be assigned to Council.
- (19) (E195) The Strata subdivision certificate shall not be issued until such time that the dwellings associated with this development are substantially commenced (as determined by Council) or where a strata management statement, or restriction as to user, prohibits any dwelling on each lot other than the dwelling approved as part of this consent.
- (20) Before the release of the occupation or strata subdivision certificate, 1.8m high boundary fence is to be erected on all side and rear boundaries. This is to include 0.4m privacy screening above the rear boundary fence line.

**F – OCCUPATION OF THE SITE**

- (1) (F004) The dwellings are approved for permanent residential use and not for short term tourist and visitor accommodation.
- (2) (F035) The consent only permits the use of each unit as a single dwelling only and does not permit the adaption or use of any building so as to create an additional occupancy.

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Item: 05

Subject: DA2020 - 252.1 MULTI DWELLING HOUSING WITH TORRENS AND STRATA TITLE SUBDIVISION AT LOT 7 DP 758603, NO. 53 NORMAN STREET LAURIETON

Report Author: Development Assessment Planner, Steven Ford

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Applicant: B R Development Pty Ltd  
Owner: Halcyon Development Pty Ltd  
Estimated Cost: \$1,200,000  
Parcel no: 14756

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**Alignment with Delivery Program**

4.3.1 Undertake transparent and efficient development assessment in accordance with relevant legislation.

**RECOMMENDATION**

That DA2020 - 252.1 for a Multi Dwelling Housing with Torrens and Strata Title Subdivision at Lot 7, DP 14, No. 53 Norman Street, Laurieton, be determined by granting consent subject to the recommended conditions.

**Executive Summary**

This report considers a development application for Multi Dwelling Housing with Torrens and Strata Title Subdivision at the subject site and provides an assessment of the application in accordance with the Environmental Planning and Assessment Act 1979.

Following exhibition of the application, one (1) submission was received.

The site is considered suitable for the proposed development and the proposal adequately addresses relevant planning controls. The development is not considered to be contrary to the public's interest and will not result a significant adverse social, environmental or economic impact.

This report recommends that the development application be approved subject to the attached conditions (**Attachment 1**).

**1. BACKGROUND****Existing Sites Features and Surrounding Development**

The site has an area of 2020m<sup>2</sup>.



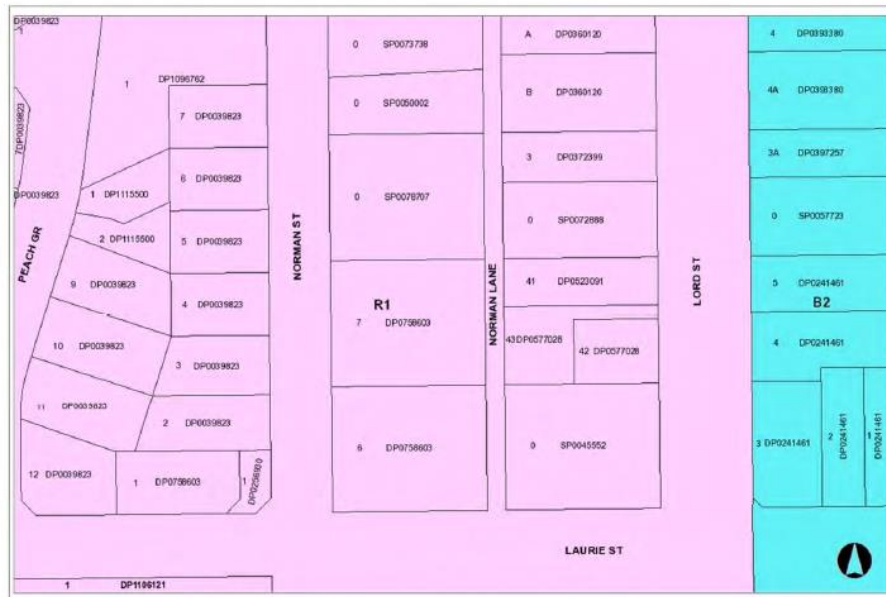
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The site is zoned R1 general residential in accordance with the Port Macquarie-Hastings Local Environmental Plan 2011, as shown in the following zoning plan:



The existing subdivision pattern and location of existing development within the locality is shown in the following aerial photograph:



**AGENDA****DEVELOPMENT ASSESSMENT PANEL  
09/09/2020****2. DESCRIPTION OF DEVELOPMENT**

Key aspects of the proposal include the following:

- Proposed development to occur on approved future Lot 2 of DA2019 - 392 - 1 into 2 lot subdivision.
- 1 into 3 Lot Torrens Title subdivision.
- Construction of 6 x 2 Bedroom Dwellings with Strata Subdivision.

Refer to **Attachment 2** at the end of this report for plans of the proposed development.

**Application Chronology**

- 15 April 2020 - Application Received.
- 28 April to 11 May 2020 - Neighbour notification.
- 3 August 2020 - Additional Information Received - Amended Bushfire Assessment.

**3. STATUTORY ASSESSMENT****Section 4.15(1) Matters for Consideration**

In determining the application, Council is required to take into consideration the following matters as are relevant to the development that apply to the land to which the development application relates:

- (a) **The provisions (where applicable) of:**  
(i) **Any Environmental Planning Instrument**

**State Environmental Planning Policy (Koala Habitat Protection) 2019**

Clause 10 - The site isn't identified on the Koala Development Application Map or under a Koala Plan of Management and the land has an area less than 1 hectare including adjoining land in the same ownership. The SEPP does not prevent the granting of consent on the land being less than 1 hectare in area. The application has also demonstrated that no habitat will be removed or modified therefore no further investigations are required.

**State Environmental Planning Policy No. 55 - Remediation of Land**

Following an inspection of the site and a search of Council records, the subject land is not identified as being potentially contaminated and is suitable for the intended use.

**State Environmental Planning Policy (Coastal Management) 2018**

The site is located within a coastal environment area.

Clause 7 - This SEPP prevails over the Port Macquarie-Hastings LEP 2011 in the event of any inconsistency.

Having regard to clauses 13 of the SEPP the proposed development is not considered likely to result in any of the following:

- a) any adverse impact on integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment;





**AGENDA****DEVELOPMENT ASSESSMENT PANEL  
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- b) any adverse impacts coastal environmental values and natural coastal processes;
- c) any adverse impact on marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms;
- d) any adverse impact on Aboriginal cultural heritage, practices and places;
- e) any adverse impacts on the cultural and built environment heritage;
- f) any adverse impacts the use of the surf zone;
- g) any adverse impact on the visual amenity and scenic qualities of the coast, including coastal headlands;
- h) overshadowing, wind funnelling and the loss of views from public places to foreshores; and
- i) any adverse impacts on existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability.

Clause 15 - The proposal is not likely to cause increased risk of coastal hazards on the land or other land.

The bulk, scale and size of the proposed development is compatible with the surrounding coastal and built environment. The site is predominately cleared and located within an area zoned for residential purposes.

**State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004**

BASIX certificates (number 1084597M, 1086599M and 1086602M) have been submitted demonstrating that the proposal will comply with the requirements of the SEPP. It is recommended that a condition be imposed to ensure that the commitments are incorporated into the development and certified at Occupation Certificate stage.

**Port Macquarie-Hastings Local Environmental Plan 2011**

The proposal is consistent with the LEP having regard to the following:

- Clause 2.2 - The subject site is zoned R1 General Residential.
- Clause 2.3(1) and the R1 zone landuse table- The proposed development for multi dwelling housing is a permissible landuse with consent.  
  
The objectives of the R1 zone are as follows:
  - 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.
- Clause 2.3(2) - The proposal is consistent with the zone objectives having regard to the following:
  - The proposal is a permissible landuse;
  - The development would provide for a variety of housing types and densities in the locality and contribute to meeting the housing needs of the community.
- Clause 4.1 and 4.1A - The minimum lot sizes do not apply to the proposal as it is characterised as multi dwelling housing development with Strata Subdivision.
- Clause 4.3 - The maximum overall height of the building above ground level (existing) is a maximum 6 m which complies with the standard height limit of 8.5 m applying to the site.



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- Clause 4.4 - The floor space ratio of the proposal is 0.62:1.0 which complies with the maximum 1:1 floor space ratio applying to the site.
- Clause 5.10 - Heritage. The site does not contain or adjoin any known heritage items or sites of significance.
- Clause 7.13 - Satisfactory arrangements are in place for provision of essential services including water supply, electricity supply, sewer infrastructure, stormwater drainage and suitable road access to service the development. Provision of electricity will be subject to obtaining satisfactory arrangements certification prior to the issue of a Subdivision Certificate as recommended by a condition of consent.

## (ii) Any draft instruments that apply to the site or are on exhibition

No draft instruments apply to the site.

## (iii) Any Development Control Plan in force

## Port Macquarie-Hastings Development Control Plan 2013

<b>DCP 2013: Dwellings, Dual occupancies, Dwelling houses, Multi dwelling houses &amp; Ancillary development</b>			
	<b>Requirements</b>	<b>Proposed</b>	<b>Complies</b>
3.2.2.2	Articulation zone: <ul style="list-style-type: none"> <li>• Min. 3m front setback</li> <li>• An entry feature or portico</li> <li>• A balcony, deck, patio, pergola, terrace or verandah</li> <li>• A window box treatment</li> <li>• A bay window or similar feature</li> <li>• An awning or other feature over a window</li> <li>• A sun shading feature</li> </ul>	No elements within the articulation zone.	N/A
	Front setback (Residential not R5 zone): <ul style="list-style-type: none"> <li>• Min. 4.5m local road</li> </ul>	Front building line setback for each proposed unit is a minimum 4.5m which satisfies the requirements of this clause.	Yes
3.2.2.3	Garage 5.5m min. and 1m behind front façade. Garage door recessed behind building line or eaves/overhangs provided	Garages setback a minimum 5.5m from front boundary. Requirements are complied with.	Yes
	6m max. width of garage door/s and 50% max. width of building	All proposed units have a single garage, less than 1/3 of the proposed unit width. Requirements are complied with.	Yes
	Driveway crossover 1/3 max. of site	3x shared driveway	Yes



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## DEVELOPMENT ASSESSMENT PANEL

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**DCP 2013: Dwellings, Dual occupancies, Dwelling houses, Multi dwelling houses & Ancillary development**

	Requirements	Proposed	Complies
	frontage and max. 5.0m width	crossings. Maximum driveway crossing is width is 6m (or 3m at each strata frontage). Driveway crossovers have been kept to a minimum. Allows stacked off street parking opportunity in front of garage doors. Shared driveways softens impact to street amenity. This is considered an acceptable outcome in this instance as objectives of this clause have been satisfied.	
3.2.2.4	4m min. rear setback. Variation subject to site analysis and provision of private open space	The rear setback provisions only apply to Lot 3. Objectives have been addressed below.	No*
3.2.2.5	Side setbacks: <ul style="list-style-type: none"> <li>Ground floor = min. 0.9m</li> <li>First floors &amp; above = min. 3m setback or where it can be demonstrated that overshadowing not adverse = 0.9m min.</li> <li>Building wall set in and out every 12m by 0.5m</li> </ul>	Northern boundary: Unit 1 - 0.98m Unit 3 - 1.53m  Southern Boundary: Unit 6 - 0.98m  All other side boundaries are internal facing and achieve a minimum 0.9m setback. The minimum side setback requirements are complied with. The wall articulation satisfies the objectives of the development provision.	Yes
3.2.2.6	35m <sup>2</sup> min. private open space area including a useable 4x4m min. area which has 5% max. grade	Each occupancy contains 35m <sup>2</sup> open space in the rear yard including a	Yes



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Attachment 2

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<b>DCP 2013: Dwellings, Dual occupancies, Dwelling houses, Multi dwelling houses &amp; Ancillary development</b>			
	<b>Requirements</b>	<b>Proposed</b>	<b>Complies</b>
		useable 4m x 4m area.	
3.2.2.7	Front fences: <ul style="list-style-type: none"> <li>If solid 1.2m max height and front setback 1.0m with landscaping</li> <li>3x3m min. splay for corner sites</li> <li>Fences &gt;1.2m to be 1.8m max. height for 50% or 6.0m max. length of street frontage with 25% openings</li> <li>0.9x0.9m splays adjoining driveway entrances</li> </ul>	The proposed front fence design is considered to meet the fencing provisions and objectives of DCP 2013. Provides privacy and casual surveillance. No adverse impacts will occur.	Yes
3.2.2.8	Front fences and walls to have complimentary materials to context No chain wire, solid timber, masonry or solid steel front fences	The front courtyard to each Unit provides both security and casual surveillance with slat screen infill panels. Fencing design complies.	Yes
3.2.2.10	Privacy: <ul style="list-style-type: none"> <li>Direct views between living areas of adjacent dwellings screened when within 9m radius of any part of window of adjacent dwelling and within 12m of private open space areas of adjacent dwellings. ie. 1.8m fence or privacy screening which has 25% max. openings and is permanently fixed</li> <li>Privacy screen required if floor level &gt; 1m height, window side/rear setback (other than bedroom) is less than 3m and sill height less than 1.5m</li> <li>Privacy screens provided to balconies/verandahs etc which have &lt;3m side/rear setback and floor level height &gt;1m</li> </ul>	The development will not compromise privacy in the area due to a combination of building design and fencing.	Yes

<b>DCP 2013: General Provisions</b>			
	<b>Requirements</b>	<b>Proposed</b>	<b>Complies</b>
2.7.2.2	Design addresses generic principles of Crime Prevention Through Environmental Design guideline	No concealment or entrapment areas proposed. Adequate casual surveillance available.	Yes



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<b>DCP 2013: General Provisions</b>			
	<b>Requirements</b>	<b>Proposed</b>	<b>Complies</b>
2.3.3.1	Cut and fill 1.0m max. 1m outside the perimeter of the external building walls	Cut and fill <1.0m change 1m outside the perimeter of the external building walls	Yes
2.3.3.2	1m max. height retaining walls along road frontage	No retaining walls greater than 1m proposed.	N/A
	Any retaining wall >1.0 in height to be certified by structure engineer	No retaining wall likely >1m Condition recommended to require engineering certification	Yes
	Combination of retaining wall and front fence height max 1.8m, max length 6.0m or 30% of frontage, fence component 25% transparent, and splay at corners and adjacent to driveway	The submitted plans show retaining walls inside of the front boundary of Unit 1 - 0.7m and Unit 2 - 0.2m. 1.8m high combination fence is achievable. No front fence will be longer than 6m and capable of incorporating landscaping. A condition has been recommended requiring plans to be amended demonstrating no front fence greater than 1.8m on the Construction Certificate plans.	Yes
2.3.3.8	Removal of hollow bearing trees	No hollow bearing trees have been identified.	N/A
2.6.3.1	Tree removal (3m or higher with 100mm diameter trunk at 1m above ground level and 3m from external wall of existing dwelling)	Tree over 3 m to be removed are Landscaping/fruit trees at the North West corner of the site.	N/A
2.4.3	Bushfire risk, Acid sulphate soils, Flooding, Contamination, Airspace protection, Noise and Stormwater	Refer to main body of report.	
2.5.3.2	New accesses not permitted from arterial or distributor roads	No new access proposed to arterial or distributor road.	N/A
	Driveway crossing/s minimal in number and width including	Driveway crossings are minimal in width	Yes



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<b>DCP 2013: General Provisions</b>			
	<b>Requirements</b>	<b>Proposed</b>	<b>Complies</b>
	maximising street parking	including maximising street parking	
2.5.3.3	Parking in accordance with Table 2.5.1. <u>Dwelling/dual occupancies</u> 1 space per dwelling/occupancy (behind building line). <u>Multi dwelling</u> 1 space per 1 & 2 bedroom occupancies 1.5 spaces per 3+ bedroom occupancies 0.25 spaces per occupancy for visitor parking.	Proposal involves 6 x 2 bedroom units. Therefore, 6 x 1 space + 6 x 0.25 visitor spaces = 7.5 spaces required, which rounds to 8 spaces. The development proposes 6 x single garages and each driveway has the opportunity for stacked parking in front of each garage door.	Yes
2.5.3.11	Section 94 contributions	Contributions apply - refer to ET calc and NOP.	Yes
2.5.3.12 and 2.5.3.13	Landscaping of parking areas	Suitable landscaping capable around driveway/parking locations.	Yes
2.5.3.14	Sealed driveway surfaces unless justified	Sealed driveway areas proposed.	Yes
2.5.3.15 and 2.5.3.16	Driveway grades first 6m or 'parking area' shall be 5% grade with transitions of 2m length	Driveway grades capable of satisfying Council standard driveway crossover requirements. Condition recommended for section 138 Roads Act permit	Yes
2.5.3.17	Parking areas to be designed to avoid concentrations of water runoff on the surface.	Stormwater drainage is capable of being managed as part of plumbing construction.	Yes

Note: Subdivision provisions of the DCP (except battleaxe handle width) are aimed at the creation of vacant lots (i.e. not lots within an integrated housing proposal such as this) and have therefore been excluded from the above assessment. Servicing requirements are discussed later in this report.

The proposal seeks to vary Development Provision relating to 3.2.2.4 - Rear setbacks

The relevant objectives are:

- *To ensure no adverse overshadowing or privacy impacts to neighbouring properties.*



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- *To allow adequate natural light and ventilation between dwellings/buildings and to private open space areas.*
- *To provide useable yard areas and open space.*

Having regard for the development provisions and relevant objectives, the variation is considered acceptable for the following reasons:

- Proposed rear boundaries are inward facing to the development.
- Each unit has 2.0m setback to proposed rear boundary, internally, giving 4.0m separation the rear building line of each unit.
- Each unit has 4x4m outdoor living area, and minimum private open space of 35m<sup>2</sup> min.
- Side setback for each unit is 0.9m and single level build, providing low impact to neighbouring properties.
- Due to single storey, there are no identifiable adverse impacts.

Based on the above assessment, the variations proposed to the provisions of the DCP are considered acceptable and the relevant objectives have been satisfied. Cumulatively, the variations do not amount to an adverse impact or a significance that would justify refusal of the application.

**(iia) Any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4**

No planning agreement has been offered or entered into relating to the site.

**(iv) Any matters prescribed by the Regulations**

N/A

**(b) The likely impacts of that development, including environmental impacts on both the natural and built environments, social and economic impacts in the locality**

**Context and setting**

- The proposal will be unlikely to have any adverse impacts to existing adjoining properties and satisfactorily addresses the public domain.
- The proposal is considered to be consistent with other residential development in the locality and adequately addresses planning controls for the area.
- There are no adverse impacts on existing view sharing.
- There are no adverse privacy impacts.
- There are no adverse overshadowing impacts. The proposal does not prevent adjoining properties from receiving 3 hours of sunlight to private open space and primary living areas on 21 June.

**Roads**

The site has road frontage Norman Street to the West, and Norman Lane to the East. Norman Street is a sealed public road under the care and control of Council. Norman Street is classified within AUSPEC as a Local Road with a 20m Reserve Width and a 10m Carriageway. It has existing SA ("upright") kerb and gutter, and intermittent 1.2m wide pedestrian paths along the Eastern Verge from infill development by others.





**AGENDA****DEVELOPMENT ASSESSMENT PANEL  
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Norman Lane is also is a sealed public road under the care and control of Council, originally constructed to provided "back lane" secondary access to dwellings with primary access from Norman Street and Lord Street. It is a single lane access way with a relatively narrow 6m Reserve Width and a 3.5m Carriageway. It has intermittent SE ("Layback") kerb and gutter, which is present on the Western Side only where subject site fronts the site.

**Traffic and Transport**

The addition in traffic associated with the development is unlikely to have any adverse impacts to the existing road network within the immediate locality. The existing carriageway width in Norman Lane of 3.5m and road reserve width of 6m which was never intended to have primary frontage to lots. As a consequence of infill development, the lane currently provides primary vehicular to approximately 7 existing dwellings and secondary vehicular access to another 7. This proposed development would take the total number of dwellings with primary vehicular access to 11, which if a greenfield site would be required by AUSPEC to have an Access Place (carriageway width 5.5m-7m, road reserve width 13.5m-15m). It is also noted that this is one of the last vacant lots along this section of Norman Lane to be developed. The accumulative impact of the proposed development will not adversely impact the lane in such that there is reasonable cause for this development to be required to upgrade the pavement of the lane.

**Site Frontage and Access**

Proposed Lot 1 has direct frontage to Norman Street, and subsequently proposed access is via a single driveway to service the proposed Lot 1 duplex.

Proposed Lot 2 and 3 have direct frontage to Norman Lane, and subsequently each lot will have a separate driveway to service the proposed duplex on each respective lot.

Due to the type and size of development, additional works are required and will include concrete footpath paving (minimum 1.2m wide) along the full frontage to Norman Street.

**Parking and Manoeuvring**

A total of 6 parking spaces have been provided on-site within garages with additional parking provided available within the driveway. Parking and driveway widths on site can comply with relevant Australian Standards (AS 2890) and conditions have been imposed to reflect these requirements.

No on-street parking is possible on Norman Lane, and subsequently it would reasonably be expected that proposed Lot 2 and 3 would utilise Norman Street for on-street parking.

**Water Supply Connection**

Each dwelling requires a separate metered water connection to Council's water main. Any required water main extension is to be at no cost to Council. All design and works shall be in accordance with Council's adopted AUSPEC Specifications.

Final water service sizing will need to be determined by a hydraulic consultant to suit the development as well as addressing fire service coverage to AS 2419 and backflow protection.

Detailed plans will be required to be submitted for assessment with the S.68 application.



**AGENDA****DEVELOPMENT ASSESSMENT PANEL  
09/09/2020****Sewer Connection**

Each Torrens Title lot requires a separate line to Council's sewer main. Any required sewer main extension is to be at no cost to Council. Any abandoned sewer junctions are to be capped off at Council's sewer main. All design and works shall be in accordance with Council's adopted AUSPEC Specifications.

Detailed plans will be required to be submitted for assessment with the S.68 application.

**Stormwater**

A detailed site stormwater management plan will be required to be submitted for assessment with the S.68 application and prior to the issue of a CC.

In accordance with Council's AUSPEC requirements, the following must be incorporated into the stormwater drainage plan:

- On site stormwater detention facilities
- Provision of interallotment drainage to allow the proposed development to drain to the nominated point of discharge via a single suitably sized conduit

**Other Utilities**

Telecommunication and electricity services are available to the site. Evidence of satisfactory arrangements with the relevant utility authorities for provision to each proposed lot will be required prior to Subdivision Certificate approval.

**Heritage**

No known items of Aboriginal or European heritage significance exist on the property. No adverse impacts anticipated. The site is in a residential context and considered to be disturbed land.

**Other land resources**

The site is within an established urban context and will not sterilise any significant mineral or agricultural resource.

**Water cycle**

The proposed development will not have any significant adverse impacts on water resources and the water cycle.

**Soils**

The proposed development will not have any significant adverse impacts on soils in terms of quality, erosion, stability and/or productivity subject to a standard condition requiring erosion and sediment controls to be in place prior to and during construction.

**Air and microclimate**

The construction and/or operations of the proposed development will not result in any significant adverse impacts on the existing air quality or result in any pollution. Standard precautionary site management condition recommended.

**Flora and fauna**

Construction of the proposed development will not require any removal/clearing of any native vegetation and therefore does not trigger the biodiversity offsets scheme. Part 7 of the Biodiversity Conservation Act 2016 is considered to be satisfied.



**AGENDA****DEVELOPMENT ASSESSMENT PANEL  
09/09/2020****Waste**

Satisfactory arrangements are in place for proposed storage and collection of waste and recyclables. No adverse impacts anticipated. Standard precautionary site management condition recommended.

**Energy**

The proposal includes measures to address energy efficiency and will be required to comply with the requirements of BASIX.

**Noise and vibration**

The construction and/or operations of the proposed development will not result in any significant adverse impacts on the existing air quality or result in any pollution. Standard precautionary site management condition recommended.

**Bushfire**

The site is identified as being bushfire prone.

In accordance with Section 100B - *Rural Fires Act 1997* - the application proposes subdivision of bush fire prone land that could lawfully be used for residential purposes. As a result, the applicant has submitted a bushfire report together with additional information that has been received during the assessment of the DA prepared by a Certified Consultant. The report was forwarded to the NSW Rural Fire Service who have since issued a Bushfire Safety Authority, which will be incorporated into the consent.

**Safety, security and crime prevention**

The proposed development will be unlikely to create any concealment/entrapment areas or crime spots that would result in any identifiable loss of safety or reduction of security in the immediate area. The increase in housing density will improve natural surveillance within the locality and openings from each dwelling overlook common and private areas.

**Social impacts in the locality**

Given the nature of the proposed development and its location the proposal is not considered to have any significant adverse social impacts.

**Economic impact in the locality**

The proposal is not considered to have any significant adverse economic impacts on the locality. A likely positive impact is that the development will maintain employment in the construction industry, which will lead to flow impacts such as expenditure in the area.

**Site design and internal design**

The proposed development design satisfactorily responds to the site attributes and will fit into the locality. No adverse impacts likely.

**Construction**

Construction impacts are considered capable of being managed, standard construction and site management conditions have been recommended.

**Cumulative impacts**

**AGENDA****DEVELOPMENT ASSESSMENT PANEL  
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The proposed development is not considered to have any significant adverse cumulative impacts on the natural or built environment or the social and economic attributes of the locality.

**(c) The suitability of the site for the development**

The proposal will fit into the locality and the site attributes are conducive to the proposed development.

Site constraints of bushfire risk have been adequately addressed and appropriate conditions of consent recommended.

**(d) Any submissions made in accordance with this Act or the Regulations**

One (1) written submission was received following public exhibition of the application. A copy of the written submission has been provided separately to members of the DAP.

Key issues raised in the submission received and comments are provided as follows:

Submission Issue/Summary	Planning Comment/Response
Privacy impacts to adjoining developments due to alfresco areas and windows proximity to boundaries.	<p>The proposal complies with the minimum requirements of the DCP for side setbacks. Due to a combination of a single storey development and the site's minimal slope, private open space will be adequately screened with boundary fences and visual privacy maintained. Additional screening is not considered necessary in this instance.</p> <p>Due to no variations of the minimum side setbacks, no adverse impacts are identifiable. The perceived impacts are not considered to be sufficient grounds to refuse the application or seek any further remedy via conditions of consent.</p>

**(e) The Public Interest**

The proposed development satisfies relevant planning controls and will not adversely impact on the wider public interest.

**Ecologically Sustainable Development and Precautionary Principle**

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes.

The four principles of ecologically sustainable development are:

- the precautionary principle,
- intergenerational equity,
- conservation of biological diversity and ecological integrity,
- improved valuation, pricing and incentive mechanisms.

The principles of ESD require that a balance needs to be struck between the man-made development and the need to retain the natural vegetation. Based on the assessment provided in the report and with recommended conditions of consent, it is considered an appropriate balance has been struck.





**AGENDA****DEVELOPMENT ASSESSMENT PANEL  
09/09/2020****Climate change**

The proposal is not considered to be vulnerable to any risks associated with climate change.

**4. DEVELOPMENT CONTRIBUTIONS APPLICABLE**

- Development contributions will be required towards augmentation of town water supply and sewerage system head works under Section 64 of the Local Government Act 1993.
- Development contributions will be required in accordance with Section 7.11 of the Environmental Planning and Assessment Act 1979 towards roads, open space, community cultural services, emergency services and administration buildings.
- For the purposes of Development Contributions, the layout of each dwelling in the development, and the adaptability of the living areas as habitable rooms, the development was levied as 6 x 3 bedroom dwellings.
- A copy of the contributions estimate is included as **Attachment 3**.

**5. CONCLUSION AND STATEMENT OF REASON**

The application has been assessed in accordance with Section 4.15 of the Environmental Planning and Assessment Act 1979.

Issues raised during assessment and public exhibition of the application have been considered in the assessment of the application. Where relevant, conditions have been recommended to manage the impacts attributed to these issues.

The site is considered suitable for the proposed development and the proposal adequately addresses relevant planning controls. The development is not considered to be contrary to the public's interest and will not result a significant adverse social, environmental or economic impact. It is recommended that the application be approved, subject to the recommended conditions of consent provided in the attachment section of this report.

**Attachments**

1. DA2020 - 252.1 Recommended Conditions
2. DA2020 - 252.1 Plans
3. DA2020 - 252.1 Contributions Estimate



**FOR USE BY PLANNERS/SURVEYORS TO PREPARE LIST OF  
PROPOSED CONDITIONS - 2011****NOTE: THESE ARE DRAFT ONLY****DA NO: 2020/252****DATE: 31/08/2020****PRESCRIBED CONDITIONS**

The development is to be undertaken in accordance with the prescribed conditions of Part 6 - Division 8A of the *Environmental Planning & Assessment Regulations 2000*

**A - GENERAL MATTERS**

- (1) (A001) The development is to be carried out in accordance with the plans and supporting documents set out in the following table, as stamped and returned with this consent, except where modified by any conditions of this consent.

Plan / Supporting Document	Reference	Prepared by	Date
Plans	11295	B R Development Consulting	20/2/2020
Statement of Environmental Effects	-	B R Development Consulting	20/3/2020
Bush fire assessment	-	Krisann Johnson	3 August 2020
BASIX Certificate	1084597M. 1085599M. 1086602M	Concept Designs Australia	13 March 2020

In the event of any inconsistency between conditions of this development consent and the plans/supporting documents referred to above, the conditions of this development consent prevail.

- (2) (A002) No building or subdivision work shall commence until a Construction Certificate or Subdivision Works Certificate has been issued and the applicant has notified Council of:
- the appointment of a Principal Certifying Authority; and
  - the date on which work will commence.
- Such notice shall include details of the Principal Certifying Authority and must be submitted to Council at least two (2) days before work commences.
- (3) (A003) The proponent shall submit an application for a Subdivision Certificate for Council certification with all relevant documentation.
- (4) (A005) This consent allows the strata-subdivision of the units, subject to the submission of an application for a Strata Certificate.
- (5) (A008) Any necessary alterations to, or relocations of, public utility services to be carried out at no cost to council and in accordance with the requirements of the relevant authority including the provision of easements over existing and proposed public infrastructure.

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- (6) (A009) The development site is to be managed for the entirety of work in the following manner:
1. Erosion and sediment controls are to be implemented to prevent sediment from leaving the site. The controls are to be maintained until the development is complete and the site stabilised with permanent vegetation;
  2. Appropriate dust control measures;
  3. Building equipment and materials shall be contained wholly within the site unless approval to use the road reserve has been obtained. Where work adjoins the public domain, fencing is to be in place so as to prevent public access to the site;
  4. Building waste is to be managed via an appropriate receptacle;
  5. Toilet facilities are to be provided on the work site at the rate of one toilet for every 20 persons or part of 20 persons employed at the site;
  6. Building work being limited to the following hours, unless otherwise permitted by Council:
    - Monday to Saturday from 7.00am to 6.00pm
    - No work to be carried out on Sunday or public holidaysThe builder to be responsible to instruct and control his sub-contractors regarding the hours of work.
- (7) (A011) The design and construction of all public infrastructure works shall be in accordance with Council's adopted AUSPEC Specifications.
- (8) (A013) The general terms of approval from the following authorities, as referred to in section 4.50 of the Environmental Planning and Assessment Act 1979, and referenced below, are attached and form part of the consent conditions for this approval.
- NSW Rural Fire Service - The General Terms of Approval, Reference DA20200609002022 and dated 14 August 2020, are attached and form part of this consent.
- (9) (A029) The provision, at no cost to Council, of concrete foot paving for the full street frontage of the development along Norman Street. Footpath paving (unless varied in writing by Council) is to be in accordance with AUSPEC and Council Standard drawing ASD103. The design plans must be approved by Council pursuant to Section 138 of the Roads Act.
- (10) (A030) The restoration of any vehicle access or kerb outlet rendered redundant by the development, to standard kerb and footpath formation at no cost to Council, in accordance with Council's current AUSPEC Specifications and Standards. All works must be approved by Council pursuant to Section 138 of the Roads Act.
- (11) (A032) The developer is responsible for any costs relating to minor alterations and extensions to ensure satisfactory transitions of existing roads, drainage and Council services for the purposes of the development.
- (12) (A033) The applicant shall provide security to the Council for the payment of the cost of the following:
- a. making good any damage caused to any property of the Council as a consequence of doing anything to which the consent relates;
  - b. completing any public work (such as road work, kerbing and guttering, footway construction, utility services, stormwater drainage and environmental controls) required in connection with the consent;
  - c. remedying any defects in any such public work that arise within twelve (12) months after the work is completed.

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Such security is to be provided to Council prior to the issue of the Subdivision Certificate/Construction Certificate or Section 138 of the Roads Act, 1993.

The security is to be for such reasonable amount as is determined by the consent authority, being an amount that is 10% of the contracted works for Torrens Title subdivision development/the estimated cost plus 30% for building development of public works or \$5000, whichever is the greater of carrying out the development by way of:

- i. deposit with the Council, or
- ii. an unconditional bank guarantee in favour of the Council.

The security may be used to meet any costs referred to above and on application being made to the Council by the person who provided the security any balance remaining is to be refunded to, or at the direction of, that person. Should Council have to call up the bond and the repair costs exceed the bond amount, a separate invoice will be issued. If no application is made to the Council for a refund of any balance remaining of the security within 6 years after the work to which the security relates has been completed the Council may pay the balance to the Chief Commissioner of State Revenue under the Unclaimed Money Act 1995.

- (13) This consent permits the carrying out the development in stages in any order in regards to construction of individual dwellings and/or subdivision of the Torrens title lots.

Unless specified, the conditions of this consent will apply to all stages, with any decision on any discrepancy with conditions and associated staging resting with Council.

#### B – PRIOR TO ISSUE OF A CONSTRUCTION CERTIFICATE OR SUBDIVISION WORKS CERTIFICATE

- (1) (B001) Prior to release of the Construction Certificate, approval pursuant to Section 68 of the Local Government Act, 1993 to carry out water supply, stormwater and sewerage works is to be obtained from Port Macquarie-Hastings Council. The following is to be clearly illustrated on the site plan to accompany the application for Section 68 approval:
  - Position and depth of the sewer (including junction)
  - Stormwater drainage termination point
  - Easements
  - Water main
  - Proposed water meter location
- (2) (B006) An application pursuant to Section 138 of the Roads Act, 1993 to carry out works required by the Development Consent on or within public road is to be submitted to and obtained from Port Macquarie-Hastings Council prior to release of the Construction Certificate.
 

Such works include, but not be limited to:

  - Civil works
  - Traffic management
  - Work zone areas
  - Hoardings
  - Concrete foot paving
  - Footway and gutter crossing
  - Functional vehicular access
- (3) (B003) Submission to the Principal Certifying Authority prior to the issue of a Construction Certificate or Subdivision Works Certificate detailed design plans for

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the following works associated with the developments. Public infrastructure works shall be constructed in accordance with Port Macquarie-Hastings Council's current AUSPEC specifications and design plans are to be accompanied by AUSPEC DQS:

1. Road works along frontage.
  2. Sewerage reticulation.
  3. Water supply plans shall include hydraulic plans for internal water supply services and associated works in accordance with AS 3500, Plumbing Code of Australia and Port Macquarie-Hastings Council Policies.
  4. Stormwater systems.
  5. Erosion and sedimentation controls
  6. Location of all existing and proposed utility services including: electricity and communications, water supply, sewerage and stormwater.
  7. Driveway profile and long section in accordance with AS2890, AUSPEC D1 and ASD207/ASD208.
  8. Provision of concrete footpath across the full road frontage of the property along Norman Street, to connect to the existing extents of footpath paving to the north, and to connect into the existing footpath to the south at Laurie Street.
- (4) (B010) Payment to Council, prior to the issue of the Construction or Subdivision Certificate (whichever occurs first) of the Section 7.11 contributions set out in the "Notice of Payment – Developer Charges" schedule attached to this consent unless deferral of payment of contributions has been approved by Council. The contributions are levied, pursuant to the Environmental Planning and Assessment Act 1979 as amended, and in accordance with the provisions of the following plans:
- Port Macquarie-Hastings Administration Building Contributions Plan 2007
  - Hastings S94 Administration Levy Contributions Plan
  - Port Macquarie-Hastings Open Space Contributions Plan 2018
  - Hastings S94 Major Roads Contributions Plan
  - Port Macquarie-Hastings Community Cultural and Emergency Services Contributions Plan 2005

The plans may be viewed during office hours at the Council Chambers located on the corner of Burrawan and Lord Streets, Port Macquarie, 9 Laurie Street, Laurieton, and High Street, Wauchope.

The attached "Notice of Payment" is valid for the period specified on the Notice only. The contribution amounts shown on the Notice are subject to adjustment in accordance with CPI increases adjusted quarterly and the provisions of the relevant plans. Payments can only be made using a current "Notice of Payment" form. Where a new Notice of Payment form is required, an application in writing together with the current Notice of Payment application fee is to be submitted to Council.

- (5) (B011) As part of Notice of Requirements by Port Macquarie-Hastings Council as the Water Authority under Section 306 of the Water Management Act 2000, the payment of a cash contribution, prior to the issue of a Construction or Subdivision Certificate (whichever occurs first), of the Section 64 contributions, as set out in the "Notice of Payment – Developer Charges" schedule attached to this consent unless deferral of payment of contributions has been approved by Council. The contributions are levied in accordance with the provisions of the relevant Section 64 Development Servicing Plan towards the following:

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- augmentation of the town water supply headworks
  - augmentation of the town sewerage system headworks
- (6) (B016) Provision to each lot of a separate sewer line to Council's main. All work will need to comply with the requirements of Council's adopted AUSPEC Design and Construction Guidelines and Policies. Any abandoned sewer junctions are to be capped off at Council's sewer main and Council notified to carry out an inspection prior to backfilling of this work.
- Construction details are to be submitted to Port Macquarie-Hastings Council with the application for Subdivision Works Certificate.
- (7) (B024) Submission to Council of an application for water meter hire, which is to be referred to the Water Supply section so that a quotation for the installation can be prepared and paid for prior to the issue of a Construction Certificate. This application is also to include an application for the disconnection of any existing service not required.
- (8) (B037) The finished floor level of the building shall be at least 1050mm above the soffit of Council's sewer main. Details indicating compliance with this are to be submitted to the Principal Certifying Authority with the application for Construction Certificate.
- (9) (B038) Footings and/or concrete slabs of buildings adjacent to sewer lines or stormwater easements are to be designed so that no loads are imposed on the infrastructure. Detailed drawings and specifications prepared by a practising chartered professional civil and/or structural engineer are to be submitted to the Principal Certifying Authority with the application for the Construction Certificate.
- (10) (B071) Prior to the issue of any Construction Certificate, the provision of water and sewer services to the land are to be approved by the relevant Water Authority and relevant payments received.
- (11) (B072) A stormwater drainage design is to be submitted and approved by Council prior to the issue of a Construction Certificate. The design must be prepared in accordance with Council's AUSPEC Specifications and the requirements of Relevant Australian Standards and make provision for the following:
- a) The legal point of discharge for the proposed development is defined as the kerb and gutter of a public road.
- In this regard, Council's piped drainage system must be extended by an appropriately sized pipeline (minimum 375mm diameter) to the frontage of the site, where a kerb inlet pit (minimum 2.4m lintel) must be installed, to allow direct piped connection from the development site into the public drainage system.
- The pipeline must be designed to have the capacity to convey flows that would be collected at that section of street as generated by a 20 year Average Recurrence Interval storm event.
- b) All allotments must be provided with a direct point of connection to the public piped drainage system. Kerb outlets are not permitted.
  - c) The design requires the provision of interallotment drainage in accordance with AUSPEC D5
  - d) The design shall incorporate on-site stormwater detention facilities to limit site stormwater discharge to pre development flow rates for all storm events up to and including the 100 year ARI event. Note that pre development discharge shall be calculated assuming that the site is a 'greenfield' development site as per AUSPEC requirements.
  - e) Where works are staged, a plan is to be provided which demonstrates which treatment measure/s is/are are to be constructed with which civil works stage.

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Separate plans are required for any temporary treatment (where applicable e.g. for building phase when a staged construction methodology is adopted) and ultimate design.

- f) An inspection opening or stormwater pit must be installed inside the property, adjacent to the boundary, for all stormwater outlets.
- (13) Prior to the issue of a Construction Certificate, amended plans shall be submitted to the Principal Certifying Authority demonstrating that the combined height of the front fencing and any retaining walls does not exceed 1.8m, and constructed with slat screen infill panels.
- (14) (B195) Prior to issue of the Construction Certificate evidence of lot registration with the lands titles office is to be provided to the Principal Certifying Authority for creation of Lot 2 approved under DA2019 - 392.1.

## C - PRIOR TO ANY WORK COMMENCING ON SITE

- (1) (C001) A minimum of one (1) week's notice in writing of the intention to commence works on public land is required to be given to Council together with the name of the principal contractor and any major sub-contractors engaged to carry out works. Works shall only be carried out by a contractor accredited with Council.
- (2) (C013) Where a sewer manhole and/or Vertical Inspection Shaft (VIS) exists within a property, access to the manhole/VIS shall be made available at all times. Before during and after construction, the sewer manhole/VIS must not be buried, damaged or act as a stormwater collection pit. No structures, including retaining walls, shall be erected within 1.0 metre of the sewer manhole or located so as to prevent access to the manhole.

## D - DURING WORK

- (1) (D001) Development works on public property or works to be accepted by Council as an infrastructure asset are not to proceed past the following hold points without inspection and approval by Council. Notice of required inspection must be given 24 hours prior to inspection, by contacting Council's Customer Service Centre on (02) 6581 8111. You must quote your Construction Certificate number and property description to ensure your inspection is confirmed:
  - a. at completion of installation of erosion control measures
  - b. at completion of installation of traffic management works
  - c. before commencement of any filling works;
  - d. when trenches are open, stormwater/water/sewer pipes and conduits jointed and prior to backfilling;
  - e. at the completion of each pavement (sub base/base) layer;
  - f. before pouring of kerb and gutter;
  - g. prior to the pouring of concrete for sewerage works and/or works on public property;
  - h. on completion of road gravelling or pavement;
  - i. during construction of sewer infrastructure;
  - j. during construction of water infrastructure;
  - k. prior to sealing and laying of pavement surface course.

All works at each hold point shall be certified as compliant in accordance with the requirements of AUSPEC Specifications for Provision of Public Infrastructure and any other Council approval, prior to proceeding to the next hold point.

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- (3) (D006) A copy of the current stamped approved construction plans must be kept on site for the duration of site works and be made available upon request to either the Principal Certifying Authority or an officer of the Council.

**E – PRIOR TO OCCUPATION OR THE ISSUE OF OCCUPATION CERTIFICATE OR SUBDIVISION CERTIFICATE**

- (1) (E001) The premises shall not be occupied or used in whole or in part until an Occupation Certificate has been issued by the Principal Certifying Authority.
- (2) (E005) Prior to the release of any bond securities held by Council for infrastructure works associated with developments, a formal written application is to be submitted to Council specifying detail of works and bond amount.
- (3) (E030) Vehicle ramps, driveways, turning circles and parking spaces being paved, sealed and line marked prior to occupation or the issue of the Occupation Certificate or commencement of the approved land use.
- (4) (E051) Prior to occupation or the issuing of any Occupation Certificate a section 68 Certificate of Completion shall be obtained from Port Macquarie-Hastings Council.
- (5) (E034) Prior to occupation or the issuing of the Occupation Certificate provision to the Principal Certifying Authority of documentation from Port Macquarie-Hastings Council being the local roads authority certifying that all matters required by the approval issued pursuant to Section 138 of the Roads Act have been satisfactorily completed.
- (6) (E038) Interallotment drainage shall be piped and centrally located within an inter-allotment drainage easement, installed in accordance with Council's current AUSPEC standards (minimum 225mm pipe diameter within a minimum 1.5m easement). Details shall be provided:
  - As part of a Local Government Act (s68) application with evidence of registration of the easement with the Land Titles Office provided to Council prior to issue of the s68 Certificate of Completion; or
  - As part of a Subdivision Works Certificate with dedication of the easement as part of any Subdivision Certificate associated with interallotment drainage.
- (7) (E039) An appropriately qualified and practising consultant is to certify the following:
  - a. all drainage lines have been located within the respective easements, and
  - b. any other drainage structures are located in accordance with the Construction Certificate.
  - c. all stormwater has been directed to a Council approved drainage system
  - d. all conditions of consent/ construction certificate approval have been complied with.
  - e. Any on site detention system (if applicable) will function hydraulically in accordance with the approved Construction Certificate.
- (8) (E046) Prior to the issue of an Occupation Certificate, a positive covenant is to be created under Section 88E of the Conveyancing Act 1919, burdening the owner(s) with the requirement to maintain the on-site stormwater detention facilities on the property.  
The terms of the 88E instrument with positive covenant shall include, but not be limited to, the following:
  - a. The Proprietor of the property shall be responsible for maintaining and keeping clear all pits, pipelines, trench barriers and other structures associated with the on-site stormwater detention facilities ("OSD").
  - b. The Proprietor shall have the OSD inspected annually by a competent person.



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- c. The Council shall have the right to enter upon the land referred to above, at all reasonable times to inspect, construct, install, clean, repair and maintain in good working order all pits, pipelines, trench barriers and other structures in or upon the said land which comprise the OSD or which convey stormwater from the said land; and recover the costs of any such works from the proprietor.
- d. The registered proprietor shall indemnify the Council and any adjoining land owners against damage to their land arising from the failure of any component of the OSD, or failure to clean, maintain and repair the OSD.

The proprietor or successor must bear all costs associated in the preparation of the subject 88E instrument. Evidence of registration with the Lands and Property Information NSW shall be submitted to and approved by the Principal Certifying Authority prior to the issue of an Occupation Certificate.

- (9) (E053) All works relating to public infrastructure shall be certified by a practicing Civil Engineer or Registered Surveyor as compliant with the requirements of AUSPEC prior to issue of Occupation/Subdivision Certificate or release of the security bond, whichever is to occur first.
- (10) (E058) Written confirmation being provided to the Principal Certifying Authority (PCA) from any properly qualified person (eg the builder), stating that all commitments made as part of the BASIX Certificate have been completed in accordance with the certificate.
- (11) (E061) Landscaped areas being completed prior to occupation or issue of the Certificate.
- (12) (E056) A Certificate of Compliance under the provisions of Section 307 of the Water Management Act must be obtained prior to the issue of any occupation or subdivision certificate. The application for the certificate is to include an acceptable Work-As-Executed plan for water and sewer mains and services from a Professional Engineer or Registered Surveyor.
- (13) (E066) Ancillary works shall be undertaken at no cost to Council to make the engineering works required by this Consent effective to the satisfaction of Director of Council's Infrastructure Division. Such works shall include, but are not limited to the following:
  - a. The relocation of underground services where required by civil works being carried out.
  - b. The relocation of above ground power and telephone services
  - c. The matching of new infrastructure into existing or future design infrastructure
- (14) (E068) Prior to the issue of a Subdivision or Occupation Certificate, whichever occurs first, evidence to the satisfaction of the Certifying Authority from the electricity and telecommunications providers that satisfactory services arrangements have been made to the lots or dwellings (including street lighting and fibre optic cabling where required).
- (15) Prior to issue of a Subdivision Certificate, an interallotment drainage system, and associated 1.5m wide easement for drainage must be provided. The easement and interallotment system, must comply with the requirements of AUSPEC D5.
- (16) (E072) Lodgement of a security deposit with Council upon practical completion of the subdivision works
- (17) (E079) Submission to the Principal Certifying Authority of certification by a Registered Surveyor prior to the issue of a Subdivision Certificate that all services and domestic drainage lines are wholly contained within the respective lots and easements.

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- (18) (E082) Submission of a compliance certificate accompanying Works as Executed plans with detail included as required by Council's current AUSPEC Specifications. The information is to be submitted in electronic format in accordance with Council's "CADCHECK" requirements detailing all infrastructure for Council to bring in to account its assets under the provisions of AAS27. This information is to be approved by Council prior to issue of the Subdivision or Occupation Certificate. The copyright for all information supplied, shall be assigned to Council.
- (19) (E195) The Strata subdivision certificate shall not be issued until such time that the dwellings associated with this development are substantially commenced (as determined by Council) or where a strata management statement, or restriction as to user, prohibits any dwelling on each lot other than the dwelling approved as part of this consent.
- (20) Before the release of the occupation or strata subdivision certificate, 1.8m high boundary fence is to be erected on all side and rear boundaries.

## F – OCCUPATION OF THE SITE

- (1) (F004) The dwellings are approved for permanent residential use and not for short term tourist and visitor accommodation.
- (2) (F035) The consent only permits the use of each unit as a single dwelling only and does not permit the adaption or use of any building so as to create an additional occupancy.

PROPOSED 6x2 BED VILLAS AND  
3 LOT TORREN SUBDIVISION  
3x 2 UNIT STRATA SUBDIVISION  
FOR: HALCYON P/L

BUILDING/ENGINEERING DETAILS  
DRAWING No 11295



B.R. Development Consulting

Surveying • Civil & Structural Engineering • Planning

A 64 Lord St, Port Macquarie

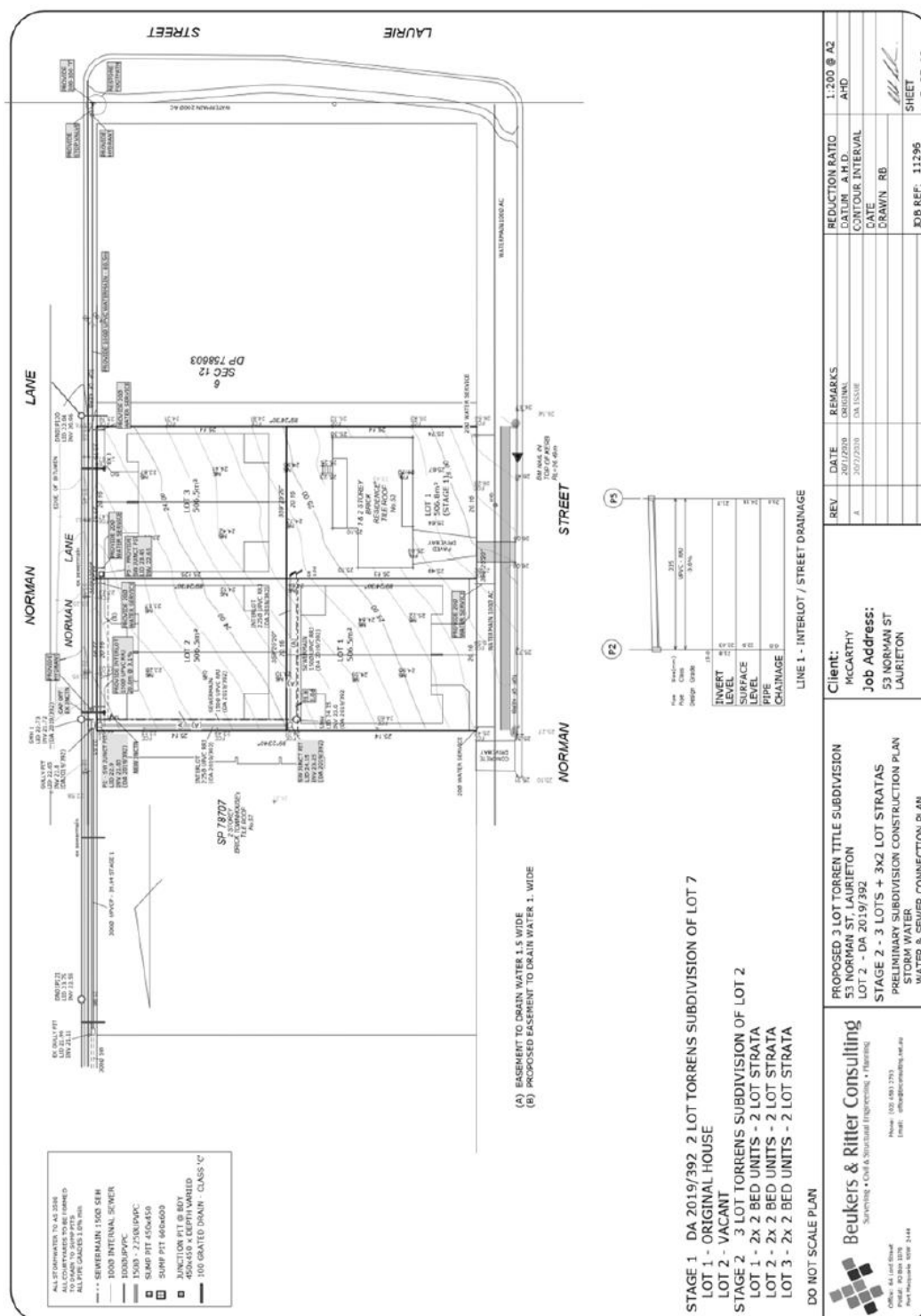
P (02) 6583 2733

E office@brconsulting.net.au

DRAWING SCHEDULE	
SHEET No	TITLE
1	COVER SHEET
2	SUBDIVISION PLAN - 3 LOTS
3	GENERAL SERVICES PLAN - 3 LOTS
4	GENERAL NOTES - 3 LOT SUBDIVISION
5	SITE PLAN LOT 1 - UNITS 1&2
6	FLOOR PLAN UNITS 1 & 2
7	ELEVATIONS UNITS 1 & 2
8	DRAFT STRATA SUBDIVISION PLAN UNITS 1 & 2
9	SITE PLAN LOT 1 - UNITS 3 & 4
10	FLOOR PLAN UNITS 3 & 4
11	ELEVATIONS UNITS 3 & 4
12	DRAFT STRATA SUBDIVISION PLAN UNITS 3 & 4
13	SITE PLAN LOT 1 - UNITS 5 & 6
14	FLOOR PLAN UNITS 5 & 6
15	ELEVATIONS UNITS 5 & 6
16	DRAFT STRATA SUBDIVISION PLAN UNITS 5 & 6
17	SECTION/ SPECIFICATION
18	OH&S

SH 1 OF 18

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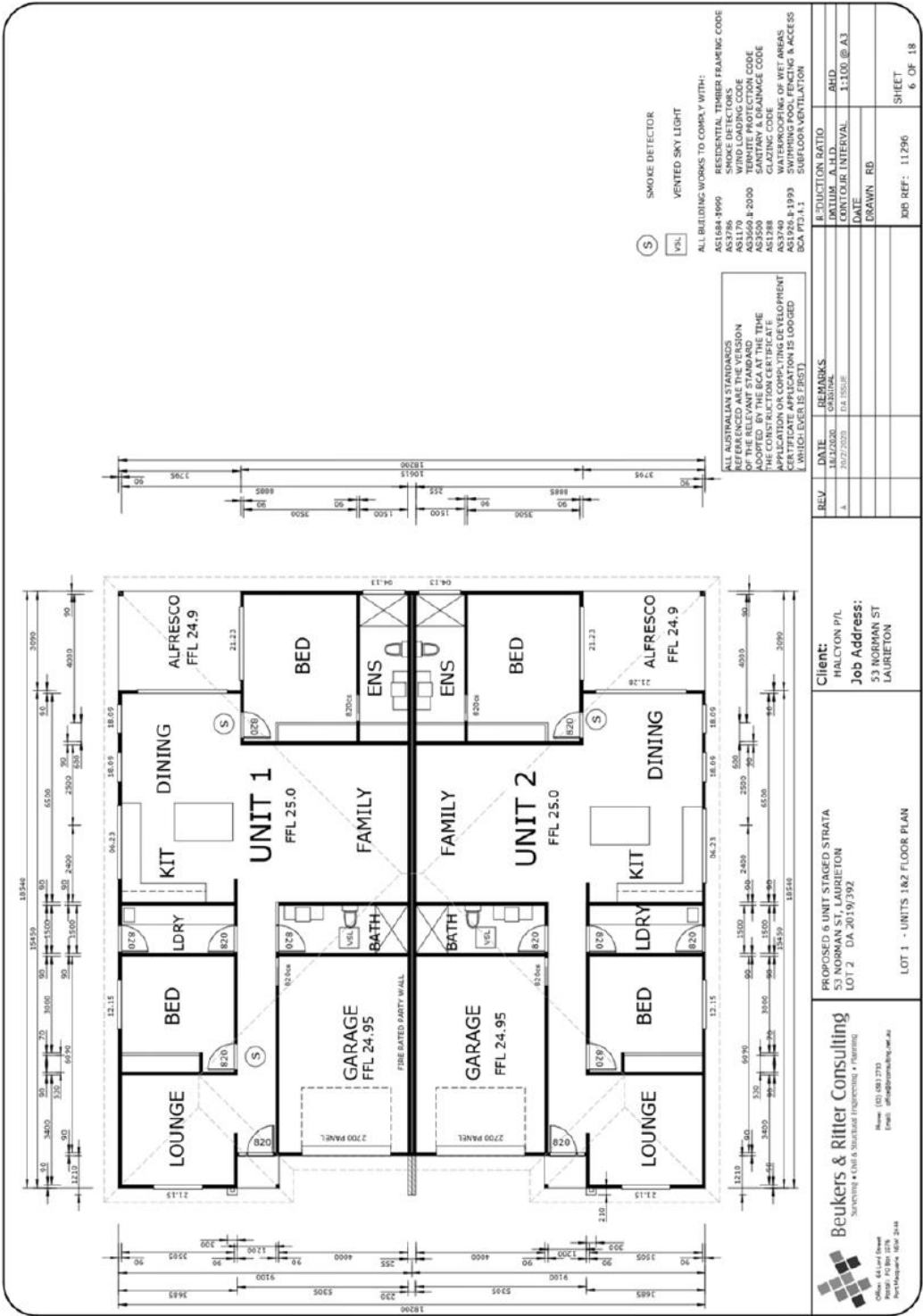


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EXISTING SERVICES		GENERAL		ACCESS & SAFETY		SEWER NOTES	
<p>All utility services indicated on the drawings originate from supplied data, therefore their accuracy and completeness is not guaranteed. It is the responsibility of the contractor to determine and confirm the location and level of all existing services prior to commencement of work.</p> <p>Care to be taken when excavating near existing services. No mechanical excavations are to be undertaken over communication, gas or electrical services. Hand excavation only in these areas.</p> <p>The contractor shall protect and maintain all existing services that are to remain in place. All services to be removed shall be removed in accordance with the specifications and at no extra cost.</p> <p>The contractor shall allow in the program for the adjustment of existing services (if required) in areas affected by the works unless otherwise noted on the drawings or by the superintendent.</p> <p>The contractor shall ensure that at all times buildings not affected by the works are not disrupted.</p> <p>Prior to commencement of work the contractor shall gain approval of the program of relocation and/or construction of temporary services and for any associated interruption of supply.</p> <p>The contractor shall construct temporary services to maintain existing services to the satisfaction of the superintendent. Once the work is completed and commissioned the contractor shall remove all such temporary services and make good to the satisfaction of the superintendent.</p>		<p>This plan is to be read in conjunction with the engineering plans, and any other documents that may be issued relating to the development or the subject site.</p> <p>Do not obtain dimensions by scaling the drawings.</p> <p>In case of doubt or discrepancy, refer to superintendent for clarification or confirmation prior to commencement of construction.</p> <p>Where new work about existing the contractor shall ensure that a smooth even profile, free from abrupt changes is obtained.</p> <p>These plans shall be read in conjunction with all approved drawings &amp; specifications prepared by other project consultants.</p> <p>It is the contractor's responsibility to ascertain in the field the location and level all existing services (Telstra, underground power, sewer, water etc.) and any other structure likely to be affected by the works and take appropriate measures to ensure no damage thereto. Any damage shall be made good at no cost to the proprietor.</p> <p>Location of all drainage lines within easements to be fixed and verified by the superintendent prior to construction.</p> <p>Subsoil drainage is generally required where depth to road subgrade from natural surface is 400mm or more. Install a 3m length of subsoil drain on the upstream side of all drainage pits with an upstream pipe.</p> <p>Surface cut off drains, and other measures as required, to be constructed and maintained at all times during construction.</p> <p>All works in accordance with AUSPEC No. 1 Port Macquarie Hastings Council Version 2003 Edition.</p> <p>All works within road reserves must be carried out by a council registered contractor.</p> <p>Traffic control to AS1742.3.</p> <p>Contractor to take appropriate dust suppression measures as necessary to prevent disturbances to adjoining residences.</p> <p>Filling works shall be controlled fill as defined in AS2870 and AS3798.</p> <p>Traffic management plan by contractor in accordance with AS1742.3.</p>		<p>The contractor shall comply with all statutory &amp; industrial requirements for a safe working environment, including traffic control:</p> <p>Adjacent works shall ensure that at all times access to all buildings and pedestrians through the site.</p> <p>Where necessary the contractor shall provide safe passage of vehicles and pedestrians through the site.</p>		<p>The contractor shall provide &amp; keep up to date at all times a set of drawings marked in such a manner as to show 'Work As Executed'. These drawings are to be returned to the Superintendent at the end of construction.</p> <p>One junction is to be installed for each lot as shown by the arrows. The junction is to be installed at the pipe joint nearest the location shown by the arrow. The final locations of all junctions, showing distances to D.5 manholes are to be shown on 'Work As Executed' drawings by the superintendent.</p> <p>Junction position to be indicated by 75mm x 150mm hardwood stake painted entirely in red and marked with a channel 'J'.</p> <p>Manhole numbers are to be painted on each lid by the contractor in accordance with the council's standard requirement.</p> <p>Pipe types to be U.P.V.C. class 5.4 or ultra rib class 5.4 for line types greater than 3 metres depth and U.P.V.C. class 2.1 for lines less than 3 metres depth. All pipes in water charged ground to be V.C.P. All pipes to be rubber ring jointed.</p> <p>Step stone to be provided to manholes deeper than 1.2m to benching.</p> <p>Trench stops to be provided on all sewer lines where grades exceed 10% or where directed.</p> <p>All trenches in excess of 1.5m deep are to be benched or shored to the satisfaction of the superintendent.</p> <p>Type 'D' cement to be used on all sewer works.</p> <p>Design and construction to be in accordance with AUSPEC development specification series No. 5 D12 &amp; C92.</p> <p>Connection to council's sewer system to be carried out under supervision of council.</p> <p>Sealings are to be 150mm extensions constructed off and at the levels of the sewermain.</p>	
<p>Watermain Notes</p> <p>Design and construction work is to be carried out in accordance with AUSPEC development design specification D11 - Water Reticulation &amp; Development Construction Specification C401 - Water Reticulation</p> <p>Connections to be marked by the supervising consultant to ensure correct location of service.</p> <p>Minimum cover in footpath areas to be 450mm &amp; under road pavement: 600mm.</p> <p>Connections to be in accordance with ASD 450, ASD 451 &amp; ASD 452 (70mm copper).</p> <p>Connection to, adjustment of, or relocation of existing mains are to be arranged with council at contractors cost.</p> <p>All pipes shall be inspected for surface damage immediately before installation and any damaged pipe shall be replaced.</p> <p>Where possible, a single length of pipe is to be used.</p> <p>Only pipe manufacturers specified tools and materials are to be used during joining operation.</p>		<p>Client: MALCOLM P/L</p> <p>Job Address: 53 NORMAN ST LAURIETON</p>		<p>PROPOSED 3 LOT TORREN TITLE SUBDIVISION</p> <p>53 NORMAN ST, LAURIETON</p> <p>LOT 2 - DA 2019/392</p> <p>SUBDIVISION CONSTRUCTION PLAN</p> <p>GENERAL NOTES</p>		<p>REDUCTION RATIO 1:200 @ A2</p> <p>DATUM A.H.D. AHD</p> <p>CONTOUR INTERVAL</p> <p>DATE</p> <p>DRAWN RB</p> <p>JOB REF: 11296</p> <p>SHEET 4 OF 18</p>	



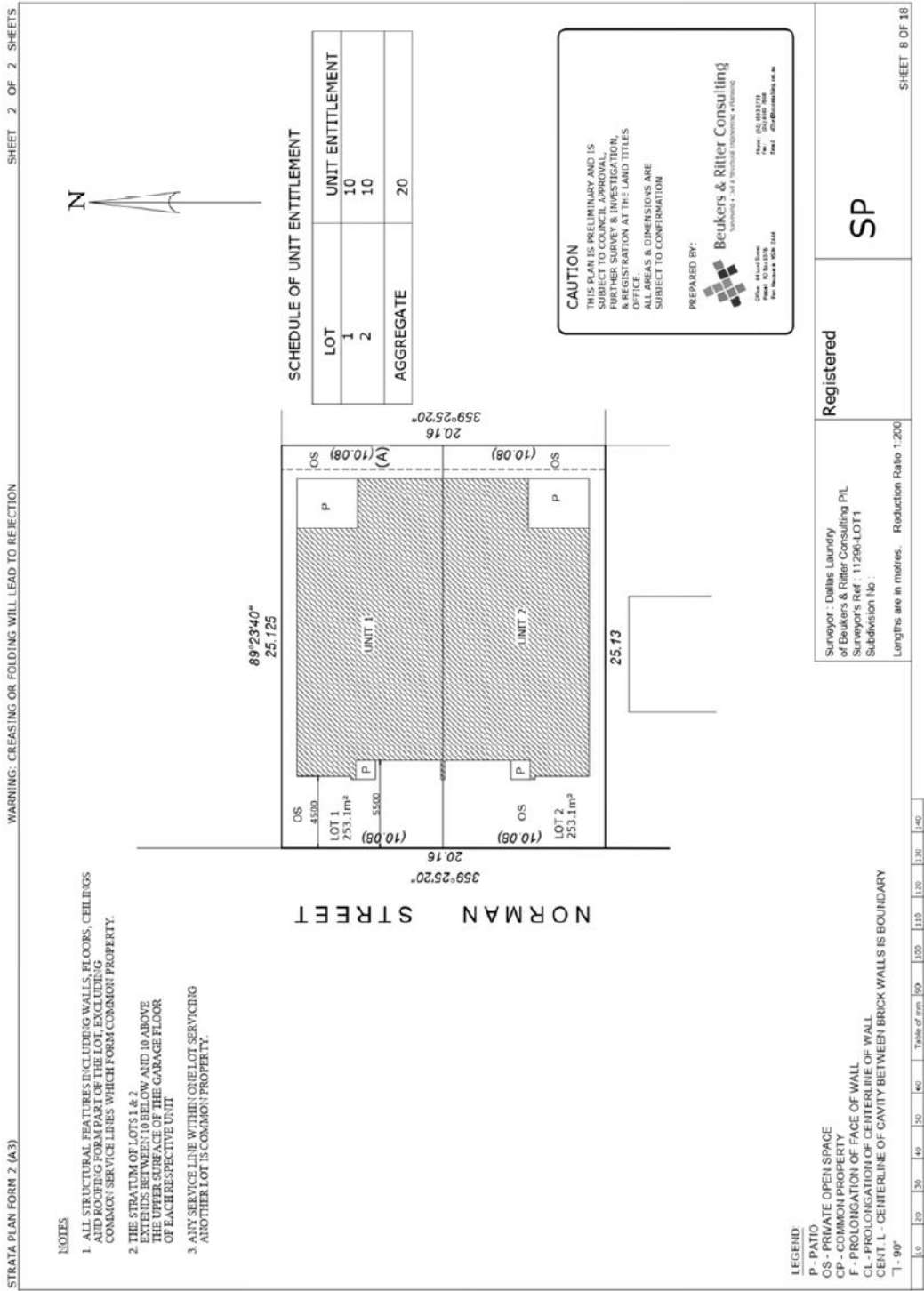


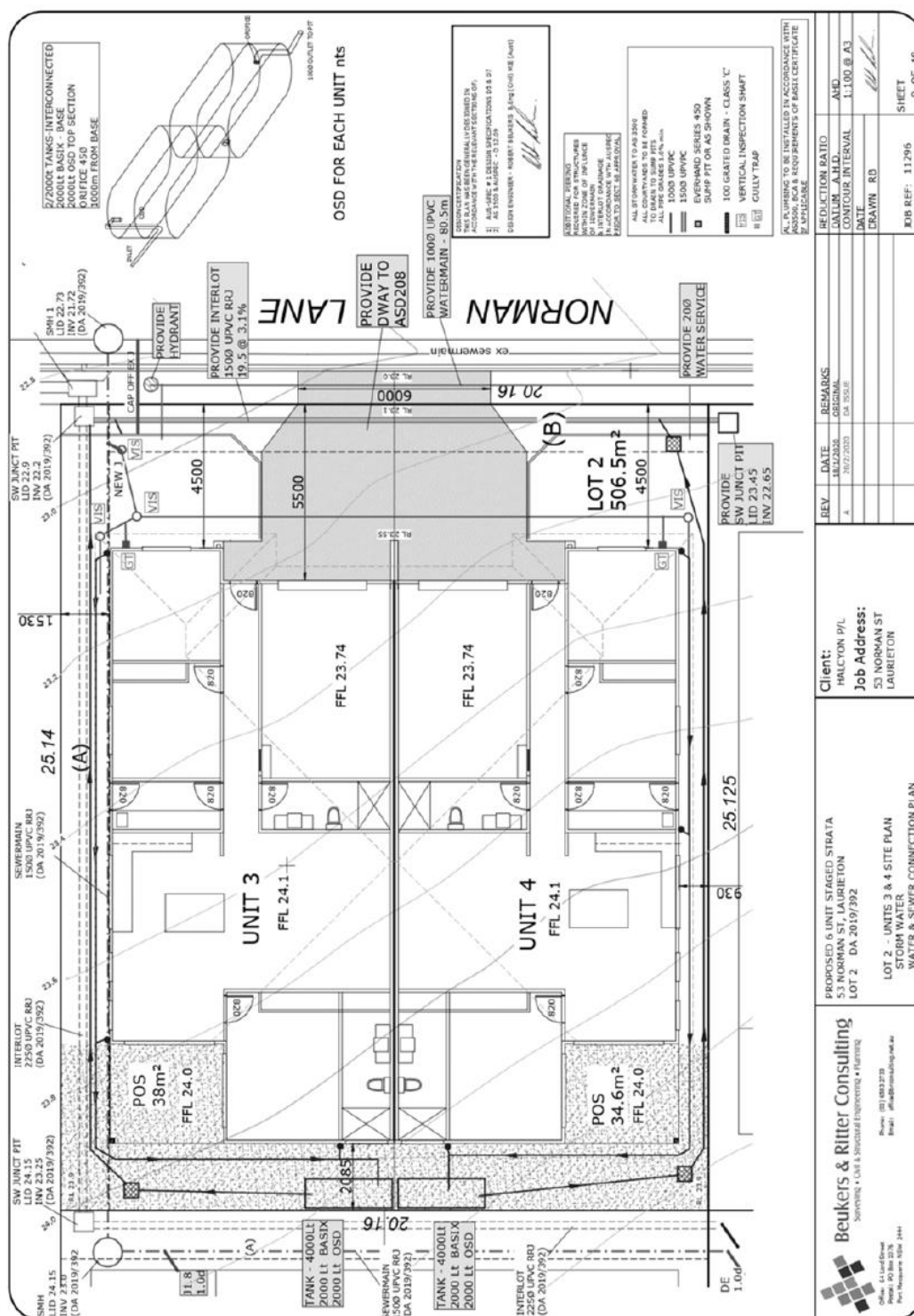




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DEVELOPMENT ASSESSMENT PANEL  
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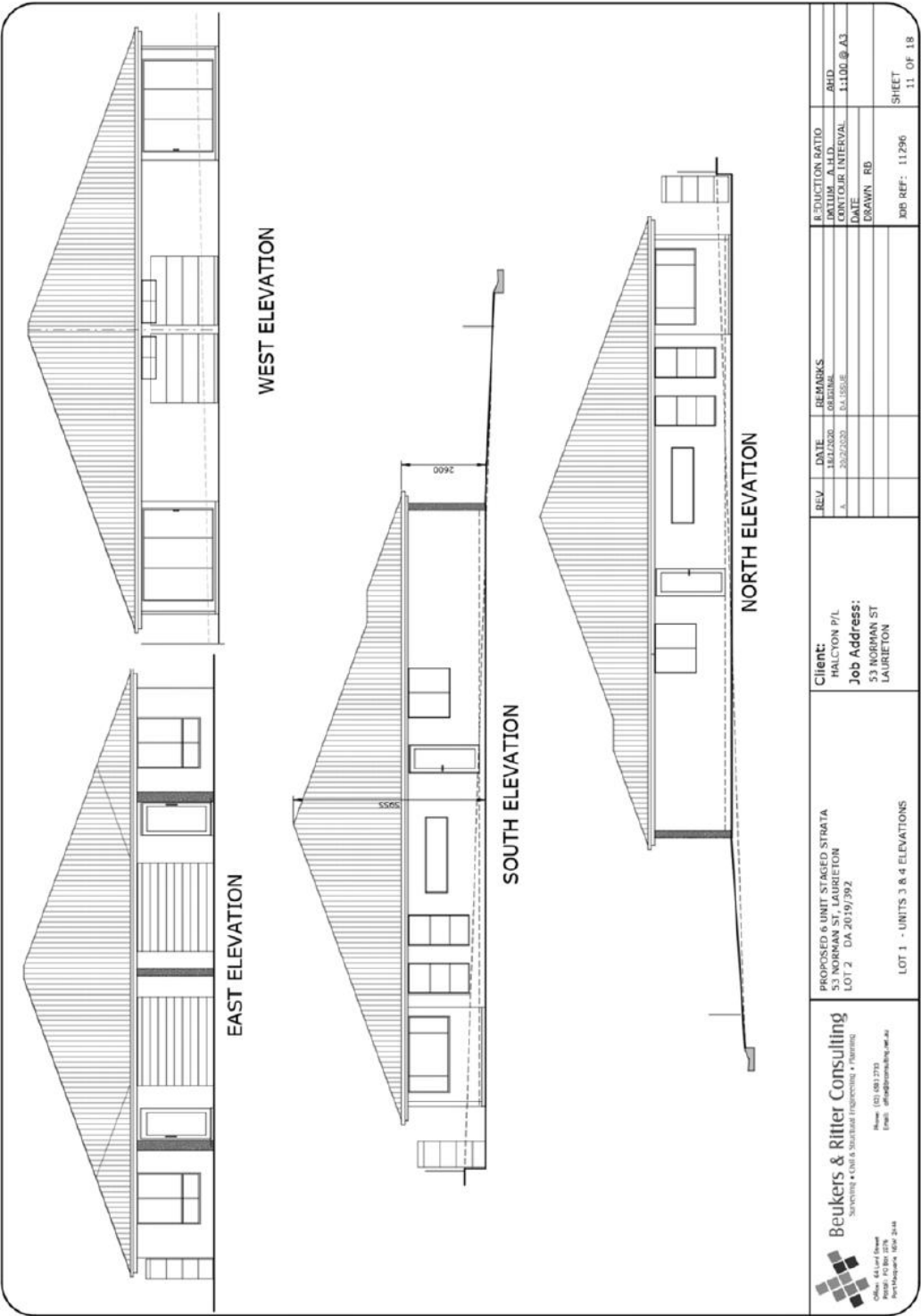


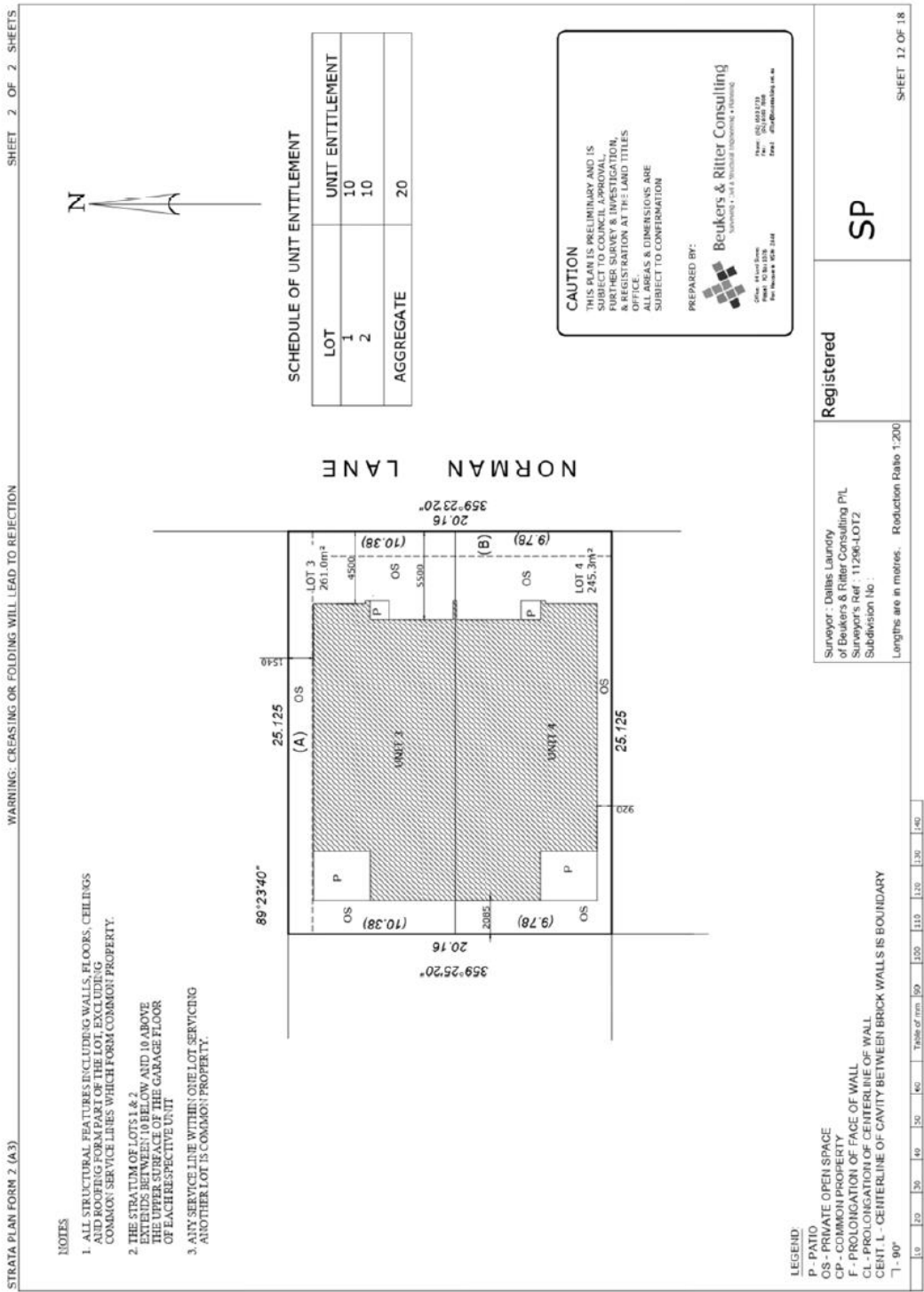




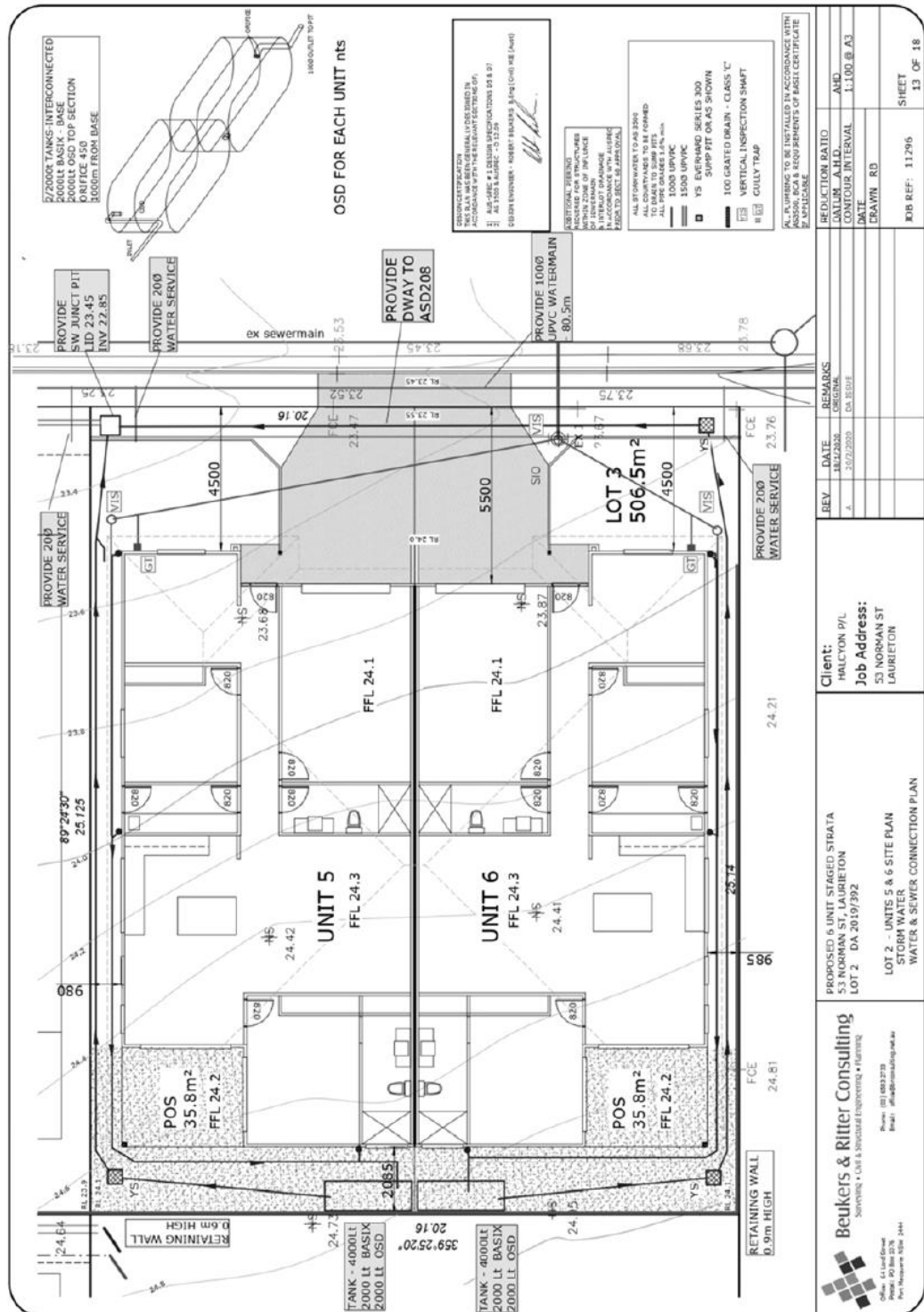
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DEVELOPMENT ASSESSMENT PANEL  
09/09/2020





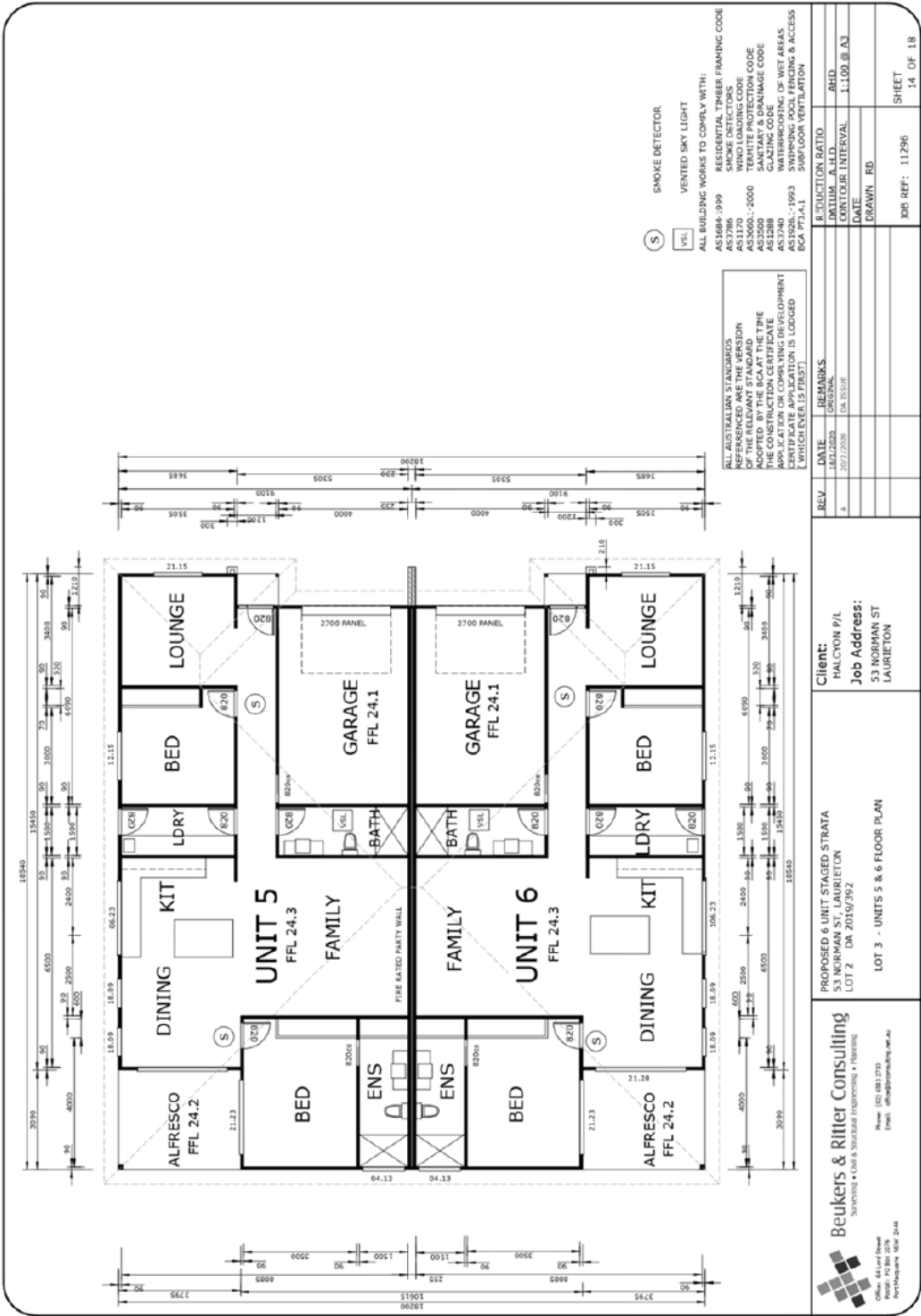
## ATTACHMENT

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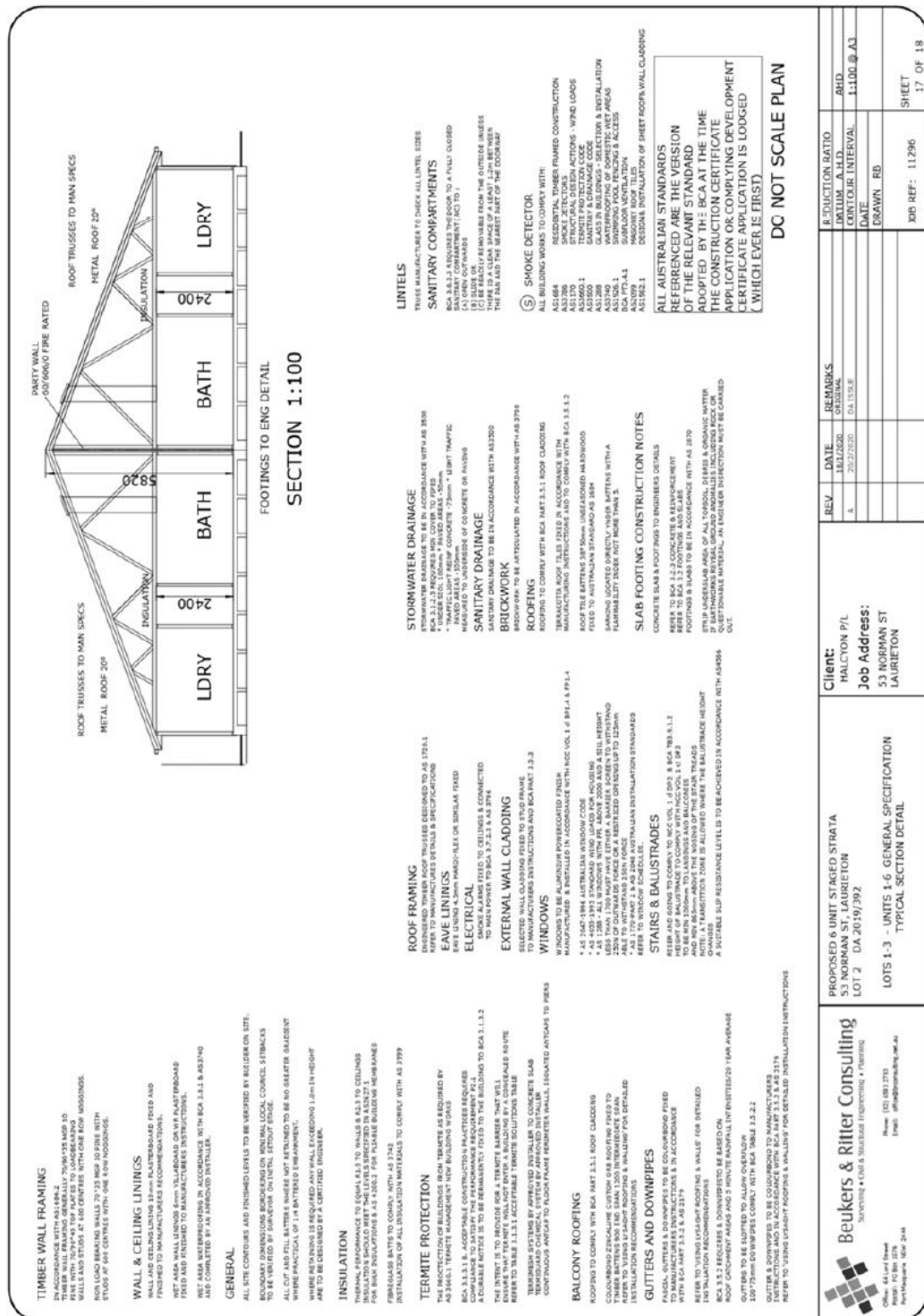
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## ATTACHMENT

DEVELOPMENT ASSESSMENT PANEL  
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## Developer Charges - Estimate

Applicant's Name: B R Development Consulting Pty Ltd  
 Property Address: 53 Norman Street Laurieton  
 Lot & Dp: Lot(s) 7, DP(s) 759803  
 Development: Multi Dwelling Housing with Torrens and Strata Title Subdivision



Water and Sewerage Headworks Levies are levied under S64 of the LGA Act & S306 of the Water Management Act 2006.  
 Other contributions are levied under Section 7.11 of the Environmental Planning and Assessment Act and Council's Contribution Plans.

Levy Area	Units	Cost	Estimate
1 Water Supply	3.8	\$10,065.00 Per ET	\$38,323.00
2 Sewerage Scheme Camden Haven	5	\$3,826.00 Per ET	\$19,130.00
3 Since 1.7.04 - Major Roads - Camden Haven - Per ET	4.4	\$8,361.00 Per ET	\$36,796.40
4 Since 31.7.18 - Open Space - Camden Haven - Per ET	4.4	\$5,941.00 Per ET	\$26,140.40
5 Commenced 3 April 2006 - Com, Cul and Em Services CP - Camden Haven	4.4	\$4,403.00 Per ET	\$19,373.20
6 Com 1.3.07 - Administration Building - All areas	4.4	\$900.00 Per ET	\$3,960.00
7 N/A			
8 N/A			
9 N/A			
10 N/A			
11 N/A			
12 N/A			
13 N/A			
14 N/A			
15 Admin General Levy - Applicable to Consents approved after 1/1/2003	2.2%	S84 Contribution	\$1,697.70
16			
17			
18			
<b>Total Amount of Estimate (Not for Payment Purposes)</b>			<b>\$145,612.70</b>

NOTES: These contribution rates apply to new development and should be used as a guide only.  
 Contributions will be determined in conjunction with a Development Application (DA) or Complying Development Application (CDA).  
 DAs will be subject to the contributions plans in force at the time of issue of the Consent and for CDCs at time of lodgement.  
 Contribution Rates are adjusted quarterly in line with the CPI.

DATE OF ESTIMATE:

1-Sep-2020

Estimate Prepared By Steven Ford

This is an ESTIMATE ONLY - NOT for Payment Purposes

B R Development Consulting Pty Ltd, 53 Norman Street Laurieton, 1-Sep-2020.xls

PORT MACQUARIE-HASTINGS COUNCIL

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