



Development Assessment Panel

Business Paper

date of meeting: Wednesday, 10 April 2013

location: Function Room, PMHC, Port Macquarie

time: 2.00pm

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.



**PORT MACQUARIE
HASTINGS**

Development Assessment Panel

CHARTER

Functions:

1. To review development application reports and conditions.
2. To determine development applications outside of staff delegations.
3. To refer development applications to Council for determination where necessary.
4. To provide a forum for objectors and applicants to make submissions on applications before DAP.
5. To maintain transparency for the determination of development applications.

Delegated Authority:

Pursuant to Section 377 of the Local Government Act, 1993 delegation to determine development applications under Part 4 of the Environmental Planning and Assessment Act 1979 having regard to the relevant environmental planning instruments, development control plans and Council policies.

Format Of The Meeting:

1. Panel meetings shall be carried out in accordance with Council's Code of Meeting Practise for Council Sub-Committees, except where varied by this Charter.
2. Meetings shall be "Open" to the public.
3. The Panel will hear from applicants and objectors or their representatives. Where considered necessary, the Panel will conduct site inspections which will be open to the public.

Development Assessment Panel

ATTENDANCE REGISTER

Member	17/10/12	07/11/12	21/11/12	12/12/12
Paul Drake	✓	✓	✓	✓
Matt Rogers	X	X	X	X
Dan Croft	A	✓	✓	✓
Patrick Gailbraith-Robertson (alternate)			✓	
Clinton Tink (alternate)	✓		✓	
David Fletcher	✓	✓	✓	✓
Paul Biron (alternate)				
Cliff Toms	A	✓	✓	✓
David Troemel (alternate)	✓			

Member	23/01/13	13/02/13	27/02/13	13/03/13	27/03/13
Paul Drake	✓	✓	✓	✓	✓
Matt Rogers					
Dan Croft	✓	✓	✓	✓	✓
Patrick Gailbraith-Robertson (alternate)					
David Fletcher	✓	✓	✓	✓	✓
Cliff Toms	✓	✓	A	✓	✓
David Troemel (alternate)			✓		

Key: ✓ = Present

A = Absent With Apology

X = Absent Without Apology



**PORT MACQUARIE
HASTINGS**

Development Assessment Panel Meeting

Wednesday, 10 April 2013

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**PORT MACQUARIE
HASTINGS**

Item: 01**Subject: ACKNOWLEDGEMENT OF COUNTRY**

"I acknowledge that we are gathered on Birpai Land. I pay respect to the Birpai Elders both past and present. I also extend that respect to all other Aboriginal and Torres Strait Islander people present."

Item: 02**Subject: APOLOGIES**

RECOMMENDATION

That the apologies received be accepted.

Item: 03**Subject: CONFIRMATION OF PREVIOUS MINUTES**

RECOMMENDATION

That the Minutes of the Development Assessment Panel Meeting held on 27 March 2013 be confirmed.

PRESENT

Members:

Paul Drake
Dan Croft
David Fletcher
Cliff Toms

Other Attendees:

Jesse Dick

The meeting opened at 2.05pm.

01 ACKNOWLEDGEMENT OF COUNTRY

The Acknowledgement of Country was delivered.

02 APOLOGIES

There were no apologies.

03 CONFIRMATION OF MINUTES

CONSENSUS:

That the Minutes of the Development Assessment Panel Meeting held on 13 March 2013 be confirmed.

04 DISCLOSURES OF INTEREST

There were no disclosures of interest presented.

05 DA 2013/0093 - CHANGE OF USE - GARAGE TO HOME BUSINESS (ART STUDIO)

Speakers:

Michelle Chapman (applicant)

CONSENSUS:

That DA 2013/0093 for a Change of Use - Garage to Home Business (Art Studio) at Lot 5, DP 32942, No. 5 Cross Street, Port Macquarie, be determined by granting consent subject to the recommended conditions.

06 DA 2013/0029 - ANCILLARY OUTBUILDING - OFFICE FOR HOME BUSINESS

An e-mail from Helen Christensen was tabled by the Chair and considered by the Panel.

CONSENSUS:

That DA 2013/0029 for an Ancillary Outbuilding - Office for Home Business at Lot 28, DP 1047707, No. 39 Lake Ridge Drive, Kew, be determined by granting consent subject to the recommended conditions.

The meeting closed at 2.20pm.

Item: 04
Subject: DISCLOSURES OF INTEREST

RECOMMENDATION

That Disclosures of Interest be presented

DISCLOSURE OF INTEREST DECLARATION

Name of Meeting:

Meeting Date:

Item Number:

Subject:
.....

I, declare the following interest:

☐**Pecuniary:**

Take no part in the consideration and voting and be out of sight of the meeting.

☐**Non-Pecuniary - Significant Conflict:**

Take no part in the consideration and voting and be out of sight of the meeting.

☐**Non-Pecuniary - Insignificant Conflict:**

May participate in consideration and voting.

For the reason that:

.....

Signed: Date:

(definitions are provided on the next page)

Definitions

(Local Government Act and Code of Conduct)

Pecuniary

An interest that a person has in a matter because of a reasonable likelihood or expectation or appreciable financial gain or loss to the person or another person with whom the person is associated. (*LG Act s442 and s443*).

A Councillor or member of a Council Committee who is present at a meeting and has a pecuniary interest in any matter which is being considered must disclose the nature of that interest to the meeting as soon as practicable.

The Councillor or member of a Council Committee must not take part in the consideration and voting on the matter and be out of sight of the meeting. (*LG Act s451*)

Non-Pecuniary

An interest that is private or personal that the Councillor or member of a Council Committee has that does not amount to a pecuniary interest as defined in the LG Act.

If you have declared a non-pecuniary interest you have a number of options for managing the conflict. The option you choose will depend on an assessment of the circumstances of the matter, the nature and significance of your interest. You must deal with a non-pecuniary interest in one of the following ways.

Non Pecuniary – Significant Interest

(For example; family, a close friendship, membership of an association, sporting club, corporation, society or trade union).

- Have no involvement by absenting yourself from and not taking part in any consideration or voting on the issue as if the provisions in the LG Act s451(2) apply.
- A future alternative is to remove the source of the conflict (for example, relinquishing or divesting the personal interest that creates the conflict or reallocating the conflicting duties to another officer).

Non Pecuniary – Less than Significant Interest

- It may be appropriate that no action is taken. However, you must provide an explanation of why you consider that the conflict does not require further action.

SPECIAL DISCLOSURE OF PECUNIARY INTEREST DECLARATION

By <i>[insert full name of councillor]</i>	
In the matter of <i>[insert name of environmental planning instrument]</i>	
Which is to be considered at a meeting of the <i>[insert name of meeting]</i>	
Held on <i>[insert date of meeting]</i>	
PECUNIARY INTEREST	
Address of land in which councillor or an associated person, company or body has a proprietary interest (<i>the identified land</i>) ⁱ	
Relationship of identified land to councillor [Tick or cross one box.]	<input type="checkbox"/> Councillor has interest in the land (e.g. is owner or has other interest arising out of a mortgage, lease trust, option or contract, or otherwise). <input type="checkbox"/> Associated person of councillor has interest in the land. <input type="checkbox"/> Associated company or body of councillor has interest in the land.
MATTER GIVING RISE TO PECUNIARY INTERESTⁱⁱ	
Nature of land that is subject to a change in zone/planning control by proposed LEP (<i>the subject land</i>) ⁱⁱⁱ [Tick or cross one box]	<input type="checkbox"/> The identified land. <input type="checkbox"/> Land that adjoins or is adjacent to or is in proximity to the identified land.
Current zone/planning control [Insert name of current planning instrument and identify relevant zone/planning control applying to the subject land]	
Proposed change of zone/planning control [Insert name of proposed LEP and identify proposed change of zone/planning control applying to the subject land]	
Effect of proposed change of zone/planning control on councillor [Tick or cross one box]	<input type="checkbox"/> Appreciable financial gain. <input type="checkbox"/> Appreciable financial loss.

Councillor's Signature: Date:

Important Information

This information is being collected for the purpose of making a special disclosure of pecuniary interests under sections 451 (4) and (5) of the *Local Government Act 1993*. You must not make a special disclosure that you know or ought reasonably to know is false or misleading in a material particular. Complaints made about contraventions of these requirements may be referred by the Director-General to the Local Government Pecuniary Interest and Disciplinary Tribunal.

This form must be completed by you before the commencement of the council or council committee meeting in respect of which the special disclosure is being made. The completed form must be tabled at the meeting. Everyone is entitled to inspect it. The special disclosure must be recorded in the minutes of the meeting.

-
- i. Section **443** (1) of the *Local Government Act 1993* provides that you may have a pecuniary interest in a matter because of the pecuniary interest of your spouse or your de facto partner or your relative^{iv} or because your business partner or employer has a pecuniary interest. You may also have a pecuniary interest in a matter because you, your nominee, your business partner or your employer is a member of a company or other body that has a pecuniary interest in the matter.
- ii. Section **442** of the *Local Government Act 1993* provides that a **pecuniary interest** is an interest that a person has in a matter because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person. A person does not have a pecuniary interest in a matter if the interest is so remote or insignificant that it could not reasonably be regarded as likely to influence any decision the person might make in relation to the matter or if the interest is of a kind specified in section **448** of that Act (for example, an interest as an elector or as a ratepayer or person liable to pay a charge).
- iii. A pecuniary interest may arise by way of a change of permissible use of land adjoining, adjacent to or in proximity to land in which a councillor or a person, company or body referred to in section **443** (1) (b) or (c) of the *Local Government Act 1993* has a proprietary interest—see section **448** (g) (ii) of the *Local Government Act 1993*.
- iv. **Relative** is defined by the *Local Government Act 1993* as meaning your, your spouse's or your de facto partner's parent, grandparent, brother, sister, uncle, aunt, nephew, niece, lineal descendant or adopted child and the spouse or de facto partner of any of those persons.

Item: 05

Subject: SECTION 96 MODIFICATION TO DA 2008/219 - AEROPLANE
LANDING AREA, LOT 1 DP 255287, HURSLEY ROAD, REDBANK

Report Author: Clint Tink

Property:	Lot 1 DP 255287, Hursley Road, Redbank
Applicant:	JJ Investments Pty Ltd
Owner:	JJ Investments Pty Ltd
Application Date:	28/8/2012
Date Formal:	23/1/2013
Estimated Cost:	N/A
Location:	Redbank
File no:	DA 2008/0219
Parcel no:	26555

Alignment with Delivery Program

- 4.9.2 Undertake development assessment in accordance with relevant legislation.
- 4.9.3 Implement and maintain a transparent development assessment process.

RECOMMENDATION

That Section 96 Modification Application to DA 2008/219 for changes to an Aeroplane Landing Area at Lot 1 DP 255287, Hursley Road, Redbank, be determined by granting a modified consent subject to the recommended conditions.

Executive Summary

This report considers a Section 96 Modification to the approved aeroplane landing area at the subject site. The Section 96 requests changes to a number of the original conditions, which will alter the way the landing area is operated.

This report provides an assessment of the application in accordance with the requirements of the Environmental Planning and Assessment Act 1979.

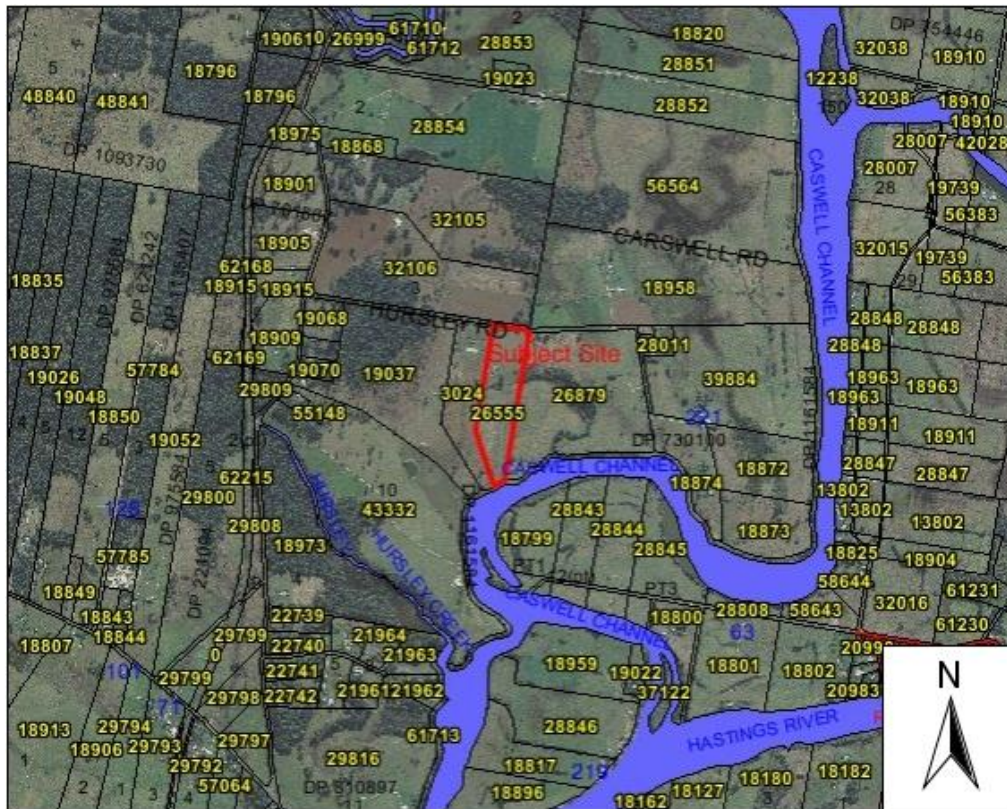
The original application received forty four (44) submissions. Subsequent to exhibition of the modification, ten (10) submissions have been received, which comprised six (6) against, three (3) in support and one (1) requesting further clarification. It should be noted that the modification was notified twice as a result of further information having been received during the course of assessment.

Existing site features and Surrounding development

The site is zoned 1(a1) Rural in accordance with the Hastings Local Environmental Plan 2001 (Note: the controls in place at the time of the original assessment), as shown in the following zoning plan:



The existing subdivision pattern and location of existing development within the immediate locality is shown in the following aerial photo:



2. DESCRIPTION OF DEVELOPMENT

Key aspects of the proposal include the following:

- Clarification on a number of existing conditions including flight paths, distance to a nearby osprey nest site and the communication process on concerns with the operation of the landing area.
- Change to the interpretation of the number of flights/movements conditions.

Application Chronology

- 12/11/2008 - DA 2008/219 approved by DAP.
- 28/8/2012 - Modification lodged.
- 7-21/9/2012 - Notification period. It should be noted that adjoining neighbours and previous objectors were notified.
- 11/9/2012 - CASA notified.
- 25/10/2012 - Council staff sent out an additional information letter seeking further information on flights, noise and ecology.
- 29/10/2012 - Applicant sought clarification on Council staff's request for additional information dated 25/10/2012.
- 31/10/2012 - CASA responded. CASA suggested contacting Air Services Australia. CASA are responsible for on ground issues with airports, while Air Services deal with in air operations.
- 5/11/2012 - Email sent to Air Services Australia regarding the DA.
- 8/11/2012 - Council responded to applicant's request for copies of submissions.
- 8-12/11/2012 - Council responded to Air Services Australia's request for additional information on the DA.

- 13-23/11/2012 - Correspondence between applicant, objectors and Council staff regarding the 2012 annual meeting. It should be noted that the annual meeting is a requirement of the existing DA conditions.
- 15/11/2012 - Complaint was received regarding the landing area and non compliance of flight paths and types of aeroplanes being used. The matter was referred to Council's Compliance team on 19/11/2012 for investigation.
- 20/11/2012 - Compliance team responded to complaints requesting witness statements and advised of the associated process to formally lodge a complaint. In particular, formal witness statements are required to act on the matter and any associated court action. Witness statements have not been received.
- 23/11/2012 - The flight number log for the 2011-12 period was received in accordance with the current conditions of consent. The flight numbers in the log complied with conditions A8 and A9.
- 4/12/2012 - Revised noise report received.
- 7/12/2012 - Council staff advised the applicant that the revised noise report was not acceptable.
- 7/12/2012 - Applicant sought clarification on the non acceptance of the noise report. Council staff responded to the applicant's request. In particular, the report stated that 28 movements were acceptable as it achieved an ANEF of 20. However, only an ANEF of <20 is acceptable. More information was also requested on potential noise receivers. The applicant advised that they would have the report reviewed and also provide an ANEF contour plan. The applicant also confirmed that the daily limit of 28 flights was something that could be reduced.
- 10/12/2012 - Applicant confirmed that the majority of take offs and landings will still occur to the south and that the north would only be used when conditions do not allow the normal southern process from a safety perspective.
- 11/12/2012 - Applicant provided a response to issues raised in the submissions.
- 12/12/2012 - Annual report was submitted as per current conditions of DA 2008/219.
- 16/12/2012 - Updated noise report was submitted. The report confirmed that 26 movements per day will result in an ANEF <20 at the closest residence.
- 19/12/2012 - Meeting was held between a number of objectors and Council's Group Manager Development Assessment regarding the application.
- 2/1/2013 - Council staff questioned distance to additional noise receptors in the noise report and also what appeared to be anomalies in a recorded flight paths plan (i.e. where a couple of take offs and landings that appeared to not follow the normal approach). The above requests were on the basis that a formal ANEF contour plan was not included in the revised noise report. The noise consultant had advised in the report that further comprehensive work and monitoring work would be involved in preparing such a document when measurements to the nearest receiver would be an acceptable measure in this case. Especially considering all other dwellings are at a further distance to the landing area.
- 2/1/2013 - Applicant responded to Council staff's request for additional information on 2/1/2013 confirming that while there would be houses located closer than 120m horizontally to the landing area/flight paths, the vertical height would ensure the overall distance to the receiver was over 120m. In terms of a plan submitted by the applicant regarding flight paths, the four (4) flights that appeared to not follow the approved flight paths for landing etc were as a result of conditions, approach path and/or doing a check of the landing area first from a higher altitude
- 3/1/2013 - Applicant submitted three (3) video recordings of plane take offs and the apparent non impact on adjoining stock.

- 18/1/2013 - Council staff requested clarification on maximum number of flights per day being sought and also the outstanding ecological comment on impacts of the changes to the conditions on the osprey site.
- 18-21/1/2013 - Discussion between Council staff and the applicant regarding what was required in terms of the revised ecological report.
- 23/1/2013 - Revised ecological comment was received in relation to the changes. The comment was prepared by the same consultant who did the initial assessment of DA 2008/219. The consultant accepted the revised 250m buffer and noted that their previous report had not recommended a 500m buffer.
- 29/1/2013 to 12/2/2013 - Due to the revised noise report and ecological comment, the modification was re-notified.

3. Assessment under Section 96 of the Environmental Planning and Assessment Act 1979

Is the proposal substantially the same?

The proposed modification still retains the overall use as an aeroplane landing area, which was originally approved in 2008. The changes in most parts relate to clarifying a number of the conditions that were applied in 2008, as well as a change to how flight numbers are measured.

The conditions proposed to be changed by the applicant are A6, A7, A8, A9, A12 and D1-3, which are discussed in detail as follows:

Condition A6 currently states:

- (6) *(DA198) Pilots are to be aware of the instrument approach procedure for the Port Macquarie Airport and not traverse such an area without having first made it clear to surrounding aircraft and getting clearance.*

The applicant has advised that the airspace surrounding Port Macquarie Airport including that related to the instrument approach procedure is class G (uncontrolled) airspace and air traffic control cannot issue a clearance to operate in this airspace, nor is it required. CASA regulations control the procedures and communications required to be used in the airspace and these cannot be amended or superseded by Council. All pilots are required by law to operate in accordance with CASA regulations.

The applicant has requested the deletion of the condition.

Council staff comment

The original condition was imposed following referral of the application to CASA. The modification was also referred to CASA who advised of controls that they apply to private airstrips. CASA also suggested contact be made with Air Services Australia. Air Services Australia were also sent a copy of the modification but no response has been forthcoming.

It is agreed that Council should not be getting involved in requirements of CASA and Air Services Australia. If either of these bodies have issues with the airstrip, they can follow up such matters under their own regulations with the operator. In this regard, it is recommended the condition be deleted and it is considered that this deletion does not materially alter the original development.

Condition A7 currently states

- (7) *(DA199) Aircraft using the site are to follow the flight paths shown on the approved plans and are to take off to the south and land from the south, unless it is an emergency or conditions do not permit.*

The applicant has advised that while the stipulated directions are usually preferred from an operational point of view, due to the slope of the runway. Using the alternate directions when possible would actually reduce the noise impact on neighbours. There are no dwellings to the north that would be affected, as opposed to the south.

In addition, some residents have interpreted the current condition to mean that the alternate approach can only be used in emergencies only. However, depending on wind direction, it may not be possible to use the preferred southern direction.

The flight paths shown on the plans could also be interpreted to require approaches and departures to follow a circling path and preclude straight in approaches and departures, which would reduce impact on surrounding dwellings.

Based on the above, the applicant requested the following revised condition:

“Aircraft using the site are to choose approach and departure paths, which minimize noise impact on nearby dwellings within the constraints of safety, CASA regulations and operational conditions such as wind direction and runway slope. If a circling approach or departure is used it should follow the flight paths shown on the approved plans.”

Council staff comment

The revised condition remains consistent with the original conditions intent, but provides further clarification in relation to the straight in approaches and departures. The revised condition is considered acceptable, subject to the reference to CASA being deleted. This is consistent with the approach taken on the deletion of condition A6 being a separate CASA matter. In this regard, the condition can be altered and does not materially change the original development.

Condition A8 currently states:

- (8) *The average number of allowable movement per day is two (2). This being an average of one (1) take off and one (1) landing per day. This equates to a maximum annual number of flights of seven hundred and thirty (730). The maximum number of movements per week (i.e. 14 movements) may be exceeded on six (6) occasions per annum, but only to a maximum of twelve (12) movements in any one day.*

The applicant has advised that the condition is more restrictive than the standards in DCP 25 - Aeroplane Landing Areas, which allow twelve (12) movements per day. The applicant confirmed that they do not wish to exceed the average two (2) flights per day or seven hundred and thirty (730) flights per year limit requirements. The applicant has requested that the reference to fourteen (14) flights per week be deleted and changed to allow up to twelve (12) flights per day.

Based on the above, the applicant requested the following revised condition:

“The average number of allowable movements per day is two (2) being an average of one (1) take off and one (1) landing per day. This equates to a maximum annual

number of flights of seven hundred and thirty (730). The maximum number of movements per day shall be twelve (12) except as provided below (condition A9)."

Council staff comment

The original number of movements was conditioned to be less than that allowed for in DCP 25 as a result of the original application and noise report not fully demonstrating compliance with the requirements of DCP. While the changes proposed by the applicant do not increase the overall number of movements, they do allow for movements to be accumulated to a degree. For example, at the moment the consent only allows a maximum of fourteen (14) movements per week. However, the revised wording would allow the applicant to fly twelve (12) movements per day seven (7) days a week resulting in a maximum of eighty four (84) movements in a week. The average of two (2) movements per day and maximum of seven hundred and thirty (730) movements ensures that the 84 movements cannot occur every week.

Given the change has the ability to alter the intensity of the development at different times during the year, the applicant was requested to submit a revised noise assessment addressing the ANEF contour plan requirement of DCP 25. The applicant subsequently submitted a revised noise report. The report did not provide an ANEF contour plan but detailed that at the nearest residential receiver, an ANEF of <20 could be achieved with 26 movements per day and an ANEF of between 15.5 and 17.5 would be achieved for 12 movements.

The revised report was considered acceptable in lieu of the contour plan based on the following reasons:

- There are no other dwellings located closer to the landing area both horizontally or vertically than the dwelling referenced in the report.
- The current Port Macquarie Hastings Local Environmental Plan 2011, Clause 7.8 only requires consideration of aircraft noise in areas subject to an ANEF of 20 or greater.
- ANEF levels generally decrease as distance increases away from the landing area.
- The average movements will still limit the number of movements.
- The number of flights proposed is still well less than the 12 movements per day (4368 movements per year) proposed in the original application.

Based on the above, it is recommended that the condition be altered. It is considered that the change does not significantly alter the original development or create any adverse impact.

Condition A9 currently states:

- (9) *The maximum number of movements per week (i.e. 14 movements) may be exceeded on six (6) occasions per annum only to a maximum of twelve (12) movements in any one day subject to:*
- *the owner of the aeroplane landing area provision seven (7) days written notice to the nominated representatives of interested residents prior to each of the six (6) occasions;*
 - *the six (6) occasions are not to be scheduled during the osprey breeding season between 1 May and 31 October.*

The applicant has requested a change to condition A9 in order to reflect the changes made to condition A8 above. The applicant also requests the deletion from condition

A9 of the requirement to avoid concentrated flights during the osprey breeding period.

Based on the above, the applicant has requested the following revised condition:

“The maximum number of movements per day (i.e. 12 movements) may be exceeded on no more than six (6) occasions per annum, providing at least seven (7) days written notice of each occasion has been provided to interested parties.”

Council staff comment

The applicant had the original ecologist provide a review of his previous report in light of the proposed changes to the conditions. The ecologist concluded that the changes were unlikely to impact on the osprey or associated breeding success.

In light of the above and the revised noise detail provided, the change to the condition is considered acceptable and unlikely to create any adverse impact. Although, in addition to the wording provided by the applicant, it is suggested that a limit on the number of movements that can occur during the six (6) occasions be included. In particular, the revised noise report suggests twenty six (26) movements per day will result in an ANEF of <20. Council staff therefore suggest the following wording of the condition:

“The maximum number of movements per day (i.e. 12 movements) may be exceeded on no more than six (6) occasions per annum, providing at least seven (7) days written notice of each occasion has been provided to the nominated representatives of interested residents and the number of movements per day does not exceed twenty six (26).”

Condition A12 currently states:

(12) Pilots are to be aware of the location of the osprey nest site (west of the aeroplane landing area) and not to traverse such a location. Pilots are also to be made aware of the roost tree and associated fishing area.

The applicant has requested the areas be quantified for ease of interpretation. The applicant has requested the following revised condition:

“Pilots are to be aware of the location of the osprey nest tree (west of the aeroplane landing area and maintain a lateral and vertical distance of at least 250m from the tree.”

Council staff comment

As detailed above, the applicant had the original ecologist provide a review of his previous report in light of the proposed changes to the conditions. The ecologist concluded that the changes were unlikely to impact on the osprey or associated breeding success.

The ecologist also advised that they did not recommend a buffer, although the landing area was 500m from the nest. This coupled with the set flight paths resulted in a 500m buffer by default. Given the changes proposed under this modification to clarify flight paths and impact on osprey, the buffer can now be clarified to that of 250m. The 250m has been accepted by the ecologist.

In addition to the above, the applicant has confirmed that at times a pilot will need to do a flyby of the landing area to assess conditions before landing. The flyby will sometimes need to be done outside the take off/landing flight paths. The 250m vertical and lateral buffer will also allow for such an inspection without compromising the osprey nest site.

Based on the above, the revised condition wording is more a clarification matter and does not change the overall use being that of an aeroplane landing area.

Condition D1 to D3 state:

- (1) *The residents are to nominate 3 to 4 representatives to represent them at the annual meeting with the owner of the aeroplane landing area.*
- (2) *Contact details are to be exchanged between the owner of the aeroplane landing area and the nominated representatives of interested residents.*
- (3) *The owner of the aeroplane landing area and the nominated representatives of the interested residents are to meet on not less than an annual basis a minimum of one (1) month prior to the anniversary date of this consent. The minutes of such meetings are to be included in the annual report for Council.*

The applicant has requested the conditions be amalgamated into the following revised condition:

"The owner is to provide to Council and to any interested residents a telephone number and an email address that the residents may use to contact the owner in relation to any concerns regarding the operation of the aeroplane landing area.

The owner shall keep a record of all communications received from residents in relation to the operation of the aeroplane landing area and shall constructively respond to those communications as necessary. Details of all such communications and responses shall be included in the annual report to Council.

If requested by residents the owner shall hold an annual meeting with those residents. The minutes of such meetings shall be included in the annual report to the Council."

Council staff comment

The changes are considered acceptable and reflect the intent of the original conditions. The changes allow flexibility to requiring meetings each year when for example 3-4 representatives are not possible, when a meeting may not be required etc. The revised condition still provides a process and opportunity for neighbours to work through any issues that may arise. Neighbours who do not feel comfortable dealing directly with the applicant can always still contact Council and advise of any non compliance (i.e. the change to the condition does not eliminate Council from the process).

However, staff would also suggest that in light of submissions received, that the last paragraph be reworded to include that the minutes of the meeting have been agreed to both by the applicant and interested residents. See below for wording:

"If requested by residents, the owner shall hold an annual meeting with those residents. The minutes of such meetings shall be agreed to by both the owner and interested residents before being included in the annual report to the Council."

Based on the above, the nominated changes to the conditions are in most part for clarification purposes only. Where minor changes are proposed, the development still remains substantially the same, especially when considering the original application that was lodged in 2008 proposed twelve (12) movements per day.

Are there any condition(s) of consent imposed by a Minister, government or public authority that require modification?

There are no conditions of consent imposed by a Minister, government etc that require modification. Condition A6 was developed by Council staff based on advice from CASA. The modification was also referred to CASA who advised of controls that they apply to private airstrips. CASA also suggested contact be made with Air Services Australia. Air Services Australia were also sent a copy of the modification but no response has been forthcoming.

It is considered that Council should not be involved in requirements of CASA and Air Services Australia. If either of these bodies have issues with the airstrip, they can follow up such matters under their own regulations with the operator. In this regard, the condition can be deleted and does not alter the original development.

Does the application require notification/advertising in accordance with the regulations and/or any Development Control Plan?

The original application received forty four (44) submissions. As the modification was proposing changes to conditions that were central to previous discussions and objections, the decision was made to notify adjoining property owners and previous objectors in accordance with the DCP. As a result, ten (10) submissions have been received, which comprised six (6) against, three (3) in support and one (1) requesting further clarification. It should be noted that the modification was later notified a second time as a result of further information having been received.

Any submissions made concerning the modification?

Ten (10) submissions have been received, which comprised six (6) against, three (3) in support and one (1) requesting further clarification following completion of the required public exhibition of the application.

Key issues raised in the submissions received and comments in response to these issues are provided as follows:

Submission Issue/Summary	Planning Comment/Response
Independent advice from a separate ecologist suggest the 250m buffer to osprey may not be acceptable. No new information has been submitted to verify the ecologists reduced setback. The changes will impact on the osprey.	The applicant engaged the consultant who assessed the original DA in 2008. The consultant advised that a 500m buffer was not recommended. However, based on experience, research and results onsite, the ecologist has provided an updated comment accepting a 250m buffer to the osprey nest. This response is considered acceptable.
Council's comments and stance on the noise report has changed.	The Section 96 modification process under the <i>Environmental Planning and Assessment Act 1979</i> allows for a consent to be modified and subsequently for Council to review the application in light of the proposed changes. In this case, the application has been assessed on merit having regard for the original and the revised noise reports.
Original noise report was flawed.	Refer to above point.
The changes do not reflect those previously agreed to at DAP in 2008. A modification should not be considered.	The Section 96 modification process under the <i>Environmental Planning and Assessment Act 1979</i> allows for a consent to be modified and subsequently for Council to review the application in light of the proposed changes. The applicant is within their rights to apply for such a modification as are previous objectors allowed to comment on the changes and make representation.
The impacts from the development will be more than standard agricultural activities and impact on the rural amenity.	The modification has been considered in light of the original application and permissibility. The modification is considered to have limited adverse impact based on the changes proposed and the revised noise report.
The site is also being used as a helicopter landing area.	The original approval did not consider or approve any helicopter landing onsite. The original approval and modification remain for an aeroplane landing area only. Any such activity (i.e. using the site to land helicopters) is a compliance matter.
The measure of <20 ANEF has been shown to be flawed and that a lesser ANEF should be adopted.	Council's Local Environmental Plan (which is based on the Standard Instrument LEP) uses the <20 ANEF as an acceptable test to measure aircraft noise. In this regard, any decision to change such a requirement, would need to be clearly justified on the basis of technical assessments and agreed to by the Department of Planning & Infrastructure. In addition, the noise report has demonstrated that for 12 movements per day (which will be the norm onsite), the ANEF would be between 15.5 and 17.5 ANEF, which is below the allowable <20 ANEF.
The development will result in an increase in movements.	Annually = No Daily = No Weekly = Potentially yes.

	As detailed above in the report, the change to movement numbers has potential to result in a more concentrated number of flights over a short period within the year. However, in order to keep the average and meet the total allowable flights, the busy periods will need to be offset with quieter times.
Within the noise report logger 3 failed.	Council's Environmental Health Officer has advised that even though a logger failed, it is still possible to extrapolate and calculate levels based on other results/loggers.
There have been a number of breaches of various conditions of consent including non notification of fly ins, helicopters landing onsite, larger planes using the landing area etc	Comments on this aspect are noted. Compliance matters with consents are dealt with by Council's Compliance team. In order to act on such breaches, Council requires evidence in the form of written statements. No such evidence has been received to date. In relation to the types of planes being used and in light of the planes that were tested in the noise report, it is suggested that an additional condition wording be imposed, requiring the applicant provide details to Council of any planes proposing to use the airstrip and their associated noise level. This will ensure planes using the site remain consistent with those used to test noise.
The impact on horses/stock from utilizing the north landing/take off flight path.	The use of the northern approach/departure flight path remains unchanged. The southern aspect is the preferred options with the northern area only being used in emergencies or when conditions do not suit. This was the intent of the original approval and remains the same for the modification.
The original application had 44 submissions to 1. Was this considered.	The original application was considered in light of the planning framework, normal assessment process and the submissions received. Specific conditions were applied to deal with issues raised in submissions.
Concern raised over changes to conditions D1-3 making applicant the point of contact over complaints.	To a degree this is already in place by the current wording of conditions D1-3. The change is one process for dealing with complaints. The change does not negate the ability for concerned residents to also still contact Council as an alternative.
Who will regulate compliance with conditions.	Like any development application, compliance with conditions is normally carried out by the applicant, Council and local residents or any combination depending on the circumstances.
The consent should be revoked.	Once approved, the consent cannot be revoked unless the applicant agrees to surrender the consent.
The changes are to allow a flying school.	The application does not request or nominate any use of the site for the purposes of a flying school. All aeroplane movements will be limited

	to the terms of the conditions of consent.
Who will breathe test pilots.	This is a matter for aircraft regulators.
Who will monitor safety etc.	Council will monitor the conditions of consent. Other safety aspects associated with aeroplane landing areas and flying are subject to CASA and Air Services Australia.
The development will increase the chances of bird strike.	The overall number of flights per year is not increasing from that originally approved. There will be pockets of intense use through the year, but these will need to be offset by quieter times. Any increase is unlikely to be significant. This coupled with there being no known recorded incidents of bird strike onsite since 2008 result in the development being acceptable on this aspect.
Minutes of meetings need to be signed off/agreed by both parties.	Agree. Condition worded to reflect

Any matters referred to in Section 79C(1) relevant to the modification?

The application is considered to remain consistent with the original s79C assessment. The majority of changes are more for clarification purposes rather than resulting in any significant operational changes onsite. Where relevant, the noise and ecological reports were updated to acknowledge the changes requested by the applicant and confirmed no adverse impact subject to conditions.

A copy of the original 2008 DAP report is attached for context purposes.

6. DEVELOPMENT CONTRIBUTIONS APPLICABLE

The Section 96 does not trigger the need for contributions.

In addition, there is no additional works that exceed \$100,000 for the purposes of Section 94A contributions.

5. CONCLUSION

The application has been assessed in accordance with Section 96 and Section 79C of the Environmental Planning and Assessment Act 1979.

The majority of the proposed changes are considered acceptable and will not result in any adverse environmental, social or economic impacts to the locality.

Consequently, 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 [View](#). DA2008 - 0219 Amended Conditions
- 2 [View](#). DA2008 - 0219 DAP Report - 22 October 2008
- 3 [View](#). DA2008 - 0219 DAP Report 12 November 2008

FOR USE BY PLANNERS/SURVEYORS TO PREPARE LIST OF PROPOSED CONDITIONS - 2011

NOTE: THESE ARE DRAFT ONLY

DA NO: 2008/219

DATE: 3/04/2013

Mod ¹	Modification No 1	10 April 2013
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PRESCRIBED CONDITIONS

Part 6 – Division 8A of the *Environmental Planning & Assessment Regulations 2000*

nil

A – GENERAL MATTERS

- (1) (DA001) The development is to be carried out in accordance with the plans and supporting documents set out in the following table except where modified by any conditions of this consent.

Plan / Supporting Document	Reference	Prepared by	Date
Supporting Report including Statement of Environmental Effects	14996	King & Campbell	May 2008
Plan and Longsection of Airstrip and Selected Detail	Dwg _____ No. 14996P_det.dwg	King & Campbell	April 2008
Flight Paths (as amended)	Dwg _____ No. 14996P_DA.dwg (Revision C)	King & Campbell	November 2008
Noise Report		Heggies	30 May 2008
Supporting Letter & Attachments		King & Campbell	3 November 2008

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.

Condition A1 to be deleted and replaced with condition below.

- (1) (DA001) The development is to be carried out in accordance with the plans and supporting documents set out in the following table except where modified by any conditions of this consent and as modified on 10 April 2013.

Plan / Supporting Document	Reference	Prepared by	Date
Supporting Report including Statement	14996	King & Campbell	May 2008

of Environmental Effects			
Plan and Longsection of Airstrip and Selected Detail	Dwg No. 14996P_det.dwg	King & Campbell	April 2008
Flight Paths (as amended)	Dwg No. 14996P_DA.dwg (Revision C)	King & Campbell	November 2008
Noise Report		Heggies	30 May 2008 as amended by SLR on 28 November 2012
Supporting Letter & Attachments		King & Campbell	3 November 2008
Ecological Report	-	Darkheart ECO Consultancy	23 January 2103

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.¹

- (2) (DA082) Dust nuisance shall not be generated as a result of the undertaking of the development.
- (3) ~~(DA195) Noise levels generated from aircraft or future aircraft is to be consistent with those tested/used in the Noise Report by Heggies dated 30 May 2008. The maximum take off weight of any aircraft using the aeroplane landing area is 2500 kg.~~
Condition A195 to be deleted and replaced with condition below.
- (3) (DA195) Noise levels generated from aircraft or future aircraft is to be consistent with those tested/used in the Noise Reports by Heggies dated 30 May 2008 and SLR on 28 November 2012. The maximum take off weight of any aircraft using the aeroplane landing area is 2500 kg. Council is to be provided details of all aircraft using the site and associated noise levels.¹
- (4) (DA196) The aeroplane landing area is only to be used by the owner, and pilots authorised by the owner, for private use. It is not to be used for commercial purposes.
- (5) (DA197) A windsock is to be provided onsite in a suitable location, so that conditions can be observed by a pilot. The windsock must be maintained at all times.
- (6) ~~(DA198) Pilots are to be aware of the instrument approach procedure for the Port Macquarie Airport and not traverse such an area without having first made it clear to surrounding aircraft and getting clearance. DELETED¹~~
- (7) ~~(DA199) Aircraft using the site are to follow the flight paths shown on the approved plans and are to take off to the south and land from the south, unless it is an emergency or conditions do not permit.~~

Condition A7 to be deleted and replaced with condition below.

(DA199) Aircraft using the site are to choose approach and departure paths which minimize noise impact on nearby dwellings within the constraints of safety and operational conditions such as wind direction and runway slope. If a circling approach or departure is used, it should follow the flight paths shown on the approved plans.¹

- (8) ~~The average number of allowable movement per day is two (2). This being an average of one (1) take off and one (1) landing per day. This equates to a maximum annual number of flights of seven hundred and thirty (730). The maximum number of movements per week (i.e. 14 movements) may be exceeded on six (6) occasions per annum, but only to a maximum of twelve (12) movements in any one day.~~

Condition A8 to be deleted and replaced with condition below.

The average number of allowable movements per day is two (2) being an average of one (1) take off and (1) landing per day. This equates to a maximum annual number of lights of seven hundred and thirty (730). The maximum number of movements per day shall be twelve (12) except as provided by condition A9.¹

- (9) ~~The maximum number of movements per week (i.e. 14 movements) may be exceeded on six (6) occasions per annum only to a maximum of twelve (12) movements in any one day subject to:~~
- ~~- the owner of the aeroplane landing area provision seven (7) days written notice to the nominated representatives of interested residents prior to each of the six (6) occasions;~~
 - ~~- the six (6) occasions are not to be scheduled during the osprey breeding season between 1 May and 31 October.~~

Condition A9 to be deleted and replaced with condition below.

The maximum number of movements per day (ie 12 movements) may be exceeded on no more than six (6) occasions per annum, providing at least seven (7) days written notice of each occasion has been provided to the nominated representatives of interested residents and the number of movements per day does not exceed twenty six (26).¹

- (10) Aircraft are not to train over the area or practice land. In particular, a plane that comes in to land or proposes to take off and does not, will be considered a movement, unless it can be shown that such a movement was aborted due to an emergency.
- (11) The owner is to provide Council with an annual report on the anniversary date of this consent containing the following:
- An annual log book of all usages of the aeroplane landing;
 - The initial report is to contain details of the communication protocols with representatives of interested residents;
 - Each annual report will contain details of all communications with interested residents within the previous 12 months and the minutes of the annual meeting with the residents' representatives.
- (12) ~~Pilots are to be aware of the location of the osprey nest site (west of the aeroplane landing area) and not to traverse such a location. Pilots are also to be made aware of the roost tree and associated fishing area.~~
- Condition A12 to be deleted and replaced with condition below.
- Pilots are to be aware of the location of the osprey nest tree (west of the aeroplane landing area) and maintain a lateral and vertical distance of at least 250m from the tree.¹
- (13) (DG195) Submit details of the storage of all fuels, liquids and other chemicals associated with the use of the site as a landing strip including details such as location, volumes, storage containers, bunding, MSDS's, fire prevention

measures, etc. The proposed location and storage is to be approved by Council.

- (14) The operator or any new owner/operator of the aeroplane landing area is to provide Council with a copy of their annual certificates of currency for comprehensive and indemnity insurance policies.
- (15) There is to be no use of the aeroplane landing area by helicopters.

B - PRIOR TO THE ISSUE OF OCCUPATION CERTIFICATE

- (1) (DE001) 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) Prior to the release of the Occupation Certificate the site is not to be used as an aeroplane landing area until such time as an Aeroplane Landing Area Operations Plan has been submitted to, and approved by, Council. The plan is to incorporate the provisions of this consent.

C - OCCUPATION OF THE SITE

- (1) (DF018) Offensive odours shall not be generated by the development.
- (2) (DF030) Offensive noise shall not be generated as a result of the operation of the development.
- (3) (DF031) Hours of operation of the development are restricted to the following hours:
 - 7.00 am to 8.00 pm – Mondays to Saturdays
 - 8.30 am to 8.00 pm – Sundays and Public HolidaysThe aeroplane landing area is to comply with the above times and also be during daylight hours.
- (4) Planes are to be started, and undertake all pre-take off checks, on the eastern side of the existing shed to provide noise buffering to the dwelling on Lot 2 DP 255287.

D - ADVICE

- ~~(1) The residents are to nominate 3 to 4 representatives to represent them at the annual meeting with the owner of the aeroplane landing area.~~
- ~~(2) Contact details are to be exchanged between the owner of the aeroplane landing area and the nominated representatives of interested residents.~~
- ~~(3) The owner of the aeroplane landing area and the nominated representatives of the interested residents are to meet on not less than an annual basis a minimum of one (1) month prior to the anniversary date of this consent. The minutes of such meetings are to be included in the annual report for Council.~~
Conditions D1, D2 & D3 to be deleted and replaced with:-
- (1) The owner is to provide to Council and to any interested residents a telephone number and an email address that the residents may use to contact the owner in relation to any concerns regarding the operation of the aeroplane landing area.

The owner shall keep a record of all communications received from residents in relation to the operation of the aeroplane landing area and shall constructively respond to those communications as necessary. Details of all such communications and responses shall be included in the annual report to Council.

If requested by residents, the owner shall hold an annual meeting with those residents. Those minutes of such meetings shall be agreed to by both the owner and interested residents before being included in the annual report to Council.¹

- (2) A copy of the annual report is to be made available for public review at Council.

Draft

PORT MACQUARIE-HASTINGS COUNCIL

Development Assessment Panel**Action Created**

Meeting Date: 22X/10/2008

ITEM NO: 03
PROPERTY: DA 2008/0219 LOT 1 DP 255287, HURSLEY ROAD, REDBANK
APPLICANT: KING & CAMPBELL PTY LTD
OWNER: D & J MASSEY
PROPOSAL: AEROPLANE LANDING AREA
APPLICATION DATE: 20 JUNE 2008
DATE FORMAL: 7 AUGUST 2008
ESTIMATED COST: N/A
LOCATION: PORT MACQUARIE
REPORT BY: CLINTON TINK
FILE NO: DA 2008/0219
PARCEL NO:

PRECIS

This report considers a development application to formalise an existing aeroplane landing area at Lot 1 DP 255287, Hursley Road, Redbank.

Adjoining property owners were notified of the application and provided fourteen (14) days to comment. During the notification period Council received forty four (44) submissions. It should be noted that the majority of submissions were received in the form of a petition, with some of the people listed on the petition also choosing to lodge more detailed separate submissions.

The submissions are the subject of this report.

RECOMMENDATION

That development consent to formalise an existing aeroplane landing area at Lot 1 DP 255287, Hursley Road, Redbank, be approved, subject to the conditions listed in this report.

DISCUSSION



7 April 2008 - Applicant approached Council with proposal to legitimise the existing aeroplane landing area onsite. Council staff advised applicant that a Development Application was needed.

20 June 2008 - Application lodged with Council.

3 July 2008 - Council requested further information clarifying that the proposal was local development.

10 July 2008 - Applicant responded to Council's request dated 3 July 2008.

31 July 2008 - Information on an osprey nest west of the site was forwarded to the applicant for comment.

7 August 2008 - Applicant provided response on the osprey nest site issue.

Issues Relevant to the Decision - In Point Form

- Compliance with Development Control Plan No 25 - Aeroplane Landing Areas and Development Control Plan No 40 - Advertising of Development
- Location of osprey nest site.

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- A 1988 topographic map for the area shows that there was no aeroplane landing area at that time. The next recent map in Council's possession is a 2000 series, which shows the aeroplane landing area. In this regard, it can be assumed that the aeroplane landing area has existed for at least eight (8) years. The applicant claims a period of 15 years.
- Submissions received.

Council Policies, Procedures and Codes to Which the Matter Relates

- Hastings Local Environmental Plan 2001
- Port Macquarie-Hastings Development Control Plan 2006, which incorporates Development Control Plan No 25 - Aeroplane Landing Areas and Development Control Plan No 40 - Advertising of Development.

Contributions Applicable

Contributions are not applicable to this development. In particular, there are no works proposed, no residential component proposed and no connection to reticulated water or sewer proposed.

Section 79C 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:****North Coast Regional Environmental Plan***Clause 12 - Impact on agricultural activities*

It is considered that the main impact on agriculture will be the impact from plane noise on livestock. In particular, should the development cease, the land would need little work to revert back to cropping activities etc (ie no major structures proposed). In relation to the impact of noise, Council's Environmental Health Officer has assessed noise and concluded that subject to the number of flights being reduced and specific hours of operation being applied, there will be no adverse impact.

In addition to the above, the aeroplane landing area has operated for at least eight (8) years with no complaints/impacts on livestock having been received.

Clause 15 - Development Control Wetlands or Fishery habitats

It is considered that the development will have no adverse impact on wetlands or fish habitat. In particular, no works are proposed onsite. Storage of fuels will need to be conditioned to eliminate spills.

Clause 32B - Development Control - coastal lands

The proposed development will not restrict access (or opportunities for access) to the foreshore, will not impact on the amenity of the foreshore, will not impact on the scenic qualities of the coast, will not impact on flora and fauna (or their natural environment), will not be subject to adverse coastal processes or hazards, will not create any conflict between water and land based users of the area, will not adversely impact on archaeological/heritage items and will not reduce the quality of the water in the locality. In particular, the proposed development has existed for at least eight (8) years without any adverse impacts and no specific works are proposed onsite. Therefore, the development is consistent with the NSW Coastal Policy, Coastline Management Manual and North Coast: Design Guidelines.

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Clause 81 - Development Control - development adjacent to the ocean or a waterway

The proposed development does not create any impact on visual appearance of the foreshore, access to the foreshore or amenity of the foreshore. In particular, no specific works are proposed onsite or restriction to foreshore areas.

In addition, the aeroplane landing area has existed for at least eight (8) years with no impacts on amenity recorded.

Based on the above and subject to conditions, the proposed development will not impact on waterways.

State Environmental Planning Policies*State Environmental Planning Policy 71 - Coastal Protection.*

Having considered Clauses 8 and 12 to 16 inclusive and through the imposition of conditions of consent, the proposed development will not restrict access (or opportunities for access) to the coastal foreshore, will not impact on the amenity of the coastal foreshore, will not impact on the scenic qualities of the coast, will not impact on flora and fauna (or their natural environment), will not be subject to adverse coastal processes or hazards, will not create any conflict between water and land based users of the area, will not adversely impact on archaeological/heritage items and will not reduce the quality of the water in the locality. In particular, the proposed development has existed for at least eight (8) years without any adverse impacts and no specific works are proposed onsite.

State Environmental Planning Policy (Rural Lands) 2008

Having considered the aims and rural planning principles associated with the SEPP, the proposed development will not:

- impact on opportunities for current and potential productive and sustainable economic activities;
- impact on planning for rural lands, to balance the social, economic and environmental interests of the community;
- impact on the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land; and
- impact on the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities.

In particular, the development is for private use only (small scale) and has operated for at least eight (8) years without impact. Furthermore, the site could easily be converted back to agriculture purposes.

Hastings Local Environmental Plan 2001

The development is defined as an aeroplane landing area, which is defined as:

"aeroplane landing area means an area in private ownership and not used for scheduled public aircraft flights, which is set apart for the taking off and landing of light aircraft, but does not include a helipad. (For the purposes of this definition, light aircraft means an aircraft of no more than 5,700 kilograms take off weight.)"

The property is zoned 1(a1) Rural, which only prohibits aeroplane landing areas within 1km of the coast. As the subject aeroplane landing area is located more than 1km from the coast, such development is permissible with development consent.

The property contains flood prone land and acid sulfate soils. However, the proposed development does not propose any additional works (ie aeroplane landing area already exists), which results in no adverse impact on flooding or acid sulfate soils.

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There are no other provisions of the Hastings Local Environmental Plan 2001 relevant to the development.

(ii) any Draft Environmental Planning Instrument that is or has been placed on exhibition pursuant to Section 47(b) or 66(1)(b):

There are no specific draft planning instruments relevant to the subject site or development.

(iii) any Development Control Plan in force under Section 72:

Port Macquarie-Hastings Development Control Plan 2006, which incorporates the following specific Development Control Plans:

Development Control Plan No 25 - Aeroplane Landing Areas

The requirements of the DCP in terms of a compliant aeroplane landing areas are as follows:

- Predicted noise exposure footprints prepared by a noise consultant, shown on a plan to a scale of 1:25000.

Comment: Refer to comments on noise detailed later in this report, which indicate no adverse impact subject to conditions.

- Required obstacle limitation surface, shown on a plan to a scale of 1:25000.

Comment: Due to the small scale of the aeroplane landing area, this has been shown at a scale of 1:2500. The obstacle limitation plan shows that the aeroplane landing area is acceptable, which is reinforced by comments from CASA - contained later in this report.

- Proposed flight paths, shown on a plan at a scale of 1:25000.

Comment: Applicant has submitted plan showing flight path detail.

- Location of dwellings in the flight path.

Comment: The flight path plan shows the location of the flight path in terms of surrounding dwellings. The flight paths predominately follows areas that do not contain dwellings (ie open paddocks, the river and the North Coast Railway Line).

- Hours that the landing area is open.

Comment: The hours of operation have been nominated to be consistent with Clause 3(b) of DCP 25, being 7am to 8pm. These have been further changed by conditions of consent - more restricted.

- Likely average daily landings and take offs (annual average)

Comment: The applicant has nominated that they will be consistent with Clause 3(b) of DCP being twelve (12) movements per day. However, based on comments made by Council's Environmental Health Officer in terms of noise and submissions received, it is suggested that the application be approved with a maximum of four (4) movements per day. Following a trial period of one (1) year, the applicant be invited to reapply to increase movements (if necessary) and where it can be shown to not create any adverse impact on neighbours.

- Surface detail of landing area and maximum aircraft weight able to utilise the strip.

Comment: The existing grass runway will be retained with aircraft up to 5,700kg, which is consistent with CASA requirements. In particular, it is the pilots responsibility to determine

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suitability of the aeroplane land area. It should also be noted that the aeroplane landing area has been used for at least eight (8) years without any impact. Therefore, the aeroplane landing area is deemed suitable as a small scale private operation.

- Proposed ground lighting and any existing lighting beyond the property boundaries that may be a source of conflict to the land.

Comment: There is no existing ground lighting and the aeroplane landing area will not operate outside of daylight hours.

Based on the above, the proposal is consistent with DCP 25, subject to conditions.

CASA comments

The proposed development was referred to CASA for comment. CASA did not object to the proposed development provided that the pilots using the landing area did not fly within the instrument approach procedure for the Port Macquarie Airport and that the preferred take off route is to the south and landing is to come from the south (ie due to the location of the trees at the northern end of the runway impacting on runway length). These matters can be covered by conditions of consent.

In addition to the above, CASA also noted the location of a dam near the runway. This is not considered an issue, as the aeroplane landing area is for private use only (ie the owner will be aware of such an obstacle).

Development Control Plan No 40 - Advertising of Development

As per the DCP, adjoining property owners were notified of the application and provided fourteen (14) days to comment. During the notification period Council received forty four (44) submissions. The majority of submissions were received in the form of a petition, with some of the people listed on the petition also choosing to lodge more detailed separate submissions.

It should be noted that a number of complaints were received from residents (that did not adjoin the property but were located under the proposed flight paths) for not receiving notification of the proposal. However, the DCP does not require owners under the flight path to be notified. Furthermore, it is difficult to determine when a flight path ceases in terms of height above the ground.

Designated Development

Pursuant to Schedule 3, Part 1, Clause 2 of the Environmental Planning and Assessment Regulation, certain aircraft facilities can be designated development. A copy of the relevant clause is reproduced below for the Panel's perusal. It is considered that the development is not designated due to the small scale nature of the aeroplane landing area not creating any significant environmental impact and the development is not located within 40m of a natural waterbody. In particular, the aeroplane landing area is more than 40m to the Caswell Channel and the dam onsite is not considered a natural waterbody (ie dam is an artificial waterbody created by the aeroplane landing area).

Aircraft facilities

Aircraft facilities (including terminals, buildings for the parking, servicing or maintenance of aircraft, installations or movement areas) for the landing, taking-off or parking of aeroplanes, seaplanes or helicopters:

(a) in the case of seaplane or aeroplane facilities:

(i) that cause a significant environmental impact or significantly increase the environmental impacts as a result of the number of flight movements (including taking-off or landing) or the maximum take-off weight of aircraft capable of using the facilities, and

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- (ii) that are located so that the whole or part of a residential zone, a school or hospital is within the 20 ANEF contour map approved by the Civil Aviation Authority of Australia, or within 5 kilometres of the facilities if no ANEF contour map has been approved, or*
- (b) in the case of helicopter facilities (other than facilities used exclusively for emergency aeromedical evacuation, retrieval or rescue):*
 - (i) that have an intended use of more than 7 helicopter flight movements per week (including taking-off or landing), and*
 - (ii) that are located within 1 kilometre of a dwelling not associated with the facilities, or*
- (c) in any case, that are located:*
 - (i) so as to disturb more than 20 hectares of native vegetation by clearing, or*
 - (ii) within 40 metres of an environmentally sensitive area, or*
 - (iii) within 40 metres of a natural waterbody (if other than seaplane or helicopter facilities).*

(iiia) any planning agreement that has been entered into under Section 93f or any draft planning agreement that a developer has offered to enter into under Section 93f:

None relevant.

iv) any matters prescribed by the Regulations:

NSW Coastal Policy

The proposed development will not restrict access (or opportunities for access) to the coastal foreshore, will not impact on the amenity of the coastal foreshore, will not impact on the scenic qualities of the coast, will not impact on flora and fauna (or their natural environment), will not be subject to adverse coastal processes or hazards, will not create any conflict between water and land based users of the area, will not adversely impact on archaeological/heritage items and will not reduce the quality of the water in the locality. In particular, the proposed development has existed for at least eight (8) years without any adverse impacts and no specific works are proposed onsite.

(b) The likely impacts of that development, including environmental impacts on both the natural and built environments and the social and economic impacts in the locality:

Context & Setting

The area consists predominately of small agricultural farms with the Caswell Channel of the Hastings River to the south. Further to the west is the North Coast Railway Line. The aeroplane landing area has existed on the subject site for at least eight (8) years.

Access, Transport & Traffic

Access to the site is available from Hursley Road a Council maintained road. As the aeroplane landing area is to be used by the owner, no increase in traffic will occur.

Heritage

Council records indicate that there are no known heritage items or sites of significance onsite. Furthermore, the proposed development does not involve any further disturbance to the land.

Other Land Resources

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The landing strip is already in existence and the area has been cleared for a number of years.

There is a dam on the adjacent property and the nearby Caswell Channel, offering potential nesting sites for local birds, which may pose a bird-strike risk.

It is assumed that the flying and keeping of aircraft requires the onsite storage of aviation fuel but no details are contained within the DA. There is potential for site contamination and it is recommended that this be included on Council records.

Avgas (aviation fuel for small aircraft) is a high-octane fuel, which is assumed to be a fire and/or explosion hazard to the users of the aircraft or on the ground nearby spectators. Given the rural nature of the area, these risks more directly affect the aircraft users and ancillary persons rather than the neighbouring residents.

Public

Council's Environmental Health Officer identified the following potential risks to public health and safety associated with the development:

- Usual risks associated with aircraft taking off and landing – few houses under take-off and landing approaches. My research indicates that a Beech Muscater requires about 308m to take-off (425m with obstacles) and 213m to land (420m with obstacles) and so the landing strip appears of adequate length.
- Bird strike (and crash risk) – no reported instances over the last 15 years.
- A powerline is located on the road boundary at the northern end of the landing strip;
- Noise – no recorded noise complaints relating to the operation of the landing strip have been received by Council even though the noise assessment indicates that the noise level is intrusive at the nearest, most-affected residence. Noise can have detrimental health affects;
- Explosion from aviation fuel stored onsite – minimal risk of fire spread given the cleared areas on large rural allotments.
- Land contamination and potential groundwater contamination if the storage of aviation fuel over the last 15 years has been inappropriate and/or uncontrolled.
- Potential aviation fuel contamination of potable water.
- Use of the landing strip during the evening hours - there's no lighting so it is recommended that the use of the landing strip be restricted to daylight hours only.

Having considered the above issues, Council's Environmental Health Officer considered the development acceptable in this case subject to the imposition of conditions and the following recommendations:

- The use of a wind sock to provide relevant information to the pilot on wind direction and strength during take-off and landings.
- Details of the proposed fuel storage area to be submitted and details on any existing storage. In the event, it appears that soil contamination may have occurred (from existing facilities), a site investigation by a suitably qualified soil contamination consultant to determine site contamination and if so, whether groundwater has been affected and whether the contamination has migrated offsite. Mitigation measures will be required. This can be done separate to the development application.

Other suggestions included:

- Limit hours of use to:
 - a. Mon- Fri = 7am - 6pm;
 - b. Sat = 8am - 6pm; &
 - c. No use on Sundays or Public Holidays.
- Limit the number of Take-off and Landing (TOL) events.

The above recommendations have been incorporated into the recommended consent conditions.

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Water

The landing strip is adjacent to a neighbouring dam and the Caswell Channel.

Soils

Refer to comments made by Council's Environmental Health Officer in relation to potential contamination from existing fuel storage facilities under the heading "Public".

Air & Micro-climate

The emission of aviation fuel burn will be discharged in the normal course of flying the aircraft, as occurs with all fuel powered vehicles.

Flora & Fauna

The proposed development does not involve the removal or alteration of any vegetation or landform. The main impacts of the development will be noise on natural wildlife and impact/bird strike. In particular, it has been identified that an osprey nest site exists approximately 500m west of the aeroplane landing area. Having considered that the aeroplane landing area has existed for at least eight (8) years without any incident, there would be similar noise generating sources in the area (ie boats/farm equipment) and the fact that the osprey has been known to nest at the site since 2004 (ie while planes would have been flying in the area), it is considered that there will be no adverse impact on flora and fauna.

In addition, as the aeroplane landing area is for private use only, the pilot will be aware of potential bird strike hazards areas (ie near the river) and the osprey nest site.

Noise & Vibration

Council's Environmental Health Officer provided the following comments in terms of noise impact:

AIR NAVIGATION (AIRCRAFT NOISE) REGULATIONS 1984 - List of Regulations

Noise from aircraft/airports etc. is controlled collectively by CASA; Air Services Australia; & the Dept. of Infrastructure however there is nothing about noise listed in the CASA advisory documents.

All aircraft flying in Australia must comply with the noise standards set out in the Commonwealth Regulations. It is recommended that if approved, a condition of consent be applied requiring a copy of the Noise Certificate for all of the aircraft used at the aerodrome be submitted to council for council's records and use.

The noise consultant, Heggies did not prepare a noise contour footprint as required by the DCP [contrary to the K&C report which states on page 11 at point a) that a predicted noise exposure footprint has been prepared and assessed] which would have been particularly useful in assessing the noise impact on the surrounding residents so it is unknown what the noise levels are over the dwellings under the paths of travel when the planes are travelling along the approach and take-off routes. However please note that the King & Campbell report states in point d) on page 12 that there are no dwellings located under the current flight path. Most noise occurs during take-off and climb out so the Take-Off route shown on the K&C plan "Exhibit 4" towards the river and away from dwellings would be the most suitable.

The noise consultants, Heggies, did however undertake some noise level monitoring at the site of a Beech aircraft (worst case scenario) in take-off and landing mode, considered to be the

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worst case scenario of the aircraft in use at the site and these noise levels readings have been used in assessing noise impacts.

Heggies Noise Assessment Report:

- No background noise level readings were taken and a background noise level of 30dB(A) was assumed on the basis of the rural nature of the area – satisfactory;
- An Intrusiveness criteria of 35dB(A) was then calculated – satisfactory;
- An Amenity criteria of 50dB(A) Day & 45dB(A) Evening was set as given by the INP – It would have been best if the Noise Footprint for the operation of the planes over the houses had been prepared by the noise consultant as required by the DCP. In the event of not having a Noise Footprint (Noise contours) to work off, the maximum noise level of 96dB(A) reported in Table 2 – Worst Case Scenario on page 4 has been used in an attempt to assess noise impacts on neighbouring residents.
- The PSNL is the limiting criteria, which in this case is the Intrusiveness Criteria of 35dB(A). This is the noise level against which noise in excess of the PSNL is measured and the recommended noise control measures should be made;
- The Beech aircraft was monitored as it was shown to be the worst case scenario – satisfactory;
- The noise from the Beech aircraft was monitored in take-off, circling and landing for five (5) minutes – the INP recommends that the development noise be monitored for a fifteen (15) minute period as this has been proved over the years to provide a reasonable approach to assessing intrusive noise impacts. In favour of the consultants it can be assumed that the take-off and landing events will not annoy or intrude on neighbours for a period of 15 minutes. Also, there should not be more than one landing or take-off in a 15 minute period;
- The location of Logger 3 is at the front boundary of the property in line with the landing strip. To comply with the INP, a logger should have been located over on the western boundary near the residence at the very least, and ideally on the neighbour's property within 30m of the residence;
- The consultants made an adjustment of the event noise level of 74dB(A) down to 69dB(A) to equate the noise from a 15-minute event to a 5-minute event. As the event was only monitored for 5 minutes anyway, I would retain the reported 74dB(A) as the Leq (event) and not use the assumed 69dB(A) of an event.
- The consultants have predicted a noise level of 50dB(A) at the closest, most-affected residence – Assuming 96dB(A) at 0m, I have also calculated the noise attenuation due to distance to put the worst case noise level at the nearby residence at 50dB(A) however this is +11dB(A) above the Intrusiveness criteria, which has been set as the PSNL for this development. Therefore the noise consultant should then make recommendations as to how the noise from the development can be reduced by 11dB(A) to comply with the PSNL, which has not been done.

On a comparative basis, a new commercial development would be required to implement noise control measures to reduce noise levels to be 35dB(A) at the boundary of the property. It is unknown what noise control measures can be instigated in the case of an existing and operating landing strip. Generally with aircraft noise, it is the noise receivers that are 'treated' i.e. noise insulation construction in dwellings but this option is not considered feasible under the circumstances. Considering the limitations of the development (nature and location) it is recommended that if approved, the development should have restrictions imposed limiting both the hours of use (for eg 7am – 6pm & 8am – 6pm) and the number of movements (a landing and a take-off each being a single movement) in an attempt to limit the noise impact on the local residents which have been shown by Heggies to exceed the PSNL for this project.

Natural Hazards

The site is subject to flooding. However, the development does not alter the landform in the area and the aeroplane landing area would not be in use during a flood event (ie no risk to pilots).

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The issue of bird strike has been discussed elsewhere in this report.

Based on the above, the development will not be adversely impacted upon by natural hazards.

Contamination Hazards

There is potential for the site to contain contaminated areas depending on how aviation fuel may have been stored onsite in the past. Council's Environmental Health Officer has nominated conditions for the applicant to check for contamination and rectify any issue. This can also be done separate to the DA.

The actual development will not create any additional risk to occupants. In particular, conditions will be applied to cover future fuel storage and no change of use is proposed. The identification of potential contamination would be more applicable if the owner/applicant wanted to develop the site for a more higher risk use (ie a dwelling). In such a case, the owner/applicant would need to make sure that the dwelling is not being located on a contaminated site.

Social Impact in the Locality

There is potential for the development to impact on neighbouring residents through noise. However, through the conditions of consent and the limiting of flights, such an issue is considered to be rectified.

Economic Impact in the Locality

The proposed development will not impact on the economy of the locality. In particular, the aeroplane landing area has been in use for at least eight (8) years without any major incident or complaint.

(c) The suitability of the site for the development:

The above assessment and associated conditions of consent indicate that the site is suitable for use as an aeroplane landing area.

(d) Any submissions made in accordance with this Act or the Regulations:

Council has received forty four (44) submissions in relation to the subject proposal. A summary of the issues raised in the submissions and associated comments from Council's planning staff are included below.

- The number of flights proposed is not within the amenity of the area or objectives of the 1(a1) Rural zone. This will in turn create adverse noise impacts.

Comment: Council staff agree with this statement. As a result, the number of flights is recommended to be reduced and conditioned to four (4) a day. It is recommended that the applicant be offered the opportunity to lodge an application to increase the number of flights, but only after one (1) year of four (4) flights per day. Furthermore, any such request will still be subject to further assessment.

In addition to the above, the proposed development will not result in loss of agricultural land as it can easily be converted back.

- The safety and risk factor is a concern in relation to who will govern and monitor the aircraft, flights, pilots etc.

Comment: The monitoring of the development will be covered by a range of people/bodies.

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Council, CASA and the general public will all play roles in ensuring the development occurs in a safe manner and in accordance with the conditions of consent. CASA were notified of the application and did not object to the proposal, subject to the imposition of conditions - refer to comments on CASA above in the report. It should also be noted that the property has been used as an aeroplane landing area for at least eight (8) years without incident.

- There was a lack of notification and time to respond.

Comment: Refer to comments in this report on compliance with Development Control Plan No 40 - Advertising of Development.

In addition to the above, the assessing officer was contacted by a number of residents regarding the limited timeframe to respond. Reasonable extensions were made available.

- Impact on fauna (birds) from planes/bird strike.

Comment: Refer to comments in this report under the heading of flora and fauna.

- The proposed development requires a rezoning to go ahead.

Comment: Pursuant to the Hastings Local Environmental Plan 2001, the proposed development is permissible with consent and therefore does not require a rezoning.

- If there is no increase in movements why the need for a DA? Who will monitor movements and noise.

Comment: The DA has been submitted to formalise the aeroplane landing area, which has operated for a number of years and Council does not have any record of approval. The monitoring of movements and noise can be done in a number of ways. Council's Compliance Officer can do a random audit/inspection. Council would also invite the public to inform Council of any non compliance/keep records of flights.

- There is concern that the site will be used as a commercial operation (ie pilot training/freight transport) and impact on traffic/road use.

Comment: The application before Council is not for a commercial operation and will be conditioned accordingly. Any change will require separate development approval from Council.

- The statement by the applicant that there are no dwellings located under the flight path is not true. At present time aircraft fly over Secombe Lane

Comment: The application as submitted does not show any dwellings directly under the main flight path take off/landing area shown on the plans and as proposed. This may be slightly different to what occurs at present or has occurred in the past. As stated previously in this report, there is also the issue of when a flight path begins and ends in terms of height and the difficulty of specifically defining. In this regard, Council does not disregard such a comment.

- Concern is raised over the impact of planes on livestock and horseriders.

Comment: In relation to the impact of noise, Council's Environmental Health Officer has assessed noise and concluded that subject to the number of flights being reduced and specific hours of operation being applied, there will be no adverse impact.

In addition to the above, the aeroplane landing area has operated for at least eight (8) years with no complaints/impacts on livestock having been received.

Furthermore, being a rural area, there is also the existing risk of farm equipment spooking

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livestock.

- The development will devalue property.

Comment: There has been no evidence to suggest that adjoining properties will devalue as a result of this development. The existing nature and scale of the proposal are considered to create no long term adverse impacts.

- The size of aircraft will potentially increase creating additional noise impacts.

Comments: Noise from aircraft will be covered by conditions of consent to ensure noise levels stay within consistent levels. Therefore, any new aircraft/larger aircraft will need to comply.

(e) The Public Interest:

The above assessment and associated conditions will ensure that the proposed development does not impact on the public or their interests.

A - GENERAL MATTERS

- (1) (DA001) The development is to be carried out in accordance with the plans and supporting documents set out in the following table except where modified by any conditions of this consent.

Plan / Supporting Document	Reference	Prepared by	Date
Supporting Report including Statement of Environmental Effects	14996	King & Campbell	May 2008
Plan and Longsection of Airstrip and Selected Detail	Dwg No. 14996P_det.dwg	King & Campbell	April 2008
Flight Paths	Dwg No. 14996P_DA.dwg	King & Campbell	May 2008
Noise Report		Heggies	30 May 2008

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) (DA082) Dust nuisance shall not be generated as a result of the undertaking of the development.
- (3) (DA195) Noise levels generated from aircraft or future aircraft is to be consistent with those tested/used in the Noise Report by Heggies dated 30 May 2008.
- (4) (DA196) The aeroplane landing area is only to be used by the owner for private use and is not to be used for commercial purposes
- (5) (DA197) A windsock is to be provided onsite in a suitable location, so that conditions can be observed by a pilot. The windsock must be maintained at all times.

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- (6) (DA198) Pilots are to be aware of the instrument approach procedure for the Port Macquarie Airport and not traverse such an area without having first made it clear to surrounding aircraft and getting clearance.
- (7) (DA199) Aircraft using the site are to follow the flight paths shown on the approved plans and are to take off to the south and land from the south, unless it is an emergency or conditions do not permit.
- (8) The maximum number of movements permitted each day is four (4), this being two (2) take off and landings. Aircraft are not to train over the area or practice land. In particular, a plane that comes into land or proposes to take off and does not, will be considered a movement, unless it can be shown that such a movement was aborted due to an emergency.
- (9) Pilots are to be aware of the location of the osprey nest site (west of the aeroplane landing area) and not to traverse such a location.
- (10) (DG195) Submit details of the storage of all fuels, liquids and other chemicals associated with the use of the site as a landing strip including details such as location, volumes, storage containers, bunding, MSDS's, fire prevention measures, etc. The proposed location and storage is to be approved by Council.
- (11) (DG196) Submit to council a copy of the Noise Certificate for all of the aircraft used at the aerodrome for council's records and future use.

B - PRIOR TO THE ISSUE OF OCCUPATION CERTIFICATE

- (1) (DE001) 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.

C - OCCUPATION OF THE SITE

- (1) (DF018) Offensive odours shall not be generated by the development.
- (2) (DF030) Offensive noise shall not be generated as a result of the operation of the development.
- (3) (DF031) Hours of operation of the development are restricted to the following hours:
 - 7.00 am to 6.00 pm – Mondays to Fridays
 - 8.00 am to 6.00 pm – Saturdays
 - No use on Sundays and Public HolidaysThe aeroplane landing area is to comply with the above times and also be during daylight hours.

COUNCIL RESOLUTION:
Consensus:

That this item be deferred to a future Development Assessment Panel Meeting to be held on site (date TBA).

The applicant is to provide further information with respect to:

- log of previous 12 months of airplane movements on the airstrip.

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- mandatory liability indemnity requirements for pilots.
- impact of noise on rural activities, particularly in relation to the keeping of horses.
- potential impact of airstrip activities on the osprey nest. This may need comment from a suitably qualified person.

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Attachment



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Development Assessment Panel**Action Created***Meeting Date: 12/11/2008*

ITEM NO: 01
PROPERTY: DA 2008/0219 - LOT 1, DP 255287, HURSLEY ROAD, REDBANK
APPLICANT: KING & CAMPBELL PTY LTD
OWNER: D & J MASSEY
PROPOSAL: AEROPLANE LANDING AREA
APPLICATION DATE: 20 JUNE 2008
DATE FORMAL: 7 AUGUST 2008
ESTIMATED COST: N/A
LOCATION: REDBANK
REPORT BY: CLINTON TINK
FILE NO: DA 2008/0219
PARCEL NO: 26555

PRECIS

This report has been prepared as a follow up to a previous report to the Development Assessment Panel (DAP) on 22 October 2008 whereby the following resolution was made:

"That this item be deferred to a future Development Assessment Panel Meeting to be held onsite (date TBA).

The applicant is to provide further information with respect to:

- log of previous 12 months of airplane movements on the airstrip.
- mandatory liability indemnity requirements for pilots.
- impact of noise on rural activities, particularly in relation to the keeping of horses.
- potential impact of airstrip activities on the osprey nest. This may need comment from a suitably qualified person"

The applicant has since submitted additional information on the above matters, which are the subject of this report, as well as noting the previous report and forty four (44) objections.

A copy of the DAP report from the 22 October 2008 is attached for the Panel's information.

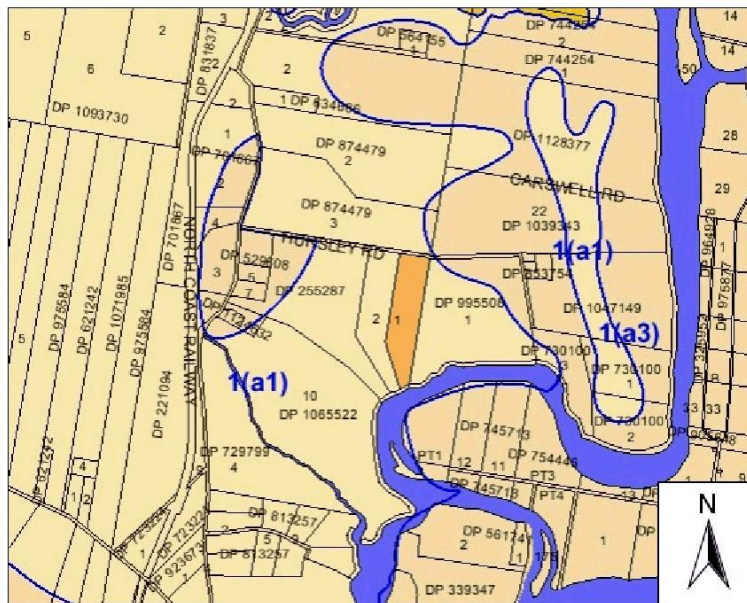
The following determination is recommended subject to a satisfactory outcome of the site inspection by DAP.

RECOMMENDATION


That Development Application 2008/0219 to formalise an existing aeroplane landing area at Lot 1, DP 255287, Hursley Road, Redbank, be approved, subject to the conditions of consent listed in the report.

DISCUSSION

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Issues identified at DAP 22 October 2008

The following comments are to be read in conjunction with the previous DAP report and Section 79(C) report of the 22 October 2008. In particular, the following comments address the outstanding issues raised by DAP on 22 October 2008.

Copy of DAP Report 22 October 2008 

- Log of previous 12 months of airplane movements on the airstrip.

The applicant has supplied a log of airplane movements from January 2008 to October 2008. While not specifically for 12 months, the figures are considered acceptable for providing an example of the current operator's movements. The applicant has advised that the log book shows approximately 76 movements by Mr Massey. Mr Massey also estimated that an additional 80 movements occurred over this period as a result of other pilots. Therefore, the applicant estimated that 156 movements occurred over the 10 month period (290 days), equating to an average of 0.54 movements per day.

It should be noted that the log appears to indicate that not all movements occurred from the subject property. In particular, the log book indicates that only 58 movements occurred from the subject property. Furthermore, the log book shows that the operator did over 100 movements in total (ie includes flights from other places). While these figures are different to those listed by the applicant, the figures show that the operator has still been averaging around 0.47 – 0.65 movements per day.

- Mandatory liability indemnity requirements for pilots.

The applicant has provided a copy of insurance for the aeroplane landing area associated planes and third party liability.

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- Impact of noise on rural activities, particularly in relation to the keeping of horses.

The applicant has submitted an addendum to the noise report (prepared by Heggies) that shows a tractor produces 77dBA, which is 3dBA more than the aeroplane tested in the original noise report. Therefore, the noise from a small aircraft is not dissimilar from a tractor that may be used on a rural property in the area. However, the exposure to aeroplane noise is likely to be intermittent while a tractor could persist all day.

In addition, the operator is prepared to only start up planes on the eastern side of the shed onsite to further reduce any noise impact on the adjoining dwelling to the west and advise the associated resident of the days when more than the average number of movements will occur. This can be further reinforced through the conditions of consent.

The applicant has also received comments from a suitably qualified ecologist regarding the impacts of aeroplane noise on livestock. The ecologist concluded that livestock in the area would not be significantly affected by any formalisation and continued use of the existing aeroplane landing area. The ecologist explains that livestock that are exposed to various noise sources become accustomed and less flighty. Due to the small size lots in the area and regular human interaction (ie cars driving past, existing planes, stabling of existing livestock), livestock in the area would be accustomed to such activity and noises. This was further evident in the pictures of the osprey nest, which showed cattle unaffected by a human taking photos.

- Potential impact of the airstrip activities on the osprey nest. This may need comment from a suitably qualified person.

The applicant received comment from a suitably qualified ecologist regarding the impacts of the aeroplane landing area on the osprey nest site and osprey feeding perch. The ecologist concluded that the formalisation and continued use of the existing landing strip would not pose any significant impact on the osprey. In particular, such a decision was based on other examples of osprey nest sites in high use/noise areas not being affected, the small scale size of aircraft to be used, the nest being active when the aeroplane landing area was in use, the distance of the nest to flight paths and the height at which aircraft will be located when passing over the feeding perch.

Condition matters raised by the applicant

In addition to the issues raised by DAP on 22 October 2008, the applicant also lodged a request at the subject DAP meeting for changes to the proposed conditions. In particular, the applicant has proposed the following changes to the conditions of consent nominated in the 22 October 2008 report:

Condition A3 be amended to read:

Noise levels generated from aircraft or future aircraft to be consistent with those tested/used in the noise report by Heggies dated 30 May 2008. The maximum take off weight of any aircraft using the aeroplane landing area is 2500kg.

The request by the applicant is seen as a positive in that it further limits the size of aircraft using the facility. In particular, Council's Development Control Plan 25 – Aeroplane Landing Areas allows up to 5700kg.

Condition A8 be amended to read:

The average number of movements per day is two (2). This being an average of one take

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off and one landing per day. This equates to a maximum annual number of flights of 730. The maximum number of flights per day is 12. This maximum usage of the aeroplane landing area is permitted on six occasions per annum. The owner is to provide Council with an annual log book of all usage of the aeroplane landing area. Aircraft are not to train over the area or practice land. In particular a plane that comes into land or take off and does not will be considered a movement unless it can be shown that such a movement was aborted due to an emergency.

The proposed change will result in a maximum of 730 movements per annum based on an average of two (2) flights per day (ie applicant's revised request). This is as opposed to a potential 4368 movements per annum based on twelve (12) flights per day (ie DCP 25 provision), and 1248 movements per annum based on the proposed condition reported to DAP on 22 October 2008.

In this regard, the change results in a significant reduction in overall movements per annum than that originally proposed and previously reported to DAP. However, the offset is that the applicant requests to be able to have 12 movements a day on 6 occasions. Based on the original assessment and the revised information above, the requested changes are considered acceptable. In particular, overall movements are reduced and the limited number of occasions that 12 movements will occur is unlikely to create any adverse impact. Furthermore, Council could provide further clarification to the condition in that the average of 2 flights per day is only to be exceeded on 6 occasions, with no more than 12 movements per day on each of those occasion. This is to ensure that the applicant does not conduct multiple blocks of movements per day (for instance 10 per day, which complies with the 12 movements per day, but could occur up to 60+ times per year still meet the average).

Subsequent to the above change, the applicant also requests the following change to Condition C3:

Hours of operation of the development are restricted to the following hours:

7:00am to 8:00pm Mondays to Saturdays

8:00am to 8:00pm Sundays and public holidays

The aeroplane landing area is to comply with the above times and also be during daylight hours.

The above request was made on the basis that the use is for private purposes only and the main time that the operator would be able to conduct flights is on weekends (ie the operator works during the week).

In light of the changes to the number of movements and the above additional information on noise etc, the change to hours of operation is not considered to be unreasonable.

Additional Condition Matters

In addition to the applicant's proposed changes, it is recommended that the following additional issues be conditioned, which have come out of the additional information submitted after the DAP meeting on 22 October 2008:

- The operator or any new owner/operator of the aeroplane landing area is to provide Council with a copy of their indemnity insurance.
- Planes are to be started on the eastern side of the existing shed to provide buffering to the dwelling on Lot 2 DP 255287.
- The adjoining neighbour on Lot 2 DP 255287 is to be given fourteen (14) days notice by mail of any day when the average number of movements is to be exceeded.

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A - GENERAL MATTERS

- (1) (DA001) The development is to be carried out in accordance with the plans and supporting documents set out in the following table except where modified by any conditions of this consent.

Plan / Supporting Document	Reference	Prepared by	Date
Supporting Report including Statement of Environmental Effects	14996	King & Campbell	May 2008
Plan and Longsection of Airstrip and Selected Detail	Dwg No. 14996P_det.dwg	King & Campbell	April 2008
Flight Paths	Dwg No. 14996P_DA.dwg	King & Campbell	May 2008
Noise Report		Heggies	30 May 2008
Supporting Emails		King & Campbell	31 October 2008

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) (DA082) Dust nuisance shall not be generated as a result of the undertaking of the development.
- (3) (DA195) Noise levels generated from aircraft or future aircraft is to be consistent with those tested/used in the Noise Report by Heggies dated 30 May 2008. The maximum take off weight of any aircraft using the aeroplane landing area is 2500 kg.
- (4) (DA196) The aeroplane landing area is only to be used by the owner for private use and is not to be used for commercial purposes
- (5) (DA197) A windsock is to be provided onsite in a suitable location, so that conditions can be observed by a pilot. The windsock must be maintained at all times.
- (6) (DA198) Pilots are to be aware of the instrument approach procedure for the Port Macquarie Airport and not traverse such an area without having first made it clear to surrounding aircraft and getting clearance.
- (7) (DA199) Aircraft using the site are to follow the flight paths shown on the approved plans and are to take off to the south and land from the south, unless it is an emergency or conditions do not permit.
- (8) The average number of allowable movements per day is two (2). This being an average of one (1) take off and one (1) landing per day. This equates to a maximum annual number of flights of seven hundred and thirty (730). The average number of flights per day may be exceeded on six (6) occasions per annum, but only to a maximum of twelve (12) movements per day. The owner is to provide Council with an annual log book of all

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usage of the aeroplane landing area. Aircraft are not to train over the area or practice land. In particular, a plane that comes into land or proposes to take off and does not, will be considered a movement, unless it can be shown that such a movement was aborted due to an emergency.

- (9) Pilots are to be aware of the location of the osprey nest site (west of the aeroplane landing area) and are not to traverse that location.
- (10) (DG195) Details are to be submitted to Council relating to the storage of all fuels, liquids and other chemicals associated with the use of the site as a landing strip including details such as location, volumes, storage containers, bunding, MSDS's, fire prevention measures, etc. The proposed location and storage is to be approved by Council.
- (11) (DG196) Records are to be submitted to council of the Noise Certificate for all of the aircraft used at the aerodrome for council's records and future use.
- (12) The operator or any new owner/operator of the aeroplane landing area is to provide Council with a copy of their indemnity insurance.

B - PRIOR TO THE ISSUE OF OCCUPATION CERTIFICATE

- (1) (DE001) 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.

C - OCCUPATION OF THE SITE

- (1) (DF018) Offensive odours shall not be generated by the development.
- (2) (DF030) Offensive noise shall not be generated as a result of the operation of the development.
- (3) (DF031) Hours of operation of the development are restricted to the following hours:
 - 7.00 am to 8.00 pm – Mondays to Saturdays
 - 8.00 am to 8.00 pm – SaturdaysThe aeroplane landing area is to comply with the above times and also be during daylight hours.
- (4) Planes are to be started on the easement side of the existing shed to provide noise buffering to the dwelling on Lot 2 DP 255287.
- (5) The adjoining neighbour on Lot 2 DP 255287 is to be given fourteen (14) days notice by mail of any day when the average number of movements is to be exceeded.

COUNCIL RESOLUTION:**Consensus:**

That Development Application 2008/0219 to formalise an existing aeroplane landing area at Lot 1, DP 255287, Hursley Road, Redbank, be approved, subject to the conditions of consent listed in the report AND SUBJECT TO THE FOLLOWING AMENDMENTS TO THE CONDITIONS OF CONSENT:

A. GENERAL MATTERS

* Condition A1 - Amend the table to Condition A1 for Flight Paths document as follows:

Flight Paths (as amended)

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Dwg No. 149996P_DA.dwg (Revision C)
King & Campbell
November 2008

* Condition A4 - Amend Condition A4 to read:

"The aeroplane landing area is only to be used by the owner, and pilots authorised by the owner, for private use. It is not to be used for commercial purposes."

* Condition A8 - Amend Condition A8 to read:

"The average number of allowable movements per day is two (2). This being an average of one (1) take off and one (1) landing per day. This equates to a maximum annual number of movements of seven hundred and thirty (730). The maximum number of movements per week (ie 14 movements) may be exceeded on six (6) occasions per annum, but only to a maximum of twelve (12) movements in any one day."

* Insert a new Condition A9 (between the current A8 and A9) to read as follows:

"The maximum number of movements per week (ie 14 movements) may be exceeded on six (6) occasions per annum only to a maximum of twelve (12) movements in any one day subject to:

- The owner of the aeroplane landing area provision seven (7) days written notice to the nominated representatives of interested residents prior to each of the (6) occasions;
- The six (6) occasions are not to be scheduled during the osprey breeding season between 1 May and 31 October."

* Insert a new Condition A10 after the previous new condition as follows:

"Aircraft are not to train over the area or practice land. In particular, a plane that comes in to land or proposes to take off and does not, will be considered a movement, unless it can be shown that such a movement was aborted due to an emergency."

* Insert a new Condition A11 after the previous new condition as follows:

"The owner is to provide Council with an annual report on the anniversary date of this consent containing the following:

- An annual log book of all usages of the aeroplane landing area;
- The initial report is to contain details of the communication protocols with representatives of interested residents;
- Each annual report will contain details of all communications with interested residents within the previous 12 months and the minutes of the annual meeting with the residents' representatives.

* Condition A9 renumbered to A12 and include an additional sentence to read:

"Pilots are also to be made aware of the roost tree and associated fishing

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area."

* Condition A10 renumbered to A13.

* Delete Condition A11.

* Delete Condition A12.

* Add new condition A14 to read:

"The operator or any new owner/operator of the aeroplane landing area is to provide Council with a copy of their annual certificates of currency for comprehensive and indemnity insurance policies."

* Add new Condition A15 to read:

"There is to be no use of the aeroplane landing area by helicopters."

B. PRIOR TO ISSUE OF OCCUPATION CERTIFICATE

* Add new Condition B2 to read:

"The site is not to be used as an aeroplane landing area until such time as an Aeroplane Landing Area Operations Plan has been submitted to, and approved by, Council. The plan is to incorporate the provisions of this consent."

OCCUPATION OF SITE

* Condition C3 - Amend the second dash point of Condition C3 to read:

- 8.30 am to 8.00 pm – Sundays and Public Holidays

* Condition C4 - Amend Condition C4 to read:

"Planes are to started, and undertake all pre-take off checks, on the eastern side of the existing shed to provide noise buffering to the dwelling on Lot 2 DP 255287."

* Delete Condition C5.

ADVICE

Add an "Advice" section to the schedule of conditions that includes the following:

(1) The residents are to nominate 3 to 4 representatives to represent them at the annual meeting with the owner of the aeroplane landing area.

(2) Contact details are to be exchanged between the owner of the aeroplane landing area and the nominated representatives of interested residents.

(3) The owner of the aeroplane landing area and the nominated representatives of the interested residents are to meet on not less than an annual basis a minimum of one (1) month prior to the anniversary date of this

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consent. The minutes of such meetings are to be included in the annual report for Council.

- (4) A copy of the annual report is to be made available for public review at Council.

Item: 06

Subject: DA 2012/305 - STAGED SIXTY THREE (63) LOT INDUSTRIAL SUBDIVISION WITH ADDITIONAL RESIDUE AND INFRASTRUCTURE LOTS AT LOT 30 DP 255774, LOT 2 DP 222740, LOT 1 DP 124543, LOT 1 DP 226821, LOT 62 DP 754434, LOT 1 DP 1131036 AND PART LOT 1 DP 1144490, SANCROX ROAD, SANCROX

Report Author: Clint Tink

Property: Lot 30 DP 255774, Lot 2 DP 222740, Lot 1 DP 124543, Lot 1 DP 226821, Lot 62 DP 754434, Lot 1 DP 1131036 and Part Lot 1 DP 1144490, Sancrox Road, Sancrox

Applicant: Expressway Spares Pty Ltd, JJ & CB Dunn Superannuation Fund, Mr & Mrs JJ & CB Dunn c/- King & Campbell Pty Ltd

Owner: Expressway Spares Pty Ltd, JJ & CB Dunn Superannuation Fund and JJ & CB Dunn

Application Date: 6 July 2013

Date Formal: 22 March 2013

Estimated Cost: \$12,000,000 (Subdivision/Infrastructure costs)

Location: Sancrox

File no: DA 2012/0305

Parcel no: 18126, 57583, 59744, 18141, 3225, 36429 & 18144

Alignment with Delivery Program

- 4.9.2 Undertake development assessment in accordance with relevant legislation.
- 4.9.3 Implement and maintain a transparent development assessment process.

RECOMMENDATION

1. That the Koala Plan of Management prepared by King & Campbell Pty Ltd dated March 2013 be adopted, subject to requirements of the letter from the Department of Planning and Infrastructure (DoPI) dated 28 March 2013.
2. That upon approval of recommendation 1, DA 2012/305 for a staged sixty three (63) lot industrial subdivision with additional residue and infrastructure lots at Lot 30 DP 255774, Lot 2 DP 222740, Lot 1 DP 124543, Lot 1 DP 226821, Lot 62 DP 754434, Lot 1 DP 1131036 and Part Lot 1 DP 1144490, Sancrox Road, Sancrox, be determined by granting consent subject to the recommended conditions.

Executive Summary

This report considers a Development Application for a staged sixty three (63) lot industrial subdivision with additional residue and infrastructure lots at the subject site.

This report provides an assessment of the application in accordance with the requirements of the Environmental Planning and Assessment Act 1979.

Subsequent to exhibition of the application, no submissions have been received.

1. BACKGROUND

Existing sites features and Surrounding development

The site has a combined area of 85.268ha.

The site is zoned IN1 General Industrial, IN2 Light Industrial, E2 Environmental Conservation, E3 Environmental Management, E4 Environmental Living and RU1 Primary Production in accordance with the Port Macquarie-Hastings Local Environmental Plan 2011, as shown in the following zoning plan:



The site contains a mixture of cleared and timbered land. A dwelling exists in the northern section of the property. On the southern side of Sancrox Road, the property is used for storage of machinery and also a food processing business.

Surrounding the site is a mixture of development including a quarry to the west, the Pacific Highway and a vineyard/restaurant to the east, rural land to the north and further industrial land uses to the south. Further out, the use of the land changes to rural residential.

The existing subdivision pattern and location of existing development within the immediate locality is shown in the following aerial photo:

- 3/8/2012 to 3/9/2012 - Exhibition period of the application.
- 25/7/2012 - DoPI were advised that Council would have the KPOM peer reviewed before sending it for comment/approval.
- 25-30/7/2012 - Discussions with Steve Phillips from Biolink regarding peer reviewing the KPOM.
- 30/7/2012 - Discussion with RMS staff regarding the DA referral.
- 10/8/2012 - Further discussion with RMS regarding the traffic study, industrial yield rates etc.
- 13/8/2012 - Steve Phillips advised that he was still working through the KPOM.
- 15/8/2012 - Meeting was held between Council staff, the applicant and Steve Phillips.
- 16/8/2012 - RMS requested additional information on traffic study, yield rates etc. RMS response was forwarded to the applicant on 20/8/2012.
- 22/8/2012 - Applicant responded to RMS's letter, which was forwarded to the RMS on 23/8/2012.
- 22/8/2012 - Applicant provided alternate access arrangement in case the upgrades to Sancrox Road were to falter.
- 27/8/2012 - Council staff contacted Steve Phillips for update on KPOM review. General Terms of Approval from the Office of Water were received.
- 30/8/2012 - Response received from NSW Rural Fire Service (RFS) regarding the subdivision. NSW RFS supported the proposal.
- 3/9/2012 - Council's Natural Resources Officer provided feedback on VMP and KPOM. Comments forwarded to Steve Phillips.
- 5/9/2012 - The applicant was provided an update on the status of the DA.
- 6/9/2012 - Meeting was held between Council staff and RMS regarding highway upgrade.
- 11/9/2012 - The applicant was provided an update on the status of the DA.
- 17/9/2012 - Steve Phillips provided KPOM review comments, which were forwarded to the applicant along with Council's Natural Resource Officer's comments.
- 19/9/2012 - Meeting with Council staff, applicant and owner representative regarding infrastructure issues associated with the DA.
- 24/9/2012 - RMS provided response to the proposal.
- 4/12/2012 - Council staff sought an update to the revised KPOM and VMP. Applicant responded on 6/12/2012 advising that they were waiting to submit the documents based on acquisition discussions with the RMS.
- 21/12/2012 - Applicant submitted a response to the NSW RFS approval, requesting a number of conditions be clarified and amended to match staging. Copy of updated KPOM and VMP received.
- 21/1/2013 - KPOM and VMP forwarded to DoPI.
- 7/2/2013 - Meeting between Council staff and the applicant regarding the status of the DA and Voluntary Planning Agreements (VPA).
- 14/2/2013 - Applicant provided amendments to the Sancrox Employment Land Road Construction Planning Agreement. Revised subdivision plan submitted based on RMS changes to acquisition areas.
- 20/2/2013 - NSW RFS provided revised approval.
- 21/2/2013 - Council's Natural Resource Officer provided feedback to the applicant on the VMP.
- 26/2/2013 to 4/3/2013 - Applicant sought an update on the DA. Council raised concern over the visual buffer to the Pacific Highway being reduced to less than 10m. Discussions were held and following a meeting on 4/3/2013, it was agreed that cross sections of the reduced areas were required to see cut and fill of

highway works and the associated protection they would provide from a visual aspect.

- 4/3/2013 - Revised VMP submitted in response to Council's Natural Resource Officers comments.
- 5/3/2013 - Revised plans were submitted to the DoPI regarding the KPOM.
- 13/3/2013 - Applicant submitted cross sections of visual buffer in relation to highway works. Council accepted the revised buffer except for proposed Lot 12, which would still need to provide a 10m wide strip. The matter can be conditioned.
- 15/3/2013 - The DoPI sought clarification on the overall intent of the KPOM and outlined some anomalies with the VMP. The matters were forwarded to the applicant.
- 22/3/2013 - KPOM and VMP amended with copies having been sent to DoPI.
- 28/3/2013 - The revised KPOM was accepted/approved by the DoPI.

3. STATUTORY ASSESSMENT

Section 79C (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 44 - Koala Habitat Protection

In accordance with clauses 6 and 7, the subject land has an area of more than one (1) hectare in size and therefore the provisions of the SEPP must be considered.

The applicant commissioned an ecological assessment to be carried out on the property by Peter Parker Environmental Consultants Pty Ltd. The results of the assessment showed that the site contained core koala habitat.

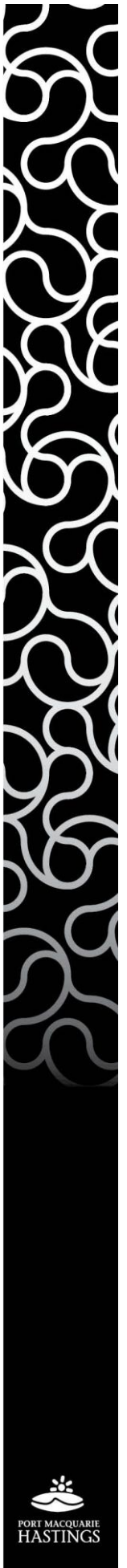
A Koala Plan of Management (KPoM) was subsequently prepared by the applicant in accordance with the SEPP. The KPOM was initially peer reviewed by Steve Phillips of Biolink, who suggested some minor changes to the plan. The applicant subsequently amended the plan, which was forwarded to the Department of Planning and Infrastructure (DoPI) for concurrence. Subject to some minor changes and conditions being imposed on any consent issued, DoPI have granted concurrence to the KPoM. A copy of the KPoM and the DoPI approval are attached at the end of this report.

It should be noted that the overall intent of the KPOM is to provide for the planned retreat of koalas from the estate as the stages progress. Fencing will be used to achieve this aspect. In the odd event that a koala enters the estate from the narrow section in the south it should follow the drainage line in vegetation unit 4 to the west. Should a koala proceed beyond this point, isolated koala food trees will still exist within the estate for their refuge only with the intent being the koalas are moved back out and into the more viable surrounding areas. Once the overall estate is finished, the KPOM allows for the fencing to be opened up depending on how the industrial land develops.

AGENDA

DEVELOPMENT ASSESSMENT PANEL **10/04/2013**

In accordance with Clause 13, DAP (as delegate of Council) is also required to approve the KPoM. In considering whether to give approval, Circular B35 relating to SEPP 44 is to be taken into consideration. An assessment of the relevant criteria is provided below:



SEPP 44 Criteria listed in Circular B35	Assessment/Compliance
<i>(i) an estimate of population size</i>	15-20 koalas in Greater Sancrox area and 1-2 onsite.
<i>(ii) Identification of preferred feed tree species for the locality and extent of resource available</i>	Tallowood, Swamp Mahogany and Small Fruited Grey Gum are the only species onsite.
<i>(iii) An assessment of the regional distribution of koalas and the extent of alternative habitat available to compensate for that affected by the actions</i>	Site provides an important component of significant regional koala habitat.
<i>(iv) Identification of linkages of core koala habitat to other areas of habitat and movement of koalas between areas of habitat. Provision of strategies to enhance and manage these corridors.</i>	Linkages nominated - main habitat is to the east and west.
<i>(v) Identification of major threatening processes such as disease, clearance of habitat, road kill and dog attack which impact on the population. Provisions of methods for reducing these impacts.</i>	Management plan provided identifying threatening processes and strategies for ongoing management
<i>(vi) Provision of detailed proposals for the amelioration of impacts on koala populations from any anticipated development within zones of core koala habitat.</i>	Criteria provided.
<i>(vii) Identification of any opportunities to increase size or improve condition of existing core habitat, this should include lands adjacent to areas of identified core koala habitat.</i>	KPoM largely nominates strengthening of habitat through compensatory planting (Figure 7) in certain designated areas. Also further habitat is provided by an offsite offset linked to Sancrox Employment Lands Environmental Lands and Services Planning Agreement.
<i>(viii) The plan should state clearly what it aims to achieve (for example, maintaining or expanding the current population size or habitat area)</i>	Objectives stated - see comment under SEPP 44 regarding the intent of the KPOM.
<i>(ix) The plan should state the criteria against which achievement of these objectives is to be measured (for example, a specified population size in a specific time frame or the abatement of threats to the population)</i>	Suitable implementation schedule provided for DA, CC and operational phases. VMP will also aid in achieving objectives.
<i>(x) The plan should also have provisions for continuing monitoring, review and reporting. This should include an identification of who will undertake further work and how it will be funded.</i>	The staging of the development and extended development period ensures monitoring can occur by developers. Conditions of consent to be imposed that provide a level of certainty that the monitoring is undertaken (i.e. stages will not be release if monitoring is not up to date and of a suitable standard)

State Environmental Planning Policy 55 – Remediation of Land

A Preliminary Site Investigation was carried out by King and Campbell in 2009 in accordance with relevant requirements and legislation. The conclusion of the Report is that there have been some land uses that have resulted in low levels of localised contamination on three lots within the study area (Lot 30, part Lot 31 and Lot 1 DP 555095) but found that the land is suitable for rezoning for commercial/industrial uses.

The report makes recommendations in relation to the above mentioned lots with the localised contamination present which need to be adopted – a condition of consent is recommended.

Potential exists for construction and occupation of the industrial area to impact on land quality however the imposition of standard conditions of consent combined with the adoption of best management and environmental practice by operators should limit any potential adverse impacts.

Based on the above, the development is consistent with the objectives of the SEPP and the future uses of the land and is compatible to the soil quality conditions, especially when factoring in the proposed conditions of consent.

State Environmental Planning Policy 62 - Sustainable Aquaculture

In accordance with clause 15C, given the nature of the proposed development, proposed stormwater controls and the location of the subdivision; the proposal will be unlikely to have any identifiable adverse impact on any existing aquaculture industries within the nearby Hastings River.

The Office of Water have also accepted the proposed works within 40m of the drainage line onsite, subject to conditions.

State Environmental Planning Policy 64 - Advertising and Signage

The proposed development includes proposed advertising signage in the form of an estate entrance sign/general advertising.

In accordance with clause 7, this SEPP prevails over the Port Macquarie-Hastings LEP 2011 in the event of any inconsistency.

The following assessment table provides an assessment checklist against requirements of this SEPP:

Applicable clauses for consideration	Comments	Satisfactory
Clause 8(a) & 13 Consistent with objectives of the policy as set out in Clause 3(1) (a), the Guideline and also Schedule 1.	Signage is permissible with consent in the IN1 zone. The signage is a standard estate sign that are commonly used to define an area.	Yes
3(1) This Policy aims: (a) to ensure that signage (including advertising): (i) is compatible with the desired amenity and visual character of an area, and (ii) provides effective communication in suitable	The quality of the sign is consistent with other estate signs and provides effective communication. Based on the above, the proposed development is consistent with the	Yes

locations, and (iii) is of high quality design and finish,	objectives of the SEPP.	
<p>14 Duration of consents</p> <p>(1) A consent granted under this Part ceases to be in force:</p> <p>(a) on the expiration of 15 years after the date on which the consent becomes effective and operates in accordance with section 83 of the Act, or</p> <p>(b) If a lesser period is specified by the consent authority, on the expiration of the lesser period.</p> <p>(2) The consent authority may specify a period of less than 15 years only if:</p> <p>(a) before the commencement of this Part, the consent authority had adopted a policy of granting consents in relation to applications to display advertisements for a lesser period and the duration of the consent specified by the consent authority is consistent with that policy, or</p> <p>(b) the area in which the advertisement is to be displayed is undergoing change in accordance with an environmental planning instrument that aims to change the nature and character of development and, in the opinion of the consent authority, the proposed advertisement would be inconsistent with that change, or</p> <p>(c) The specification of a lesser period is required by another provision of this Policy.</p>	Being an estate identification sign, the duration will not be restricted in this case.	Yes
Clause 17 & 18 stipulate that if a sign is greater than 20m ² , 8m high and within 250 of a classified road; the application must be advertised and a copy sent to RTA for concurrence. Schedule 1 of the SEPP also needs to be considered.	The sign does not exceed 20m ² or the dimension requirements. Sign is approximately 8m ² . The sign is within 250m of the Pacific Highway, but is not large enough to trigger the clause.	Yes
Clause 20 relates to the size, location and calculation of a logo.	No logo or skirt area proposed.	Yes
Schedule 1(1) Character of the area.	The quality of the sign is consistent with other estate	Yes

	signs and provides effective communication. There are no view concerns as it is on a straight and flat section of road.	
Schedule 1(2) Special areas.	There are no special areas associated with the site.	Yes
Schedule 1(3) Views and vistas.	The development will assist in the identification of the area/estate. The DCP also requires the corner be a focal point, which the sign will reinforce. The sign is not located in the visual buffer area. Based on the above, the development will not impact on any views or vistas.	Yes
Schedule 1(4) Streetscape, setting or landscape.	Refer to above comments.	Yes
Schedule 1(5) Site and building.	There will be no change or impact in terms of adjoining buildings.	Yes
Schedule 1(6) Associated devices and logos with advertisements and advertising structures.	Associated devices, logos etc have been incorporated into the design.	Yes
Schedule 1(7) Illumination.	Illumination of the sign has not been proposed.	N/A
Schedule 1(7) Safety.	Refer to above comments. Sign will create no impact on safety.	Yes

Transport Corridor Outdoor Advertising and Signage Guidelines

The guideline provides best practice for planning and design of outdoor advertisements in or adjacent to a transport corridor (i.e. classified road). The proposed development is consistent with the Guideline as represented through the positive comments provided in the above SEPP 64 assessment. The sign does not create any specific clutter to the area. The sign does not obstruct road user's view of the road or ability to use and interpret the road conditions. The sign does not overhang the road carriageway. The sign will not be a variable messaging, moving or a video animated sign.

In terms of the Public Benefits Test (Part 4 of the Guideline), the sign will be used to identify the estate, which will aid in the community being able to identify the area and promote local business. Promoting the estate will help bring in business and thereby lead to increased expenditure and flow on effects within the community.

State Environmental Planning Policy (Infrastructure) 2007

Clauses 101 and 102 relate to development with frontage to a classified road and impact of classified roads by way of noise and vibration respectively. Clause 103 relates to traffic generating development in which a subdivision of 50 or more lots

with access to a classified road is triggered. In terms of Clause 101 & 103, Council referred the application to the Roads and Maritime Services (RMS) for comment. The RMS comments have been factored into the assessment and are detailed below in the "Roads" and "Traffic" sections of this report.

In terms of Clause 102, consideration of the impacts of noise and vibration will be more relevant to future applications for specific development. Furthermore, it is unlikely that future uses of the industrial zoned land will contain sensitive receivers such as residential development. Having considered Clauses 101-102 inclusive, the proposed development is consistent with the requirements of the SEPP.

State Environmental Planning Policy (Major Development) 2005

The development does not trigger any of the clauses or thresholds in the SEPP.

State Environmental Planning Policy (Rural Lands) 2008

SEPP requirement	Comment	Complies
Objectives		
2(a) to facilitate the orderly and economic use and development of rural lands for rural and related purposes,	The area to be developed has been identified through a recent rezoning. Previous studies completed on the property, plus those completed as part of the rezoning and development application confirm that the site is suitable for industrial purposes and is suitably serviced. The rural zoned land is well separated from the site via vegetation buffering and the existing Pacific Highway. This will minimise any conflict along with the rural zoned land not being used for any substantial rural pursuits. The staging and design of the industrial subdivision has also been designed to ensure the adjoining quarry to the west can continue to operate to full potential/life.	Yes
2(b) to identify the Rural Planning Principles and the Rural Subdivision Principles so as to assist in the proper management, development and protection of rural lands for the purpose of promoting the social, economic and environmental welfare of the State,	Refer to above comments.	Yes
2(c) to implement measures designed to reduce land use conflicts,	It is considered that there would be limited conflict between the development and any surrounding rural uses. This is based on the buffers and limited rural pursuits being carried out in the area.	Yes
2(d) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land,	The area to be developed would not impact on State significant agricultural land.	Yes

having regard to social, economic and environmental considerations,		
2(e) to amend provisions of other environmental planning instruments relating to concessional lots in rural subdivisions.		N/A
Rural Planning Principles		
7(a) the promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas,	The development will not impact on the current or potential productive and economic activities in the area as per comments on Clause 2(a) above.	Yes
7(b) recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State,	Refer to all comments above.	Noted
7(c) recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development,	Refer to all comments above.	Noted
7(d) in planning for rural lands, to balance the social, economic and environmental interests of the community,	Based on the comments above and the conclusions from the ecological report accompanying the development application, it is considered that a balance has been met between the relevant aspects.	Yes
7(e) the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land,	Refer to comments above. The proposed development will not impact on flora and fauna, watercourses or any known natural resources. In particular, the drainage line onsite is not to be developed and will be replanted to create an improved habitat link.	Yes
7(f) the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities,	Refer to comments on 2(a). The existing rural residential area on Bushlands Drive will be afforded protection via the construction of a noise barrier.	Yes
7(g) the consideration of impacts on services and infrastructure and appropriate location when providing for rural	No new rural housing proposed.	N/A

housing,		
7(h) ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.	The site has recently been rezoned for industrial purposes.	Yes
Rural Subdivision Principles		
8(a) the minimisation of rural land fragmentation,	The rural land will not be subdivided or fragmented.	Yes
8(b) the minimisation of rural land use conflicts, particularly between residential land uses and other rural land uses,	Refer to comments on 2(a) above.	Yes
8(c) the consideration of the nature of existing agricultural holdings and the existing and planned future supply of rural residential land when considering lot sizes for rural lands,	The rural land will not be subdivided or fragmented.	Yes
8(d) the consideration of the natural and physical constraints and opportunities of land,	The rural land will not be subdivided or fragmented.	Yes
8(e) ensuring that planning for dwelling opportunities takes account of those constraints.	The rural land will not be subdivided or fragmented.	Yes
Rural Subdivision for Agricultural Purposes		
<p>9(1) The objective of this clause is to provide flexibility in the application of standards for subdivision in rural zones to allow land owners a greater chance to achieve the objectives for development in the relevant zone.</p> <p>9(2) Land in a rural zone may, with consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size otherwise permitted for that land.</p> <p>9(3) However, such a lot cannot be created if an existing dwelling would, as the result of the subdivision, be situated on the lot.</p> <p>9(4) A dwelling cannot be erected on such a lot.</p>	Not relevant to this application.	N/A

9(5) State Environmental Planning Policy No 1— Development Standards does not apply to a development standard under this clause.		
Matters to be considered in determining development applications for rural subdivisions or rural dwellings		
<p>10(1) This clause applies to land in a rural zone, a rural residential zone or an environment protection zone.</p> <p>10(2) A consent authority must take into account the matters specified in subclause (3) when considering whether to grant consent to development on land to which this clause applies for any of the following purposes:</p> <ul style="list-style-type: none"> (a) subdivision of land proposed to be used for the purposes of a dwelling, (b) erection of a dwelling. <p>10(3) The following matters are to be taken into account:</p> <ul style="list-style-type: none"> (a) the existing uses and approved uses of land in the vicinity of the development, (b) whether or not the development is likely to have a significant impact on land uses that, in the opinion of the consent authority, are likely to be preferred and the predominant land uses in the vicinity of the development, (c) whether or not the development is likely to be incompatible with a use referred to in paragraph (a) or (b), 	The rural land will not be subdivided nor are any rural dwellings proposed.	N/A

<p>(d) if the land is not situated within a rural residential zone, whether or not the development is likely to be incompatible with a use on land within an adjoining rural residential zone,</p> <p>(e) any measures proposed by the applicant to avoid or minimise any incompatibility referred to in paragraph (c) or (d).</p>		
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Port Macquarie-Hastings Local Environmental Plan 2011

In accordance with clause 2.2, the subject site is zoned IN1 General Industrial, IN2 Light Industrial, E2 Environmental Conservation, E3 Environmental Management, E4 Environmental Living and RU1 Primary Production.

In accordance with clause 2.3(1) and the zone landuse tables, the proposed development for a subdivision is a permissible landuse with consent.

The objectives of the subject zones are as follows:

IN1

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To support and protect industrial land for industrial uses.
- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.

IN2

- To provide a wide range of light industrial, warehouse and related land uses.
- To encourage employment opportunities and to support the viability of centres.
- To minimise any adverse effect of industry on other land uses.
- To enable other land uses that provide facilities or services to meet the day to day needs of workers in the area.
- To support and protect industrial land for industrial uses.

E2

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To protect coastal wetlands and littoral rainforests.
- To protect land affected by coastal processes and environmentally sensitive land.
- To prevent development that adversely affects, or would be adversely affected by, coastal processes.
- To enable development of public works and environmental facilities where such development would not have an overall detrimental impact on ecological, scientific, cultural or aesthetic values.

E3

- To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.
- To provide for a limited range of development that does not have an adverse effect on those values.

E4

- To provide for low-impact residential development in areas with special ecological, scientific or aesthetic values.
- To ensure that residential development does not have an adverse effect on those values.

RU1

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

In accordance with clause 2.3(2), the proposal is consistent with the zone objectives having regard to the following:

- the proposal is a permissible land use;
- the subdivision will allow a range of future uses;
- the impact of industry on surrounding areas was considered as part of the rezoning with screening and vegetation buffer to be imposed and future specific industrial use applications being subject to their own individual checks/requirements;
- the subdivision will free up industrial land in the area for future development and facilitate economic growth; and
- Environmental areas will be protected and enhanced.

In accordance with clause 4.1, the lot sizes within the proposed industrial subdivision range from 3450m² to 6.88ha. All these proposed lots comply with the minimum lot sizes identified in the Lot Size Map relating to the industrial area.

The existing dwelling in the north will be retained on a 6ha lot, which complies with the 6ha minimum lot size standard applicable to that area.

It should be noted that there are residual environmental and rural zoned areas/lots that are subject to a 40ha minimum lot size (i.e. Lot 65 and 67). These areas are proposed to be dedicated to Council as exempt development in accordance with State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. In this regard, the minimum lot size clause is considered to not apply to these subject lots.

In accordance with clause 5.9, listed trees in Development Control Plan 2011 are proposed to be removed. The removal of the trees and their ecological value has been considered and accepted.

Clause 5.10 – Heritage = Previous investigations have been carried out on the property by the applicant in 2007 through to 2009. The results showed that no sites of cultural or archaeological significance were observed during the survey. Nor were any PADs (areas identified as Potential Archaeological Deposits) recorded.

However, two sites had previously been recorded within the survey area by others, and although they were not relocated during the current investigation, their listing on the Aboriginal Heritage Information Management System (Aboriginal Sites Register), was a constraint to development.

Consequently, King & Campbell commissioned ASR to produce a Management Plan to support an application for a Section 90 Permit to salvage the artefactual material in the two sites, #30-3-0194 and #30-3-0195.

Subsequently DECC issued an Aboriginal Heritage Impact Permit (AHIP) #2941, to allow salvage of all artefactual material at the two sites.

Upon receipt of AHIP #2941, Appleton (ASR) and Lindsay Moran, Senior Sites Officer, Birpai LALC, returned to the locations of the sites to be salvaged but were unable to recover any artefactual material. It was observed that the site locations had been significantly disturbed by licenced logging since the sites were first recorded, and so it was not surprising that no artefactual material was recovered.

As a result of this project there are no cultural or archaeological constraints to development of the subject property. However, the proponents are advised that they continue to be legally obliged to comply with the following provisions of the National Parks and Wildlife Act 1974 (as amended), which state that:

- The owners, and their employees, earthmoving contractors, subcontractors, machine operators and their representatives, whether working in the survey area or elsewhere, should be instructed that in the event of any bone or stone artefacts, or discrete distributions of shell, or any objects of cultural association, being unearthed during earthmoving, work should cease immediately in the area of the find.

In the event that any bone cannot be clearly identified by a qualified archaeologist as being of animal remains the police are to be informed of its discovery, and officials and/or their representatives of the Birpai Local Aboriginal Land Council, and the Department of Environment and Climate Change, Coffs Harbour, advised that the bone is subject to police investigation.

Work should not recommence in the area of the find, until both the police (if bone has been found) and those officials or representatives have given their permission to do so. Those failing to report a discovery and those responsible for the damage or destruction occasioned by unauthorised removal or alteration to a site or to archaeological material may be prosecuted under the National Parks and Wildlife Act 1974, as amended.

A condition has been imposed to cover such requirements.

In accordance with clause 7.1, the site contains potential acid sulfate soils. The area affected will be predominately retained in proposed Lot 71 (drainage reserve). No adverse impacts are expected to occur to the Acid Sulphate Soils found on site.

In accordance with clause 7.3, the site contains land within a mapped "flood planning area". The application was referred to Council's Flood Engineer who raised no objection to the development subject to conditions. In this regard, the following comments are provided:

- The proposal is compatible with the flood hazard of the land

- The proposal will not result in a significant adverse affect on flood behaviour that would result in detrimental increases in the potential flood affectation of other development or properties.
- The proposal 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
- The proposal is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.
- The development and assessment has been considered in light of the effects of sea level

Clause 7.5 – Koala Habitat – Applies to land that is shown as “Koala Habitat area” on the Koala Habitat Map. While the site is not identified as containing Clause 7.5 Koala Habitat a KPOM has been prepared in accordance with SEPP 44. Refer to comments earlier in this report on this aspect.

7.9 - Development subject to acoustic controls = The subject clause applies to the property by virtue of the adjoining Hanson Quarry to the west. As part of the rezoning process, the impact of noise and flyrock associated with the quarry was considered. To ensure the continued operation of the quarry, a VPA was put in place to manage the issue. The VPA sets out controls relating to the timing of development and construction requirements.

Based on the above and given no new residential or tourist uses are proposed with the subdivision; no adverse impact is foreseen.

In accordance with clause 7.13, satisfactory arrangements are in place for provision of essential public utility infrastructure including stormwater, water and sewer infrastructure 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.

Part of the land is also subject to visually sensitive land pursuant to the Visually Sensitive Land Map, which negates certain exempt and complying development. Council’s Development Control Plan (DCP) 2011 provides provisions to deal with the matter - refer to DCP assessment.

(ii) Any draft instruments that apply to the site or are on exhibition:

None relevant.

(iii) any Development Control Plan in:

Port Macquarie Hastings Development Control Plan 2011

DCP 2011 Requirement	Proposed	Complies
Notification/Advertising		
Development has been notified in accordance with DCP 2011	In accordance with the DCP and integrated development exhibition requirements, the development was advertised in the paper and adjoining property owners were notified of the application and provided a minimum of thirty (30) days to comment. During the	Yes

	notification period no submissions were received.	
DP 6.1 Social Impact Assessment required	The development does not trigger any of the thresholds in the policy. Positive social impacts are expected through the provisions of additional employment lands.	N/A
Crime Prevention		
DP 1.1 CPTED principles considered.	Refer to comments on "Safety, Security & Crime Prevention" in the main body of the assessment report.	Yes
Environmental Management		
DP 1.1-3.1 Heritage considerations	Refer to comments on Heritage in the LEP 2011 section of this report.	Yes
DP 4.1-7.4 Cut & Fill & Retaining Wall requirements	Erosion and sediment controls will be conditioned to minimise any erosion issues.	Yes
DP 10.1 Habitat offset requirements where vegetation removed. VMP required for any environmental land.	A VMP was included with the application and has been accepted. A VPA has also been entered into relating to management of environmental lands.	Yes
DP 11.1- 12.5 Hollow Bearing Tree Requirements & Offsets	The ecological report accompanying the application confirmed that the site contained limited substantial old growth/hollow bearing trees. Trees exist onsite that are likely to develop into hollow bearing within the next 20-50 years. The majority of these trees are within the areas to be protected. The clearing would not create an adverse impact or key threatening impact	Yes
Tree Management		
DP 1.1-3.9 Management of trees and associated removal.	Tree removal will be covered by VMP. A VPA has also been entered into relating to management of environmental lands.	Yes
Hazards Management		
DP 3.1-4.1 Development within Clause 7.7 LEP area not to be bird attracting, dust etc emission producing.	The development is not located within a Clause 7.7 area.	N/A
DP 5.1 Lighting requirements within Clause 7.7 LEP area	The development is not located within a Clause 7.7 area.	N/A

DP6.1 – Development to comply with Planning for Bushfire Protection Guidelines 2006	A bushfire report was prepared and forwarded to the NSW Rural Fire Service (RFS). The NSW RFS accepted the report subject to conditions.	Yes
DP 7.1 APZ's outside environmental zones and contained within private property.	APZ's are outside environmental zones.	Yes
DP 7.2-7.3 Perimeter roads to all urban areas adjoining environmental zones and design requirements	Perimeter roads comply with NSW RFS requirements.	Yes
DP 10.1 Development complies with LEP flood clauses and Floodplain Management Plan.	Refer to comments on Flooding in the LEP 2011 section of this report.	Yes
DP 12.1 Stormwater complies with Auspec	Refer to comments on "Stormwater" in the main body of this assessment report.	Yes
Transport, Traffic Management, Access and Car Parking		
DP 1.1-1.3 New roads are designed in accordance adopted specifications.	Roads etc have been considered and accepted by the RMS and Council's Engineers.	Yes
DP 2.1-2.3 New direct access to arterial or distributor road not permitted and existing accesses rationalised where possible.	No new access to the Pacific Highway has been proposed.	Yes
DP 13.1-13.2 Landscaping requirements on Council land.	Landscaping of roads will be conditioned. All other replanting etc will be subject to the KPOM, VMP and VPA's.	Yes
Subdivision		
DP1.1 Provision of suitable site analysis in accordance with listed requirements.	Site plan submitted with the application.	Yes
DP3.1 Battleaxe lots discouraged, and if applicable, justified in accordance with DP3.2	The provisions are more applicable to residential subdivisions. In this case, the development proposes two (2) battleaxe lots. One is for an existing telecommunication facility (proposed Lot 72), which is preferred to not have street frontage. The other is Lot 23, which still retains a 31m+ frontage.	Yes
DP6.1 & DP6.2 <ul style="list-style-type: none"> Provision of suitable street plan derived from site analysis (see DP1.1); Street Plan provided in accordance with 	Street plan/layout has been accepted by Council Engineers.	Yes

requirements listed in DP6.2		
DP6.3 <ul style="list-style-type: none"> Kerb and guttering provided, or alternative solution demonstrated. Acceptable drainage techniques demonstrated 	Kerb and guttering proposed and accepted.	Yes
DP6.4 Size of blocks may vary provided acceptable ease of movement demonstrated.	Size of lots are acceptable.	Yes
DP8.1-35.1 Relate to infrastructure requirements	Subdivision has been accepted from an infrastructure perspective - refer to comments in the main body of the assessment report.	Yes
DP 36.1 & 40.1 Commercial & industrial lots are to front constructed roads.	The lots will have frontage to constructed roads.	Yes
DP 36.2 & 39.1 Water and Sewer provided as per design specifications.	Water and Sewer Sections of Council have raised no objection to the subdivision, subject to conditions.	Yes
DP 38.1 Industrial lots are to comply with minimum lot size standards, have a min width of 20m, minimum depth of 40m and the depth to width ratio shall not exceed 3 to 1.	Except for Lot 72, the industrial lots comply with dimensional standards. In terms of Lot 72 it is being created for an existing telecommunications facility and is considered acceptable.	Yes
DP 38.2 Lots are to be generally rectangular in shape and have regard for site features.	The lots have a rectangular type shape.	Yes
DP 38.3 Battleaxe allotments shall not be permitted.	Refer to comments on 3.1 above.	Yes
DP 39.2 Industrial subdivision will not be supported on land with a slope greater than 15%.	In most parts of the site the slope does not exceed 15%.	Yes
DP 40.2 Street layout and design shall be in accordance with Council design specifications.	Street design has been accepted by Council Engineers.	Yes
DP 41.1 Cul de sac controls	Cul de sac design has been accepted by Council Engineers	Yes
DP 47.1-55 Relates to street lighting, naming, design and tree planting requirements. Also provision for community/strata subdivision.	Street lighting, design etc has in principle been accepted by Council Engineers with more specific detail to be provided at construction certificate stage.	Yes
Sancrox Employment Lands		
DP1.1 Environmental Lands to be dedicated to Council and require a VMP to be lodged with	Development proposes to dedicate Environmental Lands and a VMP has been	Yes

the subdivision DA.	prepared.	
DP2.1 Koala proof fencing and food trees to be planted along northern boundary.	Provisions are covered in VMP and KPOM.	Yes
DP3.2 Landscaping of streets to comply with Auspec.	Covered by conditions.	Yes
DP4.1-6.6 Water quality/stormwater	The Office of Water and Council's Engineering section have raised no objection on stormwater grounds. Appropriate stormwater management conditions recommended.	Yes
DP7.1-8.1 Flood liable land provisions and replanting of riparian corridors.	The development has been accepted on flooding grounds by Council's Flood Engineer. Re-vegetation of the site and riparian corridors has been accommodated in the VMP and accepted by Council's Natural Resources Section.	Yes
DP9.1-9.7 Land stability, cut and fill requirements.	The managing of such issues has been accommodated in the conditions of consent.	Yes
DP12.1 Contamination	Refer to comments on SEPP 55.	Yes
DP13.1-18.1 Quarry Operational impacts <ul style="list-style-type: none"> - Restrictions on timing of development near the quarry. - Noise report required for non industrial uses. - New roads 100m from the quarry. - Barriers to recreation areas for industrial uses etc. - Dust sensitive land uses are not to locate next to the quarry. - Consider the ability to win material in the industrial area. 	The timing of development has been accommodated into the DA and VPA's. No industrial uses proposed at this stage. It should be noted that the 100m setback of roads to the eastern face of the quarry is not consistent with the desired road layout in Fig 65 to which this development has complied. Figure 65 has taken precedence in this case.	Yes
DP19.1-20.1 Road design <ul style="list-style-type: none"> - Requirements as per Figure 65, 66, 67 & 68. - Internal access road provided for lots fronting Sancrox Road - Perimeter roads to environmental land 	The road layout is consistent with the DCP and has been accepted by Council Engineers.	Yes
DP21.1 Visual Amenity <ul style="list-style-type: none"> - Design requirements for 	No buildings proposed. Development generally	No, but considered



buildings on cnr Pacific Highway and Sancrox to provide a focal point. - Design requirements for buildings on northern boundary. - Northern boundary screened. - Landscape screens as per Fig 71 - 10m wide E3 zone vegetated strip and fencing provided along Pacific Highway. - 5m landscape buffer to Sancrox Road.	includes buffers as per DCP. Where the buffer distance is slightly less than the DCP, the proposal has been offset by the imposition of streets to provide setback and topography (i.e. the Pacific Highway is located in cut and the industrial area is not visible). Based on the above, the proposed development provides adequate screening in accordance with the DCP.	acceptable.
DP25.1-25.2 - Southern boundary treatment to include: - Acoustic treatment as per Figure 72, 73 & 74. - Noise impact assessments for industrial buildings.	No buildings proposed. The proposal has included acoustic treatment as per Figures 72-74, which has been accepted by Council's Environmental Health Officer.	Yes
DP26.1 Cultural heritage and requirement for work to cease if anything is found.	Refer to comments on Heritage in the LEP 2011 section of this report.	Yes
DP27.1-28.1 Servicing requirements	Water and Sewer Sections of Council have accepted the proposed development. Electricity and telecommunications are available in the area and can be upgraded at developer's expense.	Yes

(iia) any planning agreement that has been entered into under Section 93f or any draft planning agreement that a developer has offered to enter into under Section 93f:

The landowners entered into Voluntary Planning Agreements for the purposes of Section 93F of the Act in relation to the rezoning of the land. The following planning agreements apply to the proposed development:

- Sancrox Employment Land and Quarry Planning Agreement dated 15 July 2011
- Sancrox Employment Lands Environmental Lands and Services Planning Agreement dated 15 July 2011
- Sancrox Employment Land Road Construction Planning Agreement dated 15 July 2011

The landowners agreed to make development contributions in accordance with the VPAs in connection with carrying out of development permitted by the local environmental plan.

The VPAs provide for the carrying out of works by the landowners including establishing and maintaining environmental lands, sewer services and water supply works, dedication of land to Council and payment of monetary development contributions.

iv) any matters prescribed by the Regulations:

None relevant.

v) any coastal zone management plan (within the meaning of the [Coastal Protection Act 1979](#)), that apply to the land to which the development application relates:

None relevant.

(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 & Setting

The site contains a mixture of cleared and timbered land. A dwelling exists in the northern section of the property. On the southern side of Sancrox Road, the property is used for storage of machinery and also a food processing business.

Surrounding the site is a mixture of development including a quarry to the west, the Pacific Highway and a vineyard/restaurant to the east, rural land to the north and further industrial land uses to the south. Further out, the use of the land changes to rural residential.

The development is consistent with the existing and future desired character of the area and has addressed associated impacts onsite.

Access, Transport & Traffic

Roads and Access

The subject site adjoins the Pacific Highway and Sancrox Rd. Sancrox Road is a local collector road of rural standard approx 8m wide pavement intersecting with the Pacific Highway with Rawdon Island Rd to the west.

The application has been referred to the RMS in regard to future upgrading of the Pacific Highway. The proposed access arrangements are consistent with the RMS's detailed designs for the construction of the Sancrox Road Interchange.

The RMS has Project Approval (issued 8 February 2012) for the upgrade of the highway Oxley Highway to Kempsey. The upgrade will provide an 'access controlled' four lane divided carriageway along the Pacific Highway frontage of the development site with construction currently planned to commence in 2013.

The proposed access arrangement for the site, as designed by the RMS, includes an overpass approximately 600 metres south of the Sancrox Road with service road incorporating roundabout connections to Sancrox Road on the west and Fernbank Creek Road to the east. Left in/ left out only and a closed median will be maintained at the Pacific Highway's intersection with Sancrox Rd and Fernbank Creek Road intersection, providing access to and from the Highway. Details of the Sancrox Traffic

Arrangement are contained in the Sancrox Employment Land Road Construction Planning Agreement (SEL_RC_PA).

Construction of the site access road and proposed Sancrox Interchange works by the RMS will provide flood free access for the site in the 1 in 100 year ARI including allowance for climate change. The proposed site access road level is R.L. 6.50m AHD.

The internal road network proposes three (3) roads in the northern precinct and a cul de sac accessing Lots 55 to 63 off proposed Sancrox Service Road No 1 to the south east of Sancrox Rd and Bushlands Dr intersection. The proposed new roads are to be designed and constructed to Councils Auspec Specifications for 'Industrial' category. The requirements for road reserve width and carriageway width are 23metre and 13metre respectively.

The proposed local road network is consistent with the Road Hierarchy Fig. 64 in DCP 2011. The proposed road layout has been designed to take this requirement into account the Detailed Concept Design (DCD) for the Sancrox Traffic Arrangement prepared on behalf of the RMS and Council.

The DCD includes:

- The upgrade and widening of Sancrox Road
- A new roundabout on Sancrox Road at its intersection with the existing driveway entrance to Hanson Quarry
- The proposed Sancrox Service Road No 2 on the northern side of the roundabout which provides access to Stages North 1, North 2 and North 3 of the development. Sancrox Service Road No 2 will also facilitate the construction of a new driveway entrance to Hanson Quarry. The construction of Service Road No 2 will involve acquisition of land by RMS from Expressway Spares and adjoining landowners (Pioneer Concrete (Qld) Pty Ltd – Hanson Quarry and Mr Dan McMullen). The subject landowners have through the Road Construction VPA offered to use reasonable endeavours to procure the dedication of the Access Road Land prior to the granting of development consent Clause 4 SEL_RC_PA). The landowners are currently negotiating with the owners of Hanson Quarry regarding the Access Road Land
- The proposed Sancrox Service Road No 1 on the southern side of the roundabout provides access to the south bound carriageway of the Pacific Highway via the proposed bridge over the highway
- Sancrox Service Road No 3. Sancrox Road No 1 will also provide access to Stage South 1 of the development and a new driveway entrance to the existing operations of Expressway Spares; and Service Road No 3 on the western side of the Pacific Highway including a rearrangement of the intersection of Fernbank Creek Road and the Pacific Highway and construction of a new driveway to the entrance to Cassegrain Winery
- The lot size and shape of Stage South 1 and the existing stormwater drain on the southern side of Sancrox Road
- Setback of the north-south road within Stage North 1 approximately 100m from the Hanson Quarry eastern boundary. The location of this road was determined as a result of negotiations with the owners of Hanson Quarry and Council during the rezoning process
- Setback of the east-west road within Stages North 2 and 3 approximately 100m from the Hanson Quarry northern boundary.

The location of this road was determined as a result of an independent assessment of quarry operations by SKM-Terrock on behalf of PMHC and the negotiations with Hanson Quarry as part of that assessment.

Other internal roads within the development are generally perimeter roads adjacent to environmental lands and have been located to manage interfaces in relation to bushfire hazards, management of environmental lands and stormwater drainage. All new roads and drainage depressions shall ultimately be designed to ensure access during a 1 in 100 year ARI with climate change flood event. Proposed road culverts under the site access road shall be designed to convey a 1 in 100 year ARI with climate change flood event without the road overtopping.

The subdivision layout within Stages North 1, North 2 and North 3 has been designed as a series of loop roads with no cul-de-sacs.

Road reservation widths are in accordance with the DCP, being either 23m or 20. Pavement widths shall be 13m wide where the road has dual frontage to industrial lots and 11m wide where only one side of the perimeter road has frontage to industrial lots.

The applicant proposes on merit a reduction of this standard to 20/11 metres in several sections of road. The reduction in the carriageway width is proposed on perimeter roads 1 and 2 where the industrial land only fronts one side of the road and the non development side of the road fronts environmental management lands. The reduction in width of the carriageway has been achieved by deleting the parking lane on the non development side of the perimeter road. The deletion of the parking lane on the non development side of the perimeter roads should not reduce the level of access, safety and convenience to all users. The proposed variation to the DCP is considered to be consistent with objectives and deemed acceptable.

The deletion of the parking lane on the non-development side of the perimeter roads is also designed to minimise conflicts at the environmental lands/industrial interface demonstrating compliance with DP20.1 of the DCP.

The application proposes to dedicate to Council buffer land across the Pacific Hwy frontage (proposed lots 68 and 69). The minor variation to Figures 66 and 67 in the Area Based Provisions of DCP is considered justified in the circumstances relating to the perimeter roads.

Traffic

Pacific Highway / Sancrox Road Traffic Interchange

The subject site adjoins the Pacific Highway for which the Roads and Maritime Services (RMS) have the care and control. RMS has Project Approval (issued 8 February, 2012) for the upgrade of the highway. The upgrade will provide a four lane divided carriageway from the Oxley Highway to Kempsey bypass. The upgrade also includes access control for all adjacent development. Survey, geotechnical investigations and acquisition negotiations and detailed design are currently well advanced for upgrade works, with expected tenders let mid 2013.

The RMS approved access arrangement for the site, includes an overpass approximately 600 metres south of Sancrox Road with service road connections to Sancrox Road on the west and Fernbank Creek Road on the east. Left in/left out only and a closed median will be maintained at the Pacific Highway's intersection with

Sancrox Road and Fernbank Creek Road intersection, providing access to/from the highway.

The Sancrox Employment Land Road Construction Planning Agreement (SEL_RC_PA) contains the landowner offer made at the rezoning stage with respect to a financial contribution and in-kind contribution (carrying out of work and dedication of land) towards the construction of the Sancrox Traffic Arrangement .

RMS have subsequently completed detailed designs used for the preparation of a more detailed construction cost estimates and negotiations between the parties regarding land acquisitions and dedications and maintaining access to existing operations of Expressway Spares, TNT, HF Hand and Hanson Quarry.

The landowners have also prepared detailed concept earthworks design plans of the interface between the constructed Sancrox Employment Precinct (SEP) and the upgraded Pacific Highway. These designs factor in the future visual buffer along the Highway.

During wet weather the traffic-ability of heavy machinery may be reduced and that the use of temporary construction roads may be required.

A traffic report carried out by TTM dated August 2009 has been submitted with this application. The RMS, in their letter dated 15 August 2012 had concerns on the predicted traffic generation (14,900 trips per day) estimated in the TTM Traffic Report compared to the RMS preliminary estimate of 3,922 trips per day.

The applicant King and Campbell responded to the RMS's original concern. In a letter from the RMS dated 20 Sep 2012 following review of King and Campbell's response to them found their analysis acceptable to accommodate the additional estimate of trips per day based on their assumption of 40% GFA yield rate proposed for the subdivision.

DCP 2011 provides: "*Where industrial land fronts onto Sancrox Road, an internal access road is to be provided. Direct lot access to Sancrox Road will not be permitted*" The intent of this provision is to restrict access in relation to stage South 1 only. The provisions do not apply to proposed Lots 1 and 2 within stage North 1. Access to all proposed lots within stage South 1 will be from a new internal road and not from Sancrox Road.

Parking

Limited parking will be available within the road reserves. On-site parking requirements for each lot will be assessed individually when DA's are submitted for future developments.

Manoeuvring

The subdivision will be required to be designed in accordance with AUSPEC specifications. Particular attention to intersection designs will be necessary to ensure appropriate turning areas for all large vehicles. Manoeuvring space within individual lots will be considered when determining future development application at a later date.

Pedestrians

This proposal is for an industrial development, and unlikely to generate a significant amount of pedestrian movements.

Public Domain

The proposed development will provide additional industrial land for development within an existing industrial zoned area. The subdivision is therefore unlikely to have any adverse impact on the public domain.

Stormwater

Conditions of consent will be utilised to manage the implementation of a stormwater management plan and associated controls.

Sewer

The concept plans and notes are consistent with Council's sewer planning strategy for the area and will need to evolve as the considerations of the proposed reconstruction of Pacific Highway and Area 13 are developed.

The proposal to carry the sewer rising main on the proposed bridge over the highway has not been finalised and it may be that RMS does not agree with this approach. In this case it will be necessary to route the rising main under the pavement.

At this stage standard sewer conditions for the subdivision are proposed together with non standard condition options covering the future development as it evolves.

Water

Records indicate that the proposed development site has a 40mm metered water service located on Lot 30. The remaining lots do not have water services at present.

The water service layout as proposed is not necessarily accepted, with the likely major difference being the trunk water main to service this area probably being located adjacent to Lot 30. Water main sizing will be subject to computer modelling.

A ten metre wide easement will be required along the southern boundaries of proposed lot 2 to allow construction of the water and sewer mains across the Pacific Highway Road reserve. Depending on final engineering design, some road widening dedication may be required in this area.

Arrangements are to be made to have the watermain on lot 30 extend between proposed lots 59 and 60 to Sancrox Road in a suitable reserve.

Water supply conditions include a requirement for the provision of reclaimed water supply to each lot.

As per the sewer comments, the water requirements can be addressed in more detail at the construction certificate stage, as the design adapts to the Pacific Highway upgrade works.

Soils

Erosion and sediment controls shall be provided during any site earthworks until the site is stabilised.

Air & Micro-climate

Potential exists for dust to be generated onsite during construction. Potential also exists for industry to emit air emissions (odour, dust & particulates) that may adversely impact on local amenity, adjoining industrial building occupants and nearby residential receivers.

An Air Quality Impact Assessment Report was undertaken by Heggies in 2009 which has modelled potential odour, particulate matter and dust emissions based on the assumptions listed in section 8.5 on pp 37-39 of the report, including modelling based on similar industrial activities (but which is not industry/site specific). Some of the assumptions made in the modelling may not eventuate to reflect the on-the-ground operational reality of the proposed industrial area generally, and some specific industrial sites in particular.

The Heggies report concludes that given the separation distances from the proposed industrial area to the adjoining sensitive residential receiver locations, odour, dust and particulate matter emissions are likely to comply with relevant OEH standards at the sensitive receiver locations (i.e. adjoining residents), and no adverse impacts on residents are expected from air emissions from the proposed industrial area.

Due to the proposed industrial land-use there is an expectation that industrial building occupants will tolerate higher (but still reasonable) levels of air emissions such as odour. "Sensitive receivers" is a classification generally restricted to homes, schools & places of worship for assessment purposes and the potential adverse impacts of a development on the occupants of industrial buildings are not usually considered except for exceptional circumstances. If the assessment indicates the potential impacts on adjoining or nearby residents is likely to be satisfactory then it follows that the potential impacts on a closer commercial/industrial area will likely fall within tolerable/reasonable limits.

Standard dust control consent conditions have been recommended.

Flora & Fauna

The applicant has submitted a flora and fauna impact assessment report prepared by Peter Parker Environmental Consultants Pty Ltd dated July 2012. The report factored in a number of past studies that have been completed in the area. A summary of the key issues from the assessment are as follows:

- The site to be developed has been modified/disturbed in the past.
- A total of six (6) vulnerable species were recorded onsite but are unlikely to be adversely affected.
- An Endangered Ecological Community (Swamp Sclerophyll Forest) exists onsite and will be retained and afforded protection in an environmental zone.

- Significant hollow and old growth trees exist in the area to be developed. The majority are to be retained in environmental managed land.
- The site contains core koala habitat and a KPOM has subsequently been prepared - refer to comments on SEPP 44 above in this report.
- The removal of vegetation will have minimal impact on threatened flora and fauna, especially through the retention of trees in key areas and additional replantings through a VMP.
- A Species Impact Statement was not required.

The report addresses the requirements of the '7 part test' under Section 5A of the Act. The report concludes that the proposal is unlikely to have any significant adverse impact on flora and fauna subject to recommended conditions being incorporated into the consent.

Noise & Vibration

A Noise Impact Assessment Report was carried out by Heggies in 2009 which modelled potential noise impacts on surrounding sensitive residential receivers. It was found that the INP Day Amenity noise levels are likely to be met at all receivers. However, Evening and Night Amenity levels are likely to be exceeded at several receivers and the Report has recommended noise mitigation, including in addition to operational procedures by future industrial occupants, the provision of acoustic barriers. Refer to plans for more details of the acoustic barriers.

The Heggies NIA Report concludes that the recommended noise mitigation measures (including behaviours by occupants) will likely result in the INP Day, Evening and Night Amenity criteria being met at residential receivers.

As with the "Air & Microclimate" section above, the NIA focused on impacts from the proposed industrial area on adjoining sensitive receivers and did not assess potential impacts from the industrial area on the occupants of the industrial buildings.

The SKM Buffer Zone Assessment Report indicates that a 70m buffer from the quarry is required to ensure the INP Day Amenity criteria of 70dB(A) for Industrial areas can be met, i.e. the occupants of the industrial buildings are not subjected to noise likely to be in excess of the INP ANL of 70dB(A) during the day.

The SKM assessment report focuses on the potential impacts of quarry operations on the proposed industrial area. On this basis, the SKM Report indicates the following indicative buffers are satisfactory to limit impacts from the quarry on the occupants on the proposed industrial area:

- Fly rock: 90m;
- Noise: 70m;
- Vibration: 66m (37Kg MIV); & 100m (87Kg MIC);
- Overpressure: 73m (37Kg MIC); & 90m (87Kg MIC);
- Air Quality: N/A (no adverse impacts are expected);

The SKM Buffer Zone Assessment Report concludes that:

"Based on the assessments undertaken and associated assumptions a buffer distance beyond the quarry boundary of approximately 90m is considered sufficient to mitigate adverse impacts from quarry blast ground vibration, air blast overpressure as well as general quarry noise and dust impacts." (s.6.0 Conclusion, p.38).

The SKM Report acknowledges that at the present time there is no agreement for 90m of the proposed industrial area to be set aside as a fly-rock buffer.

It should be noted that the reports indicate that the quarry production site on the quarry premises will move towards the west in the future away from the proposed industrial area in the east & south and that the proposed staging of the proposed industrial area has been nominated to negate the potential adverse fly rock (90m buffer) issue, which will in itself also negate the noise (70m buffer) issue.

It is considered unlikely that the proposed development will have any significant adverse environmental health impacts, subject to the imposition of relevant conditions of consent. Standard and special noise control DA consent conditions recommended.

Natural Hazards

A bushfire report was prepared and forwarded to the NSW Rural Fire Service (RFS). The NSW RFS accepted the report subject to conditions, which have been incorporated into the consent.

Flooding is discussed in the LEP 2011 section of this report.

Social Impact in the Locality

Given the nature of the proposed development and its' location, the proposal is unlikely to result in any adverse social impacts. The creation of industrial lots will promote further development of the site for industrial type uses, which has the potential to create jobs and positive flow on effects.

Economic Impact in the Locality

Refer to comments on Social impacts above, which are relevant to the economic aspect as well. In particular, the development will create flow on effects through increased development, employment and expenditure.

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

No potential adverse impacts identified to neighbouring properties with the construction of the proposal. Conditions will be imposed to manage construction traffic.

Cumulative Impacts

The proposed development is not expected to have any 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 have been adequately addressed and appropriate conditions of consent recommended.

(d) Any submissions made in accordance with this Act or the Regulations:

No written submissions have been received following completion of the required public exhibition of the application.

(e) The Public Interest:

The proposed development satisfies relevant planning controls and is not expected to impact on the wider public interest.

4. DEVELOPMENT CONTRIBUTIONS APPLICABLE

Monetary development contributions will be required under the Sancrox Employment Land Environmental Lands and Services Planning Agreement for environmental land management and the Sancrox Employment Land and Road Construction Planning Agreement for road and infrastructure work.

Clause 7.2 of The Sancrox Employment Land Environmental Lands & Services Planning Agreement excludes the application of s94A to subdivision work but not other development.

5. CONCLUSION

The application has been assessed in accordance with Section 79C 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 suitable for the proposed development, is not contrary to the public's interest and will not have a significant adverse social, environmental or economic impact. Consequently, 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 [View](#). DA2012 - 0305 Recommended Conditions
- 2 [View](#). DA2012 - 0305 Plans
- 3 [View](#). DA2012 - 0305 Dept of Planning & Infrastructure Comments
- 4 [View](#). DA2012 - 0305 Koala Plan of Management
- 5 [View](#). DA2012 - 0305 Vegetation Management Plan

FOR USE BY PLANNERS/SURVEYORS TO PREPARE LIST OF PROPOSED CONDITIONS - 2011

NOTE: THESE ARE DRAFT ONLY

DA NO: 2012/305

DATE: 19/03/2013

PRESCRIBED CONDITIONS

Part 6 – Division 8A of the *Environmental Planning & Assessment Regulations 2000*

- (1) (P003) A sign must be erected in a prominent position on any site on which building work, subdivision work or demolition work is being carried out:
 - a. showing the name, address and telephone number of the principal certifying authority for the work, and
 - b. showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
 - c. stating that unauthorised entry to the work site is prohibited.

Any such sign is to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed.

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
Statement of Environmental Effects, including Exhibits, Appendices (unless varied by plans below)		King & Campbell Pty Ltd	June 2012
Vegetation Management Plan	4802	King & Campbell Pty Ltd	March 2013
Plan of Subdivision	4802 Revision F	King & Campbell Pty Ltd	8/3/2013
Koala Plan of Management	4802	King & Campbell Pty Ltd	March 2013

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) (A003) The proponent shall submit an application for a Subdivision Certificate for Council certification with all relevant documentation.
- (3) (A004) An application for a Construction Certificate will be required to be lodged with Council prior to undertaking subdivision works and a Subdivision Certificate is required to be lodged with Council on completion of works.

- (4) (A013) The general terms of approval from the following authorities, as referred to in section 93 of the Environmental Planning and Assessment Act 1979, and indicated in Sections, G & H of this consent, are attached and form part of the consent conditions for this approval.
- NSW Rural Fire Service
 - NSW Department of Environment, Climate Change and Water
- (5) (A019) Prior to preparation of any engineering design plans, the consultant preparing the design plans will need to contact Council's Engineering Development Section within Infrastructure Division to discuss the extent and scope of all works and details required on the design plans to conform to Council's Development Control Plans, Codes, Policies and AUSPEC Specifications. Some of the issues to be discussed and incorporated in the design plans include, but are not limited to the following:
- Sewer
 - Water
 - Road
 - Drainage
- (6) (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.
- (7) (A035) The design and construction of firetrail(s) and provision of APZ(s) shall be in accordance with the current publication *Planning for Bushfire Protection*. Port Macquarie-Hastings Council and authorised persons shall have full and free right to pass and repass for the purpose of emergency bush fire access. A positive covenant shall clearly refer to the proprietor of the burdened lot

being responsible for the maintenance of the firetrail and APZ, releasing Council from any obligation to renew, repair and maintain.

- (8) (A036) Any interruption to the natural overland flow of stormwater drainage, which could result in the disruption or deterioration to any other property is not permitted.
- (9) (A052) All Sewage Pumping Stations are to be contained wholly within a separate lot dedicated to Council inclusive of constructed and sealed access handle to the public road. Construction details are to be submitted to Port Macquarie-Hastings Council with the application for Subdivision Construction Certificate.
- (10) (A056) One (1) metre clear distance is required around any vertical inspection shaft and any manhole.
- (11) (A057) The applicant is to ensure the proposed development will drain to the existing point of connection to Council's sewerage system.
- (12) (A067) The development shall provide natural (pre-development or landform change) overland flow paths, bypass facilities and the drainage of entrapped waters for all events up to the 100 year ARI from all adjoining property.
- (13) (A195) This development consent approves the development to be completed in 4 stages as per Exhibit 6, Staging Plan dated 28/3/2012 as follows.
 - Stage 1(North 1)
 - Stage 2(North 2)
 - Stage 3(South 1)
 - Stage 4(North 3)

Unless specified, the conditions of this consent will apply to all stages, with any decision on any discrepancy with the conditions and associated staging resting with Council. Any decision to allow a change to the staging will also rest with Council along with applicable conditions and any contributions payable.

- (14) (A196) All infrastructure in the Detailed Concept Design (DCD) for the *Sancrox Traffic Arrangement prepared on behalf of the RMS and Council contained in the Sancrox Employment Land Road Construction Planning Agreement (SEL_RC_PA)* shall be constructed prior to the issue of practical completion for any internal subdivision works AND subdivision certificate of same.

The DCD includes, but not limited to:

- The upgrade and widening of Sancrox Road;
- A new roundabout on Sancrox Road at its intersection with the existing driveway entrance to Hanson Quarry;
- The proposed Sancrox Service Road No 2 on the northern side of the roundabout which provides access to Stages North 1, North 2 and North 3 of the SEP. Sancrox Service Road No 2 will also facilitate the construction of a new driveway entrance to Hanson Quarry. The construction of Service Road No 2 will involve acquisition of land by RMS from Expressway Spares and adjoining landowners (Pioneer Concrete (Qld) Pty Ltd – Hanson Quarry and Mr

Dan McMullen). The subject landowners have through the Road Construction VPA offered to use reasonable endeavours to procure the dedication of the Access Road Land prior to the granting of development consent Clause 4 SEL_RC_PA). The landowners are currently having continuing discussions with the owners of Hanson Quarry regarding the Access Road Land;

- The proposed Sancrox Service Road No 1 on the southern side of the roundabout provides access to the south bound carriageway of the Pacific Highway via the proposed bridge over the highway and
 - Sancrox Service Road No 3. Sancrox Road No 1 will also provide access to Stage South 1 of the SEP and a new driveway entrance to the existing operations of Expressway Spares; and Service Road No 3 on the western side of the Pacific Highway including a rearrangement of the intersection of Fernbank Creek Road and the Pacific Highway and construction of a new driveway to the entrance to Cassegrain Winery;
- (15) (A199) Due to the increase in load, the developer will be responsible for the cost of constructing one or more Sewer Pump Stations, rising mains and other sewer infrastructure as may be required to service the project, unless such a requirement is varied by Council staff. The rising mains and pump stations are to be sized for the ultimate development sewer load from the Sancrox area. It may be feasible, initially, to install smaller pumps for upgrading as the development proceeds.
- Note : The proposal to carry the sewer rising main on the proposed bridge over the highway has not been finalised and it may be that RMS may not agree. In this case it will be necessary to route the Rising main under the pavement.
- (16) (A202) Traffic associated with the proposed subdivision (other than construction traffic) shall not commence until completion of the Sancrox Interchange and all works contained in the Sancrox Employment Land Road Construction Planning Agreement (SEL_RC_PA)
- (17) (A203) A construction certificate shall not be issued over any part of the site requiring a controlled activity approval until a copy of the approval has been provided to Council.
- (18) (A204) The property access from proposed Road 2 to the existing dwelling on proposed Lot 70 shall be constructed in accordance with Section 4.1.3(2) of "Planning for Bushfire Protection 2006" prior to issue of subdivision certificate
- (19) (A202) Acquisition and dedication of all Highway dedication land required by the RMS and also in accordance with Sancrox Employment Land Road Construction Planning Agreement and/or any other Voluntary Planning Agreement.
- (20) (A203) Construction of the internal road network and proposed Sancrox Traffic Arrangement works by the NSW RMS shall provide flood free egress for the site in the 1 in 100 year ARI with climate change flood. The proposed site access road level shall be a minimum R.L.6.1m AHD.
- (21) (A204) The applicant is to enter into and comply with the planning agreements under section 93F of the *Environmental Planning and Assessment Act 1979*, known as the Sancrox Employment Land Environmental Lands and Services Planning Agreement dated 15 July 2011 between Port Macquarie Hastings Council and Expressway Spares Pty Ltd and James John Dunn and Catherine Brigitte Dunn, Sancrox Employment Land and Quarry Planning Agreement dated 15 July 2011 between Port Macquarie Hastings Council and James John Dunn and Catherine Brigitte Dunn (acting for the JJ & CB Dunn Superannuation Fund) and the Sancrox Employment Land Road Construction Planning Agreement dated 15 July 2011 between Port Macquarie Hastings Council and Expressway Spares Pty Ltd and James John Dunn and Catherine Brigitte Dunn, in relation to the carrying out of the development the subject of this consent.

- (22) Establishment and Management of Environmental Management Land, including the Offsite Offset Land, Dunn Residence Land and Visual Buffer Land, in accordance with the approved Vegetation Management Plan (Clause 13).
- (23) The Establishment Obligation in relation to the Environmental Management Land and Offsite Offset Land to be completed in accordance with the approved Vegetation Management Plan prior to dedication of the land free of cost to Council.
- (24) Submission of an annual report by 28 July in each year that demonstrates that the maintenance requirement in relation to the Dunn Residence Land has been completed in accordance with approved Vegetation Management Plan have been completed for the land. The report to be prepared by a suitably qualified bush regenerator. (Clause 22).
- (25) (B195) The approved vegetation management plan forms part of this consent and is to be complied with at all times.

B – PRIOR TO ISSUE OF A CONSTRUCTION CERTIFICATE

- (1) (B001) 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) (B003) Submission to the Principal Certifying Authority prior to the issue of a Construction 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 the frontage of the development.
 - 2. New roads within the subdivision.
 - 3. Earthworks, including filling of the land for flood protection.
 - 4. Sewerage reticulation.
 - 5. Water supply reticulation.
 - 6. Stormwater systems.
 - 7. Erosion & Sedimentation controls.
 - 8. Location of all existing and proposed utility services including:
 - a. Conduits for electricity supply and communication services (including fibre optic cable).
 - b. Water supply
 - c. Sewerage
 - d. Stormwater
 - 9. Landscaping.
 - 10. Bridges/Major Culverts.
 - 11. Detailed intersection layout in accordance with AUSTROADS Pt 5 "Intersections at Grade" giving particular attention to sight distance.

12. Provision of fire trails with the current version of *Planning for Bush Fire Protection*.

An application and checking fee in accordance with Council's Management Plan shall be payable upon submission of engineering design plans.

- (3) (B004) Road network within the subdivision is to be categorised with carriageway width as follows:

Road No.	Road Width (Metres)					
	Shareway	Access	Local	Collector	Commercial	Industrial
Road No 1	Width (Mtrs) 23/13					Industrial
Road No 2	Width (Mtrs) 23/13					Industrial
Road No 2 east/west Lots 21, 22, 24-27	Width (Mtrs) 20/13					Industrial
Road No 2 (opposite Lots 66 & 68)	Width (Mtrs) 20/11					Industrial
Road No 1 Lots 45, 50- 54 (opposite Lot 65)	Width (Mtrs) 20/11					Industrial
Road 1 Lots 43-47	Width (Mtrs) 20/13					Industrial
Road No 3	Width (Mtrs) 20/13					Industrial
Road No Lots 55-63	Width (Mtrs) 20/13					Industrial
Road No Lot 72 access handle	Width (Mtrs) 10/4/1/1					Rural Laneway With Sealed Footway/ private driveway

- (4) (B007) If engineering works are of a value equal to or greater than \$25,000, a detailed estimate of cost of the civil engineering works and documentary proof of payment of the Levy required by the Building and Construction Industry Long Service Payments Act must be provided to Council prior to any approval of engineering plans.
- (5) (B017) Submission to Council of an application for water service connections and compliance with Council's requirements for the provision of such connections. Payments of costs to provide for these connections and/or extensions are to be made prior to the issue of the Construction Certificate. This application is also to include an application for the disconnection of any existing service not required.
- (6) (B019) The local water supply reticulation mains are to loop within the subdivision to minimise dead ends and connect to the existing reticulation wherever possible.
- (7) (B022) Prior to issue of a Construction Certificate, for the proposed total development, the proponent is to provide a water supply strategy detailing subdivision staging and the corresponding water supply work (including augmentation) necessary to support each stage, unless varied by Council staff. The strategy is to incorporate the latest changes in water supply design requirements as well as being modelled on software compatible with that used by Council.

- (8) (B023) A water main connection is required from this development to Sancrox Road (public road) from the adjacent cul-de-sac, unless varied by Council staff. This water is to be located in either a public pathway, public reserve or a water supply reserve.
- (9) (B030) An application under Section 138 of the Roads Act 1993 is to be submitted to and approved by Council for works associated with the development on or within the Public Road.
- (10) (B050) A report outlining the validation of all soil excavations (resulting from the removal of contaminated soils) and fill materials, carried out in accordance with the Environmental Protection Authority "Contaminated Sites Guidelines for Consultants Reporting on Contaminated Sites, November 1997", shall be submitted to and approved by Council prior to commencement of the development.
- (11) (B057) The existing sewer including junction and/or stormwater drainage shall be located on the site and the position and depth indicated on the plans which accompany the application for the Construction Certificate.
- (12) (B196) Unless varied by Council staff, the development is to provide a ten metre wide easement along the southern boundaries of proposed lot 2 to allow construction of the water and sewer mains across the Pacific Highway Road reserve. Depending on final engineering design, some road widening dedication may be required in this area. Details are to be submitted with application for Construction Certificate.
- (13) (B198) Unless varied by Council staff, potable and reclaimed water services are to be provided to each lot. Details are to be submitted with application for Construction Certificate.
- (14) (B197) The recommendations made in the King and Campbell "Preliminary Site Investigation Report Sancrox Enterprise Zone Sancrox Road Port Macquarie" Report 14802 dated September 2009 shall be complied with.
- (15) (A200) Where the sewer is proposed to be located within private property, written owners consent is to be submitted prior to issue of Construction Certificate.

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) (C002) Prior to the commencement of any works, a pre-construction meeting shall be organised by the applicant. This meeting is to be attended by the applicant or consultants, principal contractor and Council's development engineer or his representative.
- (3) (C004) Erosion and sediment controls in accordance with the approved management plan shall be in place prior to the commencement of any works or soil disturbance and maintained for the entirety of the works until the site is made stable by permanent vegetation cover or hard surface.
- (4) (C013) Where a sewer manhole exists within a property, access to the manhole shall be made available at all times. Before during and after construction, the sewer manhole 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:
- at completion of installation of erosion control measures
 - prior to installing traffic management works
 - at completion of installation of traffic management works
 - before commencement of any filling works;
 - when the sub-grade is exposed and prior to placing of pavement materials;
 - when trenches are open, stormwater/water/sewer pipes and conduits jointed and prior to backfilling;
 - at the completion of each pavement (sub base/base) layer;
 - before pouring of kerb and gutter;
 - prior to the pouring of concrete for sewerage works and/or works on public property;
 - on completion of road gravelling or pavement;
 - during construction of sewer infrastructure;
 - during construction of water infrastructure;
 - 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.

- (2) (D004) The capacity and effectiveness of erosion and sediment control measures shall be maintained at all times in accordance with the approved management plan until such time as the site is made stable by permanent vegetation cover or hard surface.
- (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.
- (4) (D014) Work on the project 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 holidays
- The builder to be responsible to instruct and control his sub-contractors regarding the hours of work.
- (5) (D026) The site shall be left free of wastes and debris following completion of the demolition work.
- (6) (D027) Dust or airborne particles shall not be allowed to escape from the site. The use of fine mesh dust proof screens, fine water sprays or other approved methods are required.

- (7) (D028) Demolition works performed on buildings with materials containing asbestos or lead shall be carried out strictly in accordance with the current requirements of the Workcover Authority and National OH&S Committee – *Code of Practice for the Safe Removal of Asbestos* and *Code of Practice for the Management and Control of Asbestos in Workplaces*.
- (8) (D033) Should any Aboriginal objects be discovered in any areas of the site then all excavation or disturbance to the area is to stop immediately and the National Parks and Wildlife Service, Department of Environment and Conservation is to be informed in accordance with Section 91 of the *National Parks and Wildlife Act 1974*. Subject to an assessment of the extent, integrity and significance of any exposed objects, applications under either Section 87 or Section 90 of the *National Parks and Wildlife Act 1974* may be required before work resumes.
- (9) (D037) Noise from construction activities (measure as the L_{AeqT} noise level) shall not exceed the background noise level (measured as the L_{A90} noise level in the absence of the source), for periods of construction between 4 and 26 weeks by 10 dB(A), and for periods of construction exceeding 26 weeks by 5 dB(A), in any Octave Band Centre Frequency, when measured at any affected residence, or premises.
- (10) (D040) Wastes including vegetation shall not be disposed of by burning.
- (11) (D043) Any damage to a tree nominated for retention/protection during the construction phase shall be treated by an Arborist with a minimum qualification AQF level 5 (diploma level) or an international qualification considered equivalent by Council, or a person deemed suitable by Council at the developer's expense.
- (12) (D045) A suitably qualified ecological consultant shall inspect all native trees that have been approved for removal before they are felled. If there are any koala or other fauna species in the tree, work in the vicinity is to cease until the animal has moved from the area. If it is likely that hollows are providing habitat for native species, traps shall be set for several nights and any native species found shall be relocated to an appropriate nearby location.

E – PRIOR TO THE ISSUE OF SUBDIVISION CERTIFICATE

- (1) (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.
- (2) (E034) Prior to the issuing of the Subdivision 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.
- (3) (E039) An appropriately qualified and practising consultant is required to furnish a Compliance Certificate to the Principal Certifying Authority confirming:
 - 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.

- (4) (E044) The applicant will be required to submit prior to issue of the Subdivision Certificate, certification by a Registered Surveyor that the development has met the necessary flood planning levels specified in this consent.
- (5) (E050) Prior to Subdivision Certificate, submission of relevant documentation from the Water Authority confirming its acceptance of infrastructure works, including work as executed plans in accordance with Port Macquarie-Hastings Council current version of AUSPEC.
- (6) (E053) All works shall be certified by a practicing Civil Engineer or Registered Surveyor as compliant in accordance with the requirements of AUSPEC in accordance with the Council's *Interim Requirements for the Maintenance and Certification of Public Infrastructure Provided Through Land Developments* (dated 6 September 2010) prior to issue of the release of the security bond to guarantee completion of public works.
- (7) (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 subdivision certificate.
- (8) (E064) Provision of street lighting to all new roads in accordance with AS1158 and compliance with the requirements of the electricity authority regarding provision of electricity to serve the development. Provision shall be made for placement of conduits for future requirements or upgrades. Evidence by way of letter from the electricity provider, indicating compliance with this condition shall be submitted prior to the issue of the Subdivision Certificate.
- Any proposal to erect non-standard, prestige or Smart Poles (or equivalent) street lighting shall:
- Forward all plans to the service provider for comment;
 - Include instruction for completion of 'Lighting Requirements';
 - be referred to Council together with details of the difference in annual charges over a twenty five (25) year period in accordance with Policy R5 – Street Lighting on Public Roads;
 - Supply to Council to keep in stock, one (1) extra pole for every six (6) run of poles, unless varied by Council staff.
- (9) (E065) 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.
- (10) (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 relocation of street lighting
 - d. The matching of new infrastructure into existing or future design infrastructure
- (11) (E067) Prior to the issue of a Subdivision Certificate the proponent shall provide to each lot an underground connection to the following reticulated services in accordance with their respective requirements:
- Telecommunications

- Electricity supply
 - National Broadband Network
- (12) (E072) Lodgement of a security deposit with Council upon practical completion of the subdivision works in accordance with the Council's *Interim Requirements for the Maintenance and Certification of Public Infrastructure Provided Through Land Developments* (dated 6 September 2010).
- (13) (E075) Road names proposed for the subdivision shall be submitted for Council approval prior to lodgement of the Subdivision Certificate. A suitable name for any new road(s) shall be in accordance with Council's adopted policy.
- (14) (E078) The lot identified as proposed drainage land under Council's control is to be dedicated to Council for drainage purposes. Provision for this dedication is to be made in the application for the Subdivision Certificate.
- (15) (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 Certificate. The copyright for all information supplied, shall be assigned to Council.
- (16) Evidence of registration of the Planning Agreements on the title of the land in accordance with Clause 11 of the Sancrox Employment Land and Quarry Planning Agreement dated 15 July 2011, Clause 39 of the Sancrox Employment Land Environmental Lands and Services Planning Agreement dated 15 July 2011 and Clause 29 of the Sancrox Employment Land Road Construction Planning Agreement dated 15 July 2011 to be provided prior to issue of the first subdivision certificate in the development.
- (17) Completion of the Establishment Obligation in accordance with the approved Vegetation Management Plan in relation to the Dunn Residence Land prior to issue of the subdivision certificate that separates the Dunn Residence Land from the adjoining land (Clause 21)
- (18) Dedication of the Environmental Management Land in a stage of the development as a public reserve free of cost to Council upon registration of the first plan of subdivision in the stage. Where development in a Stage relating to Environmental Management Land does not involve subdivision, dedication is required prior to the issue of the first Part 4A Certificate issued relating to that Stage.
- (19) Dedication of the whole of the Offsite Offset Environmental Land being Lots 67, 68, 69, 70, 71 & 75 in Deposited Plan DP 805548 in accordance with Clause 19 of the Sancrox Employment Land Environmental Lands and Services Planning Agreement dated 15 July 2011 free of any easements, and as a public reserve free of cost to Council prior to release of the first subdivision certificate in relation to Stage North 1 or Stage South 1, whichever occurs first.
- (20) Evidence of dedication of the Dedication Land and the Highway Upgrade Land as described in the Sancrox Employment Land Road Construction Planning Agreement dated 15 July 2011 prior to issue of the first subdivision certificate in the development. (Clause 8).
- (21) (A197) The visual buffer on proposed Lot 12 is to be increased to 10m wide and dedicated to Council as part of application for Subdivision certificate.

- (22) Suitable arrangements to be made in relation to access to the land from Sancrox Road which may include dedication of the Access Road Land free of cost to Council as part of the first subdivision certificate in the development (Clause 4) or construction of a temporary access road as per Exhibit 4 - Temporary Road Access Arrangement plan by King & Campbell Pty Ltd dated 25 July 2012.
- (23) Restriction on the carrying out of development on proposed Lot 41, Lot 42, Lot 43 and Lot 44 in accordance with the provisions of the Clause 8 of the Sancrox Employment Land and Quarry Planning Agreement dated 15 July 2011.
- (24) Restriction on the carrying out of development on proposed Lot 9, Lot 10 and Lot 11 in accordance with Clause 7 of the Sancrox Employment Land and Quarry Planning Agreement dated 15 July 2011.
- (25) Payment of the Component 3 Road Infrastructure monetary development contribution to Council in accordance with Clause 9 of the Sancrox Employment Land Road Construction Planning Agreement dated 15 July 2011 unless Council has entered into an agreement with the Developer to carry out the Component 3 Road Infrastructure Work.
- (26) (B009) Payment to Council, prior to the issue of the Subdivision Certificate of the contributions set out in the "Notice of Payment – Developer Charges" schedule attached to this consent. The contributions are levied, pursuant to the Environmental Planning and Assessment Act 1979 as amended, and in accordance with the provisions of the Sancrox Employment Land Environmental Lands & Services Planning Agreement dated 15 July 2011 and Sancrox Employment Land Road Construction Planning Agreement dated 15 July 2011.
- (27) 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 Planning Agreements. 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.
- (28) (B198) Construction of the water supply work in accordance with the Sancrox Employment Land Environmental Lands and Services Planning Agreement dated 15 July 2011 to the reasonable satisfaction of Council prior to issue of a Subdivision Certificate for the development (Clause 9).
- (29) Construction of the Sewerage Services Work in accordance with Sancrox Employment Land Environmental Lands and Services Planning Agreement dated 15 July 2011 to the reasonable satisfaction of Council prior to issue of a Subdivision Certificate for the development (Clause 11).
- (30) Completion of the Road and Infrastructure Works prior to the issue of a Subdivision Certificate relating to the development in accordance with Clause 10 of the Sancrox Employment Land Road Construction Planning Agreement dated 15 July 2011.

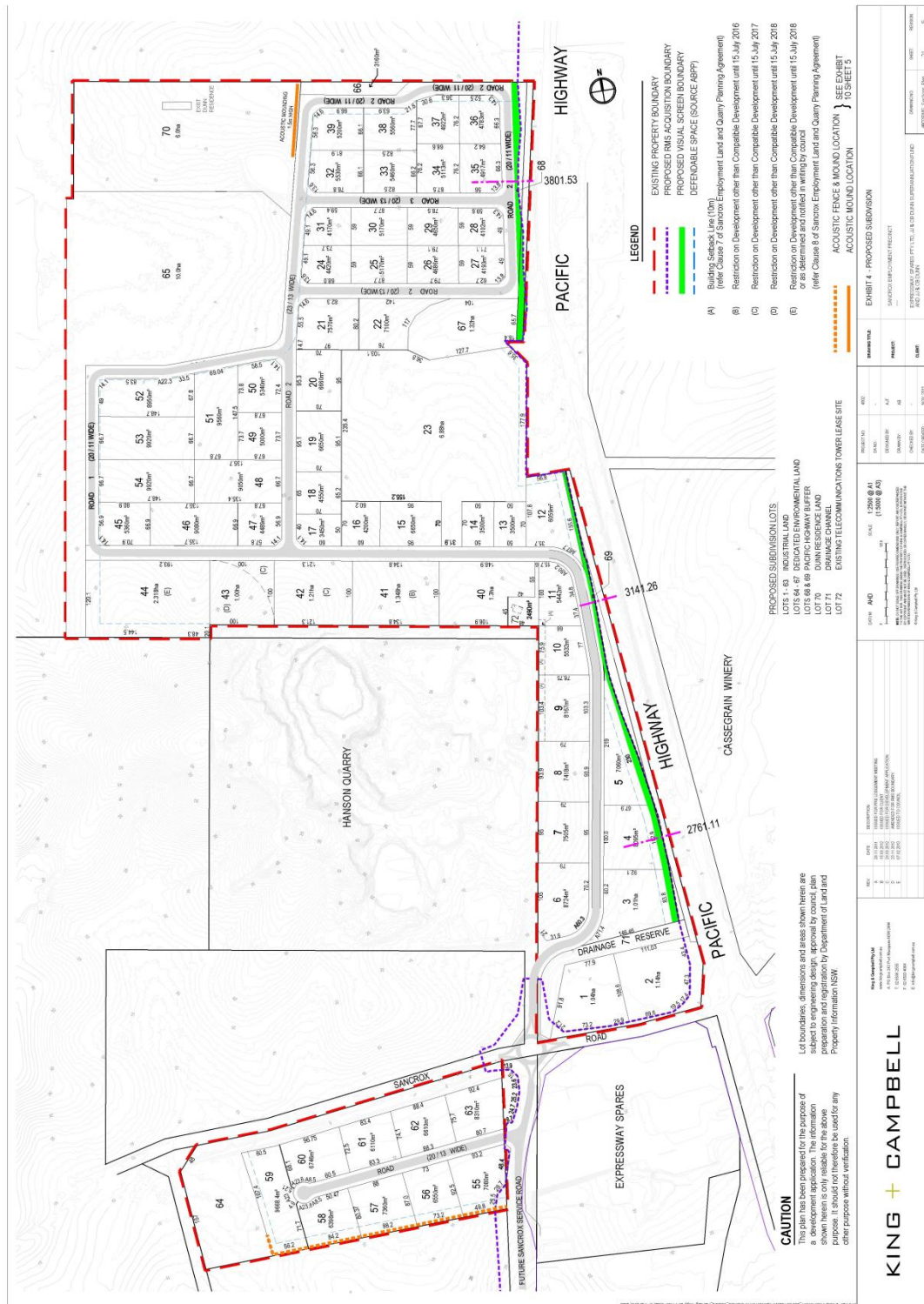
G - NSW RURAL FIRE CONDITIONS

The General Terms of Approval, Reference D12/1695 DA 12073184285 PC dated 18 February 2013, are attached and form part of this consent.

H - OFFICE OF WATER

The General Terms of Approval, Reference 30 ERM 2012/0613 dated 14 August 2012 are attached and form part of this consent.

10/04/2013



10/04/2013

D-CT

Planning &
Infrastructure

Mr T Hayward
General Manager
Port Macquarie-Hastings Council
PO Box 84
Port Macquarie NSW 2444

Our ref: 12/12330
Your ref: 2012/305

Dear Mr Hayward

Subject: SEPP 44 Draft Koala Plan of Management for DA 2012/305 – Sancro Employment Precinct and Offsite Offset Environmental Lands, Sancro

I refer to your letter dated 21 January 2013 and the above application for approval of a draft Koala Plan of Management (KPoM) by King and Campbell Consultancy dated December 2012 under State Environmental Planning Policy No. 44 – Koala Habitat Protection (SEPP 44). A revised version of the KPoM and accompanying Vegetation Management Plan (VMP) dated March 2013 was subsequently submitted by the consultant to amend inconsistencies in the version sent to us by Council. An assessment of this revised March 2013 KPoM and VMP has now been completed.

In accordance with clause 13 of SEPP 44, approval has been granted to the KPoM and accompanying VMP dated March 2013.

Council is encouraged to consider the removal of koala proof fencing around the site post-development, as outlined in the KPoM, to ensure movement across and within the site is not restricted in the long term.


Council should commence a process to rezone the offsite Offset Environmental Lands for environmental protection to reflect and further secure their purpose as offset habitat.

Council should also consider measures to ensure the retention of the adjoining habitat and movement corridor to the west of the site in perpetuity.

Should you require further clarification, please contact Carlie Boyd of the Northern Region's Grafton office on phone 6641 6610.

Yours sincerely


Steve Murray
Regional Director
Northern Region

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Activity	
Subject	DA 2012-305
Folder	D12/95

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KING + CAMPBELL

Koala Plan of Management
Sancrox Employment Precinct,
Pacific Highway, Sancrox

Prepared for:

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Date: **March 2013**

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Attachment



King & Campbell Pty Ltd

Koala Plan of Management
'Sancrox Employment Precinct',
Pacific Highway, Sancrox

Section 1

Introduction and Objectives

1.1 Introduction

This Koala Plan of Management (KPoM) accompanies a Development Application (DA) for land within the 'Sancrox Employment Precinct', a proposed industrial subdivision located on the corner of the Pacific Highway and Sancrox Road, Sancrox.

SEPP 44 defines core Koala habitat as "... an area of land with a resident population of Koalas evidenced by attributes such as breeding females (that is, females with young) and recent sightings of and historical records of a population". If a site is determined to constitute Core Koala Habitat a KPoM is required to accompany the DA for proposed development.

This KPoM has been prepared with regard to:

- SEPP No.44 – Koala Habitat Protection;
- The Director's Guidelines as set out in Section 2.2 of Circular No. B35 (Department of Urban Affairs and Planning, 22 March, 1995);
- The Recovery Plan for the Koala (NPWS November 2008);
- Port Macquarie-Hastings Council (PMHC) Sancrox Employment Precinct LES, LEP and DCP;
- Flora and Fauna Survey, Peter Parker Environmental Consultants Pty Ltd, September 2009;
- Pacific Highway Employment Precinct – Flora and Fauna Survey, July, 2012 (Peter Parker Environmental Consultants Pty Ltd);
- Greater Sancrox Ecological Assessment – Final Report to PMHC, August, 2011 (Biolink Pty Ltd);
- Sancrox Rural Residential Investigation Area – Preliminary Ecological Review, PMHC, May, 2009 (Biolink Pty Ltd);
- The Vegetation Management Plan (VMP), prepared by King & Campbell in conjunction with Wild Things Native Gardens and PPEC – attached at Appendix E to the Statement of Environmental Effects. Relevant excerpts of the VMP have been included in the KPoM (refer Appendix KPoM_D).

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King & Campbell Pty Ltd

Koala Plan of Management
'Sancrox Employment Precinct',
Pacific Highway, Sancrox**1.2 The Site**

The site forms part of the 'Sancrox Employment Precinct' and has a total combined land area of 85.268 ha. The subject DA for industrial subdivision and this KPOM is in relation to the following individual allotments:

- Lot 30 DP 255774 - 10.12 ha;
- Lot 2 DP 222740 - 14.139 ha;
- Lot 1 DP 124543 - 31.02 ha;
- Lot 1 DP 226821 - 12.22 ha;
- Lot 62 DP 754434 - 16.188 ha;
- Lot 1 DP 1131036 - 6,652m²; and
- Part Lot 1 DP 1144490 - 9,158m².

Exhibit KPOM 1 provides details of the locality of the site and its context. The site is located:

- Adjacent to the western boundary of the Pacific Highway;
- West of the recently approved duplication of the Pacific Highway;
- North and south of Sancrox Road;
- North and west of the proposed Sancrox Traffic Arrangement for which construction is proposed to be commenced in 2013;
- North and west of the existing operations of Expressway Spares Pty Ltd;
- North and east of the existing operations of the Hanson Sancrox Quarry; and
- East and south-east of the Sub-Regional Corridor identified by Biolink in the Greater Sancrox Ecological Assessment (August 2011).

1.3 Background**1.3.1 Rezoning Process – Sancrox Employment Precinct**

The Local Environmental Study (LES) dated May 2010 was prepared by Blueprint Planning Consultants for PM-HC. The LES was informed by a number of specialist studies. The ecological assessment, which included a survey of Koala habitat pursuant to SEPP 44, was undertaken by Peter Parker Environmental Consultants Pty Ltd (PPEC). PM-HC engaged Biolink Pty Ltd to undertake a peer review of the PPEC report, resulting in further survey work and assessment being undertaken leading to the final PPEC Flora & Fauna Survey dated

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September, 2009. Further consideration of ecological assessments is provided in **Section 1.3.3** below.

The rezoning of the Sancrox Employment Precinct was completed with the gazettal of Amendment No 3 to the PMH LEP 2011 on 26 August, 2011.

As a result of Amendment No 3 to PMH LEP 2011, the site is zoned as follows:

- part IN1 General Industrial (58.2 ha);
- part IN2 Light Industrial (7.1 ha);
- part E2 Environmental Conservation (13.8 ha);
- part E3 Environmental Management (3.8 ha);
- part E4 Environmental Living (3.4 ha); and
- part RU1 Primary Production (0.7 ha).

Exhibit KPOM 2 provides detail of the various zones that apply to the subject property.

Blueprint Planning Consultants also prepared the Area Based DCP Provisions for Sancrox Employment Precinct which have subsequently been incorporated into the Port Macquarie Hastings Development Control Plan 2011 (PMH DCP 2011). The DCP includes the following Development Provisions that are relevant to the KPOM:

- A Vegetation Management Plan (VMP) is required for environmental lands proposed to be dedicated to Council with establishment of approved environmental works required prior to the release of the subdivision certificate. (The VMP is contained in **Appendix E** to the accompanying DA - refer **Section 1.3.4, Appendix KPOM D** and below for relevant details of the VMP applicable to the subject KPOM);
- In order to encourage movement of Koalas from the east to higher value vegetation in the west, Koala proof fencing and food tree planting is to be provided along the northern boundary (Section 3 of this KPOM contains details of the measures proposed to comply with this provision); and
- In order to ensure the protection and rehabilitation of important habitat areas, threatened species and SEPP 44 assessments are to be undertaken at the DA stage to assess the impact of the development involving clearing of native vegetation (**Sections 1.3.2, 1.3.3, 1.3.4 and 3** and **Appendix KPOM D** contain details of the measures to protect and rehabilitate important habitat areas and a summary of the threatened species and SEPP 44 assessments undertaken).

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Koala Plan of Management
'Sancrox Employment Precinct',
Pacific Highway, Sancrox**1.3.2 Planning Agreements**

As part of the rezoning process, the landowners have entered into the following Planning Agreements with PMHC, dated 15 July, 2011:

1. Sancrox Employment Land Environmental Lands and Services Planning Agreement (SEL_ELS_PA);
2. Sancrox Employment Land and Quarry Planning Agreement (SEL_Q_PA); and
3. Sancrox Employment Land Road Construction Planning Agreement (SEL_RC_PA).

The following provisions of these Voluntary Planning Agreements are relevant to this KPOM:

1. The Sancrox Employment Land Environmental Lands and Services Planning Agreement (SEL_ELS_PA).

This VPA provides for the following:

- a. The establishment, management and dedication as public reserve of the Environmental Lands (refer **Exhibit KPOM 3**);
- b. The establishment and management of the Dunn Residence Land (refer **Exhibit KPOM 3**);
- c. The establishment, management and dedication as public reserve of the Offsite Offset Environmental Lands (refer **Exhibit KPOM 4**);
- d. The preparation of a Vegetation Management Plan (VMP) to outline the conservation and rehabilitation measures to be undertaken in the establishment, management and dedication of the Environmental Lands and Offsite Offset Environmental Lands and the establishment and management of the Dunn Residence Land. The VMP has been prepared as part of the Development Application (DA) this KPOM accompanies. Relevant details of the VMP are summarised in **Section 1.3.4** and **Appendix KPOM D**;
- e. Ongoing Management (maintenance) of the Environmental Lands, Offsite Offset Environmental Lands (for three years) and Dunn Residence Land;
- f. Payment of the Management Contribution on a stage by stage basis to be held and applied by Council for the ongoing environmental management of the Environmental Lands and Offsite Offset Environmental Land for a further 17 years; and

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- g. The inclusion in the VMP of provisions relating to the establishment, management and Annual Report of the maintenance requirements of the Dunn Residence Land.
2. The Sancrox Employment Land Quarry Planning Agreement (SEL_Q_PA).

This VPA is based on a Landowner Offer negotiated to allow the co-existence of the continued lawful operation of the adjoining Hanson Quarry and the staged development of the Sancrox Employment Precinct. Clause 8 of the SEL_Q_PA contains the provisions relevant to the Koala Plan of Management (refer **Exhibit KPoM_2**) as follows:

- a. Restriction preventing the development of Lot 41 until 15 July 2016;
- b. Restriction preventing the development of Lot 42 and part Lot 43 until 15 July 2017;
- c. Restriction preventing the development of Part Lot 43 until 15 July 2018;
- d. Restriction preventing the development of Lot 44 until 15 July 2018 or as determined and notified by Council.

This KPoM makes use of the above existing restrictions on the staged development of the subject land to implement and provide certainty with respect to ameliorative measures to mitigate potential impacts of the proposed industrial subdivision on existing Koala habitat (refer **Section 3**).

The current negotiations with respect to a revised SEL_Q_PA propose to extend the restrictions preventing the development of Lots 41 – 44 until 2020.

1.3.3 Assessment of Koala Habitat

This section provides a summary of the ecological assessments carried out in relation to the both the site and the locality, including:

1. The Koala habitat assessments undertaken by Peter Parker Environmental Consultants Pty Ltd (PPEC) as part of the ecological assessment component of the LES and rezoning process;
2. The reviews of the PPEC ecological assessments by Biolink Pty Ltd on behalf of PMHC;
3. Koala habitat assessments undertaken by Biolink for PMHC in the Greater Sancrox Region (adjoining the subject lands) as part of the Greater Sancrox Ecological Assessment (2011) as well as

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throughout the land identified by PMHC as part of the investigation lands in the Port Macquarie-Hastings Urban Growth Management Strategy, and

4. The updated Ecological Assessment by PPEC for the subject Development Application (July 2012).

Having regard to the above, the process for determining the extent of core Koala habitat on the subject lands has occurred as follows:

1. Ecological Assessment by Peter Parker Environmental Consultants Pty Ltd (PPEC), September, 2007 and September, 2009.

The work undertaken by PPEC included spotlighting and SAT based sampling at 250m intervals within the Sancrox Employment Precinct (SEP). This work reported the observation of a single koala across the 85ha site. The results of the SAT based sampling are shown in the table below and recorded generally low koala activity levels (0 – 20%):

SAT number	Number of sites with faecal pellets	Activity level	Tree species with faecal pellets
A1	nil	zero	na
A2	nil	zero	na
A3	6	20%	TW, GG, WW
B1	nil	zero	na
B2	1	3.3%	TV
B3	3	10%	TW, GIB
C1	2	6.6%	TW, BB
C2	2	6.6%	TW, BB
C3	3	10%	TW, SB
D1	5	16.6%	TW, BB
D2	nil	zero	na
D3	nil	zero	na
E4	nil	zero	na
F4	nil	zero	na
G2	1	3.3%	TV
G3	1	3.3%	SB

TW – Tallowood, GG – Grey Gum, BB – Blackbutt, SB – Stringybark

PPEC provided the following assessment of the results from the SAT Survey undertaken in 2009:

"An empirical measure of Koala activity was obtained by dividing the number of trees which had Koala faecal pellets at their base by 30 (table 7). The percentage equivalent activity level for east coast Koala populations is found in Phillips and Callaghan (submitted manuscript) and is as follows:

- *Low: SAT site activity level less than 22.52%;*
- *Medium to High: SAT levels greater than or equal to*

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22.52% but less than or equal to 32.84%; and

- High: SAT levels greater than 32.84%.

Koala use of the site is transient according to the results of the SAT survey (Table 7 at page 40).

A (further) inspection at the base of 17 tallwood trees in the vicinity of B3 undertaken on 4 August 2009 did not record any scats. A 10% activity level was recorded when these trees were previously included in the SAT survey (Table 7). These results suggest that the previous assessment of "transient use" was the appropriate interpretation of Koala usage of the site." (PPEC September 2009)

2. The work undertaken by Biolink Pty Ltd on adjoining lands included spotlighting and SAT-based sampling at 250m intervals as part of the Greater Sancrox Rural Residential study. This work resulted in the incidental sighting of koalas – including a female with joey – near the boundary of the SEP, and low activity levels similar to that reported by PPEC (mean activity level (active sites only): 7.50 + 6.31 % (SD), range: 3.3 – 17).

Based on the low activity results of the SAT survey and the sighting of Koalas, Biolink provided the following assessment of Koala activity within the Greater Sancrox Area including the SEP:

"The lack of widespread and high measures of Koala activity within the study area was an unexpected result given the presence of a relatively large area of intact bushland containing preferred food tree species in the central part of the study area. It is clear that a viable and self-sustaining Koala population (ie ≥180 animals) is not present despite extensive areas of suitable habitat. Of site-specific studies done within the study area, only Darkheart (2004) reported the presence of significant Koala activity in the Bushland Drive area in the south-eastern portion of our study area, an area we have identified as now supporting only small isolated cells of activity. Darkheart (2005a, 2005b) also reported areas of low activity in the north and the southwest of the study area. Similarly, the proposed Sancrox Employment Precinct adjacent to the north-eastern boundary of the study area was considered to be subject of transient use by Koalas when assessed by Parker (2009).

The work of Phillips and Callaghan (2011) cautions that any determinations regarding the importance of Koala activity levels should ideally be informed by a broader soil-based understanding of tree preferences. The influence of soil landscape on the palatability of some Koala food tree species is now well documented (eg. Phillips and Callaghan 2000; Moore et al 2004), the underlying implications of which are that (i) only

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*the larger food trees (ie. > ~450mm dbh) are likely to be palatable, (ii) because larger trees occur at lower densities across the landscape, so must any resident Koalas, and (iii) because individual home range areas are larger, faecal pellets are more widely scattered which in turn results in lower activity levels being recorded. This phenomenon is becoming increasingly documented along the east coast and typically associated with lower nutrient erosional and (to a lesser extent) residual soil landscapes. Our incidental spotlighting observations of a female with young, coupled to an underlying low-nutrient soil landscape further typified by the presence of Spotted Gum (a low soil nutrient specialist) and trees with a generally small diameter, along with low activity sites exhibiting a high measure of spatial autocorrelation all infer that application of the "East coast low density", rather than "East coast med- high density" activity thresholds of Phillips and Callaghan (2011), is warranted for the purposes of delineating core Koala habitat..." (Biolink, August 2011, p.22 **Appendix KPOM B**).*

As a result of this assessment and contrary to the activity level thresholds applied at the rezoning stage, Biolink's recommendation to apply the 'East Coast low density' activity thresholds in the Greater Sancrox Region has the effect that any evidence of Koala activity from the SAT survey of the SEP constitutes core Koala habitat.

Accordingly, koala activity across the subject site and adjoining lands was modelled using the combined datasets of PPEC and Biolink to best indicate the location and approximate extent of Core Koala Habitat based on the 12% activity contour. This model (Exhibit KPOM 06) was prepared by Biolink (reproduced with permission) and adopted for the purpose of this KPOM."

3. The *Sancrox Employment Precinct Flora and Fauna Survey* (PPEC, July, 2012) is contained in **Appendix D** of the DA. Relevant excerpts of the PPEC July, 2012 report are included in **Appendix KPOM B**. These excerpts include the Vegetation Map of the site and the sections containing the Koala habitat assessment.

The PPEC July, 2012 assessment has advised the following:

"A follow-up inspection at the base of 17 tallwood trees in the vicinity of SAT site "B3" was undertaken on 4 August 2009 and again at the same site on 31 October 2011. These inspections recorded no koala activity. These results suggest that the northern and eastern parts of the site were not used by the koala from 2009 through to 2011. No inspections have been undertaken since October 2011.

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The Biolink (2011) survey of the greater Sancrox area recorded several koalas near the quarry in the western part of the site, thus supporting the thesis that ongoing koala use of the site is occurring but is localised to the west.

An empirical measure of koala "activity" is obtained by dividing the number of trees which had koala fecal pellets at their base by 30 (Table 12). The percentage "equivalent activity" use level for the category "east coast (low) koala populations" is illustrated in Table 13. This is the activity level that Biolink (2011) recommend for the greater Sancrox area and a single tree with scats is sufficient to trigger the "medium use" activity level.

Table 13: East coast (low) activity level (after Phillips and Callaghan 2011)

Activity Level	Low use	Medium (normal) use	High use
	n/a	Greater than or equal to 3.33% but less than or equal to 12.59%	Greater than 12.59%

Biolink considers the koalas which occur in the greater Sancrox area to be the north-western outlier of the major population cell centred around Lake Innes (reported in King and Campbell 2012). Koala habitat in the Sancrox area, as estimated by Biolink (2011), is capable of supporting a koala population of approximately 0.1 koalas per hectare (reported in King and Campbell Pty Ltd 2012)." (PEEC, July 2012, pp46-47)

1.3.4 Vegetation Management Plan (VMP)

The VMP accompanying the subject DA has been prepared in accordance with PMHC's Vegetation Management Plan Requirements (refer **Appendix KPOM D**).

The VMP provides the management tool for the implementation of the Landowner obligations established by the Sancrox Employment Land Environmental Lands and Services Planning Agreement (SEL_ELS_PA) (Refer Section 1.3.2 and **Exhibits KPOM 3 and 4**).

Exhibit KPOM 2 provides details from the VMP of the Koala food tree plantings to be undertaken in conjunction with the development of the Sancrox Employment Precinct. Approximately 1,601 Koala food trees are to be planted in Vegetation Management Units (4), (7a), (7b), (8), (9), (11), (12) and (13) in conjunction with the development of the first stage of the Sancrox Employment Precinct on the north side of Sancrox Road (Stage North 1).

The VMP provides for the planting of a further 1,354 Koala food trees

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within Vegetation Management Units (15a) and (15b) on the Offsite Offset Environmental Lands (refer **Exhibit KPOM_4**).

In addition, a total of 250 Koala feed street trees are proposed to be planted in conjunction with the completion of the detailed civil and services works in stages North 1, North 2 and North 3 of the SEP.

The VMP contains detailed measures for the initial eradication of weeds and the ongoing maintenance of revegetation and regeneration areas within the Environmental Management Lands.

In conjunction with the legal framework and funding mechanism (Management Contribution) contained in the SEL_ELS_PA, the VMP provides certainty with respect to the future management of areas of retained Koala habitat.

1.4 Legislative Context

1.4.1 State Environmental Planning Policy 44 – Koala Habitat Protection (SEPP 44)

SEPP 44 commenced operation on 13 February, 1995.

The aim of SEPP 44 is ... "to encourage the proper conservation and management areas of natural vegetation that provide habitat for Koalas to ensure a permanent free-living population over their present range and reverse their current trend of population decline by:

- a) Requiring the preparation of plans of management before development consent can be granted in relation to areas of core Koala habitat;
- b) By encouraging the identification of areas of core Koala habitat;
- c) By encouraging the inclusion of areas of core Koala habitat in environment protection zones."

SEPP 44 defines core Koala habitat as ... "an area of land with a resident population of Koalas, evidenced by attributes such as breeding females (that is, females with young) and recent sightings of and historical records of a population".

As outlined above in **Section 1.3.3**, the recent work by Biolink has concluded that the 'East-coast low' rather than the 'East-coast med-high' activity thresholds should apply to the subject land for the purposes of delineating core Koala habitat (Biolink, August, 2011). The extent of core Koala habitat based on the 'East-coast low' density activity threshold has been mapped and is shown on **Exhibit KPOM_6** (reproduced with the permission of Biolink).

Clause 11(3) of SEPP 44 requires that a plan of management is to be prepared in accordance with the Director's Guidelines as set out in

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Section 2.2 of Circular No. B35 (Department of Urban Affairs and Planning, 22 March, 1995). **Section 2** of this KPoM contains the provisions as required by the 'Guidelines'.

1.4.2 Threatened Species Conservation Act 1995 (TSC Act)

The Koala is listed as a vulnerable species pursuant to Part 1 Schedule 2 of the TSC Act. The PPEC June 2012 Flora & Fauna Survey Report contains the seven part test required pursuant to Section 5A of Environmental Planning & Assessment Act 1979. This assessment concludes that the proposed development is unlikely to cause a significant impact on the Koala. **Section 3** of this Plan contains the management and operational measures designed to preserve and enhance areas identified as containing vegetation of high conservation value.

1.4.3 Environmental Protection & Biodiversity Conservation Act 1999 (EPBC Act)

The Koala populations in Queensland, New South Wales and the Australian Capital Territory were listed as vulnerable under the EPBC Act on 2 May, 2012.

The Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) have issued the Interim Koala Referral Advice for Proponents dated June, 2012. This advice provides guidelines to assist proponents in determining whether a proposed action is considered likely to have a significant impact on Koalas, thereby requiring referral under the EPBC Act.

Key aspects of the interim guidelines have been considered in the preparation of this KPoM as follows:

1. Important Populations:

The Significant Impact Guidelines define *Important Populations* as:

An important population that is necessary for a species' long term survival and recovery. This may include populations identified as such in recovery plans and/or that are:

- *Key source populations either for breeding or dispersal;*
- *Populations that are necessary for maintaining genetic diversity; and/or*
- *Populations that are near the limit of the species' range.*

Section 2.3 of this KPoM contains details of the Koala population in the Port Macquarie Hastings LGA overall and the Greater Sancrox region based on recent work undertaken by Biolink on behalf of PMHC.

The Koalas making use of part of the subject property appear to

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form the north-west outlier of the Important Population centred around Lake Innes to the south-east (personal communication, Dr Stephen Phillips, 22 June, 2012). In this context and while it is a part of a low density local population, Koalas making use of part of the subject properties are not considered to be an Important Population because they:

- Comprise part of a localised breeding aggregation of 3 – 5 koalas located approximately 5kms to the north west of the Lake Innes Important Population referred to above, but otherwise separated from it by two major arterial roads in the form of the Pacific and Oxley Highways;
- Are not a key source population for breeding or dispersal;
- Are not a population that is necessary for maintaining generic diversity;
- Are not a population at or near the limit of the species' range.

2. Habitat Critical to the Survival of the Species:

The IKRA confirm that '*Habitat Critical to the Survival of the Koala*' are areas of forest or woodland where:

- Primary Koala food tree species comprise at least 30% of the overstorey trees;
- Primary Koala food tree species comprise less than 50% of the overstore trees, but together with secondary food tree species comprise at least 50% of the overstorey species;
- Primary food trees are absent but secondary food tree species are along comprise at least 50% of the overstorey trees;
- A relatively high density of koalas is supported, regardless of the presence of food trees.

Appendix 2 of the approved Recovery Plan for koalas in NSW (DECC 2008) indicates that in the North Coast Management Area the following species are primary and secondary food tree species:

Primary food tree species

Tallowwood	<i>Eucalyptus microcorys</i>
Forest Red Gum	<i>Eucalyptus tereticornis</i>
Swamp Mahogany	<i>Eucalyptus robusta</i>

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Appendix KPOM B contains the Vegetation Map and accompanying description of each vegetation associations mapped by PPEC (July 2012 pp29-39). While none of the vegetation associations support a relatively high density of Koalas, based on the definitions in the Guidelines, three of the vegetation associations contain Primary Food Tree species:

- *Eucalyptus robusta* (swamp mahogany), *Melaleuca quinquevneria* (broad leaved paperbark), *Glochidion ferdinandii* or *ferdinandii* (cheese tree) tall to very tall open forest (notated as Vegetation Association (1) on the PPEC Vegetation Map **Appendix KPOM B**);
- *Eucalyptus pilularis* (blackbutt), *Eucalyptus microcorys* (tallowwood), *Eucalyptus propinqua* (small fruited grey gum), *Melaleuca quinquevneria* (broad leaved paperbark), *Entolasia stricta* (wiry panic grass) tall to very tall open forest (notated as Vegetation Association (2) on the PPEC Vegetation Map, **Appendix KPOM B**); and
- Blackbutt, tallowwood, white stringybark, turpentine tall open forest (notated as Vegetation Association (5) on the PPEC Vegetation Map, **Appendix KPOM B**).

The land upon which Vegetation Association (5) is located is zoned General Industrial IN1 and is proposed to be developed in stages for industrial purposes. Ameliorative and management measures to address the impacts of clearing within Vegetation Association (5) are included in Section 3 of this Plan.

Vegetation Associations (1) and (2) are considered to likely satisfy the vegetation components of the definition of "Habitat Critical to the Survival of the Koala".

We note that:

- ✓ Vegetation associations (1) and (2) are located with the E2 Environmental Conservation zone;

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- ✓ Vegetation associations (1) and (2) are proposed to be conserved and enhanced through the works proposed in the Vegetation Management Plan (refer **Section 1.3.4** and **Exhibit KPoM_2**;
- ✓ Vegetation associations (1) and (2) are proposed to be established, managed and dedicated as public reserve in accordance with the provisions of SEL_ELS_PA (refer **Section 1.3.2** and **Exhibit KPoM_3**).

The SEL_ELS_PA also provides for the payment of a Management Contribution to fund a further 17 years of management of the dedicated lands and the conservation, enhancement and ongoing management of the adjoining Dunn Residence Land (refer **Exhibit KPoM_3**).

On the basis of the existing environmental zones and the ongoing management measures already in place through the existing Planning Agreement and proposed VMP and reinforced by this Plan of Management (refer **Section 3**), habitat likely to meet the vegetation component of the definition of 'habitat critical to the survival of the Koala' is to be preserved, enhanced and protected in the long term.

It is concluded that the actions associated with the development of the proposed industrial subdivision will not be likely to have a significant impact on an "Important Population" of Koalas nor will it result in impacts on "Habitat Critical to the Survival of the Koala" as defined in the Department of Sustainability, Environment, Water, Population and Communities Interim Koala referral advice for proponents.

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Section 2

Director-General's Guidelines

This section addresses the Director General's Guidelines for the preparation of individual site specific Koala Plans of Management.

2.1 Objectives of the Plan

The objectives of this Koala Plan of Management (KPoM) are to:

- Maintain the existing Koala usage of the site by identifying, preserving and enhancing areas of high conservation value vegetation containing Koala habitat that is considered to be important for Koala conservation;
- Coordinate the staging and development of the Sancrox Employment Precinct, to minimise potential impacts on the existing low density population of Koalas currently utilising the land;
- Implement the Development Provisions of PMH DCP 2011 that apply to the Sancrox Employment Lands, by undertaking Koala feed tree planting and permanent / temporary fencing to encourage the movement of Koalas from the east to the higher value vegetation in the west;
- Undertake rehabilitation and revegetation works in accordance with the Vegetation Management Plan (VMP) (refer **Section 1.3.4**) as a first stage of development to enhance and preserve the existing areas of high conservation value and reinforce existing linkages to the sub-regional corridor identified for the Greater Sancrox Region, prior to the clearing of land within the adjoining industrial zoned land;
- Undertake rehabilitation and revegetation works on the Offsite Offset Environment Lands (refer **Exhibit KPoM_4**) in association with the VMP to enhance and preserve other Koala habitat areas in the surrounding region;
- Implement a funding mechanism to ensure the sustainability of ongoing management of the retained habitat;
- Coordinate the implementation of other management measures (including temporary and permanent fencing) to minimise the impact of other potential threat (e.g. vehicles collisions, dog attacks); and
- Monitor the effectiveness of the Plan of Management through annual survey of Koala usage of the subject lands through the development phase of the Sancrox Employment Precinct and for a minimum of five years thereafter.

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Koala Plan of Management
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The criteria against which achievement of the objectives will be measured are:

- Enhancement of existing Environmental Lands and Dunn Residence Land (refer **Exhibit KPoM_3**) through the implementation of the VMP and SEL_ELS_PA to ensure these lands ultimately satisfy the definition of Primary habitat being "...areas of forest and/or woodland wherein primary food tree species comprise the dominant (i.e. > 50%) overstorey tree species.;
- Monitoring of Koala usage within the Environmental Lands and the Offsite Offset Environmental Lands;
- Annual reporting of the effectiveness of the proposed revegetation and rehabilitation measures required by the VMP;
- Regular monitoring of Koala activity on the subject lands both prior to the commencement of the development of each stage of the Sancrox Employment Lands and after the completion of each stage;
- Review of the effectiveness of the enhanced linkage to the Greater Sancrox sub-regional corridor as part of the VMP annual reporting;
- Effective implementation and monitoring of temporary and permanent Koala proof fencing within the subject lands; and
- Provision of appropriate and effective tree protection measures during site works.

The provisions of the existing Sancrox Employment Lands Environmental Lands and Services Planning Agreement (SEL_EL_PA) and the Vegetation Management Plan that forms part of the subject DA provide for both the legal and reporting framework within which monitoring of the KPoM can occur and a guaranteed funding mechanism for the ongoing maintenance of the high quality conservation areas containing Koala habitat.

2.3 Estimate of Population Size and Regional Distribution of Koalas

The following assessment of Koala population size and regional distribution has been compiled based on the following sources:

1. Greater Sancrox Ecological Assessment, Biolink Pty Ltd, August, 2011; and
2. Personal communications, Dr Stephen Phillips, Biolink Pty Ltd, regarding Koala studies currently being undertaken for Port Macquarie-Hastings Council over the area occupied by the Port Macquarie Urban Growth Management Strategy.

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The key components of the local and regional populations are:

- A current population of approximately 1,600 Koalas across the Port Macquarie- Hastings LGA;
- Approximately 70% of that population (or approximately 1,120 animals) exist on the eastern side of the Pacific Highway;
- Approximately 60% of the population on the eastern side of the Pacific Highway (or approximately 670 Koalas) are within the population cell centred around Lake Innes (Dr Stephen Phillips, personal communication, 22 June, 2012);
- The Greater SancroX Ecological Assessment provides an estimate of the Koala population in the Greater SancroX Planning Area as follows:

"It is clear that a viable and self-sustaining Koala population (ie > 180 animals) is not present despite extensive areas of suitable habitat ... Our incidental spotlighting observations of a female with young, coupled to an underlying low nutrient soil landscape further typified by the presence of Spotted Gum (a low nutrient specialist) and trees with generally smaller diameters, along the low activity sites exhibiting a high measure of spatial auto-correlation all infer that application of the "East coast low density", rather than East coast medium density activity thresholds of Phillips & Callaghan (2011), is warranted for the purposes of delineating core Koala habitat ... Given the results, it is our considered view that the total Koala population estimate for the planning area would at this time be unlikely to exceed 15-20 animals. Major impediments to the ability of the areas resident Koala population(s) to recruit from known source populations such as Lake Innes include known and ongoing road mortalities along the Pacific Highway. Additionally the high number of domestic dog (272 registered animals) that inhabit the rural residential landscape are likely to reduce prospects for sustained Koala population increase from in situ or existing populations." (Biolink, August, 2011, pp21-22).

- The core Koala habitat on the subject lands based on the 'East coast low density activity thresholds have been mapped by Biolink (refer Exhibit KPOM 6), as peripherally extending into the subject lands in the general vicinity of areas proposed for development in Stage 3 (i.e.; Stage North 3 area). The generally low levels of koala activity that extend beyond this into the remainder of the subject site likely represent peripheral movements and/or transient activity by no more than 1 – 2 individuals.

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Koala Plan of Management
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The list of preferred feed tree species has been identified from the following sources:

- Area 13 Thrumster Koala Plan of Management and draft Area 14 Koala Plan of Management (Biolink Pty Ltd is the author in both cases);
- Various personal communications with Dr Stephen Phillips of Biolink Pty Ltd regarding the Greater Sancrox Ecological Assessment and Koala habitat Assessment for the PMHC Urban Growth Management Strategy Area; and
- The Recovery Plan for the Koala (DECC, 2008).

The preferred feed tree species for the PMH LGA are:

- *Eucalyptus robusta* (swamp mahogany);
- *Eucalyptus microcorys* (tallowwood);
- *Eucalyptus tereticornis* (forest red gum); and
- *Eucalyptus propinqua* (small fruited grey gum).

With the exception of the *Eucalyptus propinqua*, all of the above preferred tree species are also nominated on the SEPP 44 Schedule 2 Feed Tree species list.

With respect to the subject lands, tallowwood is the only preferred koala food tree species occurring on lands that have been identified for clearing (refer **Exhibit KPOM 6**). The swamp mahogany, tallowwood and small fruited grey gum all exist in higher densities in the areas of high conservation value vegetation that are proposed to be preserved and enhanced within the environmentally zoned lands generally located in the north-western corner of the subject lands. While studies of the high conservation value vegetation within the Environmental Lands have to date recorded minimal to no Koala activity, the vegetation is considered to have the capacity of supporting medium density populations at approximately 0.6 Koalas / hectare. (Dr Stephen Phillips, personal communication, 22 September, 2011)

The proposed ameliorative measures outlined in **Section 3** below and shown on **Exhibit KPOM 2** will include the planting of 1,659 preferred Koala feed species to augment the existing Koala habitat on the Environmental Lands (i.e., within vegetation Management Units (4), (7a), (7b), (8), (9) and (11)).

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The planting of the preferred feed species will occur with the first stage of development of the employment lands north of Sancrox Road and therefore well in advance of vegetation clearing in Vegetation Management Unit (14C) and possibly in advance of vegetation clearing in Vegetation Management Unit (14B).

There are also significant areas of alternative, but currently unoccupied, habitat immediately west of the Environmental Lands on the subject property including the sub-regional corridor identified by Biolink (August, 2011) (refer **Exhibit KPOM_1**).

The sub-regional corridor itself is located within a larger intact area of alternate habitat. Biolink estimate that 710 ha or 44% of the Greater Sancrox Planning Area supports native forest cover (Biolink, August, 2011, p.6). The Biolink Greater Sancrox Ecological Assessment provides further evidence of the significant alternate Koala habitat adjoining the subject lands.

"The lack of widespread and high measures of Koala activity within the study area was an unexpected result given the presence of a relatively large area of intact bushland containing preferred food tree species in the central part of the study area". (Biolink, August, 2011, p.21).

The location of this alternative available habitat is shown on **Exhibits KPOM_1, 2 & 5**.

Further alternate Koala habitat is also contained within the Offsite Offset Environmental Lands (refer **Exhibit KPOM_4**). As outlined below in **Section 3** it is proposed to supplement the existing Koala habitat in the OOEL with 1,354 preferred Koala food trees in conjunction with the first stage of the development of the Sancrox Employment Lands. The works associated with the enhancement (establishment), management and dedication of these lands which are located contiguous to extensive publicly owned lands, have been secured by provisions of the Sancrox Employment Lands Environmental Lands and Services Planning Agreement (SEL_ELS_PA).

2.5 Identification of Linkages of Core Koala Habitat to the Adjacent Areas of Habitat and Movement of Koalas between Areas of Habitat

The following linkages between core Koala habitat on the subject lands to other adjacent areas of habitat have been identified:

- A 30 metre wide linkage/corridor along the subject western boundary referred to as Vegetation Management Unit (13) on **Exhibit KPOM_2**.

This linkage is located within the E2 Environmental Conservation zone.

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- The above linkage in conjunction with existing habitat and an additional 487 preferred Koala food species to be planted in Vegetation Management Unit (11) as part of Stage North 1 works will supplement linkages between the existing core Koala habitat and the adjacent habitat within the subject Environmental Lands and the existing habitat on the adjoining western property including the sub-regional corridor identified by Biolink (refer **Exhibit KPOM_1** and **2**).
- A further linkage is proposed to be established from existing core Koala habitat to adjoining existing habitat to the north-east through the planting of 484 preferred Koala food species within Vegetation Management Units (8) and (9). This linkage is to be established for that purpose within land zoned E2 Environmental Conservation.
- An east-west linkage is proposed to be established through the proposed drainage reserve in Lot 71. The linkage will join the proposed combined drainage and fauna crossings under Road No 1 and the Pacific Highway providing access to the existing habitat to the west. The linkage will be enhanced by the planting of 198 Koala feed trees within Lot 71 and permanent koala proof fencing of Lot 71. Details of this linkage are contained on **Exhibit KPOM_2** and **Exhibit KPOM_7**.

All of the works associated with establishing, enhancing and managing the above linkages have been secured by the provisions of the Sancrox Employment Lands Environmental Land and Services Planning Agreement (SEL_ELS_PA) and are proposed to be undertaken in accordance with the Vegetation Management Plan that forms part of the subject Development Application (refer **Section 1.3.4**).

It is also proposed to enhance the existing linkage between the Offsite Offset Environmental Lands (OOEL) and the adjoining PMHC Landholding through the planting of 1,354 preferred Koala food tree species within the OOEL identified as Vegetation Management Units (15A) and (15B) (refer **Exhibit KPOM_4**).

All of the enhancement and management works associated with the OOEL are secured by the provisions of the SEL_ELS_PA and are proposed to be undertaken in accordance with the provision of the Vegetation Management Plan that forms part of the subject Development Application.

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Koala Plan of Management
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The current threatening processes are:

- **Habitat loss or Degradation**

The subject lands have a long history of vegetation disturbance through successive selective logging and bushfire events. The staged clearing of Vegetation Management Units (14B) and (14C) in conjunction with the development of the Sancrox Employment Lands is proposed to be managed through the ameliorative measures outlined in Section 3.

- **Road Kills**

The adjoining Pacific Highway is recognised as a major source of road mortalities as it separates the subject lands from the known major population cell to the south-east at Lake Innes. The potential for further future road mortalities will be increased by the duplication of the Pacific Highway which is expected to occur within the next 5 years.

- **Dog Attacks**

While there are no records of Koala fatalities from dog attacks on the subject lands Biolink have in the Greater Sancrox Ecological Assessment indicated that:

"The high number of domestic dogs (272 registered animals) that inhabit the rural residential landscape are likely to reduce prospects for sustained Koala population increase from in situ or existing populations" (p.22)

A higher than average number of domestic dogs in Greater Sancrox is probably typical of many rural residential areas and so is not expected to change in the future.

- **Fire**

The subject lands have a long history of 'controlled burns', usually undertaken in conjunction with past selective logging operations. There is also a record of a bushfire throughout the subject lands in 2003.

- **Logging**

The subject lands have been logged on a regular basis which in combination with the low nutrient soil landscape has resulted in the vegetation on the subject lands being characterised generally by trees with a smaller diameter. This is particularly the case within the lands recently zoned General Industrial IN1.

The LES process included a survey of old growth/ recruitment trees with the majority of those trees identified being retained in the E2 Environmental Conservation, E3 Environmental Management and E4 Environmental Living Zones.

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- **Disease**

The recent work undertaken by Biolink and PPEC on the subject lands and by Biolink in the Greater Sancrox Region and previously in the Area 13 Urban Investigation Area Koala Plan of Management (January 2008) have not identified disease as a significant threat to the local Koala population.

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Section 3

Management Measures

This section contains details of the management measures proposed to be implemented to:

- *Improve the quality and Koala population carrying capacity of the existing habitat within the Environmental Lands currently zoned E2 Environmental Conservation, E3 Environmental Management and E4 Environmental Living (refer Exhibit KPOM_2); and*
- *Ameliorate the potential impacts of the Sancrox Employment Lands on the Koala by encouraging the peripheral and/or transient movement of Koalas from the industrially zoned lands in the east to the higher value habitat on the above Environmental Lands.*

This is to be undertaken through the implementation of the planting of Koala feed trees and vegetation management works within the Environmental Lands, temporary and permanent Koala proof fencing and the staged clearing of the industrially zoned lands.

3.1 Staging of Works

The Sancrox Employment Precinct lands are proposed to be developed in stages; South 1, North 1, North 2 and North 3. This plan of management provides details of the measures to ameliorate the potential impacts of the development by way of offsetting, staged tree removal and the gradual displacement of koala activity into higher carrying capacity habitat immediately to the west of the subject site over a 4 – 6 year timeframe).

3.2 Clearing of Native Vegetation

(This section is prepared with reference to provisions in Area 13 UIA KPOM, Biotin k, January, 2008)

The following procedures will apply;

- The clearing of native vegetation within stages North 1, North 2 and North 3 must not occur until the area proposed to be cleared has been inspected for Koalas by an accredited ecological consultant approved by Council and written approval to proceed has been given;
- Vegetation clearing works lasting more than one day will require re-inspection by the accredited ecological consultant prior to the

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recommencement of works each day, and

- Clearing of native vegetation and/or other site works within 25m of a tree occupied by a Koala are to be temporarily suspended until the Koala has moved from the tree and the area occupied by the site works.

3.3 Offsite Offset Environmental Lands (OOEL) Vegetation Management Works

The works associated with the OOEL will include;

- Vegetation management works in Vegetation Management Units (15a) and (15b), contained in the OOEL (refer **Exhibit KPOM_4** and **Appendix KPOM_D**). These works will include the planting of 1,354 primary Koala feed trees;
- Dedication of the OOEL as public reserve;
- Maintenance works as for the SEL_ELS_PA and detailed in the Vegetation Management Plan; and
- The vegetation management works associated with the OOEL will be undertaken in conjunction with the development of stage North 1.

3.4 Stage North 1

The development of stage North 1 will follow the completion of the works associated with the construction of the Sancrox Traffic Arrangement by the RMS. This is expected to be finalised by late 2014.

The works associated with stage North 1 will include:

- Inspections of native vegetation as per **Section 3.2**;
- Vegetation clearing and civil works to create proposed employment lands Lots 1 – 12, the Pacific Highway Buffer (Lot 69 - Vegetation Management Unit (5)) and the Drainage Reserve (Lot 71 - Vegetation Management Unit (4)), removal of Tallowwood trees from stage North 2;
- **Planting of Koala feed trees (Tallowwoods as street trees on each side of streets with approximate spacing of 1 tree every 30m) (refer Appendix KPOM_D for planting details);**
- Management works in Vegetation Management Unit (4) will include the planting of **198** primary Koala feed trees (refer **Exhibit KPOM_2** and **Appendix KPOM_D**);
- Maintenance works and payment of the Management Contribution towards future management of the Environmental Land as per the SEL_ELS_PA (refer **Section 1.3.2**).

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Pacific Highway, Sancro**3.5 Environmental Lands – Lots 65, 66 and 70**

The Environmental Lands within Lots 65, 66 and 70 include land zoned E2 Environmental Conservation, E3 Environmental Management and E4 Environmental Living. The vegetation management works and Stage 1 planting to be undertaken within these lots includes the following:

- Vegetation management works in Vegetation Management Units (8), (9) and (11) will include the planting of 971 primary Koala feed trees (refer **Exhibit KPOM_2** and **Appendix KPOM_D**); and
- Maintenance works as per the SEL_ELS_PA (refer **Section 1.3.2**) and detailed in the Vegetation Management Plan (refer **Appendix KPOM_D**).

The purpose of the Stage 1 planting is to increase the extent and quality of available Koala habitat, to improve the carrying capacity of the Environmental Lands which are currently underutilised by Koalas and to commence the encouragement of movement of Koalas from the east to the west.

Works in relation to the Environmental Lands are proposed to be undertaken in conjunction with the completion of stage North 1 or the commencement of stage North 2.

3.6 Stage North 2

The development of stage North 2 will follow the completion of works associated with stage North 1. Due to the extent of earthworks associated with stage North 2 it is anticipated that the vegetation clearing and bulk earthworks will be undertaken in a single stage and that the detailed civil and services works will be undertaken in a series of sub-stages. The bulk earthworks and clearing works will be most likely undertaken in conjunction with the Environmental Lands works (**Section 3.5**).

The works associated with stage North 2 will include;

- Inspections of native vegetation as per **Section 3.2**;
- Vegetation clearing and bulk earthworks within stage North 2, removal of 50% Tallowood trees from Stage North 3;
- Vegetation management works in Lot 68 (Vegetation Management Unit (7C)), including the planting of 358 primary Koala feed trees (refer **Exhibit KPOM_2** and **Appendix KPOM_D**);
- Staged detailed civil and services works to create Lots 13-39 and 47-50;
- **Planting of Koala feed trees (Tallowoods as street trees on each**

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side of streets with approximate spacing of 1 tree every 30m) (refer Appendix KPOM_D for planting details);

- Drainage (water quality) and vegetation management works within Lot 67 (Vegetation Management Units (7a) and (7b));
- Maintenance works and payment of the Management Contribution towards the future management of the Environmental Lands as per the SEL_ELS_PA (refer Section 1.3.2).

3.7 Stage North 3

The development of stage North 3 will follow the completion of works associated with stage North 2. The development of Lots 41-44 is also restricted by the provisions of the Sancrox Employment Land Quarry Planning Agreement (SEL_Q_PA). The SEL_Q_PA restricts the development of those lots on a sliding scale until July 2015 (Lot 4) and July 2018 (or as determined by Council) in relation to Lot 44 (refer Section 1.3.2).

The works associated with stage North 3 include;

- Inspections of native vegetation as per Section 3.2;
- Vegetation clearing and bulk earthworks within stage North 3;
- Staged detailed civil and services works to create Lots 40-46 and Lots 51-54;
- Planting of Koala feed trees (tallowwoods) as street trees on each side of streets, with approximate spacing of 1 tree every 30 metres; and
- Maintenance works and payment of the Management Contribution towards the future management of the Environmental Lands as per the SEL_ELS_PA (refer Section 1.3.2).

3.8 Mitigation of Road Kills

The staged removal of koala food trees has been designed to encourage movement of Koalas from the east to the higher value vegetation in the west.

The duplication of the Pacific Highway in the vicinity of the Sancrox Employment Precinct is currently undergoing detailed concept design which will address appropriately located fauna under passes to better facilitate east to west movement of Koalas from the existing population centres to currently unoccupied areas of suitable habitat.

Final landscaping needs of the SEP in terms of the location and

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numbers of koala food trees to be planted will be undertaken once detailed concept designs have been finalised by RMS. The current Concept Design prepared by RMS provides for a fauna underpass in conjunction with the drainage culvert at the western boundary of proposed Lot 71. The VMP provides for the planting of 198 primary koala food trees in the drainage reserve contained within Lot 71 that links the Pacific Highway and the fauna underpass / drainage culvert.

3.9 Amelioration of Other Threats

The development of the Sancroxx Employment Precinct will not introduce additional dogs for domestic purposes however there is some minor potential for employment premises to use dogs for security purposes.

Impacts from rural based activities such as fires and logging will be reduced by preserving, enhancing and dedicating as public reserve, those areas of vegetation identified as having high conservation value in particular the majority of old growth 'recruitment' trees.

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Section 4

Monitoring, Review and Reporting

It is proposed to implement the following monitoring, review and reporting procedures;

- Monitoring of Koala usage of the subject lands annually through the development of the SEP and for five years following completion of the development. The annual review of Koala usage will be undertaken by reassessing koala activity in the original field sites as detailed in Table 7 of (Parker 2009) using SAT methodology, to determine the success of encouraging movement of Koalas to currently unoccupied Koala habitat;
- Additional monitoring of Koala usage of the subject lands after completion of each stage of development (i.e., after completion of Stages North 1, North 2 and North 3). The additional reviews of Koala usage will be undertaken by reassessing koala activity in the original field sites as detailed in Table 7 of (Parker 2009) using SAT methodology, to determine the success of encouraging movement of Koalas to currently unoccupied Koala habitat;
- Monitoring of the effectiveness of the revegetation/regeneration works in the Environmental Lands within the SEP and the Offsite Offset Environmental Lands which are proposed to improve the existing condition, of the vegetation to achieve conformity with the definition of Primary Habitat (i.e., >50% over storey primary feed tree species);
- The Sancrox Employment Land Environmental Lands and Services Planning Agreement (SEL_ELS_PA) requires the landowner to maintain the Environmental Lands for three years and once the vegetation establishment works has been completed to Council's satisfaction, to accept the land as a dedicated public reserve. During that three year period the landowner will be required to provide an annual report to Council on the effectiveness of the maintenance works in accordance with the approved VMP. The annual report will include details of the effectiveness of the revegetation /regeneration works undertaken on the Environmental Lands within the SEP and Offsite Offset Environmental Lands ;
- The SEL_ELS_PA requires the landowner of the Dunn Residence Land (refer Exhibit KPOM_3) to establish the revegetation/regeneration works in accordance with the approved VMP and thereafter provide Council with an annual audit report; and
- The SEL_ELS_PA requires the landowner to pay a Management Contribution to fund 17 years of maintenance by Council of the revegetation/regeneration works on the Environmental Lands. The maintenance and monitoring and review of the condition of the

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vegetation within the Environmental Lands will be undertaken by Council during that period.

- In summary, provide Port Macquarie Hastings Council and the Department of Planning & Infrastructure with the following reports:
 - Annual reports of koala usage of the subject lands using the results of the reassessment of koala activity in the original field sites as detailed in Table 7 of (Parker 2009) using SAT methodology;
 - Additional monitoring of koala usage at the completion of Stages North 1, North 2 and North 3;
 - Annual reports during the three year Management Period confirming the effectiveness of the revegetation/regeneration works in the Environmental Lands (Lots 65, 66, 67, 68, 69, 70 and 71). The Management Period is defined by the SEL_EL_PA to commence once the revegetation/regeneration works has been accepted by Council as having been established in accordance with the provision of the VMP;
 - Ongoing Annual Reports confirming the effectiveness of the revegetation/regeneration works in the Dunn Residence Land (Lot 70). The submission of Annual Reports will commence once the revegetation/regeneration works have been accepted by Council as having been established in accordance with the provisions of the VMP;
 - The Annual Reports with respect to vegetation management on the Environmental Lands and the Dunn Residence Land are to include consideration of the effectiveness of the enhanced linkages to the Greater Sancrox sub-regional corridor through reference to:
 - The latest koala usage results for the SEP; and
 - Conformity with the definition of Primary Habitat (ie >50% overstory primary feed tree species);
- PMHC in consultation with DoPI are, at the completion of the development phase of the Sancrox Employment Precinct (ie completion of Stage North 3) to determine whether to remove panels of the permanent koala proof fence on Lots 65 and 66 to facilitate movement of koalas through the fully developed estate. This decision will have regard to the results of annual koala usage survey and vegetation management audits submitted during the development phase of the SEP (estimated to be at least 10 years); and
- Monitoring of koala fencing will be undertaken as follows:
 - Temporary koala proof fences are to be monitored to

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ensure they form an effective deterrent to koalas moving within Stage North 2 during construction of that stage of the SEP;

- Permanent koala proof fences are to be monitored on an annual basis and details of the results of the inspections are to be included in the reporting with respect to VMP compliance and koala usage; and
- The temporary and permanent koala proof fences are to provide effective protection of trees, within either Environmental Lands or future stages of the SEP, which are not proposed to be removed in the current stage of construction.

Construction certificate documentation is to include details of any additional tree protection measures required for specific works.

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ECOLOGICAL CONSULTANTS

ABN 27 090 572 099

The General Manager
Port Macquarie Hastings Council
Attn: Ms. Sandra Bush
PO Box 84
Port Macquarie NSW 2444

4th September 2009

Dear Ms. Bush

RE: Stage 1 Sancrox Employment Precinct – Ecological Assessment Review

I refer to the revised report of Peter Parker Environmental Consultants dated September 2009 and advise that in general terms we now consider the level of information presented in the report adequate to inform future planning decisions on the site. Pertinent aspects of the report that have influenced this view are detailed below:


1. All EECs have now been mapped and measures proposed to minimize any negative impact arising from future development of the site. In particular we note that recommendations includes the need for bio-retention swales to be constructed between the small area of EEC on the eastern boundary and the adjoining quarry in order to improve the quality of water feeding into the former.
2. We note recognition that the site contains potential koala habitat that currently appears to be the subject of transient use. The proposal to retain some of this habitat by way of a corridor/habitat linkage along the western and southern fringes of the proposed development area is supported, in addition to broader recommendations regarding retention of koala food trees generally, and to incorporate use of same in any subsequent streetscape. Further, we support the cautious approach to future development and draw Council's attention to recommendation on p 52 of the report that use of the site by koalas be reevaluated in conjunction with any future development application.
3. We note the results of the hollow-bearing tree survey and that the locations of all large "recruitment" trees on the subject site have been surveyed. The expansion of the proposed wildlife corridor to capture some of these trees is also a positive outcome. While a final development footprint and associated design is yet to be finalized, we would hope that many of the larger recruitment trees that have now been identified and mapped may be able to be effectively integrated.

Working for a sustainable future

4. Lastly and for purposes of the 7 – part tests included in the report (page 88 refers), we acknowledge the difficulties in determining the extent to which any clearing of native vegetation required for proposed development of the site may qualify as a key threatening process and subsequently support the stated need for reassessment once concept plans have been finalized.

Please don't hesitate to contact the undersigned if you require further information.

Yours sincerely



(Dr.) Stephen Phillips
Director/Principal Ecologist

3.3 Weather

The weather recorded prior to and during the flora and fauna survey is described in Table 5.

Table 5: Weather

Date	Day-time conditions	Night conditions
10 April 2007	Overcast, heavy rain had fallen over the weekend prior to arrival, 22°C at 1300 hrs	Sunset at 1730 hrs, 16°C at 2000 hrs, minimum overnight temperature 12.8°C, no moon
11 April 2007	Clear skies, gentle breezes, 22°C at 1300 hrs	Sunset at 1738 hrs, 16°C at 2000 hrs, minimum overnight temperature 13.7°C, several mm of overnight rain, no moon
12 April 2007	Scattered early cloud but clearing, gentle southerly breezes increasing to around 15 knots during the day, 18°C at 0730 hrs, 23°C at 1330 hrs; 20°C at 1630 hrs	Several mm of overnight rain, 16°C from 1730 hrs to 2000 hrs, minimum overnight temperature 14°C, no moon
13 April 2007	Clear skies with some cloud patches, gentle southerly breezes, 23°C at 1130 hrs	Not recorded
30 January 2008	Clear skies with some cloud patches, gentle southerly breezes, 28°C at 1230 hrs	Mild, puddling noted following extensive rains
31 January	Clear skies, gentle southerly breezes	Not recorded

4.0 RESULTS

4.1 Vegetation associations and communities

Four vegetation communities comprising of nine associations are described and mapped (refer to Table 6: Vegetation Associations at page 28 and Fig. 6: Vegetation at page 31). Much of the vegetation at the site was significantly modified in 2002 due to the removal of approximately 900 saw logs by the KC Cooper and Sons Sawmill. Substantial hazard reduction clearing was conducted following a wildfire in 2003. These activities included burning and slashing and

have simplified vegetation in the low understorey and ground strata (Plate 2).

Table 6: Vegetation associations

<p>Forest</p> <ul style="list-style-type: none"> • <i>Eucalyptus robusta</i> (swamp mahogany), <i>Melaleuca quinquenervia</i> (broad-leaved paperbark), <i>Glochidion ferdinandii</i> var. <i>ferdinandii</i> (cheese tree), tall to very tall open forest • <i>Eucalyptus pilularis</i> (blackbutt), <i>Eucalyptus microcorys</i> (tallowwood), <i>Eucalyptus propinqua</i> (small-fruited greygum), broad-leaved paperbark, <i>Entolasia stricta</i> (wiry panic grass) tall to very tall open forest • Blackbutt, tallowwood, <i>Eucalyptus globoidea</i> (white stringybark), <i>Syncarpia glomulifera</i> (turpentine), <i>Pteridium esculentum</i> (bracken) tall open forest • <i>Melaleuca styphelioides</i> (prickly-leaved teatree), <i>Allocasuarina littoralis</i> (black she-oak), <i>Lomandra longifolia</i> (matrush) low to mid-high forest <p>Woodland</p> <ul style="list-style-type: none"> • Blackbutt, tallowwood, white stringybark, turpentine tall open woodland • Blackbutt, white stringybark, blady grass, tall open woodland <p>Sedgeland / rushland</p> <ul style="list-style-type: none"> • <i>Cyperus polystachos</i> (bunchy flat-sedge), <i>Eleocharis equisetina</i> (a spike-rush), <i>Juncus usitatus</i> (tussock rush) low open to closed sedgeland to rushland • <i>Typha orientalis</i> (broad-leaved cumbungi), <i>Periscaria decipiens</i> (slender knotweed), <i>Schoenoplectus mucronatus</i> (a sedge) tall closed sedgeland to rushland <p>Grassland</p> <ul style="list-style-type: none"> • <i>Setaria gracilis</i> (slender pigeon grass), <i>Axonopus affinis</i> (broad-leaved carpet grass), whiskey grass low to tall closed grassland
--

Pacific Highway Employment Precinct, Flora and Fauna Survey**Fig. 6: Vegetation**

4.1.1 Forest

Eucalyptus robusta (swamp mahogany), *Melaleuca quinquenervia* (broad-leaved paperbark), *Glochidion ferdinandii* var. *ferdinandii* (cheese tree), tall to very tall open forest

This association was recorded in the north-west of the site. It had not been logged for over 20 years and exhibited a rich diversity of canopy, mid, low and understorey vegetation. It was not grazed by stock and, together with vegetation on the adjoining land to the west, was the core conservation asset at the site. A small area of vegetation in the east of the site has been included in this association. This association was dominated by broad-leaved paperbark and sedges and has been disturbed by logging, hazard reduction clearing and slashing (Fig. 7). However, this association has substantially regenerated over the past 12 months since slashing was discontinued.

This association falls within the description of the Swamp Sclerophyll Forest on Coastal Floodplains of the NSW Far North Coast, Sydney Basin and South East Corner bioregions ("swamp forest"), an Endangered Ecological Community ("EEC") as described by the NSW Scientific Committee.

The NSW Scientific Committee described swamp forest as follows:

"Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions is the name given to the ecological community associated with humic clay loams and sandy loams, on waterlogged or periodically inundated alluvial flats and drainage lines associated with coastal floodplains. Floodplains are level landform patterns on which there may be

active erosion and aggradation by channelled and overbank stream flow with an average recurrence interval of 100 years or less.

Swamp Sclerophyll Forest on Coastal Floodplains generally occurs below 20 m (though sometimes up to 50 m) elevation, often on small floodplains or where the larger floodplains adjoin lithic substrates or coastal sand plains in the NSW North Coast, Sydney Basin and South East Corner bioregions. The structure of the community is typically open forest, although partial clearing may have reduced the canopy to scattered trees. In some areas the tree stratum is low and dense, so that the community takes on the structure of scrub. The community also includes some areas of fernland and tall reedland or sedgeland, where trees are very sparse or absent. Typically these forests, scrubs, fernlands, reedlands and sedgelands form mosaics with other floodplain forest communities and treeless wetlands, and often they fringe treeless floodplain lagoons or wetlands with semi-permanent standing water."

Upper storey:

Swamp mahogany and broad-leaved paperbark

Mid storey:

Cheese tree, broad-leaved paperbark, silver aspen, lilly pilly, blue lilly pilly and pink-tipped bottlebrush

Low understorey:

Tall saw-sedge, hairy pittosporum, flintwood, small-leaf tuckeroo, muttonwood, banana bush and silkpod vine

Ground cover:

Guinea vine, basket grass, morinda, native violet, wombat berry, common ground fern and smilax

Eucalyptus pilularis (blackbutt), *Eucalyptus microcorys* (tallowwood), *Eucalyptus propinqua* (small-fruited greygum), broad-leaved paperbark, *Entolasia stricta* (wiry panic grass) tall to very tall open forest

This association, which occurred on more elevated land to that described above, supported a variety of tall eucalypts with a mixed rainforest, sclerophyll forest understorey. This association is of significant conservation value as it has not been logged for over 20 years and serves as a buffer to the EEC described above.

Upper storey:

Blackbutt, tallowwood, white stringybark, small-fruited grey gum pink bloodwood and grey ironbark

Mid storey:

Forest oak, turpentine, cheese tree, broad-leaved paperbark, pink-tipped bottlebrush and red ash

Low understorey and ground cover:

Cordyline, gristle fern, blady grass, tall saw-sedge, bracken, mattrush, breynia and climbers

Blackbutt, tallowwood, *Eucalyptus globoides* (white stringybark), *Syncarpia glomulifera* (turpentine), *Pteridium esculentum* (bracken) tall open forest

This association was recorded both to the south and east of the quarry. It was recorded on gently sloping land and was similar to the forest described above but small-fruited grey gum and tallowwood were less common. The trees in this association were more widely spaced while the understorey vegetation had been maintained by slashing. Despite these impacts, this forest has

retained its floristic character, it has not been burnt nor slashed and supported several species of small to medium weight native mammals (see results of the fauna survey reported in section 4.2 of this report).

Upper storey:

Blackbutt, red bloodwood, pink bloodwood, white mahogany and grey ironbark

Mid-strata:

Turpentine, spotted gum, forest oak, silkpod vine, red ash and pink-tipped bottlebrush

Low understorey and ground cover:

Matrush, sweet sarsaparilla, pomax, sandfly ziera, silkpod vine, prickly-leaved teatree, geebung, basket grass, wiry panic, blue flax lily, white dogwood and common ground fern

Melaleuca styphelioides (prickly-leaved teatree), *Allocasuarina littoralis* (black she-oak), *Lomandra longifolia* (matrush) low to mid-high forest

This association was recorded on the flats in the south-western corner of the site adjoining the Expressway Spares machinery stockpile. It is a floodplain community which falls under the EEC classification: Swamp Sclerophyll Forest on Coastal Floodplains of the NSW Far North Coast, Sydney Basin and South East Corner bioregions.

Upper storey:

Prickly-leaved teatree, forest oak, broad-leaved paperbark and swamp mahogany (tallowwood, blackbutt and pink bloodwood in ecotone)

Mid storey:

Forest oak, silkpod vine, prickly-leaved teatree and broad-leaved paperbark

Low understorey and ground cover:

Tall saw-sedge, matrush, basket grass, native violet and hairy pittosporum

4.1.2 Woodland

Blackbutt, tallowwood, white stringybark, turpentine tall open woodland

This association has been extensively logged resulting in tree spacings of around 5-10 m. Following an extensive wildfire in 2003, bush fire hazard reduction activities resulted in the removal of the understorey vegetation and ground covers. This association is regularly slashed resulting in a depauperate floristic assemblage which is unlikely to recover under the current management regime (refer to Plates 1 and 2).

Upper storey:

Blackbutt, tallowwood, small-fruited grey gum, pink bloodwood, white stringybark, white mahogany,

Mid storey:

Forest oak and turpentine

Ground cover:

Blady grass, whiskey grass, matrush, twining glycine and dusky coral pea

Blackbutt, white stringybark, blady grass, tall open woodland

This association comprised of scattered trees over a grassy understorey. Trees in this association are more widely spaced when compared to the blackbutt, tallowwood, white stringybark, turpentine tall open woodland association (described above).

Upper storey:

Blackbutt, white stringybark, grey ironbark, tallowwood and pink bloodwood

Mid storey:

Forest oak

Low understorey and ground cover:

Blady grass, whiskey grass, matrush, Rhode's grass and lantana

4.1.3 Rushland/Sedgeland

Cyperus polystachos (bunchy flat-sedge), *Eleocharis equisetina* (a spike-rush), *Juncus usitatus* (tussock rush) low open to closed sedgeland to rushland

This association has developed along a drainage swale which originates in the quarry to the west. A number of perennial pools occurred along its length which were colonised by sedges such as spike-rush and rushes such as *Juncus prismatocarpus*.

Typha orientalis (broad-leaved cumbungi), *Periscaria decipiens* (slender knotweed), *Schoenoplectus mucronatus* (a sedge) tall closed sedgeland to rushland

This association occurred along a constructed drain running parallel to Sancrox Road. It was dominated by the nutrient-loving species broad-leaved cumbungi suggesting that untreated drainage from the adjoining land passes into the waterway. The exotic mosquito fish, *Gambusia holbrooki*, was recorded within this waterway. This species is known to predate on native frogs eggs.

Upper storey:

Broad-leaved cumbungi, slender knotweed, lantana, sedges and exotic grasses

Low understorey and ground cover:

Smooth cassia, slender pigeon grass, tea tree, lantana and exotic annuals

4.1.4 Grassland

Setaria gracilis (slender pigeon grass), *Axonopus affinis* (broad-leaved carpet grass), whiskey grass low to tall closed grassland

Grassland at the site is regularly slashed thus minimising any regrowth potential. It is dominated by exotic species (eg., slender pigeon grass, broad-leaved carpet grass and annuals such as thickhead, *Crassocephalum crepidioides*). This association is of low conservation value with no recovery potential under the current management regime.

Ground cover:

Slender pigeon grass, broad-leaved carpet grass, blady grass,
Parramatta grass, broad-leaved paspalum and opportunistic weeds

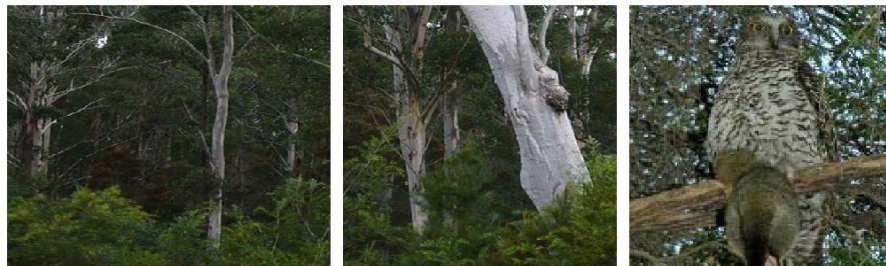
4.1.5 Plants or vegetation of conservation significance

No threatened plant species was recorded at the site during the vegetation surveys. These surveys included a follow up targeted flora survey from 30-31 January 2008 in potential habitat areas for species listed by the DECC in the Port Macquarie 1:1000 map sheet.

DECC listed species are *Allocasuarina defungens*, *Hibbertia hexandra*, *Chamaesyce psammogeton*, *Maundia triglochinosoides*, *Melaleuca biconvexa*, *Melaleuca groveana*, *Phaius tankervilleae*, *Grevillea guthrieana*, *Hakea archaeoides*, *Acronychia littoralis*, *Zieria lasiocaulis* and *Thesium australe*. However, suitable habitat was recorded only for *Hibbertia hexandra*, *Maundia triglochinosoides*, *Melaleuca biconvexa*, *Melaleuca groveana* and *Thesium australe*.

The EEC: Swamp Sclerophyll Forest on Coastal Floodplains of the NSW Far North Coast, Sydney Basin and South East Corner bioregions was recorded in the north, south and east of the site. This community retained an intact structure (eg., contained upper, mid, low-understorey and ground cover of vegetation), was relatively weed free and was not grazed by stock in the north and south of the site. In the far east of the site, it had been impacted by past logging and hazard reduction activities. It merged with similar vegetation to the west thus further enhancing its conservation value.

Greater Sanicrox
Ecological Assessment



Final Report to Port Macquarie-Hastings Council

August 2011



Summary

This report describes the results of ecological assessment and constraints analysis over an area of approximately 1700ha of land comprising what has become known as the Greater Sancrox Planning area. Port Macquarie-Hastings Council proposes to prepare and implement a coordinated Structure Plan for this area in order to guide further development in the future.

Ecological knowledge for the planning area presented in this report was based on data obtained from previous studies in addition to ancillary survey and targeted threatened species survey work, the latter focusing on koalas, squirrel gliders, powerful and masked owls. Flora and hollow-bearing tree survey and associated mapping work was also undertaken in order to place vegetation community descriptions into the context of a broader, LGA-based mapping program currently being undertaken on Council's behalf.

The Greater Sancrox Planning area supports a diversity of vegetation communities that range from saline-influenced saltmarsh areas to coastal floodplain forests, stands of both wet and dry sclerophyll forests and some relic and albeit heavily disturbed sub-tropical rainforest. Some of these communities, and especially those occurring on or in association with the coastal floodplain, conform to a suite of coastal floodplain endangered ecological communities (EECs) that must ultimately serve as a primary guiding constraint to future planning in the area, whilst also indirectly inferring the need for a precinct-based approach to development because of their widespread distribution across the planning area. No threatened plant species were recorded, although the potential does exist for at least two species to occur, both of which tend to be associated with EECs. The planning area also supports a forest community that - while not listed as an EEC - is of regional conservation significance. Hollow-bearing trees are relatively uncommon, but remain scattered across the landscape and function as another key biodiversity asset deserving *a priori* consideration.

As alluded to above, a number of threatened fauna species occur within the planning area, two of which - masked and powerful owls - maintain mutually exclusive territories of several hundred hectares each, components of which overlap extensively with existing rural and rural-residential areas. Both owl species are keystone predators whose long-term survival in the planning area will be contingent

upon effective management and conservation of essential habitat elements such as appropriately sized hollow-bearing trees, in addition to the retention of sufficient forest cover across all vegetation communities currently being utilised so as to enable viable populations of their preferred prey species to persist.

Koalas are largely absent from the planning area, restricted to two small population cells in the north-east and south-east, upon which we base a total population size estimate of probably less than 10 - 15 individuals. Current impediments to koala population viability and recovery of this species within the planning area include impeded recruitment arising from ongoing road mortalities along the existing Pacific Highway, coupled with high densities of domestic dogs associated with existing rural-residential development in the area. Two species of threatened glider also occur, the first of which – squirrel glider – is likely represented by a total population size of approximately 25 – 30 individuals, our data further suggesting a possible range contraction in recent years. Yellow-bellied gliders are also present, but appear restricted to only a single, small group inhabiting a large forest block in the south of the study area.

Subject to some modification specifically intended to minimize the edge to area ratio, we consider the biodiversity values of the two large forest blocks remaining in the central and northern sections of the planning area to be sufficiently high as to warrant a high level of protection. Within the existing rural/rural-residential development matrix we consider that the needs of other threatened species known to inhabit the study area including micro-chiropteran bats, square-tailed kites, squirrel gliders and glossy black-cockatoos can be effectively met by an overarching planning strategy guided primarily by the need to a) preserve EECs, and b) maintain owl territories along with viable populations of their preferred prey species. We further consider that such needs can largely be met by a focus on the buffering and rehabilitation of drainage lines and associated riparian habitats, elements of which will also work to restore habitat connectivity across the landscape.

[bio link](#)

Greater Sanctuary Ecological Constraints Analysis

Document Control

Draft 1		Date
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Draft 2		
Edited by	S. Phillips & M. Hopkins	

4

Introduction

In response to a request from the NSW Department of Planning that Council take a more strategic approach to the rezoning and release of land in the SancroxE Rural Residential Investigation Area (SRRIA), Council resolved in December 2007 to prepare a coordinated Structure Plan for the area.

Recognising the need to understand the significance of ecological constraints in the locality as a precursor to Structure Plan preparation, in February 2009 Council initiated a preliminary review and evaluation of several site-specific ecological reports and Koala Plans of Management that had been prepared in support of various rezoning proposals by individual landowners. This review (Biolink 2009) acknowledged the informative nature of the existing site-specific ecological studies, concluding that collectively they inferred the presence of a diverse array of vegetation communities as well as at least ten (10) threatened fauna species, notable amongst which were the koala, squirrel glider and two species of forest owl; the review further noted that whilst the site-specific reports were of varying quality in terms of methodology, the potential existed to build upon them to establish an overall understanding of ecological constraints in the area. A landscape approach to further assessment was also recommended.

The Biolink review also recommended that Council undertake further work to map vegetation communities and determine the extent of occurrence of endangered ecological communities (EECs) and threatened fauna within the SRRIA, with particular emphasis on keystone species such as the large forest owls, in addition to koalas and squirrel gliders. Since that time, Council has adopted the *Port Macquarie-Hastings Urban Growth Management Strategy 2010* (PMHUGMS) which specifies the need to prepare a Structure Plan in order to establish a long-term planning framework for staged development over a larger area now called Greater SancroxE; this a larger precinct which now includes the former SRRIA (now identified in part for future urban investigation), together with land adjacent to the Pacific and Oxley Highways, for future urban/employment investigation and gateway sites.

The aims of this study were to

- a) supplement existing ecological data in order to provide an overall landscape perspective that would best inform preparation of a Structure Plan for the Greater SancroxE Area,

- b) provide an understanding of the ecological value and constraints of the additional lands nominated in the PMHUGMS for investigation in the Greater Sancrox Area (i.e. lands adjacent to the Pacific & Oxley Highways), and
- c) provide preliminary recommendations on threatened species to inform the preparation of a Structure Plan for Greater Sancrox as a precursor to subsequent preparation of any Koala Plans of Management and/or Threatened Species Management Plans.

Methodology

Study area

The Greater Sancrox study area (Fig. 1) comprised approximately 1,700ha of land located to the west of the Pacific Highway between the Oxley Highway – Pacific Highway crossover (the donut) in the south and Fernbank Creek to the north, is bounded in the south by the Oxley Highway while the western boundary was defined by the limit of rural residential development in the Sancrox locality generally. The Hastings River formed the northwestern boundary before traversing eastwards across the floodplain to rejoin the Pacific Highway in the vicinity of Fernbank Creek. Excluding that portion of Cowarra State Forest that falls within the study area boundary, approximately 710ha (or 44%) of the study area supports native forest cover.

Database searches

Previous survey work relevant to the study area was reviewed to obtain records of flora and fauna species and other matters of ecological importance. Additionally, an indication of the potential presence of species and ecological communities listed for purposes of the *Environment Protection and Biodiversity Conservation Act 1999* were obtained from the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) Protected Matters Database, while records for threatened flora and fauna species and Endangered Ecological Communities (EECs) listed on Schedules 1 and 2 of the *Threatened Species Conservation Act 1995* and present within a 5km radius from the approximate centre of the study area were obtained from the Office of Environment & Heritage's (OEH) Atlas of NSW Wildlife database.

Previous studies

The review by Biolink (2009) addressed five flora and fauna surveys that had been undertaken in the planning area over the time period 2004 – 2006. Two other reports

of relevance to the study area related to surveys by North Coast Forestry & Ecological Services (2004, 2008) and Keystone Ecological (2008) were also included in the review, both of which focused on the now approved Part 3A application associated with the Le Clos Verdun rural-residential subdivision. More recently another flora and fauna survey conducted in 2008-2009 in support of the proposed Sancroix employment precinct has also become available. Collectively but now further supported by ancillary survey work and targeted threatened species surveys (see below) reported herein, it is the data forthcoming from these previous reports that now forms the basis of ecological knowledge for the Greater Sancroix planning area.

Flora

Vegetation communities of the study area were assessed and mapped as a component of the vegetation mapping project currently being undertaken on behalf of Port Macquarie Hastings Council. The methodology underpinning this project will be detailed in the report accompanying the vegetation mapping project and will not be communicated in this report, save to say that the mapping reflects that arising from a nested classification approach that has been adopted for the overall project, and presents herein for the first time a standardized approach to classification of vegetation that will be applied throughout the PMHCLGA.

Ground-truthing undertaken for the above enabled traverses of most bushland patches within the planning area, aspects of which also focused on threatened flora species. During this process the locations of significant hollow-bearing trees (i.e. living or dead standing trees scoring 15 or above based on the Hollow-bearing Tree (HBT) assessment protocol of biolink (2007) – Appendix 1) were also recorded.

Fauna

Following a meeting with Council planning staff and another with representatives from the Office of Environment & Heritage (OEH), a two stage fauna/flora assessment was agreed to, the first relying upon knowledge and effort accumulated by past surveys but to be further supported by some ancillary work, the second a targeted threatened species survey focusing on koalas, squirrel gliders and the two species of forest owl, each of which a) were already known to occur in the study area, and b) would clearly benefit from a landscape-based approach to assessment. In both instances we opted for an systematic approach to survey design with sampling points located at regular intervals across the assessment landscape. To

guide this process we applied a 250m regularised grid over the study area, thus allowing formal survey effort to be scaled up (i.e. 500m or 1km sampling intervals) as required.

a) Ancillary survey

Ancillary survey effort was concentrated towards the southern end of the study area, specifically in the area of approximately 93ha of Cowarra State Forest north of the Oxley Highway but otherwise located within the planning area. This decision was made so as to optimize results by focusing on a large forest patch with a complex but relatively undisturbed understorey, thus – in our view – most likely to be acting as a local biodiversity reservoir. So as to be in accord with sampling effort over the larger planning area, sampling was undertaken at 1000m, 500m and 250m sampling intervals (Table 1). At each site, four Type A Elliot traps were baited with rolled oats, peanut butter, honey and truffle oil, while cage traps and hair funnels were sequentially baited with either the preceding bait mix or sardines, the latter as a means of targeting carnivores such as Spotted-tailed Quoll. Traps were maintained for four consecutive nights while hair funnels were left in the field for 10 - 12 consecutive nights.

Table 1. Application of fauna sampling techniques based on a variable-size, grid-based survey design (Cp = call playback, T = tree-traps, C = cage trap, E = Type A Elliot, F = hair funnel).

Sampling Interval (m)	Cp	T	C	E	F
1000	x	x	x	x	x
500			x	x	x
250				x	x

Spotlighting

For purposes of the ancillary survey, spotlighting was undertaken along tracks within the general area, but was also a component of the owl and glider survey work.

Predator scats

Surveys for predator scats were undertaken along tracks during the course of the field assessment. Hair analysis was undertaken in-house.

Opportunistic observations

Opportunistic observations of fauna were recorded during the overall field assessment.

b) Threatened species survey

Koalas

Utilization of habitat by koalas was assessed using the Regularised, Grid-based Spot Assessment Technique (RG-bSAT) sampling approach (Phillips and Callaghan 2011; Phillips *et al* submitted) at 500m and 250m intervals where grid points intersected areas of native vegetation, the smaller interval being used to assist refinement of koala activity boundaries surrounding areas where koala activity was recorded. In accord with the requirements of SEPP 44, *core koala habitat* was defined as those parts of the study area that were currently supporting a *resident* koala population. A 25m radial search (0.196ha) for koalas was also undertaken at each field site.

Owls

Large forest owls (Powerful Owl and Masked Owl) were censused using call playback - initially at 1km sampling intersections, and latterly at 750m intersections. Calls of both species were broadcast using a 15W megaphone in accord with the following survey protocol:

- (i) 5 minute settle in
- (ii) 10 person minutes spotlight survey
- (iii) Broadcast call 1 (Powerful Owl)
- (iv) 5 minute listen for response
- (v) Broadcast call 2 (Masked Owl)
- (vi) 5 minute listen for response
- (vii) 10 person minutes spotlight survey.

Call playback sessions at each site were replicated four times on non-consecutive nights over a 4-6 week period. In order to minimize disturbance, call broadcasting was limited to species that had not been recorded at a given field site (i.e. once a positive response by either species at a given site had been obtained, no further calls of that species were broadcast at that site). Minimum Convex Polygons (MCPs) connecting the outermost sites at which the species' were recorded, and thereafter buffered to accommodate sampling uncertainty, were used to illustrate territory boundaries.

Squirrel Gliders

Survey for squirrel gliders was also initially done at the aforementioned 1km and latterly at 750m intersections. In addition to the abovementioned spotlighting effort (cumulatively 80mins spotlighting per field site), sampling involved deployment of five tree-mounted Arbor-traps (Winning and King 2007), one at the central sampling point indicated by site coordinates, the remaining four at distances of 100 - 125m to the north, south, east and west respectively (effective sampling area ~ 5ha). Traps were attached to trees at a height of between three and four metres off the ground, baited with a mixture of rolled oats, peanut butter and honey, and maintained for five consecutive nights. A honey solution was applied onto the tree trunk in the vicinity of the trap entrance each morning.

Results**Database searches**

Database searches returned records of 55 threatened fauna species which had either been recorded within 5km of the study area, or were otherwise considered likely to occur, have habitat in and/or breed in the area (Appendix 2). Details relating to the extent and accumulated effort of previous survey work has been summarised in the review by Biolink (2009). In summary, sixteen threatened fauna species have previously been recorded within the study area:

- Glossy Black Cockatoo *Calyptorhynchus lathami*
- Brown Treecreeper *Climacteris picumnus*
- Little Lorikeet *Glossopsitta pusilla*
- Square-tailed Kite *Lophoictinia isura*
- Powerful Owl *Ninox strenua*
- Masked Owl *Tyto novaehollandiae*
- Regent honeyeater *Xanthomyza phrygia*
- Spotted-tail Quoll *Dasyurus maculatus*
- Little Bentwing-bat *Miniopterus australis*
- Eastern Bentwing-bat *M. schreibersii oceanensis*
- Eastern Freetail-bat *Mormopterus norfolkensis*
- Large-footed Myotis *Myotis adversus*
- Squirrel Glider *Petaurus norfolcensis*
- Koala *Phascolarctos cinereus*
- Grey-headed Flying-fox *Pteropus poliocephalus*

- Greater Broad-nosed Bat *Scoteanax ruepellii*

Field assessment

The field-based assessment was completed between May and July 2011. Weather conditions during this protracted sampling period were not always conducive to field work and ultimately contributed to some delays.

Flora

Nested in the classification structure of Keith (2004) twelve vegetation communities and one rainforest alliance collectively representing 5 Formations and 8 classes of native vegetation occur within the study area, consistent with the classification system utilised in the broader vegetation mapping project. A summary of these communities is provided below.

Formation: Saline Wetlands

Class: Saltmarshes

Type: Mid-high to Tall Open Sedgelands

Community: Sea Rush Sedgelands

Formation: Forested Wetlands

Class: Coastal Floodplain Wetlands

Type: Tall to Very Tall Open Forest

Community: Swamp Oak Forest

Community: Swamp Oak – Eucalypt Forest Complex.

Community: Prickly-leaved Tea tree - Flax-leaved Paperbark – Eucalypt Forest Complex.

Class: Coastal Swamp Forests

Type: Mid-high to Very Tall Paperbark Open Woodlands/Forests

Community: Broad-leaved Paperbark – Flax-leaved Paperbark Forest.

Community: Broad-leaved Paperbark – *Eucalyptus* spp. Forest Complex.

Community: Broad-leaved Paperbark - Swamp Mahogany Forest.

Formation: Dry Sclerophyll Forests

Class: Hunter-Macleay Dry Sclerophyll Forests

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Greater Sanctuary Ecological Constraints Analysis

Type: Tall to Extremely Tall Open Forests**Community:** Spotted Gum Forest**Formation:** Wet Sclerophyll Forests**Class:** Northern Hinterland Wet Sclerophyll Forests**Type:** Very Tall to Extremely Tall Open Forest**Community:** Tallowwood – White Stringybark – Grey Gum Forest.**Community:** Grassy Blackbutt Forest**Class:** North Coast Wet Sclerophyll Forests**Type:** Very Tall to Extremely Tall Open Forest**Community:** Wet Tallowwood Forest**Community:** Flooded Gum Forest**Formation:** Rainforests**Class:** Subtropical Rainforests**Type:** Lowland Gallery Rainforest**Alliance:** Black Booyong

Figure 2 illustrates the distribution of each of the preceding vegetation communities within the study area. A number of these communities are of conservation significance, either existing as analogs of Endangered Ecological Communities (EECs) listed on Schedule 1 of the *Threatened Species Conservation Act 1995*, or otherwise considered to be of regional importance as follows:

(i) EECs

a) *Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East corner bioregions.*

Conforming vegetation community: Sea Rush Sedgeland

Total combined area: ~ 2ha

b) *Swamp Oak Floodplain forest of the NSW North Coast, Sydney Basin and South East corner bioregions.*

Conforming vegetation communities: Swamp Oak Forest and Swamp Oak – Eucalyptus spp. Forest Complex.

Total combined area: ~ 57ha

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c) *Swamp Sclerophyll Forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East corner bioregions.*

Conforming vegetation communities: Broad-leaved Paperbark – Flax-leaved Paperbark Forest, Broad-leaved Paperbark – *Eucalyptus* spp. Forest Complex, and Broad-leaved Paperbark – Swamp Mahogany Forest.

Total combined area: ~ 19ha

d) *Sub-tropical coastal floodplain forest of the NSW North Coast bioregions.*

Conforming vegetation communities: Prickly-leaved Tea tree - Flax-leaved Paperbark – *Eucalypt* spp. Forest Complex and Flooded Gum Forest.

Total combined area: ~ 57ha

e) *Lowland Rainforest in the North Coast and Sydney Basin bioregions.*

Conforming alliance: Black Booyong Rainforest

Total combined area: ~ 5ha

(ii) Other significant vegetation communities

The planning area contains approximately 7ha of Spotted Gum Forest. We consider this community to be of conservation and taxonomic-biogeographic importance given its occurrence outside of the known distributions of the two constituent species in NSW – *Corymbia citriodora* (otherwise extending north from Kempsey) and *C. maculata* (otherwise extending south from Taree). We consider the species present at Sancrox to be *C. citriodora* based on the lemon-scented foliage. A larger stand of Spotted Gum Forest also occurs on Red Hill at Telegraph Point.

(iii) Threatened flora

No threatened flora species were confirmed. However, we opportunistically recorded populations of Grove's Paperbark *Melaleuca groveana* outside the study area. Populations of Biconvex Paperbark *Melaleuca biconvexa* are also known to occur proximal to the south-eastern corner of the study area. Both species are primarily associated with drainage lines.

(iv) Hollow-bearing trees (HBTs)

A total of thirty four HBTs scoring in the range of 15 -18 were recorded during the course of the field survey. Other HBTs in this scoring range occur along the upper

drainage line of the southernmost forest block but were not mapped due to access difficulties.

The distribution of the aforementioned EECs and Spotted Gum Forest, along with recorded HBTs is detailed in Figure 3.

Fauna

Ancillary Survey

Survey work was undertaken over the period 9th – 14th June 2011. Temperatures over this time period ranged from a maximum of 19°C to a minimum of 5°C with intermittent periods of (sometimes heavy) rain. The extent of ancillary survey effort applied to the area selected for assessment is detailed in Table 2, and further summarized thereafter.

Table 2. Extent of ancillary survey effort within the study area.

Technique	Total effort
Elliot A (trap nights)	208
Arbor-traps (trap nights)	50
Hair funnels (trap nights)	136
Cage traps (trap nights)	22
Spotlighting (person hours)	4.6
Call playback (hours)	4.6

Elliot traps

Two hundred and eight trap nights returned captures of four native mammal species: Brown Antechinus *Antechinus stuartii*, Bush Rat *Rattus fuscipes*, Swamp Rat *R. lutreolus* and Fawn-footed Melomys *Melomys cervinipes*¹, and two introduced species: Black Rat *Rattus rattus* and House Mouse *Mus domesticus*.

Tree traps

Fifty trap nights attributable to Arbor traps resulted in the capture of 17 *A. stuartii*.

Hair funnels

Seven of 11 hair funnels returned samples of mammalian hair from two species: *A. stuartii* and *R. fuscipes*.

Cage trapping

Cage trapping resulted in two captures only: *R. rattus* and *R. fuscipes*.

¹ Species not previously recorded for study area.

Spotlighting

Spotlighting revealed the presence of Brush-tailed Possum *Trichosurus vulpecula*, Ring-tailed Possum *Pseudocheirus peregrinus*, Grey-headed Flying-fox *Pteropus poliocephalus* and Koala *Phascolarctos cinereus*.

Predator scats

Seven predator scats and two owl pellets were collected from forest areas in the Greater Sanctuary area over the survey period. Prey items identified by hair analysis consisted of Northern Brown Bandicoot *Isodon macrourus*, House Mouse *Mus musculus* (Owl pellets) and macropods (probably Red-necked Wallaby *Macropus rufogriseus* and Swamp Wallaby *Wallabia bicolor*).

Opportunistic observations

In addition to those obtained via spotlighting, hair analysis and that work described below, we essentially restricted reporting of our opportunistic observations to that of threatened species or evidence thereof. To this end we recorded four threatened species: chewings attributable to feeding activity by Glossy Black Cockatoos *Calyptorhynchus lathami*, Little Lorikeets *Glossopsitta pusilla* towards the southern end of Bushland Drive, Square-tailed Kite *Lophoictinia isura* (2 records) observed overhead in the northwest, and Brown Treecreepers *Climacteris picumnus* in grassy blackbutt forest to the south.

Locations of threatened species recorded during this study along with those reported during previous work are provided in Figure 4.

Targeted Threatened Species Survey

1. Forest Owls

Twenty five field sites were sampled, twelve of which were successful in obtaining positive responses (i.e. sightings and/or call) from one or the other of the two target species.

a) Powerful Owl *Ninox strenua*

Powerful Owls responded positively at seven field sites, indicating a potential territory of approximately 633 ha located in the central section of the study area. Figure 5 illustrates the overall distribution of owl survey effort, the 7 sites at which we recorded the species, and the location of one additional contemporary record attributable to

previous studies in the area. The territory determined by this study thus encapsulates all available records for this species.

b) Masked Owl *Tyto novaehollandiae*

Masked Owls responded positively at four sites while an active nest tree was present at another (no calls of either species were broadcast at this site), the resulting MCP suggesting a territory size of approximately 567 ha located in the central and south-west of the study area. Figure 6 illustrates the overall distribution of survey effort, sites at which we recorded the species, and the location of an additional three contemporary records attributable to previous studies in the area. As alluded to above, an active nest tree (complete with resident owlets) located on rural-residential land was detected during the survey. Not all database records have been encapsulated by the MCP arising from our survey work, hence inferring the presence of transient individuals and/or sub-adults and/or possibly another pair no longer present within the study area.

Despite the indicative territory overlap implied by overlaying the MCPs for each of the two owl species presented in Figures 5 & 6, there was no site at which both species were detected.

2. Koalas

Ninety-four formally-assessed SAT sites provided data on tree use by koalas from 2,474 trees comprised of 11 *Eucalyptus* species and more than 13 species of non-eucalypt. Evidence of koala activity (presence of koala faecal pellets) was recorded at 21 sites, with activity levels between 3.33% and 20%. Systematic searches for koalas were carried out within 18.42ha during koala habitat assessment with no koala sightings recorded. Interestingly however, four koalas (female + joey, and two nearby males) in close proximity to each other were opportunistically sighted on adjoining employment precinct lands during the course of owl survey work in the north east of the study area. Figure 7 illustrates the location of each sampled SAT site, along with the modeled distribution of *core koala habitat* within the study area, the derivation of which is discussed elsewhere in this report.

3. Squirrel Gliders

A total of 410 Arbor-trap nights at eighteen field sites spread across the study area returned 87 brown antechinus captures but only one squirrel glider, while calls attributable to the species were recorded at two other locations. Collectively but also

with a view of contemporary records, the data suggests a relatively small Extent of Occurrence (~183ha) within which occupancy rates are low, while the overall population size is small (i.e. < 100 individuals, upper 95% CI), widely dispersed and patchy in distribution. Figure 8 illustrates the overall distribution of survey effort, sites at which we recorded the species (or evidence thereof), and the location of contemporary records attributable to previous studies in the area. A comparison of the two squirrel glider MCPs – that arising from this survey and that inclusive of the contemporary records – infers that some range contraction may have occurred.

4. Yellow-bellied Gliders

We opportunistically recorded the presence of this species at one site during the course of the owl survey work (refer Figure 8).

Cumulative Survey Effort

Table 3 summarises the nature and extent of cross-seasonal survey effort that has now been applied across the planning area.

Table 3. Cumulative survey effort of relevance to the Greater Sancroix Planning area based on studies reviewed by Biolink (2009), that of Parker (2009) for the Sancroix Employment Precinct, and that arising from this work.

Technique	Total effort
Type A Elliot (trap nights)	1667
Type B Elliot (tree) (trap nights)	592
Arbor-trap (trap nights)	410
Cage trap (trap nights)	141
Pitfall (trap nights)	96
Hair funnel (trap nights)	2526
Spotlighting (person hours)	~107
Anabat (recording hours)	206
Harp trap (trap nights)	3
Mist net (trap hours)	9
Call playback (hours)	72
IR photography (recording nights)	3
Active search (person hours)	215.5

Discussion

Ecological survey work in the Greater Sancroix planning area has revealed a matrix of biodiversity values for evaluation. Despite a long history of agricultural activity, in more recent times followed by an intensification of habitat modification/fragmentation for rural-residential settlement purposes, the area has nonetheless managed to retain an enviable biodiversity register. The task ahead of the Structure Planning process is thus how best to at least maintain or improve the *status quo*, while at the same time facilitate further development. In the following paragraphs we discuss some of the ecologically-related planning matters that we consider warrant further examination.

Significant Vegetation Communities (SVCs)

All but one of the SVCs within the planning area are linked to the coastal floodplain and associated riparian landscape. We use the word "associated" here in the context of the NSW Scientific Committees final determinations of coastal floodplain EECs generally, implying that all drainage lines within the planning area – even those not occurring on alluvial soils – will need to be recognized as EECs for planning purposes. Given that much of the planning area is relatively low-lying and directly abuts the coastal floodplain, it follows that protection coupled with adequate buffering of the drainage network (naturally vegetated or otherwise) must serve as a fundamental ecological constraint for planning purposes.

Hollow-bearing Trees

Because of their role in maintaining biodiversity, we see protection and effective integration of the existing HBT resource, along with measures to ensure ongoing recruitment over time, as another key consideration. The problem in terms of achieving a balanced and demonstrably sustainable planning outcome for HBTs within the planning area however, is not as straightforward as simply protecting those trees we have identified, as can be evidenced by the results of our survey. Aside from a relatively large diameter at breast-height (DBH), a tree occupied by one or more Squirrel Gliders was not especially noteworthy, scoring 11 out of a possible 18 points when assessed using our HBT assessment protocol, and thus potentially able to be offset for planning purposes (Biolink 2006). Similarly, a large HBT known to be utilised by a breeding pair of Masked Owls scored only 15 because of its spatial context in an already developed area. In the first case, the tree might readily be overlooked during the course of ecological survey work, while in the second it would function as a major impediment to more intensive development of the area. In both

instances these trees are critical to the life history strategies of the two threatened species concerned.

The problem for HBTs generally is that they have no security of tenure, their retention in the landscape relying – for the most part - entirely on the goodwill of property owners. We can do no more than encourage Council to consider how best to resolve this issue, while that relating to the disparity in HBT scores and the ecological importance of lower-scoring HBTs can only really be addressed by ensuring that – within that area occupied by squirrel gliders at least - the retention of all large trees (i.e. >750mm dbh) be maximised.

Native vegetation

Based on current mapping, we estimate the extent of native forest cover within the study area at approximately 44%. We suggest that this value should serve as a lower benchmark against which the Structure Plan is based, the intent to ensure that such a value is maintained, or ideally improved upon as a consequence of the planning process. In saying this and with the exception of EECs and large patches of native vegetation we do not necessarily see remaining areas of vegetation cover as a fixed and non-negotiable element across the planning landscape, rather as one that can be moulded and/or refined to achieve a more desirable, long-term biodiversity outcome in terms of connectivity and threatened species management, in addition to that of an appropriate and demonstrably sustainable development footprint.

Forest Owls

The presence of two species of large forest owls is a significant biodiversity attribute of the planning area. The good news is that both species appear to be successfully coexisting with humans and development, although their continued long-term persistence in the planning area will be contingent upon retention of HBTs and sufficient forest cover/habitat so as to support viable populations of their preferred prey items – Possums and Gliders in the case of *N. strenua*, terrestrial rodents and Dasyurids in the case of *T. novaehollandiae*. This consideration implies the need for a broad biodiversity focus within the territories of these birds, one that arguably focuses more on maintaining species richness than it does a focus on just threatened species. By example, one of the more interesting outcomes from our survey data is the high numbers of *A. stuartii* captured in tree traps in some of the less disturbed habitat areas. Such data infers large numbers of this particular species will be present in some of the more intact habitat areas, inferring that recognition and

management of this likely food resource should becoming an underlying objective of Masked Owl habitat management. At the other end of this dietary spectrum, Powerful Owls require the equivalent of 1 possum every 2 – 3 days, again inferring the need for biodiversity planning measures to take a more holistic view of the landscape.

Another interesting issue that arises from Figures 5 & 6 is the juxtaposition of owl territory boundaries to the south and east, and the proximity of both the Pacific and Oxley Highways. This outcome indirectly supports a hypothesis that traffic volume along the two highways may have some influence over the ability of large forest owls to maintain territories in such areas, either (i) because any owls attempting to establish territories in such areas are killed on the road, or ii) prey densities are much lower because of ongoing road mortalities. Regardless of whether one or both i) and ii) in the preceding sentence are contributing factors, it follows that intensification of settlement will lead to increased traffic volume within the planning area. As to whether this consideration will negatively impact upon the ability of the two species of large forest owl to survive in the area remains to be determined.

Both species of forest owls are the subject of an approved recovery plan (DEC 2006). The primary objective of the Recovery Plan for Large Forest Owls is to “...ensure that viable populations of all three species covered by the plan (i.e. Masked, Powerful and Sooty Owls) continue in the wild in NSW in each region where they presently occur” (DEC 2006). Amongst specific recovery objectives, actions and performance criteria is the following:

Objective 5: Minimise further loss and fragmentation of habitat by protection and more informed management of significant owl habitat (including protection of individual nest sites).

Required Action: Encourage private landholders to undertake management options to conserve and/or actively manage large forest owl habitat (and particularly nest sites) through incentive Property Vegetation Plans, Voluntary Conservation Agreements or other management initiatives.

The preceding action is of direct relevance to the planning area given the location of a Masked Owl nest tree within an existing rural-residential development. This tree and others like it are irreplaceable biodiversity assets, yet how are they best afforded

protection in an already developed and/or potentially developing landscape within which such trees will likely be overlaid with a conflicting land use zoning? We see resolution of this conundrum as a fundamental outcome of the structure planning process if any measure of ecological sustainability is to be apportioned to it.

Gliders

Survey data confirms the presence of at least three species of glider in the study area, two of which (squirrel glider and yellow-bellied glider) are threatened species. An approved recovery plan exists for only one of these species (yellow-bellied glider – NPWS 2003), although i) it was originally envisaged to operate for only 3 years, and ii) does not include any meaningful measures that might work to assist the structure planning process. Moreover, its theoretical replacement by the Northern Rivers Regional Biodiversity Management Plan (DECCW 2010) offers little practical guidance in terms of glider habitat management, aside from an overarching objective of protecting species and their habitats from the effects of (habitat) clearing and fragmentation. In the context of Local Government, this objective is to be met through full enforcement of legislative requirements to protect biodiversity, and actioned by a policy of net conservation gain to be applied when assessing and/or approving applications for any development or activity. We assume that this proposed measure would also apply to other threatened species inhabiting the planning area.

Our data suggests that the squirrel glider population in the study area is both small and patchy in distribution, while yellow-bellied gliders may well be represented by a small group of 2-3 individuals living in the southernmost of the two large forest blocks present within the planning area. Interestingly, there is some evidence that this population or its progenitors have been present in this area for some time, a deceased specimen obtained from the same area approximately 12-15 years ago (Cheyne Flanagan, pers. comm.).

Koalas

The lack of widespread and high measures of koala activity within the study area was an unexpected result given the presence of a relatively large area of intact bushland containing preferred food tree species in the central part of the study area. It is clear that a viable and self sustaining koala population (i.e. ≥ 180 animals) is not present despite extensive areas of suitable habitat. Of site-specific studies done within the study area, only Darkheart (2004) reported the presence of significant koala activity in the Bushland Drive area in the south-eastern portion of our study area, an area we

have identified as now supporting only small isolated cells of activity. Darkheart (2005a, 2005b) also reported areas of low activity in the north and the southwest of the study area. Similarly, the proposed Sancroix Employment Precinct adjacent to the north-eastern boundary of the study area was considered to be subject of transient use by koalas when assessed by Parker (2009).

The work of Phillips and Callaghan (2011) cautions that any determinations regarding the importance of koala activity levels should ideally be informed by a broader soil-based understanding of tree preferences. The influence of soil landscape on the palatability of some koala food tree species is now well documented (e.g. Phillips and Callaghan 2000; Moore *et al* 2004), the underlying implications of which are that (i) only the larger food trees (i.e. $\geq \sim 450\text{mm dbh}$) are likely to be palatable, (ii) because larger trees occur at lower densities across the landscape, so must any resident koalas, and (iii) because individual home range areas are larger, faecal pellets are more widely scattered which in turn results in lower activity levels being recorded. This phenomenon is becoming increasingly documented along the east coast and typically associated with lower nutrient erosional and (to a lesser extent) residual soil landscapes. Our incidental spotlighting observations of a female with young, coupled to an underlying low-nutrient soil landscape further typified by the presence of Spotted Gum (a low soil nutrient specialist) and trees with a generally small diameter, along with low activity sites exhibiting a high measure of spatial autocorrelation all infer that application of the "East coast low density", rather than "East coast med - high density" activity thresholds of Phillips and Callaghan (2011), is warranted for the purposes of delineating core koala habitat; this is now reflected in the model we have presented herein. Given the results, it is our considered view that the total koala population estimate for the planning area would at this time be unlikely to exceed 15-20 animals. Major impediments to the ability of the area's resident koala population(s) to recruit from known source populations such as Lake Innes include known and ongoing road mortalities along the Pacific Highway. Additionally, the high numbers of domestic dogs (272 registered animals) that inhabit the rural-residential landscape are likely to reduce prospects for sustained koala population increase from in situ or existing populations.

The presence of a small area of core koala habitat in the south east of the study area will – in the absence of a shire wide CKPoM – necessitate preparation of a Koala Plan of Management should further subdivision be envisaged in the Bushland Drive area. Such a recommendation will similarly apply should any development contrary to

that alluded to in this report be envisaged in the northern forest block. For the remainder of the planning area it would appear that a Koala Plan of Management will not be required.

Ranking ecological attributes

In order to provide a graphical perspective that may be of some utility in terms of informing subsequent stages of the structure planning process we apportioned ecological values across the planning landscape by way of a cell-based assessment. So as to undertake this process objectively and in an informed way we overlaid the planning area with a 1ha grid, each cell of which was weighted as follows:

A. Irreplaceable

- i) a cell containing non-offsettable EEC areas; and/or
- ii) a cell containing one or more high-scoring HBTs; and/or
- iii) a cell being part of a core ecological area (i.e. located 200m or more from an existing forest edge, and thus able to incorporate a fully vegetated outer layer at least 100m in width).

B. Value Managed

- i) a cell containing an offsettable EEC area, so determined on the basis of its small size and/or extent of degradation; and/or
- ii) a cell containing part or all of a vegetation community considered to be of regional importance; and/or
- iii) a cell containing forest cover that is within either a Masked or Powerful Owl territory; and/or
- iv) a cell that is located within an area of core koala habitat; and/or
- v) a cell containing forest cover that is either partially or entirely within squirrel glider habitat; and/or
- vi) a cell containing forest habitat that is located within 200m of the Yellow-bellied glider record.

C. Directly Offsettable

- i) remaining areas of relatively intact forest cover that are not otherwise designated as either irreplaceable or value managed.

Figure 9 illustrates the spatial array of ecological values across the Greater Sanctuary planning landscape as determined by the preceding classification system. By way of

further explanation, we see those cells scored “Irreplaceable” as identifying lands with such significant ecological values that they should not be considered for development. Cells identified as “Value managed” also contain locally significant ecological values that – while nominally offsettable – can theoretically be accommodated by way of a planning outcome guided by a threatened species management plan and/or koala plan of management. In contrast, areas identified as “Directly offsettable” reflect patches of potential habitat and/or forest cover which both the field data and other available knowledge suggests is currently not occupied and/or the subject of regular use by one or more threatened fauna species. All remaining area not captured by the above process we would see as relatively unconstrained for planning purposes subject to a) relevant provisions of Council’s Environmental Management Policy in so far as it relates to buffer requirements for streams and/or drainage lines, and b) a number of generalized localities within which provision for dry-land habitat linkages should be considered; these areas have been identified separately on Fig. 10, one of which in the north east of the planning area presents two options for consideration.

Sub-regional corridor

The southern portion of the planning area (i.e. Cowarra State Forest) has been identified as part of the regional corridor network from which a sub-regional corridor passing through the southeastern portion of the Greater Sancrox planning area was also envisaged (Scotts 2003). The merit of this location was reviewed by Biolink (2009) who consequently identified an alternative alignment to the north. The alternative alignment would appear vindicated by the results of this survey given that a greater number of species identified by Scotts (2003) as comprising the two target fauna assemblages (Moist Escarpment – Foothills, and Dry Coastal Foothills) are now known to occur within and along the alternative alignment. Scotts (2003) advocates a minimum width of 300m for sub-regional corridors (Scotts 2003), the conceptual spine of which has also been indicated on Fig. 10.

Conclusion

The ideal outcome in this instance would be to see a Structure Plan for the Greater Sancrox planning area that was capable of accommodating current biodiversity assets and recovery objectives in a meaningful and measurable way, while at the same time catering to an increase in development potential and associated human carrying capacity of the landscape.

The merit of a precinct-based approach to development, originally mooted in our earlier review, now appears to be reinforced by the results of this survey work, with precinct separation ideally driven for the most part by a network of riparian-focused buffers and embedded habitat linkages (Figure 10). *De facto*, such an approach is consistent with outcomes envisaged by Northern Rivers Regional Biodiversity Management Plan. To increase the efficacy and utility of these areas by native wildlife we see riparian areas and habitat linkages abutted on all sides by larger allotments that offer the choice of a dog and cat-free lifestyle focused on stewardship. To assist this process we reiterate the need for an approach that – large vegetation patches and EECs aside – views the remainder of the planning landscape as a palette upon which a long-term vision of habitat management, connectivity and consolidated development can be painted. We have taken this view because vegetation is a renewable resource, forest edges can be smoothed to minimize edge to area ratios and enhancement of effective habitat linkages will be a precursor to the maintenance of existing biodiversity values, whilst also allowing for population increases for species such as the koala and squirrel glider to occur. In this context and by example, provision of nest boxes of a size suitable for squirrel gliders could be strategically placed within those areas of retained vegetation that do not currently contain HBTs so as to increase carrying capacity and suitability of habitat areas for this species.

Resolving issues arising from ongoing road mortalities along the Pacific Highway will have long-term implications for biodiversity management within the planning area generally. To this end we can only encourage liaison with the NSW RTA regarding provisioning of proposed highway upgrades with fauna exclusion fencing, underpasses and glider bridges along the eastern boundary of the planning area. To this end Figure 10 indicates locations at which major dry-passage underpass provisioning to the maximum size possible should be located.

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References

- Ashby, E. 2008. Flora and Fauna Impact Assessment, Le Clos Verdun Rural Residential Estate Sancrox Road Port Macquarie LGA. Unpublished report to Riverpark Sancrox Pty Ltd. Keystone Ecological.
- Biolink 2009. Sancrox Rural-residential Investigation Area: preliminary ecological review. Report to Port Macquarie Hastings Council.
- Brunner, H. and Coman, B.J. 1974. The identification of mammalian hair. Inkata Press, Melbourne.
- Darkheart Eco-consultancy. 2004. Ecological Impact Assessment Vol 1. Flora and Fauna Survey and SEPP 44 – Koala Habitat Assessment of future rural residential subdivision of Bushland Drive Sancrox. Prepared for Luke & Co
- Darkheart Eco-consultancy. 2005a. EPBC Act 1999 – Matters of national environmental significance, TSC Act 1995 – eight part tests, and SEPP 44 Koala Habitat Assessments of Lot 1 DP574308 and Lots 4 & 5 DP785611, Sancrox Rd Wauchope. Prepared for King & Campbell
- Darkheart Eco-consultancy. 2005b. EPBC Act 1999 – Matters of national environmental significance, TSC Act 1995 – eight part tests, and SEPP 44 Koala Habitat Assessments of Proposed Rural-residential subdivision of Lot 9 DP1029887 cnr of Zanardis Lane and the Oxley Highway; and Portion 462 DP754434 cnr of Rawdon Island Road and the Oxley Highway, Wauchope. Prepared for Hopkins Surveyors.
- Ecobyte. 2002. Hair ID: an interactive tool for identifying Australian mammalian hair. CSIRO Publishing, Collingwood.
- Environmental Resources Management (ERM) Australia. 2006. Proposed Rezoning and rural residential subdivision at Sancrox Ecology Assessment. Prepared for Luke & Company Pty. Ltd.
- Moore, B. D., Wallis, I. R., Wood, J. T., and Foley, W. J. 2004. Foliar nutrition, site quality and temperature influence foliar chemistry of Tallowwood (*Eucalyptus microcorys*). *Ecological Monographs* 74(4), 553 – 568.
- NSW Scientific Committee. 2005a. Final determination to list Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner Bioregions as an Endangered Ecological Community in Part 3 Schedule 1 of the Threatened Species Conservation Act 1995 (gazetted 28/1/05).
- NSW Scientific Committee. 2005b. Final determination to list Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions as an Endangered Ecological Community in Part 3 Schedule 1 of the Threatened Species Conservation Act 1995 (gazetted 28/1/05).
- Phillips, S., and Callaghan, J. 2011. The Spot Assessment Technique: a tool for determining localized levels of habitat use by koalas *Phascolarctos cinereus*. *Australian Zoologist* 35(3), 774 – 790.
- Phillips, S., Hopkins, M. and Warnken, J. Splines in the sand: modelling koala metapopulation distribution across the landscape in order to provide greater conservation and planning certainty. Submitted to *Wildlife Research*
- Scotts, D., 2003, Key Habitats and Corridors for Forest Fauna: A Landscape Framework for Conservation in North-east New South Wales, *NSW NPWS Occasional Paper* 32, NSW National Parks and Wildlife Service, Sydney.

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Winning, G. and King, J. 2007. A new trap design for capturing squirrel gliders and sugar gliders. *Australian Mammalogy*. 29(2), 245-249.

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Appendix 1 Hollow-bearing tree assessment protocol

HOLLOW-BEARING TREE ASSESSMENT

LGA/Project:

Date: Easting: Northing: Datum:

Tree species (if known):

Alive	Dead	Score

Tree ID:

Height (m):

DBH (cm):

DBH Score

Number of visible hollows:

> 5	2 - 4	0 - 1	Score

Hollow Size (variable: 1 or more):

>100mm	>50mm	<50mm	Score

Habitat Proximity:

<i>In situ</i>	< 30m	> 30m	Score

Longevity:

High	Medium	Low	Score

TOTAL SCORE:

Evidence of existing use

.....

Recommendation(s):

.....

.....

Explanatory Notes:

Hollow-bearing trees (HBTs) are an important element in the Australian landscape and a significant factor affecting biodiversity values. This assessment sheet is intended to provide a more quantitative and ecologically meaningful approach to the ranking of HBTs than is otherwise currently applied. As advocated by Gibbons & Lindenmayer (2002), the emphasis for conservation purposes is clearly on large, living trees that are likely to offer the greatest diversity of hollow types and/or size.

The assessment does not include provision for a formal survey of HBTs for use by native wildlife. This omission is deliberate and simply reflects the difficulties in accurately representing use of the HBT resource over time, aspects of which may be seasonal and/or

periodic. Having said this, any observations about existing use at the time of assessment may be of some importance in the case of low scoring trees when recommendations relating to removal and/or longer-term management are being considered.

The Scoring System

The scoring system is relatively straight forward and serves to facilitate a total score for a given HBT that could fall anywhere between 2-18. The total score should be interpreted as follows:

Total Score > 12: mandatory retention in landscape required, no disturbance of substrate within radius prescribed by dripline, no habitable dwellings or other structures within buffer area (radius 1.25 x tree height measured from tree base); fencing and hazard/interpretive signposting as required.

Total Score 8 – 12: retention in landscape desirable if objectively assessed hazard rating* can be managed long-term at 10 or less; removal subject to identification of at least 2 recruitment trees of same species & size class elsewhere on land to which DA applies + formal strategy for tree removal that minimizes impact(s) on native wildlife + compensatory nestboxes in immediate vicinity.

Total Score < 8: removal possible subject to identification of at least 1 recruitment tree of same species & size class elsewhere on land to which DA applies + formal strategy for tree removal that minimizes impact(s) on native wildlife + compensatory nestboxes in immediate vicinity.

* as determined by use of Tree Hazard Evaluation Form (2nd Ed) – International Society of Arboriculture.

Scores should be allocated as follows:

Status: Living Tree = 3; Dead Tree = 1; **DBH Score** (living trees only): 80-100⁺cm = 3; 60-80cm = 1.5; <60cm = 0; **Number of visible hollows:** >5 = 3; 2-4 = 1.5; 0-1 = 0 (Note: emphasis is on visible hollows only); **Visible Hollow(s) Score:** 1 or more > 100mm = 3; 1 or more > 50mm = 2; 1 or more < 50mm = 1 (Note: score single category only, it is assumed that a tree with 1 or more hollows > 100mm will also have hollows > 50mm and < 50mm); **Habitat Proximity Score:** HBT in habitat block/linkage to be retained (*in situ*) = 3; < 30m from habitat block/linkage to be retained = 2; > 30m from habitat block/linkage to be retained = 0; **Longevity Ranking:** High = 3; Medium = 1.5; Low = 0, determined as follows: High: Living tree (any species) with inclination from vertical of less than 10°, Medium: Living tree with shallow adventitious root system (e.g. Blackbutt - Scribbly Gum - Bloodwoods - White Mahoganies) on skeletal soils and with an inclination from the vertical of 10 – 15°. Low: Any dead tree and/or living trees in Medium category that have an inclination from the vertical of > 15°. Please note: this is intended to provide an ecological perspective on the extent of likely hazard (in a developed landscape) presented by the tree in question; hence the risk of a dead tree or shallow rooted *Eucalyptus* spp. on a skeletal soil that has a distinct 'lean' on it must be taken into account.

N.B. Nothing in these pages is intended to diminish the underlying importance of HBTs in the Australian landscape generally; rather, it is a tool by which the most important trees can be identified and protected in the first instance, while also offering (for lower scoring HBTs) some flexibility for planning purposes that must also be met by compensatory measures.

References

Gibbons, P., and Lindenmayer, D. 2002. *Tree Hollows and Wildlife Conservation in Australia*. CSIRO Publishing.

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Appendix 2 – Threatened species database records within 5km of the study area

Family	Species	Common Name	Status		Data-base record
			TSC Act	EPBC Act	
Flora					
Apocynaceae	<i>Cynanchum elegans</i>	White-flowered Wax Plant	E	E	S2
	<i>Parsonsia dorrigoensis</i>	Milky Silkpod	V	E	S2
Casuarinaceae	<i>Allocasuarina defungens</i>	Dwarf Heath Casuarina	E	E	○
Myrtaceae	<i>Melaleuca biconvexa</i>	Biconvex Paperbark	V	V	●
Orchidaceae	<i>Cryptostylis hurteriana</i>	Leafless Tongue Orchid	V	V	S3
	<i>Phaius tancarvilleae</i>	Lady Tankerville's Swamp Orchid	E	E	○
Proteaceae	<i>Hakea archaeoides</i>	Big Nellie Hakea	V	V	S2
Santalaceae	<i>Thesium australe</i>	Austral Toadflax	V	V	S2
Fauna					
Amphibia					
Hylidae	<i>Litoria aurea</i>	Green and Golden Bell Frog	E	V	○
	<i>Litoria brevipalmata</i>	Green-thighed Frog	V	-	○
Myobatrachidae	<i>Crinia tinnula</i>	Wallum Froglet	V	-	○
	<i>Mixophyes balbus</i>	Stuttering Frog	E	V	S2
	<i>Mixophyes iteratus</i>	Giant Barred Frog	E	E	S2
Aves					
Accipitridae	<i>Circus assimilis</i>	Spotted Harrier	V	-	○
	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	-	MT, Ma	S2
	<i>Hieraaetus morphnoides</i>	Little Eagle	V	-	○
	<i>Lophoictinia isura</i>	Square-tailed Kite	V	-	✓
	<i>Pandion haliaetus</i>	Osprey	V	-	●
Anatidae	<i>Oxyura australis</i>	Blue-billed Duck	V	-	○
Apodidae	<i>Apus pacificus</i>	Fork-tailed Swift	-	Ma, MM	S3
	<i>Hirundapus caudacutus</i>	White-throated Needletail	-	MT, Ma	S3
Ardeidae	<i>Ardea alba</i>	Great Egret	-	MW, Ma, MM	S3
	<i>Ardea ibis</i>	Cattle Egret	-	MW, Ma, MM	S3
	<i>Ixobrychus flavicollis</i>	Black Bittern	V	-	○
Cacatuidae	<i>Calyptrorhynchus lathamii</i>	Glossy Black-Cockatoo	V	-	✓ ^{1,2}
Charadriidae	<i>Pluvialis fulva</i>	Pacific Golden Plover	-	MW, Ma	S1
Ciconiidae	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E	-	●
Climacteridae	<i>Climacteris picumnus</i>	Brown Treecreeper	V	-	✓
Columbidae	<i>Ptilinopus regina</i>	Rose-crowned Fruit-dove	V	-	○
Dicruridae	<i>Monarcha melanopsis</i>	Black-faced Monarch	-	MT, Ma	B3
	<i>Monarcha trivirgatus</i>	Spectacled Monarch	-	MT, Ma	B2
	<i>Myiagra cyanoleuca</i>	Satin Flycatcher	-	MT, Ma	B2
	<i>Rhipidura rufifrons</i>	Rufous Fantail	-	MT, Ma	B3
Meliphagidae	<i>Xanthomyza phrygia</i>	Regent Honeyeater	E	E, MT	✓
Meropidae	<i>Merops ornatus</i>	Rainbow Bee-eater	-	MT, Ma	S3

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Neosittidae	<i>Daphoenositta chrysoptera</i>	Varied Sittella	V	-	○
Psittacidae	<i>Glossopsitta pusilla</i>	Little Lorikeet	V	-	✓ ⁵
	<i>Lathamus discolor</i>	Swift Parrot	E	E, Ma	○
Rostratulidae	<i>Rostratula australis</i>	Australian Painted Snipe		V	S3
	<i>Rostratula benghalensis</i>	Painted Snipe	E	MW, Ma	S3
Scolopacidae	<i>Gallinago hardwickii</i>	Latham's Snipe		MW, Ma	S3
	<i>Numenius phaeopus</i>	Whimbrel	-	MW, Ma	S2
Strigidae	<i>Ninox strenua</i>	Powerful Owl	V	-	✓ ^{1,2}
Tytonidae	<i>Tyto capensis</i>	Grass Owl	V	-	○
	<i>Tyto novaehollandiae</i>	Masked Owl	V	-	✓ ⁴
Mammalia					
Dasyuridae	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E	✓
	<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	V	-	○
	<i>Planigale maculata</i>	Coastal Planigale	V	-	○
Emballonuridae	<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	V	-	○
Macropodidae	<i>Petrogale penicillata</i>	Brush-tailed Rock Wallaby	E	V	S3
Molossidae	<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	V	-	✓ ⁵
Muridae	<i>Pseudomys gracilicaudatus</i>	Eastern Chestnut Mouse	V	-	○
Petauridae	<i>Petaurus australis</i>	Yellow-bellied Glider	V	-	●
	<i>Petaurus norfolcensis</i>	Squirrel Glider	V	-	✓ ^{2,3}
Phascolarctidae	<i>Phascolarctos cinereus</i>	Koala	V	-	✓ ^{1,2,3,4}
Potoroidae	<i>Potorous tridactylus</i>	Long-nosed Potoroo	V	V	S3
Pteropodidae	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	✓ ^{1,2,3}
Vespertilionidae	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V	V	S3
	<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	-	○
	<i>M. schreibersii oceanensis</i>	Eastern Bentwing-bat	V	-	✓
	<i>Miniopterus australis</i>	Little Bentwing-bat	V	-	✓ ^{1,2,3,5}
	<i>Myotis adversus</i>	Large-footed Myotis	V	-	✓ ⁵
	<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V	-	✓ ¹

V=vulnerable; E=endangered; MW=migratory wetlands species; MT=migratory terrestrial species; Ma=listed marine species; MM=migratory marine species

Atlas records

✓=recorded on the site

●=recorded within 1km of the site

○=recorded within 5km of the site

EPBC protected matters search

S1=species or species habitat known to occur in area

S2=species or species habitat likely to occur in area

S3=species or species habitat may occur in area

B2=breeding likely to occur in area

B3=breeding may occur in area

R1=roosting known to occur in area

R2=roosting likely to occur in area

R3=roosting may occur in area

¹Darkheart 2004; ²Darkheart 2005a; ³Darkheart 2005b; ⁴ERMA 2006; ⁵Ashby 2008.

Appendix 3 – Fauna species recorded on site (cumulative)

Family	Species	Common Name
Amphibians		
Myobatrachidae	<i>Adelotus brevis</i>	Tusked Frog
	<i>Crinia signifera</i>	Eastern Brown Froglet
	<i>Limnodynastes peronii</i>	Striped Marsh Frog
	<i>Mixophyes fasciolatus</i>	Great Barred Frog
	<i>Pseudophryne coriacea</i>	Red-backed Toadlet
	<i>Uperoleia fusca</i>	Dusky Gungan
Hylidae	<i>Litoria dentata</i>	Bleating Tree Frog
	<i>L. fallax</i>	Eastern Dwarf Tree Frog
	<i>L. nasuta</i>	Rocket Frog
	<i>L. peronii</i>	Brown Tree Frog
	<i>L. tyleri</i>	Southern Laughing Tree Frog
Reptiles		
Agamidae	<i>Physignathus lesueuri</i>	Eastern Water Dragon
Agamidae	<i>Pogona barbata</i>	Bearded Dragon
Elapidae	<i>Pseudechis porphyriacus</i>	Red-bellied Black Snake
Scincidae	<i>Lampropholis delicata</i>	
	<i>L. guichenoti</i>	Common Garden Skink
Varanidae	<i>Varanus varius</i>	Lace Monitor
Birds		
Accipitridae	<i>Accipiter fasciatus</i>	Brown Goshawk
	<i>Aquila audax</i>	Wedge-tailed Eagle
	<i>Lophoictinia isura</i>	Square-tailed Kite
	<i>Elanus axillaris</i>	Black-shouldered Kite
Alcedinidae	<i>Alcedo azurea</i>	Azure Kingfisher
Anatidae	<i>Anas castanea</i>	Chestnut Teal
	<i>A. superciliosa</i>	Pacific Black Duck
	<i>Chenonetta jubata</i>	Australian Wood Duck
Ardeidae	<i>Ardea ibis</i>	Cattle Egret
	<i>Egretta novaehollandiae</i>	White-faced Heron
Artamidae	<i>Artamus leucorhynchus</i>	White-breasted Woodswallow
	<i>Cracticus nigrogularis</i>	Pied Butcherbird
	<i>C. torquatus</i>	Grey Butcherbird
	<i>Gymnorhina tibicen</i>	Australian Magpie
	<i>Strepera graculina</i>	Pied Currawong
Cacatuidae	<i>Cacatua galerita</i>	Sulphur-crested Cockatoo
	<i>Calyptrorhynchus funereus</i>	Yellow-tailed Black-Cockatoo
	<i>C. lathami</i>	Glossy Black-Cockatoo
	<i>Eolophus roseicapilla</i>	Galah
Campephagidae	<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
Caprimulgidae	<i>Eurostopodus mysticallis</i>	White-throated Nightjar
Charadriidae	<i>Vanellus miles</i>	Masked Lapwing
Cinclosomatidae	<i>Psophodes olivaceous</i>	Eastern Whipbird
Climacteridae	<i>Climacteris picumnus</i>	Brown Treecreeper
	<i>Cormobates leucophaeus</i>	White-throated Treecreeper

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Greater Sanctuary Ecological Constraints Analysis

Columbidae	<i>Columba leucomela</i>	White-headed Pigeon
	<i>C. livia</i>	Rock Dove
	<i>Geopelia humeralis</i>	Bar-shouldered Dove
	<i>Leucosarcia melanoleuca</i>	Wonga Pigeon
	<i>Macropygia amboinensis</i>	Brown Cuckoo-Dove
	<i>Ocyphaps lophotes</i>	Crested Pigeon
	<i>Streptopelia chinensis</i>	Spotted Turtle-Dove
Coraciidae	<i>Eurystomus orientalis</i>	Dollarbird
Corvidae	<i>Corvus coronoides</i>	Australian Raven
Cuculidae	<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo
	<i>Centropus phasianinus</i>	Pheasant Coucal
	<i>Cuculus pallidus</i>	Pallid Cuckoo
	<i>C. variolosus</i>	Brush Cuckoo
	<i>Eudynamis scolopacea</i>	Common Koel
Dicruridae	<i>Dicrurus bracteatus</i>	Spangled Drongo
	<i>Grallina cyanoleuca</i>	Magpie-lark
	<i>Myiagra inquieta</i>	Restless Flycatcher
	<i>Myiagra rubecula</i>	Leaden Flycatcher
	<i>Rhipidura fuliginosa</i>	Grey Fantail
	<i>R. leucophrys</i>	Willie Wagtail
Halcyonidae	<i>Dacelo novaegiuneae</i>	Laughing Kookaburra
Hirundinidae	<i>Todiramphus macleayii</i>	Forest Kingfisher
	<i>Hirundo neoxena</i>	Welcome Swallow
Maluridae	<i>Hirundo nigricans</i>	Tree Martin
	<i>Malurus cyaneus</i>	Superb Fairy-wren
	<i>M. lamberti</i>	Variegated Fairy-wren
Megapodidae	<i>Alectura lathamii</i>	Australian Brush-turkey
Meliphagidae	<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill
	<i>Anthochaera carunculata</i>	Red Wattlebird
	<i>A. chrysoptera</i>	Little Wattlebird
	<i>Lichenostomus chrysops</i>	Yellow-faced Honeyeater
	<i>Lichmera indistincta</i>	Brown Honeyeater
	<i>Manorina melanocephala</i>	Noisy Miner
	<i>Meliphaga lewinii</i>	Lewin's Honeyeater
	<i>Melithreptus albogularis</i>	White-throated Honeyeater
	<i>Philemon corniculatus</i>	Noisy Friarbird
	<i>Phylidonyris nigra</i>	White-cheeked Honeyeater
	<i>Anthus novaeseelandiae</i>	Richard's Pipit
Motacillidae	<i>Oriolus sagittatus</i>	Olive-backed Oriole
Oriolidae	<i>Sphecotheres viridis</i>	Figbird
Pachycephalidae	<i>Colluricincla harmonica</i>	Grey Shrike-thrush
	<i>Pachycephala rufiventris</i>	Rufous Whistler
Pardalotidae	<i>Acanthiza lineata</i>	Striated Thornbill
	<i>Acanthiza nana</i>	Yellow Thornbill
	<i>A. pusilla</i>	Brown Thornbill
	<i>Gerygone mouki</i>	Brown Gerygone
	<i>G. olivacea</i>	White-throated Gerygone
	<i>Pardalotus punctatus</i>	Spotted Pardalote
	<i>Pardalotus striatus</i>	Striated Pardalote

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Greater Sanctuary Ecological Constraints Analysis

	<i>Sericornis frontalis</i>	White-browed Scrubwren
	<i>Sericornis brevirostris</i>	Weebill
Pelecanidae	<i>Pelecanus conspicillatus</i>	Australian Pelican
Petroicidae	<i>Eopsaltria australis</i>	Eastern Yellow Robin
	<i>Microeca fascians</i>	Jacky Winter
Phalacrocoracidae	<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant
Phasianidae	<i>Coturnix ypsilophora</i>	Brown Quail
Plataleidae	<i>Threskiornis molucca</i>	Australian White Ibis
Ploceidae	<i>Neochmia temporalis</i>	Red-browed Finch
Podargidae	<i>Podargus strigoides</i>	Tawny Frogmouth
Psittacidae	<i>Alisterus scapularis</i>	Australian King Parrot
	<i>Glossopsitta pusilla</i>	Little Lorikeet
	<i>Platycercus elegans</i>	Crimson Rosella
	<i>Platycercus eximius</i>	Eastern Rosella
	<i>Trichoglossus chlorolepidotus</i>	Scaly-breasted Lorikeet
	<i>T. haematodus</i>	Rainbow Lorikeet
Ptilonorhynchidae	<i>Ptilonorhynchus violaceus</i>	Satin Bowerbird
Rallidae	<i>Fulica atra</i>	Eurasian Coot
	<i>Gallinula tenebrosa</i>	Dusky Moorhen
	<i>Gallinula philippensis</i>	Buff-banded Rail
	<i>Porphyrio porphyrio</i>	Purple Swampphen
Strigidae	<i>Ninox novaeseelandiae</i>	Southern Boobook
	<i>N. strenua</i>	Powerful Owl
Sturnidae	<i>Acridotheres tristis</i>	Common Myna
Sylviidae	<i>Cincloramphus mathewsi</i>	Rufous Songlark
	<i>Cisticola exilis</i>	Golden-headed Cisticola
Threskiornithidae	<i>Threskiornis spinicollis</i>	Straw-necked Ibis
Tytonidae	<i>Tyto novaehollandiae</i>	Masked Owl
Zosteropidae	<i>Zosterops lateralis</i>	Silvereye
Mammals		
Canidae	<i>Canis familiaris</i>	Dog/Dingo
	<i>Vulpes vulpes</i>	Fox
Cervidae	<i>Cervus elaphus</i>	Red Deer
Dasyuridae	<i>Antechinus stuartii</i>	Brown Antechinus
Leporidae	<i>Lepus capensis</i>	Brown Hare
	<i>Oryctolagus cuniculus</i>	European Rabbit
Macropodidae	<i>Macropus giganteus</i>	Eastern Grey Kangaroo
	<i>M. rufogriseus</i>	Red-necked Wallaby
	<i>Wallabia bicolor</i>	Swamp Wallaby
Molossidae	<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat
	<i>Mormopterus sp.2</i>	Freetail-bat
	<i>Tadarida australis</i>	White-striped Mastiff Bat
Muridae	<i>Melomys cervinipes</i>	Fawn-footed Melomys
	<i>Mus musculus</i>	House Mouse
	<i>Rattus fuscipes</i>	Bush Rat
	<i>R. lutreolus</i>	Swamp Rat
	<i>R. rattus</i>	Black Rat
Peramelidae	<i>Isodon macrourus</i>	Northern Brown Bandicoot

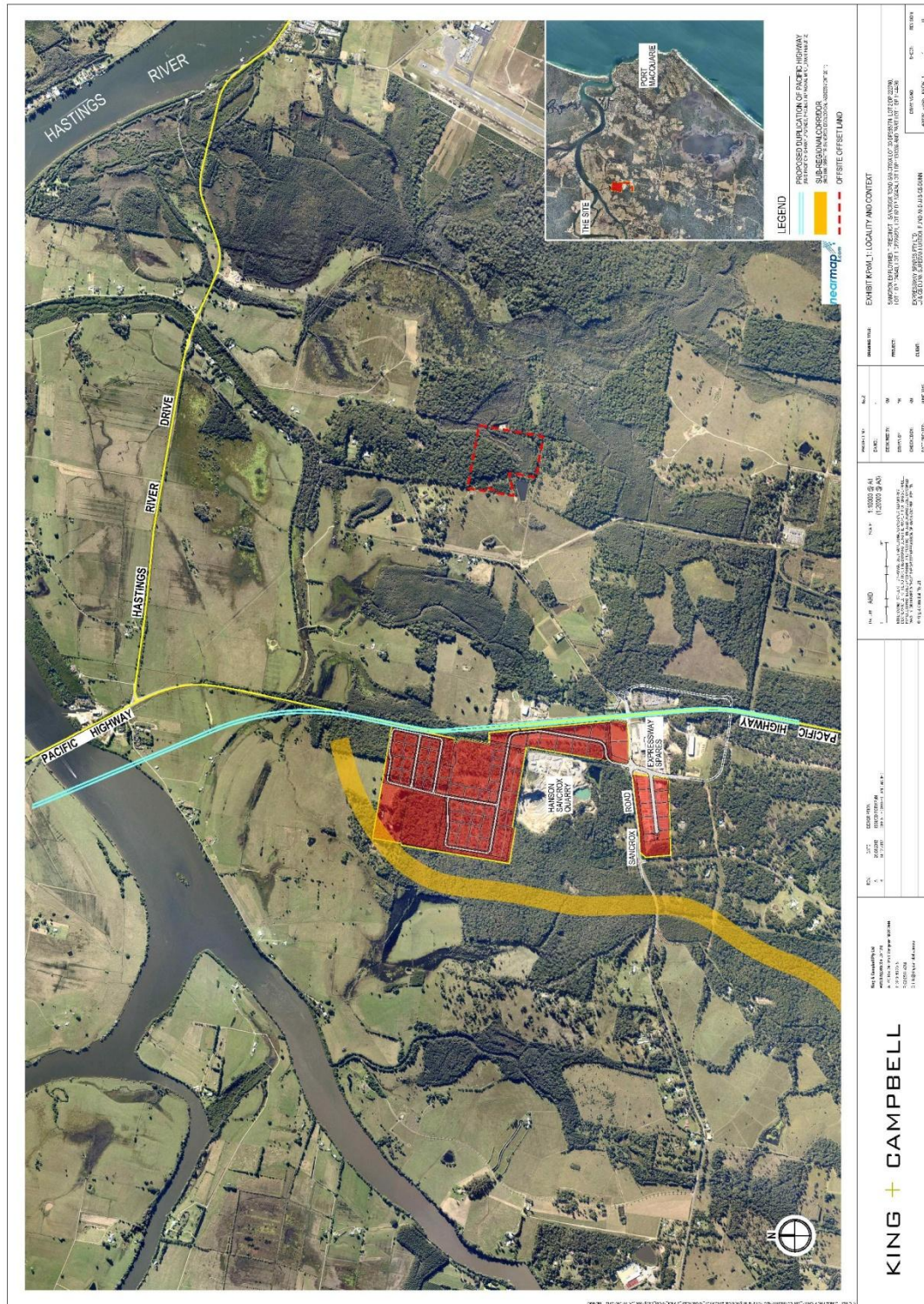
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Greater Sanctuary Ecological Constraints Analysis

Petauridae	<i>Petaurus australis</i>	Yellow-bellied Glider
	<i>P. breviceps</i>	Sugar Glider
	<i>P. norfolkensis</i>	Squirrel Glider
Phalangeridae	<i>Trichosurus vulpecula</i>	Common Brushtail Possum
Phascolarctidae	<i>Phascolarctos cinereus</i>	Koala
Pseudocheiridae	<i>Pseudocheirus peregrinus</i>	Ring-tailed Possum
Pteropodidae	<i>Pteropus poliocephalus</i>	Grey-headed Flying Fox
Rhinolophidae	<i>Rhinolophus megaphyllus</i>	Eastern Horseshoe Bat
Tachyglossidae	<i>Trichoglossus aculeatus</i>	Short-beaked Echidna
Vespertilionidae	<i>Chalinolobus gouldii</i>	Gould's Wattled Bat
	<i>C. morio</i>	Chocolate Wattled Bat
	<i>Miniopterus australis</i>	Little Bentwing-bat
	<i>Myotis macropus</i>	Large-footed Myotis
	<i>Nyctophilus sp.</i>	Long-eared Bat
	<i>Scotorepens orion</i>	Eastern Broad-nosed Bat
	<i>S. sp.</i>	Broad-nosed Bat
	<i>Vespadelus darlingtoni</i>	Large Forest Bat
	<i>V. pumilus</i>	Eastern Forest Bat

Appendix 4 – Koala activity recorded at SAT sites.

Site	Trees sampled	Activity (%)	Site	Trees sampled	Activity (%)
GS3	25	0.00	GS61	25	0.00
GS6	26	0.00	GS62	26	0.00
GS8	25	0.00	GS63	25	0.00
GS13	25	0.00	GS64	27	3.70
GS14	28	0.00	GS65	25	0.00
GS15	25	0.00	GS67	27	0.00
GS16	30	16.67	GS68	25	0.00
GS17	27	0.00	GS69	25	0.00
GS18	25	0.00	GS70	25	0.00
GS19	28	0.00	GS73	27	3.70
GS20	25	0.00	GS93	25	0.00
GS21	25	0.00	GS98	26	0.00
GS22	30	16.67	GS108	25	0.00
GS23	30	16.67	GS113	25	0.00
GS24	25	0.00	GS123	30	3.33
GS26	25	0.00	GS124	30	6.67
GS27	25	0.00	GS125	30	3.33
GS28	25	0.00	GS131	30	3.33
GS29	25	0.00	GS144	25	0.00
GS30	25	0.00	GS145	30	3.33
GS31	25	0.00	GS165	26	0.00
GS32	25	0.00	GS166	25	0.00
GS33	25	0.00	GS167	30	3.33
GS34	25	0.00	GS168	25	0.00
GS36	25	0.00	GS169	25	0.00
GS37	30	6.67	GS175	25	0.00
GS38	30	3.33	GS176	30	3.33
GS39	25	0.00	GS177	25	0.00
GS40	25	0.00	GS187	26	0.00
GS41	27	0.00	GS188	25	0.00
GS42	25	0.00	GS189	25	0.00
GS43	25	0.00	GS190	25	0.00
GS44	26	0.00	GS191	30	3.33
GS45	30	3.33	GS192	30	3.33
GS46	25	0.00	GS193	30	3.33
GS47	25	0.00	GS200	25	0.00
GS48	25	0.00	GS201	25	0.00
GS49	25	0.00	GS214	25	0.00
GS51	25	0.00	GS215	26	0.00
GS52	28	0.00	GS216	25	0.00
GS53	26	0.00	GS227	25	0.00
GS54	30	6.67	GS228	26	0.00
GS55	25	0.00	GS241	25	0.00
GS57	26	0.00	GS242	25	0.00
GS58	25	0.00	GS243	25	0.00
GS59	25	0.00	GS244	30	3.33
GS60	25	0.00	GS245	30	3.33



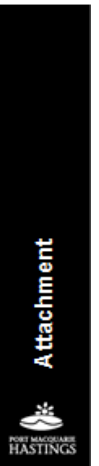
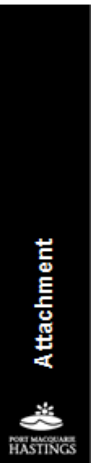


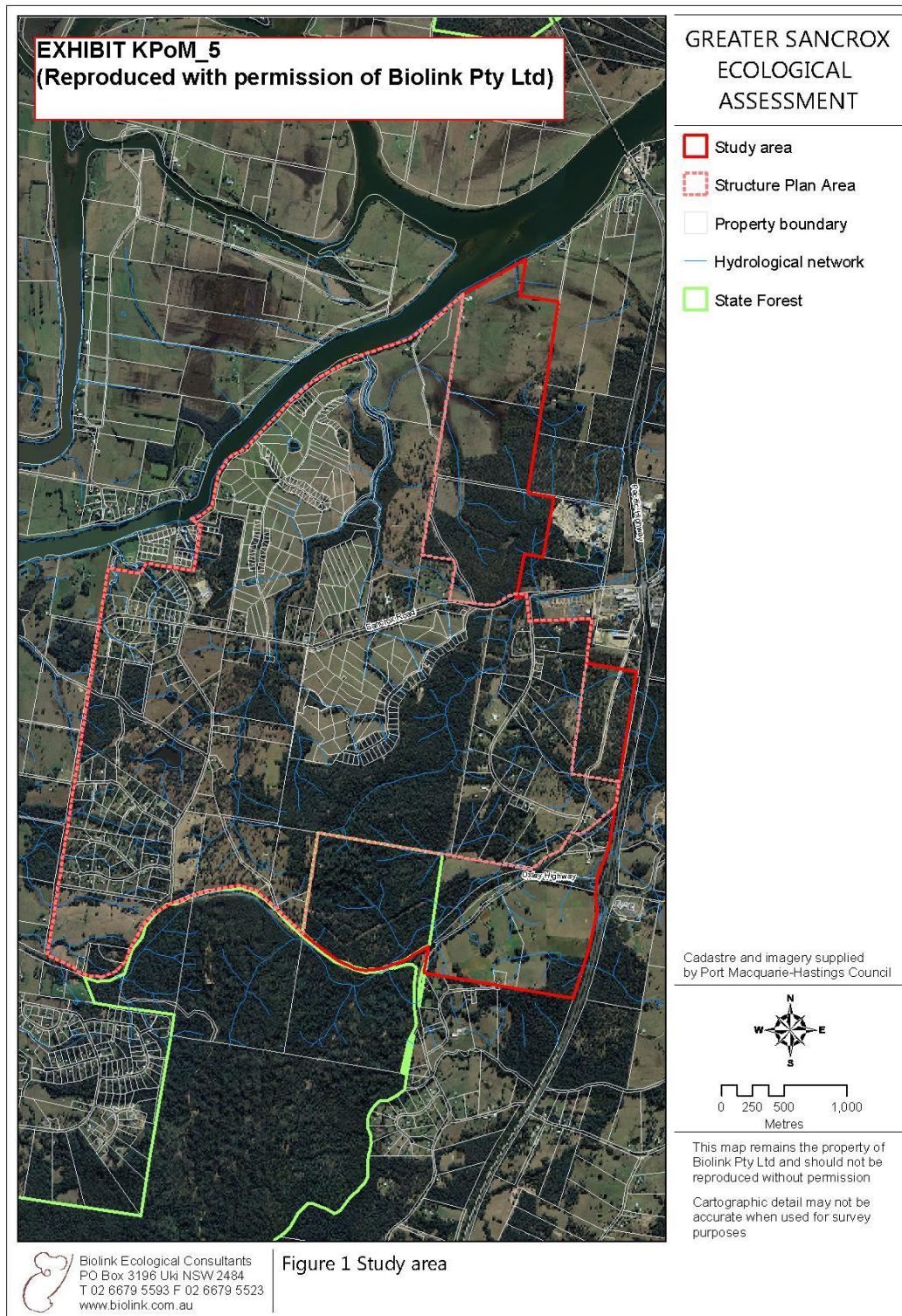
EXHIBIT KPOM_3
Schedule 2 Sheet 1 of The Sanroox
Employment Land Environmental Lands
& Services Planning Agreement



ENVIRONMENTAL MANAGEMENT LAND	
A	DUNN RESIDENCE LAND
B	DUNN RESIDENCE LAND
C	DUNN LAND
D	DUNN LAND
E	DUNN LAND
F	EXPRESSWAY SPARES LAND
G	EXPRESSWAY SPARES LAND
H	McMULLEN LAND
E4	ENVIRONMENTAL LIVING
E2	ENVIRONMENTAL MANAGEMENT
	DEDICATED ENVIRONMENTAL LANDS
	DEDICATED ENVIRONMENTAL LANDS
	PACIFIC HIGHWAY BUFFER
	PACIFIC HIGHWAY BUFFER
	DEDICATED ENVIRONMENTAL LANDS
	DEDICATED ENVIRONMENTAL LANDS

KING + CAMPBELL	
King & Campbell Pty Ltd 10/04/2013 A: PO Box 251 Port Taranaki 6024 T: 06 4800 2000 F: 06 4800 2000 E: info@kingandcampbell.co.nz	DATE: 10/04/2013 BY: J. CAMPBELL FOR: KING + CAMPBELL SUBJECT: ENVIRONMENTAL MANAGEMENT LAND
ENVIRONMENTAL MANAGEMENT LAND & DUNN RESIDENCE LAND - SHEET 1	ENVIRONMENTAL MANAGEMENT LAND & DUNN RESIDENCE LAND - SHEET 1
SANROOX ENTERPRISE ZONE SANROOX ROAD AND PACIFIC HIGHWAY	SANROOX ENTERPRISE ZONE SANROOX ROAD AND PACIFIC HIGHWAY
EXPRESSWAY SPARES PTY LTD	EXPRESSWAY SPARES PTY LTD
4800_Envil09M3	4800_Envil09M3
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Vegetation Management Plan
Sancrox Employment Precinct
(Lot 30 DP 255774, Lot 2 DP 222740, Part Lot 1
DP 1144490, Lot 1 DP 124543, Lot 1 DP 1131036,
Lot 62 DP 754434, Lot 1 DP 226821)
and
Offsite Offset Environmental Lands
(Lots 67 to 71 & 75 DP 805548)
Sancrox

Prepared for:

Expressway Spares Pty Ltd
JJ & CB Dunn Superannuation Fund
JJ & CB Dunn

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Date: **March, 2013**

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Attachment



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 - Appendix VMP_B – Gantt Chart – Costing and Timing
 - Appendix VMP_C – List of Proposed Native Plants
 - Appendix VMP_D – PMHC 'VMP Audit and Monitoring Proforma'

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Vegetation Management Plan
Sancrox Employment Precinct

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Vegetation Management Plan
Sancrox Employment Precinct

Section 1

Introduction

This Vegetation Management Plan (VMP) has been prepared to accompany a Development Application for the industrial subdivision of the following properties within the Sancrox Employment Zone:

- Lot 30 DP 255774 ;
- Lot 2 DP 222740;
- Lot 1 DP 124543;
- Lot 1 DP 226821;
- Lot 62 DP 754434;
- Lot 1 DP 1131036 ; and
- Part Lot 1 DP 1144490

This VMP provides detail on the work to be undertaken within 15 Management Units within both the above-listed properties and within the following Offsite Offset Environmental Lands:

- Lots 67 to 71 and 75 DP 805548.

The total land area where works will be undertaken in accordance with this VMP is 37.73ha.

The required works include weed eradication, plant establishment and ongoing maintenance, management and monitoring, as set out in the Sancrox Employment Land Environmental Lands and Services Planning Agreement (SEL_ELS_PA) between Port Macquarie-Hastings Council (PMHC), Expressway Spares Pty Ltd, JJ & CB Dunn Superannuation Fund and JJ & CB Dunn.

This VMP has been prepared in consultation with Wild Things Native Gardens (WNG) and Peter Parker Environmental Consultants Pty Ltd (PPEC).

1.1 VMP - Objectives

The objectives of this VMP are to clearly set out the environmental obligations for the land, as established by the VPA, by specifying the following control measures:

- Vegetation management measures in relation to the Environmental Lands, Offsite Offset Environmental Lands, Dunn Residence Land, Drainage Reserve and the Visual Buffer Land;
- Staged clearing of the existing vegetation within the lands recently zoned for industrial land uses in conjunction with the staged

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Vegetation Management Plan
Sancrox Employment Precinct

development of the Sancrox Employment Precinct;

- Implementation of regeneration treatments and ongoing maintenance regimes including weed control;
- Revegetation works including protection of existing vegetation communities as well as creating meaningful extensions to them;
- Satisfying PMHC's requirements as defined in the VPA with respect to the Establishment Obligation (leading to dedication of the Environmental lands as public reserve) and the Management Obligation; and
- Satisfying PMHC's requirements as defined in the VPA with respect to the establishment and ongoing maintenance of the Dunn Residence Land.

The implementation of this VMP will be the responsibility of the property owners. All works will be carried out by a suitably qualified bush regenerator and design documented and monitored and certified by a suitably qualified consultant. All certification will be submitted to PMHC as required by the VPA.

In preparation of this VMP, the following resources have been utilised:

- A Flora and Fauna Survey of the properties, prepared for King & Campbell Pty Ltd on behalf of the landowners by Peter Parker Environmental Consultants, 10 April, 2012;
- The VPA between PMHC and the landowners, dated 15 July, 2011; and
- The informational guide 'Vegetation Management Plan Requirements' prepared by Port Macquarie Hastings Council (as at 14 December 2011).

1.2 Timing

The Sancrox Employment Precinct lands are to be developed for their future industrial uses in stages, identified as stage 'South 1' (southern side of Sancrox Road) and stages 'North 1', 'North 2' and 'North 3' (northern side of Sancrox Road). The northern and southern stages can proceed independently of each other. Planting and environmental works within the Offsite Offset lands will proceed as a first stage with either the northern or southern stages, whichever proceeds first.

All planting in accordance with this VMP will be undertaken as the first stage in either the southern or northern stages and generally in association with the staged industrial development of the lands as follows:

1. South 1 - Industrial development of the southern stage will initiate the planting and environmental works within Management Units 1, 2 and 3; and
2. North 1 - Industrial development associated with this stage will initiate the planting and environmental works within Management Units 4 to 13.

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Vegetation Management Plan
Sancrox Employment Precinct

Section 2

Existing Site Conditions

2.1 Vegetation

Peter Parker Environmental Consultants Pty Ltd (PPEC) undertook an initial vegetation survey during 2007 as part of a flora and fauna survey to accompany the Local Environmental Study for the rezoning of the site. The objective of the survey was to provide a detailed investigation of the ecological characteristics of the site. Amendment No.3 to PMH LEP 2011 was subsequently gazetted on the 26 August, 2011.

This initial survey has now been updated to take into account the current relevant legislation and additional ground truthing. A full copy of the Flora and Fauna Survey, 10 April, 2012, is included at **Appendix D** to the Statement of Environmental Effects.

The vegetation classification system adopted by PPEC was based on the following:

"The vegetation classification system adopted for this survey is based on Walker and Hopkins (1990). This system describes the components of the association in the following order:

- *the first species is usually the most abundant in the tallest stratum;*
- *a second species is chosen when it is always present in the tallest stratum. In the absence of a tallest stratum species, the most abundant species in the next most conspicuous stratum is chosen. For those associations where several species dominate, these are listed in order of abundance;*
- *a third species is chosen from many stratum usually a ground cover or shrub layer. It is used as an indicator species;*
- *the forest type refers to the distances between the crowns of adjacent trees (refer to Table 1); and*
- *the height of the tallest stratum is defined by the terms 'low', 'mid-high', or 'tall' (refer to Table 2)."*

The survey recorded a total of four (4) vegetation communities comprising nine (9) associations. The survey noted that much of the vegetation within the Sancrox Employment Precinct was significantly modified by the removal of approximately 900 saw logs by the KC Cooper and Sons Sawmill in 2002. In addition substantial hazard reduction clearing was conducted following a wildfire in 2003. It was concluded that these activities, including burning and slashing, have simplified the vegetation on the low and ground strata.

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Table 1 below describes the vegetation associations on site and should be read in association with Figure 6 from PPEC 2012 (reproduced below table).

Table 1 – Vegetation Associations	
1. Forest	
1.1 Tall to very tall forest – identified as number 1 in Figure 6 below.	
<i>Eucalyptus robusta</i> (swamp mahogany), <i>Melaleuca quinquenervia</i> (broad-leaved paperbark), <i>Glochidion ferdinandii</i> var. <i>ferdinandii</i> (cheese tree).	
Distribution	North-west of site within existing residential allotment (Lot 62 DP 754434) and a small isolated area within Lot 1 DP 124543.
Condition	Has not been logged for over 20 years and exhibits a rich diversity of canopy, mid, low and understorey vegetation. Together with vegetation on the adjoining land to the west, this vegetation is the core conservation asset of the site.
Structure and Species Composition	
a) Upper storey	Swamp mahogany and broad-leaved paperbark
b) Mid storey	Cheese tree, broad-leaved paperbark, silver aspen, lilly pilly, blue lilly pilly, pink-tipped bottlebrush.
c) Low understorey	Tall saw-sedge, hairy pittosporum, flintwood, small-leaf tuckeroo, muttonwood, banana bush and silkpod vine.
d) Ground cover	Guinea vine, basket grass, morinda, native violet, wombat berry, common ground fern and smilax.
Comments	This association falls within the description of the Swamp Sclerophyll Forest on Coastal Floodplains of the NSW Far North Coast, Sydney Basin and South East Corner bioregions ("swamp forest") and is an Endangered Ecological Community (EEC).
1.2 Tall to very tall open forest – identified as number 2 in Figure 6 below.	
<i>Eucalyptus pilularis</i> (blackbutt), <i>Eucalyptus microcorys</i> (tallowwood), <i>Eucalyptus propinqua</i> (small-fruited grey gum), broad-leaved paperbark, <i>Eriolasia stricta</i> (wiry panic grass).	
Distribution	Occurs on the more elevated lands on Lot 62 DP 754434, adjacent to that described above.
Condition	Has not been logged for over 20 years and is of significant conservation value.
Structure and Species Composition	
a) Upper storey	Blackbutt, tallowwood, white stringybark, small-fruited grey gum, pink bloodwood and grey ironbark.
b) Mid storey	Forest oak, turpentine, cheese tree, broad-leaved paperbark, pink-tipped bottlebrush and red ash.
c) Low understorey and ground cover	Cordyline, gristle fern, blade grass, tall saw-sedge, bracken, matrush, breynia and climbers.
Comments	This association's conservation value is as a buffer to the EEC described above.
1.3 Tall open forest – identified as number 4 in Figure 6 below.	
Blackbutt, tallowwood, <i>Eucalyptus globoides</i> (white stringybark), <i>Syncarpia glomulifera</i> (turpentine), <i>Pteridium esculentum</i> (bracken).	
Distribution	Occurs to the south and east (Lot 2 DP 222740) of the quarry, on gently sloping land.

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Condition	Recent logging has occurred and the understorey vegetation has been impacted by machinery related to logging. However it has retained its floristic character.
Structure and Species Composition	
a) Upper storey	Blackbutt, red bloodwood, pink bloodwood, white mahogany and grey ironbark.
b) Mid storey	Turpentine, forest oak, silkpod vine, red ash and pink-tipped bottlebrush.
c) Low understorey and ground cover	Matrush, sweet sarsaparilla, pomax, sandfly ziera, silkpod vine, prickly-leaved teatree, geebung, basket grass, wiry panic, blue fax lily, white dogwood and common ground fern.
Comments	This forest has not been recently burned or slashed and supports several species of small to medium native mammals.

1.4 Low to mid-high forest - identified as number 3 in Figure 6 below:

Melaleuca styphelioides (prickly-leaved teatree), *Allocasuarina littoralis* (black she-oak), *Lomandra longifolia* (matrush).

Distribution	Recorded on the flats on the south-western corner of the site adjoining the Expressway Spares machinery stockpile (Lot 30 DP 255774).
Condition	Requires weeding and maintenance only.
Structure and Species Composition	
a) Upper storey	Prickly-leaved teatree, forest oak, broad-leaved paperbark and swamp mahogany (tallowwood, blackbutt and pink bloodwood in ecotone).
b) Mid storey	Forest oak, silkpod vine, prickly-leaved teatree and broad-leaved paperbark.
c) Low understorey and ground cover	Tall saw-sedge, matrush, basket grass, native violet and hairy pittosporum.
Comments	This association is a floodplain community which falls under the EEC classification of 'Swamp Sclerophyll Forest on Coastal Floodplains of the NSW Far North Coast, Sydney Basin and South East Corner regions'.

2. Woodland

2.1 Tall open woodland - identified as number 5 in Figure 6 below:

Blackbutt, tallowwood, white stringybark, turpentine.

Distribution	This community occurs over the majority of Lot 1 DP 124543 and Lot 1 DP 226821.
Condition	This association has been extensively logged and following wildfires in 2003, the understorey vegetation and ground covers have been removed. This association is regularly slashed resulting in a poor floristic assemblage.
Structure and Species Composition	
a) Upper storey	Blackbutt, tallowwood, small-fruited grey gum, pink bloodwood, white stringybark and white mahogany.
b) Mid storey	Forest oak and turpentine.
c) Ground cover	Blady grass, whiskey grass, matrush, twining glycine and dusky coral pea.
Comments	Given the current management regime of slashing, this association is unlikely to recover.

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Table 1 – Vegetation Associations	
2.2 Tall open woodland - identified as number 6 in Figure 6 below:	
Blackbutt, white stringybark, blady grass.	
Distribution	This association occurs in the north-western corner of the residential allotment (Lot 62 DP 754434) and on the eastern extent of Lot 1 DP 124543, generally adjacent the association described above.
Condition	This association comprises scattered trees over a grassy understorey.
Structure and Species Composition	
a) Upper storey	Blackbutt, white stringybark, grey ironbark, tallwood and pink bloodwood.
b) Mid storey	Forest oak.
c) Ground cover	Blady grass, whiskey grass, matrush, Rhode's grass and lantana.
3. Sedgeland / rushland	
3.1 Low open to closed sedgeland to rushland - identified as number 7 in Figure 6 below:	
<i>Cyperus polystachos</i> (bunchy flat-sedge), <i>Eleocharis equisetina</i> (a spike-rush), <i>Juncus usitatus</i> (tussock rush).	
Distribution	This association has developed along a drainage swale within Lot 1 DP 124543 which originates in the quarry.
Structure and Species Composition	A number of perennial pools occur along the length of the swale which have been colonised by the sedges and rushes.
3.2 Tall closed sedgeland to rushland - identified as number 8 in Figure 6 below:	
<i>Typha orientalis</i> (broad-leaved cumbungi), <i>Periscaria decipiens</i> (slender knotweed), <i>Schoenoplectus mucronatus</i> (a sedge).	
Distribution	Occurs along a constructed drain (Lot 2 DP 222740) which runs parallel to Sancro Road.
Condition	Association is dominated by the broad-leaved cumbungi suggesting that untreated drainage passes into the waterway.
Structure and Species Composition	
a) Upper storey	Broad-leaved cumbungi, slender knotweed, lantana, sedges and exotic grasses.
c) Low understorey and ground cover	Smooth cassia, slender pigeon grass, tea tree, lantana and exotic annuals.
Comments	The exotic mosquito fish was recorded in this waterway, which is known to prey on native frog eggs.
4. Grassland	
4.1 Low to tall closed grassland - identified as number 9 in Figure 6 below:	
<i>Setaria gracilis</i> (slender pigeon grass), <i>Axonopus affinis</i> (broad-leaved carpet grass), whiskey grass.	
Distribution	Generally occurs adjacent the Pacific Highway and Sancro Road (Lot 2 DP 222740) and within the existing residential allotment (Lot 62 DP 754434).
Condition	Dominated by exotic species and is of low conservation value.
Structure and Species Composition	
a) Ground cover	Slender pigeon grass, broad-leaved carpet grass, blady grass, Parramatta grass, broad-leaved paspalum and opportunistic weeds.
Comments	No recovery potential under the current management regime.

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(Source: Flora and Fauna Survey, Peter Parker Environmental Consultants Pty Ltd, April, 2012, Figure 6, p.31)

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Table 2 below provides a summary of the vegetation significance.

Table 2 – Vegetation Significance	
Threatened plant species	No plant species of vegetation significance was recorded on the site. However the preservation of the forest which adjoins the EEC located near the western boundary is warranted as it supports potential habitat for threatened species
Endangered Ecological Communities	One EEC was recorded on site – ‘Swamp Sclerophyll Forest on Coastal Floodplains of the NSW Far North Coast, Sydney Basin and South East Corner bioregions’ (‘swamp forest’). This community has retained an intact structure, is relatively weed free and is not grazed by stock in the north and south of the site. In the far east of the site it has been impacted by past logging and hazard reduction activities.
Significant habitats and wildlife corridors	Part of the forest and woodland communities support high conservation value habitat. The retention of these habitats will support functional wildlife corridors.
Old growth trees	Trees within the majority of the site are relatively young given the previous sawmill harvesting and wildfires. Trees in the range 800 – 1200 mm dbh do not exhibit tree hollows or burls.
NPVs key habitats and corridors	No mapped regional or sub-regional corridor passes through the site, however key habitat has been mapped in and to the west of the site.

2.2 Weed Mapping

Weed species on the site have been identified in the Flora and Fauna Survey (PPEC) and mapped by Wild Things Native Gardens (WNG). A Baseline Weed Map is provided at **Exhibit 3**.

Table 3 below provides a summary of existing on site weed species

Table 3 – Weed species list	
Botanic Names	Common Names
GYMNOSPERMS	
PINACEAE	
<i>Pinus Elliotii</i>	Slash Pine
ANGIOSPERMS	
CYPERACEAE	
<i>Cyperus eragrostis</i>	Umbrella sedge
POACEAE	
<i>Andropogon virginicus</i>	Whisky grass
<i>Axonopus affinis</i>	Broad leaved carpet grass
<i>Chloris gayana</i>	Rhodes grass
<i>Eragrostis curvula</i>	Love grass
<i>Paspalum dilatatum</i>	Paspalum

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Table 3 – Weed species list	
Botanic Names	Common Names
<i>Paspalum distichum</i>	Water paspalum
<i>Paspalum murvillei</i>	Paspalum
<i>Paspalum wetsteinii</i>	Broad leaved paspalum
<i>Pennisetum clandestinum</i>	Kikuyu
<i>Pennisetum purpureum</i>	Bhara grass
<i>Setaria gracilis</i>	Slender pigeon grass
<i>Sporobolus indicus</i> var. <i>Carpensis</i>	Parramatta grass
DICOTYLEDONS	
ANACARDIACEAE	
<i>Schinus terebinthifolia</i>	Broad-leaved pepper tree
ASCLEPIADACEAE	
<i>Asclepias curvassica</i>	Redhead cotton bush
ASTERACEAE	
<i>Ageratina adenophora</i>	Crofton weed
<i>Ageratum houstonianum</i>	Blue billygoat weed
<i>Crassocephalum crepidioides</i>	Thickhead
<i>Hypochaeris radicata</i>	Flatweed
<i>Senecio lautus</i>	Fireweed
<i>Sonchus oleraceus</i>	Sowthistle
CAESALPINIACEAE	
<i>Senna pendula</i> var. <i>Glabra</i>	Winter senna
<i>Senna floribunda</i>	Smooth senna
CONVOLVULACEAE	
<i>Ipomea cairica</i>	Coastal morning glory
LAURACEAE	
<i>Cinnamomum camphora</i>	Camphor Laurel
MELASTOMACEAE	
<i>Tibouchina "Alstonvillea"</i>	Tibouchina
NYMPHAEACEAE	
<i>Nymphaea caerulea</i> ssp. <i>zanzibarensis</i>	Cape Water lilly
OXALIDACEAE	
<i>Oxalis</i> sp.	Oxalis
SOLANACEAE	
<i>Solanum mauritanium</i>	Wild tobacco
VERBENACEAE	
<i>Lantana camara</i>	Lantana
<i>Verbena bonariensis</i>	Purple top

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Vegetation Management Plan
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Field investigations undertaken by Martens and Associates as part of the LES process for the rezoning found that the site is predominantly underlain by sedimentary geology consisting of fine-medium grained sandstone and siltstone.

Sub surface conditions can be split into three broad categories:

1. Soil category 1: Deep colluvial silty clays and plastic clays. The deep clay soil profile in this area is indicative of weathered dolerite or similar intrusive rock.
2. Soil category 2: Sub-surface materials are shallow colluvial and residual silts, silty clays and overly sandy clays.
3. Soil category 3: Fill, possibly uncontrolled consisting of sandstone and other rock cobbles / floaters in a silty / sandy clay mix.

(source: Preliminary Geotechnical Constraints Assessment, Martens & Associates, October, 2009, p.9).

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Section 3

Proposed Environmental Works

3.1 Management Units

The Management Units (units) are detailed on **Exhibit 2**. Planting stages, rates and quantities in relation to each unit is included in the Management Unit Planting, Stages, Rates and Quantities Table at **Appendix VMP_A**

Table 4 below provides a brief description of the proposed works for each unit and should be read in conjunction with **Exhibit 2** and **Appendix VMP_A**

Table 4 - Management Units			
No.	Location	Brief description of unit and required works	Timing
Sancrox South			
1	E2 zoned land within Lot 30 DP 255774	<p><i>Vegetation type – Existing Swamp Sclerophyll EEC.</i></p> <p>Displays a high level of resilience with weed infestations mostly limited to sporadic small infestations of Lantana and Winter senna.</p> <p>Primary weeding will greatly reduce chances of reinfestation and maintenance will be minimal.</p>	<p>Works to be undertaken in conjunction with Stage 1 South development.</p> <p>No planting required. Primary weeding to be undertaken in stage 1, with maintenance weeding required in stages 2 and 3..</p>
2	E3 zoned land within Lot 30 DP 255774	<p><i>Vegetation type – Requires riparian mixed wet sclerophyll planting to provide a buffer to the EEC in Unit 1</i></p> <p>Currently cleared.</p> <p>A 2 m wide planted (<i>Lomandra longifolia</i>) buffer adjacent to the Unit 1 Swamp Oak EEC is required to protect the edge adjacent to Expressway Spares from weed grass incursions.</p> <p>Area will require repeat spraying to kill grass followed by mulching at a 100mm thickness to minimise reinfestation of grasses.</p> <p>Unit 2 will include Biofiltration infrastructure and further planting of macrophytes and riparian species will be required after the required drainage works have been completed.</p> <p>Tubestock supply required.</p> <p>Mulch required (for <i>Lomandra</i> buffer).</p>	<p>Works to be undertaken in conjunction with Stage 1 South development.</p> <p>Planting to be undertaken in stage 1. Primary weeding to be undertaken in stage 1, with maintenance weeding and spraying required in stages 2 and 3.</p> <p>On-going treatment of vines and <i>Ageratina adenophora</i> (Crofton weed) required. Timing will be crucial with targeted spraying required prior to seed set.</p>

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Table 4 - Management Units			
No.	Location	Brief description of unit and required works	Timing
3 1.07 ha	E3 zoned land within Lot 30 DP 255774, adjacent Sancrox Road	<p><i>Vegetation type – Requires riparian mixed wet sclerophyll planting. Currently contains landscape plantings.</i></p> <p>Removal of Tibouchina "alstonvillea" plantings adjacent to Sancrox Road, as required by PMHC. This work should be completed by a licensed tree contractor and chipped and left onsite to be used as mulch for future plantings.</p> <p>Supplementary buffer planting will be required adjacent to Sancrox road following removal of Tibouchina "alstonvillea" plantings.</p> <p>Tubestock supply required.</p>	<p>Works to be undertaken in conjunction with Stage 1 South development.</p> <p>Planting to be undertaken in stage 1. Primary weeding and tree removal to be undertaken in stage 1, with maintenance weeding and spraying required in stages 2 and 3.</p>
Sancrox North			
4 7,260m ²	Drainage channel zoned IN1, within Lot 2 DP 222740.	<p><i>Vegetation type – Requires riparian mixed wet sclerophyll planting.</i></p> <p>Requires primary weeding, maintenance and planting</p>	<p>Works to be undertaken in conjunction with Stage 1 North development.</p> <p>Planting to be undertaken in stage 1. Primary weeding to be undertaken in stage 1, with maintenance weeding and spraying required in stages 2 and 3.</p> <p>On-going treatment of <i>Ageratina adenophora</i> (Crofton weed) required. Timing will be crucial with targeted spraying required prior to seed set.</p>
5 7,706m ²	E3 zoned strip of land within Lot 2 DP 222740, adjacent the Pacific Highway.	<p><i>Vegetation type – Requires Dry Sclerophyll Forest planting. Currently grassland.</i></p> <p>Requires weed control and planting. As the aim of this planting is to provide screening from the Pacific Highway, the extent of the works will be determined in conjunction with the RMS detailed design and undertaken in a program co-ordinated with the adjacent Highway construction works by the RMS.</p>	<p>Works to be undertaken in conjunction with Stage 1 North development.</p> <p>Planting to be undertaken in stage 1. Planting preparation to be undertaken in stage 1 and maintenance spraying to be undertaken in stages 2 and 3.</p>
6 3,066m ²	Small area of E2 zoned land within Lot 1 DP 124543, being an EEC	<p><i>Vegetation type – Existing Swamp Sclerophyll EEC.</i></p> <p>Requires primary weeding only.</p>	<p>Works to be undertaken in conjunction with Stage 1 North development.</p> <p>No planting required. Primary weeding to be undertaken in stage 1, with maintenance weeding required in stages 2 and 3.</p>
7a 5,109m ²	15m wide E3 zoned land immediately adjacent unit 6	<p><i>Vegetation type – Plantings required to provide an inner buffer to the Swamp Sclerophyll EEC in Unit 6.</i></p>	<p>Works to be undertaken in conjunction with Stage 1 North development.</p>

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Table 4 - Management Units			
No.	Location	Brief description of unit and required works	Timing
		Requires removal of grass weeds and buffer planting for adjacent unit 6. Tubestock supply required.	Planting to be undertaken in stage 1. Primary weeding to be undertaken in stage 1, with maintenance weeding required in stages 2 and 3.
7b 5,807m ²	15m wide E3 zoned land immediately adjacent unit 7a	<i>Vegetation type – Planting required to provide an outer buffer to the Swamp Sclerophyll EEC in Unit 6.</i> Unit 7b will include Biofiltration infrastructure and further planting may be required after the required drainage works have been completed Primarily requires weed control and planting. Tubestock supply required.	Works to be undertaken in conjunction with Stage 1 North development. Planting to be undertaken in stage 1. Primary weeding to be undertaken in stage 1, with maintenance weeding required in stages 2 and 3.
7c 3,590m ²	E3 strip of land adjacent the Pacific Highway, within Lot 1 DP 226821	<i>Vegetation type – Requires Dry Sclerophyll Forest plantings.</i> Requires weed control and planting. As the aim of this planting is to provide screening from the Pacific Highway, works will be undertaken in a program co-ordinated with the adjacent Highway construction works by the RTA.	Works to be undertaken in conjunction with Stage 1 North development. Planting to be undertaken in stage 1. Planting preparation to be undertaken in stage 1, with maintenance spraying required in stages 2 and 3.
8 3176m ²	Small area of E2 zoned land on the northern boundary of Lot 1 DP 226821 and Lot 62 DP 754434	<i>Vegetation type – Supplementary Dry Sclerophyll Forest planting required.</i> Requires weed control and supplementary planting. Tubestock supply required.	Works to be undertaken in conjunction with Stage 1 North development. Planting to be undertaken in stage 1. Planting preparation to be undertaken in stage 1, with maintenance weeding and spraying required in stages 2 and 3.
9 8,404m ²	Small area of E2 zoned land on the northern boundary of Lot 62 DP 754434, adjacent unit 8. This unit is within the Dunn residence land area.	<i>Vegetation type – Requires Dry Sclerophyll Forest planting. Currently cleared.</i> Requires weed control and full planting. Multiple herbicide treatments to prepare area for planting. Site preparation to include ripping of soil as directed by planting contractor. Mulch to be mechanically spread in a mosaic pattern to a depth of 100mm. Tubestock supply required.	Works to be undertaken in conjunction with Stage 1 North development. Planting to be undertaken in stage 1. Planting preparation to be undertaken in stage 1, with maintenance weeding and spraying required in stages 2 and 3.
10 3.4 ha	E4 zoned land within the Dunn residence land area.	Residential allotment. Requires minor weed control works adjacent the existing dam	Works to be undertaken in conjunction with Stage 1 North development. No planting required. Curtilage to

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Table 4 - Management Units			
No.	Location	Brief description of unit and required works	Timing
			the existing dwelling to be maintained for continued fire protection purposes. Primary weeding adjacent existing dam to be undertaken in Stage 1 and maintenance weeding to be undertaken in Stage 2 and 3.
11 1.6 ha	E2 zoned land immediately adjacent the western and southern boundary of unit 10, within the Dunn residence land area.	<i>Vegetation type – Supplementary Dry Sclerophyll Forest planting required.</i> Displays a high level of resilience with weed infestations mostly limited to the edges. Primary weeding will greatly reduce chances of reinfestation and maintenance will be minimal. Supplementary planting required.	Works to be undertaken in conjunction with Stage 1 North development. Planting to be undertaken in stage 1. Primary weeding to be undertaken in stage 1, with maintenance weeding required in stages 2 and 3.
12 8.9 ha	Part E2 zoned land within Lot 62 DP 754434 and part Lot 1 DP 124543 and strip of RU1 zoned land within Lot 1 DP 1131036	<i>Vegetation type – Existing Swamp Sclerophyll EEC.</i> Displays a high level of resilience with weed infestations mostly limited to the edges. Minor infestation of Acacias was also noted and these could pose a threat to the integrity of the adjoining bushland if retained. Primary weeding will greatly reduce chances of reinfestation and maintenance will be minimal.	Works to be undertaken in conjunction with Stage 1 North development. No planting required. Primary weeding and tree removal to be undertaken in stage 1, with maintenance weeding required in stages 2 and 3.
13 1.2 ha	Strip of E2 zoned land on the northern boundary of Lot 1 DP 124543 and strip of RU1 zoned land within Lot 1 DP 1131036	<i>Vegetation type – Supplementary Dry Sclerophyll Forest planting required.</i> Requires weed removal, erection of Koala fencing and supplementary planting.	Works to be undertaken in conjunction with Stage 1 North development. No planting required. Primary weeding to be undertaken in stage 1, with maintenance weeding and spraying required in stages 2 and 3.
14a 12.6 ha	IN1 zoned land within Lot 2 DP 222740	Will require clearing prior to development in accordance with its industrial zoning. Clearing to be undertaken as part of Stage North 1 earthworks.	The timing of the required vegetation clearing will be associated with the staging of the earthworks for future industrial use.
14b 28.1 ha	IN1 zoned land within part Lot 1 DP 1144490, part Lot 1 DP 124543, Lot 1 DP 226821 and part Lot 62 DP 754434	Will require clearing prior to development in accordance with its industrial zoning. Clearing to be undertaken as part of Stage North 2 earthworks.	The timing of the required vegetation clearing will be associated with the staging of the earthworks for future industrial use.
14c 15 ha	IN1 zoned land within Lot 1 DP 124543 and part	Will require clearing prior to development in accordance with its industrial zoning.	The timing of the required vegetation clearing will be associated with the staging of the

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Table 4 - Management Units			
No.	Location	Brief description of unit and required works	Timing
	Lot 1 DP 1144490	Clearing to be undertaken as part of Stage North 3 earthworks. These works will not occur prior to July 2016 as a minimum and likely not until July 2018.	earthworks for future industrial use.
15a 2.48 ha	Offsite Offset Environmental, comprising Lots 67 to 71 DP 805548	<u>Vegetation type – Supplementary Dry Sclerophyll Forest planting required.</u> Has been previously regenerated, however still contains a significant amount of Pigeon grass. Repeated spraying required, however resilience will be high and area will respond well to treatment and additional planting.	Works to be undertaken in conjunction with either Stage 1 North or Stage 1 South development, whichever occurs first. Planting to be undertaken in stage 1. Primary weeding and planting preparation to be undertaken in stage 1, with maintenance weeding and spraying required in stages 2 and 3.
15b 12.7 ha	Offsite Offset Environmental Lands, comprising Lot 75 DP 805548	<u>Vegetation type – Supplementary Swamp Sclerophyll Forest planting required.</u> In a good condition with occasional <i>Lantana camara</i> scattered throughout. The southern edge of the unit will require spraying for grass incursion weeds and there is a medium infestation of <i>Lantana camara</i> requiring hand weeding using the Cut and Paint method as described in the weed treatment table. Supplementary planting required.	Works to be undertaken in conjunction with either Stage 1 North or Stage 1 South development, whichever occurs first. Planting to be undertaken in stage 1. Primary weeding to be undertaken in stage 1, with maintenance weeding required in stages 2 and 3.

3.1.1 Costing

The costing associated with the completion of the specific tasks for each unit is detailed in **Appendix VMP_B**. (Note: all costings are estimates for budgeting purposes only).

3.2 Seed collection

Seed collection for all planting stages will be undertaken at project commencement, or upon Development Consent if necessary, due to seasonal differences in the vegetation communities.

All seed collected for propagation of tubestock will be provenance and species indicative of the vegetation community in which they will be planted.

All seed collection is to follow seed collection guidelines set out by Greening Australia's FLORA Bank code of practice.

Seeds for propagation of revegetation plant material and direct seeding are to be collected from the following areas:

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- Expressway spares property;
- Dunn property;
- The Offsite Offset Environmental Lands (where appropriate/necessary); and
- The Cairncross and Burrawan State forests (Seed collection licences required).

Seed collection records are to be maintained including date of collection, collector, collection site and species.

Dry seed can be stored for up to 12 months in water proof containers.

3.3 Weed Control

3.3.1 Noxious and priority weed

Primary weeding is required in units 1, 2, 3, 4, 6, 11 and 12 by an experienced bush regeneration contractor with membership to Australian Association of Bush regeneration (AABR).

Weeds declared noxious under the Noxious Weeds Act (1993) include, *Ageratina adenophora* (Crofton weed), *Lantana camara* (Lantana) and *Schinus terebinthifolia* (Broad leaved pepper tree). Both Crofton weed and Broad leaved pepper tree are listed as noxious weeds in the Hastings LGA, while lantana is considered a Weed of National Significance (WONS). The Lantana is likely, by the sale of their seeds or movement within the state to an area of the State, to spread in the State or outside the State.

The Mid North Coast Weeds Advisory Committee (MNCWAC) and Port Macquarie Hastings Council Development Control Plan 2011 require landholders to reduce the spread of *Ageratina adenophora* (Crofton Weed) to adjoining properties, to within a 10 m buffer of the property boundary. This plant poses a threat to primary production, the environment or human health, is widely distributed in an area to which the order applies and is likely to spread in the area or to another area.

3.3.2 Weed Control Methods

Successful management of the weeds present on site will involve a variety of weed control methods. Recommendations of weed control methods per species recorded on site are listed in Table 5 below.

Timing of weed control can also be critical and generally, control should aim to interrupt the weed's reproductive cycle.

Where timing of weed treatments is significant it has been included in the Gantt Chart attached at Appendix VMP_B.

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Table 5 – Weed control measures			
Scientific name	Common name	Recommended control methods	Comments and treatment timing
Noxious & priority weeds			
<i>Ageratina adenophora</i>	Crofton weed	<ul style="list-style-type: none"> Remove seeds Hand pull ensuring removal of rhizome 	<ul style="list-style-type: none"> Woody perennial Treat early in project due to intractable nature and likely need for retreatment
<i>Ageratum houstonianum</i>	Blue billygoat weed	<ul style="list-style-type: none"> May need to use mattock or knife 	<ul style="list-style-type: none"> Treat prior to seeding in September
<i>Lantana camara</i>	Lantana	<ul style="list-style-type: none"> Cut and paint¹ stem bases with glyphosate mix³ 	<ul style="list-style-type: none"> Stack weed refuse in neat piles to maximise potential regeneration between piles and facilitate maintenance access
<i>Solanum mauritianum</i>	Wild tobacco		
<i>Schinus terebinthifolia</i>	Broad-leaved pepper tree	<ul style="list-style-type: none"> Inject base of stems with glyphosate mix³ 	<ul style="list-style-type: none"> Use cordless drill or chainsaw auger with 10mm or larger drill bit to create herbicide injection points Control as high priority
<i>Senna pendula</i> var. <i>Glabra</i>	Winter senna	<ul style="list-style-type: none"> Cut stems at ground level and paint¹ with glyphosate and metsulfuron mix² Hand pull immature plants as practical Spray seedlings with 1:100 glyphosate mix⁴ as appropriate 	<ul style="list-style-type: none"> Shrubs Thin vascular tissue can render success of glyphosate only cut and paint treatments variable Treatment during April/May flowering can assist in location of individual plants Treat before May/June pod production In densely infested areas mass germination of seedlings may occur following treatment
<i>Senna floribunda</i>	Smooth senna		
Other woody weeds			
<i>Acacia baileyana</i>	Cootamundra wattle	<ul style="list-style-type: none"> Cut and paint¹ stem bases with glyphosate mix³ 	<ul style="list-style-type: none"> To be removed by a qualified arborist Young seedlings to be hand pulled by bush regeneration contractor as needed
<i>Acacia podalyrifolia</i>	Queensland silver wattle		
<i>Tibouchina alstonvillea</i>	Lasiandra		
<i>Asclepias curvassica</i>	Redhead cotton bush	<ul style="list-style-type: none"> Remove any seeds Hand pull smaller plants Cut and paint¹ stem bases with glyphosate mix³ Spray seedlings with 1:100 glyphosate mix⁴ as appropriate 	<ul style="list-style-type: none"> In densely infested areas mass germination of seedlings may occur following treatment
<i>Cinnamomum camphora</i>	Camphor laurel	<ul style="list-style-type: none"> Inject base of stems with glyphosate mix³ 	<ul style="list-style-type: none"> Use cordless drill or chainsaw auger with 10mm or larger drill bit to create herbicide injection points Control as high priority
<i>Pinus elliotii</i>	Slash pine		
Vine weeds			
<i>Araujia sericifera</i>	Moth vine	<ul style="list-style-type: none"> Remove any seeds Scrape and paint⁵ stem bases with glyphosate mix³ 	<ul style="list-style-type: none"> Control as high priority Treat early in project due to intractable nature and likely need for retreatment In densely infested areas mass germination of seedlings may occur following initial treatment
<i>Ipomoea cairica</i>	Coastal morning glory		
<i>Tekomaria</i> sp.		<ul style="list-style-type: none"> Cut and paint¹ larger vine bases with glyphosate mix³ 	<ul style="list-style-type: none"> Control as high priority In densely infested areas mass

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Table 5 – Weed control measures			
Scientific name	Common name	Recommended control methods	Comments and treatment timing
		<ul style="list-style-type: none">Scrape and paint¹ stem bases with glyphosate mix²	germination of seedlings or re-sprouting from parent vines may occur following initial treatment
Perennials			
<i>Crassocephalum crepidioides</i>	Thickhead	<ul style="list-style-type: none">Hand pull or spray with 1:100 glyphosate mix² as appropriate	<ul style="list-style-type: none">Treatment is a low priority
<i>Hypochoeris radicata</i>	Flatweed		
<i>Senecio madagascariensis</i>	Fireweed		
<i>Sonchus oleraceus</i>	Sowthistle		
<i>Verbena bonariensis</i>	Purpletop		
Tall pasture grasses			
<i>Andropogon virginicus</i>	Whisky grass	<ul style="list-style-type: none">Spray with 1:100 glyphosate mix² as appropriateWhere practical reduce seed head formation and dispersal by removing with whipper snipper or slashing	<ul style="list-style-type: none">Occurrence will naturally reduce as revegetation and regeneration produces shrub canopy and associated soil shadingControl required only when inhibiting natural regeneration or impeding growth of plantings
<i>Chloris gayana</i>	Rhodes grass		
<i>Eragrostis curvula</i>	Love grass		
<i>Paspalum dilatatum</i>	Paspalum		
<i>Paspalum urvillei</i>	Paspalum		
<i>Paspalum wettsteinii</i>	Broad leaved paspalum		
<i>Setaria gracilis</i>	Slender pigeon grass		
<i>Sporobolus indicus</i> var. <i>Capensis</i>	Paramatta grass		
Rhizomatous pasture grasses			
<i>Axonopus affinis</i>	Broad-leaved carpet grass	<ul style="list-style-type: none">Spray with 1:100 glyphosate mix² as appropriate	<ul style="list-style-type: none">Occurrence will naturally reduce as revegetation and regeneration produces shrub canopy and associated soil shadingControl required only when inhibiting natural regeneration or impeding growth of plantings
<i>Pennisetum clandestinum</i>	Kikuyu		
<i>Pennisetum purpureum</i>	Bhaha grass		
Other weeds			
<i>Cyperus eragrostis</i>	Umbrella sedge	<ul style="list-style-type: none">Spray with 1:100 glyphosate mix² as appropriate	
<i>Nymphaeae caerulea</i> ssp. <i>Zanzibarensis</i>	Cape water lily		
<i>Oxalis</i> sp.	Oxalis		

(Notes on herbicide mixes:

¹ Cut stems as close to ground as practical using sharp loppers or secateurs and apply herbicide mix as soon as possible.

² Undiluted 360 g/L glyphosate (such as Roundup Biactive®) and 835g/L glyphosate 10g/kg metsulfuron-methyl (such as Trounce®) mixed at ratio of 10:1. Herbicide marker dye (such as Bigfoot®) added to colour. Apply via 100mm container with small nozzle.

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³ Undiluted 360 g/L glyphosate (such as Roundup Biactive®) and herbicide marker dye (such as Bigfoot®) to colour. Apply via 100mm container with small nozzle.

⁴ 1:100 360 g/L glyphosate (such as Roundup Biactive®) and clean water. Herbicide marker dye (such as Bigfoot®) to be added to mix to colour.

⁵ Scrape stems of vine weeds exposing vascular tissue along approximately 30cm stem length and 1/3 of stem in cross section)

3.4 Planting Works

All plantings will be indicative of the vegetation community in which they will be planted, as set out in the Flora and Fauna Survey undertaken by PPEC (2012) and will cover a range of aspects such as stratum, fauna forage species, colonisers and long lived species. Planting will aim to mimic the natural diversity found in each of the vegetation associations.

Planting lists have been established using the species already occurring both on site and on adjacent lands, together with the species lists generated by the DECCV (Department Environment Climate Change and Water).

Plantings will be as per planting lists for each vegetation association, as included at **Appendix VMP_C**.

Planting stages, rates and quantities in relation to each individual unit is included at **Appendix VMP_A**.

3.4.1 General Planting Guidelines

Unless otherwise specified the following applies to all planting activities.

With the exception of transplants, all plants are to be supplied in a weed free state as tubestock. Roots should extend to base of tube without circling. When removed from the tube, the root ball and growing medium should remain in-tact.

Placement of plants on site is to be undertaken by a suitably qualified bush regenerator who is able to identify all species to be planted and has an understanding of their mature size and ecological requirements.

Plants should be placed to mimic a common natural distribution pattern of clumped groups of 3 to 7 plants of same species.

All plants are to be watered on the day of planting with 2 litres of water. A liquid water retention and wetting agent additive (such as *Hydretain*® or *Hydrasoil*®) is to be used with this initial watering. If no rainfall greater than 10mm in a single event occurs during one month following planting, the initial watering, including additive, is to be repeated. Water retention crystals are not to be used.

Watering frequency in addition to that involving additive is obviously weather and soil moisture dependent and therefore specifications are irrelevant. It is important to note however that:

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- single rainfall events of less than 10mm do little to replenish soil moisture; and
- on average 3 waterings are required after planting tubestock.

Recommended techniques for revegetating depends on the bushland resilience expressed on site.

Areas of low bushland resilience require staged planting, transplanting, direct seeding and ongoing weed maintenance.

Areas of high resilience (Units 1, 11 and 12) can be managed by hand weeding treatments (as listed in previous section), relying on natural regeneration and recruitment of species from existing plants.

3.4.2 Site preparation for planting

Initial woody weed treatment in the planting areas is to be completed a minimum of 6 months prior to commencement of planting.

During this 6 month period, the following weed control measures are to be implemented:

- re-treatment of woody weeds as necessary;
- treatment of *Senna pendula* seedlings germinating from the significant bank of soil stored weed seed; and
- multiple spraying of pasture grasses and annuals present, timed to minimise seed production and deplete the soil stored weed seed bank.

Depending on soil condition at time of planting, planting areas may be ripped to a depth of 15cm minimum, with rip lines at minimum of 2 metre spacing's. Added advantages of ripping include improved plant performance and dislodgement of poisoned *Senna pendula* roots.

3.5 Nesting Boxes

Vegetation of significance and ecological value is contained within the E2 and E3 zones which apply to the site. The majority of old growth or recruitment trees are also located within the environmental lands. Vegetation to be removed is zoned either IN1 or IN2.

Parker (2012) notes that the vegetation within the areas zoned industrial had previously been extensively logged and is therefore relatively young. It was also noted that trees in these areas with a 800 – 1200 mm dbh do not exhibit tree hollows or burls. Accordingly, as the proposed industrial use of the site will not remove existing hollow bearing trees, the provision of nest boxes as compensation was not required.

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A Bushfire Protection Assessment was prepared by Australian Bushfire Protection Planners Pty Ltd to accompany the Local Environmental Study for the rezoning of the site.

The purpose of the assessment was to determine the required bushfire protection strategies for the development and to address the following matters:

- The provision of building setbacks ('defendable spaces') from vegetated areas and the siting of buildings to minimize the impact of radiant heat and direct flame contact;
- Fire fighting water supplies;
- Access requirements for customers/staff and emergency service vehicles;
- Construction standards to be used for the future building within the proposed development to minimize the vulnerability of the building to ignition from radiation and ember attack;
- Land management responsibilities; and
- Evacuation management.

All required APZ's for the site ('defendable spaces') are fully contained within the developable portions of the site. All high quality habitat areas, including the EEC's are contained within the E2 Environmental Management zone, supported and protected by adjoining vegetated E3 Environmental Management zones.

3.7 Fire History

The Flora and Fauna Survey undertaken by PPEC noted that a significant extent of the existing vegetation on site had been modified as a result of a wildfire in 2003, which was followed by hazard reduction clearing. This is particularly evident in the 'woodland' vegetation association (the majority of Lot 1 DP 124543 and Lot 1 DP 226821) where tree spacing's are around 5 – 10m and the understorey vegetation and groundcover has been removed.

Additionally, the wildfire of 2003 together with the previous saw log harvesting has contributed to the relatively young age of trees and minimal hollow-bearing trees.

High frequency fire, where two or more successive fires close together in time to interfere with or limit the ability of plants to build up a seed bank of sufficient size to maintain the population through the next fire, is recognised as a key threatening process under the Environmental Planning and Assessment Act, 1979.

Therefore in relation to the Sancrox Employment Precinct as a whole, the PPEC survey concluded that appropriate mitigation measures in

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relation to the on-site vegetation is to:

- Preserve the high quality habitat, including the EEC's;
- Provide for appropriate wildlife corridors;
- Retain the larger hollow-bearing trees within the EEC's; and
- Retain the majority of recruitment trees (being those which will potentially contain hollows in 20 – 50 years).

The above mitigation measures have been achieved with the zoning of high quality habitat areas as E2 Environmental Conservation, to be supported and protected by adjoining, fully vegetated E3 Environmental Management zones. All Hollow-bearing trees and recruitment trees are located within the E2/E3 zones.

The provision of edge roads generally adjacent the E3/E2 zone will provide a level of protection for these high quality habitat areas from any fires emanating from within the proposed industrial subdivision.

3.8 Management Recommendations from Ecological Report

The following recommendations are contained in the PPEC Flora and Fauna Survey of 2012 (p.55). This VMP has incorporated these findings, where appropriate.

- *The protection of key habitats and corridors identified in Fig. 9 of this report;*
- *The retention of forested linkages to adjoining bushland areas through a corridor network as depicted in Fig. 7;*
- *Bio-retention swales or their equivalent will avoid excessive nutrients or sediment loads entering areas identified for conservation, including EECs (see engineering details in the statement of environmental effects);*
- *Woodland remnants within the wildlife corridors or environmental protection areas will be actively and naturally regenerated and these will incorporate extensive koala food tree plantings (see environmental management plan);*
- *Landscape plantings and street trees will be selected from natives of local provenance particularly species recorded at the site (refer to Appendix 1: Flora) and wherever possible koala food trees will be retained;*
- *Weed control and management will be undertaken throughout the environmental protection zones; and*
- *Hazard reduction burning will not be undertaken within areas proposed for conservation.*

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Vegetation Management Plan
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A list of all proposed native plants associated with the proposed revegetation works is included in **Appendix VMP_C**.

3.10 Consistency with Koala Plan of Management

A Koala Plan of Management has been prepared for the site with its aim being to:

- *Improve the quality and Koala population carrying capacity of the existing habitat within the Environmental Lands currently zoned E2 Environmental Conservation, E3 Environmental Management and E4 Environmental Living; and*
- *Ameliorate the potential impacts of the Sancrox Employment Lands on the Koala by encouraging the peripheral and/or transient movement of Koalas from the industrially zoned lands in the east to the higher value habitat on the Environmental Lands.*

These aims will be achieved through the staging of works, the planting of Koala feed trees within the Environmental Lands, the provision of temporary Koala proof fencing associated with the staged clearing of the industrially zoned lands and the provision of permanent Koala proof fencing upon completion of the civil works.

1. Staging of works

The Sancrox Employment Precinct lands are to be developed in stages; South 1, North 1, North 2 and North 3 and the Offset Offsite lands, where the northern and southern stages can proceed generally independently of each other. Planting and environmental works within the Offsite Offset lands will proceed as a first stage with either the northern or southern stages, whichever proceeds first.

2. Planting of Koala food trees

Koala feed tree species such as *Eucalyptus microcorys* (tallowwood), *Eucalyptus propinqua* (small fruited grey gum) and *Eucalyptus robusta* (swamp mahogany) will represent the majority of all canopy planting in Management Units 4, 7a, 7b, 8, 9, and 11.

No Koala feed tree species will be provided within the Pacific Highway buffer areas (Management Units 5 and 7c).

3. Temporary Koala proof fencing and staged clearing

The purpose of temporary Koala proof fencing in association with staged tree removal is to provide for the gradual displacement of koala activity into higher carrying capacity habitat immediately to the west of the subject site, over a 4 – 6 year timeframe.

The location of the temporary fencing is shown on **Exhibit 4**.

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The location of permanent koala proof fencing is also shown on Exhibit 4. The permanent fencing includes the boundaries of Lot 71 (Management Unit 4) to assist in the creation of a linkage within the drainage reserve between the Pacific Highway and environmental lands to the west.

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Section 4

Monitoring and Reporting

4.1 Monitoring and Audit Proforma for Each Management Unit

The following monitoring program will apply to each of the Management Units identified in **Table 4**:

- Yearly photo monitoring of each Management Unit; and
- Yearly VMP audit report for each Management Unit. A copy of the Council's 'VMP Audit and Monitoring Proforma' is included in **Appendix VMP_D**.

4.2 Schedule of Proposed Reporting Periods

The costing spread sheet included as **Appendix VMP_B** details the intended invoicing and annual reporting timeframes and requirements.

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Section 5

Maintenance and Contingency

5.1 Maintenance of Plantings

Maintenance of all areas will be ongoing for the period of the VMP and will include a mix of hand weeding and herbicide spraying in conjunction with tining of seed set.

It is anticipated that the majority of maintenance works will focus on grass weeds and annuals in most areas with some ongoing vine treatment in unit 3. Treatment of *Ageratina adenophora* (Crofton weed) will also be ongoing focusing on infestations occurring in drainage lines in unit 2 and 4, timing will be crucial in the treatment of these infestations, with targeted spraying prior to seed set.

Maintenance to include but not be limited to the following:

- Spraying annual and grass weeds between plantings
- Hand weeding of high bushland resilience areas
- Watering plantings
- Replacing plantings as necessary
- Maintenance of fencing (Area 13); and
- Re-mulching of Lomandra Buffer area 2 and roadside planting in area 3.

5.2 Street Tree Plantings

All street trees are proposed to be *Eucalyptus microcorys* and will be:

- Minimum size at planting – 50 litre (1.5 – 2m tall);
- Double staked (50mm x 50mm x 1.8m) and hessian tied;
- Sub-soil drainage provided in heavy soils; and
- 12 months maintenance / defects liability period secured by bond.

Further details are to be provided with subdivision construction certificate documentation.

5.3 Contingency Plans for Failed Works

A contingency of 10% for plants (tubestock) and staged planting costs is to be provided as per the Costing spread sheet included as **Appendix VMP_B**.

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Section 6

Costings

The Costing spread sheet included as **Appendix VMP_B** details the costs associated with each Management Unit over the three year period. (Note: all costings are estimates for budgeting purposes only).

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Section 7

Dedication of Land and Planning Agreements

7.1 Planning Agreement

The site is subject to Sancrox Employment Land Environmental Lands and Services Planning Agreement (SEL_ELS_PA) between Port Macquarie-Hastings Council, Expressway Spares Pty Ltd, JJ & CB Dunn Superannuation Fund and JJ & CB Dunn. The VPA is included on the accompanying CD to this submission.

The VPA provides the certainty of a legal framework and funding mechanism to deliver the environmental works associated with the development of the Sancrox Employment Precinct in accordance with the approved VMP.

The VPA provides the legal framework, funding and reporting mechanisms for:

- The establishment of the Environmental Management Lands, the Offsite Offset Environmental Lands and the Dunn Residence Land in accordance with the provisions of the VMP (Establishment Obligation);
- The staged dedication of the Environmental Management Lands and the Offsite Offset Environmental Lands as public reserve;
- The maintenance of the Environmental Management Lands and the Offsite Offset Environmental Lands for three years post completion of the Establishment Obligation (Management Obligation);
- The maintenance of the Dunn Residence Land during the Management Period; and
- The payment of the Management Contribution to provide funding for the maintenance of the Environmental Management Lands.

7.2 Location of the lands to be dedicated

The Environmental Management Lands to be dedicated to Council includes all of the land zoned E2 Environmental Conservation and E3 Environmental Management (excluding the Management Units within the Dunn residence land holding) within the subject lands and the Offsite Offset Environmental Lands.

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O:\4802_ExpresswaySpares\8-Approvals\2013.03.21_VMP_KPOM_March2013\VMP_March 2013\word and excel
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Vegetation Management Plan
Sancrox Employment Precinct**7.3 Timing of the Dedication**

The VPA has established the following timing periods in relation to the Environmental Management Lands:

- Establishment Period – the time in which the Environmental Management Lands, Offsite Offset Environmental Lands and Dunn Residence Land must be established in accordance with the provisions of the VMP, being a period of not less than 12 months from the commencement of the subject Development and ending when the works are completed to Council's satisfaction.
Stage 1 of the environmental works (see Appendix VMP_B) will be undertaken during the Establishment Period;
- Management Period – In relation to the Environmental Management Lands, the Offsite Offset Environmental Lands and the Dunn Residence Land, the period commencing at the end of the Establishment Period and ending three years later, or such period as agreed to;
- Staged Dedication of the subject Environmental Management Lands to Council as a public reserve, free of cost, is to occur with the registration of the relevant plan of subdivision for that stage of the Development; and
- Management Contributions, being a monetary Development Contribution per hectare of Net Developable Area to fund the maintenance of the Environmental Management Lands for a period of 17 years, are to be paid on a stage by stage basis with the release of the subdivision certificate for that particular stage.

7.3.1 Offsite Offset Environmental Lands

The timing of the dedication of the Offsite Offset Environmental Lands to Council is to be consistent with Clause 20 of the VPA, as set out below:

"20 Making of Development Applications

- 20.1 The Developer is not to make, or cause or permit to be made, or to give its consent as owner to the making of, an application for a Subdivision Certificate relating to the part of the Development on the Expressway Spares Land unless the Offsite Offset Environmental Land has first been dedicated to the Council.*
- 20.2 Clause 20.1 does not apply:*
- 20.2.1 to an application for consent or approval under the Act to subdivide the Expressway Spares Land for the purpose only of facilitating the dedication of the Offsite Offset Environmental Land to the Council, or*

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20.2.2 *if the Council and the Developer agree in writing
to the contrary."*

Accordingly, the Offsite Offset Environmental Lands is to be dedicated
to Council as a public reserve prior to the issue of the first Subdivision
Certificate issued on the Expressway Spares Land.

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Planting Stages - Sancrox Employment Precinct

Management Unit	Vegetation Type	Planting Rate	Number	Planting Type	Number
1	Swamp Sclerophyll EEC	NA	0	No Planting	0
Subtotal			0		0
2	Riparian mixed wet sclerophyll	1/m2 buffer	500	Groundcover	500
Subtotal			500		500
3	Riparian mixed wet sclerophyll	3 rows x 1m spacings	1425	Lower Canopy Shrubs	950 475
Subtotal			1425		1425
4	Riparian mixed wet sclerophyll	30%	1992	Koala Food Trees Upper Canopy Lower Canopy Shrubs Forage Trees Groundcover	198 184 246 550 85 779
Subtotal			1992		2042
5	Dry Sclerophyll Forest		5775	Upper Canopy Lower Canopy Shrubs Forage Trees Groundcover	962 1604 1924 215 1070
Subtotal			5775		5775
6	Swamp Sclerophyll EEC	NA		No Planting	
7a	Swamp Sclerophyll EEC	30%	1377	Koala Food Trees Upper Canopy Lower Canopy Shrubs Groundcover	127 255 255 510 255
Subtotal			1377		1402
7b	Swamp Sclerophyll EEC	Supplementary Planting	80	Koala Food Trees	105
Subtotal			80		105
7c	Dry Sclerophyll Forest	1/m2	3043	Upper Canopy Lower Canopy Shrubs Forage Trees Groundcover	500 500 1000 185 500
Subtotal			3043		2685
8	Dry Sclerophyll Forest	30%	854	Koala Food Trees Upper Canopy Lower Canopy Shrubs Groundcover	114 158 158 316 158

Subtotal			854		904
9	Dry Sclerophyll Forest	1.5/m2	11015	Koala Food Trees Upper Canopy Lower Canopy Shrubs Forage Trees Groundcover	520 1925 1925 3858 962 1925
Subtotal			11015		11115
10	NA	NA	0	No Planting	0
Subtotal			0		0
11	Swamp Sclerophyll EEC	Supplementary Planting		Koala Food Trees Upper Canopy Shrubs Groundcover	537 914 1828 915
Subtotal			0		4194
Management Units 14 a, b, c (development area) - 250 street trees (Koala food trees)					
15a	Dry Sclerophyll Forest	50%	10832	Koala Food Trees Upper Canopy Lower Canopy Shrubs Forage Trees Groundcover	1274 1593 1593 3983 796 1593
			10832	0	10832
15b	Swamp Sclerophyll	Supplementary Planting	380	Koala Food Trees Shrubs Groundcover	138 200 100
Subtotal			380		438

Planting Type	Totals
Street Trees (Koala food trees)	250
Groundcover	7795
Shrubs	14644
Lower canopy	7231
Upper canopy	6491
Forage Trees	2243
Koala Food Trees	3013
Totals	41417

Sanctuary Employment Precinct - DRAFT VMP costings table (NB All costings are for budgeting purposes only)														
Management Units	Units	Stage 1 (Establishment period)				Stage 2 (Management period)				Stage 3 (Ongoing management)				Comments
		A	B	C	D	A	B	C	D	A	B	C	D	
1	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
2	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
3	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
4	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
5	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
6	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
7a	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
7b	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
7c	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
8	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
9	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
10	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
11	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
12	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
13	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
14a, 14b & 14c (Development area)	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
15a	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
15b	Primary weeding													
	Maintenance													
	Planting preparation													
	Maintenance spraying													
	Plant supply													
Overall project costs														
Total 100% provision														

N.B. Total cost does not include 10% contingency.
Planting will be staged over 2 years. Refer to planting stages table. All plantings will be watered with hydrants to improve water holding capacity during the establishment phase.
Maintenance weeding will be ongoing. Refer to weed treatment list.
Planting and spraying rates reflect averages at various sites in the Hastings LGA.

SWAMP SCLEROPHYLL FOREST EEC PLANTING LIST	
SPECIES LIST	COMMON NAME
UPPER CANOPY	
<i>Callistemon salignus</i>	Willow Bottlebrush
<i>Casuarina glauca</i>	Swamp She-Oak
<i>Eucalyptus resinifera</i> subsp <i>hemilampra</i>	Red Mahogany
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Livistona australis</i>	Cabbage-tree Palm
<i>Melaleuca quinquenervia</i>	Broad-leafed Paperbark
LOWER CANOPY	
<i>Allocasuarina littoralis</i>	Black She-Oak
<i>Glochidion ferdinandii</i>	Cheese Tree
<i>Melaleuca ericifolia</i>	Swamp Paperbark
<i>Melaleuca linariifolia</i>	Snow-in-summer
<i>Melaleuca sieberi</i>	Sieber's Paperbark
<i>Melaleuca styphelioides</i>	Prickly-leaved Paperbark
<i>Syzygium smithii</i>	Lillypilly
COLONISING SHRUBS	
<i>Acacia elongata</i>	Swamp Wattle
<i>Acacia longifolia</i>	Sydney Golden Wattle
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Dodonaea triquetra</i>	Hop Bush
<i>Homalanthus populifolius</i>	Bleeding Heart
<i>Polyscias sambucifolia</i>	Elderberry Panax
<i>Pultenaea villosa</i>	Hairy Bush Pea
<i>Viminaria juncea</i>	Golden Spray
SHRUBS	
<i>Banksia oblongifolia</i>	Swamp Banksia
<i>Banksia spinulosa</i>	Hair-pin Banksia
<i>Callistemon pachyphyllus</i>	Wallum Bottlebrush
<i>Ficus coronata</i>	Sandpaper Fig
<i>Leptospermum polygalifolium</i>	Lemon-scented Tea-tree
GROUNDCOVERS	
<i>Carex appressa</i>	Tall Sedge
<i>Crinum pedunculatum</i>	Swamp Lily
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Gahnia clarkei</i>	Tall Saw-sedge
<i>Gahnia sieberiana</i>	Red-fruited Saw-sedge
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush
<i>Morinda jasminoides</i>	Jasmine Morinda

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RIPARIAN MIXED WET SCLEROPHYLL FOREST PLANTING LIST	
SPECIES LIST	COMMON NAME
UPPER CANOPY	
<i>Casuarina glauca</i>	Swamp She-Oak
<i>Cupaniopsis anacardioides</i>	Tuckeroo
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus grandis</i>	Flooded Gum
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Ficus rubiginosa</i>	Port Jackson Fig
<i>Ficus macrophylla</i>	Moreton Bay Fig
<i>Lophostemon confertus</i>	Brush Box
<i>Melaleuca quinquinervia</i>	Broad-leaved Paperbark
LOWER CANOPY	
<i>Acacia melanoxylon</i>	Blackwood
<i>Acronychia oblongifolia</i>	Lemon Aspen
<i>Alphitonia excelsa</i>	Red Ash
<i>Glochidion ferdinandi</i>	Cheese Tree
<i>Syzygium smithii</i>	Lillypilly
<i>Tristaniaopsis laurina</i>	Water Gum
COLONISING SHRUBS	
<i>Acacia binervata</i>	Two-veined Hickory
<i>Acacia longifolia var longifolia</i>	Sydney Golden Wattle
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Commersonia fraserii</i>	Brush Kurrajong
<i>Dodonaea triquetra</i>	Hop Bush
<i>Nematolepis squamea</i>	Satinwood
<i>Ozothamnus diosmifolius</i>	Tick Bush
<i>Polyscias sambucifolia</i>	Elderberry Panax
<i>Trema tomentosa</i>	Poison Peach
SHRUBS	
<i>Clerodendrum tomentosum</i>	Hairy Clerodendrum
<i>Cordyline stricta</i>	Narrow-leaved Palm Lily
<i>Elaeodendron australe</i>	Red Olive Plum
<i>Endiandra sieberi</i>	Hard Corkwood
<i>Eupomatia laurina</i>	Bolwarra
<i>Notolaea longifolia</i>	Large Mock-Olive
<i>Rhodomyrtus psidioides</i>	Native Guava
<i>Synoum glandulosum</i>	Scentless Rosewood
GROUNDCOVERS	
<i>Cladium procernum</i>	Leafy Twig Rush
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Gahnia clarkei</i>	Tall Saw-sedge
<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Lomandra hysterix</i>	Long Leaved Mat Rush
<i>Morinda jasminoides</i>	Jasmine Morinda

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SWAMP OAK FOREST PLANTING LIST	
SPECIES LIST	COMMON NAME
UPPER CANOPY	
<i>Casuarina glauca</i>	Swamp She-Oak
<i>Cupaniopsis anacardiodes</i>	Tuckeroo
<i>Ficus fraseri</i>	Sandpaper Fig
<i>Melaleuca quinquinervia</i>	Broad-leaved Paperbark
LOWER CANOPY	
<i>Acacia melanoxylon</i>	Blackwood
<i>Acronychia oblongifolia</i>	Lemon Aspen
<i>Alphitonia excelsa</i>	Red Ash
<i>Callistemon salignus</i>	Willow Bottlebrush
<i>Glochidial ferdinandi</i>	Cheese Tree
<i>Melaleuca ericifolia</i>	Swamp Paperbark
<i>Melaleuca styphelioides</i>	Prickly-leaved Paperbark
<i>Pittosporum revolutum</i>	Hairy Pittosporum
<i>Polyscias elegans</i>	Basswood
<i>Syzygium smithii</i>	Lillypilly
<i>Tristaniopsis laurina</i>	Water Gum
SHRUBS	
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Clerodendrum tomentosum</i>	Hairy Clerodendrum
<i>Eupomatia laurina</i>	Bolwarra
<i>Notolaea longifolia</i>	Large Mock-Olive
<i>Polyscias sambucifolia</i>	Elderberry Panax
GROUNDCOVERS	
<i>Crinum pedunculatum</i>	Swamp Lily
<i>Gahnia clarkei</i>	Tall Saw-sedge
<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Lomandra longifolia</i>	Spiny-headed Mat Rush
<i>Morinda jasminoides</i>	Jasmine Morinda

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DRY SCLEROPHYLL FOREST & KOALA FOOD TREE PLANTING LIST	
SPECIES LIST	COMMON NAME
UPPER CANOPY	
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Corymbia intermedia</i>	Pink Bloodwood
<i>Cupaniopsis anacardiodes</i>	Tuckeroo
<i>Eucalyptus globoidea</i>	White Stringybark
* <i>Eucalyptus microcorys</i>	Tallowood
<i>Eucalyptus pilularis</i>	Blackbutt
* <i>Eucalyptus propinqua</i>	Grey-gum
<i>Eucalyptus resinifera</i> subsp <i>hemilampra</i>	Red Mahogany
* <i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus signata</i>	Scribbly Gum
* <i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Eucalyptus umbra</i>	White Mahogany
<i>Ficus macrophylla</i>	Moreton Bay Fig
<i>Lophostemon confertus</i>	Brushbox
* <i>Melaleuca quinquenervia</i>	Broad-leafed Paperbark
<i>Melaleuca styphelioides</i>	Prickly Paperbark
<i>Syncarpia glomulifera</i>	Turpentine
LOWER CANOPY	
** <i>Allocassuarina littoralis</i>	Black She-Oak
** <i>Allocassuarina torulosa</i>	Forest She-Oak
** <i>Banksia integrifolia</i>	Coastal Banksia
<i>Endiandra sieberi</i>	Corkwood
<i>Glochidion ferdinandi</i>	Cheese Tree
<i>Syzygium oleosum</i>	Blue Lillypilly
<i>Syzygium smithii</i>	Lillypilly
COLONISING SHRUBS	
<i>Acacia binervata</i>	Two-veined Hickory
<i>Acacia elongata</i>	Swamp Wattle
<i>Acacia longifolia</i> var <i>longifolia</i>	Sydney Golden Wattle
<i>Acacia falcata</i>	Sickle Wattle
<i>Acacia myrtifolia</i>	Myrtle Wattle
<i>Acacia ulicifolia</i>	Prickly Moses
<i>Breynia oblongifolia</i>	Coffee Bush
<i>Dodonaea triquetra</i>	Hop Bush
<i>Homalanthus populifolius</i>	Bleeding Heart
<i>Jacksonia scoparia</i>	Dogwood
<i>Nematolepis squamea</i>	Satinwood
<i>Oxylobium formosum</i>	Shaggy Pea
<i>Ozothamnus diosmifolius</i>	Tick Bush
<i>Pultenaea villosa</i>	Hairy Bush Pea
<i>Trema tomentosa</i>	Poison Peach
<i>Zieria smithii</i>	Sandfly Zieria
SHRUBS	
<i>Banksia robur</i>	Green Banksia
<i>Banksia serrata</i>	Old Man Banksia
<i>Callistemon pachyphyllus</i>	Wallum Bottlebrush
<i>Leptospermum polygalifolium</i>	Lemon-scented Tea-tree
<i>Notolaea longifolia</i>	Large Mock-Olive
<i>Pittosporum revolutum</i>	Rough fruit Pittosporum
GROUNDCOVERS	
<i>Dianella caerulea</i>	Blue Flax Lily
<i>Eustrephus latifolius</i>	Wombat Berry
<i>Gahnia clarkei</i>	Tall Saw-sedge
<i>Gymnostachys anceps</i>	Settlers Flax
<i>Hibbertia scandens</i>	Climbing Guinea Flower
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush

* Koala Food Trees

Other Forage Trees
 04-Consultants\WildThings\WMP Docs Weed & Works Plans 2011.11.11 to 2012.01.24\Dry Sclerophyll Forest & Koala Food Tree Planting List.xls

Port Macquarie – Hastings Council**Vegetation Management Plan Requirements**

The following requirements are to be addressed for the development of VMPs.

EXISTING SITE CONDITIONS

- Vegetation map of existing and retained vegetation. Vegetation needs to be mapped at vegetation community level. Structure condition (age and forms) needs to be included.
- Weed map detailing current weed condition (species, extent, density).
- Soils map.
- Topography.

PROPOSED ENVIRONMENTAL WORKS

- Management units mapped, staging and costing table defined for each unit.
- Planting works table (where required) for each unit. Planting table to identify species, area and planting densities (plants/m²).
- Bush regeneration works map and table for each work unit. Detail on type and timing of control works and target weed species.
- Type, number and location of Nesting Boxes (if applicable).
- Mapped APZ and treatment requirements (if applicable).
- Fire History mapped and Ecological Burning requirements identified (for bushland areas > 1ha).
- Inclusion of management recommendations from any ecological assessments.
- List of proposed native plants to be planted (if applicable).

MONITORING AND REPORTING

- Detailed monitoring and audit proforma for each management unit.
- Schedule of proposed reporting periods (minimum yearly reporting).

MAINTENANCE AND CONTINGENCY

- Detail on scheduled maintenance of plantings, nesting boxes, APZ, and bush regeneration areas.
- Contingency plans for failed works.

COSTINGS

- Annual costings of each management unit and the overall budget for life of the VMP.

MAPPING OF ENVIRONMENTAL LANDS

- Applicant to submit geo-referenced file (AutoCAD DXF or GIS shapefile) of environmental lands.

DEDICATION AND VOLUNTARY PLANNING AGREEMENTS

- Where the environmental land is to be dedicated to Council. The timing of dedication in relation to rehabilitation stages and development construction is to be stated.



VMP Audit and Monitoring Proforma

Area No.	
Date of Inspection	
Personnel Recording	
Revegetation Performance Approximate date the area was first rehabilitated	
Sample Size – Area (m ²) of sample site	

Map of Management Unit

Previous Activity since last audit / report:																																	
Regeneration / Revegetation hours allocated	Regeneration / Revegetation hours spent																																
Previous audit / report actions undertaken																																	
General Vegetation Area Performance / Observations																																	
	<table border="1"> <tr> <th>Major</th> <th>Minimal</th> <th>None</th> <th>N/A</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <th>Good</th> <th>Fair</th> <th>Poor</th> <th>N/A</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Major	Minimal	None	N/A													Good	Fair	Poor	N/A												
Major	Minimal	None	N/A																														
Good	Fair	Poor	N/A																														
Evidence of any pollution, rubbish, litter, excessive sediment or erosion.																																	
Evidence of weeds adjacent to the rehabilitation area likely to impact it.																																	
Evidence of plant pests and diseases or feral animal populations.																																	
Evidence of macro fauna colonisation / use (scats, tracks and sitings)																																	
Evidence of micro fauna colonisation / use (insects, lizards etc)																																	
Assessment of overall Habitat Value (eg. Animal hiding places, vegetation cover, food etc.)																																	
Regeneration / Weed Control Performance																																	
Approximate date the area first underwent weed control																																	
Yes	No																																
Natural Recruitment: Natural recruitment observed																																	
Estimate % coverage (by area projected to ground)	Estimate % age composition																																
Weeds species identified	<table border="1"> <tr> <th>Canopy</th> <th>Ground</th> <th>Mature</th> <th>Seedlings</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Canopy	Ground	Mature	Seedlings																												
Canopy	Ground	Mature	Seedlings																														
Weed Control Comments and Observation Notes:																																	



Revegetation Performance		Approximate date the area was first rehabilitated			
		Sample Size – Area (m2) of sample site			
Vegetation/ Plant Growth:					
Approximate native plant count within sample area:	Trees	<input type="text"/>	Shrubs	<input type="text"/>	Grasses / Herbs
Species Diversity : (approx no. of different species in each stratum)	Trees	<input type="text"/>	Shrubs	<input type="text"/>	Grasses / Herbs
Species Growth (m): (height of average specimen in each stratum class in metres)	Trees	<input type="text"/>	Shrubs	<input type="text"/>	Grasses / Herbs
		>50%	50-20%	20-5%	<5%
Canopy Cover: Estimate %coverage by area (projected to ground)		<input type="text"/>	<input type="text"/>	<input type="text"/>	Nil
Plant Mortality Rates : Estimate percentage death of new plants		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Bare Soil : Percentage coverage of area		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Humus / Leaf Litter Depth : (mm) average in sample area		<input type="text"/>			
Fauna:		Yes		No	
Evidence of plant damage / death caused by feral animals?		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Detail:					
Number of nest boxes in monitoring area?		<input type="text"/>	Nest boxes inspected?		Yes No
		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Detail any nest box issues: nest box damage, takeover by feral animals, damage to tree caused by nest box.					
GENERAL COMMENTS AND OBSERVATION NOTES:					
CORRECTIVE ACTIONS REQUIRED / RECOMMENDED:		Yes		No	
Follow up: were previous corrective actions successful and issues addressed?		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Detail follow up and new corrective actions proposed.					

Koala Plan of Management

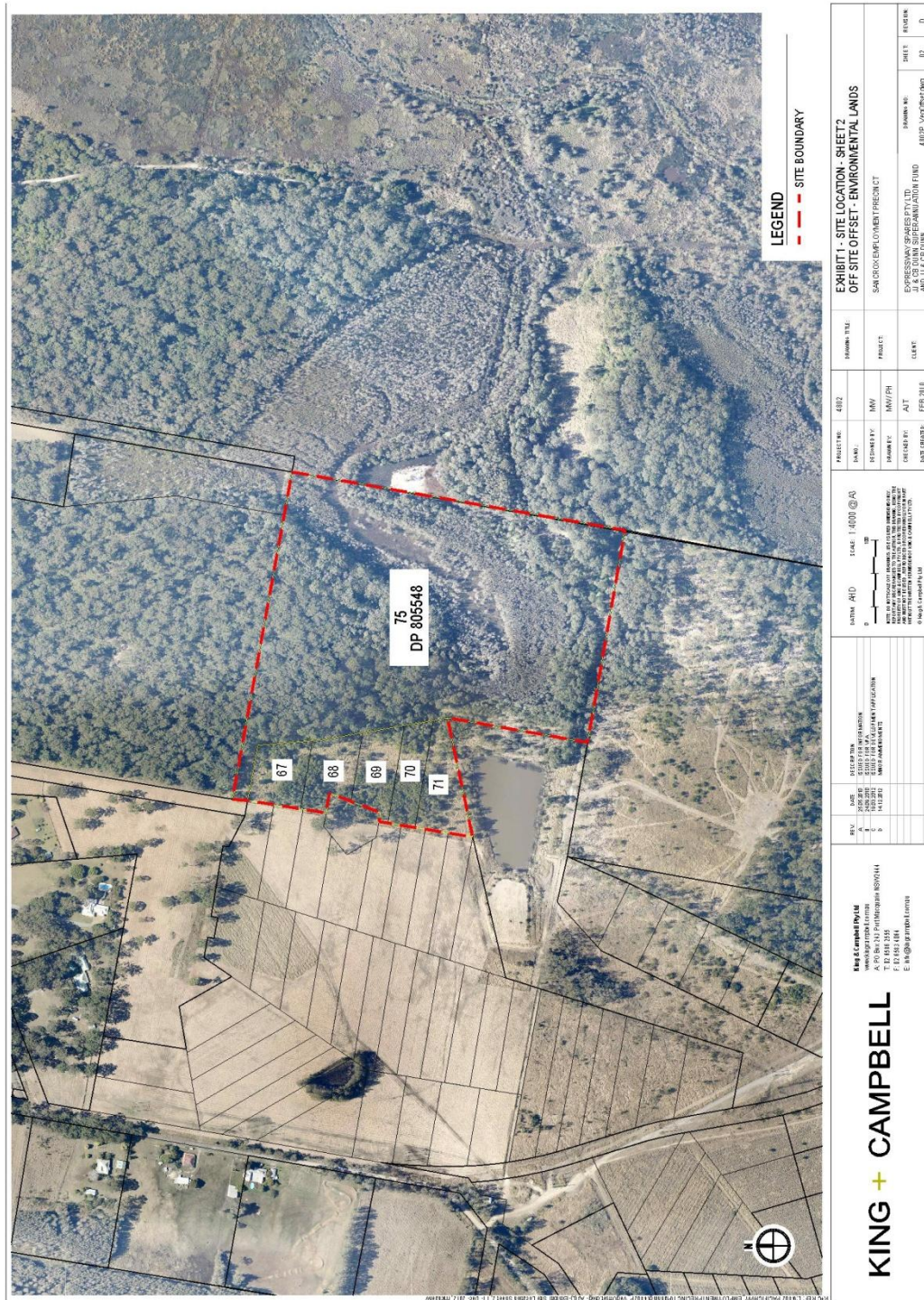
1. Results of Annual Koala Usage Survey
2. Proportion of Koala feed trees in the overstorey species in:
 - i Management Unit 4
 - ii Management Unit 7(a) and 7(b)
 - iii Management Unit 8
 - iv Management Unit 9
 - v Management Unit 11

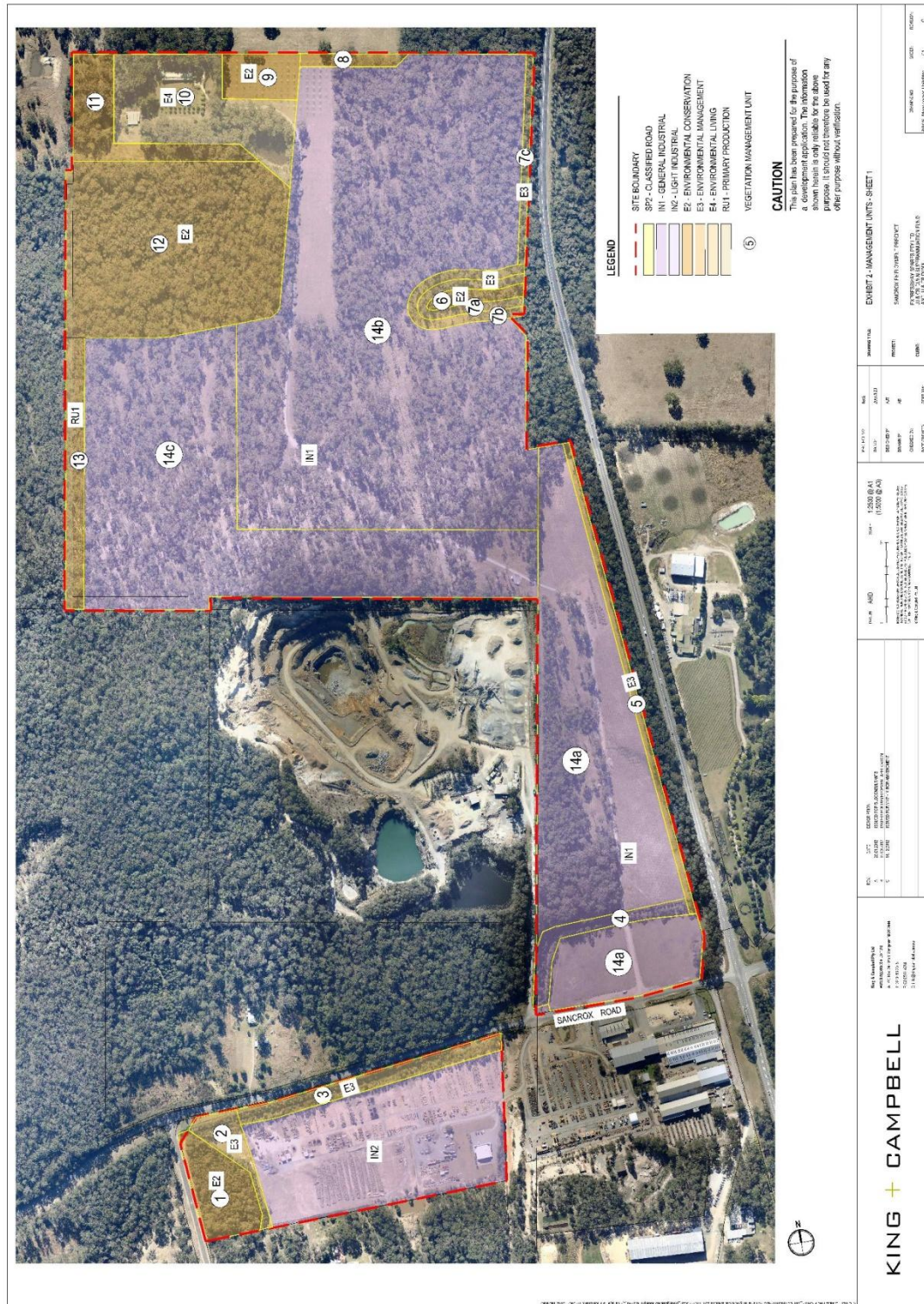
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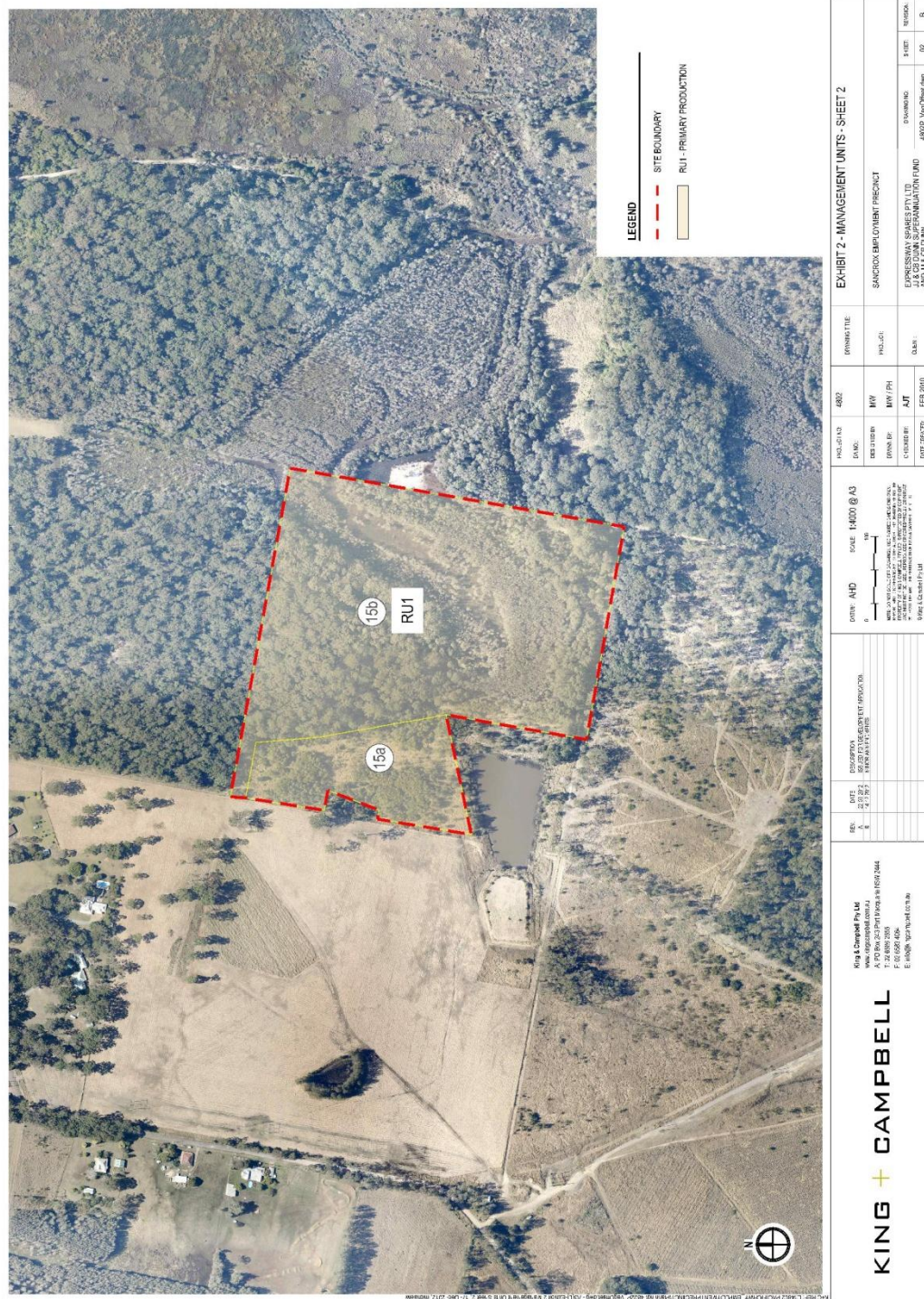
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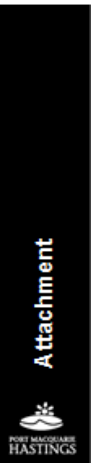


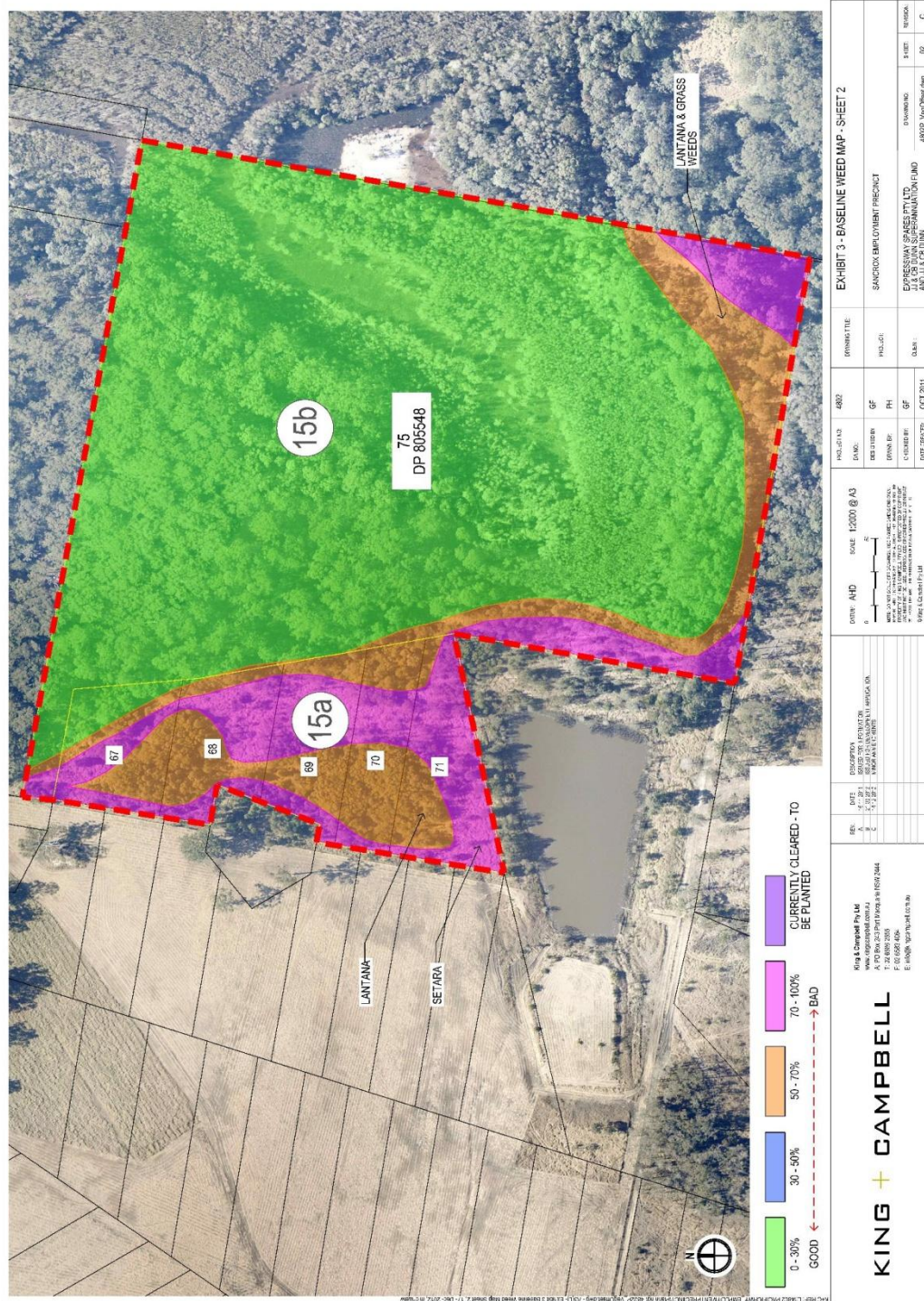
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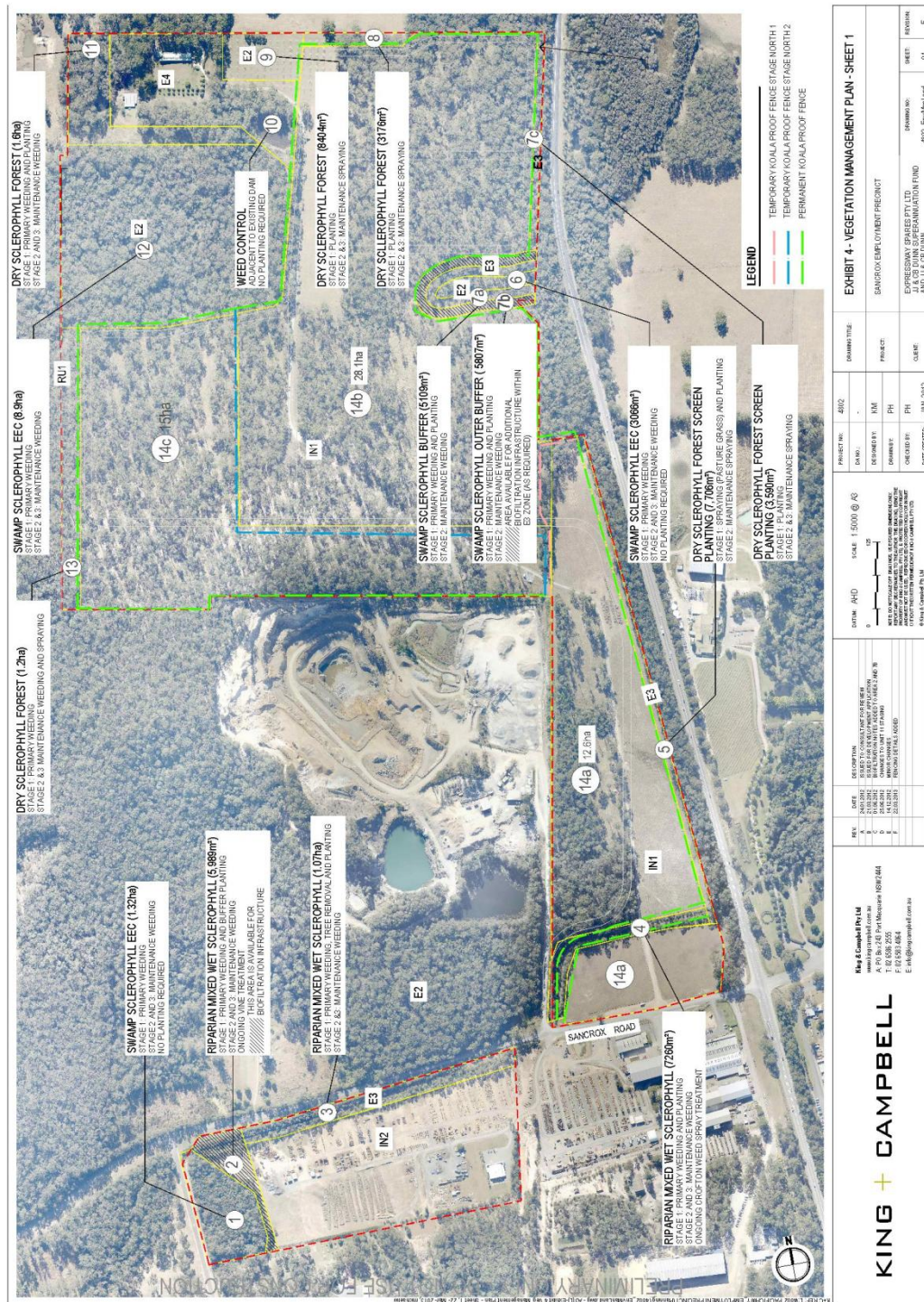


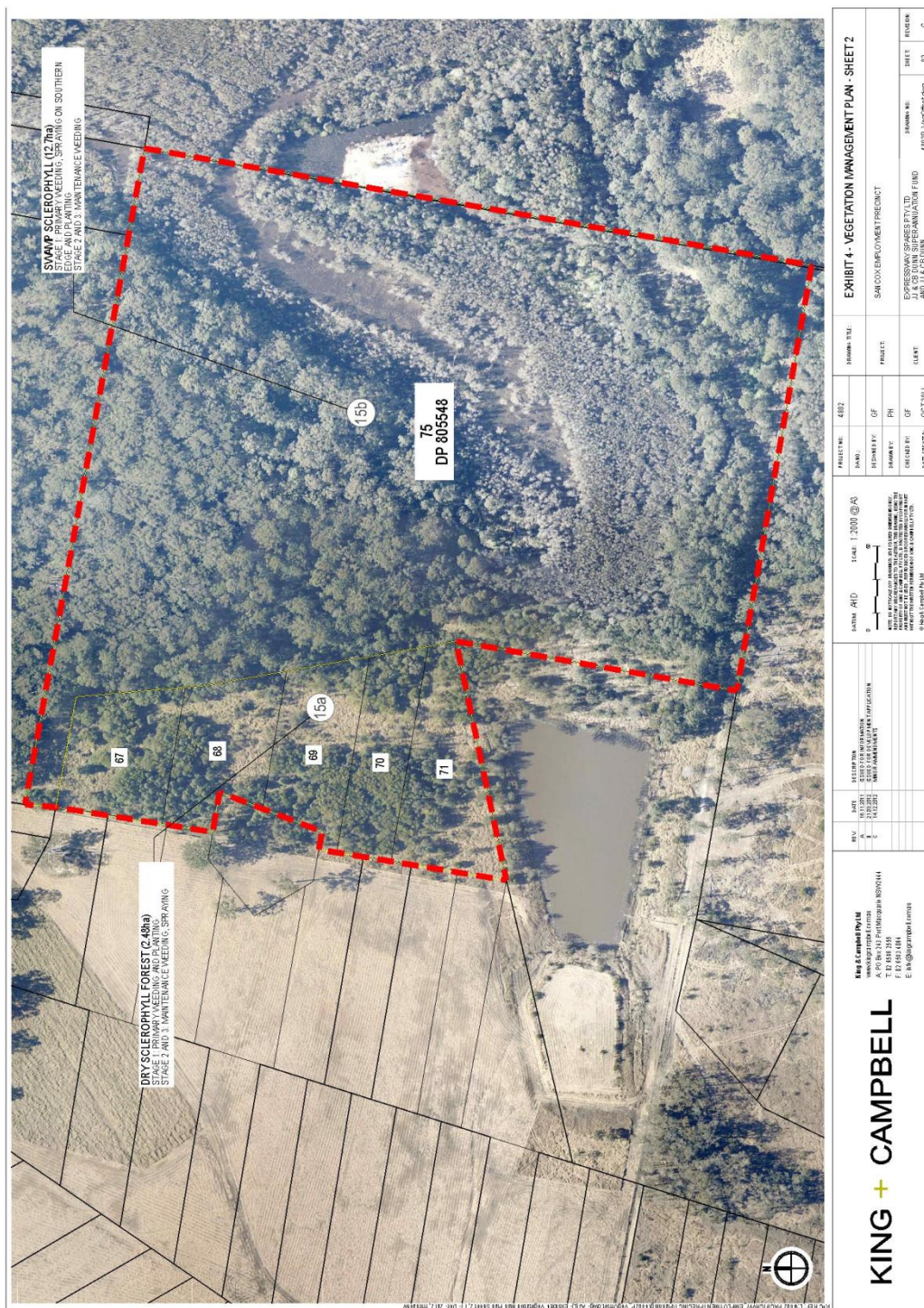












Item: 07

Subject: DA 2013/21 - PRIMITIVE CAMP GROUND WITHIN EXISTING
SHOWGROUND (KENDALL SHOWGROUND)

Report Author: Patrick Galbraith-Robertson

Property:	Lot 2 DP 1048212, Lot 17 DP 370240, 23 Batar Creek Road, Kendall
Applicant:	Camden Haven P A H & I Society Inc.
Owner:	Camden Haven P A H & I Society Inc.
Application Date:	2 January 2013
Date Formal:	2 January 2013
Estimated Cost:	NIL
Location:	Kendall
File no:	DA 2013/21
Parcel no:	40135, 1303

Alignment with Delivery Program

- 4.9.2 Undertake development assessment in accordance with relevant legislation.
- 4.9.3 Implement and maintain a transparent development assessment process.

RECOMMENDATION

That DA 2013/21 for a primitive campground within existing showground (Kendall Showground) at Lot 2 DP 1048212, Lot 17 DP 370240, 23 Batar Creek Road, Kendall, be determined by granting consent subject to the recommended conditions.

Executive Summary

This report considers a Development Application for primitive a campground within existing showground (Kendall Showground) at the subject site.

This report provides an assessment of the application in accordance with the requirements of the Environmental Planning and Assessment Act 1979.

Subsequent to exhibition of the application, two (2) submissions have been received. One in support and one raising concerns with the proposal.

1. BACKGROUND

Existing sites features and Surrounding development

The site has a combined (2 lots) area of 12.649 hectares.

The site is zoned part R1 General Residential and Part RE2 Private Recreation in accordance with the Port Macquarie-Hastings Local Environmental Plan 2011, as shown in the following zoning plan:



The site is within an existing showground facility with frontage to the west to Batar Creek Road, Kendall. To the west is the North Coast railway line. To the north is residential zoned lots occupied by dwellings.

The closest dwellings to the camp sites proposed are to the west at a distance of approximately 50m.

The existing subdivision pattern and location of existing development within the immediate locality is shown in the following aerial photo:



2. DESCRIPTION OF DEVELOPMENT

Key aspects of the application proposal include the following:

- Establish primitive camping ground sites - 10 sites within existing showground facility.

Refer to attachments at the end of this report.

Application Chronology

- 2 January 2013 - DA lodged
- 15 to 29 January 2013 - Consultation on the proposal via neighbour notification.
- 25 January 2013 - Site inspection.
- 11 February 2013 - Additional information requested.
- 25 March 2013 - Additional information and amended plans received from Applicant.

3. STATUTORY ASSESSMENT

Section 79C(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 21 - Caravan Parks**

In accordance with clause 6, caravan park includes by definition a camping ground.

In accordance with clause 8 (1), a camping ground is a permissible landuse.

In accordance with clause 8 (2)(b), the number (10 proposed) of primitive camping ground sites under the *Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005* is permitted. There is no minimum size of land area for a camping ground however there is a maximum restriction of 2 camp sites per hectare (total area of site) in accordance with the regulations (clause 132). In this regard, the site (entire showground) comprises 2 lots with a combined area of 12.649 hectares. 10 camp sites are therefore permitted. The proposal is capable of compliance with the remainder of the requirements of this regulation and a condition is recommended accordingly.

In accordance with clause 8 (3), a condition is recommended to restrict the total number of sites to ten (10).

In accordance with clause 10, the proposal meets the services and facilities requirements.

The requirements of this SEPP are therefore satisfied.

State Environmental Planning Policy No. 44 – Koala Habitat Protection

In accordance with clauses 6 and 7, the subject land has an area of more than 1 hectare in size and therefore the provisions of SEPP must be considered.

The Department of Planning and Infrastructure's Circular No. B35, Section 1.5 states that "In relation to affected DAs it is the intention of the policy that investigations for 'potential' and 'core' koala habitats be limited to those areas in which it is proposed to disturb habitat".

The application has demonstrated that no habitat will be removed or modified and therefore, no further investigations are required.

The requirements of this SEPP are therefore satisfied.

State Environmental Planning Policy No.55 – Remediation of Land

In accordance with clause 7, 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.

The requirements of this SEPP are therefore satisfied.

State Environmental Planning Policy No. 64 – Advertising and Signage

Standard condition recommended requiring development consent to be obtained for any advertising signage other than signage which is exempt development.

The requirements of this SEPP are therefore satisfied.

Port Macquarie-Hastings Local Environmental Plan 2011

In accordance with clause 2.2, the subject site is zoned part R1 General Residential and Part RE2 Private Recreation.

In accordance with clause 2.3(1) and the R1 and RE2 zone landuse table, the proposed development for a 'camping ground' is a permissible landuse with consent.

The objectives of the R1 zone are as follows:

1 Objectives of zone

- *To provide for the housing needs of the community.*
- *To provide for a variety of housing types and densities.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*

The objectives of the RE2 zone are as follows:

1 Objectives of zone

- ***To enable land to be used for private open space or recreational purposes.***
- ***To provide a range of recreational settings and activities and compatible land uses.***
- *To protect and enhance the natural environment for recreational purposes.*

In accordance with clause 2.3(2), the proposal is consistent with the zone objectives having regard to the following:

- the proposal is a permissible landuse;
- the use is located within an existing showground which can be used for dual use purposes to encourage alternate recreational opportunities

In accordance with clause 7.13, satisfactory arrangements are in place for provision of essential public utility infrastructure including stormwater, water and sewer infrastructure to service the development. Provision of electricity and telecommunications are assumed to be satisfactory.

The requirements of this LEP are therefore satisfied.

(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:

Port Macquarie Hastings Development Control Plan 2011

Requirement	Proposed	Complies
Part 3 DP 1.1 Crime prevention	The siting and orientation of the camping ground sites are within an existing showground and within 100m of the public road - Batar Creek Road. No adverse crime risk identified.	Yes
Part 3 DP 3.1 - Off street parking requirements	No specific parking rate - area based requirements under Local Government regulations - as primitive camping.	N/A
Part 3 DP 14.1 - parking and	The site has a bitumen sealed	No. - Variation

manoeuvring surfaces shall be constructed with a coarse base of sufficient depth to suit the amount of traffic generated by the development, as determined by Council. It shall be sealed with either bitumen, asphaltic concrete or interlocking pavers.	entry from Batar Creek Road into the site of approximately 15m then driveway/road access within showground is to a gravel standard. The proposal is for primitive camping only for 10 camping sites.	to pavement requirement considered acceptable provided that dust is appropriately managed which will achieve compliance with the objectives of the provision.
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- (iiia) any planning agreement that has been entered into under Section 93f or any draft planning agreement that a developer has offered to enter into under Section 93f:**

No planning agreement has been offered or entered into relating to the site.

- iv) any matters prescribed by the Regulations:**

N/A

- v) any coastal zone management plan (within the meaning of the Coastal Protection Act 1979), that apply to the land to which the development application relates:**

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 site is an existing showground with street frontage Batar Creek Road, Kendall.

Adjoining the site to the north-east and north-west are existing residential lots occupied by dwelling-houses.

Adjoining the site to the east is the north coast railway line.

Adjoining the site to the south and west are residential zoned parcels of land which have not yet been subdivided. To the south-east is a rural zoned parcel of land.

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 existing development in the locality and adequately addresses planning controls for the area.

The proposal does not have any significant identifiable adverse lighting impacts.

There are no significant adverse privacy impacts.

Access, transport and traffic

The proposal will be unlikely to have any adverse impacts within the immediate locality in terms access, transport and traffic.

The site has a bitumen sealed entry from Batar Creek Road into the site of approximately 15m then driveway/road access within showground is to a gravel standard.

The proposal is for primitive camping only for 10 camping sites.

The existing road network will satisfactorily cater for any increase in traffic generation as a result of the development.

Water Supply Connection

Service available - no proposed change to existing. Refer conditions recommended.

Sewer/OSM Connection

According to Council records, sewer is not connected to Lot 17 DP 370240. However, the application drawing shows a private line from the toilet block connecting to Council sewer. This line appears to traverse both Lot 17 DP370240 and Lot 2 DP1048212.

As the anticipated discharge will exceed 2 Equivalent Tenements, sewer connection is to be from a new or existing manhole. This can be achieved by either consolidation of both Lot 17 DP 370240 and Lot 2 DP1048212 or by installing a main line from MH KK01P020 to a point within Lot 17 DP370240. The design engineer should confer with Council Sewer Section prior to completing design plans. Other standard conditions are recommended.

Stormwater

No change to existing. Camp sites on existing grounds only.

Other Utilities

Assumed that existing telecommunication and electricity services service the showground's site.

Heritage

Following a site inspection (and a search of Council records), no known items of Aboriginal or European heritage significance exist on the property. No adverse impacts anticipated.

Other land resources

No adverse impacts anticipated. The site is within an established urban context and will not sterilise any significant mineral or agricultural resource.

Water cycle

The proposed development will be unlikely to have any adverse impacts on water resources and the water cycle.

Soils

The proposed development will be unlikely to have any 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 operations of the proposed development will be unlikely to result in any adverse impacts on the existing air quality or result in any pollution.

Flora and fauna

Construction of the proposed development will not require any removal/clearing of any significant vegetation and therefore will be unlikely to have any significant adverse impacts on biodiversity or threatened species of flora and fauna. Section 5A of the Act is considered to be satisfied.

Waste

Satisfactory arrangements are in place for proposed storage and collection of waste and recyclables. No adverse impacts anticipated.

Energy

No adverse impacts anticipated.

Noise and vibration

No adverse impacts anticipated. Condition recommended to restrict construction to standard construction hours.

Bushfire

The siting of camping areas is not identified as being bushfire prone.

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 facility is an existing established showground.

Social impacts in the locality

Given the nature of the proposed development and its' location the proposal is unlikely to result in any adverse social impacts.

Economic impact in the locality

No adverse impacts. Likely positive impacts can be attributed to the development.

Site design and internal design

The proposed development design is satisfactorily responds to the site attributes and will fit into the locality. No adverse impacts likely.

Construction

No potential adverse impacts identified to neighbouring properties with the construction of the proposal.

Cumulative impacts

The proposed development is not expected to have any 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.

(d) Any submissions made in accordance with this Act or the Regulations:

Two (2) written submissions have been received following completion of the required public exhibition of the application. 1 of the submission has been received in support of the proposal.

Key issues raised in the 1 submission received raising concerns and comments in response to these issues are provided as follows:

Submission Issue/Summary	Planning Comment/Response
<p>Concern raised by neighbouring property from main road entrance to showground. Submitter was of the understanding that the access was to be upgraded to a sealed standard to mitigate dust nuisance particularly given the likely increase in traffic with camping.</p>	<p>The applicant has provided the following additional information during the assessment of the DA:</p> <ul style="list-style-type: none"> - The entrance road is bitumen from Batar Creek Road to the front gate of the showground. - When funds are available the internal road will be bitumen sealed. - In the case of dry weather will endeavour to keep the road watered and will instruct people attending the Men's Shed to travel slowly through the grounds to minimise dust. <p>Based upon the response and the relatively small scale of the proposal it is considered reasonable to not require the road to be upgraded to a sealed standard. A condition is recommended to manage dust suppression with water application.</p>

(e) The Public Interest:

The proposed development satisfies relevant planning controls and is not expected to impact on the wider public interest.

4. DEVELOPMENT CONTRIBUTIONS APPLICABLE

- No development contributions apply to the proposal due to Council resolution of 14 November 2012 and the proposal including a maximum number of 10 sites. If there is any future increase in sites this matter will need to be revisited.

5. CONCLUSION

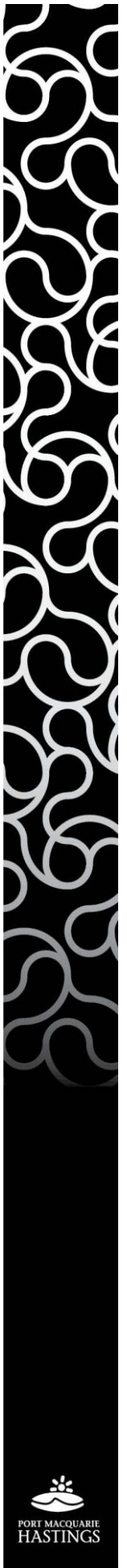
The application has been assessed in accordance with Section 79C of the Environmental Planning and Assessment Act 1979.

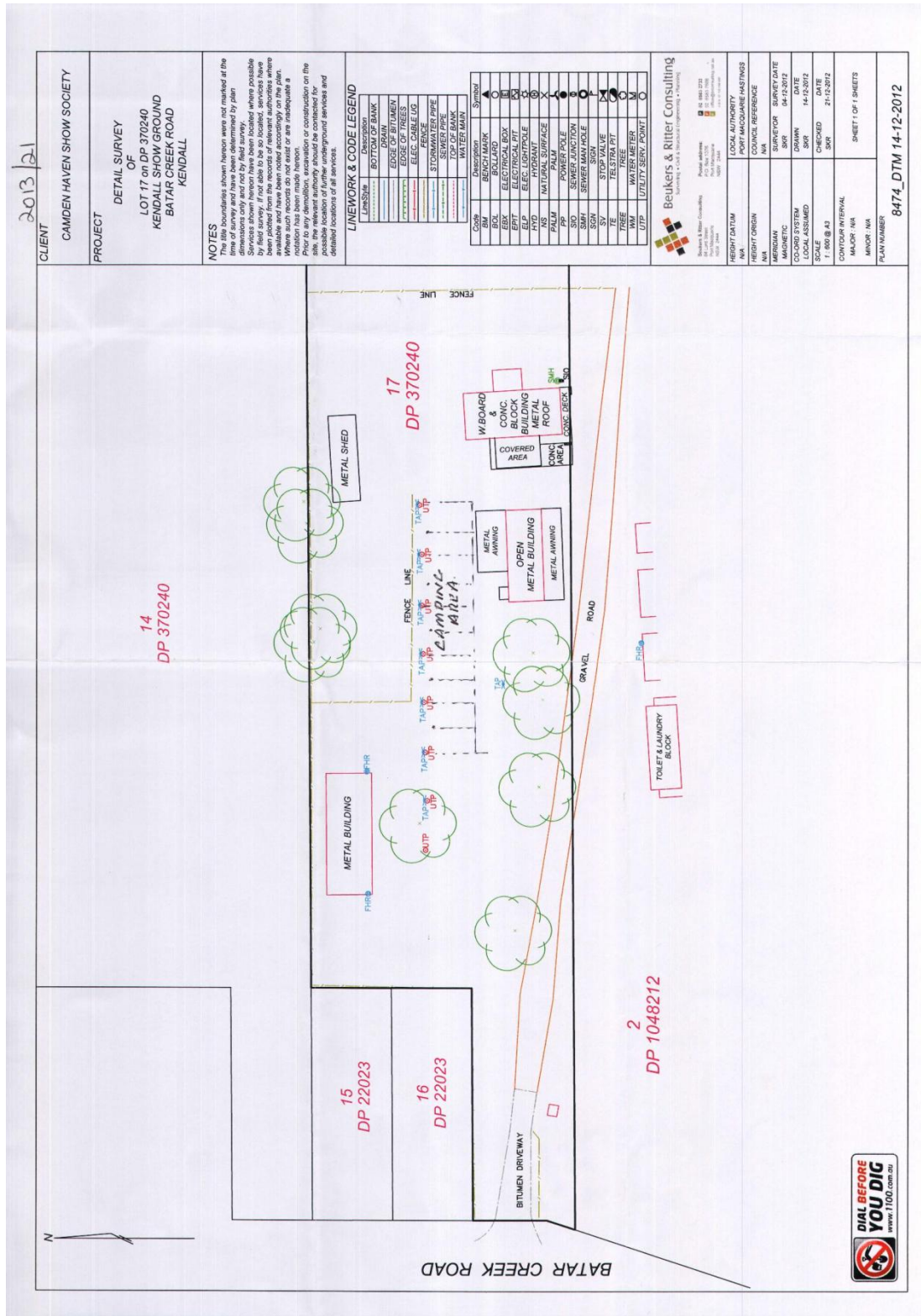
Issues raised during assessment and public exhibition of the application have been considered in the assessment of the application. Where relevant, conditions have been recommended to manage the impacts attributed to these issues.

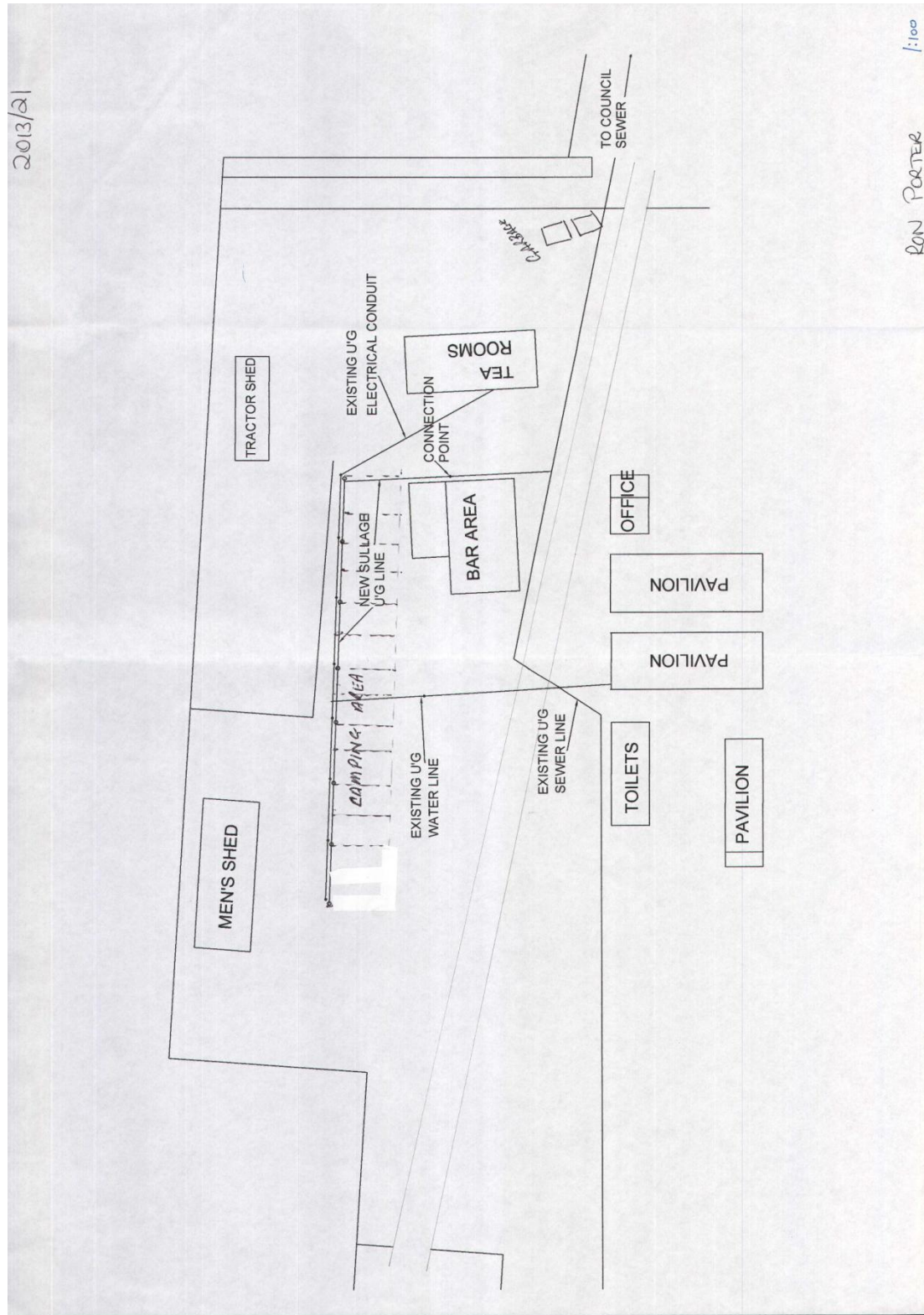
The site is suitable for the proposed development, is not contrary to the public's interest and will not have a significant adverse social, environmental or economic impact. Consequently, it is recommended that the application be approved, subject to the recommended conditions of consent provided in the attachment section of this report.

Attachments

- 1 [View](#). DA2013 - 0021 Plans
- 2 [View](#). DA2013 - 0021 Recommended DA Conditions
- 3 [View](#). DA2013 - 0021 Development Contributions Calculation Sheet







FOR USE BY PLANNERS/SURVEYORS TO PREPARE LIST OF PROPOSED CONDITIONS - 2011

NOTE: THESE ARE DRAFT ONLY

DA NO: 2013/21

DATE: 4 April 2013

PRESCRIBED CONDITIONS

Part 6 – Division 8A of the *Environmental Planning & Assessment Regulations 2000*

nil

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
Site plan - Detail Survey	2013/21	Beukers & Ritter	21 December 2012
Services plan	2013/21	Ron Porter	undated

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) (A014) This approval does not provide any indemnity to the owner or applicant under the Disability Discrimination Act 1992 with respect to the provision of access and facilities for people with disabilities.
- (3) (A017) A separate development application for any proposed advertising signs (other than signs which are exempt development or approved under this consent) must be submitted to and approved by council prior to the erection or display of any such signs.
- (4) (A042) In respect of applications for other than separate Class 1 buildings, applicants are required to furnish the following information from an approved Hydraulic Consulting Engineer with the application for the water service:
- Hydraulic calculations that address flow, pressure and velocity requirements of AS 3500.1.
 - A plan to a scale of not less than 1:100 that clearly indicates the position of the water meter on the property, the type of materials and nominal size of all water service pipes, the position of all stop valves, stop taps, backflow prevention devices and other valves, any water storage to be provided including air gap requirements, overflow pipe arrangement and any booster pumps.
 - Complete details of any fire service, booster pump or irrigation system installation.
- (5) (A045) Extension or modification of the town sewerage system where necessary to serve the development, at no cost to Council.
- (6) (A195) A separate approval to operate a primitive camping ground on the land which the development is to be carried out must be obtained under part 3 of chapter 7 of the Local Government Act 1993.

Unless varied by this consent/approval, the primitive camping ground is to comply with Division 3 of the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005.

The applicant is to become familiar with this document and is to ensure all associated documentation is submitted when lodging the application to operate a primitive camping ground with Council.

- (7) (A196) During dry weather conditions and/or likely high vehicular traffic coming to and from the showground site the entrance road shall be watered to manage dust impacts.
- (8) (A197) This consent approval restricts the number of camp sites to a maximum of 10 only. Any change to site numbers will require separate development approval to be obtained from Council.
- (9) (A198) The camp sites, the subject of this development consent, are approved for short term use only. No permanent occupancy of the camp sites are permitted.
- (10) (B001) 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
- (11) (E004) Consolidation of the allotments comprising the site of the proposed development within 12 months of the date of this consent.

D – DURING WORK

nil

E – PRIOR TO OCCUPATION

- (1) (E051) Prior to occupation provision to the Council of a Water Authority and/or Section 68 Sanitary Plumbing and/or Stormwater Drainage Final Certificate issued by Port Macquarie-Hastings Council.

F – OCCUPATION OF THE SITE

- (1) (F024) Offensive noise as defined under the Protection of the Environment Operations Act 1997, shall not be generated as a result of the operation of the development.

4/04/2013

Development Contributions Calculation Sheet - Final Consent Issue									
Development Details				Contributions Plans Applicable					
DA No.	2013	0021	General S94 Plans		Applies	ET Chargeable	RatePer ET	Contribution Amount	
Address:	Batar Creek Road, Kendall		Major Roads		Yes	2.5	\$7,457.00	\$18,642.50	
Dev Description:	Primitive Camp Ground (10 x Short Term Site)		Open Space		Yes	2.5	\$5,615.00	\$14,037.50	
Lot Number(s):	17 & 2		Community Cultural & Emergency Services		Yes	2.5	\$3,927.00	\$9,817.50	
DP Number(s):	370240, 1048212		Admin Building		Yes	2.5	\$803.00	\$2,007.50	
Stage No:	Total		Bushfire - Specific		No				
Applicant:	Camden Haven P A H & I Society		Kings Creek		No				
Contribution Area:	<input checked="" type="checkbox"/> Scheriden/Heron <input type="checkbox"/> Innes Peninsula <input type="checkbox"/> Kings Creek <input type="checkbox"/> Lake Cathie/Bonny Hills <input type="checkbox"/> Port Macquarie <input type="checkbox"/> Rural <input type="checkbox"/> Sancroft/Thrumster <input type="checkbox"/> Wauchope		Admin Levy		Yes	2.2% of S94	\$44,505.00	\$979.10	
(Planner must Select Contribution Area. Click Once with Mouse)			Specific Contribution Plans and DSPs (Planner Must Select if Plans are Applicable) S94A Levy Development Cost \$1 No						
DA Lodged Date: 2/01/2013 Prepared By: Jesse D DA Consent Date: Issue No. 1 Calc Sheet Date: 3-Apr-2013 FINAL CONSENT CALCULATION <input checked="" type="checkbox"/> Tick for FINAL Consent Calculation			Laureton CBD Car Parking Contribution		<input type="checkbox"/> Applies	JesseD: This development is exempt from paying contributions as a result of Council resolution. See Council meeting minutes from meeting on 14/11/2012. See item 12.06			
			North Haven Car Parking Contribution		<input type="checkbox"/> Applies				
			Bushfire Additional		<input type="checkbox"/> Applies				
			Laureton Walkway		<input type="checkbox"/> Applies				
			Water	1.6% Levy: \$386.60	<input checked="" type="checkbox"/> Applies	2.5	\$9,666.00	\$24,168.00	
			Sewer		<input checked="" type="checkbox"/> Applies	2.5	\$4,521.00	\$11,302.50	
			Car Parking CP		Contribution Total: \$81,338.20				
			No. of Spaces Short:		Notice of Payment Re-Issue Fee: <input type="checkbox"/> Applies				
ET Calculation for New Development (Proposed)									
Commercial & Industrial New Development			Rate	Units	Water Rate	Sewer Rate	ET Water	ET Sewer	Traffic Facilities m ²
N/A	▼	m2	0	0	0	0	0	0	
N/A	▼	m2	0	0	0	0	0	0	
N/A	▼	m2	0	0	0	0	0	0	
N/A	▼	m2	0	0	0	0	0	0	
			Total Commercial ETs:			0	0	0	0
New Residential Development			Units	Sec 94 ET	Water ET	Sewer ET			
Number of new residential lots greater than 450m ² (excluding Dual Occ & Int Housing)			0	0	0	0			
Number of new residential lots greater than 2000m ² (excluding Dual Occ & Int Housing)			0	0	0	0			
1 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)			0	0	0	0			
2 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)			0	0	0	0			
3 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)			0	0	0	0			
4 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)			0	0	0	0			
1 Bedroom Units (High Density - 3 or more storeys)			0	0	0	0			
2 Bedroom Units (High Density - 3 or more storeys)			0	0	0	0			
3 Bedroom Units (High Density - 3 or more storeys)			0	0	0	0			
4 Bedroom Units (High Density - 3 or more storeys)			0	0	0	0			
Motel Unit - Partially Self Contained (Own ensuite but shared facilities for cooking & laundry)			0	0	0	0			
Motel Unit - Self Contained (Own ensuite and kitchen)			0	0	0	0			
Caravan Park - Not Self Contained Site (permanent or transient)			10	2.5	2.5	2.5			
Caravan Park - Partially Self Contained Site (permanent or transient)			0	0	0	0			
Nursing Homes High Dependency/Residential Care Facility (per bed)			0	N/A	0	0			
Nursing Homes Low Dependency/Hostel (per bed)			0	0	0	0			
Aged Unit - Self Contained 1 bedroom with ensuite & kitchen (SEPP - Seniors Living)			0						
Aged Unit - Self Contained 2 bedroom with ensuite & kitchen (SEPP - Seniors Living)			0						
Aged Unit - Self Contained 3 bedroom with ensuite & kitchen (SEPP - Seniors Living)			0						
Boarding House per 1 Occupancy Bedroom Not Self Contained (shared facilities for cooking, laundry & bathroom)			0						
Boarding House per 1 Occupancy Bedroom Partially Self Contained (Own ensuite - shared cooking & laundry facilities)			0						
Boarding House - Not Self Contained Per Bed (for dormitories/bunkrooms, shared cooking, laundry and bathroom)			0						
Boarding House - Self Contained Per Bed (for dormitories/bunkrooms, Own ensuite per bedroom/dorm/bunkroom with shared cooking and laundry)			0	0	0	0			
New Residential Unit Total:			10	2.5	2.5	2.5			

4/04/2013

ET Calculation for Existing Development (Credits)							
Commercial & Industrial Existing Development	Rate	Units	Water Rate	Sewer Rate	ET Water	ET Sewer	Traffic Facilities m ²
N/A	m2	0	0	0	0	0	
N/A	m2	0	0	0	0	0	
N/A	m2	0	0	0	0	0	
N/A	m2	0	0	0	0	0	
Total Commercial ETs:					0	0	0
Existing Residential Development		Units	Sec 94 ET	Water ET	Sewer ET		
Number of existing residential lots greater than 450m ² (excluding Dual Occ & Int Housing)		0	0	0	0		
Number of existing residential lots greater than 2000m ² (excluding Dual Occ & Int Housing)		0	0	0	0		
1 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)		0	0	0	0		
2 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)		0	0	0	0		
3 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)		0	0	0	0		
4 Bedroom Units (Low Density - Flats, town houses, villas, dual occs, Int housing & Permanent Self Contained Caravan Park Sites)		0	0	0	0		
1 Bedroom Units (High Density - 3 or more storeys)		0	0	0	0		
2 Bedroom Units (High Density - 3 or more storeys)		0	0	0	0		
3 Bedroom Units (High Density - 3 or more storeys)		0	0	0	0		
4 Bedroom Units (High Density - 3 or more storeys)		0	0	0	0		
Motel Unit - Partially Self Contained (Own ensuite but shared facilities for cooking & laundry)		0	0	0	0		
Motel Unit - Self Contained (Own ensuite and kitchen)		0	0	0	0		
Caravan Park - Not Self Contained Site (permanent or transient)		0	0	0	0		
Caravan Park - Partially Self Contained Site (permanent or transient)		0	0	0	0		
Nursing Homes High Dependency/Residential Care Facility (per bed)		0	N/A	0	0		
Nursing Homes Low Dependency/Hostel (per bed)		0	0	0	0		
Aged Unit - Self Contained 1 bedroom with ensuite & kitchen (SEPP - Seniors Living)		0	0	0	0		
Aged Unit - Self Contained 2 bedroom with ensuite & kitchen (SEPP - Seniors Living)		0	0	0	0		
Aged Unit - Self Contained 3 bedroom with ensuite & kitchen (SEPP - Seniors Living)		0	0	0	0		
Boarding House per 1 Occupancy Bedroom Not Self Contained (shared facilities for cooking, laundry & bathroom)		0	0	0	0		
Boarding House per 1 Occupancy Bedroom Partially Self Contained (Own ensuite - shared cooking & laundry facilities)		0	0	0	0		
Boarding House - Not Self Contained Per Bed (for dormitories/bunkrooms, shared cooking, laundry and bathroom)		0	0	0	0		
Boarding House - Self Contained Per Bed (for dormitories/bunkrooms, Own ensuite per bedroom/dorm/bunkroom with shared cooking and laundry)		0	0	0	0		
Existing Residential Unit Total:		0	0	0	0		

3:\Dev\Env\DEV AND BUILDING CONTROLS\DA2013\DA2013-0021\Development Contributions Calculation Sheet, DA 2013-0021, Stage No. Total, Issue No.1

Item: 08

Subject: SECTION 96 MODIFICATION DA 2010/230 - REMOVAL OF RESTRICTION ASSOCIATED WITH AMPLIFIED LIVE MUSIC (CONDITION F8) ASSOCIATED WITH PREVIOUSLY APPROVED RESTAURANT TENANCY (THE FIG)

Report Author: Patrick Galbraith-Robertson

Property: Lot 1 SP 79256, 1/17-19 Horton Street, Port Macquarie
Applicant: P Barr CARE Summers Building and Development Services
Owner: Landan Pty Ltd
Application Date: 26 September 2012
Date Formal: 26 September 2012
Estimated Cost: NIL
Location: Port Macquarie
File no: S96 DA 2010/230
Parcel no: 55464

Alignment with Delivery Program

- 4.9.2 Undertake development assessment in accordance with relevant legislation.
4.9.3 Implement and maintain a transparent development assessment process.

RECOMMENDATION

That S96 Modification Application to DA 2010/230- removal of restriction associated with amplified live music (Condition F8) associated with previously approved restaurant tenancy (The Fig), at Lot 1 SP 79256, 1/17-19 Horton Street, Port Macquarie be determined by granting consent subject to the following changes:

1. Amend condition F(8) to state:

The following noise restrictions apply to the operations of the restaurant premises:

- Install compression or limiting devices to the sound system;
- Install equalization devices to control low frequency sound levels;
- Set a maximum noise level for the restaurant which shall be included in contracts with performers (to ensure it is not exceeded);
- Staff are to carry out regular noise monitoring with proper devices to ensure maximum noise levels are not exceeded and compliance with the Office of Liquor, Gaming and Racing noise conditions are achieved;
- Establish a Complaints Register and Complaints Handling Procedure for staff;
- Staff are to be trained in complaint handling and are to investigate and act on noise complaints received;

- Offensive noise is not to be generated on the premises;
- 2. Add new condition F(10) to state:

The LA10 noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Frequency (31.5Hz - 8kHz) by more than 5db between 7.00am and 12.00 midnight at the boundary of any affected residence.

- 3. Add new condition F(11) to state:

The LA10 noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz– 8kHz inclusive) between 12:00 midnight and 7:00 am at the boundary of any affected residence.

- 4. Add new condition F(12) to state:

The noise from the licensed premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00 am.

Executive Summary

This report considers a modification application to remove a restriction condition of consent relating to amplified music associated with a previously approved restaurant at the subject site.

This report provides an assessment of the application in accordance with the requirements of the Environmental Planning and Assessment Act 1979.

Subsequent to exhibition of the application, twelve (12) submissions have been received.

1. BACKGROUND

Existing sites features and Surrounding development

At the time of the original consent approval being granted the site was zoned 3(t) Tourist Business in accordance with the Hastings Local Environmental Plan 2001, as shown in the following zoning plan:



The existing subdivision pattern and location of existing development within the immediate locality is shown in the following aerial photo (2009) - note cadastre does not align with aerial:

Assessment under Section 96 of the Environmental Planning and Assessment Act 1979***Is the proposal substantially the same?***

Section 96 of the Environmental Planning and Assessment Act 1979 enables the modification of consents and categorises modification into three categories - S.96 (1) for modifications involving minor error, misdescription or miscalculation; S.96 (1A) for modifications involving minimal environmental impact; and S.96 (2) for other modifications.

The proposal will not alter the essence of the development primarily comprising a restaurant and it will be substantially the same. The use is essentially the same and the proposed change is not considered to give rise to a substantially different development.

The modification application is being considered under the provisions of Section 96(1A).

Are there any condition(s) of consent imposed by a Minister, government or public authority that require modification?

No conditions were imposed by any other authorities other than Council.

Does the application require notification/advertising in accordance with the regulations and/or any Development Control Plan?

The application was notified in accordance with the provisions of DCP May 2011.

Any submissions made concerning the modification?

Twelve (12) written submissions have been received following completion of the required public exhibition of the application. 2 of the submissions are in support of the proposal the remainder objecting to the changes proposed.

Key issues raised in the submissions received and comments in response to these issues are provided as follows:

Submission Issue/Summary	Planning Comment/Response
Incomplete information 1. The proposed modification is not accompanied by a Statement of Environmental Effects, or any other documentation, addressing the relevant matters for consideration pursuant to Section 79C of the Environmental Planning and Assessment Act, 1979. In particular, an assessment of the environmental impacts (i.e. noise, traffic, access, litter impacts and the like) and social impacts (i.e. consumption of alcohol, safety, security, availability of transport and the like) of the proposal is absent. 2. Since the Modification has not been	1. Sufficient information has been submitted to enable an assessment of the application relating to seeking a change in condition of consent approval. Additional noise assessment information has been submitted during the assessment of the application. A copy of the Noise Impact Assessment submitted post public exhibition is attached to this report. 2. The approved use of the premises

specific about the relationship between the approved restaurant use and the proposed amplified live music, we believe that Council should take a conservative view and consider the Modification as though the premises will be operated with the primary purpose of a live music venue certain nights of the week. That then leads to a broader array of matters for consideration which include a change in the culture of the premises, thus giving rise to questions regarding CCTV requirements, security personnel, RSA marshals; a change in operational issues such as patrons queuing outside the premises to get in (and associated noise, litter and potential anti-social behaviour impacts); a change in capacity issues such as parking in the vicinity with patrons coming to the premises for more than one purpose; and the design of the premises to handle a potential increase in patrons as more patrons would stand rather than be seated for a meal.

3. Application should have been lodged with an Acoustic Impact Assessment. In this case, acoustic analysis seems absolutely necessary for the Council and the public to understand the environmental impacts of the proposal.

4. The Modification document says that sound limiters have been installed on the premises to reduce or disconnect amplification equipment once sound levels exceed the limits imposed on licenced premises within Liquor Licencing documentation. Several issues with this statement:-

(i) The noise recommendations referred to in the Statement of Environmental Effects were from October 2009. To an acoustic engineer, are those recommended limits the applicable limits? For example, Council may impose more stringent noise controls than the Liquor Licence conditions;

(ii) To establish any sound limiter, acoustic engineers will have had to measure the existing background noise levels at the closest sensitive receiver(s) and assess the noise contribution of amplified live music. Why then was the acoustic advice not given to Council as part of the Modification application?

is for a restaurant only. An inspection of the premises indicates a significant portion of floorspace occupied by primarily tables and chairs.

The operations of the premises including use of amplified music including live music is capable of operating within prescribed acceptable noise levels.

The applicant does not propose to change to character/nature of the current use and is required to comply with the original intention for operation as a restaurant primarily.

Original carparking calculations remain the same/unchanged.

3 & 4. Post public exhibition a noise assessment has been provided which has taken into consideration in assessment of noise impacts with the proposed change to condition of current consent approval.

Refer to Noise impacts assessment detailed later in this report.

<p>Perhaps it identified that additional acoustic management techniques are necessary to achieve compliance?</p> <p>(iii) No assessment of the assumptions associated with setting noise limiters has been provided. For example, were the limits established with doors and windows within The Fig in an open or closed position? Were the limits established assuming there was an air-lock system at the entry doors? On what days and at what times were the background noise levels logged? Was the existing background noise logged by disregarding existing noise from the premises? Factual details on which to base basic decision-making are missing.</p> <p>(iv) No assessment has been done on the reverberation effects on noise within the premises and its effect on residential receivers in the locality. Whilst a noise limiter may achieve compliance with the prescribed noise criteria at the closest residential receiver (in the case the apartments above), it may not demonstrate compliance at other residential receivers due to sound reverberation. In this regard, the hard surfaces on the floor and ceiling of the premises will project noise out from the premises in a horizontal plane, where noise at nearby receivers may not comply with Liquor Licence conditions.</p> <p>5. Council should defer the Modification for additional information. In particular, the noise impacts require significantly greater scrutiny. The potential noise impacts are paramount to the acceptability of the Modification.</p> <p>6. The shortcomings of the Modification should be rectified and the DA should be re-exhibited for public comment. We request that we be given a reasonable opportunity to inspect any new material.</p> <p>7. It is noted that latter part of section 3.2 in "the document" refers to the owner having staged a series of live events and noting that no noise complaints have been lodged. From our point of view it would have greatly assisted if it was known that such test</p>	<p>5. Agree - the assessment of the modification application was deferred to request additional noise impact assessment information to support the proposal's capability of compliance with noise criteria proposed (refer to attached report).</p> <p>6. The additional information received has not been publicly exhibited. It is considered that key noise impact concerns have been raised in the submissions received. This noise assessment has been subsequently assessed by Council staff.</p> <p>7. Notwithstanding that previous live music events have been claimed to have occurred prior to lodgement of the modification application, a test exercise - live event was conducted during the assessment of the modification application which</p>
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<p>events were being conducted. In one-off situations, as have happened in the past, indiscretions may not be reported, but conducting a test, knowing that this may well be the ongoing normal may well have residents considering their position in a different light. We quite agree with having test events, and consider that notification of such should be broached with the residents and other commercial operators in The Quay North complex and could even form part of "the document" to allow a proper assessment.</p> <p>8. An acoustic report should be completed by the proponent clearly identifying what live entertainment is proposed from the venue, and take into consideration the cumulative noise impact from other existing venues already in the locality.</p> <p>9. The Office of Liquor, Gaming & Racing within their guidelines "Sound Advice - Reducing the risk of noise disturbance' indicates that to ensure good relationships with police, local Council and residents, the proponent should clearly identify how the restaurant will implement a complaint handling plan and management plan to mitigate the impact of noise coming from the venue to ensure everyone - staff, contractors, performers, managers and promoters and patrons are aware of the rules. This should be provided as part of the SEE for comment.</p>	<p>included the Applicant organising a Noise Impact assessment to be carried out.</p> <p>8. Refer to point 5 above.</p> <p>9. Agree - refer to key additional recommended conditions.</p>
<p>Substantially the same test</p> <p>1. Insufficient information submitted to effectively judge what would be the likely outcome of the change.</p> <p>2. The Applicant is requesting approval to conduct amplified live music events within the premises. That is, on some nights of the week (and the Applicant</p>	<p>1. Sufficient information has been submitted to enable an assessment of the application relating to seeking a change in condition of consent approval. Additional noise assessment information has been submitted during the assessment of the application.</p> <p>The applicant does not propose to change to character/nature of the current use and is required to comply with the original intention for operation as a restaurant primarily.</p> <p>2. The applicant does not propose to change to character/nature of the current use and is required to comply with the original intention for</p>



<p>has not specified which nights), the venue may cease the approved use of a restaurant and become a premises the predominant use of which is a live music venue.</p> <p>3. The Statement of Environmental Effects states that the premises owner has already trialled several of these “live events”. We could find no references in the submitted material regarding whether or not the proposed “live events” maintain the predominant use of the premises as a restaurant. In Section 4.0 of the Statement of Environmental Effects, the document states that the purpose of the Modification is to “<i>permit a diverse use of the premises.</i>”</p> <p>4. We encourage Council to carefully consider whether the Modification, if approved, may transform the approved use of the premises in a manner which is not substantially the same as the original approval. There is certainly the potential for the Modification to transform the approved use. For example, Thursday, Friday and Saturday nights may become “live music nights” where the sale of food is secondary to the provision of amplified live music/entertainment.</p> <p>5. The Applicant should be more specific about the relationship between the approved restaurant use and the proposed amplified live music.</p>	<p>operation as a restaurant primarily. An inspection of the premises during the assessment of the application indicates a significant portion of floorspace occupied by primarily tables and chairs.</p> <p>3. Notwithstanding that previous live music events have been claimed to have occurred prior to lodgement of the modification application, a test exercise - live event was conducted during the assessment of the modification application which included the Applicant organising a Noise Impact assessment to be carried out.</p> <p>4. The current more recent defined landuse for restaurant under the Port Macquarie-Hastings Local Environmental Plan 2011 is as follows:</p> <p><i>restaurant or cafe</i> means a building or place the principal purpose of which is the preparation and serving, on a retail basis, of food and drink to people for consumption on the premises, whether or not liquor, takeaway meals and drinks or entertainment are also provided.</p> <p>The applicant does not propose to change to character/nature of the current use and is required to comply with the original intention for operation as a restaurant primarily. Separate approval would be required to change the use of the premises should the use change in character to being primarily to a pub as follows:</p> <p><i>pub</i> means licensed premises under the <u>Liquor Act 2007</u> the principal purpose of which is the retail sale of liquor for consumption on the premises, whether or not the premises include hotel or motel accommodation and whether or not food is sold or entertainment is provided on the premises.</p> <p>5. The provision of live music to the premises is to be subordinate and ancillary to the primary approved purpose of a restaurant.</p>
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<p>6. The proposal is certainly not of minimal environmental impact and will not result in substantially the same development as that provided for in the original development consent.</p> <p>7. A new Development Application rather than a S.96 application should be required. What is actually being proposed is a significant change in the use of the site and such a change of use should not legally be dealt with as a S.96 application.</p>	<p>6. Disagree - Based upon assessment of the proposal's impacts and capability of compliance with noise criteria and the proposal is substantially the same development.</p> <p>7. refer to 5 and 7 above.</p>
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**Amenity and noise impacts upon
Town Green public space**

1. Cause for concern about the increasing amount of noise generated by amplified music at both the Fig and at the Beach House and the ensuing reduced environmental quality of this area for public space users. The amount and frequency of the amplified music from these venues is destroying the ambience of our town green. Not all users of Town Green public space are all seeking a very noisy recreational environment.

2. A *restaurant or cafe* under Council's LEP 2011 means a building or place the principal purpose of which is the preparation and serving, on a retail basis, of food and drink to people for consumption on the premises, whether or not liquor, takeaway meals and drinks or entertainment are also provided. This definition, being the approved Fig Restaurant use, does not give the operators the right to amplified entertainment and in fact Council had previously assessed this element of the proposed restaurant on merit and determined that it was not appropriate in that location.

3. The area in front of the Fig Restaurant is known as and referred to as the Village Green. It contains a children's playground, green lawn area for play, walking tracks for exercise, seating areas to enjoy a view over the river and in our view as residential apartment purchasers, a future planned retirement property for some residents in building, the central public area attraction of Port Macquarie. An entertainment property is not a complementary facility to this public area. Any Council development approval should ensure that the amenity of the Village Green area is maintained and should be the central theme in any considerations.

1&2 Any claims of adverse noise impacts generated from the nearby Beach House hotel to the east is a separate matter to this application.

The provision of the live music associated with a previous approved permissible restaurant within a town centre is not prohibited. The audible noise criteria are primarily focused on impacts on residential receivers.

Should the background noise levels for the subject premises change because of other nearby uses changing the nature of their noise generated then the operations of the subject premises will need to be adjusted/altered.

2. Agree that previous original assessment and conditions were assessed on the basis that no live music was approved to occur within the premises primarily on the basis at the time that the Applicant proposed the application in that manner. The Applicant is entitled however to apply to modify the consent under Planning legislation.

3. Council's current Development Control Plan 2011 - Area based provisions for the Town Centre states the following:

The town centre is an environment that provides opportunities for social interaction and engagement, for recreation and for entertainment. This occurs formally in designated venues such as hotels, cafes and restaurants and informally and spontaneously on the street, in public places and in shopping centres.

Based upon the above and the existing approved restaurant (and pub uses) being a permissible use in the current zoning which applies to the site it would be illogical to conclude that the subject premises could not be supported within this

	section of the Port Macquarie Central Business District area.
<p>Amenity and noise impacts upon adjoining Country Women's Association premises and other premises</p> <p>1. Cause for concern about the increasing amount of noise generated by amplified music at both the Fig and at the Beach House and the ensuing reduced environmental quality of the Country Women's Association room users.</p> <p>2. Concern with additional evening and night time noise that would negatively impact upon guests of nearby accommodation facilities. Guests are already subject to adverse noise from other venues located within close proximity resulting in complaints and potential loss of business.</p>	<p>1. The provision of the live music associated with a previous approved permissible restaurant within a town centre is not prohibited. The audible noise criteria are primarily focused on impacts on residential receivers.</p> <p>2. The operations of the premises including use of amplified music including live music is capable of operating within prescribed acceptable noise levels.</p>
<p>Amenity and noise impacts upon residences within the mixed use building</p> <p>1. The premises operates with music on Sunday afternoons which is okay, but should the music be much louder the doors of the restaurant will definitely have to close. On Sunday, the music is loud enough that it is heard in the unit on the first floor. Council approved these residential apartments and should consider impact on residence.</p> <p>2. The proponent has not suggested any time restriction for amplified music other than the closing time of midnight. To have a band and/or other amplified music on site until that time each week is completely unreasonable and will impact on the amenity of residents.</p> <p>3. The Fig Restaurant site is not suited to amplified music (at least that music which volume is not acoustically controlled and which is allowed to blare out until midnight every night of the year) due to the immediate proximity of the Quay North residential units.</p> <p>4. The change to the Liquor and Gaming Act that appears to have prompted this</p>	<p>1. Post public exhibition a noise assessment has been provided which has been taken into consideration in assessment of noise impacts with the proposed change to condition of current consent approval. The operations of the premises including use of amplified music including live music is capable of operating within prescribed acceptable noise levels.</p> <p>2. The operations of the premises including use of amplified music including live music is capable of operating within prescribed acceptable noise levels. Refer also to additional recommended conditions to be added to consent approval as detailed later in this report under assessment of Noise impacts.</p> <p>3,4&6 The restaurant premises is considered capable of having restricted supportive music to its' trading operations.</p>

modification application means that it is essential to the wellbeing of the residential dwelling situated above the Fig Restaurant that the conditions of habitation are not made untenable by a change to this one premises.

5. Condition A31 of the development consent for DA 2001/799 states the requirement with regard to double glazing (not installed, definitely not in our apartment) or laminated glass with similar noise attenuation. "The document" in the middle of section 2.2 states "It is assumed for the purposes of assessment of this proposal that these noise mitigation measures have been incorporated within the construction of the building". Under section 3.2 of "the document" in sub-section 1) that, it is stated, the Council is satisfied that the laminated glass installed has similar noise attenuation properties to double glazing. Not as sure that the glass fitted has similar noise attenuation properties and believe that "the document" should be emphatic about the issue and not "assume" that the glass installed has the correct properties.

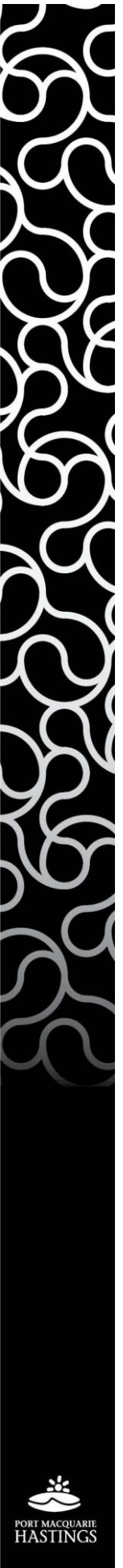
6. By way of example the property across Clarence Street from our apartment has on occasions had musical entertainment on some evenings. It was impossible to sleep and made hearing the television at normal sound levels very difficult. We have not complained, because we understand they need to conduct a business and the number of times it has occurred is very minimal, but it has raised the issues - the regularity of it occurring, the music noise level, the noise of patrons at the venue who congregate in the outdoor areas, so they can converse (loudly over the music level) and the high pitched and piercing voices that accompany the outdoor crowd. Admittedly, the music stopped at midnight, but the loud pitched and piercing voices continued until well after 1.00 a.m.

7. The issue of increased pedestrian traffic noise needs to be addressed in any modification of the approval, if granted. The regulatory position of advising people to be quiet, or posting signage advising them of their need to

5. It is noted that the double glazing or laminated glass may not have been installed within the dwellings.

6. Any claims of adverse noise impacts generated from the nearby hotel uses to the east is a separate matter to this application. The provision of the live music associated with a previous approved permissible restaurant within a town centre is not prohibited. The audible noise criteria are primarily focused on impacts on residential receivers. Should the background noise levels for the subject premises change because of other nearby uses changing the nature of their noise generated then the operations of the subject premises will need to be adjusted/altered.

7. Recommend adding new condition F(11) and other post approval operating conditions as detailed in recommendations section of this report.



be quiet, is clearly inadequate, if the building allows offensive sound to enter residential buildings. It will lead to ongoing problems, altercations, the involvement of Council staff, the police and liquor premises agencies and lower property values.

8. Is Council sure that the noise levels contained within the Liquor Act LA10 guidelines below a level that would not cause annoyance within a residence in this locality? If the Council is unsure, how are residents of Quay North premises going to be assured that their interests are being protected at the stated noise levels proposed?

9. The proponent's proposed amended conditions are contrary to the original DA, Council's Development Assessment Panel recommendations which reinforced that amplified live music was not permitted, and hours of operation are restricted.

10. The SEE and Council could consider a single noise level rather than base noise limits on an excess above background levels to enable residents and Council the opportunity to clarify and resolve future noise complaints.

11. It is unclear for instance whether the doors and windows of the restaurant will be opened, will the live entertainment be amplified to patrons dining outside the restaurant building, when and how often the live entertainment will occur, and what the likely impact will be on the apartment residents.

12. Will (as the proponents suggests in the proposed condition) the installation

8. The Office of Liquor, Gaming and Racing Sound Advice guideline states its intention to not be a mandatory compliance document under liquor licensing, noise pollution or planning laws. It contains useful information to help appreciate the risks of sound coming from a venue as proposed which may impact on neighbours and makes suggestions to help manage these risks.

9. Agree that previous original assessment and conditions were assessed on the basis that no live music was approved to occur within the premises primarily on the basis at the time that the Applicant proposed the application in that manner. The Applicant is entitled however to apply to modify the consent under Planning legislation.

The current approved trading hours are not proposed to be recommended to be changed as follows:

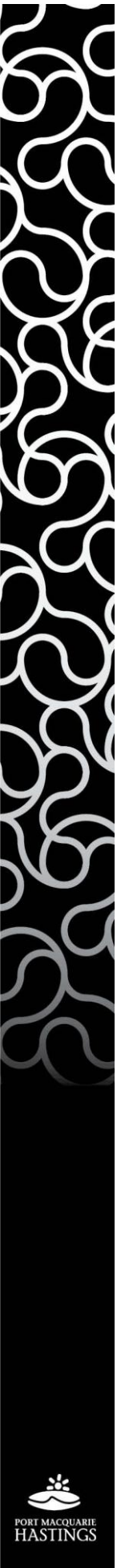
- *Hours of operation of the development are restricted to the following hours:*

- - 7.30 am to Midnight – 7 days
- - 7.30 am to 1.00 am – New year's eve only

10&11 Noise is complex to assess and needs to factor in background noise levels over average periods. Refer to recommended conditions in recommendation section of this report.

There is no intention by the Applicant to close the doors or windows within the premises on the northern side façade.

12. The operations of the premises including use of amplified music



and maintenance of sound limiters and compressors on amplification equipment used in the premises that also disconnect sound from amplification equipment should the sound level exceed the prescribed limits specified, be appropriate in this circumstance?

13. The submitted information states the owner has staged a series of live events and has not been advised of any noise complaints over the two years of operation. We have made numerous complaints to Council over the last two Years. Council's Compliance Officer has advised on many occasions that the premises exceeded their noise attenuation.

14. To state that the existing re-enforced concrete slab achieves a sound insulation index greater than the level specified in condition E9 of the consent is not correct. Has the claim been proved to Council. Engineering advice suggests that the slab was engineered for structural stability with no consideration as to the future sound pressure.

15. To propose the noise from the licensed premises shall not be audible within any habitable room in the residential premises is patently fanciful. Live on the third floor at the furthest end from the premises and during the events previously staged could not watch television without discomfort.

16. The Applicant's reference to Bringing back the music fact sheet produced by the NSW Office of Liquor, Gaming and racing in 2009 is misleading. The clear intent of that document was to protect the rights of well established venues with a long history of live music performances against the objections of newly occupied residences in close proximity.

17. What internal works were undertaken by the owner since the original consent should have received

including live music is capable of operating within prescribed acceptable noise levels.

13. It is noted that complaints have been received by Council post original approval and operations of the restaurant to date.

14. Specific information to confirm and certify the slab has not been provided as requested. The original development consent required this certification and was addressed by the Private Certifier in the Construction Certificate issued.

15. Agree - As stated earlier in this report it is important to note that it is accepted that there will be some impact on the residents above the premises. Any expectation by residents that the modification to the DA consent will result in no impact is not a reasonable expectation, particularly given the location of the restaurant in the town centre which has a mixture of commercial and residential land uses and with Port Macquarie being a tourist town catering to tourists and residents alike.

16. It is recommended that the following proposed condition be imposed:

The noise from the licensed premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00 am.

17. No internal works are

<p>Council approval.</p> <p>18. What were the acoustic conditions of the premises prior to the internal works being undertaken?</p> <p>19. How can the Applicant assure Council that the works have indeed improved the acoustics of the premises in terms of potential impacts to neighbouring residents.</p> <p>20. Was the building in fact designed in anticipation of any amplified music occurring within the otherwise residential building?</p> <p>21. What improvements to the fabric of the entertainment venue tenancy could be implemented to reduce acoustic impacts?</p>	<p>proposed to be changed as part of the modification application which would require development consent approval.</p> <p>18. The internal separation of the restaurant tenancy from other uses within the building was to comply with the Building Code of Australia. A separate DA has been submitted and previously approved.</p> <p>19. The issue of noise impacts has been revisited as part of this modification application including the Applicant providing a Noise Impact Assessment.</p> <p>20 - refer to 18 above</p> <p>21. The operations of the venue will be required to comply with the recommended conditions.</p>
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<p>Operations of premises</p> <p>1. The Modification has the potential to alter the culture of the existing premises. Consideration should be given to the installation of CCTV, security personnel, RSA marshals and incident registers at the premises so that any issues which occur on the streets in the Port Macquarie CBD, or around/within other licensed venues, later in the evening can be monitored, reported and reviewed.</p> <p>2. Council should also request a Plan of Management and Security Management Plan from the Applicant so that matters surrounding incident reporting, responsible supply of alcohol, security presence, security patrols, litter removal and helping patrons to get home, are set out and reviewable.</p> <p>3. It appears that the Fig owners are now recognising the benefits of further diversifying their use of the premises and effectively adding a significant 'amplified entertainment' element to their business. If this is indeed the case then this needs to be set out clearly in their proposal. I do not believe Council should be facilitating the establishment of another, especially late night, licensed entertainment venue in this location, by deletion or modification of this condition F8.</p> <p>4. The report states that "The owner is of the opinion that the condition places no restrictions as to the level of amplification that may be applied to recorded music." This appears to indicate that the owner is considering the introduction of recorded music and hence the amplification of recorded music needs to be addressed in any condition of approval. The introduction of recorded music into the scenario seems to override the first 2/3rds of section 3.1 of "the document", which is a solicitation that live music is good for the social environment and is Government policy. "The document" does not address the issue of recorded music,</p>	<p>1. The approved use of the premises is for a restaurant only. An inspection of the premises indicates a significant portion of floor space occupied by primarily tables and chairs. The operations of the premises including use of amplified music including live music is capable of operating within prescribed acceptable noise levels. The applicant does not propose to change to character/nature of the current use and is required to comply with the original intention for operation as a restaurant primarily.</p> <p>2. Refer to proposed recommended conditions regarding noise. Other matters are covered by Liquor Licensing.</p> <p>3. - Refer to point 1</p> <p>4. Recorded music will be subject to the same recommended restriction conditions.</p>
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except to indicate that it an issue that the owner is considering. "The document" in section 4.0 Proposed Conditions and elsewhere throughout "the document" is consistent in that it makes a case for the removal of conditions that would allow the introduction of amplification of music to the Fig Restaurant. Under such a change the usage of the premises would change from essentially being a restaurant into, in our understanding, an entertainment facility. Broadly speaking, the Liquor and Gaming Act, provides that the service of food is no longer the only reason for the venue operating to the hours nominated, but it now has the right to operate to those hours because it has a live music component.

5. We have been unable to find a definition of live music, apart from its obvious connotation. Does it include the use of a DJ to play recorded music? A Disc Jockey is a live person, but he is playing recorded music. The issue needs to be addressed.

6. The current development approval, from our interpretation of the condition F8 is, that a DJ is a live musical performance and therefore amplified music is not permitted. Amplified recorded music is appropriate to a restaurant where people will leave if the music is too loud, or conversation at normal levels is interrupted by the music. Essentially, it is common in the restaurant industry, that to clear a restaurant you turn up the lighting and turn up the music level. Having not had experience in the entertainment industry, but judging from visual images, an entertainment venue operates in a low light environment with high music levels.

7. The regularity of the occurrence of an entertainment venue being used is not something that is controlled by Government legislation, except for a few days a year, once approval has been granted. It is possible to visualize that an operator of this facility may well be considering having a dual facility involving the running of a restaurant until say 9.00 - 9.30 p.m. and then an entertainment venue when the night

5. Live music is commonly known music that it is not recorded. All music and noise will be subject to the same recommended restriction conditions.

6,7&8. The current condition does not permit amplified music with live performances within the restaurant. The applicant does not propose to change to character/nature of the current use and is required to comply with the original intention for operation as a restaurant primarily.

crowd emerges from 10.00 p.m. onwards. The effects of this would then be increased passing foot traffic, and the associated increased noise level on residential accommodation as people both arrive, leave and congregate in the outside areas of the venue to converse, especially if the property changes into a nightclub type situation.

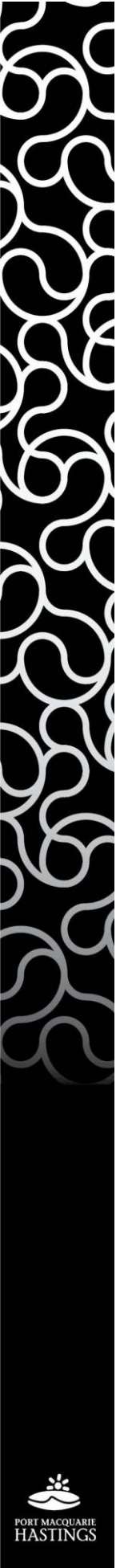
8. The sought after changes to the operating conditions of the Fig Restaurant may well change the venue from a high staffing restaurant situation to a much lower bar staff situation. There is no information in "the document" that allows anyone to establish what change from a restaurant venue, that is limited by the number of seats, to an entertainment venue would have, or to assess the effect of increased pedestrian traffic, possible vehicular movements and the effect of a higher and later noise level. "The document" should address these issues to allow proper assessment.

9. Section 3.1 of "the document" states it is "The principal intention of this guideline" (Sound Advise information guideline) "was to encourage licensees (sic) to self-assess the benefits to their business from implementing practices and strategies suggested in the document so as to manage the risks associated impacting on neighbouring residents". We are of the opinion that the document has not adequately considered all the risks, nor has it provided any information as to the proposed operating environment of the Fig Restaurant. Only the owner can self-assess the benefits in view of a projected operating environment, and such a view must exist, otherwise a modification to the development consent would not be necessary. A record of a proposed operating environment should be provided, similar to that recorded at the end of section 2.2 and recounted as the DAP report thereby allowing appropriate conditions of approval to be developed.

10. The hours of operation permitted by the development consent are identified in condition F3 (DF031) as being 7:30am to midnight – 7 days, and

9. A Noise Assessment has been submitted during the assessment of the application. Refer to consideration of noise impacts addressed later in this report including recommended conditions.

10. Conditions are recommended to be required to restrict noise when not trading but still associated with the premises operations.



<p>7.30am to 1:00am – New Years Eve only. The present permitted development does not allow the restaurant to operate between 12:00 midnight and 7:30am. All proposed conditions that make reference to noise levels between 12:00 midnight and 7:00am should be removed from the conditions of consent.</p> <p>11. Council approved the whole building as mixed use - commercial and residential i.e. Shops, residential, restaurant for mutual enjoyment but not for a night club.</p> <p>12. The original Council approval was for a restaurant of 138 seats (42 outside and 96 inside) from day one the operator has advertised seating for 300 patrons with over 100 outside. A vastly different amenity to that carefully considered by Council and independent arbitrator just two years ago.</p> <p>13. The owner/operator has not complied with operating conditions from day one and thus cannot be viewed favourably for a modified consent.</p> <p>14. Question what conditions apply to the venue's existing liquor licence. Must a meal be consumed while entertainment occurs i.e. could the tenancy operate as an entertainment venue without meals being served.</p>	<p>11. Refer to point 1</p> <p>12. The amount of seating within the premises is governed/permitted primarily under the Building Code of Australia. The original approved plans detailed the seating areas however indicatively identified seating arrangements.</p> <p>13. Compliance with the conditions of consent relating to noise is the subject of this application only.</p> <p>14. Liquor licensing is a separate matter to this application.</p>
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<p>Appropriateness of current guidelines</p> <p>1. In section 4.0 Proposed Conditions of "the document" it is proposed that the modification be to apply the industry guidelines to be the development conditions. This makes little sense in that Government policy is subject to change and industry guidelines also change in the light of experience. Does one change the development conditions via a new modification every time policy or guidelines change and who is to monitor that a change has occurred?</p> <p>2. Development conditions should not mimic Government policy or guidelines because they operate in different environments. The Development Conditions approved should reflect the local conditions in Port Macquarie and ameliorate as far as possible any untoward effects of State Government legislative or guideline inadequacies.</p>	<p>1. Development Assessment under Planning legislation is to have regard to best practice guidelines at the time of assessment of the application. Refer to recommended conditions.</p> <p>2. A noise assessment taking into consideration of the current environment has been submitted during the assessment of the application. Whilst there is missing information in the Noise Assessment as requested to be addressed (as stated later in this report) this is insufficient to warrant refusal of the application as the noise levels are capable of being achieved.</p>
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Any matters referred to in Section 79C (1) relevant to the modification?

Noise & Vibration

- The modification of the DA consent condition has the potential to particularly impact on residents (i.e. sensitive receivers) residing in dwelling units above the restaurant. Council needs to determine whether the impact from the modification to the DA consent condition on the residents residing above the restaurant will be reasonable. It is important to note that it is accepted that there will be some impact on the residents above. Any expectation by residents that the modification to the DA consent will result in no impact is an unreasonable expectation, particularly given the location of the restaurant in the town centre which has a mixture of commercial and residential land uses and with Port Macquarie being a tourist town catering to tourists and residents alike.
- During assessment of the application a Noise Assessment report was submitted prepared by In Phase Productions. The report provides a conclusion that the Applicant has taken proactive steps to control the sound pressure level (SPL) of the venue by installing their own speaker system thereby limiting the amount of SPL generated by the introduction of performer's personnel amplification and speaker systems. The series of test detailed in the report submitted conclude that the noise generated at the venue, in relation to the boundary of the nearest residence, does not fall outside the levels set by the Office of Liquor, Gaming and Racing.
- A Council Environmental Health officer has provided the following comments to assist with the assessment of the modification application particularly in relation to noise impacts.

- Inphase Productions has assessed the noise from the venue against the standard OLGR conditions applied to licensed venues providing entertainment in NSW, reproduced below:

Current proposed noise conditions:

1. *The LA10* noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz–8kHz inclusive) by more than 5dB between 7:00 am and 12:00 midnight at the boundary of any affected residence.*
2. *The LA10* noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz–8kHz inclusive) between 12:00 midnight and 7:00 am at the boundary of any affected residence.*
3. *Notwithstanding compliance with the above, the noise from the licensed premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00 am.*

** For the purpose of this condition, the LA10 can be taken as the average maximum deflection of the noise emission from the licensed premises.*

This is a minimum standard. In some instances the Director may specify a time earlier than midnight in respect of the above condition.

Interior noise levels which still exceed safe hearing levels are in no way supported or condoned by the Director.

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- The Inphase Production Report did not include a site plan showing the monitoring locations used for the Assessment. Ideally, Noise Assessment reports should include enough information to enable the Noise Assessment to be replicated (i.e. to verify results etc). A site plan was requested from Inphase Productions but has not been provided to date.

- The Noise Assessment measured the noise in Peak Hold to determine the maximum noise level as opposed to the average noise level for two minutes at each monitoring location. As can be seen from the OLGR noise conditions listed above, the OLGR does not set a minimum time frame for the noise to be monitored for the assessment.

- A Background noise level inside the residential unit above the restaurant without extraneous noise was not included in the NIA report and was also requested from Inphase Productions but it has not been provided to date. This is relevant for the assessment of noise from the restaurant against the OLGR conditions.

- The NIA report concludes that noise generated at the restaurant when measured at the boundary of the nearest residence complies with the OLGR

condition No.1. NB the other OLGR noise condition only applies to the restaurant on New Year's Eve for one (1) hour when the restaurant is open until 1am.

- To ensure noise from the restaurant is at a reasonable level at sensitive receiver locations, it is recommended that the following conditions be applied to the Modified Consent, if approved:

- Install compression or limiting devices to the sound system;
- Install equalization devices to control low frequency sound levels;
- Set a maximum noise level for the restaurant which shall be included in contracts with performers (to ensure it is not exceeded);
- Staff are to carry out regular noise monitoring with proper devices to ensure maximum noise levels are not exceeded and compliance with the OLGR noise conditions is achieved;
- Establish a Complaints Register and Complaints Handling Procedure for staff;
- Staff are to be trained in complaint handling and are to investigate and act on noise complaints received;
- Offensive noise is not to be generated on the premises;

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Based upon the above, although there has not been complete information submitted it is considered unlikely that the proposed development will have any significant adverse environmental health impacts, subject to the imposition of conditions of consent as indicated in dot points above. Refusal of the modification application is not considered appropriate on the basis of the recommended conditions above.

4. DEVELOPMENT CONTRIBUTIONS APPLICABLE

No development contributions applicable to modification proposal.

5. CONCLUSION

The modification application has been assessed in accordance with 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, modified conditions have been recommended to manage the impacts attributed to these issues.

The site remains suitable for the proposed development, is not contrary to the public's interest and will not have a significant adverse social, environmental or economic impact. Consequently, it is recommended that the modification application be approved, subject to the recommended amendments to conditions of consent provided in the recommendations section of this report.

Attachments

1 [View](#). DA2010 - 0230 Fig Noise Assessment



3rd of November 2012

Preliminary Acoustic Report Prepared for Tameka Pty Ltd.

In Relation to "The FIG" Restaurant

17-19 Horton St, Port Macquarie

Introduction

This report has been prepared by Thomas Benson, Owner and Manager of *In Phase Productions* a Port Macquarie based company providing Audio, Lighting and Vision production services. In Phase Productions has been in operation in Port Macquarie since 2002 and prior to that Thomas Benson owned and operated a similar company and spent much of his early life working and touring with Bands. He has spent at least 25 years working as an Audio Technician and Electronics Technician in the audio industry and has installed numerous P.A. systems in various places throughout NSW.

Tom's expertise in determining acoustical properties of adjacent structures relevant to noise control problems commenced with undertaking investigations associated with neighbourhood disputes in relation to domestic air conditioning systems or offensive noise issues with adjoining neighbours. Many of these investigations resulted in acoustic reports being lodged with the local council to assist them with their investigations. Tom has also been involved in a number of projects with consultant acoustic engineers such as the Kew Hotel (outside Cinema), Life Express Fitness (noise problems in adjacent shops) and more recently Panthers Port Macquarie (neighbour noise complaints). As a result, these issues have been satisfactorily resolved based on my investigations.

The brief for this series of tests was to determine whether noise coming from the Fig Restaurant was interfering with the amenity of owners of apartments located above the premises. It is understood the normal operation of the venue does not interfere with tenant amenity, however, special event evenings had given rise to complaints. It was agreed with council that acoustic testing would be undertaken on a special event to determine the noise

impacts of this event on adjoining premises. The date chosen was 27th of October when a performance by Vince Jones was scheduled for 9 pm.

All tests were performed using a class 1 sound level meter complying with AS IEC 61672. The sound level meter was set to measure A-weighted noise levels. Please note that under NSW legislation it is permissible to use either a Class 1 or Class 2 meter to undertake noise assessment surveys. Tests were also performed using peak hold so that all readings rather than average are actually the loudest noise measured over a 2 minute interval.

Weather at the time of the tests was fine with a slight breeze , temperature of 18 degrees. The seas were slight with little wave swell noise.

At the time of this event and testing, no other venues in the vicinity of the Fig were conducting any entertainment. Accordingly, background noise levels were low when compared to background noise levels normally occurring in the vicinity of the Town Green.

Legislation

The *Protection of the Environment Operations Act 1997* (POEO Act) and the Protection of the Environment Operations (Noise Control) Regulation 2008 (Noise Control Regulation) provide the legislative framework and basis for managing unacceptable noise within local government.

Noise is defined in the POEO Act as:

"noise includes sound and vibration."

Noise pollution is defined as:

"noise pollution means the emission of offensive noise."

Offensive noise is defined as:

"offensive noise means noise:

(a) that, by reason of its level, nature, character or quality, or the time at which it is made, or any other circumstances:

(i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or

(ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or

(b) that is of a level, nature, character or quality prescribed by the regulations or that is made at a time, or in other circumstances, prescribed by the regulations."

Under the *Liquor Act 2007*, the Director of Liquor and Gaming has a range of statutory powers and enforcement functions under the liquor laws including the power to deal with issues associated with licensed venues. The types of condition that can be imposed on licensees by the Director include, but are not restricted to:

- a) noise conditions

- b) prohibition on amplified entertainment
- c) requirement for acoustical testing and amelioration work

The NSW Office of Liquor, Gaming and Racing (OLGAR) recommends the following noise levels be applied to licenced premises providing entertainment:

- 1) *The LA10 noise level emitted from the licenced premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz – 8k Hz) by more than 5dB between 7:00am and 12:00 midnight at the boundary of any affected residence.*
- 2) *The LA10 noise level emitted from the licenced premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz – 8k Hz) between 12:00 midnight and 7:00am at the boundary of any affected residence.*
- 3) *The noise from the licenced premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00am.*

Background

Development consent was issued by Port Macquarie-Hastings Council on 9 July 2010 for a licenced restaurant via DA 2010/230. The following conditions of consent apply to the uses of the premises:

F(3) Hours of operation of the development are restricted to the following hours:

- 7:30 am to Midnight – 7 days
- 7:30 am to 1:00 am – New year's eve only

F(8) This approval does not permit the use of amplified music with any live music. Should there be any intention to do so, then separate development consent or modification to this consent will be necessary to be obtained from Council.

It is understood that an application to modify condition F(8) has been lodged with council. Accordingly, this report is to be read in conjunction with this application.

Table 1

Test Results

PEAK SPL READINGS - dBA				
Time	Location	Distance From Venue	Reading	Comments
7.00 pm	Outside Venue	5 metres	68db	Loud bird noises
7.02 pm	Opposite Venue	15 Metres	74db	
7.04 pm	Cenotaph	25 metres	62db	
7.16 pm	Unit 103 Lounge	N/A	40db	
7.19 pm	Unit 103 Veranda	N/A	69db	
7.21 pm	Unit 103 En-suite	N/A	36db	

8.14 pm	Outside Venue	5 metres	57db	Support Act without music
8.31 pm	Opposite Venue	15 Metres	56db	
8.35 pm	Cenotaph	25 metres	48db	
8.55 pm	Opposite Venue	15 metres	69db	Band starts
9.06 pm	Unit 103 Lounge	N/A	40db	
8.59 pm	Unit 103 Veranda	N/A	52db	
9.04 pm	Unit 103 En-suite	N/A	40db	
9.11 pm	Inside Venue	N/A	92db	
9.16 pm	Opposite Venue	15 Metres	55.9db	Doors closed
9.19 pm	Opposite Venue	15 Metres	72db	Doors open

Discussion

Background noise levels taken at 7 pm were the result of huge flocks of birds and bats in the Morten Bay Figs located in the Town Green. To enable a more accurate determination of discernible background levels, additional readings were taken at 8:35pm. It should be noted that at this time there were no other venues in the immediate vicinity operating any live or recorded music. The minimum background noise level available when taken at the cenotaph was 48db, which is extremely low given the natures of activities normally associated with this precinct.

Table 2

Comparative Readings

PEAK SPL READINGS - dBA						
Time	Location	Distance	Reading	Time	Reading	Difference
7.00 pm	Opposite Venue	5 metres	68db	8.14 pm	57db	(-) 5db
7.02 pm	Opposite Venue	15 Metres	74db	8.31 pm	56db	(-) 18db
7.04 pm	Cenotaph	25 metres	62db	8.35 pm	48db	(-) 14db
7.00 pm	Opposite Venue	5 metres	68db	8.55 pm	69db	(+) 1db
7.16 pm	Unit 103 Lounge	N/A	40db	9.06 pm	40db	No change
7.19 pm	Unit 103 Veranda	N/A	69db	8.59 pm	52db	(-) 17db
7.21 pm	Unit 103 En-suite	N/A	36db	9.04 pm	40db	(+) 4db

Comparative tests at unit 103, which is directly above the venue, show that no appreciable rise in noise level occurred inside the unit (see Table 3) particularly the readings taken in the lounge room area at 7:16pm and 9:06pm respectively. Readings taken on the veranda, although the music could be ascertained, the level was only 4db above the background level of 48db. Typically, the greatest amount of noise transfer within a building generally occurs within rooms that contain service ducts or other similar penetrations. These are likely to be found in rooms such as bathrooms, en-suites attached to bedrooms, kitchen areas or laundries. For the purposes of this survey, readings were also taken in the en-suite attached to the main bedroom which is located directly above the venue. Noise levels from this room

show that there was a 4db increase in noise level after the event commenced, yet this was still 8db below the lowest recorded background noise level.

This means that the noise level from the venue did not exceed the background noise level either at the boundary of the premises or within the premises by more than 5db on an evening where no other venues in the immediate vicinity were operating any live music. It can only be assumed that when these venues are operating, the background noise levels would be significantly higher than this recorded for the purpose of this survey.

The SPL level inside the venue at this time was checked at 92db. It was noted at this point that 2 doors were open onto the outside area. Readings were taken at the 15 metre distance from the venue with the doors open and closed and this created 17db of level difference bringing the minimum level back to 55db. However all tests were done with the venue doors open. Conversely, and as previously noted, noise levels taken at the boundary of the premises or within the premises did not indicate any appreciable rise in noise levels, nor did the noise levels exceed 5db above the lowest recorded background noise level. Therefore, closing of the doors during an event at the venue is not considered a necessary noise control implementation strategy.

Table 3

Background Noise Level Comparisons

PEAK SPL READINGS - dBA					
Time	Location	Distance	Background	Reading	Difference
7.00 pm	Opposite Venue	5 metres	62db ¹	68db	(+) 6db
7.16 pm	Unit 103 Lounge	N/A	62db	40db	(-) 22db
7.19 pm	Unit 103 Veranda	N/A	62db	69db	(+) 7db
7.21 pm	Unit 103 En-suite	N/A	62db	36db	(-) 24db
8.14 pm	Opposite Venue	5 metres	48db ²	57db	(+) 9db
8.31 pm	Opposite Venue	15 Metres	48db	56db	(+) 8db
8.35 pm	Cenotaph	25 metres	48db	48db	No change
8.55 pm	Opposite Venue	5 metres	48db	69db	(+) 19db
9.06 pm	Unit 103 Lounge	N/A	48db	40db	(-) 8db
8.59 pm	Unit 103 Veranda	N/A	48db	52db	(+) 4db
9.04 pm	Unit 103 En-suite	N/A	48db	40db	(-) 8db
9.11 pm	Inside Venue	N/A	48db	92db	(+) 44db
9.16 pm	Opposite Venue	15 Metres	48db	55.9db ³	(+) 7.9db
9.19 pm	Opposite Venue	15 Metres	48db	72db ⁴	(+) 24db

1. Background noise level measured at 7:04pm (Cenotaph) with loud bird noises

2. Background noise level measured at 8:35pm (Cenotaph) without loud bird noises and prior to any live music

3. Doors closed

4. Doors open

Conclusions

The client has taken proactive steps to control the SPL level of the venue by installing their own speaker system thereby limiting the amount of SPL generated by the introduction of performers personnel amplification and speaker systems. It was noted that the system was flown to minimise transferred vibration.

With our series of tests we have shown that the noise generated at the venue with relation to the boundary of the nearest residence does not fall outside the levels recommended by OLGAR as follows:

- 1) The LA^{10} noise level emitted from the licenced premises did not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz – 8k Hz) by more than 5dB between 7:00am and 12:00 midnight at the boundary of any affected residence.
- 2) As the premises did not operate beyond midnight, the LA^{10} noise level emitted from the licenced premises did not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz – 8k Hz) between 12:00 midnight and 7:00am at the boundary of any affected residence.
- 3) As the premises did not operate beyond midnight, the noise from the licenced premises was not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00am.

Glossary

dB decibel means the unit of measurement for noise levels.

dB(A) 'A' weighted decibel means the 'A' weighting approximates to the frequency sensitivity of the human ear.

L10,T means the noise level that is exceeded for 10% of the observing period