



Environmental Assessment

Part Lot 4 DP 1117732 (formally Part Lot 59 DP 831253)
320 Soldiers Point Road
Salamander Bay

HILL PDA
Andrews.Neil

Job No.: 04107
Date: October 2007

Port Stephens Council

ENVIRONMENTAL ASSESSMENT

**Proposed Residential Subdivision
360 Soldiers Point Road,
SALAMANDER BAY**

ANDREWS NEIL PTY LTD
ARCHITECTURE PLANNING LANDSCAPE ENVIRONMENT URBAN DESIGN

FEBRUARY 2008

Environmental Assessment -
Project Application Stage 1, Salamander Bay.

Issue	Date	Description	By
A	25.10.06	Draft for client review	NCM
B	30.01.07	Draft for client review	RKC
C	09.02.07	Revised Draft for client review	NCM
D	07.03.07	Revised Draft for client review	RKC
E	27.03.07	Revised Draft for client review	RKC
F	20.06.07	Revised Draft per DoP comments for client review	RKC
G	21.08.07	Revised Draft for client review	NCM
H	28.09.07	Revised Draft for client review	NCM
I	04.10.07	Final Draft for client review	NCM
J	26.10.07	Revised per DoP comments	ACN

Statement of Validity

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FEBRUARY 2008

Statement of Validity

Submission of Environmental Assessment

Prepared under Part 3A of the Environmental Planning and Assessment Act 1979

Environmental Assessment prepared by

Name
Qualifications
Address

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BTP UNSW
Andrews.Neil Urban Design Group Pty Ltd
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In respect of

HillPDA / Port Stephens Council

Project Application

Applicant Name
Applicant Address

HillPDA / Port Stephens Council
Level 15, 60 Carrington Street
Sydney NSW 2000

Land to be developed

Part Lot 4 DP 1117732 (formally Part Lot 59 DP 8312563) located along Old Soldiers Point Road, Salamander Bay within the Port Stephens LGA. Development area is 4.5 hectares.

Proposed development

Subdivision of land to create thirty-one (31) residential parcels and three (3) open space allotments with associated infrastructure and road works.

Environmental Assessment

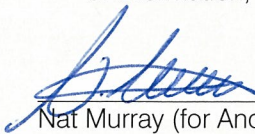
An Environmental Assessment is attached which addresses all matters listed under Part 3A of the Environmental Planning and Assessment Act 1979.

Certificate

I certify that I have prepared the contents of this Environmental Assessment and to the best of my knowledge:

- it contains all available information that is relevant to the environmental assessment of the development to which the Environmental Assessment relates
- it is true in all material particulars and does not, by its presentation or omission of information, materially mislead.

Signature
Name
Date


Nat Murray (for Andrews.Neil Pty Ltd)
14 February 2008

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ARCHITECTURE PLANNING
ENVIRONMENT URBAN DESIGN

LANDSCAPE

FEBRUARY 2008

Executive Summary

This Environmental Assessment evaluates an area of approximately 4.5 hectares zoned for residential use at Salamander in the Port Stephens local government area.

Because the site falls within the area covered by Coastal Lands Protection it by definition is designated as State development and comes within Part 3A of the *Environmental Planning and Assessment Act 1979*. As a result the Director General's requirements were sought and the documents have been prepared in accordance with these directions.

Investigations for the entire site zoned for residential use has been undertaken, however, it must be noted that this application relates only to the area identified as Stage 1, comprising thirty-one (31) residential parcels and three (3) open space allotments. A future application will relate specifically to Stage 2, which should only be considered indicative at this time. All documentation in this report relates to Stage 1 unless explicitly stated otherwise.

The development area has previously been sand mined with the land and vegetation considerably modified.

A number of key issues have been identified, examined and evaluated. These include geotechnical considerations and soil, flora and fauna, bushfire, traffic, archaeological and water sensitive urban design issues. As a result of the assessment it is proposed that large tracts of the site (just over 16,000 square metres) remain as bushland, providing for koala movement and habitat as well as water quality.

Provision has been made for the northern extent of a koala corridor in the south west portion of the site. It is envisaged that the design for future Stage 2 will continue the corridor along Old Soldiers Point Road (currently not a dedicated road). This is reflected in the indicative design layout for Stage 2 and considered in the attached specialist reports.

The plan also proposes to underground the 11kv power lines along Old Port Stephens Road. As this is not an operational road, it is intended to narrow the pavement and plant additional koala habitat. To further reinforce the corridor and as part of the water sensitive design of the project it is intended to place an elongated water detention area between the koala corridor and dwellings to minimise people/ koala contact.

The proposed subdivision has a density of 6.9 dwellings per hectare. The potential density is reduced mainly due to the preservation of a large portion of the site for environmental purposes.

The proposed development meets the expectations of Port Stephens Council, owner of the subject site, to develop a high quality, environmentally sound development, which it can showcase as an outstanding residential community boasting quality public domain and leading edge environmental

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Executive Summary

features.

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1.0 INTRODUCTION

This report represents an Environmental Assessment for the subdivision of the Subject Land being part Lot 4 DP 1117732 formally called Lot 59 DP 8312563 at Salamander Bay, Port Stephens, for residential development.

The site is approximately 21 hectares, owned by Port Stephens Council and is zoned Residential 2(a) under the local planning instrument, *Port Stephens Local Environmental Plan 2000*. The land subject to this report represents only 4.5 hectares of this total site area.

For the purposes of this report, the subject of this environmental assessment has been identified as Stage 1 on the attached Figures and in the specialist reports. Stage 2, being the remainder of Lot 59 DP 8312563, has also been subject to detailed study in each of the specialist reports, however, this stage is provided on the attached Figures for contextual purposes only. It is envisaged that Stage 2 will be proposed at a later date and is not included as part of this proposal.

All information contained within this Environmental Assessment relates only to Stage 1, being subdivision for 31 residential lots and 3 open space parcels. The various planning matters both at a State and local level are addressed in detail. Requirements issued by the Director General form the focus of consideration. **Section 6.1** of the report provides a checklist of compliance with these considerations.

2.0 BACKGROUND

The Subject Site has a long history with development being considered in the 1990s and a subsequent court case in 2002 when this proposal ceased.

Hill PDA was retained by Council to resurrect the proposal and in August 2005, a proposal was prepared for Stage 1 under the *State Environmental Planning Policy No. 71* (SEPP 71) relating to development in Coastal Lands areas.

Legislative changes in August 2005 resulted in the Subject Site potentially falling within Part 3A of the *Environmental Planning and Assessment Act 1979*. Following an application to the Department and Minister, it was determined Part 3A would apply and as a consequence, the Director General's requirements were required. These were requested and received in July 2006.

Concept approval was initially sought for Stage 1 and 2 whilst Project Approval was sought for Stage 1. Further consideration by Port Stephens Council has resulted in this application being amended to only apply for Project Approval for Stage 1.

3.0 CONSULTATION

On-going consultation with a range of relevant stakeholders has ensured an integrated approach to the development. **Table 1** below provides a list of the stakeholders who have been consulted during the planning process in relation to the proposed subdivision at Salamander.

Table 1 - Relevant Stakeholders

Agency	Contact	Date Consulted	Phone Number
Port Stephens Council	Lee-Ann McMurray/ Mack Campbell, Property Section	Regularly	4980 0390
Port Stephens Council	Steve Wilson, Environmental Officer	November 2004 January 2005	4980 0251
Port Stephens Council	Ian Gilks, Civil and Landscape Project Manager	October 2004 November 2004 January 2005	4980 0255
Port Stephens Council	Paul Douglass/David Broyd, Sustainable Planning Group Manager	October 2004 January 2005 October 2006 November 2006	4980 0255
Department of Planning	Paulina Hon/ David Mutton	December 2004, February 2005	9762 8000
DEC	John Turbill and Estelle Blair	14 March 2005	6659 8224
Salamander Bay Precinct Committee	Simon Brooke/ John Eckersley President	17 September 2004 11 November 2004 10 February 2005	4982 0564
Rural Fire Service	Nika Foman and Jane Jemison	07 June 2005 08 February 2007	8741 5424
Hunter Water	Bob Daniels	July 2005 May 2006	4979 9723
Energy Australia	Brenden Burns	January 2007 February 2007	0411 237 406
Telstra	Garry Mahon	March 2007	9397 2053

The various agencies and stakeholders have been kept informed from the outset of this project. Presentations at meetings and on site inspections have occurred. The primary concern has been the flora and fauna issues and in particular the retention and reinforcement of an environmental corridor linking koala habitat along the northern boundary of the subject land. This has been incorporated into the final design where approximately 14,300 square metres of land has been dedicated as koala habitat and connectivity. It is envisaged that the future design and development of Stage 2 to the south of the site will provide a continuation of the corridor along the Old Soldiers Point Road boundary.

Requirements issued by the Director General required consultation with the Anna Bay Drainage Union. Consultation revealed the subject site is outside the Union's area of responsibility and is subsequently not provided.

4.0 SITE DESCRIPTION

The proposed subdivision applies to land located off Soldiers Point Road, Salamander Bay. The subject site is described as part Lot 4 DP 1117732 formally called Lot 59 DP 831253 and is an irregular shaped parcel of land 4.5 ha in size located near the intersection of Old Soldiers Point Road and Soldiers Point Road (refer to **Figure 1** - Site Location). Kanimbla Drive terminates at the south east boundary of the Stage 1 development boundary.

The site adjoins existing residential development to the south and the east which mainly comprises single and two storey dwellings. A newly established Council sporting complex and playing field (former Council waste disposal site) is located to the north of the site also accessed from Old Soldiers Point Road, refer to **Photograph 1**.

The subject site is zoned 2(a) Residential under Port Stephens *Local Environmental Plan 2000* (LEP) (refer to **Figure 2** - Land Use Zoning Plan).

The development area slopes from the south to the north-western boundary (refer to **Figure 3** - Site Survey, Stage 1). A small area of *Lepironia* swamp occurs at the south western corner (refer to **Figure 4** - Site Survey, Swamp). This vegetation is representative of the Endangered Ecological Community (EEC) "freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions" listed pursuant to Part 3 of Schedule 1 of the *Threatened Species Conservation Act 1995* (TSC Act). The Water Sensitive Urban Design treatment for the site has been designed to ensure that no runoff will impact the swamp.

The plans and aerial photography indicate that this area has been subject to sand mining activities with most of the site having been disturbed, refer to **Photograph 2**. A Geotechnical Site Assessment has been prepared by Douglas Partners in January 2005, which illustrates the extent of the sand mining (refer to **Appendix 1**).

Land south of the proposed subdivision (future Stage 2) is densely vegetated. Vegetation within the south western portion of the site has been identified as preferred Koala Habitat and is representative of the EEC "swamp sclerophyll forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions" listed pursuant to Part 3 of Schedule 1 of the TSC Act.

South of Port Stephens Drive is Horizons Golf Resort and less than 500m to the south-west of the site is the Tilligerry Nature Reserve. Other recreational facilities and shops are located at Soldiers Point less than 1km from the site.

The former waste disposal area to the north of the site has been converted to playing fields. This area has been capped with an impermeable membrane and runoff is directed to ponds adjoining the northern edge of the proposed subdivision. The former waste disposal area sits between the development area and Cromartys Bay.

Existing access to the site is from an unformed driveway located along Old Soldiers Point Road, refer to **Photographs 3 and 4**.

A Site Analysis has been undertaken to identify opportunities and constraints on the site taking into account the issues raised by the specialist reports. This has defined the area that is suitable for development (refer to **Figure 5** - Site Analysis).

Photograph 1 - Aerial view looking south-east towards site



Photograph 2 - Sand Mining on Site - Stage 1



Photograph 3 - Existing Entry off Old Soldiers Point Road



Photograph 4 - Soldiers Point Road, looking towards intersection of Old Soldiers Point Road which provides access to the site and new playing fields



5.0 PROPOSED DEVELOPMENT

It is proposed to develop 4.5 hectares of the subject site into a total 34 allotments, including 3 lots dedicated as open space. There is opportunity to later develop a second stage south of the development area, however, this is not included as part of this proposal. **Figure 6** - Staging Plan outlines the current proposal (identified as Stage 1) as well as a possible future Stage 2 (indicative only).

The proposed Torrens Title subdivision for the proposed 34 lot subdivision, as illustrated in **Figure 7** - Subdivision Plan and **Figure 8** - Sections, comprises the following:

- Subdivision into 31 residential allotments, these allotments range in size from 502m² to 937m² (approximate density of 6.9 dwellings per hectare);
- The northern extent of an environmental corridor adjacent to Old Soldiers Point Road linking koala habitat areas. The indicative layouts provided for Stage 2 show that this corridor can be accommodated in any future development south of the proposed subdivision;
- An asset protection zone (APZ) to provide adequate setbacks between vegetation and development;
- Associated earthworks, roads and vegetation in accordance with the Landscape Plan, refer to **Figure 9**;
- Proposed stormwater concept design addresses principles of Water Sensitive Urban Design (WSUD) as well as SEPP 14 wetlands and unmapped wetlands, refer to Wetlands Plan - **Figure 10**;
- Retention of existing vehicular entry to the site from Port Stephens Drive via Old Soldiers Point

Road in the north.

- Pedestrian access throughout the site.
- Retention of the *Lepironia* swamp to act as a buffer between the koala corridor and the urban interface, minimising koala/people contact, as well as to the detention areas along Old Port Stephens Rd.

A summary of the residential lot areas is outlined below in **Table 2**:

Table 2 - Residential Lot Area Break-up

Range in Lot Areas	Lot Count
500 - 649m ²	24
650 - 799m ²	5
800 - 949m ²	2
Total	31

The subdivision is predominantly low density residential development. The site is ideally located close to the playing fields located on the northern side of Old Soldiers Point Road close to public transport links. The topography of the development area is some undulating but easy building land and lots have been designed to overlook the playing fields and are orientated north east - south west.

The proposed subdivision has an overall density of 6.9 dwellings per hectare. This development yield reflects the significant portion of land designated as environmental corridor, asset protection zone, and *Lepironia* swamp. Lot sizes vary to respond to the gradient and orientation to ensure that all allotments comprise favourable characteristics suitable for residential development.

Existing access to the playing fields north of the subject site is from Old Soldiers Point Road. This road will also provide access to the site. Additional access can be provided from a future continuation of Kanimbla Drive in stage 2, however, this is not proposed at part of this application.

Engineering consultants Cardno Willing have prepared a report on Water Sensitive Urban Design which encourages percolation of rainfall into the soil (refer to **Appendix 2**). Runoff will be captured in the swale system, cleaned and retained in ponding areas parallel to Old Port Stephens Rd.

6.0 PLANNING CONSIDERATIONS

The following matters are of relevance to this application and have been taken into consideration with the preparation of the proposal.

6.1 Director Generals Requirements

In July, 2006 the Director General's requirements were issued pursuant to Section 75F of the *Environmental Planning and Assessment Act 1979*. **Table 3** shows how this Environmental Assessment addresses the Director Generals Requirements (Application Number 05_2000).

Table 3 - Director General's Environmental Assessment Requirements

Requirement	Comment
General Requirements	
Executive Summary	An Executive Summary is provided at the beginning of this Assessment.
Outline of the Project Scope	The Project Scope is identified in Section 5.0 of this Assessment.

Requirement	Comment
Site analysis	A Site Analysis has been undertaken and is provided as Figure 5.
Statutory and Non-statutory requirements	The statutory and non-statutory requirements are considered in Section 6.0 of this Assessment.
Potential Impacts and Statement of Commitments	The potential impacts of the development are considered in Section 7.0 of this Assessment.
Author Declaration	A statement from the author of the Environmental Assessment has certified that the information is neither false nor misleading.
Key Issues	This table outlines how the key issues have been addressed.
<i>Issues – Part A Concept Plan for Stages 1 and 2 in as far as it impacts on the Stage 1 Project Application</i>	
1. Flora and Fauna	A Threatened Species Assessment has been prepared by Andrews.Neil (2006) and an Ecological Assessment has been undertaken by ERM (2005). The findings of the reports are discussed in Section 7.2 with the full documents attached as Appendices 3 and 4 respectively.
2. Water Cycle Management	An Integrated Water Cycle Management Plan has been prepared by Cardno (2007). The report is attached as Appendix 2 and discussed in Section 7.3.
3. Design and Visual Amenity	The Assessment considers the NSW Coastal Design Guidelines under Section 6.4.
4. Bushfire	A Bushfire Hazard Assessment has been prepared by Australian Bushfire Fire Protection Planners (2006). The findings of the report are discussed in Section 7.4 while the full report is attached as Appendix 7.
5. Traffic and Access	A Traffic Impact Assessment has been prepared by Mark Waugh Pty Ltd (2006). The findings of the report are discussed under Section 7.5 and the full report is attached as Appendix 8.

6. Infrastructure Provision	Infrastructure provision is discussed in Section 7.6. An Infrastructure Concept Plan has been prepared by Hill PDA (2007) and is attached as Appendix 9.
7. Acid Sulfate Soils and Contaminated Land	A Preliminary Geotechnical Site Assessment has been undertaken by Douglas Partners and is discussed in Section 7.7. The full report is attached as Appendix 1.
8. Cultural Heritage	An Aboriginal Heritage Assessment was undertaken by Mary Dallas Consulting Archaeologists. The findings are discussed in Section 7.8 with the full Worimi LALC report is attached as Appendix 10 including a letter from the Worimi LALC they have no interest in the development area (Stage 1).

Plans and Documents Required Under Schedule 2 of the Director General's Requirements for Concept Plans in so far as they set a context for a PA for Stage 1

1. Existing Site Survey Plan	The Site Survey Plan is attached as Figures 3 and 4.
2. Site Analysis Plan	The Site Analysis Plan is attached as Figure 5.
3. Locality/ Context Plan	The Site Location Plan is attached as Figure 1.
4. Environmental Assessment	This Environmental Assessment has been prepared in accordance with the Director General's Requirements.
5. Subdivision Concept Plans	The Subdivision Plan is attached as Figure 7.
6. Stormwater Concept Plan	The Integrated Water Cycle Management Report addresses the overall concept for stormwater management and is attached as Appendix 2.
7. Infrastructure Concept Plan	The Infrastructure Concept Plan illustrating the overall concept for infrastructure provision on site is attached as Appendix 9.

Part B - Key Issues for Project Application for Stage 1

1. Compliance with Concept Plan	The proposal is consistent with the requirements detailed in Part A.
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Consultation

<p>Consultation to be undertaken with :</p> <ul style="list-style-type: none"> ■ Port Stephens Council ■ NSW Department of Environment and Conservation ■ NSW Department of Natural Resources ■ NSW Rural Fire Service ■ NSW Roads and Traffic Authority ■ Anna Bay Drainage Union ■ Local Aboriginal Land Councils ■ Relevant community organisations 	<p>Consultation has been undertaken with all required parties, with the exception of the Anna Bay Drainage Union as the site is located outside its area of responsibility.</p> <p>Section 3.0 discusses the consultation undertaken as part of the Environmental Assessment.</p>
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Plans and Documents Required Under Schedule 2 of the Director General's Requirements for Project Application

1. Environmental Assessment	This Environmental Assessment has been prepared in accordance with the Director General's Requirements.
2. Subdivision Layout Plans	The Subdivision Plan showing the proposed lot layout is attached as Figure 7. The layout for Stage 2 is indicative only and does not form part of this proposal.
3. Stormwater Plan	The Integrated Water Cycle Management Report illustrates stormwater management and is attached as Appendix 2. This provides for stormwater to be collected, cleaned

	through bioswales and wetlands enabling recharging of the underground aquifer. No stormwater is directed to the SEPP 14 wetlands.
4. Erosion and Sediment Control Plan	The Erosion and Sediment Control Plan showing the nature and location of erosion and sedimentation control measures on site is attached as Appendix 5.
5. Landscape Plan	The Landscape Plan showing details of planting design and species is attached as Figure 9.
6. Waste Management Plan	The Waste Management Plan addressing site preparation and construction wastes is attached as Appendix 11.
7. Construction Management Plan	<p>A Construction Program has been prepared outlining the scheduling of works, this is attached as Appendix 12.</p> <p>Details on traffic and pedestrian management during construction are outlined in Section 7.10.</p>

6.1.1 Consultation with the Department of Planning

Preliminary consultation with the Department of Planning in relation to a draft version of the Environmental Assessment and accompanying documentation raised a number of issues. These matters outlined in the Department of Planning email dated 6 June 2007 have been addressed and are commented on in **Table 4** below.

Table 4 - Response to Matters Raised by the Department of Planning

Item	Comment
<u>Item 1 - Minimum Lot Sizes</u> The preliminary assessment report provided in March 06 stated that the proposed allotments would range from 500m ² to 750m ² . The current EA proposes. The current proposal may consist of at least 28 lots that could potentially be under 500m ² (with approximately 19 lots in Stage 1 that range in size from 250m ² - 399m ²). Clause 17 of the Port Stephens Local Environmental Plan 2000 states that: “(2) Consent for the subdivision of land (other than land to which subclause (3) applies) to create an allotment with an area of less than 500m ² that is, in the opinion of the consent authority, intended to be used for the purpose of residential housing is to be granted only if consent has been granted at the same time, for the erection of a dwelling on that allotment. As dwellings are not included in this application on proposed lots at the time of granting consent, I advise that the proposed lot sizes that are less than 500m ² are not permissible. Furthermore, minimum lot sizes referred to in Clause 19 of the PS LEP 2000 are not applicable to your site as it is not located within the ‘Town Centre Edge’ precinct within the ‘Nelson Bay (West) Area’, which is defined in DCP LD 15 - Residential Development Controls - Nelson Bay (West). As such you are advised to amend your proposal accordingly.	<p>The proposed subdivision concept has been amended so that all allotments are a minimum of 500m². The number of allotments proposed in has been reduced to 31 residential lots to comply with the requirement.</p>
<u>Item 2 - Confirmation of Methodology</u> DGRs were prepared on the basis that a Concept Plan Application would be undertaken for Stage 1 and Stage 2 and a Project Application prepared for Stage 1. The draft EA requests a Concept Plan Application for Stage 2 and a Project Application for Stage 1. Please confirm this request?	<p>The Environmental Assessment and accompanying documentation was originally prepared for the following:</p> <ul style="list-style-type: none">• Concept Application for both Stage 1 and 2.• Project Application for Stage 1. <p>This was in accordance with the DGRs that were provided in relation to the application.</p> <p>The Environmental Assessment has since been amended seeking a Project Application only for Stage 1. Stage 2 is not proposed in this submission and will be subject to a future application.</p>
<u>Item 3 - Requirements for a Project Application</u> A detailed subdivision plan is required for Stage 1 as this will be assessed as a ‘Project Application’, which would be equivalent to the level of information required for a DA with Council under Pat 4 of the EP&A Act. Figure 6 of the Draft EA does not have sufficient detail (including proposed lot size, vegetation retention, access points, type of subdivision proposed etc). In addition, approval can not be provided for a range of lot sizes in the Stage 1 Project Application. Definitive lot sizes are required in the Project Application.	<p>The Subdivision Plan has been amended to provide additional information including individual lot sizes, dimensions, vegetation retention, vehicular access points and the type of subdivision. This is attached as Figure 7.</p>
Can you please confirm/ clarify what you are seeking approval	The current proposal is for a Project

Item	Comment
<p>for in the Stage 1 Project Application and the key design parameters you are seeking approval for in the Concept Application:</p> <p>DGRs were prepared assuming the following:</p> <ul style="list-style-type: none"> • Concept Plan Application: A Concept Plan Approval is sought for Stages 1 and 2 of a residential subdivision (with 31 lots in Stage 1 and approximately 59 lots in Stage 2). The application will involve approval of the following key design parameters: land use, indicative building heights, site coverage, set backs, building footprints, habitat corridors, vehicular access to the site and pedestrian through site linkages. • Project Application: Subdivision of Stage 1 into 29 lots and associated services. 	<p>Application for Stage 1 is for the subdivision of the Stage 1 area of the site into 34 lots (including 3 open space parcels).</p> <p>Stage 2 is not included within this application. All references to Stage 2 on the attached Figures and specialist reports are indicative only.</p> <p>Key design parameters are outlined in the Design Principles, refer to Appendix 6.</p>
<p><u>Item 4 - General EA Requirements</u></p> <p>A draft Statement of Commitments is required as outlined in the DGRs.</p>	<p>A Statement of Commitments has been prepared for the proposed development and is attached at Appendix 13.</p>
<p>Address the Lower Hunter Regional Strategy and the Sustainability Criteria in Appendix 1 (if required).</p>	<p>The Lower Hunter Regional Strategy has been addressed in Section 6.5 of this report.</p>
<p><u>Item 5 - Flora and Fauna</u></p> <p>The draft EA refers to an ERM report in Appendix 3. Can you confirm the purpose of Andrews Neil's report? The ERM report only looks at Stage 1 and is titled 'draft'. This report will need to be updated to consider Stage 2 of the proposal. In addition, the '8 part test' has been referred to in the ERM report. The current best practice is to undertake as Assessment of Significance or what is referred to as a '7 part test'. Your assessment should be updated to utilise the '7 part test' and address the requirements of the draft Guidelines for Threatened Species and Assessment (DEC July 2005).</p>	<p>Originally consent was only sought for Stage 1. The ERM report was prepared for the development of the Stage 1 area. The detail provided in this report is relevant to the Project Application (Stage 1).</p> <p>The Andrews Neil report was subsequently prepared utilising the existing work undertaken by ERM to address the change in proposal which included both Stages 1 and 2. This provided information relevant to the Concept Application (Stages 1 and 2).</p> <p>Currently, the proposal is for a Project Application for Stage 1 only. However, the Andrews Neil assessment updated the ERM report in light of legislative changes for both Stages. The Andrews Neil report identifies the ERM report as remaining otherwise current and should be seen as a supplement.</p>
<p><u>Item 6 - Water Cycle Management Plan</u></p> <p>A map outlining the SEPP 14 wetlands and unmapped wetlands should be provided. Discussion on the value of the unmapped wetlands area is also required. DGRs state the no stormwater runoff is to be directed to any SEPP 14 or unmapped wetland. This requirement is to be addressed.</p>	<p>A map has been prepared by Andrews Neil illustrating the SEPP 14 wetlands and unmapped wetlands as requested. This Wetland Plan is attached at Figure 10.</p> <p>A preliminary assessment of the value of the unmapped wetlands was undertaken by Andrews Neil ecologists. Andrews Neil worked in conjunction with Cardno Willing to prepare a stormwater concept that directs stormwater away from these wetlands, rather stormwater is diverted to a stormwater management facility.</p> <p>Existing unmapped wetlands on the site are to be retained and transferred to Council as part of the subdivision.</p>
<p><u>Item 7 - Aboriginal Cultural Heritage</u></p>	<p>Mary Dallas is a very experienced Aboriginal</p>

Item	Comment
<p>I note and refer to the email provided by Mary Dallas (Aboriginal Cultural Heritage Consultant) dated 21 May 2007. I advise that the Aboriginal Cultural Heritage Report needs to be updated/ amended/ revised in accordance with the draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC July 2005). I understand the fundamental difference with the draft DEC guidelines relates to the consultation process. As such, consulting with just the land council may be insufficient in accordance with the current guidelines. Your consultant will need to refer to the DEC guidelines.</p> <p>In addition, the current report prepared for Aboriginal Heritage Assessment does not refer to Stage 2 of the proposal. Assessment of Stage 2 of the proposal is required and should be in accordance with DEC guidelines.</p>	<p>Cultural Heritage Consultant. She advises that the work undertaken and consultation that has occurred satisfies the requirements of DEC guidelines.</p> <p>Although Stage 2 no longer forms part of the proposal, the consultant report in conjunction with the Local Aboriginal Land Council states: "No evidence of aboriginal occupation of the southern portion (Stage 2) was identified. It was concluded that although Aboriginal people were highly likely to have utilised the resources of adjacent wetlands and swamps in the past, they are likely to have been characterised by short duration forays from large and more complex base camps closer to the foreshores of Port Stephens". (p3)</p>
<p><u>Item 8 - Open Space</u></p> <p>Management and maintenance of proposed open space areas needs to be addressed (i.e. will the area be dedicated to Council or will it be managed under community title?). I understand from our meeting that it is proposed to dedicate this area of land. This needs to be confirmed and explained in the EA.</p>	<p>Port Stephens Council currently owns all land within this development. When development does occur, land identified as park and bushland will be given over to the relevant arm of Council for control and management. A letter to this effect is contained in the commitment section (Appendix 13).</p>
<p><u>Item 9 - Other Matters in the Report</u></p> <p>I refer to page 15 and 16 of the report and the section titled 'Significant Coastal Development' and 'Part 5 Concept Plan'. I confirm that a masterplan under SEPP 71 is not required to be approved prior to the lodgement of a Part 3A project application under Part 3A of the Act and the MP SEPP.</p>	<p>Noted.</p>
<p><u>Item 10 - Fee Estimate</u></p> <p>I refer to the letter provided by Wise and Horton dated 4 May 2007. Can you please provide a copy of the report referred to in the letter which provides a breakdown of the costs? Also, to determine fees for the combined project and concept application I will need a cost for:</p> <ul style="list-style-type: none"> • CIV for the concept application proposal (i.e. estimated cost for stage 1 and 2, or total cost for stage 2). • CIV for project application proposal (i.e. estimated cost for stage 1). 	<p>Previous advice from the Department stated that a fee of \$44,239 will apply to this application.</p> <p>Since Stage 2 is no longer included, the fee will be revised.</p>

6.2 State Environmental Planning Policies

6.2.1 SEPP No.14 - Coastal Wetlands

State Environmental Planning Policy No.14 - Coastal Wetlands (SEPP 14) aims to ensure that the coastal wetlands are preserved and protected in the environmental and economic interests of the State. This protection of wetlands is achieved through flora and fauna assessments which assess the impact of development on land within the proximity of a wetland defined under the plan and recommend mitigation measures to minimise that impact.

The site adjoins a wetland which is listed under SEPP 14 (wetland no.766) however this wetland is separated from the development by Old Soldiers Point Road. There is a pond on the site, this is not classified under SEPP 14 and as such the provisions of SEPP 14 do not apply to the proposed development.

The Ecological Assessment prepared by ERM, 2005 (attached at **Appendix 3**) indicates that although the larger of the wetlands on the site appears to be natural, the smaller ponds on the site are likely to have been created from sandmining activities.

A Wetlands Plan has been prepared by Andrews Neil Pty Ltd (refer to **Figure 10**). A preliminary assessment of the value of the unmapped wetlands was undertaken by Andrews Neil Pty Ltd in collaboration with Cardno Willing, the final stormwater concept was based on minimising any potential impacts on the unmapped wetlands. There will be no stormwater to the wetlands, rather it will be directed to a stormwater management facility.

The existing *Lepironia* swamp on the site shall be retained and transferred to Council as part of the subdivision.

6.2.2 SEPP No.44 - Koala Habitat Protection

State Environmental Planning Policy No.44 - Koala Habitat Protection (SEPP 44) applies to the proposed development. The aims of SEPP 44 are:

"....to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas, to ensure permanent free-living populations over their present range and to reverse the current trend of population decline:

- (a) by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat, and*
- (b) by encouraging the identification of areas of core koala habitat, and*
- (c) by encouraging the inclusion of areas of core koala habitat in environment protection zones".*

An Ecological Assessment was prepared by ERM (2005) addressing the provisions of SEPP 44. The SEPP requires that investigations be undertaken to identify any potential and core koala habitat. The discussion concludes that "although the site contains swamp mahogany...it does not contain either potential or core koala habitat, as swamp mahogany was estimated to cover approximately 1.0% of the site" (ERM 2005:7).

According to Port Stephens Council's Comprehensive Koala Plan of Management (CKPoM) which operates under the provision of SEPP 44 the site contains some supplementary koala habitat and cleared land. The Plan of Management outlines development standards and assessment criteria for proposals either overlapping or adjacent to areas of preferred or supplementary habitat.

A large environmental corridor is proposed to conserve koala habitat and provide linkages to other koala habitat areas located along Soldiers Point Road as part of the development. This is outlined on **Figure 7** and is discussed in the Threatened Species Assessment prepared by Andrews Neil which is attached at **Appendix 4**.

6.2.3 SEPP No.71 - Coastal Protection

State Environmental Planning Policy No.71 - Coastal Protection (SEPP 71) was prepared to protect the beaches, headlands and other coastal features. The Policy came into force in November 2002 and applies to land within the coastal zone. The subject site falls within the coastal zone because it is located within 1km of the coast, and therefore the provisions of SEPP 71 apply.

Aims

Each of the aims of the SEPP 71 are listed and commented on below in relation to the proposed development.

- (a) *to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales coast*

The proposed subdivision has been designed to address the constraints of the land and surrounding environment as shown in **Figure 5**. The proposed development will have a positive economic impact on the locality through employment generation during the construction stage and on-going benefit from increased demand for goods and services.

The environmental corridor and hilltop park will protect the natural attributes of the site and locality. In addition, the site is well located in terms of proximity to new recreational facilities which adjoin the proposed development.

- (b) *to protect and improve existing public access to and along coastal foreshores to the extent that this is compatible with the natural attributes of the coastal foreshore*

The proposed development adjoins a proposed cycleway network along Old Soldiers Point Road which provides linkages to the coastal foreshore. The proposed pedestrian / cycle network within the site also increases accessibility and legibility.

- (c) *to ensure that new opportunities for public access to and along coastal foreshores are identified and realised to the extent that this is compatible with the natural attributes of the coastal foreshore,*

Suitable access has been provided for the site to allow easy access to roads, cycleways and pedestrian links to the coastal foreshore.

- (d) *to protect and preserve Aboriginal cultural heritage, and Aboriginal places, values, customs, beliefs and traditional knowledge*

There are no known aboriginal sites on the subject site.

- (e) *to ensure that the visual amenity of the coast is protected*

The proposed development is located less than 1 km from Cromartys Bay. The land rises to the south providing distant water views. Potential views into and out of the site are shown in **Figure 5**.

The proposed subdivision design has been designed to minimise potential visual impacts by retaining existing vegetation within a Sydney freshwater (*Lepironia* swamp) wetland, habitat buffers and asset protection zones along the western boundary with Old Soldiers Point Road.

- (f) *to protect and preserve beach environments and beach amenity*

The proposed development will not affect the beach environment and / or amenity.

- (g) *to protect and preserve native coastal vegetation*

An Ecological Assessment was undertaken by ERM in 2005 and a Threatened Species Assessment was undertaken by Andrews Neil in 2006, refer to **Appendix 3 and 4** respectively. The development concept retains a large portion of the vegetation with the environmental corridor, pond area and the hilltop park.

(h) *to protect and preserve the marine environment of New South Wales*

Suitable measures will be incorporated in the proposed development to minimise impacts on the marine environment including WSUD principles underlying the stormwater concept as well as sediment and erosion controls.

(i) *to protect and preserve rock platforms*

There is no evidence of rock platforms on site (refer Geotechnical Assessment by Douglas Partners attached at **Appendix 1**).

(j) *to manage the coastal zone in accordance with the principles of ecologically sustainable development (within the meaning of section 6 (2) of the Protection of the Environment Administration Act 1991)*

The proposed development has regard to ESD principles by;

- maintaining the area of *Lepironia* swamp (a threatened vegetation community),
- maintaining preferred koala habitat and providing an appropriate buffer,
- majority of lots being oriented to maximise solar access,
- having good connectivity to the existing access network,
- being located close to open space and recreation areas.

(k) *to ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area*

The proposed subdivision is of an appropriate bulk, scale and size of development for the site given the characteristics of the site including slope, vegetation, orientation and proximity to exiting development. Suitable environmental management treatments are included to facilitate the continuation of fauna and flora connectivity inherent to the locality.

(l) *to encourage a strategic approach to coastal management*

The proposed development will not be detrimental to the coast. A good outcome is achieved as the development will provide a range of housing types in a coastal region whilst ensuring the protection of the environment.

Matters for Consideration under SEPP 71

Part 2 of SEPP 71 applies to the proposed development. The matters for consideration are discussed below in **Table 5**.

Table 5 - Matters for Consideration under SEPP 71

Matters for Consideration under SEPP 71	Comment
(b) Existing public access to and along the coastal foreshore for pedestrians or persons with a disability should be retained and, where possible, public access to and along the coastal foreshore for pedestrians or persons with a disability should be improved.	The proposed development links to existing vehicle, pedestrian and cycleway networks which adjoin the site and provide linkages to the coastal foreshore.
(c) Opportunities to provide new public access to and along the coastal foreshore for pedestrians or persons with a disability.	Refer to comment for (b).
(d) The suitability of development given its type, location and design and its relationship with the surrounding area.	The proposed subdivision is similar to adjoining residential subdivision patterns.
(e) Any detrimental impact that development may have on the amenity of the coastal foreshore, including any significant overshadowing of the coastal foreshore and any significant loss of views from a public place to the coastal foreshore.	The proposed subdivision design has been designed to minimise potential visual impacts to the coastal foreshore by retaining existing vegetation along the north western boundary with Old Soldiers Point Road.
(f) The scenic qualities of the New South Wales coast, and means to protect and improve these qualities.	Currently the site has areas exposed from the previous use of the site for sand mining. The proposed subdivision will maintain and enhance significant areas of vegetation.
(g) Measures to conserve animals (within the meaning of the <i>Threatened Species Conservation Act 1995</i>) and plants (within the meaning of that Act), and their habitats.	A large parcel of land is set aside to retain natural vegetation, including the <i>Lepironia</i> swamp and to reinforce the environmental corridor. Future design and development of Stage 2 will continue the habitat link along the Old Soldiers Point boundary.
(h) Measures to conserve fish (within the meaning of Part 7A of the <i>Fisheries Management Act 1994</i>) and marine vegetation (within the meaning of that Part), and their habitats.	Suitable measures will be incorporated in the proposed development to minimise possible impacts on the marine environment.
(i) Existing wildlife corridors and the impact of development on these corridors.	The proposal involves the protection of preferred koala habitat in the western section of the site. This area forms the northern part of an overall corridor of preferred habitat along Old Soldiers Point Road that maintains connectivity for koala movement to future Stage 2 and preferred habitat in the nearby Tilligerry Nature Reserve.
(j) The likely impact of coastal processes and coastal hazards on development and any likely impacts of development on coastal processes and coastal hazards.	Due to the location of the site from the foreshore, there is no immediate threat from coastal processes and/ or hazards.
(k) Measures to reduce the potential for conflict between land-based and water-based coastal activities.	Not applicable.
(l) Measures to protect the cultural places, values, customs, beliefs and traditional knowledge of Aboriginals.	There are no known Aboriginal sites on the subject site.

Matters for Consideration under SEPP 71	Comment
(m) Likely impacts of development on the water quality of coastal waterbodies.	The implementation of an erosion sediment control plan and stormwater management protocols would minimise the movement of sediment within the site and offsite to surrounding wetlands.
(n) The conservation and preservation of items of heritage, archaeological or historical significance.	There are no known archaeological sites, items of heritage or historically significant items on the site.
(o) Only in cases in which a council prepares a draft local environmental plan that applies to land to which this Policy applies, the means to encourage compact towns and cities.	Not applicable.
(p) Only in cases in which a development application in relation to proposed development is determined:	ESD principles have been incorporated in the subdivision design and design guidelines have been prepared to assist in efficient use of water and energy.
(i) the cumulative impacts of the proposed development on the environment, and	
(ii) measures to ensure that water and energy usage by the proposed development is efficient.	

Significant Coastal Development

The proposed development comprises Significant Coastal Development being the subdivision of land within a residential zone into more than 25 lots as listed under Schedule 2. Therefore Part 3 of SEPP 71 applies to the proposed development and as a result of amendments to State legislation the development is considered to be of State Significance.

Advice from the Department of Planning in an email dated 12 June 2006 confirms the following:

"a masterplan under SEPP 71 is not required to be approved prior to the lodgement of a Part 3A Project Application under Part 3A of the Act and the MP SEPP".

Part 4 - Development Control

Part 4 of SEPP 71 applies to the proposed development. The relevant development controls are discussed below in **Table 6**.

Table 6 - Development Control

Section	Control	Comment
13 Flexible zone provisions	A provision of an environmental planning instrument that allows a development within a zone to be consented to as if it were in a neighbouring zone, or a similar provision, has no effect.	The land subject to this proposal is zoned 2(a) Residential. Subdivision is permissible in the zone. Therefore this section is not applicable.
14 Public access	A consent authority must not consent to an application to carry out development on land to which this Policy applies if, in the opinion of the consent authority, the development will, or is likely to, result in the impeding or diminishing, to any extent, of the physical, land-based right of access of the public to or along the coastal foreshore.	<p>The proposed development links to existing vehicle, pedestrian and cycleway networks which adjoin the site and provide linkages to the coastal foreshore.</p> <p>Therefore public access to the coastal foreshore is not affected by the proposal.</p>

Section	Control	Comment
15 Effluent disposal	The consent authority must not consent to a development application to carry out development on land to which this Policy applies if the consent authority is satisfied the proposal will, or is likely to, have a negative effect on the water quality of the sea or any nearby beach, or an estuary, a coastal lake, a coastal creek or other similar body of water, or a rock platform.	The proposal will be serviced by an existing sewer reticulation system and is not likely to impact on the water quality of coastal waterbodies.
16 Stormwater	The consent authority must not grant consent to a development application to carry out development on land to which this Policy applies if the consent authority is of the opinion that the development will, or is likely to, discharge untreated stormwater into the sea, a beach, or an estuary, a coastal lake, a coastal creek or other similar body of water, or onto a rock platform.	The implementation of an erosion sediment control plan and stormwater management protocols will minimise the movement of sediment within the site and offsite to surrounding wetlands. This will form part of the Water Sensitive Urban Design Concepts undertaken for the site by Cardno Willing. A range of options for water management strategy for the proposed development have been assessed and sized with a view to achieving a range of objectives for water quantity, quality and re-use.

Part 5 - Concept Plans

Part 5 of SEPP 71 requires that a Concept Plan be prepared and adopted prior to consent being granted. Email advice from the Department of Planning dated 05 September, 2007 in relation to the adoption of a Concept Plan prior to Project Application states,

"I advise that you may lodge a Project Application for Stage 1. I do not believe it would be necessary to undertake a concept application for Stage 1 if you are able to prepare documentation required for a full project application"

A Subdivision Plan has been prepared for the proposed development in accordance with the requirements outlined under the SEPP (see **Figure 7**) and included with this Project Application in accordance with the Departments advice that a separate Concept Plan would be unnecessary. The Plan has been created with regard to the Draft SEPP 71 Coastal Protection Master Plan Guidelines prepared by DIPNR in March 2003. **Table 7** outlines and comments on the matters outlined under Clause 21 (2) of the SEPP which are required to be included in the draft master plan. Note that Stage 2 as shown on the plan is indicative and not included as part of this Project Application.

Table 7 -Checklist of Matters for Consideration in the Concept Plan

Required Information	Illustrated on Plan (yes/ no)	Comment
(a) design principles drawn from an analysis of the site and its context	Yes	Environmental constraints and surrounding development were analysed as part of the concept planning of the site, refer to Figure 5 .
(b) desired future locality character	Yes	The proposed Concept Plan generally reflects the pattern and character of existing development.
(c) the location of any development,	Yes	The proposal has been designed to address

Required Information	Illustrated on Plan (yes/ no)	Comment
considering the natural features of the site, including coastal processes and coastal hazards		the constraints of the subject site and surrounding environment. The concept includes an environmental corridor and retention of the <i>Lepironia</i> swamp.
(d) the scale of any development and its integration with the existing landscape	Yes	<p>The scale of the proposed development comprising a range of residential lots is suited to this location and includes the retention and integration of existing vegetation.</p> <p>The subdivision layout is in accordance with the Site Analysis (Figure 5). The range of lot sizes respond to site characteristics.</p>
(e) phasing of development	Yes	<p>This proposal previously related to a two staged development. Currently, only Stage 1 (31 residential and 3 open space allotments) is proposed.</p> <p>No timeframe for future Stage 2 is provided at this stage and no approval is being sought for this area as part of this application.</p>
(f) public access to and along the coastal foreshore	Yes	The proposal maintains public access to the coastal foreshore.
(g) pedestrian, cycle and road access and circulation networks	Yes	<p>The proposed development links to existing vehicle, pedestrian and cycleway networks which adjoin the site and provide linkages to the coastal foreshore.</p> <p>Existing access from Port Stephens Drive via Old Soldiers Point Road will be formalised by road construction. Internal access for pedestrians and cyclists has been provided for legible, safe and accessible circulation.</p> <p>The indicative layout for Stage 2 shows the opportunity to provide additional access at a later date.</p>
(h) subdivision pattern	Yes	The proposed subdivision pattern is indicated in Figure 7.
(i) infrastructure provision	Yes	The future infrastructure will be provided along the proposed internal road system and includes water, electricity and telephone.
(j) building envelopes and built form controls	No	Council's Development Controls related to building envelopes and built form will be used to guide future development as well as the design guidelines prepared specifically for this development responding to the site characteristics.
(k) heritage conservation	No	There are no known heritage items on the site or surrounding property.

Required Information	Illustrated on Plan (yes/ no)	Comment
(l) remediation of the site	No	A radiation survey of the site undertaken as part of the Geotechnical Assessment indicated that there is no barrier in terms of radiation to the use of the site for residential purposes.
(m) provision of public facilities and services	No	There are no public facilities and services within the development however there are pedestrian/ cycle linkages along the environmental corridor and to the sporting fields adjoining the site to the north.
(n) provision of open space, its function and landscaping	Yes	The proposal involves the retention and integration of existing vegetation comprising a wetland, preferred koala habitat/ habitat buffer and asset protection zone.
(o) conservation of water quality and use	Yes	The <i>Lepironia</i> swamp situated on the western side of the site is representative of the EEC "coastal wetlands" and is also classified as an area of preferred koala habitat. A buffer to future development is included in the design to minimise impacts on water quality and use. Additionally the asset protection zone will further reduce potential impacts.
(p) conservation of animals (within the meaning of the <i>Threatened Species Conservation Act 1995</i>) and plants (within the meaning of that Act), and their habitats	Yes	<p>The proposal involves the protection of preferred koala habitat in the western section of the site that links to a corridor of preferred habitat along Old Soldiers Point Road to maintain connectivity for koala movement to Tilligerry Nature Reserve.</p> <p>The Ecological Assessment by ERM, 2005 and Threatened Species Assessment by Andrews Neil, 2006 indicate that provided the recommended mitigation measures are implemented, there is not likely to be a significant impact on threatened species, populations or ecological communities, or their habitats.</p>
(q) conservation of fish (within the meaning of Part 7A of the Fisheries Management Act 1994) and marine vegetation (within the meaning of that Part), and their habitats.	N/A	

6.3 Port Stephens Local Environmental Plan 2000

The subject site is zoned 2(a) Residential under *Port Stephens Local Environmental Plan 2000* (LEP).

A description of the Residential 'A' zone under Clause 16(1) of the LEP is:

The Residential 'A' Zone is characterised by one and two storey dwelling-houses and dual occupancy housing. Townhouses, flats and units up to two storeys may occur throughout the zone. Dwellings may also be erected on small lots in specially designed subdivisions. Small-scale commercial activities compatible with a residential neighbourhood and a variety of community uses may also be present in this zone.

The proposed residential subdivision is consistent with the description of the Residential 'A' zone. The objectives of the Residential 'A' zone are:

- (a) *to encourage a range of residential development providing for a variety of housing types and designs, densities and associated land uses, with adequate levels of privacy, solar access, open space, visual amenity and services, and*
- (b) *to ensure that infill development has regard to the character of the area in which it is proposed and does not have an unacceptable effect on adjoining land by way of shading, invasion of privacy, noise and the like, and*
- (c) *to provide for non-residential uses that are compatible with the area and service local residents, and*
- (d) *to facilitate an ecologically sustainable approach to residential development by minimising fossil fuel use, protecting environmental assets and providing for a more efficient use of existing infrastructure and services, and*
- (e) *to ensure that the design of residential areas takes into account environmental constraints including soil erosion, flooding and bushfire risk.*

The proposed development is permissible in the 2(a) zone and is generally consistent with the objectives of the zone through providing a variety of lot sizes that respond to the characteristics of the land and form of surrounding development.

Given the location of the site close to public transport and recreational facilities in Salamander a range of lot sizes have been included in the proposal to cater for a variety of housing options. The proposed subdivision will result in allotments ranging in size from 502m² to 937m², complying with the provisions of the LEP.

6.4 Coastal Design Guidelines for NSW (2003)

Data from the Australian Bureau of Statistics indicates that Salamander Bay had a population of 5,356 people in 2001. This figure also includes population located at Soldiers Point and Taylors Beach. It is estimated that the population of this area has grown since the census as has its role and importance as a centre.

Although Salamander is identified as a 'coastal town' under the Coastal Design Guidelines for NSW the proposed subdivision for 96 lots falls within the 'new coastal settlements: villages and hamlets'. This settlement type is defined as any subdivision with 25 lots or over related to coastal cities and towns.

The Guidelines identify an opportunity for place-based planning that responds to the characteristics of

the site, as well as the existing built, urban and natural character of an area. The proposed development will assist in achieving this principle and ultimately improve the range of housing, lifestyle and economic opportunities.

The issues outlined in the Guidelines for the planning, design and construction of new subdivisions have been addressed by the proposal. The desired future character encourages development that responds to the landform, views, ecological limits of the site and its context. The preservation of a wildlife link and retention of the *Lepironia* swamp is an integral part of the design. In this way, the subdivision design responds to the topographic and natural features of the site.

The site is situated in a logical and suitable location for expansion to the existing centre. The defined building height for residential development in this area is a maximum of two storeys; this reflects the context of surrounding development.

The proposed development is consistent with the State guidelines.

6.5 Lower Hunter Regional Strategy

The Lower Hunter Regional Strategy 2006-31 sets out broad outcomes and actions for the Lower Hunter. It is planned to accommodate an additional 160 000 residents and 115 000 new dwellings over the next 25 years. Greenfield housing represents 75 per cent of all new housing located in existing zoned urban areas. The Strategy aims to provide sufficient housing resources to accommodate projected population growth. The proposed residential subdivision is consistent with the intentions of the Strategy.

The nearest town to Salamander Bay is Nelsons Bay and its nearest regional centre is Raymond Terrace. Under the Strategy, Port Stephens has been identified suitable for accommodating a total 12 500 new dwellings.

An average development yield of 12 dwellings per hectare is established under the Strategy for new release areas. The proposed development has an overall dwelling yield of approximately 6.9 dwellings per. This development yield reflects the dedication of large areas within the site for vegetation retention (approximately 16145m²) and the provision of environmental protection/habitat link area. The proposed subdivision design represents an efficient use of the land for urban development given the need to incorporate the constraints of the site and environmental principles. The Department of Planning advised in their email dated 12 June 2007 that a higher development yield for the site is not appropriate.

The Strategy also addresses the impact of future development on the environment. Wetlands have been identified as environmental features that characterise the Hunter. Koala habitat is also identified as a valued part of the Region. The Strategy also seeks to conserve native vegetation that contains high conservation value. The proposed development comprises an environmental corridor and addresses nearby SEPP 14 wetlands.

The Strategy also sets out a Sustainability Criteria for any development site outside designated areas in regional strategies. Although the area is not specifically identified under the Strategy, it is zoned for urban land use. Although the site has already been identified as suitable for urban development through a rezoning, the Sustainability Criteria has been addressed, refer to **Table 8** below.

Table 8 - Sustainability Criteria

Suggested Threshold Sustainability Criteria	Measurable Explanation of Criteria	Comment
1. Infrastructure Provision Mechanisms in place to ensure utilities, transport, open space and communication are provided in a timely and efficient way.	<p>Development is consistent with any regional strategy, subregional strategy, and State Infrastructure Strategy.</p> <p>The provision of infrastructure (utilities, transport, open space, and communications) is costed and economically feasible based on Government methodology for determining infrastructure development contributions.</p> <p>Preparedness to enter into development agreement.</p>	<p>The site adjoins existing residential development and forms a logical and practical extension of the existing urban area.</p> <p>Adequate utility services can be provided to the proposed development including water, sewer, electricity and communications.</p> <p>On-site stormwater management, the retention of existing vegetation and the provision of open space is proposed.</p> <p>Consultation with relevant agencies during the planning of the development has confirmed appropriate infrastructure provision can be provided to the site.</p>
2. Access Accessible transport options for efficient and sustainable travel between homes, jobs, services and recreation to be existing or provided.	<p>Accessibility of the area by public transport and/ or appropriate road access in terms of:</p> <ul style="list-style-type: none"> - location/ land use - to existing networks and related activity centres. - network - the area's potential to be serviced by economically efficient transport services. - catchment - the area's ability to contain, or form part of the larger urban area which contains adequate transport services. Capacity for land use/ transport patterns to make a positive contribution to achievement of travel and vehicle use goals. <p>No net negative impact on performance of existing subregional road, bus, rail, ferry and freight network.</p>	<p>Access to and from the northern part of the site is adequately provided for via the existing entry from Old Soldiers Point Road.</p> <p>There will be no direct vehicular access to individual lots from either Soldiers Point Road or Port Stephens Drive.</p> <p>The proposed development is located along existing public transport routes and will result in a likely increase in patronage.</p>
3. Housing Diversity Provide a range of housing choices to ensure a broad population can be housed.	<p>Contributes to the geographic market spread of housing supply, including any government targets established for aged, disabled or affordable housing.</p>	<p>The proposed subdivision will contribute to providing a range of housing and lifestyle options.</p>
4. Employment Lands Provide regional/ local employment opportunities to support the Lower Hunter's expanding role in the wider regional and NSW economies.	<p>Maintain or improve the existing level of sub-regional employment self-containment.</p> <p>Meets subregional employment projections.</p> <ul style="list-style-type: none"> - Employment related land is provided in appropriately zoned areas. 	<p>The proposed subdivision will result in an increase in population and positive impacts on the local economy through retail spending.</p>

<i>Suggested Threshold Sustainability Criteria</i>	<i>Measurable Explanation of Criteria</i>	<i>Comment</i>
5. Avoidance of Risk Land use conflicts, and risk to human health and life, avoided.	<p>No residential development within 1:100 floodplain.</p> <p>Avoidance of physically constrained land, e.g.</p> <ul style="list-style-type: none"> - high slope - highly erodible <p>Avoidance of land use conflicts with adjacent existing or future land use as planned under relevant subregional or regional strategy.</p> <p>Where relevant available safe evacuation route (flood and bushfire).</p>	<p>An examination of environmental characteristics of the land was undertaken to determine the most suitable subdivision design.</p> <p>Physical constraints from bushfire were considered in the site planning.</p>
6. Natural Resources Natural resource limits not exceeded/ environmental footprint minimised.	<p>Demand for water within infrastructure capacity to supply water and does not place unacceptable pressure on environmental flows.</p> <p>Demonstrates most efficient/ suitable use of land.</p> <ul style="list-style-type: none"> - avoids identified significant agricultural land. - avoids productive resource lands - extractive industries, coal, gas and other mining, and quarrying. <p>Demand for energy does not place unacceptable pressure on infrastructure capacity to supply energy-requires demonstration of efficient and sustainable supply solution.</p>	<p>Individual applications for residential development will comply with the stormwater concept and requirements of BASIX. This will minimise impact on water resources.</p>
7. Environmental Protection Protect and enhance biodiversity, air quality, heritage, and waterway health.	<p>Consistent with government approved Regional Conservation Plan (if available).</p> <p>Maintains or improves areas of regionally significant terrestrial and aquatic biodiversity (as mapped and agreed by DEC). This includes regionally significant vegetation communities; critical habitat; threatened species; populations; ecological communities and their habitats.</p> <p>Maintain or improve existing environmental condition for air quality.</p> <p>Maintain or improve existing environmental condition for water quality.</p> <ul style="list-style-type: none"> - Consistent with community water quality objectives for recreational water use and river health (DEC and CMA) - Consistent with catchment and stormwater management planning (CMA and Council). <p>Protects areas of Aboriginal cultural heritage value (as agreed by DEC).</p>	<p>Environmental assessment of flora and fauna on the site has been incorporated into the proposed subdivision design. The proposed habitat link will improve and protect koala habitats. The swamp will provide a buffer between the residential development and the koala habitat.</p> <p>Adequate erosion and sediment controls will be implemented to mitigate any potential impacts, refer to plan attached at Appendix 5.</p>

<i>Suggested Threshold Sustainability Criteria</i>	<i>Measurable Explanation of Criteria</i>	<i>Comment</i>
8. Quality and Equity in Services Quality health, education, legal, recreational, cultural and community development and other government services are accessible.	Available and accessible services: - do adequate services exist - are they at capacity or is some capacity available? - has Government planned and budgeted for further service provision - developer funding for required service - upgrade/ access is available.	The proposed dwellings are located close to facilities and services provided locally at Salamander Bay and Nelsons Bay as well as regional facilities provided at Raymond Terrace.

6.6 Development Control Plans

Port Stephens Development Control Plan 2007 was adopted by Council 22 May 2007. The DCP applies to the proposed development and is discussed below:

- Part B1 – Subdivision and Streets

The proposed subdivision addresses the development controls and principles of the DCP including:

- *Topography and views;*
- *Street and block layout;*
- *Footpaths and cycleways;*
- *Parks and open space;*
- *Lot layout;*
- *Infrastructure; and*
- *Street trees.*

Due to the topography and existing vegetation on the site, the slope and views of the site are a key component to the overall design. This is seen through street and block layout, lot sizes and orientation.

The subdivision concept is designed to provide an effective, legible, safe, efficient and functional development that is well designed. It is designed to integrate with the adjoining residential development and address the environmental characteristics of the site. Lots have been located to ensure surveillance over public areas.

The appearance of the residential development has been minimised through the retention of native vegetation. Open space areas will provide a higher level of amenity to residents and will form part of the regional open space network. There are adequate services and infrastructure available to the site.

The proposed development is consistent with the design requirements outlined in the DCP.

- Part B2 – Environmental Construction and Management

The subdivision design will enable the preservation of key areas of vegetation as well as the existing koala habitat areas on the site. Appropriate sediment and erosion controls will be implemented during earthworks to minimise any impacts on surrounding ecosystems, refer to **Appendix 5** – Erosion and Sediment Control Plan.

The stormwater concept prepared by Cardno demonstrates the on-going management of water on the site, refer to **Appendix 6** – Integrated Water Cycle Management Report.

- Part B3 – Parking, Traffic and Transport

The proposed subdivision has been designed in accordance with Council's Parking, Traffic and Transport development controls and principles. These controls and principles relate to:

- *Public transport;*
- *Access;*
- *Parking;*
- *Sight distances at driveway exits; and*
- *Design requirements.*

Access and circulation within the site has been designed to provide safe, efficient and legible movement for vehicles and pedestrians. The subdivision design addresses vehicular access through the existing Old Soldiers Point Road entry. No lot directly fronts Port Stephens Drive or Soldiers Point Road.

- Part B6 – Single and Dual Occupancy Dwellings

The proposed development is consistent with the development controls and principles contained in Council's DCP. A Site Analysis has been prepared which examines the opportunities and constraints of the site, refer to **Figure 5**. This in conjunction with specialist studies including flora and fauna, bushfire, geotechnical, and traffic have formed the basis of the design concept for the site.

The subdivision design has taken into consideration Council's setback requirements, building scale and external appearance in the design of allotments. These are discussed in more detail in the Design Principles, attached at **Appendix 6**.

6.7 Comprehensive Koala Plan of Management (CKPoM)

Port Stephens Council has outlined the following objectives in its Comprehensive Koala Plan of Management:

- *Evaluate and rank koala habitat throughout the Port Stephens LGA;*
- *Identify priority conservation areas and strategies to protect significant koala habitat and populations;*
- *Identify threats that impact on koalas and koala habitat;*
- *Provide for the long-term survival of koala populations by devising conservation strategies to effectively address each of the threats impacting on koalas and koala habitat;*
- *Provide for the restoration of degraded koala habitat areas;*
- *Ensure that adequate detail is provided with Development Applications in order to assess, minimise and ameliorate likely impacts on koala habitat;*
- *Provide guidelines and development standards to protect koalas and koala habitat;*
- *Provide for effective public awareness and education programs concerning koala conservation issues;*
- *Encourage appropriate eco-tourism programs;*
- *Provide a formal approach for the assessment, retrieval, rehabilitation and release of sick, injured, orphaned or distressed koalas;*
- *Identify potential funding sources for implementation of the CKPoM;*
- *Facilitate targeted koala conservation and management-oriented research projects within the Port Stephens LGA; and*
- *Provide for the effective implementation and monitoring of the CKPoM.*

The subject site comprises areas of koala habitat. Port Stephens Council in their CKPoM require that the narrow and tenuous koala corridor to the north of the subject site is to be buffered and reinforced through the subdivision design. It also requires that conflicts are limited in the koala corridor in terms of cars and dogs.

This has been addressed through the dedication of land for an environmental link which contains preferred koala vegetation that will aid and complement the koala habitat corridor.

7.0 LIKELY IMPACTS OF DEVELOPMENT

7.1 Context and Setting

A Site Analysis was prepared as part of the concept planning process and examines opportunities and constraints on the site, refer to **Figure 5**. The proposal has been designed to address the constraints of the land and surrounding environment.

The proposed residential subdivision reflects the characteristics of the land including views, slope, vegetation, drainage and orientation. The proposal retains and enhances existing vegetation within a freshwater wetland, preferred koala habitat, habitat buffers and asset protection zones along the north western boundary with Old Soldiers Point Road.

The site is well located in terms of proximity to major access routes, open space and recreational facilities situated approximately 550m from Cromartys Bay. The proposed residential subdivision will result in future development that responds to adjoining residential development in the locality, refer to **Photograph 5**.

The quality of future residential development in the subdivision will be ensured through design principles specific to the site, refer to **Appendix 6** - Design Principles.

Photograph 5 - Example of near-by residential development



Photograph 6 - Existing Pedestrian Access from Adjoining Development



7.2 Flora and Fauna

An Ecological Assessment was prepared by ERM in 2005 for the Project Application (Stage 1); this is attached at **Appendix 3**. A Threatened Species Assessment was undertaken by Andrews Neil for the Concept Plan Application (Stage 1 and Stage 2); this is attached at **Appendix 4**.

It should be noted that in this report draft Guidelines for Threatened Species in the Andrews Neil report were designed in accordance with Flora and Fauna Survey Guidelines prepared for the Lower Hunter and Central Coast Regional Environmental Management Strategy which is the current standard for Port Stephens. Discussions between Andrews Neil and Department of Environment and Climate Change regarding the level of assessment undertaken concluded that sufficient information had been provided.

Four vegetation communities are present on the site, including coastal sand apple-blackbutt forest, swamp mahogany-paperbark forest, disturbed re-growth and *Lepironia* swamp. Preferred koala habitat is present where swamp mahogany-paperbark forest occurs on the site (0.2 ha). Preferred koala habitat occurs adjacent to the *Lepironia* Swamp and would be retained and enhanced to offset the loss of a small and isolated patch of Swamp Mahogany Paper bark forest in the northern section of the site. Further to this, Swamp Mahogany would be planted along the northern boundary of the site to strengthen the link between the site and preferred koala habitat on the northern side of Soldiers Point Road.

No threatened flora was found on the site. A number of threatened fauna species were recorded including Squirrel Glider, Koala and tree-roosting microchiropteran bats.

The development footprint has been designed to protect habitat for threatened species and ecological communities. The Threatened Species Assessment indicates that provided the recommended mitigation measures are implemented, there is not likely to be a significant impact on threatened species, populations or ecological communities, or their habitats.

Recommendations from the report are outlined in **Table 9**.

Table 9 - Recommendations from Threatened Species Assessment

Recommendation	Justification
1 Implement a traffic control strategy within the sub-division and at the point that the corridor crosses Soldiers Point Road including a 40kph speed limit and sign posting.	Reducing the speed limit in places where Koala is known or likely to cross the road will reduce the likelihood of road related Koala fatalities (see PSC 2001).
2 Semi-mature <i>Eucalyptus robusta</i> should be planted closer to Soldiers Point Road and adjacent to Swamp Mahogany Paperbark forest adjacent to Old Soldiers Point Road in the area indicated in Figure 9 of the attached Ecological Assessment report..	This would strengthen the link across Soldiers Point Road for Squirrel Glider and would provide additional foraging resources for Koala.
3 A Habitat Restoration Plan should be prepared and implemented for the study area. This would include measures for the management of exotic species, in particular <i>Crysanthemoides monilifera</i> and <i>Lantana camara</i> which are listed pursuant to the WM Act. The plan should be prepared and implement prior to commencement of construction. A 5 year monitoring and maintenance period following the completion of all infrastructure associated with the sub-division should be considered.	The habitat restoration plan is required to manage the interface between the development area adjacent native vegetation in the wildlife corridor. A 5 year monitoring and maintenance period is considered necessary to enable native vegetation to properly establish within the interface. Following this period native vegetation within the interface should be established to a point that exotic species are unable to proliferate.
4 A Wildlife Management Strategy should be implemented for the study area. This would include a tree removal protocol and habitat augmentation strategy including nestbox installation. A 5 year monitoring and maintenance period following the completion of all infrastructure associated with the sub-division should be considered.	The Wildlife Management Strategy is required to manage fauna habitat attributes within the study area. The WMS includes strategies to manage fauna during the construction phase of the development such as during tree felling; provides a supplementary habitat plan (including a nest box program), and; a monitoring program to determine the effectiveness of the strategy. As with the HRP, a 5 year monitoring period is recommended. The WMS should be prepared in consultation with Council.

Recommendation	Justification
Stormwater should be directed away from the Lepironia swamp within stage 1.	The Lepironia swamp is considered to represent the EEC Freshwater Wetlands and as such directing stormwater away from this community is necessary to maintain the integrity of the habitat. Further to this, Wallum Froglet <i>Crinia tinnula</i> was recorded within this community. This species has a narrow pH tolerance (see Barker <i>et al.</i> 1995) and as such changes in the hydrological regime within its habitat could be detrimental to the survival of the species.
6 External night lighting needs to be designed to ensure that there is no significant light wash into adjacent bushland.	Artificial night lighting has been shown to negatively affect the behaviour of some nocturnal species (see Rich and Longcore 2006). Therefore, minimising light wash into remnant bushland is considered to be important in the management of remnant bushland which provides habitat for nocturnal species.

These recommendations have been adopted in the design and will be reflected in the implementation of the project.

7.3 Water Cycle Management

An Integrated Water Cycle Management (IWCM) Plan has been prepared by Cardno (2007) in consultation with Andrews Neil Pty Ltd ecologists, refer to **Appendix 2** The IWCM Plan has been prepared to ensure that the drainage, flooding and stormwater quality objectives are met as defined by Port Stephens Council and the Director Generals Requirements.

The IWCM strategy has been developed to minimise impacts on receiving waters. The Water Sensitive Urban Design (WSUD) elements recommended for the proposed 34 lot subdivision are summarised as follows:

- Constructed water quality wetland comprising a permanent water body and extended detention capacity;
- Vegetated biofiltration swales and check dams;
- Filter strips;
- Discontinuous kerbs along roads facing the asset protection zone (APZ);
- Self watering tree biofiltration for every second lot not facing the APZ;
- Permeable pipes for inter allotment drainage; and
- Rainwater Tanks

In relation to the potential impact on SEPP 14 wetlands, all stormwater is to be treated on site. The report also notes that groundwater infiltration is to be maintained across the site and as such it is anticipated that there will be a minimal impact on the downstream wetlands, refer to Wetlands Plan attached as **Figure 10**.

7.4 Bushfire

The subject site is impacted by Bushfire Prone Land. A Bushfire Hazard Assessment was prepared by Australian Bushfire Protection Planners (2006) and is attached to this report at **Appendix 7**. The Bushfire Hazard Assessment supports the proposed subdivision and makes the following recommendations:

- Provide a 35 metre APZ (25m IPA and 10m OPA) to north-western aspect of residential lots. This is provided by perimeter road and setbacks of dwellings.
- Provide an APZ greater than 15 metres to the south-west and north-west of residences to wetlands, provided by the perimeter road.
- The APZ should be managed in accordance with *Planning for Bushfire Protection*

2006.

- A Fire Management Plan to be prepared for the fuel management of the environmental corridor.
- S88b covenant for the management of the asset protection zone.
- The perimeter road to be 8m wide and internal roads 6m wide to cater for emergency vehicle access.
- Old Soldiers Point Road to be maintained as a fire trail in the case of an emergency.
- Fire hydrants to be installed in accordance with AS 2419.1-1994.
- Dwellings adjoining the APZ to be constructed in accordance with Construction of Buildings in Bushfire Prone Areas, include protection devices and comply with the relevant Australian Standards.

These recommendations have been adopted in the design of the subdivision.

7.5 Traffic and Access

A Traffic Impact Assessment was undertaken by Mark Waugh Pty Ltd and is attached in **Appendix 8**.

The proposed development links to existing vehicle, pedestrian and cycleway networks which adjoin the site.

The internal road layout is designed to provide access to the development from the existing entry off Old Soldiers Point Road. The Traffic Impact Assessment concludes that the existing road network is capable of accommodating the additional traffic with no major impact on existing traffic flows.

7.6 Infrastructure Provision

The proposed development will be provided with access to utilities including:

- Water
- Electricity
- Sewerage
- Telephone

An Infrastructure Concept Plan has been prepared illustrating the overall concept for infrastructure provision on the site, refer to **Appendix 9**.

7.7 Acid Sulfate Soils and Contaminated Land

A Preliminary Geotechnical Site Assessment has been prepared by Douglas Partners and is attached at **Appendix 1**.

The Preliminary Geotechnical Site Assessment indicates that the site is suitable for the proposed development, subject to appropriate engineering design and construction.

In addition a Radiation (Gamma) Survey of the site was prepared by Barto Safety Management Service, which indicated that there is no barrier in terms of radiation to the use of the site for residential purposes.

7.8 Cultural Heritage

Mary Dallas Consulting Archaeologists undertook a further review of the area of land at Salamander Bay which had been the subject of an Aboriginal Assessment in 1998.

The report findings were as follows:

- On both occasions no archaeological constraints to the sites development were identified. *"It was concluded that although Aboriginal people were highly likely to have utilised the resources of adjacent wetlands and swamps in the past, they are likely to have been characterised by short duration forays from large or complex base camps closer to the foreshores of Port Stephens."* (p.3)
- The report of December 2004 concludes *"there are no aboriginal heritage constraints to the development of Stage 1 area."* A letter from the Worimi Local Aboriginal Land Council has been issued in support of this conclusion.

7.9 Waste Management

There is no existing development on the site and the area to be developed is predominantly cleared. Materials generated from excavation will be reused on site for recontouring and green waste will be mulched on site for reuse. A Waste Management Plan has been prepared for the site preparation works, refer to **Appendix 12**.

7.10 Construction Management

A Construction Program has been prepared and is attached at **Appendix 12**. This outlines an indicative timeframe for completion of a series of tasks required to complete the project including site preparation, stormwater and road works. The management of construction will ensure that works are undertaken in a timely and safe manner.

In terms of external construction management, the site would have limited access for the public. Traffic access would be restricted to an access way from the road to the playing fields. This access would be restricted to vehicles operating on site. Of an evening and on weekends gates to the site would be locked. Pedestrian access is not required to or through the site. Pedestrians and cyclists would be able to use Old Port Stephens Road for the majority of the development phase. Restrictions would only be applied for possibly a day or town when landscaping of the road was proposed.

No construction of Stage 2 is proposed. The subdivision layout for this stage is indicative only.

7.11 Suitability of Site

The proposed subdivision design has resulted from an identification of opportunities and constraints, on-going consultation with relevant stakeholders as well as specialist investigations. The proposed subdivision design responds to the surrounding development and environment and has been designed to minimise potential visual impacts to the coastal foreshore by retaining existing vegetation along the north western boundary with Old Soldiers Point Road.

Suitable access to and from the site as well as internal circulation routes have been incorporated.

The site is capable of supporting the proposed development. It will enable the articulation of residential development to the playing fields as opposed to the present situation where the existing residential turns its back on the area.

The area is well serviced with open space given the redevelopment of the tip area, adjacent and directly north of the site. Both public and private open space is abundant in this area. The proposed development will further contribute to its availability with the additional areas proposed. Area to the north and to the west adjacent to the *Lepironia* swamp will become part of the open space network. Vegetation in both areas will consist of native vegetation at centres acceptable to the Rural Fire Service.

In terms of open space management, the land, because it is owned by Council will remain in its ownership and Council will retain management responsibility including management of the APZ.

Clearing for the purposes of the APZ will not affect the integrity of the koala corridor. Additional trees may be planted in the APZ to reinforce the corridor area. To the west, the APZ and koala area are proposed to be separate and an undertaking will be given to reinforce the koala vegetation by additional plantings.

The proposed subdivision will improve housing choice and availability in the locality. The subdivision layout has been designed to preserve native vegetation for visual and environmental qualities. Views to and from the site have been a key element of the design, this has been enhanced through road layout and subdivision pattern.

8.0 CONCLUSION

The proposed subdivision at Salamander Bay into 31 residential allotments represents a logical extension to existing urban development and is ideally located close to facilities and amenities including the adjacent sporting fields.

The Project Approval of Stage 1 (31 lots being developable for residential purposes) can be given as all issues have been addressed and adequate safeguards are proposed to ensure an environmentally acceptable outcome.

The proposed development has been designed with careful regard to context, scale, built-form, resource, energy and water efficiency, as well as to aesthetics, landscape, safety and security and economies.

Contextually, the development will address projected population growth and associated housing demand for the region. It is consistent with the relevant State, Regional and Council planning controls and can be undertaken without significant environmental impacts.