

***Preliminary Assessment
Under Part 3A of the
Environmental Planning and
Assessment Act, 1979.***

STAGED RESIDENTIAL DEVELOPMENT PROPOSAL FOR
SALAMANDER WATERS ESTATE
SOLDIERS POINT ROAD
SALAMANDER BAY

Executive Summary

The Salamander Waters Project was originally submitted under SEPP 71. With the coming into affect of Part 3A of the Act the matter was considered by the Director General, as a delegate of the Minister, and by letter of 17 January advice was received that this was a Project and Part 3A applies.

This report is submitted pursuant to Section 75E of the Act. It represents a preliminary assessment of the Subject Land being part Lot 59 DP 8312563 at Salamander Bay, Port Stephens, for residential development.

The subject land is owned by Port Stephens Council and is zoned Residential 2(a) under the local planning instrument, LEP 2000. It was previously being assessed under the provisions of SEPP 71.

It is proposed that the site be developed residentially in two stages.

A series of consultations has occurred with key stakeholders and the following issues identified:

- Flora and fauna issues, particularly the Koala Corridor north of the subject site
- Water management
- Bushfire hazard management
- Archaeology
- Geotechnical issues including radiation check

Evaluation of these issues through specialist consultant reports has enabled the preparation of a Concept Plan for the site.

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1.0 INTRODUCTION

This report has been prepared as a Preliminary Assessment for the two stage subdivision of land owned by Port Stephens Council at Salamander Bay. This report identifies the subject site as well as identifying key issues which have emerged from consultation and from studies undertaken on the site.

2.0 SITE DESCRIPTION

The proposed subdivision applies to land located off Soldiers Point Road, Salamander Bay. The subject site is described as part Lot 59 DP 831253 and is an irregular shaped parcel of land. The Stage 1 area some 4.5ha in size located at the intersection of Old Soldiers Point Road and Soldiers Point Road. The site adjoins existing residential development to the south and the east whilst a newly established Council sporting complex and playing field (former Council waste disposal site) is located to the north of the site. Stage 2 - Potential Development Area adjoins the site to the west.



Figure 1 – Site Location

The subject site is zoned 2(a) Residential under Port Stephens Local Environmental Plan 2000. The Stage 1 area slopes from the southern portion of the site to the north-western boundary. The site has been subject to sand mining in the past with most of the site having been disturbed. A small area of *Lepironia* swamp, Sydney freshwater wetland occurs at the south western end of the site. The Stage 2 area has a prominent hill on the site and is heavily treed.

3.0 PROPOSED DEVELOPMENT

The Stage 1 proposal notionally involves the subdivision into twenty-nine (29) allotments, comprising twenty-eight (28) residential allotments and one (1) residual superlot. These allotments range in size from 500m² to 750 m² (see Appendix 1). Depending on the market the middle section may be considered for a more medium density style of development allowable under the zoning.

The boundary of Stage 1 generally reflects the area that was previously sand mined and is arbitrary, given that the adjoining land on three sides is owned by Port Stephens Council.

The area of *Lepironia* swamp and preferred koala habitat has been retained with a 30 metre asset protection zone/buffer setback to the proposed allotments.

The proposal for Stage 2 consists of approximately 66 residential lots (approx. 12ha.) but would require further assessment regarding use of the hill top and traffic access issues.

4.0 BACKGROUND

Port Stephens Council engaged Hill PDA as Development Manager to progress and manage the development process for the subdivision of land owned by Council at Salamander Bay (Part Lot 59 DP 8312563) for Stage 1 of development. Hill PDA commissioned a number of specialist consultants to report on key issues. Andrews Neil was retained to assist with the urban design and concept planning for the site, as the proposal previously fell within the confines of SEPP 71 (Coastal Lands).

Plans and aerial photography indicate that the Stage 1 area of the site has been subject to sand mining activities. A Geotechnical Site Assessment has been prepared by Douglas Partners in January 2005, which illustrates the extent of the sand mining.

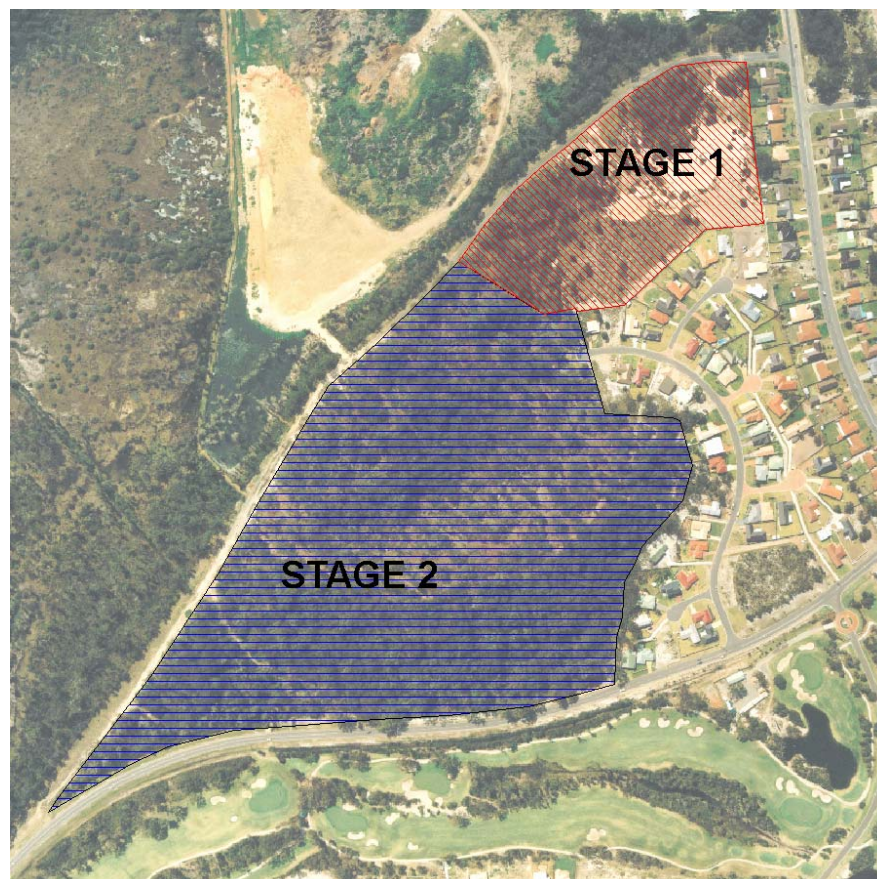


Figure 2 – Aerial View of Stages 1 and 2

4.1 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 of Stage 1 Salamander Waters Estate.

Table 1 – Relevant Stakeholders

Agency	Contact	Date Consulted	Phone Number
Port Stephens Council	Stewart Murrell, Property Section	Regularly	4980 0390
Port Stephens Council	Lee-Ann McMurray, 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, Sustainable Planning Group Manager	October 2004, January 2005	4980 0255
DIPNR	David Mutton	December 2004, February 2005	9762 8000
DEC	John Turbill and Estelle Blair	14 March 2005	6659 8224
Salamander Bay Precinct Committee	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	8741 5424

4.2 Port Stephens Council Items

4.2.1 Koala Plan of Management

The narrow and tenuous koala corridor to the north of the subject site is to be buffered and reinforced. Limit conflict with koala corridor in terms of cars and dogs.

4.2.2 Access to subject site

Access to playing fields north of the subject site will be through the koala corridor. If possible the subject residential development will exit cars through existing residential development, rather than putting further vehicles in an area close to the koala corridor.

4.2.3 Conservation of Water Quality

The former waste disposal area to the north of the site is in the process of being converted to playing fields. This area has been capped with an impermeable membrane and runoff directed to ponds adjoining the northern edge of the Stage 1 development area. The former waste disposal area sits between the Stage 1 development area and Cromartys Bay. Engineering consultants Cardno Willing have prepared a report on Water Sensitive Urban Design which encourages percolation of rainfall into the soil. Runoff will be captured in the swale system and cleaned and retained in a wetland area proposed for the north east corner of the site. Any additional runoff escaping from the site will be of a high quality.

4.3 Previous Issues

The Salamander Precinct Committee has 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 the tenuous Koala corridor on the

northern boundary of the subject land.

4.4 Bushfire Hazard

Bushfire zones are a legitimate concern and studies have been conducted by ERM to inform the Concept Plan. A meeting has also occurred with the Rural Fire Service where it was argued that the wetland area on the western side of Stage 1 should be included as part of the APZ.

5.0 PLANNING CONSIDERATIONS

Section 79C of The Environmental Planning and Assessment Act, 1979, as amended, states the following

(1) Matters for consideration — general

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

- (a) the provisions of:*
 - (i) any environmental planning instrument, and*
 - (ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority, and*
 - (iii) any development control plan, and*
 - (iv) any matters prescribed by the regulations, that apply to the land to which the development application relates,*
- (b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,*
- (c) the suitability of the site for the development,*
- (d) any submissions made in accordance with this Act or the regulations,*
- (e) the public interest.*

Section 79C(1) plays an important role in the development assessment process and in managing change in an environmentally responsible way. It sets broad categories, each of which covers a range of issues that arise when preparing and assessing development applications.

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

5.1 State Environmental Planning Policies

5.1.1 State Environmental Planning Policy No.14 – Coastal Wetlands (SEPP 14)

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. Although there are wetlands on the site, these are not classified under SEPP 14, therefore the provisions of SEPP 14 do not apply to the proposed development.

The Ecological Assessment prepared by ERM 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.

5.1.2 State Environmental Planning Policy No.44 – Koala Habitat Protection (SEPP 44)

The aims of State Environmental Planning Policy No.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 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, Conacher Travers (1998) concluded that 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.

5.1.3 State Environmental Planning Policy No.71 – Coastal Protection (SEPP 71)

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, and therefore the provisions of SEPP 71 apply.

Aims

Each of the aims of the SEPP71 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. 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 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.

- (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,*

An opportunities and constraints analysis was prepared as part of the concept planning process. This identified suitable access to and from the site as well as internal circulation routes.

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

There are no known aboriginal sites on or adjoining the subject site.

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

The proposed development is located some 1 km from Cromartys Bay. The land rises to the south providing distant water views from the upper levels of some dwellings. Potential views into and out of the site are shown in Appendix 2.

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

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

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

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

An Ecological Assessment was undertaken and incorporated in the opportunities and constraints analysis. Areas that contain native coastal vegetation including a Sydney freshwater wetland (*Lepironia* swamp) will be preserved under this development proposal.

- (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.

- (i) *to protect and preserve rock platforms*

There is no evidence of rock platforms on site (refer Geotechnical Assessment by Douglas Partners).

- (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) and suitably buffer areas of preferred koala habitat,
- majority of lots being oriented to maximise solar access,
- having good connectivity to 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 a density and size consistent with adjoining residential subdivision patterns.

(l) to encourage a strategic approach to coastal management

The proposed development is generally consistent with SEPP 71 requirements.

Matters for Consideration

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

Table 2 – Matters for Consideration

Matters for Consideration	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 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 of a density and size consistent with 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 Threatened Species Conservation Act 1995) and plants (within the meaning of that Act), and their habitats.	Areas that contain native coastal vegetation including a Sydney freshwater wetland (<i>Lepironia</i> swamp) and preferred koala habitat will be preserved under this development proposal.
(h) Measures to conserve 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.	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 that links to a corridor of preferred habitat along Old Soldiers Point Road to maintain connectivity for koala movement to Stage Two area and preferred habitat in 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.
(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>(p) Only in cases in which a development application in relation to proposed development is determined:</p> <ul style="list-style-type: none"> (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. 	ESD principles have been incorporated in the subdivision design.

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.

Part 4 - Development Control

Table 3 – 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>
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 and 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 would 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 MBK (see Appendix 9). 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. A Draft Concept Plan has been prepared for the proposed development in accordance with the requirements outlined under the SEPP (see Figure 1). In addition, the Concept Plan has been created with regard to the Draft SEPP 71 Coastal Protection Master Plan Guidelines prepared by DIPNR in March 2003.

Table 4 below 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.

Table 4 –Draft Master Plan Checklist

Required Information	Illustrated on Draft Masterplan (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.
(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, considering the natural features of the site, including coastal processes and coastal hazards	Yes	The proposal has been designed to address the constraints of the subject site and surrounding environment.
(d) the scale of any development and its integration with the existing landscape	Yes	The scale of the proposed development comprising standard residential lots is suited to this location and includes the retention and integration of existing vegetation.
(e) phasing of development	Yes	This proposal represents Stage One of a two stage development.
(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	The proposed development links to existing vehicle, pedestrian and cycleway networks which adjoin the site and provide linkages to the coastal foreshore.
(h) subdivision pattern	Yes	The proposed subdivision pattern is indicated on the concept plan.
(i) infrastructure provision	Yes	The future infrastructure will be provided along the proposed internal road system.
(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.
(k) heritage conservation	No	There are no known heritage items on the site or surrounding property.
(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.
(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 Sydney freshwater wetland is situated on the western side of the site with an area of preferred koala habitat and 30 m buffer to future development to thereby minimise impacts on water quality and use. Additionally the 40m asset protection zone will further reduce potential impacts.
(p) conservation of animals (within the meaning of the Threatened Species Conservation Act 1995) 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 Stage Two area and preferred habitat in Tilligerry Nature Reserve.</p> <p>The Ecological 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.</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	

5.2 Port Stephens Local Environmental Plan 2000

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

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 generally consistent with the objectives of the zone.

The minimum allotment size for subdivision is 500m². The proposed subdivision will result in allotments ranging in size from 500 m² to 750 m², complying with the provisions of the LEP.

5.3 Development Control Plans

The following Development Control Plans (DCP's) apply to the proposed subdivision:

- DCP PS3 – Subdivision Guidelines; and
- DCP PS1 – Urban Housing and Dual Occupancy Development Controls.

5.3.1 Development Control Plan PS3 – Subdivision Guidelines

The objectives of the DCP include:

To promote subdivision development which is of a high design standard and which minimises impact on the environment;

To ensure cost-effective subdivisional development reflecting appropriate community standards for health, safety and amenity;

To ensure that there is adequate provision of infrastructure and services and to minimise Council's future maintenance costs for public roads and services;

To provide a functional, attractive and safe environment for residents;

To encourage innovative design which enhances all aspects of the environment.

The proposed development is generally consistent with the objectives of the DCP.

Provisions from DCP PS3 relevant to the proposal are discussed in Table 5 below.

Table 5 – DCP PS3 Controls

Section	Provision	Comment																																								
5.0 Roadworks – Design 5.1 Aim	Objectives include: <ul style="list-style-type: none">• Provide for convenient and safe access or pedestrians, vehicles and cyclists.• Provide safe, logical and hierarchical transport linkages within existing system.• Provide appropriate access for emergency and service vehicles.• Provide a convenient way for public utilities.• Provide an opportunity for street landscape.• Provide convenient parking for visitors.• Have appropriate regard for the climate, geology and topography of the area.	The proposed subdivision is consistent with the roadwork design objectives.																																								
5.3 Road Reserve and Carriageway Widths 5.3.1 Urban Roads	<table><tr><th>Class</th><th>Lots Dwelling</th><th>Width FP.CW.FP</th><th>Total Rd</th><th>ESA</th></tr><tr><td>Access way</td><td><5</td><td>4.5-3.5-4.5</td><td>12.5</td><td>1 x 10⁴</td></tr><tr><td>Cul-de-sac</td><td><12</td><td>4.5-5.5-4.5</td><td>14.5</td><td>5 x 10⁴</td></tr><tr><td>Local access</td><td>12 to 50</td><td>5.5-6.5-5.5</td><td>17.5</td><td>1 x 10⁵</td></tr><tr><td>Collector</td><td>50 to 200</td><td>4.5-8-4.5</td><td>17</td><td>1 x 10⁶</td></tr><tr><td>Distributor</td><td>>200</td><td>4.5-11-4.5</td><td>20</td><td>5 x 10⁶</td></tr><tr><td>Industrial</td><td>Minor</td><td>5.5-11-5.5</td><td>22</td><td>1 x 10⁷</td></tr><tr><td>Industrial & Bus Route</td><td>Major</td><td>4.5-13-4.5</td><td>22</td><td>1 x 10⁷</td></tr></table>	Class	Lots Dwelling	Width FP.CW.FP	Total Rd	ESA	Access way	<5	4.5-3.5-4.5	12.5	1 x 10 ⁴	Cul-de-sac	<12	4.5-5.5-4.5	14.5	5 x 10 ⁴	Local access	12 to 50	5.5-6.5-5.5	17.5	1 x 10 ⁵	Collector	50 to 200	4.5-8-4.5	17	1 x 10 ⁶	Distributor	>200	4.5-11-4.5	20	5 x 10 ⁶	Industrial	Minor	5.5-11-5.5	22	1 x 10 ⁷	Industrial & Bus Route	Major	4.5-13-4.5	22	1 x 10 ⁷	The internal roads servicing the subdivision will be designed as Local Access roads.
Class	Lots Dwelling	Width FP.CW.FP	Total Rd	ESA																																						
Access way	<5	4.5-3.5-4.5	12.5	1 x 10 ⁴																																						
Cul-de-sac	<12	4.5-5.5-4.5	14.5	5 x 10 ⁴																																						
Local access	12 to 50	5.5-6.5-5.5	17.5	1 x 10 ⁵																																						
Collector	50 to 200	4.5-8-4.5	17	1 x 10 ⁶																																						
Distributor	>200	4.5-11-4.5	20	5 x 10 ⁶																																						
Industrial	Minor	5.5-11-5.5	22	1 x 10 ⁷																																						
Industrial & Bus Route	Major	4.5-13-4.5	22	1 x 10 ⁷																																						
5.4 Design Criteria	All new roads in a subdivision shall be fully constructed. All roads to connect the subdivision to Council's existing road system. The extent and type of construction shall be determined at the time of development consent.	The proposed development has direct access to Soldiers Point Road via Old Soldiers Point Road with a potential linkage to Stage Two development.																																								
	Adequate stopping and sight distances shall be provided for horizontal and vertical curves and intersections and junctions.	To be incorporated during detail road design.																																								
	Roads shall intersect at not less than 75 degrees and be provided with public road splays for service requirements being 3 metres minimum.	To be incorporated during detail road design.																																								
	The desirable road longitudinal grade shall be between 1% and 10%. In adverse situations the absolute maximum grade shall be 15% and the absolute minimum grade shall be 0.5%.	To be incorporated during detail road design.																																								

	Subsoil drainage shall be provided as directed and located generally on the high side of the road and on both sides in cutting or where the longitudinal grades are less than 5%.	To be incorporated during detail road design.
	Temporary turning heads are to be provided at the end of staged constructions and may include T and Y shapes as detailed in Appendix D9.	To be incorporated during detail road design.
	Turning head shall be 8.5 metres minimum radius in residential areas with kerb and gutter and 9.5 metres radius for edge of seal in rural areas.	To be incorporated during detail road design.
	Kerb returns shall be circular with 7.5 metres minimum radius and 10 metre minimum radius for bus routes. Kerb shall be upright for bus routes. Pram ramps to the kerb shall be provided in accordance with Appendix D9 together with footpathing.	To be incorporated during detail road design.
9.0 Stormwater Drainage 9.1 Aim	Objectives include: <ul style="list-style-type: none"> • Minimise and control local and area flooding. • Stabilise landform and control erosion. • Enhance the urban landscape. • Provide ease of access for maintenance purposes. • Control water quantity and quality. 	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.
10.0 Cycleways 10.1 Aim	Aim: To encourage the use of a bicycle as an alternative form of transport by the strategic location and construction of suitable cycleways.	A cycleway is proposed along Old Soldiers Point Road adjoining the site.
10.2 Location	Cycleways should be incorporated in the design of new subdivisions wherever possible. Cycleways may be used to link the person's place of residence to schools, shops or work. In the urban and rural environment, cycleways may be established solely for the cyclist or a combined pedestrian / cycleway can be used.	Complies.
10.3 Design Criteria	For single lane cycleways the pavement width shall be 2.0 metres, while for combined pedestrian / cycleway the pavement width shall be 2.5 metres.	To be incorporated during detail cycleway design.
	The optimum maximum grade on a cycleway should be 8%. In extreme short distances a grade of up to 12% is allowable.	To be incorporated during detail cycleway design.
11.0 Miscellaneous 11.2 Services	Adequate provision shall be made within subdivisions for the installation of electricity, telephone and gas services in conjunction with the relevant authorities	To be incorporated during detail road design.

5.3.2 DCP PS1 – Urban Housing and Dual Occupancy Development Controls

DCP PS1 is designed to encourage high quality urban design and improved residential amenity. Although the standards contained in the plan mostly relate to housing type and design, the proposed subdivision is inline with the core objectives of the plan and is consistent with the efficient use of residential land as well as ecologically sustainable development.

The proposed subdivision of Stage 1 at Salamander Waters responds to the surrounding environment, including the constraints of the surrounding environment and as a result minimises disruption to existing natural landform, flora and fauna. The overall design has consideration to orientation with allotments designed to maximise the northerly aspect where possible. The subdivision design responds to the subdivision pattern of nearby residential development and links up to existing vehicular, pedestrian and cycle networks along Old Soldiers Point Road and Soldiers Point Road.

5.4 Likely Impacts of Development

5.4.1 Studies Undertaken

As a result of discussion with various stakeholders and site inspection a number of studies were undertaken to inform the development of a site concept plan. The specialist consultant studies were as follows:

- Flora and Fauna – ERM
- Bushfire Analysis – ERM
- Geotechnical and soils – Douglas Partners
- Archaeology – Mary Dallas
- Water sensitive urban design – Cardno

5.4.2 Context and Setting

An opportunities and constraints analysis was prepared as part of the concept planning process. The proposal has been designed to address the constraints of the land and surrounding environment.

The proposal retains and enhances existing vegetation within a Sydney freshwater wetland, preferred koala habitat, habitat buffers and asset protection zones along the north western boundary with Old Soldiers Point Road.

The proposed residential subdivision generally reflects the pattern and character of surrounding development.

The site is well located in terms of proximity to major access routes, open space and recreational facilities.

5.4.3 Access, Transport and Traffic

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

Advice from Port Stephens Council is that a roundabout will be constructed at the junction of Soldiers Point Road and the new access to the playing fields. The proposed subdivision will also access this road. The roundabout has been considered necessary as a result of additional traffic generated by the new playing fields and to a lesser degree by the residentially zoned land.

A road connection from Stage 1 to the Stage 2 area is proposed and it was considered that this would connect to Port Stephens Drive and to Kanimbla Drive. The connection to Port Stephens Drive is not favoured by Port Stephens Council Traffic Engineer at this time but still remains an option. Consideration at the Development Application stage would need to be given to closing the link to the playing fields road

and thereby reducing impact on the koala corridor. This would necessitate the opening of a connecting road to Port Stephens Drive.

The existing road network is capable of accommodating the additional traffic with no major impact on existing traffic flows.

5.4.4 Utilities

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

- Water
- Electricity
- Sewerage

5.4.5 Soils

A Preliminary Geotechnical Site Assessment has been prepared by Douglas Partners.

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 (this report forms an attachment to the Preliminary Geotechnical Site Assessment), which indicated that there is no barrier in terms of radiation to the use of the site for residential purposes.

5.4.6 Flora and Fauna

An Ecological Assessment has been prepared by ERM and is attached at Appendix 5. Three vegetation communities are present on the site, including coastal sand apple-blackbutt forest, swamp mahogany-paperbark forest and *Lepironia* swamp. Preferred koala habitat is present where swamp mahogany-paperbark forest occurs on the site (0.2 ha). The loss of this small area is offset by retention of areas around the *Lepironia* Swamp (which will act as a natural fire break and becomes part of the APZ) and reinforcement of the corridor in appropriate locations along Old Soldiers Point Road. No threatened flora was found on the site, however threatened fauna was recorded and includes the squirrel glider and tree-roosting microchiropteran bats.

The development footprint has been designed to protect habitat for threatened species and ecological communities. The Ecological 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 include:

- Implementation of a weed management plan (targeting bitou bush and exotic grasses);
- Implementation of an erosion and sediment control plan;
- Implementation of a feral animal management plan;
- Retention of *Lepironia* swamp and fringing swamp mahogany-paperbark forest (as part of the required asset protection zone for the development);
- Retention of hollow-bearing trees where possible, especially within Asset Protection Zones and the southern section of the site;
- Where retention is not possible, pre-clearing surveys of hollow-bearing trees to be conducted by a suitably qualified wildlife professional;
- Landscaping of residential properties in sympathy with surrounding native vegetation;

- Implement a community education program aimed at educating home-owners on responsible pet ownership (if dog and cat ownership is permitted) and responsible garden waste management;
- Protection of the fauna corridor along Old Soldiers Point Road by erecting a barrier between the development footprint and the road;
- Restricting vehicle speeds within the development footprint to less than 40 kilometres per hour;
- Relocation of powerlines along Old Soldiers Point Road and rehabilitation of the power line easement;
- Preventing runoff being directed from construction areas into low-lying areas in the southern section of the site where *Lepironia* swamp occurs; and
- Contribute to the rehabilitation of preferred koala habitat along the Old Soldiers Point Road.

These recommendations are to be adopted during implementation of the project.

5.4.7 Aboriginal Archaeology

Mary Dallas Consulting Archaeologists undertook a reconnaissance of an area of land at Salamander Bay, which had been subject to an Aboriginal Heritage Assessment in 1998. The report findings follow:

- there are no aboriginal heritage constraints to the proposed development of the Stage 1 area
- the conclusions of the 1998 archaeological study remain current
- no further aboriginal heritage assessment is required
- the current Worimi LALC report supports these conclusions

Refer Appendix 8 for updated report and Worimi LALC correspondence.

5.4.8 Natural Hazards

The subject site is classified as Bushfire Prone Land. A Bushfire Hazard Assessment was prepared by ERM and is attached to this report at Appendix 4. The Bushfire Hazard Assessment supports the proposed subdivision and makes the following recommendations:

- Provide a 40 metre APZ (30 metre IPA and 10 metre OPA) on the northern and western boundary of Stage One;
- The APZ should be located generally within the maximum development footprint external to the preferred habitat, buffers and movement corridor;
- Construction with future lots should comply with AS3959-1999;
- Roads should be designed in accordance with the design criteria as summarised in this assessment and Planning for Bushfire Protection; and
- Fire hydrants should be installed in accordance with AS2419.1-1994.

These recommendations are to be adopted during implementation of the project. Further to discussions between the Project Manager (Hill PDA) and the Rural Fire Service a decision has been made to incorporate the swamp as part of the Asset Protection Zone, since it represents a natural fire break.

5.4.9 Social Impact

The proposed development will have a positive social impact and will strengthen social capital.

5.4.10 Economic Impact

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.

5.4.11 Site Design and Internal Design

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.

5.4.12 Suitability of the Site for Development

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 Stage 1 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.

With regard to clearing where APZ and koala corridors exist this is not an issue. The koala corridor to the north on the playing fields area will not be impacted upon by the APZ in this area. Some trees may be able to be planted in the APZ, which reinforces 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.

Future Residential Development

All consultants have undertaken initial investigations for Stage 2 of the subject development. Like Stage 1, this land is also zoned residential but has more vegetation and has not been previously mined.

6.0 CONCLUSIONS

The proposed development of the subject site needs to be considered in the context of the potential development impacts identified in Section 5 of this report. Investigation of specific matters has been completed relating to flora and fauna, geotechnical and soils, bushfire hazard assessment, archaeology and water sensitive urban design.

The proposed subdivision of Stage 1 into twenty-nine (29) residential allotments is consistent with the relevant State and Council planning controls and can be achieved without significant environmental impact.

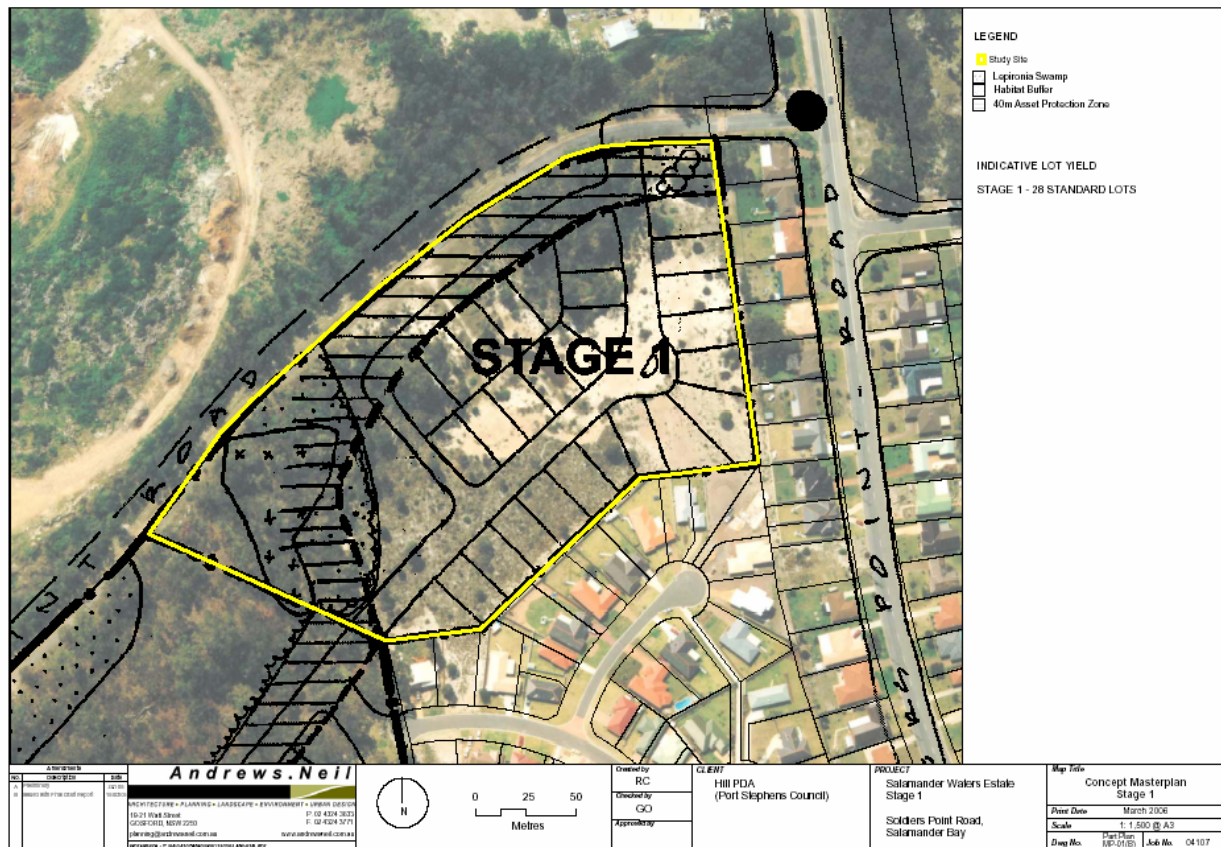
As this project will be staged, Stage 2 area has not been investigated to the depth of Stage 1; however, this area also has development potential constrained largely by significant vegetation and the resultant bushfire considerations.

A concept plan prepared in accordance with the outcomes of the studies is at Annexure 1 and 1A.

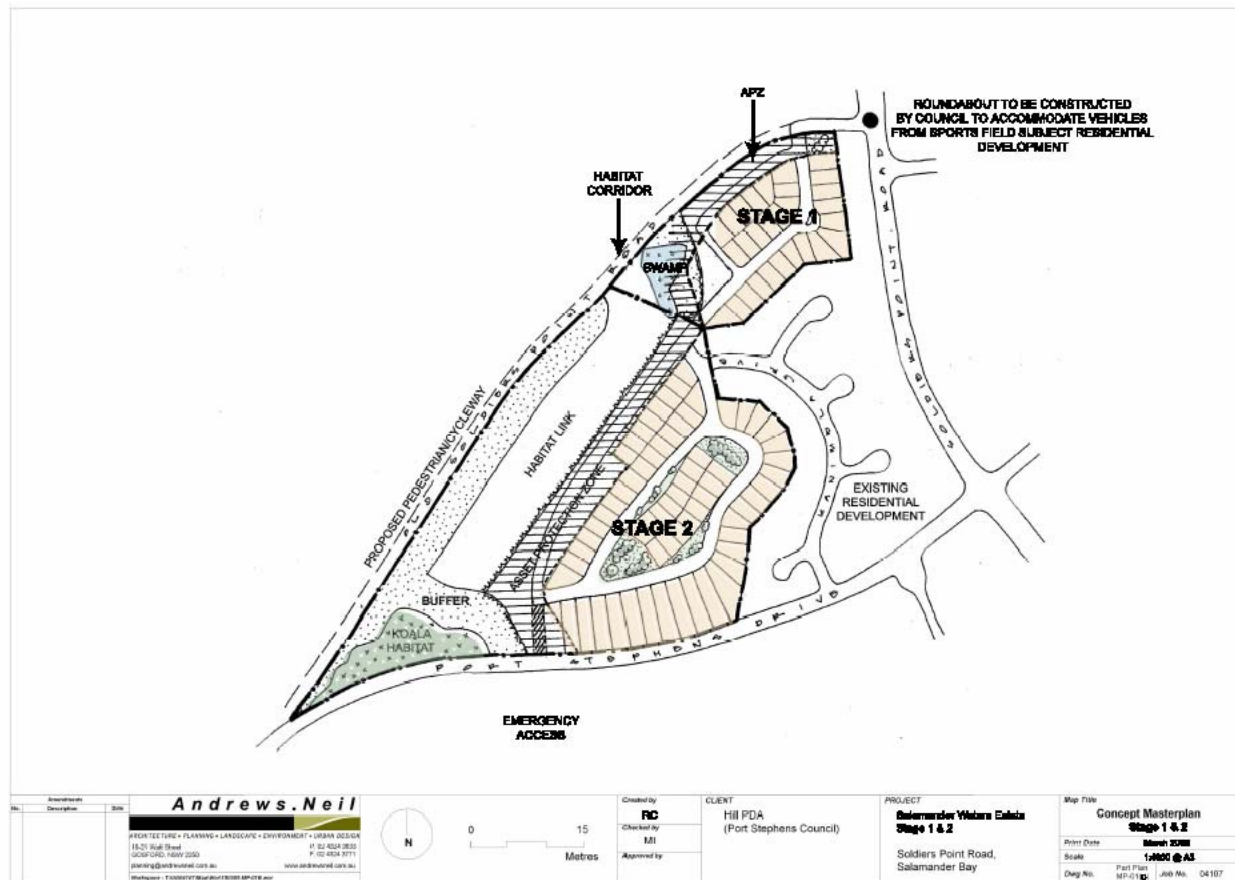
While considerable investigation of the site has been undertaken, at this stage, we seek the Director-Generals environmental assessment requirements which we respectfully suggest should be in line with the work and consultation already undertaken.

It is considered that ultimately a concept approval would be issued for the whole site but that Stage 1 would proceed to specific approval.

APPENDIX 1 – PRELIMINARY CONCEPT PLAN STAGE 1



APPENDIX 1A – CONCEPT PLAN STAGE 1 & 2



APPENDIX 2 – VIEW ANALYSIS

