

**MAJOR PROJECT ASSESSMENT:
FERN BAY SEASIDE VILLAGE
LOT 46 DP 280008, Lots 1, 4 and 7 DP
270466
NELSON BAY ROAD, FERN BAY
Proposed by ASPEN GROUP LIMITED**



Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

June 2010

Cover Image: Fern Bay Seaside Village Site Layout and Aerial Photograph
Photo Source: Environmental Assessment (ERM, February 2009)

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EXECUTIVE SUMMARY

This is a report on a project application made by Aspen Group Pty Ltd to carry out a 411 lot subdivision ("the proposal") of lands at Seaside Boulevard, Fern Bay. The project is an extension of an existing residential subdivision known as 'Fern Bay Seaside Village'.

The application seeks approval for:

- Bulk earthworks and vegetation clearing;
- Subdivision to create 411 lots comprising: 370 residential lots, 38 super lots (for future residential purposes), 2 commercial lots and 1 community lot, under a Community Title Scheme. The subdivision is divided into 17 stages, numbered 4 – 20 (NB: Stages 1 – 3 have been developed under earlier approvals);
- Creation of ecological conservation areas to be managed as Community Conservation Lands;
- Creation of a recreational and open space network including formal parks and an Aboriginal cultural heritage reserve;
- Creation of two sites for commercial facilities and a site for a recreational/community facility;
- Construction of a road network including internal roads, pedestrian pathways and a shared footpath/cycleway on part of Nelson Bay Road;
- Construction of a stormwater management system;
- Creation of asset protection zones;
- Landscaping; and,
- Works to connect to reticulated services (water, sewerage, power and telecommunications).

The capital investment value (CIV) is \$52.2 million. The proposal will create 2470 full time equivalent construction jobs and 20 full time equivalent operational jobs.

The proposal was declared a major project on the 28 September 2006, under *State Environmental Planning Policy (Major Projects) 2005*, being subdivision of land for residential purposes into more than 25 lots in the coastal zone.

The Minister for Planning adopted a master plan for the site on 8 August 2006. The master plan was prepared in accordance with the requirements of *State Environmental Planning Policy No. 71 (Coastal Protection)* and established a development footprint and ecological offsets package. The Director-General's Environmental Assessment Requirements required the project to be generally consistent with the master plan. The Department is satisfied that this is the case.

During the exhibition period, the Department of Planning ('the Department') received 13 submissions from public authorities and 6 submissions from the public. Key issues raised include, impacts on flora and fauna, impacts on stormwater, groundwater and flooding, traffic and coastal erosion.

Key issues considered in the Department's assessment include:

- General consistency with adopted SEPP 71 master plan;
- Subdivision design & layout;
- Stormwater management;
- Flooding;
- Coastal hazards;
- Flora and fauna;
- Traffic and access;
- Aboriginal cultural heritage;
- Acid sulphate soils;
- Bushfire;
- Provision of community and commercial facilities;

- Management of community property; and,
- Section 94 Contributions.

The Department has assessed the merits of the project and is satisfied its impacts have been addressed via the Statement of Commitments and the recommended conditions of approval, and can be suitably mitigated and/or managed to ensure a satisfactory level of environmental performance. The project is in the public interest and will provide the following environmental, social and economic benefits to the region:

- Additional serviced housing lots in a variety of sizes;
- Ongoing management of vegetation of ecological significance; and,
- Improved public infrastructure, including an extension to the existing pedestrian cycleway network.

The project achieves the key priorities in the *NSW Government State Plan (2010)* of improving housing affordability and protecting native vegetation. The project achieves these by increasing lots available for housing and setting aside vegetated areas for conservation purposes.

The Department recommends that the project be **approved**, subject to conditions.

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1 BACKGROUND

1.1 THE SITE

Site Context and Location

The site is located off Nelson Bay Road, Fern Bay, in the Port Stephens local government area. It sits between two key coastal features, being, the Hunter River (the estuarine reach of the river is located to the west) and Stockton Bight (open coast of the Tasman Sea to the east). The site is approximately 18km north of the Newcastle central business district, 6km north of Stockton (which is in the Newcastle LGA) and 20 km south of Nelson Bay. Refer to Figures 1 and 2 below.

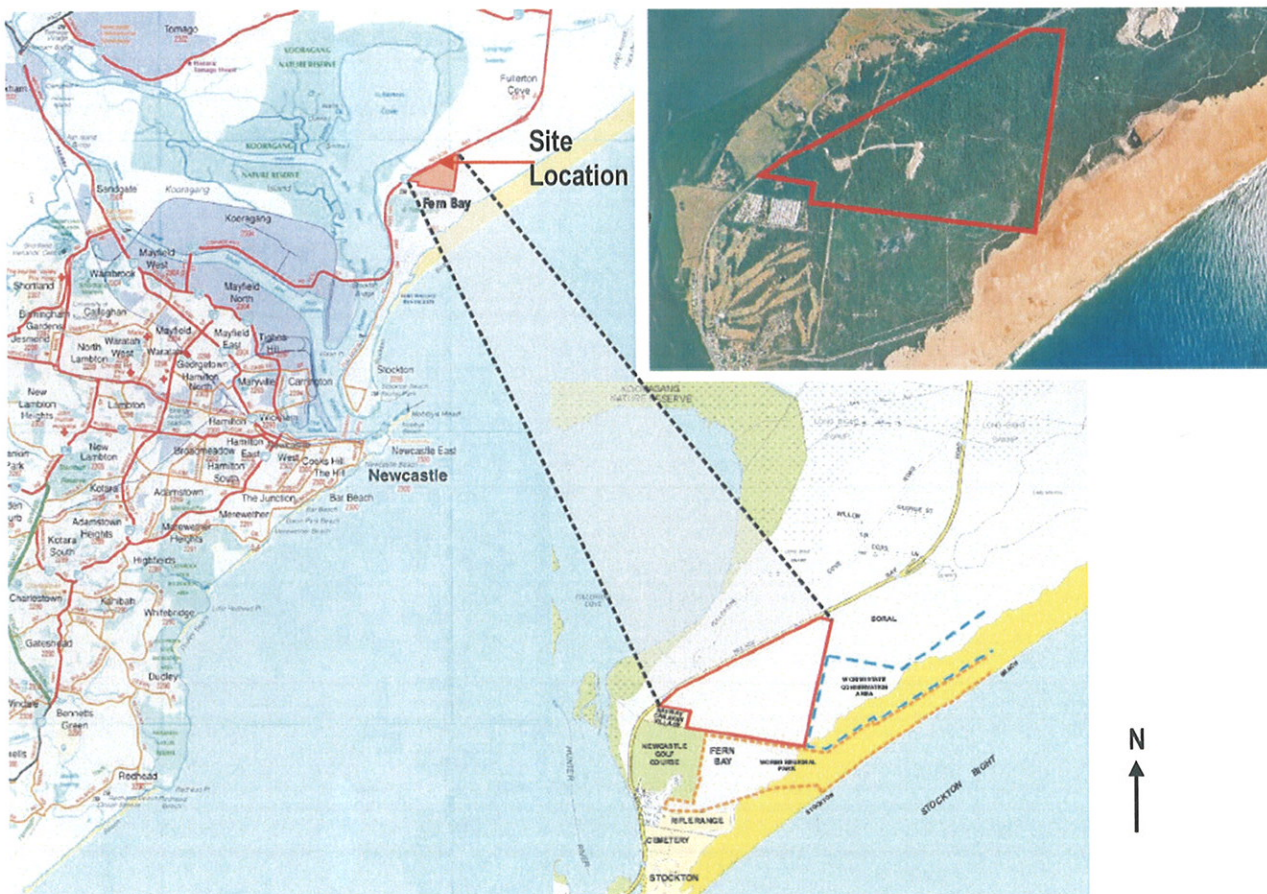


Figure 1: Site location

Source: Environmental Assessment (ERM, February 2009)



Figure 2: Aerial photograph of site depicting surrounding properties (prior to construction of Stage 1 and 2)
Source: Environmental Assessment (ERM, February 2009)

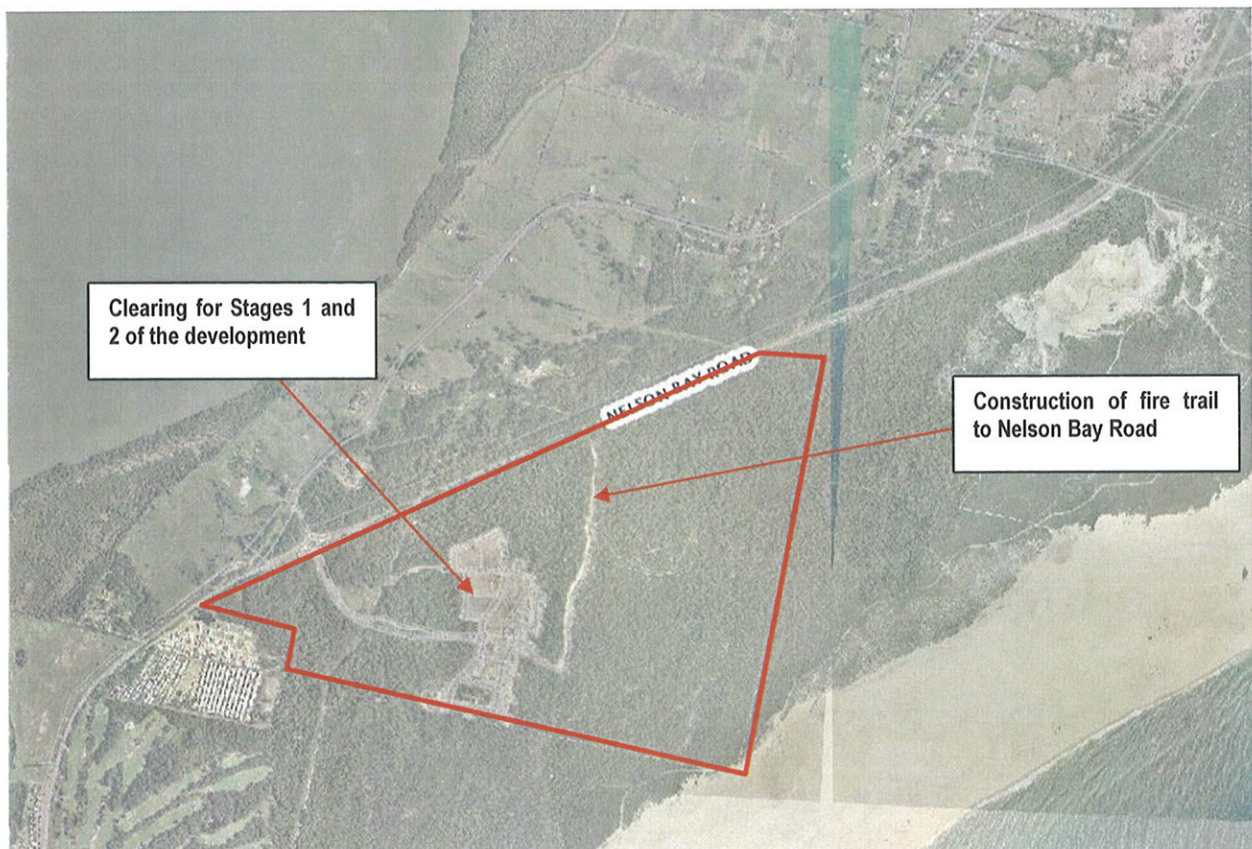


Figure 3: Aerial photograph of site depicting surrounding properties (following clearing for Stage 1 and 2)
Source: Department of Lands SIX Viewer 2009

Existing site features

The site is legally described as Lot 46 in DP 28008 and Lots 1, 4 and 7 in DP 270466. It has an area of 205 ha, is triangular in shape and is largely vegetated (refer Figure 3).

The site is part of the Newcastle Bight dune barrier system. The transgression of dunes across the site has resulted in a series of prominent and distinct ridges and sandy knolls, principally in a north-south direction. Active dunes occur in the south-east corner of the site.

Portions of the overall site rise up to 20m AHD but most of the site is at 10m AHD or lower. The sites geology consists of topsoil about 0.2m thick of silty sand, over a sand layer with a thickness that varies from 13m to 27m, that overlays sandy clay. The sand layers at the site are underlain by rock at a depth of about 60m.

Surrounding development

The site is surrounded by naturally vegetated land in various ownerships including the Worimi Regional Park to the south and Worimi State Recreation Area to the north-east, which are owned and managed by the Department of Environment, Climate Change and Water (DECCW). These lands (and the site) are part of a regional corridor in the Lower Hunter region (connecting the Sugarloaf Range to Stockton Bight which has been mapped in the National Parks and Wildlife "Key habitats and Corridors Project"). The site's location within this corridor does not preclude it from being developed, but requires an assessment to be made of the development's impact on the value of the corridor as habitat and as a habitat linkage. The impacts of the development on the regional corridor are assessed in section 5.3.

A mobile home village (Bay View Village) adjoins the site to the southwest.

The site context and surrounding lands are illustrated in Figure 2. Figures 4 - 7 show key locations on the site.



*Figure 4: The Site and Context (Existing Access Road)
(Looking north-east along Nelson Bay Road – subject site on right hand side of road)*



Figure 5: View of existing roundabout at the intersection of Seaside Boulevard and Ironbark Drive
(Existing vegetation in the foreground depicts Stage 4 of the proposed development)

Worimi Regional Park



Vegetation to be maintained as community conservation lands (located between stages 1 and 5)

Figure 6: View of existing vegetation and constructed houses, as viewed along Rushland Drive (facing west)
(Worimi Regional Park to the south)



Figure 7: View of cleared land for Stage 3 of the development, as viewed from Rushland Drive (facing north east)

1.2 SITE HISTORY

Previous applications

The Land and Environment Court granted approval to a 208 lot residential subdivision on 29 September 1997. This consent has been modified on 5 occasions with the most significant modification being the relocation of 33 lots from the area adjacent to Nelson Bay Rd, to create a vegetated buffer.

Stages 1 and 2 of the development (which consist of 149 residential lots) have been constructed and houses have been developed on many of the lots. Stage 3 (which consists of 33 residential lots) has been commenced with 18 lots completed.

SEPP 71 master plan

On 8 August 2006, the Minister for Planning adopted a master plan (20-4-2005) prepared in accordance with clause 18 of *State Environmental Planning Policy No 71 – Coastal Protection* ('SEPP 71') over the site (refer to Figure 9). The master plan was for a subdivision consisting of 947 residential lots, open space lots, a community nursery, conservation areas, recreational and commercial facilities, new public roads, fire trails, pedestrian trails and asset protection zones.

The current application is generally consistent with the master plan. Details on the consistency are outlined in Section 5.1.

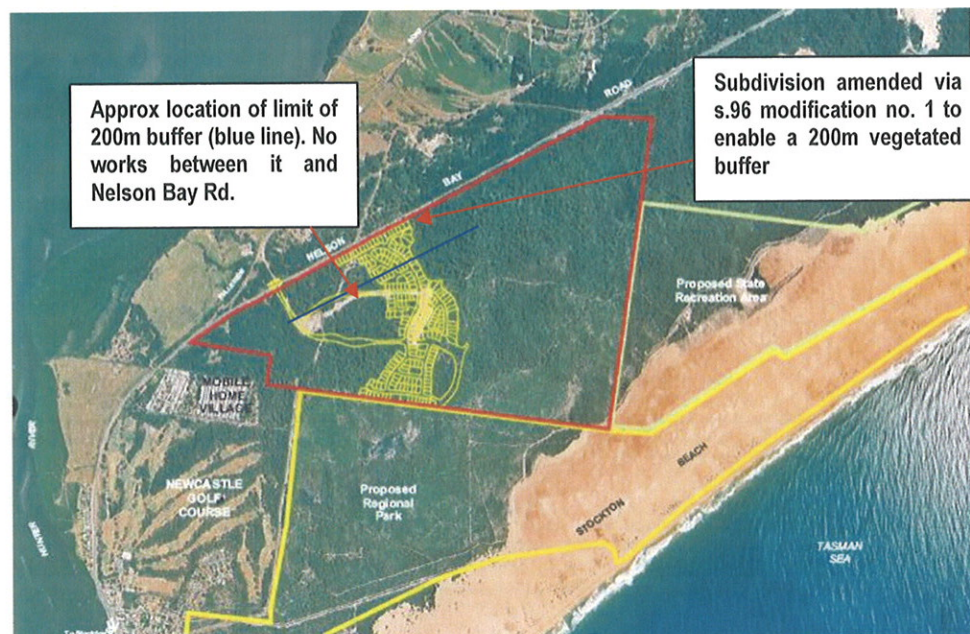


Figure 8: Approved subdivision from Land and Environment Court consent (highlighted in yellow)
Source: Environmental Assessment (ERM, February 2009)

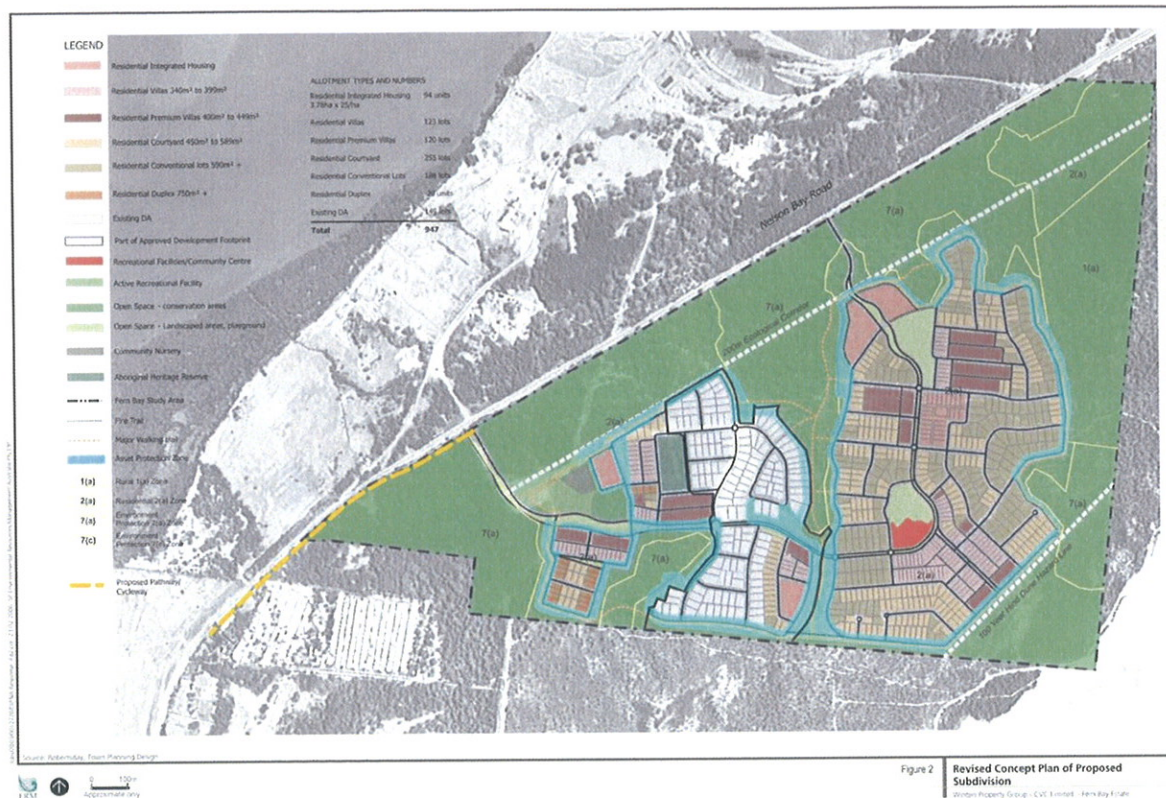


Figure 9: Approved master plan (MP 20-4-2005)
Source: Robertsdale, Town Planning Design prepared for ERM 2006

2 THE PROPOSED DEVELOPMENT

2.1 EXHIBITED PROPOSAL

The proposal (as exhibited - refer to Figure 10) sought approval for:

- Bulk earthworks and vegetation clearing;
- Subdivision of the land into 683 residential lots (including 4 integrated lots which could be potentially subdivided into 84 integrated housing lots) under a Community Title Scheme. The subdivision was in 12 stages, numbered 4 – 15 (NB: Stages 1 – 3 have been developed under earlier approvals);
- Creation of ecological conservation areas to be managed as Community Conservation Lands;
- Creation of a recreational and open space network providing for areas including formal parks and an Aboriginal Cultural Heritage Reserve;
- Construction of the road network including internal roads, pedestrian pathways and a shared footpath/cycleway on part of Nelson Bay Road;
- Construction of stormwater management measures;
- Landscaping works; and,
- Connect to reticulated services (water, sewerage, power and telecommunications).

The capital investment value (CIV) is estimated at \$52.2 million. The project will create 2470 full-time construction jobs and 20 full-time equivalent operational jobs.

2.2 PREFERRED PROJECT REPORT (AMENDED PROPOSAL)

A Preferred Project Report (PPR) (refer to Figure 11) was submitted, incorporating the following changes:

- A reduction in the number of lots from 683 to 411 (comprising 370 residential lots, 38 super lots, 2 commercial lots, and one community lot);
- An increase in the total number of stages from 16 to 20. Approval is sought for stages 4 to 20 (equating to 17 stages in this current application);
- Reconfiguration of the road layout to improve connectivity through the subdivision and ensure compliance with the street block dimension requirements of the Port Stephens Development Control Plan (DCP);
- The reconfiguration of asset protection zones, so that they are maintained within the development footprint and outside of conservation areas;
- An amended stormwater and groundwater plan;
- The relocation of pumping stations to minimise vegetation clearing;
- Amended draft community management statement; and,
- Amended statement of commitments.

The PPR was accepted as adequate on 9 April 2010. The amendments made did not result in any substantial change in impact and accordingly no formal public exhibition was necessary. The PPR was placed on the Department's website.

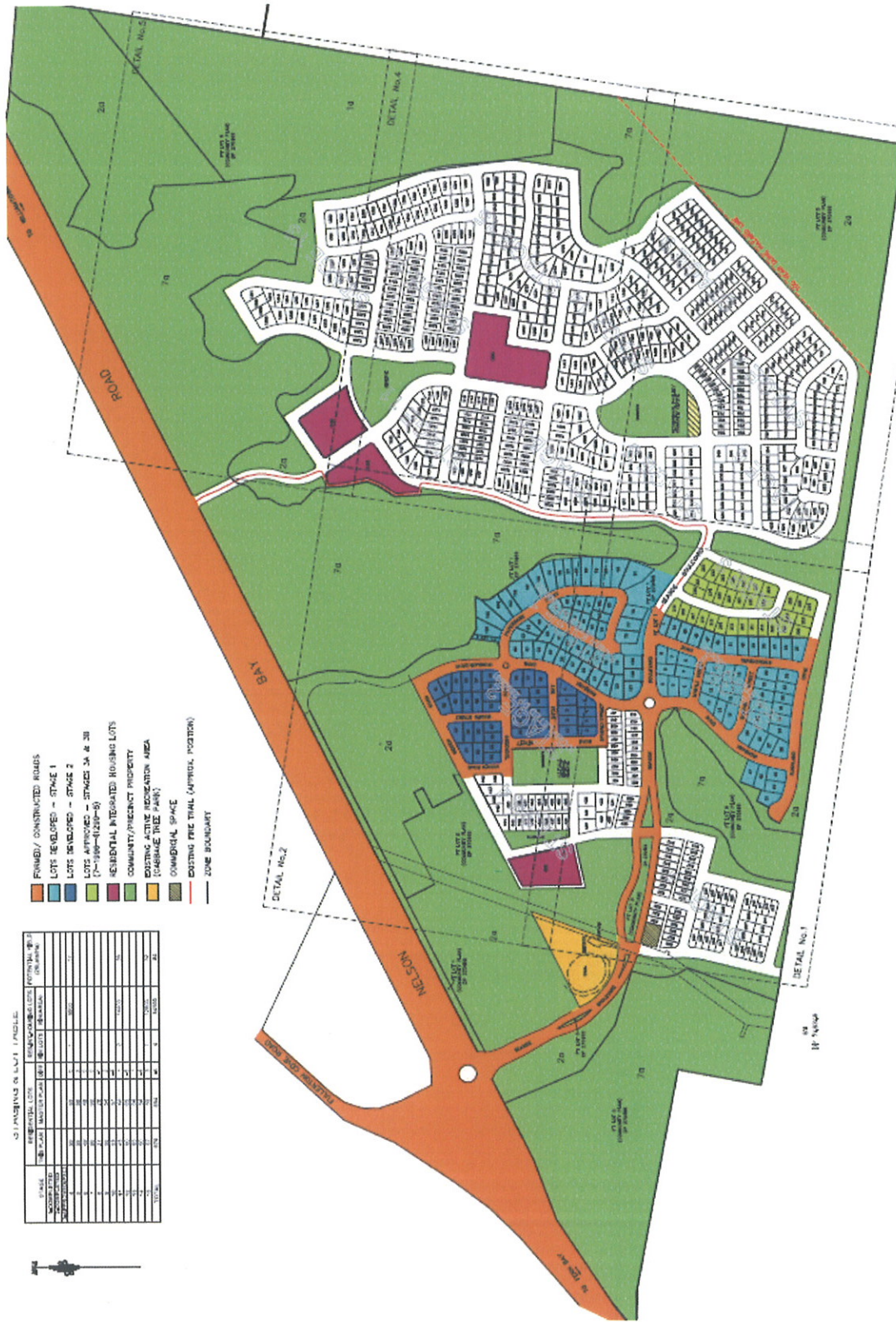


Figure 10: Proposed development plan showing proposed 683 lots (indicated in white, with 4 superlots proposed for integrated housing indicated in purple) (As Exhibited)
Source: Environmental Assessment (ERM, February 2009)



3 STATUTORY CONTEXT

3.1 PART 3A DECLARATION

The proposal was declared a major project under *State Environmental Planning Policy (Major Projects) 2005* on the 28 September 2006, being subdivision of land for residential purposes into more than 25 lots in the coastal zone (Schedule 2, 1(1)(j)(i) – Coastal Areas).

If the application were made today, the proposal would be identified by *State Environmental Planning Policy (Major Development) 2005*, as a major project, as it involves the subdivision of land outside the metropolitan zone into more than 100 lots.

3.2 ZONING AND PERMISSIBILITY

The site is predominantly zoned 2 (a) Residential (136.4 Ha) under the *Port Stephens Local Environmental Plan 2000* (Port Stephens LEP). Other portions of the site are zoned 1(a) Rural Agriculture (16.4 Ha), and 7(a) Environmental Protection (52.2 Ha). Figure 12 shows the zoning arrangement.

The proposed residential development is restricted to areas zoned 2(a) Residential. Subdivision for the purposes of commercial and residential lots is consistent with the zone objectives and is permissible with consent in this zone. A road and associated infrastructure (such as pumping stations) and pedestrian trails are proposed within part of the site zoned 1(a) Rural Agriculture. These uses are permissible with consent in both zones. A small section of roadway and pedestrian trails are proposed within the 7(a) Environment Protection areas of the site. These uses are also permissible with consent in this zone.

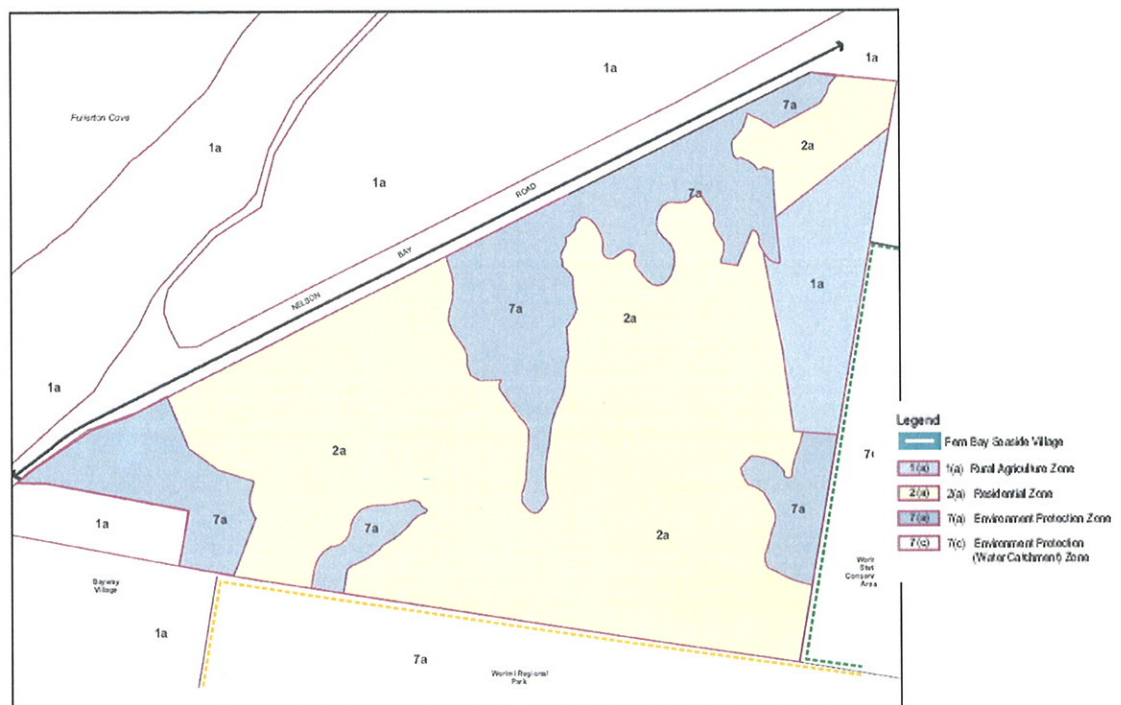


Figure 12: Zoning plan
Source: Environmental Assessment (ERM, February 2009)

3.3 EXHIBITION AND NOTIFICATION

The Environmental Assessment (EA) was placed on public exhibition from 8 May - 9 June 2009 and submissions were invited, in accordance with the requirements of sections 75H (3) & (4) of the Act. The EA was made available

on the Department's website, in accordance with the requirements of clause 8G of the *Environmental Planning and Assessment Regulation 2000* (the Regulation).

3.4 ENVIRONMENTAL PLANNING INSTRUMENTS (EPIs)

Application of EPIs to Part 3A of the Act

Under Sections 75(2)(d) and 75(2)(e) of the EP&A Act, the Director-General's report for a project is required to include a copy of, or reference to, the provisions of any State Environmental Planning Policy (SEPP) that substantially govern the carrying out of the project, and the provisions of any environmental planning instruments (EPI) that would (except for the application of Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the assessment of the project.

The Department's consideration of relevant SEPPs and EPIs is provided in Appendix C.

3.5 OTHER PLANS AND POLICIES

NSW State Plan

The project achieves the key priorities in the *NSW Government State Plan (2010)* of improving housing affordability and protecting native vegetation. The project achieves these by increasing lots available for housing and setting aside vegetated areas for conservation purposes.

Lower Hunter Regional Strategy

The site is identified as an existing urban area in the *Lower Hunter Regional Strategy* (the strategy). Key elements of the strategy include to provide for up to 115 000 new dwellings and to protect environmental assets.

The project will create 408 residential lots (including 38 super lots suitable for further subdivision) in a variety of sizes. The development of these lots for housing will assist in meeting the region's dwelling targets. The variety in the lot sizes will result in a mix of dwelling types, which is an aim of the strategy.

The project protects the site's environmental assets by avoiding development of its most environmentally sensitive parts. An ecological offsets package, which includes rehabilitation works in the adjoining Worimi Conservation Area, will prevent any loss of biodiversity.

The proposal is consistent with the strategy.

Other plans and policies

The project has been assessed against a variety of non-statutory documents including the *Port Stephens Development Control Plan 2007*. This assessment is provided in Appendix D.

3.6 OBJECTS OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Decisions made under the EP&A Act must have regard to the objects of the Act, as set out in Section 5 of the Act, which are as follows:

- (a) to encourage:
 - (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,
 - (ii) the promotion and co-ordination of the orderly and economic use and development of land,
 - (iii) the protection, provision and co-ordination of communication and utility services,
 - (iv) the provision of land for public purposes,
 - (v) the provision and co-ordination of community services and facilities, and

- (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
 - (vii) ecologically sustainable development, and
 - (viii) the provision and maintenance of affordable housing, and
- (b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and
- (c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

Of particular relevance to the application are sections 5(a) (i), (ii), (v), (vi), (vii), (viii). The Department has considered the objects of the Act as follows:

1. The proposed development is an orderly and efficient use of land. It responds appropriately to the sites constraints and provides for a variety of lot sizes and densities;
2. The proposed development will not have an adverse impact on the environment due to the required ecological compensatory works to be undertaken offsite in the Worimi Regional Park and the ongoing rehabilitation and maintenance work to be undertaken on site in the Community Conservation Lands; and,
3. The approval includes conditions to protect the surrounding environment and encourage ESD including the ongoing maintenance and rehabilitation of ecological conservation areas and the protection of groundwater through the use of regular water quality monitoring.

The Act adopts the definition of Ecologically Sustainable Development in the *Protection of the Environment Administration Act 1991*, including the precautionary principle, the principle of inter-generational equity, the principle of conservation of biological diversity and ecological integrity, and the principle of improved valuation, pricing and incentive mechanisms. The Department assessment of the project against the ESD principles is as follows:

- **Integration and Intergenerational Principle** – The final development will support a variety of lot sizes and housing densities including a mixture of integrated housing lots, residential villas and courtyards, duplexes and conventional residential lots;
- **Precautionary Principle** – The development addresses the effects of climate change induced sea level rise through the use of appropriate avoidance and mitigation measures such as the use of minimum flood levels and the setting back of development from the 100 year coastal hazard line (including sea level rise to 2100);
- **Inter-Generational Principle and Biodiversity Principle** - A variety of housing types is proposed for the development which will assist in accommodating future population growth in Fern Bay. The development will ensure the enhancement and maintenance of proposed ecological conservation areas on the site through the implementation of a Community Lands Environmental Management Plan, which sets out a monitoring and maintenance program for the community conservation lands to be implemented by the Community Association. In addition, a Vegetation Management Plan for the adjoining Worimi Regional Park has been prepared and will be implemented through the enactment of a Voluntary Planning Agreement between the proponent (Winten and Aspen) and the DECCW (owners of the Worimi Regional Park); and,
- **Valuation Principle** – The development has been designed to ensure the proposed subdivision layout has been efficiently designed in terms of orientation and size of lots and roads.

4 CONSULTATION AND ISSUES RAISED

4.1 PUBLIC EXHIBITION DETAILS

The EA was exhibited for 30 days from 8 May - 9 June 2009. Notification was given in the following local papers:

- Port Stephens Examiner; and,
- Newcastle Herald.

Exhibition locations were:

- Department of Planning (Head Office, Bridge Street Sydney);
- Department of Planning (Hunter Regional Office, Honeysuckle Drive, Newcastle);

- Nature Conservation Council, Kent Street, Sydney;
- Port Stephens Council, Adelaide Street, Raymond Terrace;
- Newcastle City Council, King Street, Newcastle;
- Tomaree Library and Community Centre, Salamander Way, Salamander Bay; and,
- Stockton Library, King Street, Stockton.

The EA was also provided for download on the Department's website.

Letters were sent to adjoining landowners and relevant government agencies, including Council, notifying of the exhibition and inviting a submission. A total of 19 submissions were received comprising 6 submissions from the public and 13 submissions from public authorities. The authorities who made submissions were:

1. Port Stephens Council;
2. Newcastle City Council;
3. Department of Water and Energy (DWE) now NSW Office of Water (NoW);
4. Department of Environment and Climate Change (DECC) now known as Department of Environment, Climate Change and Water (DECCW);
5. Rural Fire Service (RFS);
6. Roads and Traffic Authority (RTA);
7. Department of Primary Industries (DPI);
8. Ministry of Transport (MoT);
9. Hunter New England Health (HNE);
10. Department of Education and Training (DET);
11. Hunter Water Corporation;
12. Housing NSW; and,
13. Department of Defence (DoD).

A series of Preferred Project Reports were submitted, with the PPR accepted as adequate on 9 April 2010. The amendments made did not result in any substantial change in impact and accordingly no formal public exhibition was necessary. The PPR was placed on the Department's website.

4.2 SUBMISSIONS FROM THE PUBLIC

The 6 submissions from the public were all letters of objection. The submissions raised the following issues:

- Impacts on flora and fauna, including clearing of native vegetation;
- Increases in traffic;
- Impacts on Stockton Beach (increased vehicle movements);
- Impacts on stormwater, groundwater and flooding;
- Coastal erosion;
- Climate change; and,
- Bushfire risk.

A summary of the public submissions is attached at **Appendix E**. The proponent's response to these submissions is attached at **Appendix F**.

4.3 SUBMISSIONS FROM PUBLIC AUTHORITIES

Submissions were received from 13 agencies, including Council. Submissions raising key issues are summarised below.

Port Stephens Council

Port Stephens Council ('Council') made a detailed submission, with their key issues:

- Strategic Planning - concern with lots less than 500sqm, which if approved, would be unworkable and create a situation whereby Council as the relevant consent authority under Part 4 of the Act cannot approve dwellings on the proposed lots. Clause 17(2) of the Port Stephens LEP specifies that subdivision of land for residential purposes less than 500m² may only be granted if consent has been granted for a dwelling house on that allotment or is granted at the same time as the proposed subdivision. This issue is discussed in **Section 5.2**.
- Traffic and Staging of Works – concern with the need for Local Area Traffic management, concern with the number of roundabouts, issues relating to future car parking around commercial and public areas, and concern with street block lengths and laneways. Council also requested that Seaside Boulevard be provided with a 1.2m footpath on one side of the road and a 2.4m cycleway on the other. Council also sought clarification with the staging of the traffic infrastructure (such as the opening of the northern connection of Seaside Boulevard back onto Nelson Bay). This issue is discussed in **Section 5.7**.
- Water Cycle Management (Stormwater, Groundwater and Flooding) - significant concerns raised with the proposed stormwater management system including issues relating to: the lack of information on groundwater levels; concerns with the methodology used in undertaking the stormwater assessment (including calculations relating to catchment flows; management of overland flows and comparison of predevelopment and post development scenarios); concerns with the proposed infiltration systems in low lying areas; and the impact of excessive cutting and filling on the existing hydrology and hydrogeology. Council also requested that a groundwater study should be carried around the whole catchment to assess the impact of infiltration system, variation of the water table, variation of the hydraulic gradient, groundwater flow and changes of flow pattern as a result of construction roads, houses and other infrastructures. In addition, Council also requested the design and sizing of drainage infrastructure have consideration for future sea level rise and future increase in the rainfall intensities (10-30%). These issues are discussed in **Sections 5.3 and 5.4**.
- Flora and Fauna - concern was raised with the proposed compensatory package formulated as part of the master plan and whether this offset for the loss of all vegetation communities. Council also raised concern with the Koala assessment and proposed management strategies relating to mosquitoes and noxious weeds. These issues are addressed in **Section 5.6**.
- Request for Rural Fire Service Station - Council requested land and funding for a Rural Fire Service Station to be provided on the site. This issue is discussed in **Section 5.10**.

Newcastle City Council

Newcastle City Council ('NCC') advised that a Cross Boundary Section 94 plan was being prepared with Port Stephens Council (note: this plan has been adopted by both Council and came into effect 1 October 2009). The NCC noted that there were only limited existing and proposed public amenities to service Fern Bay and as such, NCC requested an apportionment of contributions from Port Stephens Council towards the embellishment and upgrade of existing facilities and the provision of new facilities in Stockton. Issues relating to Section 94 contributions are discussed in **Section 5.13**.

NSW Office of Water (formerly Department of Water and Energy)

The NSW Office of Water ('NOW') provided in principle support provided there are no structures (excavation) having a permanent connection with the groundwater aquifer. NOW also required further consideration of the following issues:

- Excavation for development must maintain a minimum one (1) metre buffer above the highest predicted groundwater;
- Quality of water entering the groundwater aquifer shall be equal to or better than the quality of receiving water; and,
- Preparation and implementation of satisfactory plans for stormwater management, groundwater monitoring and contingency strategies.

The issues relating to water quality and groundwater management are further discussed in **Section 5.3**.

Department of Environment, Climate Change and Water

The Department of Environment, Climate Change and Water ('DECCW') (formerly Department of Environment, and Climate Change) has commented extensively on this proposal and was involved in the review of the adequacy of the Environment Assessment. Despite extensive consultation undertaken prior to the exhibition of the EA, DECCW was unable to support the proposal exhibited in the EA and raised concern with a number of issues:

- Draft Statement of Commitments (SoC) - DECCW require the draft SoC to be amended to include: commitments made by the proponent in the Community Lands Environmental Management Plan (CLEMP) relating to the environmental management of the proposed conservation areas of the site (known as 'Community Conservation Lands'); a commitment which states that all vegetation within 100m of the Owl roost tree will be retained; and a commitment for the retention of mature trees. These issues are discussed in **Section 5.6**.
- Community Conservation Lands - DECCW has requested a proposed zoning plan to reflect the actual land uses proposed for the site as not all the proposed 'Community Conservation Lands' are zoned for conservation. DECCW reiterated that they have previously advised (5 Dec 08) they would accept conservation in perpetuity via appropriate zonings and the CLEMP forming part of the Articles of the Community Association. Agreement on the use of the CLEMP was on the basis that the rezoning will be altered to reflect the new land uses. This issue is discussed further in **Section 5.6.10**.
- Infrastructure impacting on Conservation Lands - DECCW opposes the placement of proposed sewer pump stations and stormwater detention/treatment structures in the Community Conservation lands and seek clarification on whether vegetation removal for infrastructure has previously been included in calculations of vegetation retention and loss. This issue is discussed further in **Sections 5.3 and 5.6**.
- Asset Protection zones - DECCW oppose the location of APZs being in Community Conservation Lands. However, it appears some of the proposed APZs still intrude into the area. This issue is discussed further in **Section 5.10**.
- Community Title Scheme - DECCW raised concern with the responsibilities of the community association and developer access rights. Specifically, DECCW was concerned that the Community Title Scheme lacked detail of how the conservation lands will be managed in perpetuity and the financial mechanisms for the ongoing management. This issue is discussed further in **Section 5.12**.
- Aboriginal Heritage Issues - DECCW considered the Aboriginal Cultural Heritage Assessment to be sufficient, but sought clarification on management measures required for the Cultural Heritage Management Plan. This issue is discussed further in **Section 5.8**.

Roads and Traffic Authority

The Roads and Traffic (RTA) raised no objection to the proposal, subject to matters which were raised during the assessment of the master plan being addressed. These included requirements for:

- New vehicular access to be constructed to/from Nelson Bay Road;
- Provision of a shared foot/cycleway on Nelson Bay Road; and,
- Design of the development to mitigate against road traffic noise

These issues are discussed in further detail in **Section 5.7**.

Ministry of Transport

The Ministry of Transport raised concerns with the following issues:

- Proposed density of the development which is significantly less than the recommended 12 dwellings per hectare identified in the Lower Hunter Regional Strategy;
- Location of high density residential integrated housing lots which should be located as close as possible to bus stops;
- Request that pathways be designed to allow shared access with cyclists; and,

- Request that the oval on the western edge of the development be relocated to a more centralised location (Note – this is an existing oval which was approved as part of Stage 1 and 2 of the development).

These issues are discussed in further detail in **Section 5.2** and **Section 5.7**.

Hunter New England NSW Health

HNE Health raised concerns with environmental health and health promotion issues. HNE Health raised the need for a mosquito risk assessment and management plan to be prepared. This issue is further discussed in **Section 5.6.11**. Further, HNE raised a number of issues relating to health promotion, including the need for the proposed bus route and open space facilities to be accessible to all residents. These issues are discussed in **Section 5.7**.

Housing NSW

Housing NSW requested that the proponent provide more detail in relation to the social and economic impact of the development and its ability to aid in accommodating the increasing demand for affordable housing for low to moderate income earners and the implications of the development on the surrounding services and facilities. Specifically, Housing NSW recommended the development be amended to:

- Provide adequate support to the likely mix of household types in the next 10 years (20% single person households, 30% households with children and 50% couple households);
- Consider requiring a minimum proportion of one and two bedroom stock and adaptable housing to ensure a housing diversity which meets the needs of the community (minimum 10% one bedroom dwellings and a minimum of 30% two bedroom dwellings);
- Consider negotiating a voluntary planning agreement between the proponent and the Department of Planning in order to achieve affordable housing on this site; and,
- Require a minimum of 15% of all new housing on the site to be developed as adaptable housing to enable resident to age in place and to cater for the need of people with disabilities.

This issue is discussed in **Section 5.2**.

Department of Defence

Department of Defence did not raise objections with the proposal provided future residents and potential landowners are made aware that the site may be exposed to aircraft noise from time to time. Council was advised of this issue so that they may determine whether it is appropriate to include such information on their planning certificates.

5 ASSESSMENT OF ENVIRONMENTAL IMPACTS

The Department considers the key environmental issues for the project to be:

- General Consistency with adopted SEPP 71 master plan;
- Subdivision Design & Layout;
- Management of Stormwater (Surface water and Groundwater);
- Flooding;
- Coastal Hazards and Climate Change;
- Flora and Fauna;
- Traffic and Access;
- Aboriginal Cultural Heritage;
- Acid Sulphate Soils;
- Bushfire;
- Provision of Community and Commercial facilities;
- Management of Community Property (Community Management Statement); and,

- Section 94 Contributions.

5.1 CONSISTENCY AND COMPARISON WITH SEPP 71 MASTER PLAN

A master plan for the development of the site, prepared in accordance with SEPP 71 under Part of the Act, was adopted by the Minister for Planning on 8 August 2006. The master plan was for a residential subdivision (refer to Figure 9) comprising up to 947 residential allotments, open space lots, a community nursery, community centre, conservation area, recreational and commercial facilities, new public roads, fire trails and pedestrian trails and bushfire buffers.

The Director-General's Environmental Assessment Requirements (DGRs) required this project to be generally consistent with the master plan. An assessment of the project against the general terms and key variation requirements of the master plan is undertaken in Tables 1 and 2 below.

Table 1: Comparison of key parameters of the adopted master plan and proposed project

	SEPP 71 master plan	Current project
Site area (ha)	205	205
Lots	947 (or 798 to be constructed) Note: 149 lots – standard residential lots at 550m ² or greater already constructed.	411 (with potential for 806 lots) Includes 38 super lots (anticipated to accommodate 396 dwelling lots less than 500m ² in future applications).
Lot sizes (m ²)	Residential lots ranging from 340m ² to 750m ² , plus integrated lots which could include apartments.	Residential lots ranging from 500m ² to 750m ² , plus integrated lots which could include apartments.
Open Space (ha)	Various areas of recreational open space, children's playgrounds.	Various areas of recreational open space, children's playgrounds.
Community Facilities	Community centre and community nursery.	Community centre to be located in Banksia Park.
Area of retail and commercial (m ²)	A child care centre and convenience store.	Two commercial sites (1156m ² and 2285m ²).

Table 2: Summary of required variations to the adopted master plan

Required variations to the master plan	Description of Variation	Compliance with Variations
A1. Ecological Offset Measures	<p>The following ecological offset measures are required to be carried out on adjoining lands for the proposal:</p> <ol style="list-style-type: none"> 1. Rubbish removal (car bodies, asbestos dumps etc) and implementation of a weed control program on the adjoining land to the south of the subject site described as lands held in the name of the Minister for the Environment under Part 11 of the <i>National Parks and Wildlife Act 1974</i> ("the Part 11 lands")¹; 2. Rehabilitation of approximately 31.7 hectares of wet heath on the Part 11 lands; 3. Rehabilitation of the numerous tracks on the Part 11 lands in order to better protect current and future hollow bearing trees; and 4. Provision of funding to DEC, to maintain the rehabilitation works for at least 20 years. <p>In this regard, a Vegetation Management Plan must be provided to the satisfaction of the Department of Environment and Conservation² with</p>	These requirements are addressed in the Voluntary Planning Agreement. Refer to Sections 5.6.

¹ Now known as the 'Worimi Regional Park'

² Now known as the 'Department of Environment, Climate Change and Water' (DECCW)

	any future development/project application which incorporates, among other things, weed control, rehabilitation and reporting and monitoring measures for the Wet Heath community including the rehabilitation of the tracks on this adjoining site.	
A2. Public Access	The public access to the beach from the subject site must be in accordance with the following requirements and details shall be provided in any development/project application for the proposal: 1. The fencing of the northern boundary of the Part 11 lands and the construction of a four-wheel drive track adjacent to this boundary, with associated infrastructure (hard stand, car parks, pedestrian pathway, lighting, signage etc) and closure of numerous tracks leading to the adjoining Part 11 lands to the south of the subject site.	These requirements are addressed in the Voluntary Planning Agreement. Refer to Section 5.7.
A3. Pedestrian/Cyclist Facilities	A shared foot/cycle way shall be provided on Nelson Bay Road from the roundabout at Fullerton Cove Road to the bus shelter at Bayway Village to the south. This requirement must be illustrated in any future development/project application for the proposal.	The shared foot/cycle way forms part of the application. The proponent has committed to constructing this at their cost. Refer to section 5.7.3.
A4. Owl Roost Tree Buffer	A 100m buffer zone around the Owl roost tree in the north-western portion of the site must be provided. This buffer zone is not to contain walking or cycle tracks or similar recreational infrastructure and must be illustrated in any future development/project application for the proposal.	The proponent has committed to ensuring no works are undertaken in the buffer zone. Refer to section 5.6.4

The proposed variations from the master plan are:

- The final number of lots will vary slightly as will the breakdown of the numbers of lots of varying sizes;
- A child care site will not be created however this use is permissible within the site in general and is likely to be pursued when it is viable from a market perspective;
- The community nursery will not be pursued as part of this project, with the area proposed to be retained as open space; and,
- The master plan drawings also indicated a swimming pool which will no longer be incorporated into the recreational facilities due to both limited demand and ongoing maintenance costs.

These variations do not result in the project being substantially different to the master plan. The project is therefore generally consistent with the master plan.

5.2 SUBDIVISION DESIGN & LAYOUT

Lot Size

The initial subdivision layout (as exhibited) included a number of lots less than 500m² in area. Clause 17 of the Port Stephens LEP specifies consent for the subdivision of land for residential lots less than 500m² may only be granted if consent has been granted for a dwelling house on that lot or is granted at the same time as the proposed subdivision. Council believed that it would be unable to approve dwellings on these lots because of the operation of this clause. To overcome this issue, the proponent has amended the subdivision layout to consolidate all lots less than 500m² into 38 superlots. Future applications for development on these lots will need to include both the allotments and buildings.

Housing NSW expressed a view that the development should accommodate some of the increasing demand for affordable housing for low to moderate income earners. The application is for subdivision only and does not include the approval of any dwellings. Notwithstanding, the subdivision includes a mix of lot sizes (including a number of superlots) which will facilitate the provision of a range of housing types, which will be available in a range of costs.

Arrangement of Lots

A number of agencies (Council, MoT and HNE Health) raised concern about the street block lengths and the accessibility of residential dwellings to future bus stops and open space facilities. Council also raised concern with a number of laneways which would be inaccessible to garbage trucks.

The amended subdivision layout addressed these issues by reducing block lengths to provide improved pedestrian access/connectivity to open space and ensure bus stops are within 400m walking distance from any lot. The proposed laneways were removed. Refer to Figure 11.

Design Guidelines

The proponent has developed their own set of Design Guidelines which were included as part of the EA. The Design Guidelines are intended to apply to all residential lots, but currently only apply to existing Stages 1 and 2. The intention of the guidelines is to provide assistance on building form, floor areas, solar access, energy efficiency, bushfire protection, external finishes, roof pitches and driveways. The Design Guidelines are intended to be incorporated into the Community Management Statement. Port Stephens Council requested the proponent amend the Design Guidelines to incorporate the following:

- Measures to minimise the threat posed to fauna (such as Koalas) by swimming pools including appropriate fencing;
- Light colours for roofing should be encouraged; and,
- Siting of solar panels and water tanks in locations that are visible from the street should not be prevented if this is the most efficient location.

The Design Guidelines should be updated for Stages 4 to 20 of the development to the satisfaction of Council and a condition of approval to this effect is recommended. The proponent has also provided a commitment in the Statement of Commitments (no.3) to update the design guidelines for Stages 4 to 20 and to consider bushfire and ecological issues.

5.3 MANAGEMENT OF STORMWATER (SURFACE WATER AND GROUNDWATER)

A Trunk Drainage Conceptual Plan and Water Sensitive Urban Design Principles report were prepared by DMS Survey Pty Ltd as part of the EA documentation. The drainage system proposed a number of large detention basins (2500 to 12,300 cubic metres) to contain all stormwater flows from the site and relied primarily on the infiltration of stormwater through the sandy soils for treatment, discharging into the groundwater.

Numerous agencies (DoP, DECCW, Council and NoW) and private submitters raised concern with the drainage system. The Department engaged a stormwater/flooding specialist to review the documentation, who also raised concern. The concerns raised by these parties include:

- It had not been demonstrated that the drainage system is suitable to ensure no adverse water quantity and water quality impacts (both to the surface water and the groundwater);
- The veracity of the assessment of the impacts on the existing groundwater table, which is intrinsically linked with the stormwater system;
- It is not clearly articulated what is intended with respect to the stormwater system (i.e. infiltration locations and the amount of infiltration expected). That is, whether the stormwater is to infiltrate the groundwater from each of the detention areas and the quantity/quality of infiltration;
- It is unclear how the new drainage works will relate to the existing drainage works which have been completed as part of the earlier stages of the development;
- Excessive cutting and filling may alter the entire hydrological and hydrogeological regime (e.g. excessive filling may raise the groundwater level within the entire catchment and consequently impact the infiltration system);
- The average groundwater level in these locations is higher than the design invert level of the infiltration basin. Therefore, in a major/prolonged storm event, water may exfiltrate into the basin rather than being

infiltrated from the basin and into soil below;

- The proposed infiltration rates achieved in the soil media which will be utilised in the stormwater system, which do not appear to be substantiated; and,
- More detail is required on the management of overland flows along the roads and how to contain the flows within the proposed roads without overflowing onto the private properties.

It is important to note that the stormwater system is intrinsically linked to the groundwater system, with the groundwater being the receiving water system.

The proponent provided an *Amended Water Cycle Management Report* ('WCM Report') (prepared by Martens Consulting Engineers, dated December 2009) and *Supplementary Water Cycle Management Information Report* (prepared by Martens Consulting Engineers, dated April 2010). The additional work undertaken included:

- A review of existing surface and groundwater conditions;
- Development of a groundwater model for existing and developed conditions to determine a design 'high water' groundwater levels; and,
- Provision of an amended surface water management scheme was developed including a review all stormwater quality and quantity.

Following the preparation of these additional reports, an amended stormwater concept plan was provided. The plan proposes to use 6 basins, where stormwater will be temporarily stored prior to groundwater infiltration. Four (4) of the basins are existing depressions which will only require minor vegetation clearing to construct overland swales to reach the basins. One basin (basin no.3) has already been partially constructed as part of existing development consent and the other basin (basin No.6) is a new basin.

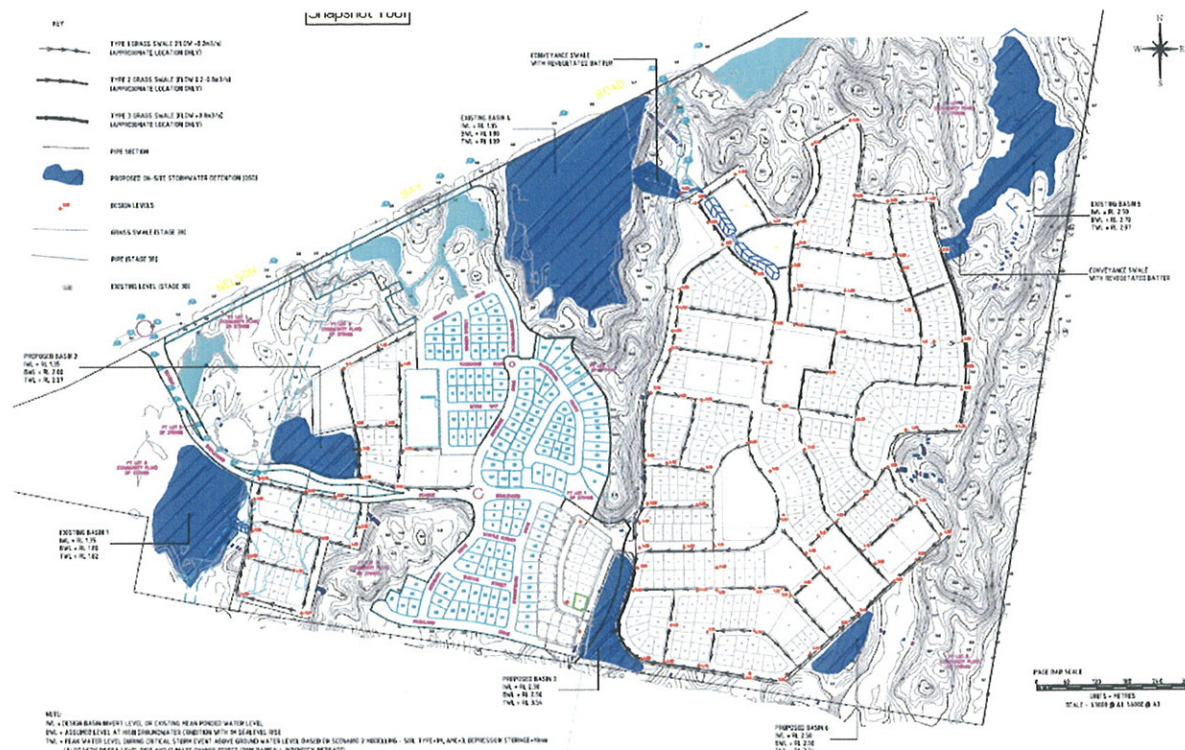


Figure 13: Amended Stormwater Management Plan (including location of Dispersion/Detention Basins
Source: Addendum to Preferred Project Report (ERM, April 2010)

The amended stormwater system has been designed such that no on-site detention of stormwater flows is required (as opposed to earlier designs) and that the infiltration basins are not being relied upon for stormwater quality treatment, but would act as receiving waters. Water quality load reductions are met prior to the basins receiving the water, using upstream Water Sensitive Urban Design features such as swales and gross pollutant traps. To ensure

the amended stormwater design complies with this treatment philosophy, it is recommended a condition of the approval require no dispersion areas or detention basins to be permitted within the site and that only infiltration basins, are to be incorporated in the development.

The drainage system will be elevated above existing and future groundwater levels (including any increases due to climate change). This will ensure a surface drainage system that is not subject to potential failure as result of rising groundwater levels.

The proponent reviewed the size of the proposed infrastructure, taking into account impacts of climate change including future sea level rise and increases in rainfall intensity (by the order of 10-30%). Additional groundwater and stormwater modelling was undertaken to determine the impacts of climate change. It identified the highest top water level (TWL) reached in a 1% Annual Exceedance Probability (AEP) storm event is 3.54m AHD (obtained in Basin no. 3, which has been partially constructed), which is higher than the proposed minimum floor levels for dwellings of 2.8m AHD (further discussed in section 5.4). A condition of approval is recommended which requires minimum habitable floor levels on residential lots in the vicinity of proposed Basin no.3 to be set above 3.54m AHD such that property will not be inundated from local flooding

Proposed basin No. 6 is located in the proposed community conservation lands. This location is not supported, as it will reduce the width of the wildlife corridor along the sites eastern edge. The conditions of approval include a condition which requires the detention basin to be relocated within the development footprint. As a consequence of this condition, an updated Water Cycle Management Report (i.e. *Amended Water Cycle Management*, dated (prepared by Martens Consulting Engineers, dated December 2009) is required. This matter is also dealt with by way of condition.

Maintenance of Stormwater Management System (during construction and operation)

The stormwater treatment facilities, which occur within the Community Association property, will be maintained and managed by Council as these facilities cater for stormwater from the public road system. A condition of approval is recommended which requires an easement to be created over the lots in favour of Council for the purposes of maintaining infiltration areas.

A Preliminary Site Management Plan was prepared which covered issues such as: stormwater system operations during construction, ongoing maintenance and monitoring of the stormwater system and groundwater monitoring requirements. The proponent has also provided a Statement of Commitment (no. 27), which commits to the preparation of a detailed *Stormwater Assessment and Stormwater Management Plan*, which will outline the future maintenance and management of stormwater systems.

A condition of approval is also recommended which requires the preparation of a detailed *Stormwater and Groundwater Management Plan* prior to the issue of the construction certificate for each stage of the development. This will include the required monitoring of stormwater and groundwater systems on an annual basis. The Plan will assist Council and the Community Association in ensuring the stormwater system functions adequately.

5.4 FLOODING

The proposed development could be impacted by flooding from the Hunter River, the ocean, or via the local drainage system. The flooding assessment provided in the EA was deemed unsatisfactory, as it relied on outdated flood studies. An additional flood assessment report was prepared, which recommended minimum floor levels of 2.8m AHD, which is 500mm above the 100 ARI flood level. Based on these minimum levels, it is considered residential areas will not be affected by the 100 year ARI event (including an allowance for the effects of a 0.9m sea level rise). A condition of approval is recommended to ensure minimum finished floor levels are set at a minimum of 2.8m AHD.

Numerous lots would be affected by the PMF. The flood assessment report provides recommendations for emergency management measures to effectively deal with the PMF event. These include:

- Final earthwork levels should be set such that risk of Probable Maximum Flood (PMF at 4.54m AHD)

- incursion into the development site is minimised;
- A Flood Evacuation Plan (FEP) should be developed for the site to guide the management of a flood induced evacuation. This plan should be made available to all existing and new residents;
- Establishment of a temporary flood recovery centre (FRC) to accommodate evacuated people in a PMF event. This should be detailed in the FEP;
- A Flood Awareness Program to be developed which informs residents about flooding, including how it affects the site, where the floodwaters flow through the site and what to do before, during and after a flood event. The program should be incorporated into the Flood Evacuation Plan; and,
- Flood proofing all buildings/structures which are likely to be affected by the 100 year ARI flood event.

A condition of approval is recommended which requires the flood risk management measures as outlined above to be undertaken and a FEP to be prepared.

5.5 COASTAL HAZARDS AND CLIMATE CHANGE

There are two key types of potential coastal hazards for the development:

- Shoreline coastal hazards – related to the landward shift of the fore dune causing a long term recession of sand from the beach system as a result of wave and tidal action, storm bite and climate change; and,
- Hind dune coastal hazards - landward movement of the hind dune associated with transgression and wind action.

The width of the shoreline coastal hazard zone, for the 100 year planning period, was determined to be 230m. The shoreline coastal hazard zone is measured landward from the seaward face of the frontal dune. The development is located more than 400m landward of the predicted 100 year coastal hazard line, and as such, is adequately protected from any movement in the shoreline in the 100 year planning period.

The transgression rate of the hind dune was determined as being 2m/year, with the width of the hind dune hazard zone for the 100 year planning period, calculated at 300m. The south-eastern edge of the development is located 340m (approx) from the current landward edge of the hind dune line, making it outside the revised 100 year planning period.

Although the development is compatible with current design standards for long term coastline recession (i.e. a 100 year planning period), it is important to note that after 100 years it could be expected that the development will have issues with inundation by dune sands, if the dune system is not stabilised. Further, the location of the development essentially only leaves a buffer of approximately 13 years beyond the 100 year planning period. If winds strengthen over this time associated with climate change (say by the order of 10% in summer periods and 2% average annually³), then it is possible that the hind dune recession rate may accelerate.

A condition of approval is recommended requiring the preparation of a dune restoration / stabilisation management plan. The stabilisation works will provide long term protection of the development, as well as providing ecological benefits in maintaining habitat that would otherwise potentially be inundated over time by wind blown sand.

³ www.climatechangeinaustralia.gov.au, accessed 29 June 2009

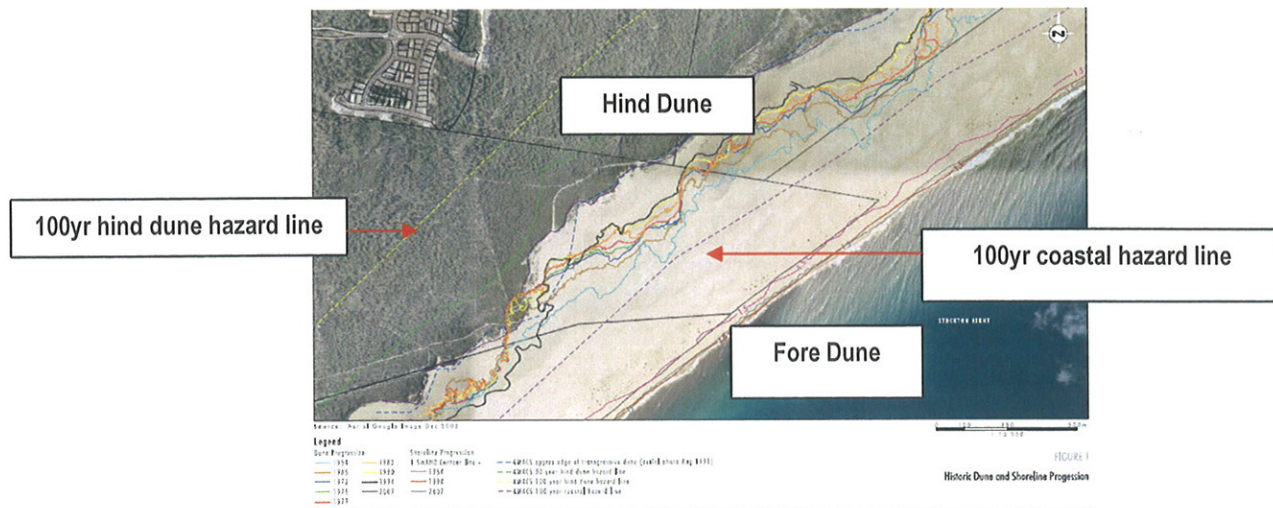
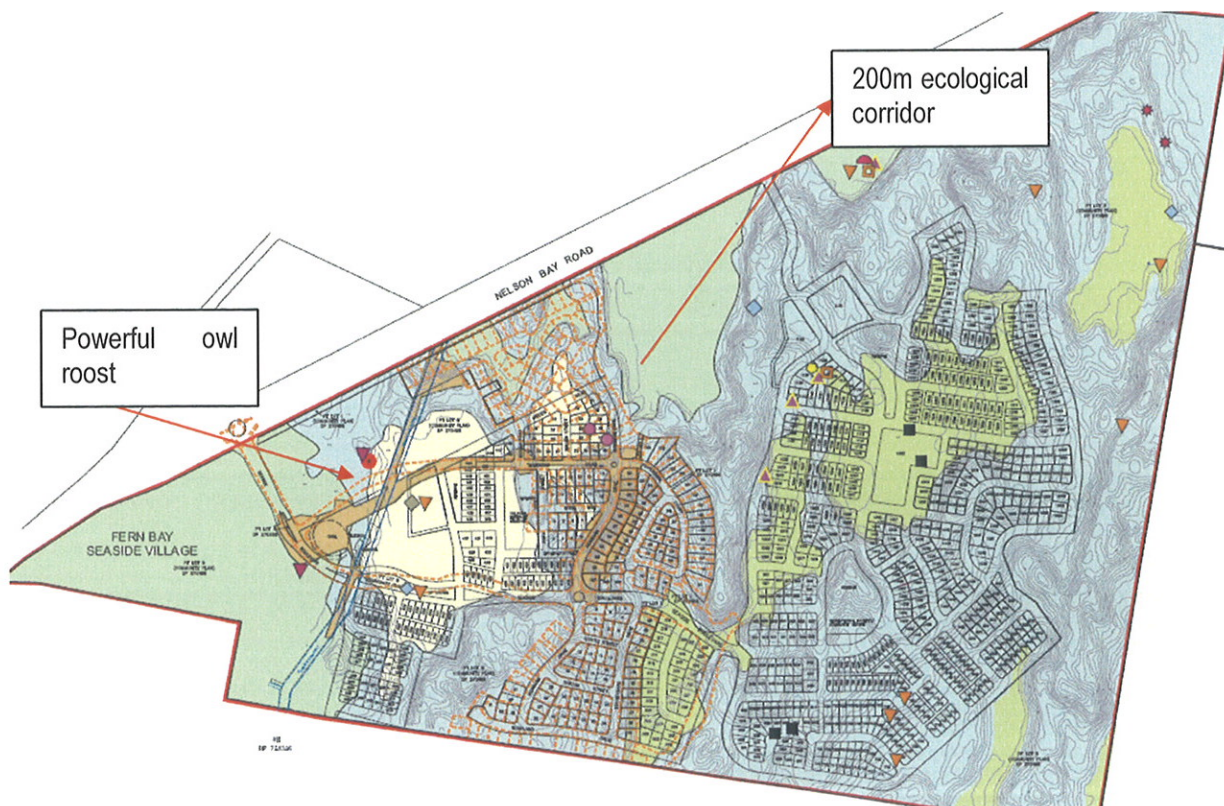


Figure 14: 100 year Coastal Hazard Line and 100 Year Hind Dune Hazard Line
Source: Preferred Project Report (Umwelt 2010)

5.6 FLORA AND FAUNA

The site contains three main vegetation communities (refer to Figure 15), these being:

- Coastal Sand Apple-Blackbutt Forest;
- Swamp Mahogany-Paperbark Forest: this is identified as a regionally significant vegetation community with parts of the community being assessed as representative of the Swamp Sclerophyll Forest of Coastal Floodplains of the NEW Coast, Sydney Basin and South East Corner Bioregions endangered ecological community ('Swamp Sclerophyll EEC'); and
- Wet Heath (Tomago sand swamp woodland/heath): this community is considered to have high conservation significance given restricted distribution and previous clearing.



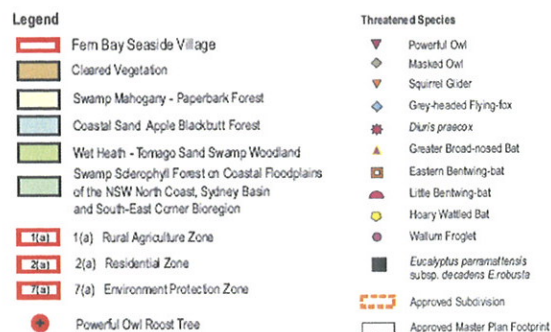


Figure 15: Vegetation Communities and Threatened Species on the site
Source: Environmental Assessment (ERM, February 2009)

Fauna surveys recorded 13 threatened species, including Wallum Froglets, Grey-headed flying fox and the Powerful Owl on the site.

Two of the threatened species found on site (the Rough Doubletail and Grey-headed Flying-fox) are listed as 'vulnerable' under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The proponent has chosen not to refer the project to the Commonwealth as they do not believe the proposal will have a significant impact on either species.

Ecological Impacts

The proposed development will involve the removal of approximately 69.9 hectares of vegetation, equating to 34% of the total vegetation on the site. The largest percentage vegetation loss is experienced by the 'wet heath' community. The development is also estimated to remove approximately 495 potential hollow bearing trees, but retaining approximately 777 potential hollow bearing trees.

Table 3 outlines the proposed clearing for the current development (including areas to be disturbed for infiltration/detention basins).

Table 3 – Existing vegetation and proposed clearing for the Fern Bay development

Vegetation Community	Total Area of Native Vegetation in Land Holding (Ha)	Vegetation removed by approved subdivision (Stages 1 to 3) (Ha)	Vegetation to be removed by Project Plan (Stages 4-20) (Ha)	Areas to be conserved (Ha)
Coastal Sand Apple – Blackbutt Forest	136.6	17.2	48.4	71.0
Swamp Mahogany – Paperbark Forest	12.1	3.1	6.9	2.1
Swamp Sclerophyll Forest	27.1	1.7	0	25.4
Wet Heath	26	4.2	14.6	7.2
Total	201	26.2	69.9	105.7

Source: Preferred Project Report (ERM, December 2009)

It is proposed under the amended stormwater concept plan to locate basin no.6 within the Community Conservation Lands, which will require over 7285m² of clearing of Coastal Sand Apple Blackbutt Forest. The Department and DECCW do not support the location of the basin, as it will fragment the regionally important wildlife corridor along the eastern side of the site and weaken the ecological compensation package. It is recommended a condition of the approval require the proponent to amend the stormwater design layout to relocate proposed basin number 6 from the community conservation areas and into the development footprint, to the satisfaction of the DoP.

The project adjoins the Worimi Regional Park on the southern boundary and has the potential to cause edge effects. The northern edge of the park currently experiences and will continue to experience disturbance from 4WD vehicles. The works proposed in the VPA on the 4WD drive track will result in an improved outcome and acceptable level of impact on this edge. A number of public submissions expressed concern about the impact on the Worimi Regional Park from increased visitation and residents. The impacts from visitors will be controlled through the park management.

There is a powerful Owl roost tree located in the western portion of the site (refer to Figure 15). The proponent has provided a Statement of Commitment (no. 19), as requested by DECCW, to retain all vegetation within 100m of the identified Owl roost tree. To supplement this commitment, a condition of approval is recommended which requires a restriction to be placed on title which identifies the 100 metre buffer around the powerful owl roost tree and to ensure no development occurs in this location including walking or cycling tracks.

Mitigation Measures

A number of measures have been incorporated into the design to avoid or mitigate ecological impacts, these include:

- Retention of a 200 metre ecological corridor along the northern boundary of the site. This corridor avoids the clearing of large areas of the Swamp Sclerophyll EEC and will allow a movement corridor for fauna through the swamp forest. Refer to Figure 15;
- Protection of large areas of preferred Koala habitat and habitat buffers;
- Retaining an ecological corridor along the eastern boundary of the site to provide a movement corridor for fauna;
- Avoiding disturbance within 100 metres of the identified Powerful Owl Roost Tree; and,
- Management and protection of flora and fauna within ecologically significant lands (termed Community Conservation Lands).

These mitigation measures are satisfactory and acceptable to the Department.

Community Conservation Lands & Community Lands Environmental Management Plan (CLEMP)

The areas of vegetation to be conserved will be made 'Community Conservation Lands' and will be the responsibility of the Community Association. A Community Lands Environmental Management Plan (CLEMP) has been prepared by the proponent in liaison with DECCW. This outlines the responsibilities of the Community Association in managing and sustaining the ecological values within the conservation areas. The CLEMP sets out management actions required pre and post construction to mitigate impacts on vegetation communities, threatened flora and fauna species and habitat.

A condition has been imposed requiring the CLEMP to be annually reviewed for three years, following release of the subdivision certificate for the Stage 4. The reviews will be undertaken in consultation with Council and the Department of Environment, Climate Change and Water. A revised review program will be established between these parties at the end of this period.

A condition of approval is also recommended which requires the 'Community Conservation Lands' to be subject to a covenant, requiring their management in perpetuity in accordance with the *Community Lands Environmental Management Plan*.

Ecological Compensation Package and master plan

A key outcome of the master plan process was the establishment of an Ecological Compensatory Package ('ECP') negotiated between the Department, the DECCW (formerly Department of Environment and Climate) and the original proponent (Winten). The ECP was required to be implemented as part of any future project/development application. The **purpose** of the ECP was to compensate or 'offset' the unavoidable loss of vegetation and threatened species habitat on the site for which mitigation measures cannot be employed. It comprises the following measures:

1. Rubbish removal (car bodies, asbestos dumps etc) and implementation of a weed control program on the adjoining land to the south of the subject site (the 'Worimi Regional Park');

2. Rehabilitation of approximately 31.7 Ha of wet heath in the Worimi Regional Park;
3. Rehabilitation of the numerous tracks in the Worimi Regional Park in order to better protect current and future hollow bearing trees;
4. Provision of funding to DECCW to maintain the rehabilitation works for at least 20 years; and,
5. Provision of a Vegetation Management Plan to the satisfaction of the DECCW with any future development/project application which incorporates, among other things, weed control, rehabilitation and reporting and monitoring measures for the Wet Heath community including the rehabilitation of the tracks on this adjoining site.

The proponent prepared the Worimi Regional Park Vegetation Management Plan (VMP). The VMP provides a robust work program and framework in which to implement the necessary ecological offsets package. The VMP was submitted as part of the EA and was examined by DECCW who agreed to its exhibition. No further comments on the VMP have been received from DECCW. The VMP will be implemented following the execution of the Voluntary Planning Agreement.

Council raised concern that since 2006 (when the master plan was adopted) there have been significant changes to the manner in which environmental offsets are calculated and that the proposed offsets do not comply with current legislation. Council requested documentation demonstrating that the measures in the VMP will adequately offset the loss of vegetation from the development. In response, the proponent provided an assessment of the proposed offsets in accordance with the *'Principles for the Biodiversity Offsets in NSW'* (DECC 2008) which is outlined in the table below:

Table 4: Assessment against principles for biodiversity offset

Principles for Biodiversity Offset	Assessment
1. Impacts must be avoided first by using prevention and mitigation measures. Offsets are then used to address remaining impacts.	Development sought to avoid impacts on threatened species through the retention and management of native vegetation in ecological corridors, provision of compensatory habitat and management of habitat for affected species in Community Conservation Lands.
2. All regulatory requirements must be met	Regulatory requirements have been met.
3. Offsets must never reward ongoing poor performance.	The current landowner has not demonstrated ongoing poor performance.
4. Offsets must complement other government programs	The proposed compensatory package will preserve vegetation and habitat areas through the dedication of lands as Community Conservation Lands as well as the management of a dedicated Regional Park.
5. Offsets must be underpinned by sound ecological principles	The management of Community Conservation Lands, as detailed in the CLEMP, comprises action to mitigate development impacts on vegetation communities, threatened flora and fauna species and habitat. The VMP for the Regional Park focuses on increasing the habitat value of existing vegetation via reducing impacts such as illegal dumping and weed infestation. Both the CLEMP and VMP are based on sound ecological principles.
6. Offsets should aim to result in a net improvement in biodiversity over time.	The CLEMP and VMP aim to improve the biodiversity of the Community Conservation Lands and Worimi Regional Park over time to achieve a net benefit. They aim to achieve this through management of threats and specific management actions for endangered species and communities, as well as an ongoing monitoring program.
7. Offsets must be enduring – they must offset the impact of the development for at least the period that the impact occurs.	Both the CLEMP and VMP set out a monitoring and maintenance program for a period of up to 20 years.
8. Offsets should be agreed prior to the impact occurring.	The proposed compensatory package has been established prior to the impact occurring.
9. Offsets must be quantifiable – the impacts and	The EA quantifies the areas of impact, the species and communities to

benefits must be reliably estimated.	be impacted, existing condition of habitat and the proposed management actions to reduce impacts.
10. Offsets must be targeted – they must offset impacts on a like for like or better basis.	The proposed offset of Community Conservation lands and the compensatory package for the Worimi Regional Park are targeted at providing 'like for like' vegetation types and habitat.
11. Offsets must be located appropriately – the offset must be in the same region as the impact.	The compensatory works proposed in the Worimi Regional Park adjoin the proposed development at Fern Bay.
12. Offsets must be supplementary – they must be beyond existing requirements and not already be funded under another scheme.	The proposed compensatory works in the Worimi Regional Park are not already funded by another scheme.
13. Offsets and their actions must be enforceable – through development consent conditions, licence conditions, conservation agreement or a contract	The conditions of the approval will require the Community Association to implement the management actions outlined in the CLEMP. The VMP will be implemented via the execution of the Voluntary Planning Agreement between Aspen and DECCW. Refer to Section 5.6.7 below.

The proposed compensatory works generally comply with the offsetting principles. Any adverse impacts from the project will be offset by the works in the VMP, which will create public benefit by improving the Worimi Regional Park and the vegetation and habitat within it.

Voluntary Planning Agreement

To ensure the VMP for Worimi Regional Park and the requirement for public access to the Stockton beach (in accordance with the required variations to the master plan, are implemented, a Voluntary Planning Agreement (VPA) has been formulated. The parties to the VPA include: Director-General, Department of Environment, Climate Change and Water; Aspen Group Limited (the proponent); and Winten Fern Bay No 2. Pty Ltd (the owners of the site). The objectives of the draft VPA are to ensure the following outcomes:

- The implementation of the Vegetation Management Plan (VMP) prepared by ERM for the Worimi Regional Park land for a period of 20 years following project approval; and
- The provision of public purpose works within the Worimi Regional Park.

The nature of the draft VPA is such that when the project approval is granted, the proponent will be obliged to deliver the in-kind public purpose works and pay monetary contributions towards the implementation of the VMP for the Worimi Regional Park.

The VPA operates from the date of the Project Approval and contributions under the agreement must be undertaken in accordance with the timeframes specified in the VPA, with a number of works being required to be completed within 12 months of the date of Project Approval.

A draft VPA was prepared and agreed to between the DECCW and the proponent prior to the exhibition of the EA. The document was exhibited concurrently with the EA with a separate advertisement prepared by DECCW and the documentation placed on DECCW's website. Subsequent to this, the parties to the VPA re-negotiated the terms of the VPA, with a draft copy of the VPA provided to the Department on 3 June 2010. It is the understanding of the Department that the key terms of the VPA have been resolved.

The proponent has committed (Commitment no. 20) to enter into the draft VPA. To ensure the commitment is adhered to a condition of deferred approval is recommended. The consent permits the undertaking of limited works in Stage 4 (being bulk earthworks and clearing), prior to satisfaction of this condition of deferred approval, but requires the VPA to be entered into prior to the main body of the approval becoming operational.

Impact on Koala habitat

The site is identified as predominantly supplementary Koala habitat in the *Port Stephens Council Comprehensive Koala Plan of Management* (June 2002) ('CKPoM'), with an area of preferred Koala habitat corresponding with the

Swamp Mahogany-Paperbark Forest. The proposal will remove 24.7Ha of potential Koala habitat (Swamp Forest and Wet Heath).

The proponent undertook a Koala assessment as part of the master plan in a document entitled *Fern Bay Estate Response to the Port Stephens Comprehensive Koala Plan of Management* (ERM 2005) ("the Koala Assessment"). The study found the areas mapped as swamp forest and wet heath to be potential Koala habitat as defined by SEPP 44 Koala Habitat ('SEPP 44') (i.e. Eucalyptus robusta is greater than 15% of the total species), as well as being defined as preferred Koala habitat as defined by Council's CKPoM. The assessment also found that the two vegetation communities (wet heath and swamp mahogany) do not support core habitat as defined in SEPP 44.

The Koala assessment included searches for Koala faecal pellets within one metre of the base of the Swamp Mahogany trees, but did not provide any evidence of Koala usage in the area. Therefore, although the swamp forest and wet heath support potential Koala habitat, the two vegetation communities are not considered to support 'core' Koala habitat as defined by the SEPP. The proponent supported this conclusion with the lack of recent (post 1992) records of Koalas in the study area.

Council raised concern with the Koala assessment and disagreed with the statements made in the report that indicate there is not a resident Koala population on site. Council's staff has recorded Koalas within this location. Council were also concerned with the lack of details on fencing requirements within the design guidelines.

The proponent has sought further advice from Council to determine exact location of additional sightings. Council has advised that the Council officers have recorded Koalas near Newcastle Golf course (refer to Figure 8). However, these sightings were not recorded within DECCW's Wildlife Atlas.

The project will provide for the protection of large areas of Koala habitat. However, it is recommended that future development incorporate adequate design in accordance with Council's KPoM to ensure development, such as fencing, does not compromise the potential for safe movement of Koalas across the site. To do this, it is recommended a condition of approval require the Design Guidelines (for the Fern Bay development) to be updated to include the following:

- Appropriate fencing to be constructed so that the bottom of the fence is a minimum of 200mm above ground level that would allow Koalas to move underneath; or the fence will facilitate easy climbing by Koalas; or open post and rail or post and wire
- Appropriate measures to be applied in relation to backyard swimming pools to reduce the risk of Koala mortality, including:
 - Trailing a length of stout rope (min diameter 50mm) which is secured to a stable poolside fixture, in the swimming pool at all times; or
 - Designing the pool in such a way that Koalas can readily escape; or
 - Enclosing the pool with a fence that precludes Koalas (this should include locating the fence and away from any trees which Koala could use to cross the fence and the design guidelines should specify how the fencing will achieve the precluding of Koalas.

A key threat to Koalas (and other native fauna) would also come from domesticated animals from the Fern Bay development. As such, a condition of approval is recommended which requires a restriction on title which places restrictions on cats and dogs from the development. Such restrictions include:

- No cats may be kept unless completely within the dwelling or in a cattery within the dwelling curtilage at all times (day and night) for the life of the development;
- Dogs may be kept on the property for the life of the development, subject to the following:
 - A maximum of 2 dogs shall be permitted on the property at any one time;
 - Dogs shall be restrained within the dwelling curtilage between sunset and sunrise each day; and,
 - Dogs shall not be permitted to enter areas of indigenous vegetation on or in the vicinity of the property unless restrained.

Zoning of conservation areas

The proposed 'Community Conservation Lands' are largely zoned 7(a) Environmental Protection, but with some areas zoned 2(a) Residential and 1(a) Agriculture. DECCW has requested that the Department rezone these land (as part of the project approval) to reflect the conservation status. Council has advised that the areas of the site zoned residential, but proposed to be retained as managed bushland for ecological reasons (i.e. the Community Conservation Lands), will be considered as part of Council's comprehensive review of Port Stephens LEP 2000 and rezoned to reflect their environmental qualities.

Rezoning the 'Community Conservation Lands' to an appropriate Environmental Conservation zone through the Council's comprehensive LEP is the most appropriate mechanism and, as such, it is not considered necessary to rezone the site as part of the project approval.

Mosquito Management

The development proposes a stormwater management system which will comprise a number of infiltration basins where stormwater runoff will be temporarily detained before infiltrating into the groundwater. The basins, which may contain large bodies of stagnant water, could pose a risk to future residents due to potential mosquito infestation. Council and HNE Health raised concern about the absence of a mosquito risk assessment and the use of adulticides for mosquito control proposed in the CLEMP.

The proponent in the PPR provided a *Mosquito Risk Assessment* (dated September 2004, prepared by Institute of Clinical Pathology and Medical Research). The report was prepared for the master plan. ERM prepared an addendum report to update this report, which sought to provide a response to issues raised by government agencies.

As a result of the concerns raised by agencies, the following has been undertaken and incorporated into the PPR:

- The CLEMP has been updated to include management methods in accordance with Port Stephens DCP 2007; and,
- The use of adulticides as a suggested management procedure has been removed.

This issue is considered to be satisfactorily resolved.

5.7 TRAFFIC AND ACCESS

Traffic and Access

The site is directly accessed from Nelson Bay Road via a four lane roundabout. An internal road (Seaside Boulevard) has already been constructed and forms the main collector road in the site. The site has two proposed access points from Nelson Bay Road, approximately 1.5km apart which will result in a collector road serving the future internal traffic:

- Southern Access – this has been constructed (as part of Stage 1 to 3 works) and comprises a four way roundabout and currently allows access into the site; and,
- Northern Access - it is proposed to construct a 'left in - left out' T intersection with Nelson Bay Road, north east of the existing Nelson Bay/Fullerton Cove Road intersection.

A northern access emergency fire trail (which runs along part of the alignment of proposed formalised northern access road) was constructed in 2006 as part of a modification to the Stage 1 - 3 development consent to ensure compliance with the 2006 *Planning for Bushfire Protection* and to provide an alternative access and egress to the development.

Concern was raised by Council and the Department that the proponent did not identify appropriate staging of the proposed northern access intersection. Subsequently, the proponent provided a Statement of Commitment (no.31) which commits to the construction of the intersection at Stage 14 of the development at the full cost to the developer.

This is considered to be an appropriate stage to construct the intersection. In addition, a condition of approval is recommended which requires the proponent to construct the intersection to RTA standards.

Council also raised concern regarding the Local Area Traffic measures. A condition is recommended requiring detailed road designs to be undertaken, including Local Area Traffic measures, prior to issue of a Construction Certificate for each stage.

The traffic impacts of the project will be largely contained within the development. The road network is designed in a hierarchy to control traffic flows. The RTA has considered impacts on the wider road network and is generally satisfied.

Impacts of traffic on Stockton beach (4WD access)

The site is located in close proximity to Stockton beach. Currently, vehicular and pedestrian access to the beach is via informal trails. Concern was raised in public submissions on the impact of increased demand for public access to Stockton Beach, resulting in increased traffic through the adjoining national park.

The proponent has committed as part of the Voluntary Planning Agreement to constructing a formal 4WD track within the Worimi Regional Park to provide access from the Fern Bay site to the beach. Access to the beach will be limited to the 4WD track in order to minimise impacts on the dune system and coastal vegetation. The VPA requires the 4WD track to be constructed within 12 months of the project approval.

The proponent has provided a commitment for the access to the existing 4WD track from Seaside Boulevard to be formalised through an easement prior to the issue of the Subdivision Certificate for Stage 4 of the development.

Approval of the 4WD track is not part of the project application and will be subject to a separate approval under Part 5 of the Environmental Planning and Assessment act 1979.

Pedestrian Pathways and Cycle Routes

There are existing cycle routes in the locality including some sections of off-road cycleway suitable for cycling use along Nelson Bay Road that could in the future be extended to Stockton. There is also an existing paved pedestrian footpath along the south (eastern) side of Nelson Bay Road, commencing approximately 1km south of the site which continues for a further 1.5km through the existing Fern Bay settlement. The proponent has committed (no. 33) to construct a 2.5m wide concrete shared footway cycleway from the southern access roundabout at the intersection of Nelson Bay Road to the bus shelter at Bayway Village as part of Stage 4. This commitment was required as a variation to the master plan (adopted in 2006) as outlined in Section 5.1.

The proposal will also include the construction of pedestrian pathways through the development to link the eastern and western residential areas. Some of these pathways will be located within sensitive ecological areas, identified as 'Community Conservation Lands'. As such, a condition of approval is recommended which ensures pedestrian pathways are constructed through Community Conservation Lands in a manner which has a minimal impact on existing vegetation.

To improve pedestrian access through the development and the use of cycling as a means of transport, the current development will provide a 1.2m to 1.5 m pedestrian pathway on the collector road as well as a 1m wide cycleway on either side of the road. Council raised in their submission to the EA that Seaside Boulevard (the main collector road through Stages 1 to 3 of the development and to be extended through to the northern access to Nelson Bay Road through Stages 4 to 20) should be provided with a 1.2m footpath on one side of the road and a 2.4m cycleway on the other. This is currently the standard as required by the Port Stephens DCP 2007.

Part of Seaside Boulevard has already been constructed (for Stages 1 to 3) which comprises a 1.2m wide pedestrian pathway on the northern side of the road and a 1m wide cycleway on either side of the road. As such, it is considered reasonable to allow for a minor variation to the requirements of the DCP to continue the existing combined footpath cycleway along Seaside Boulevard. Council also advised in September 2009 that continuation of this arrangement for future stages is considered reasonable.

Access to Public Transport

Submissions were received from Council, HNE Health and Ministry of Transport regarding the provision and viability of public transport for the development. Existing bus services (Port Stephens Coaches and Blue Ribbon) operate in the locality along Nelson Bay Road connecting the development site with Stockton and Newcastle. It is likely the site will require a new bus route to be developed independent of existing routes. It is understood existing bus companies have expressed interest in providing this service. The subdivision has been designed such that a public bus service will be able to enter and exit the site from either access intersection and extend along the main loop collector road.

The indicative location of bus stops has been identified and these are located within a 400m walking catchment to all residents. A condition of approval is recommended which requires the proponent to provide a 'Bus Bay and Bus Shelter Plan'. The plan should detail the locations and specifications of indented bus bays and bus shelters including concrete pads.

5.8 ABORIGINAL CULTURAL HERITAGE

Twenty five Aboriginal archaeological sites have been recorded on the site, including middens, open artefact scatter, a hearth and a Worimi Cleave. A cultural heritage report titled *Fern Bay Estate Aboriginal Heritage Assessment Report* (ERM 2005) was prepared as part of the master plan. The report assessed the cultural heritage significance of the site and provided relevant management strategies. An addendum to this report was submitted with the EA to update its currency.

Based on the result of the cultural heritage assessment and community consultation (including consultation with the Worimi Local Aboriginal Land Council, Maaialgal Aboriginal Heritage Incorporated, Mur-roo-ma Incorporated and Nur-run-gee Incorporated), an Aboriginal Reserve is proposed is to be created within the western portion of the proposed development in order to retain an area that represents key aspects of the Aboriginal archaeological record at Fern Bay. The site, approximately 60m by 150m, is located in a low dune ridge, contains two recorded Aboriginal sites and in an area of high archaeological sensitivity. The reserve will be excluded from any further development activity.

To assist in the future management of the Reserve, the proponent has prepared a *Fern Bay Estate Aboriginal Heritage Reserve - Cultural Heritage Management Plan* (ERM 2006) ('CHMP') which identifies the requirements for the protection and management of the Cultural Heritage Reserve. The plan will form part of the community title agreement for the Community Association who will be responsible for the management of the reserve.

The proponent undertook additional consultation with the local Aboriginal community subsequent to the preparation of the 2006 CHMP which identified the need for a second additional Aboriginal reserve in the eastern portion of the site. The proponent has not provided a final location for the reserve but has investigated two potential sites located in the eastern portion of the site within the proposed community conservation lands.

DECCW reviewed the Aboriginal Cultural Heritage components of the EA (including the CHMP) and considered the assessment and proposed management strategies to satisfactorily ensure the preservation of cultural significance on the site. DECCW indicated support for the inclusion of the additional reserve but required the CHMP to be updated to ensure appropriate management measures indicated in the plan are appropriate to the additional reserve (e.g. appropriateness of fencing and pathways which overlap with wildlife corridors in this location). DECCW supported the proposed CHMP but questioned the responsibility of the Community Association and whether this meets the approval of the Aboriginal Community.

The proponent has incorporated amendments in the draft Statement of Commitments (commitment nos. 23-26) provided with the PPR, which commit to:

- Updating the CHMP prior to the release of the construction certificate for stage 4 of the development to include specific reference to the management requirements of the additional cultural heritage reserve (which will be undertaken in consultation with the local Aboriginal community); and
- Further consultation with the Aboriginal community on the management of the Aboriginal reserves by the Community Association.

This issue has been satisfactorily resolved.

5.9 ACID SULFATE SOILS

A *Phase 1 Preliminary Site Assessment* (dated June 2007, prepared by RCA Australia) was submitted with the EA which addressed the potential presence of acid sulphate soils and contamination of land within the site. The report concluded that the development is largely undisturbed and is unlikely to be contaminated.

The report concluded that there is potential acid sulphate soils (ASS) on the site in areas associated with the organic top soil in the swampy area of the site, and in the sands underlying these soils. These soils were found to exist in swampy areas generally below 3m AHD surface elevation. Works in areas below 5m AHD (or where excavation below this depth is required) should incorporate an ASS sampling program during the detailed design phase to assess the specific areas to be developed. The report recommended that an 'Acid Sulphate Management Plan' be developed to ensure that environmental and human health risks associated with the potential ASS on the site are managed.

A condition of approval is recommended which requires that an 'Acid Sulphate Management Plan' be developed for each stage of the development as part of the geotechnical assessment for each stage.

5.10 BUSHFIRE

The proposed development is located adjacent to remnant vegetation that is identified as bushfire prone land on Council's bushfire prone land map. A Bushfire Hazard Assessment report, prepared by ERM (dated February 2009) was submitted with the EA. The report recommended the requirement to incorporate Asset Protection Zones (APZs) in accordance with the *Planning for Bushfire Protection* (RFS 2006).

Varying widths of APZs are provided along the interface of the residential areas of the subdivision with the bushland areas. The widths of the proposed APZs range generally from 20m to 25m and increase with the bushfire threat posed by the type of vegetation adjacent and the slope and aspect of the land. However, around the Cultural Heritage Reserve (adjacent to Stage 20), the required APZ is 10m wide.

The DECCW raised concern during the exhibition of the EA with the location of APZs on land earmarked for Community Conservation Lands. In the PPR, the proponent provided sufficient clarification that all future APZs for Stage 4 – 20 will not impinge on Community Conservation Lands and the APZ will be maintained primarily within the perimeter roads. There will be a number of residential lots along the eastern most boundary which will include a portion the APZ along the frontage of the lots.

The NSW RFS raised no objection to the proposal, subject to conditions regarding compliance with *Planning for Bushfire Protection* and incorporating a requirement for a restriction to land use pursuant to section 88B within the subdivision requiring the provision of asset protection zones (APZs). Conditions recommended by RFS have been incorporated into the recommended conditions of approval. These conditions include requiring a 5m easement for APZ at the frontage of some residential lots (as identified in Figure 2 of the PPR). A draft statement of commitment has also been prepared which commits to incorporating restrictions on the use of lands containing APZs.

Council in their submission to the Department also requested that the proponent provide for a Rural Fire Service Station on the site. The Department sought clarification from the NSW Fire Brigade and NSW RFS on the need for an additional RFS station on the site. The area will be serviced by the RFS Williamtown/Salt Ash Brigade and the Stockton Station of the NSW Fire Brigade. Neither the Fire Brigade nor RFS considered a need for an additional RFS station on the Fern Bay site. As such, it was not deemed necessary to require a station at this locality.

5.11 PROVISION OF COMMUNITY AND COMMERCIAL FACILITIES

The project application is for 411 lots but has the potential for further subdivision and upon completion of the final stage, the development will comprise up to 950 lots. This equates to approximately 2500 residents. It is important the proposed development provides sufficient community and commercial facilities in order to accommodate the increase in the local population.

The amount of space allocated to community and commercial areas was assessed as part of the master plan and it was considered there was an adequate provision of community and commercial facilities.

Prior to the exhibition of the EA, Council raised the need for additional community and commercial facilities on the development over and above the established floorspace adopted in the master plan. Council requested an additional 2.5 Ha of land be provided either within the development or offsite to provide community facilities (such as sports training and other youth activities such as Skate Park/BMX, multipurpose community facility and Rural Fire Service facility) and an additional 6.7Ha for retail/commercial uses.

The Department conducted negotiations with the proponent in an effort to increase the amount of community and commercial facilities on the development. However, it was considered that there were limited opportunities to require additional commercial facilities and community facilities over and above what had been established in the master plan. The development will provide:

- 2 parks, including Banksia Park (1.38 Ha) and Corymbia Park (1.09Ha), and one unnamed reserve (2500sqm) as depicted on Figure 16. Note: Cabbage Tree Park is located near the entrance of the development and was constructed as part of the already approved stages;
- 2 Aboriginal heritage reserves; and,
- 2 commercial lots located in the eastern and western portions of the site (2285m² and 1165m² respectively). Note: previously only 1 commercial lot was proposed in the master Plan.

The parks will be located on the Community Lot and be managed by the Community Association. However, all areas of open space will be available to the public (as required by relevant laws in the draft Community Management Statement).

There is approximately 5.0ha of active recreation and community space provided in the development equating to over 5% of the developable area. This is in addition to the Community Conservation Lands which would not be considered active open space but would still provide for passive recreation through the instalment of pedestrian walkways. Further, the proponent has committed to provide a community building (150sqm) within the Banksia park.

The proponent has provided a draft Statement of Commitment to carry out works in accordance with the exhibited EA and PPR. It is intended that the proponent will establish and construct all recreational facilities and provide for a community centre identified by the subdivision plan. Ultimately all recreational amenities and the community centre will become the property and responsibility of the Community Association. The proponent has indicated in the EA that the community/recreation facility will be constructed during Stage 12 of the development. In addition, the proponent committed (no.40) to provide details for child play equipment to Council prior to the release of the construction certificate for the relevant stage. However, the particular parks which will be provided with equipment and the timing of their construction has not been committed to. As such, a condition of approval is required which specifies the relevant parks which should be allocated child play equipment and the timing for their construction.

In terms of the commercial facilities, the development provides 3450m² of floorspace for commercial/retail uses on two lots (located in the eastern and western portions of the site). Prior to the exhibition of the EA, the Department requested the proponent provide additional commercial areas in the development, which resulted in an additional area in the eastern portion of the site being allocated for commercial space.

It is considered the quantum of floor space is adequate to meet the needs of the final development (which will potentially accommodate up to 950 lots) and the proposed locations will provide accessible retail and commercial facilities within walking distance of future occupiers of the site. There will be a need to ensure that suitable mechanisms are in place to facilitate the establishment of commercial facilities on lots identified as commercial development. The proponent has provided a draft Statement of Commitment to prepare an action plan to facilitate the establishment of commercial facilities on the site prior to the release of a construction certificate for the relevant stages in the subdivision. This commitment is supported by the Department.

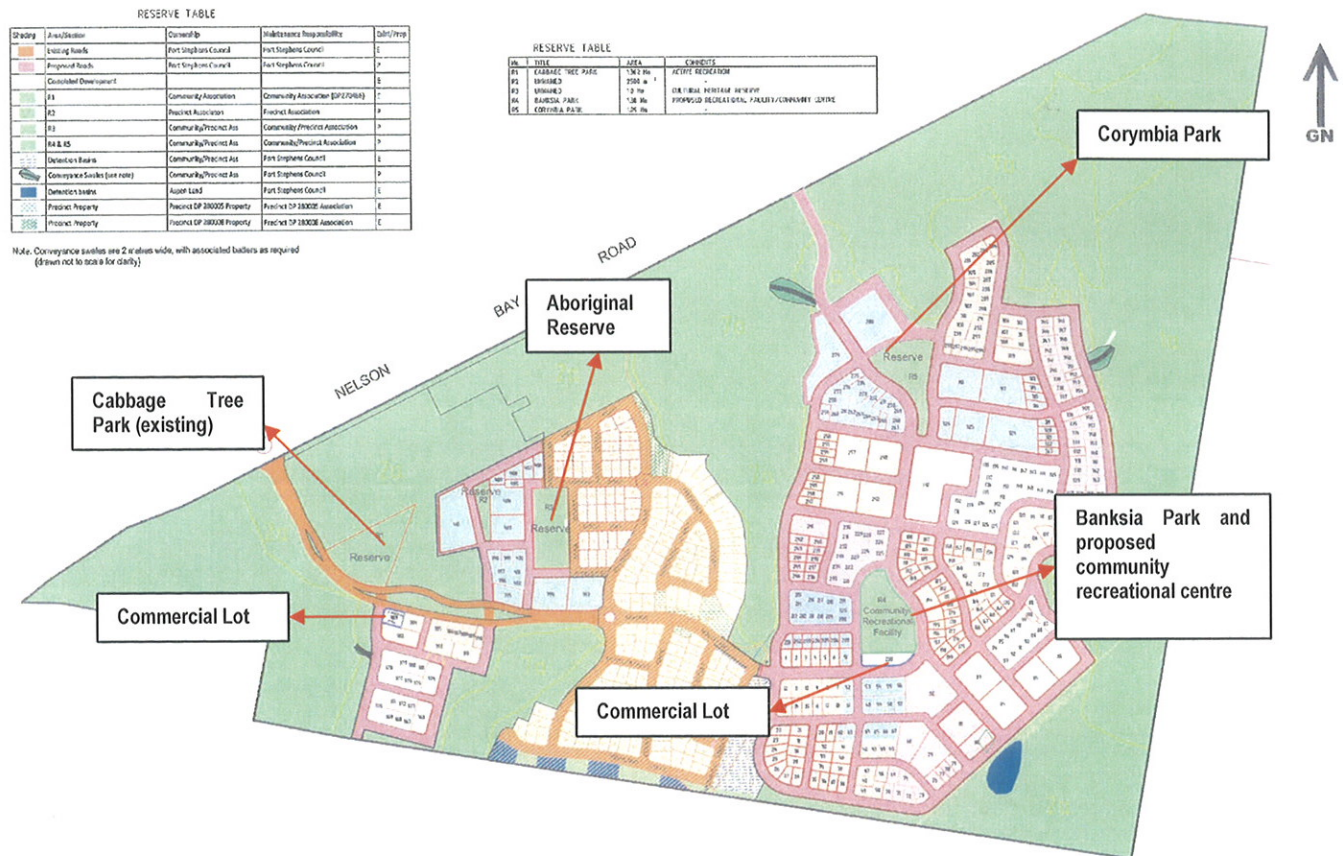


Figure 166: Open Space and Commercial Areas
Source: Addendum to Preferred Project Report (ERM, April 2010)

5.12 MANAGEMENT OF COMMUNITY PROPERTY (COMMUNITY MANAGEMENT STATEMENT)

The proposed community title subdivision will involve the formation of a Community Association (CA) comprising the owners of all strata/Torrens lots. The CA would be established upon registration of the Community Plan which is accompanied by a Community Management Statement (CMS). It is noted that a CA already exists for the current development for Stages 1 to 3.

A draft CMS was submitted as part of the EA documentation. Both DoP and DECCW raised concern with the draft CMS. This included concerns on the lack of detail regarding the responsibilities of the CA and the extent of the property to be owned and maintained by the association. The by-laws within the draft CMS also made no reference to the responsibilities and obligations of the CA to undertake works in accordance with relevant management plans including:

- Community Land Environmental Management Plan – which outlines the management of the Community Conservation Lands;
- Bushfire Management – for the management of APZs that impinges on Community Conservation Lands;
- Aboriginal Cultural Heritage Plan – for the management of the Aboriginal Cultural Heritage Reserves;
- Stormwater Assessment and Stormwater Management Plan – required for the monitoring of stormwater and groundwater and the maintenance of drainage features; and
- Flood Evacuation Plan – guide the management of a flood induced evacuation.

The proponent provided an amended draft CMS with the PPR which now includes:

- Responsibilities of the CA;
- Inclusion of a reference to Community Conservation Lands and the CLEMP

- Management of drainage features;
- Maintenance of pedestrian pathways on community land;
- Maintenance obligations for the Aboriginal Cultural Heritage Reserves; and,
- Management of Asset Protection Zones.

The Department considered the amended draft CMS required additional changes to the by-laws to improve the enforceability of the CLEMP and other management plans such as stormwater/groundwater monitoring, landscaping and management of the Aboriginal Heritage Reserve. The CLEMP imposes duties on the CA to:

- Be responsible for management of conservation areas and reserves;
- Be responsible for long term monitoring of the site; and,
- Provide an annual review (for the first 3 years) of the operation of the CLEMP in consultation with Council and DECCW.

The draft CMS needs to be modified to provide a clearer identification of the duties arising from the CLEMP. As a result, it is considered then CMS should impose a clear duty to the CA to comply with the CLEMP, to engage suitably qualified persons to ensure compliance, to provide reports, to inform lot owners and subsidiary bodies, and to carry out such conservation related tasks and programs. The CMS should also be modified to ensure a copy of the CLEMP is maintained and regularly updated. A condition of approval is recommended to require the draft CMS to incorporate these amendments.

It is also recommended the draft CMS make specific reference to the Stormwater and Groundwater Management Plan and the Landscaping Revegetation Plan and clearly specify the responsibilities of the Community Association under these plans. Further conditions of approval are recommended to ensure relevant changes to the by-laws in the draft CMS are made to reference these plans.

5.13 SECTION 94 CONTRIBUTIONS

The proposed development is located in the Port Stephens Council LGA, but in close proximity to the boundary with Newcastle City Council. Port Stephens Council in conjunction with Newcastle City have prepared a Section 94 Cross Boundary Plan which provides a summary of the apportionment of Section 94 contributions to each Council. The relevant plan is titled '*Port Stephens Section 94 Development Contributions Plan (incorporating Port Stephens, Great Lakes and Newcastle Cross Boundary Section 94 Contributions Plans (amended October 2009)*'. The Plan was exhibited between 9 July 2009 and 6 August 2009 and became effective from October 2009. The proposed Section 94 contribution apportionments are outlined in Table 7.

A condition of approval is recommended which requires the Proponent to pay, prior to the endorsement of a Subdivision Certificate for each stage of the subdivision, and in proportion to the additional lots created by that stage, the following contributions to Council pursuant to Section 94 of the *Environmental Planning and Assessment Act (1979)*.

Table 5: Section 94 Contributions

TOTAL CONTRIBUTIONS PAYABLE	General Contribution (per lot)	Apportionment to Port Stephens	Apportionment to Newcastle
Public Open Space, Parks and Reserves	\$2046	\$1550	\$496
Sport and Leisure Facilities	\$4821	\$2743	\$2078
Cultural and Community Facilities	\$2424	\$1770	\$654
Civic Administration	\$377	\$377	-
Road Works	\$1370	\$1370	-
Fire and Emergency Services	\$188	\$188	-
TOTAL	\$11,226	\$7998	\$3228

6 CONCLUSION

The Department has assessed the EA and PPR and considered the submissions in response to the proposal. The key issues raised in submissions related to subdivision layout and urban design, flora and fauna impacts, management of conservation lands, stormwater and groundwater impacts, traffic and access to public transport, coastal hazards, and management and mitigation of construction impacts. The Department has considered these issues and a number of conditions are recommended in conjunction with the proponent's Statement of Commitments to ensure these issues are satisfactorily addressed issues and the proposal has minimal impacts.

The proposed development will allow for a sustainable residential development which will provide:

- A variety of residential lot sizes which will assist in providing a range of housing types to meet the future needs of the local population;
- Improved public infrastructure including the upgrade and extension of the existing pedestrian cycleway network;
- The ongoing management of vegetation of ecological significance on the site via an environmental management plan; and,
- The ongoing management of the Worimi Regional Park through the execution of a voluntary planning agreement and implementation of a vegetation management plan.

On these grounds, the Department considers the site to be suitable for the proposed project and that it is in the public interest. Consequently, the Department recommends that the project be approved, subject to the conditions of approval and the proponent's Statement of Commitments.

7 DELEGATION

In accordance with the Instrument of Delegation, 25 January 2010 the Minister for Planning delegated his powers and functions to the Deputy Director-General in relation to Project Applications where there are less than 25 public submissions. The application attracted 6 public submissions. Therefore, the Deputy Director-General has the power to determine the application under s75J of the *Environmental Planning and Assessment Act 1979*.

8 RECOMMENDATION


It is recommended that the Deputy Director-General as delegate for the Minister:

- (A) consider the findings and recommendations of this Report; and
- (B) approve the project application, subject to conditions, under Section 75J Environmental Planning and Assessment Act 1979; and,
- (C) sign the Instrument of Approval at **Appendix A**.

Prepared by:

Paulina Hon
Senior Environmental Planner

Endorsed by:


Alan Bright
A/Director
Regional Projects

Endorsed by:

A handwritten signature in black ink, consisting of a large, stylized 'C' followed by a horizontal line.

Chris Wilson
Executive Director
Major Project Assessments

For Approval:

A handwritten signature in blue ink, consisting of a large, stylized 'R' followed by a horizontal line.

Richard Pearson
Deputy Director-General
Development Assessment & Systems Performance

APPENDIX A. INSTRUMENT OF APPROVAL

APPENDIX B. DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Attachment 1 Director-General's Environmental Assessment Requirements Section 75F of the Environmental Planning and Assessment Act 1979	
Application number	06_0250
Project	Proposed Residential Subdivision at Seaside Boulevard, Fern Bay Project application for Fern Bay Estate development comprising: <ul style="list-style-type: none"> • Residential subdivision (950 lots) • Recreation/open space • Community facilities and Community title subdivision • Roads, fire trails and pedestrian trails • Conservation areas • Associated stormwater and other infrastructure
Location	Part Lot 3, Lot 4 & Lot 5 DP 270466 Seaside Boulevard, Fern Bay
Proponent	Winten (20) Pty Ltd
Date issued	November 2006
Expiry date	2 years from date of issue
General requirements	<p>The Environmental Assessment (EA) for the project application must include:</p> <ul style="list-style-type: none"> • An executive summary; • A detailed description of the project including:- <ul style="list-style-type: none"> (i) Any development options; (ii) Justification for the project taking into consideration any environmental impacts of the project, the suitability of the site and whether the project is in the public interest; (iii) Outline of the staged implementation of the project, if applicable; • A thorough site analysis and description of existing environment; • Consideration of any relevant statutory and non-statutory requirements, in particular relevant provisions of Environmental Planning Instruments, Lower Hunter Regional Strategy and Development Control Plans as well as impacts, if any, on matters of national environmental significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>; • Where relevant, demonstrate compliance with BCA and relevant Australian Standards for proposed building; traffic, road and parking; utilities; noise and flooding; • An environmental risk analysis of the project including consideration of the issues raised during consultation; • An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts of the project; • The plans and documents outlined in Attachment 2. • A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading; and • An assessment of the key issues specified below and a table outlining how these key issues have been addressed.
Key issues	<p>The Environmental Assessment must address the following key issues:</p> <ol style="list-style-type: none"> 1. General Consistency with the approved Master Plan <ol style="list-style-type: none"> 1.1. The project application must be generally consistent with Master Plan No. MP 20-4-2005 for the site, approved by the Minister for Planning on 8 August 2006.

	<p>2. Design and Visual Impacts</p> <p>2.1. Demonstrate suitability of the proposal with the surrounding area in relation to potential character, bulk, scale and visual amenity of development resulting from the subdivision having regard to the <i>Coastal Design Guidelines of NSW (2003)</i>, <i>NSW Coastal Policy (1997)</i>, <i>State Environmental Planning Policy No. 71 – Coastal Considerations</i> (specifically Clauses 2 and 8), <i>Port Stephens Local Environmental Plan 2000</i> and other relevant Development Control Plans. Confirm that the proposal is consistent with the Lower Hunter Regional Strategy.</p> <p>2.2. Identify the extent of potential development footprints, building envelopes and built form controls and any significant trees to be removed.</p> <p>2.3. Address safety; provision of public reserves; potential perimeter road layouts; pedestrian and bicycle movement to, within and through the site.</p> <p>2.4. Provide details of the formalisation of dune/beach access from site, generally consistent with the Master Plan.</p> <p>3. Social and Community</p> <p>3.1. Address the social and economic context of the development in terms of infrastructure requirements, access, public transport, community services and facilities, having regard to the Council's <i>Section 94 Contributions Plan- Plan District No.8 Fern Bay</i>.</p> <p>4. Traffic and Access</p> <p>4.1. Provide a Traffic Impact Study in accordance with the <i>RTA Guide to Traffic Generating Developments</i> and in consideration of SEPP 11.</p> <p>4.2. Identify all relevant vehicular traffic routes and intersection for access to/ from the subject areas.</p> <p>4.3. Provide current traffic counts for all of the above traffic routes and intersections and anticipated vehicular traffic generated from the proposed lots.</p> <p>4.4. Provide a traffic analysis, using SIDRA or similar traffic model, for the relevant intersections including: current and traffic growth projections for the life of the project; 95th percentile back of queue lengths; and delays and level of service on all legs.</p> <p>4.5. Consider traffic impact on the existing intersections and the capacity of MR108 (Nelson Bay Road) to safely and efficiently cater for the additional vehicular traffic generated.</p> <p>5. Infrastructure Provision</p> <p>5.1. Address existing capacity and requirements of the proposal for effluent disposal, water supply, electricity, and telecommunications services. Identify staging, if any, of infrastructure works. Consider the feasibility of implementing a greywater reuse system within the development.</p> <p>6. Flora and Fauna</p> <p>6.1. Outline measures for the conservation of flora and fauna and their habitats within the meaning of the <i>Threatened Species Conservation Act 1995</i>, having regard to the <i>Draft Guidelines for Threatened Species Assessment (DEC & DPI July 2005)</i>. Measures should generally be in accordance with the approved Master Plan No. MP 20-4-2005.</p> <p>6.2. Address the requirements of <i>State Environmental Planning Policy No 44 – Koala Habitat Protection</i> and the <i>Port Stephens Comprehensive Koala Plan of Management</i>.</p> <p>6.3. Assess the impact of the proposal on groundwater dependent ecosystems (swamp forest and wet heath), and assess the need for appropriate buffer zone(s) to be placed around groundwater dependent ecosystems.</p> <p>7. Impact on Adjoining Lands</p> <p>7.1. Describe mitigation and management options that will be used to</p>
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	<p>prevent, control, abate or minimise identified impacts on Department of Environment and Conservation (DEC) estate. Asset Protection Zones proposed for the development should not impact on adjacent lands managed by the DEC.</p>
	<p>7.2. Address impacts of dense residential development on neighbouring sand extraction operations. Address impacts of the neighbouring sand extraction operations on the proposed residential development.</p>
	<p>8. Water Cycle Management</p>
	<p>8.1. Demonstrate the development will not exacerbate local flooding and is designed in expectation of flooding. Demonstrate compatibility with Port Stephens Council Flood Policy and in accordance with the guidelines contained in the <i>NSW Floodplain Development Manual</i> (2005). Implications of climate change on flooding should be considered.</p>
	<p>8.2. Address drainage issues associated with changes in the hydrological regime of the catchment. Provide a stormwater plan for the subdivision layout (based on best practice management of stormwater and incorporating Water Sensitive Urban Design principles).</p>
	<p>8.3. Address potential impacts on the water quality of surface and groundwater (during construction and occupation of the site), into adjoining lands and downstream, having regard to the <i>Groundwater Assessment Standard Requirements for State Significant Developments/Major Developments within a Municipal Water Supply Catchment</i> (DNR, 2006) and the principles of the <i>NSW State Groundwater Policy Framework</i>. Provide a Groundwater Study, which includes a Geotechnical site assessment as per Australian Standard (AS 2870).</p>
	<p>9. Coastal Zone Management</p>
	<p>9.1. Address potential landward movement of transgressive dunes towards the development, having regard for coastal and mobile Dune Hazard Lines outlined in Figure 7.3, Part D of the <i>Stockton Bight Environmental Study and Management Plan</i> prepared by HLA Envirosciences Pty Ltd (August 1995). Ensure the development is setback behind the 1 in 100 year hazard line. Mitigation or dune restoration/stabilisation measures should also be considered.</p>
	<p>9.2. Address the predicted increases in water level as a result of sea level rise.</p>
	<p>10. Bushfire</p>
	<p>10.1. Address the requirements of <i>Planning for Bush Fire Protection 2001</i> (RFS), in particular asset protection zones, adequacy of water supply for bushfire suppression operations and future management of any areas of hazard remaining, including natural areas and buffers zones.</p>
	<p>11. Cultural Heritage</p>
	<p>11.1. Address and document information contained in <i>Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation</i> (DEC 2005). Demonstrate that effective consultation with Aboriginal communities has been undertaken in determining and assessing impacts, developing options and making final recommendations.</p>
	<p>12. Acid Sulfate Soils and Contaminated Land</p>
	<p>12.1. Identify the presence and extent of acid sulfate soils on the site and outline appropriate mitigation measures. Identify areas of contamination on site and appropriate mitigation measures. The level of assessment shall be consistent with the <i>Acid Sulfate Soil Manual</i> by ASSMAC.</p>

APPENDIX C. COMPLIANCE WITH ENVIRONMENTAL PLANNING INSTRUMENTS

State Environmental Planning Policy (Major Projects) 2005 (MP SEPP)

The MP SEPP has now been replaced by the *State Environmental Planning Policy (Major Developments) 2005*. However, MP SEPP applied to the project at the time of project lodgement and is discussed in **Section 3.1**.

State Environmental Planning Policy (Infrastructure) 2007 (incorporates State Environmental Planning Policy No.11 (Traffic Generating Development) ('SEPP 11'))

SEPP 11 has now been repealed, however it is relevant to this project as the SEPP was in force at the time of project lodgement. The planning provisions previously within SEPP 11 has been updated and incorporated into the SEPP Infrastructure 2007. Schedule 3 of SEPP Infrastructure applies to subdivision of land into 50 lots or more. The Policy aims to provide the RTA an opportunity to make representations in respect of developments which are significant generators of traffic. The application was referred directly to the RTA and their response is discussed in more detail in Section 4 of this report.

State Environmental Planning Policy No. 44 – Koala Habitat

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 a permanent free-living population over their present range and reverse the current trend of Koala population decline by requiring the preparation of plans of management, identification of areas of core Koala habitat and the inclusion of areas of core Koala habitat in environment protection zones. Port Stephens's local government area is subject to the provisions of SEPP 44 and the site does contain tree species listed as Koala feed trees on Schedule 2 of the SEPP. The issue of Koala habitat protection has been assessed in Section 5.11 of this report. .

State Environmental Planning Policy No. 55 – Remediation of Land

The aim of SEPP 55 is to provide for remediation of contaminated land for the purpose of reducing the risk of harm to human health or the environment and requiring that any remediation work meets certain standards and notification requirements. There is no evidence that the site is contaminated.

State Environmental Planning Policy No. 71 – Coastal Protection

SEPP 71 applies to land within the coastal zone. It aims to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales coast. The provisions of SEPP 71 have been considered in the assessment of the proposal and the Department considers the proposal adequately addresses the provisions of the SEPP.

SEPP 71 applies to the land and development within the coastal zone (clause 4) as defined by the *Coastal Protection Act 1979*. The subject site is located within the coastal zone. SEPP 71 provides aims of the Policy (clause 2) and matters for consideration (clause 8) when assessing development proposals. The Policy has been made to ensure that development in the NSW coastal zone is appropriate and suitably located, there is a consistent and strategic approach to coastal planning and management and there is a clear development assessment framework for the coastal zone. The major themes of SEPP 71 include retention of visual amenity, protection of the coastal foreshore in relation to amenity, public access, wildlife corridors, water quality, views, items of heritage and suitability of development within the area. The proposal is considered to be generally consistent with the provisions of SEPP 71 subject to the proposed amendment to the proposal to reduce the extent of development and provide conservation of threatened species habitat.

Port Stephens Environmental Plan 2000 (PSLEP 2000)

The PSLEP 2000 sets the broad planning framework for development in Port Stephens local government area and establishes permissible forms of development and land use which will be permitted in the area. The subject site is zoned part 2(a) Residential, part 7(a) Environmental Protection and 1(a) Rural under the PSLEP 2000. The proposed development generally meets the objectives and provisions of the PSLEP 2000 and is permissible with consent.

The proposed residential development is restricted to areas which occur within the areas zoned 2(a) Residential and is permissible with consent. The objectives of the 2(a) Residential zone include:

- (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.*

A road and associated infrastructure (pumping stations etc) and pedestrian trails are proposed within part of the site zoned 1(a) Rural Agriculture. These uses are permissible with consent in both zones. Objectives of the rural zone:

- (a) regulating the development of rural land for purposes other than agriculture by ensuring that development is compatible with rural land uses and does not adversely affect the environment or the amenity of the locality, and*
- (b) ensuring development will not have a detrimental effect on established agricultural operations or rural activities in the locality, and*
- (c) preventing the fragmentation of grazing or prime agricultural lands, protecting the agricultural potential of rural land not identified for alternative land use, and minimising the cost to the community of:*
 - (i) fragmented and isolated development of rural land, and*
 - (ii) providing, extending and maintaining public amenities and services, and*
- (d) protecting or conserving (or both protecting and conserving):*
 - (i) soil stability by controlling development in accordance with land capability, and*
 - (ii) trees and other vegetation in environmentally sensitive localities where the conservation of the vegetation is likely to reduce land degradation or biodiversity, and*
 - (iii) water resources, water quality and wetland areas, and their catchments and buffer areas, and*
 - (iv) land affected by acid sulphate soils by controlling development of that land likely to affect drainage or lower the water table or cause soil disturbance, and*
 - (v) valuable deposits of minerals and extractive materials by restricting development that would compromise the efficient extraction of those deposits, and*
- (e) reducing the incidence of loss of life and damage to property and the environment in localities subject to flooding and to enable uses and developments consistent with floodplain management practices.*

A small section of roadway, utility installations and pedestrian trails are proposed within the 7(a) Environment Protection areas of the site. These uses are permissible with consent in this zone. The objectives of the 7(a) zone is to:

- (a) to protect significant wildlife habitats, water catchment areas and coastal lands, and*
- (b) to regulate development to avoid inappropriate uses of land, being uses which would destroy or damage a habitat ecosystem (particularly that of wetlands), significant vegetation or wildlife, and*

- (c) to promote the regeneration of areas of significant vegetation, and their corridors, for the protection of native fauna and flora species and to maintain their diversity, and
- (d) to encourage development compatible with, and sympathetic to, the preservation of the natural environment and based on the principles of ecologically sustainable development, and
- (e) to regulate development so that it does not adversely affect and is not adversely affected by coastal processes, in both the short and long term, and
- (f) to maintain the visual character of coastal landscapes, hillscares and ridgelines and the availability of land for coastal recreation and access, and
- (g) to ensure the sensitive use of renewable resources to maintain the integrity of the resource base and provide for its continued use by future generations, and
- (h) to conserve biological diversity and ecological integrity.

APPENDIX D. COMPLIANCE WITH OTHER PLANS AND POLICIES

The Proposal has been considered against the following non-statutory documents:

Port Stephens Development Control Plan 2007 ('Port Stephens DCP')

Port Stephens DCP applies to the Fern Bay area. The aim of the DCP is to provide principles and controls for development that is site responsible, innovative and contributes to the character of each locality. The DCP provides guidelines on 'Subdivision and Streets', 'Environmental and Construction Management', and 'Parking, Traffic and Transport'.

To improve pedestrian access through the development and the use of cycling as a means of transport, the current development will provide a 1.2m to 1.5 m pedestrian pathway on the collector road as well as a 1m wide cycleway on either side of the road. Council raised in their submission to the EA that Seaside Boulevard (the main collector road through Stages 1 to 3 of the development and to be extended through to the northern access to Nelson Bay Road through Stages 4 to 20) should be provided with a 1.2m footpath on one side of the road and a 2.4m cycleway on the other. This is currently the standard as required by B.1.C19 of the Port Stephens DCP 2007.

Part of Seaside Boulevard has already been constructed (for Stages 1 to 3) which comprises a 1.2m wide pedestrian pathway on the northern side of the road and a 1m wide cycleway on either side of the road. As such, it is considered reasonable to allow for a minor variation to the requirements of the DCP to continue the existing combined footpath cycleway along Seaside Boulevard. Council also advised in September 2009 that continuation of this arrangement for future stages is considered reasonable.

Port Stephens Koala Plan of Management

The objectives and controls of this CKPoM have been addressed in the Flora and Fauna Assessment and Koala assessment provided.

Port Stephens Urban Settlement Strategy

The strategy outlines Council's strategic direction for future urban development within the LGA and identified the site as a 'Future neighbourhood centre'. The proposal involves subdivision of land which is zoned for residential development. The project application is consistent with this strategy.

Lower Hunter Regional Strategy

The primary purpose of the Regional Strategy is to ensure adequate land is available and appropriately located to sustainably accommodate the project housing and employment needs of the region's population over the next 25 years. It will do this by ensuring that land is available in appropriate locations to sustainably accommodate the projected population growth and associated housing, employment and environmental needs over the next 25 years. The Strategy sets 'Outcomes' and 'Actions' for various components including the: employment growth and economy development; housing transport; environment; and natural hazards.

The *Lower Hunter Regional Strategy* nominates that the Port Stephens local government area will need to provide an additional 12,500 dwellings over the next 25 years. The Strategy requires development to plan for a range of housing types of appropriate densities, location and suitability that are capable of adapting and responding to the ageing of the population. The proposal is consistent with the Lower Regional Strategy in that it will contribute to achieving the dwelling targets in the region and provide for a range of housing types.

NSW Coastal Policy 1997 and NSW Coastal Design Guidelines

The *NSW Coastal Policy 1997* responds to the fundamental challenge to provide for population growth and economic development without placing the natural, cultural, spiritual and heritage values of the coastal

environment at risk. The Policy is based on the principles of ecologically sustainable development and addresses a number of key coastal themes including population growth, coastal water quality issues and establishing a comprehensive and representative system of reserves. The NSW Coastal Design Guidelines aim to ensure that future developments and redevelopments are sensitive to the unique natural and urban settings of coastal places in NSW. The Guidelines provide an urban design focus for the coastal context. The coastal policies and guidelines are relevant legislation and planning provisions applying to the site.

APPENDIX E. SUMMARY OF PUBLIC SUBMISSIONS

Summary of Public Submissions (6 submissions received)

OBJECTIONS TO PROPOSAL (6 objections)		
Topic	Number of references in submissions	Details / Comment
Ecology/Biodiversity	3	<ul style="list-style-type: none"> Impact of development on flora and fauna.
	1	<ul style="list-style-type: none"> Proposed development is not in keeping with the nature of the locality or region (situated adjacent to a State Conservation Area (Worimi) and Regional Park).
	1	<ul style="list-style-type: none"> No assessment of the development adjacent to coastal swamp forests.
	1	<ul style="list-style-type: none"> Inadequate assessment of ecological impacts of the development including loss of habitat, loss of wet heath habitat and fragmentation of habitats in the local and regional context.
	1	<ul style="list-style-type: none"> Concern that the development will result in an increase in the number of road kills associated with the main roads traversing the wildlife corridor and increase in predation from domestic pets.
	1	<ul style="list-style-type: none"> Development will destroy a significant part of the environment on the site (more than 70 Ha of existing vegetation). The area represents an outstanding example of remnant coastal habitats that forms a critical corridor for the survival of regionally and nationally significant species. Concern with the fragmentation of remaining habitats.
	1	<ul style="list-style-type: none"> Inadequate assessment of human impacts associated with residential development including impacts from road traffic, increased runoff associated with impervious surfaces, rubbish dumping, predation by domestic and feral animals, weed dispersal, changes in fire frequency.
Traffic	2	<ul style="list-style-type: none"> Concern with the increase in traffic.
	1	<ul style="list-style-type: none"> Concern with the isolation of the development which is not amenable to widespread integration of public transport. Development represents increased urban expansion which increases traffic, travelling time, reduced amenity to workplace etc.
Coastal/Stockton Beach	2	<ul style="list-style-type: none"> Concern with impacts on Stockton Beach due to the increase in vehicle movements and visitation by the access provided by the development.
Stormwater and Groundwater	2	<ul style="list-style-type: none"> Potential contamination of groundwater reserves under sand dunes not adequately addressed.
	1	<ul style="list-style-type: none"> Require clarification on where the runoff from the overland flows from the site during extreme flood events (i.e. Pacific Ocean, Fullerton Cove, Fullerton Drainage System).
	1	<ul style="list-style-type: none"> Concern with the increase in pollutants to the coastal system.
Coastal Processes	1	<ul style="list-style-type: none"> Inadequate assessment of the long term coastal erosion of the site.

OBJECTIONS TO PROPOSAL (6 objections)

Topic	Number of references in submissions	Details / Comment
	1	<ul style="list-style-type: none"> Removal of vegetation resulting in destabilisation of sand dunes.
Climate Change	1	<ul style="list-style-type: none"> Inadequate assessment of the risk of further sea level rise. Issues not addressed include the effect of climate change and increasing spread of mosquito born diseases.
Footpath/Cycleway	1	<ul style="list-style-type: none"> Public safety concern with a shared footpath/cycleway on any part of Nelson Bay due to restriction of space.
Land use	1	<ul style="list-style-type: none"> Inconsistency in use of rezoning in the area for residential. No further residential development should be undertaken at the site.
Socio economic	1	<ul style="list-style-type: none"> Uncertainty of further sales as a result of economic downturn.
Bushfire	1	<ul style="list-style-type: none"> Concern with the hazard risk to bushfires and impact on natural fire regime of the area.

APPENDIX F. PREFERRED PROJECT REPORT

Fern Bay Seaside Village Project Application - Submission Report, prepared by ERM on behalf of Aspen Group, dated December 2009 (ref:0063154 Final).

Fern Bay Seaside Village Project Application – Further Response to Submissions, prepared by ERM on behalf of Aspen Group, dated April 2010 (ref: 0063154)

APPENDIX G. ENVIRONMENTAL ASSESSMENT

Environmental Assessment Report (Volumes 1, 2 3 and 4) prepared by ERM on behalf of Aspen Group Pty Ltd, dated February 2009.