
**Environmental Assessment
45 Hearn's Lake Road, Woolgoolga
Proposed Land Subdivision**

Part 3A Application

April 2009



**Mersonn Pty Ltd
6/20 Wylde Street
Potts Point NSW 2011**

CONTENTS

Executive Summary	9
Certificate	29
1.0 INTRODUCTION	
1.1 Background	35
1.2 Application History	37
2.0 SITE ANALYSIS	
2.1 Property Description and Area	40
2.2 Location and Context	42
2.3 Surrounding Land Uses and Services	44
2.4 Site Conditions	45
2.4.1 Meteorological data	50
2.4.2 Topography	51
2.4.3 Geomorphology	51
2.4.4 Flooding and Coastal Inundation	52
2.4.5 Soil Types and Properties	53
2.4.6 Ecological Information	54
2.4.7 Acoustic Environment	56
2.4.8 Improvements and Services	56
3.0 PROJECT DESCRIPTION	
3.1 Introduction	57
3.2 Need for the Project	58
3.2.1 Justification for the Proposal	58
3.2.2 Alternatives	60
3.3 Concept Plan	61
3.4 Project Plan	61
3.4.1 Proposed Lot Areas	62

3.4.2	Bulk Earthworks and Filling	63
3.4.3	Hearnes Lake Road Access and Bioretention Basin	65
3.4.4	Grass Swales, Rain Gardens, Pathways and Bushfire Trails	68
3.4.5	Ephemeral Wetland Reserve	72
3.4.6	Utility Services Construction	75
3.5	Staging	77
4.0	STATUTORY PLANNING	
4.1	Introduction	79
4.1.1	Commonwealth Legislation	79
4.1.1.1	Environmental Protection and Biodiversity and Conservation Act 1999	79
4.1.2	NSW State Legislation and Planning Instruments	
4.1.2.1	National Parks and Wildlife Act 1974	80
4.1.2.2	Threatened Species Conservation Act 1995	80
4.1.2.3	Native Vegetation Act 2003	81
4.1.2.4	Heritage Act 1977	82
4.1.2.5	Water Management Act 2000	82
4.1.2.6	Environmental Planning and Assessment Act 1979	
4.1.2.6.1	State Environmental Planning Policy 2005 (Major Projects)	83
4.1.2.6.2	State Environmental Planning Policy– Infrastructure	83
4.1.2.6.3	State Environmental Planning Policy 26 (Littoral Rainforest)	84

4.1.2.6.4	State Environmental Planning Policy 44 (Koala Habitat)	84
4.1.2.6.5	State Environmental Planning Policy 55 (Contaminated Lands)	84
4.1.2.6.6	State Environmental Planning Policy 71 (Coastal Protection)	85
4.1.2.6.7	North Coast Regional Environmental Plan	86
4.1.2.6.8	CHCC Local Environmental Plan	87
4.1.2.6.9	CHCC Local Environmental Plan Amendment No.29	87
4.1.2.6.10	Hearnes Lake/Sandy Beach Development Control Plan	87
4.1.2.6.11	Subdivision DCP	88
4.1.2.6.12	Draft Vegetation Conservation DCP	89
5.0	KEY ISSUES	
5.1	Strategic Planning	90
5.1.1	North Coast Regional Environmental Plan	98
5.1.2	Coastal Development Guidelines NSW	106
5.1.3	NSW Coastal Policy 1997	111
5.1.4	State Environmental Planning Policy 71 (Coastal Considerations)	113
5.1.5	CHCC Local Environmental Plan 2000	119
5.1.6	CHCC Local Environmental Plan Amendment 29	127
5.1.7	Hearnes Lake/Sandy Beach Development Control Plan	128
5.1.8	Subdivision DCP	163
5.1.9	Sustainability Criteria of the Draft Mid-North Coast Regional Strategy.	169
5.2	Subdivision Design/Layout and Desired Future Character	175

5.3	Visual Impact	178
5.4	Noise	183
5.5	Infrastructure Provision	186
5.6	Traffic and Access	191
5.7	Hazard Management and Mitigation	195
5.8	Water Cycle Management	201
5.9	Heritage	204
5.10	Flora and Fauna	211
6.0	CONSULTATION	221
7.0	DRAFT STATEMENT OF COMMITMENTS	224
8.0	CONCLUSION	232

DRAWING LIST

Map 1	Overall Concept	De Groot and Benson Sep 2007 Rev H
Map 2	Staging Plan	De Groot and Benson July 2007 Rev G
Map 3	Site Topography	De Groot and Benson July 2007 Rev G
Map 4S	Sewer Concept	De Groot and Benson July 2007 Rev G
Map 4W	Water Concept	De Groot and Benson July 2007 Rev G
Map 5	Overall Constraints	De Groot and Benson July 2007 Rev G
Map 6	Bushfire Control	De Groot and Benson July 2007 Rev G
Map 8	Locality Plan	De Groot and Benson July 2007 Rev G
Map 9	Site Analysis Plan	De Groot and Benson July 2007 Rev G
Map 10	Earthworks	De Groot and Benson July 2007 Rev G

APPENDICES

Appendix 1

Director General's Requirements

Appendix 2

BMT WMB, Revised Stormwater Management Strategy, 45 Hearnese Lake Road, Woolgoolga, July 2008

Appendix 3

Patterson Britton and Partners; 45 Hearnese Lake Road, Woolgoolga Coastline Hazard Definition and Lake Entrance Processes. 2004

Appendix 3A

Worley Parsons; 45 Hearnese Lake Road, Woolgoolga, Updated Climate Change Estimates and Effect on Coastal Hazards, July 2008

Appendix 3B

De Groot and Benson Pty Ltd, Flooding Assessment for Lot 21 Hearnese Lake Road, Woolgoolga, April 2009

Appendix 3C

Worley Parsons; Sandy Beach North Residential Development, Flood Impact Assessment, February 2009

Appendix 4

Holmes and Holmes Geotechnical Assessment for Proposed Residential Development at Hearnese Lake, Woolgoolga 2003

Appendix 5

Eco Logical Australia Pty Ltd 45 Hearnese Lake Road, Woolgoolga, Flora and Fauna Assessment July 2007

Appendix 6

Heggies, 45 Hearnese Lake Road Traffic Noise Assessment. June 2008

Appendix 7

Eco Logical Australia, A Review of the Sainty and Associates (2006) report 'Environmental Constraint Analysis Lot 21 DP 714858, 45 Hearnese Lake Road Woolgoolga'. March 2007

Appendix 8

Anne Harrison – Landscape Architect Landscape Concept Plan & Visual Assessment, 45 Hearnese Lake Road Woolgoolga 2007

Appendix 9

RoadNet Pty Ltd, Traffic Impact Assessment revision, Hearnese Lake Road, Woolgoolga Dec 2007

Appendix 10

Australian Bushfire Protection Planners Pty Ltd, Bushfire Protection Assessment for the Proposed Torrens Title Residential Subdivision, Lot 21 in DP714858, Hearnese Lake, Woolgoolga, Oct 2007

Appendix 11

Jacqueline Collins Consultant Archaeologist, Lot 21 DP 714858 Hearnese Lake Road, Woolgoolga- Aboriginal Cultural Heritage Assessment, December 2007

Appendix 11A

Jacqueline Collins Consultant Archaeologist, Lot 21 DP 714858 Hearnese Lake Road, Woolgoolga- Archaeological Test Excavations, March 2009

Appendix 12

De Groot and Benson Pty Ltd, Lot 21 DP 714858 Hearnese Lake Road, Woolgoolga- Water Supply and Sewerage Infrastructure, October 2007

Appendix 13

Eco Logical Australia, A Response to Ecological Matters Raised in the Department of Planning and Department of Environment and Climate Change Draft Adequacy Review Lot 21 DP 714858, 45 Hearnese Lake Road Woolgoolga. June 2008

ABBREVIATIONS

APZ	Asset Protection Zone
BBK	BBK Development Corporation Pty Ltd
CHCC	Coffs Harbour City Council
DCP	Development Control Plan
EEC	Endangered Ecological Communities
EPAA	Environmental Planning and Assessment Act 1979
EPA	Environmental Protection Authority
EPAR	Environmental Planning and Assessment Regulation 2000
GPT	Gross Pollutant Traps
IPA	Inner Protection Area
ICOLL	Intermittently Closed or Open Lake or Lagoon
LEP	Local Environmental Plan
OSD	On Site Detention
OPA	Outer Protection Area
RTA	NSW Roads and Traffic Authority
SEPP 71	State Environmental Planning Policy No: 71
SEPP Major Projects	State Environmental Planning Policy (Major Projects) 2005

Executive Summary

Coffs Harbour City Council rezoned much of the subject land as Residential 2(E) on 20 April 2000 releasing what was formerly grazing lands for urban use. The NSW Government gazetted State Environmental Planning Policy (Major Projects) 2005 on 25 May 2005 which identified any subdivision comprising more than 25 lots outside of the metropolitan area as being a Major Project.

The Land

The subject site comprises an irregular shaped parcel of land described as:

- Lot 21 DP 714858

The site occupies approximately 5.54ha of land bounded by Hearn's Lake Road to the south, an existing residential subdivision and pasture land to the north and west, and Coastal Littoral Forest and the Pacific Ocean to the east.

The Proposal

The application is for the residential subdivision of the land known as Lot 21 DP714858 Hearn's Lake Road, Woolgoolga. This development will involve a Torrens title residential subdivision comprising 43 allotments (41 residential allotments) and is proposed to be constructed in one stage but released in five stages.

Stage 1 will comprise 10 allotments, 9 being residential allotments varying in size from 537m² to 1,031m² and an allotment containing the stormwater management infrastructure (Lot 10) Lots 10 is proposed to be dedicated to CHCC. Stage 2 will comprise 5 residential allotments varying in size from 711m² to 842m². Stage 3 will comprise 8 residential allotments varying in size from 665m² to 715m². Stage 4 will comprise 11 allotments being 10 residential allotments varying in size from 712m² to 1,093m² and an allotment containing a proposed Environmental

Protection 7(a) zoned land and its buffers (Lot 28). Stage 5 will comprise 9 residential allotments varying in size from 695m² to 1,060m².

The application is a project application and the staging is only intended to facilitate the release of the land over time.

Those parts of the site which are environmentally constrained land are proposed to undergo long term environmental rehabilitation to provide a high quality setting for the development and to enhance the environmental and recreational values of the site and its locality. The entire development has been designed to minimise environmental impact with the use of vegetated swales, bio-filters, rain-gardens and bio-retention basins to prevent pollutants from entering Hearn's Lake and to manage the flow of water leaving the site. All areas of environmental significance on the site have been identified and protected in a single lot (lot 28).

Access to the site will be from Hearn's Lake Road and then to the Pacific Highway. However, in the longer term access will be via a collector road from Hearn's Lake Road to Bosworth Road once residential development utilising Hearn's Lake Road has achieved a threshold.

The site is able to be adequately serviced for sewer, town water, power and telecommunications. Sewer is to be extended along Hearn's Lake Road from the existing rising main on the Pacific Highway. The sewer within the development will be gravity fed to this sewer extension in Hearn's Lake Road. Reticulated water will be provided by a new water main laid within the Hearn's Lake Road Reserve and connected to the existing main on the western side of the Pacific Highway.

The Consent Authority

The proposal is a Part 3A project under the provisions of State Environmental Planning Policy (Major Projects) 2005 (SEPP Major Projects) and the Minister is the consent authority.

The proposed development is made under the subdivision provisions of Coffs Harbour Local Environmental Plan (LEP).

The proposed development is not designated development but in accordance with the provisions of the Environmental Planning and Assessment Act 1979 the proposed development is classified as Part 3A development. Consequently, the Minister is the consent authority for this project. This application responds to the Environmental Requirements issued by the Director-General for this project. The proposal is considered to be consistent with the aims and objectives and the provisions of the LEP and the Hearnese Lake/Sandy Beach Development Control Plan.

The proposed works are considered to appropriately respond to the site constraints and the planning policies at Federal, State and Local Government level guiding the responses to those constraints. The proposed development will have no significant adverse impact upon the micro-climate, air or water quality, noise regime, or general amenity of the locality. Similarly, given the nature of the existing and future surrounding development, and the proposed operations of the site being similar to that in the adjoining residential areas, the proposal is unlikely to result in any adverse amenity impacts on neighbouring properties.

The expected traffic generation of the proposal is considered to be within an acceptable range for the locality and the intended future character of the area. It is not considered to result in any significant adverse impacts on the levels of service of the surrounding road network.

The site is suitable for the proposed development which is considered to have acceptable environmental, social and economic impacts and no significant adverse

impacts on the locality. The proposal is considered to be in the public interest and is recommended for approval in the form proffered.

Consultation

During the preparation of the application State and Local agencies were consulted for comment and input into development of the project. A series of consultation meetings were held with the local community and stakeholder groups which further developed the concept and guided the direction taken in the project and influenced the components included and their timing. Comments from those parties involved have been addressed in the EA and included in the design of the proposal.

Strategic Planning

The site has inherited a complex layering of instruments, policy and strategy at State, regional and local level. Some of these go back in excess of 10 years and were at the very root of coastal planning policy framework which is now in place. The statutory planning section of the report methodically gives consideration to each instrument and going through that process makes it clear that there is a good deal of duplication and repetition between the instruments at various levels.

However, the Hearnese Lake/Sandy Beach Development Control Plan would seem to be the most contemporaneous and relevant instrument which synthesizes what has been learnt from the previous policies with a healthy dose of community participation and contextual specificity.

It is clear that the underlying framework which consistently runs through all of these instruments is a desire to protect environmentally sensitive coastal land, while allowing the opportunity to meet housing demand in a way which is visually unobtrusive yet connected into the existing service and amenity infrastructure.

It is considered that the proposed development is consistent with the layers of State, Regional and Local statutory and strategic frameworks. However, there are a number of matters of strategic importance that have been derogated to the applicant which in fact require attention and action by the Local Authority and State Government in order to facilitate the plan.

Subdivision Design/Layout and Desired Future Character

The proposed subdivision design and layout responds to the buffers adopted by the Hearn Lake/Sandy Beach DCP and those identified on the "Environmental Constraints & Development Potential Map, Lot 21 DP 714858, 45 Hearn Lake Road, Woolgoolga (Sainty and Associates, September 2006). Where development is proposed outside the identified future development potential areas a detailed justification is provided with technical arguments in "A Review of the Sainty and Associates (2006) Report Environmental Constraints Analysis, Lot 21 DP 714858, 45 Hearn Lake Road, Woolgoolga" Eco Logical Australia March 2007.

The proposal comprises a Torrens title subdivision with all of the roads and road reserves constructed to CHCC standards and dedicated to the Council together with the infrastructure on completion. Furthermore, Lots 10 (bioretention facility) and 28 (sensitive vegetation reserve) are proposed to be dedicated to CHCC at no charge by the applicant on completion.

It is considered that the proposal demonstrates an appropriate subdivision design and layout and is satisfactory in terms of desired future character

Visual Impact

A visual impact assessment has been prepared by Anne Harrison
Landscape Architect.

From Hearn's Lake Road views to the site are entirely screened by the area of vegetation growing in association with an adjoining low lying property. This vegetation is to be zoned 7A Environmental Protection by Coffs Harbour City Council as shown in the Hearn's Lake / Sandy Beach Development Control Plan. This vegetation is also mapped as Secondary Koala Habitat and will be maintained if not strengthened by future management regimes. The retention of this vegetation guarantees that the development will always be afforded screening from Hearn's Lake Road and the Pacific Highway.

Due to a combination of topography and vegetation the site cannot be seen from Hearn's Lake Beach, therefore there is no assessable impact of the proposed subdivision. This will not change in the future, as the land in front of the subdivision is either protected as part of the Coffs Coast Regional Park network or as part of the Marine Solitary Islands National Park.

Due to a combination of topography and vegetation the proposed subdivision cannot be viewed from the recreation area. Filtered views from the upper car park area are possible. It will be important to retain existing vegetation and perhaps strengthen this planting to ensure the impacts of the subdivision are minimised in and around the day visitor area. It is not part of this proposal however to put forward plans for the car park and picnic area as it is under State and Local Government management control and beyond the scope of this Landscape Plan.

Filtered views of the high point and ridgeline of the estate are visible at fleeting moments along the Pacific Highway. It is expected that rooflines along the ridgeline will be partially visible from the Pacific Highway but that the impact of this change will not be dominant or in anyway change the essential character of the view as it is experienced now.

The site has some steep slopes that will require sensitive building design to nestle any building development into the topography. The site's visual absorption capacity is low to moderate, as the steep slopes combined with lack of vegetation mean that any form of development will be apparent. The containment of the site on the western boundary by vegetation will help visually contain development within the property. Street tree planting and the proposed detention basin area in the south west corner of the property will also be important to giving a soft vegetated character to the estate. Based on absorption capability alone, development on the site would have a moderate to high impact, however because the site is not readily visible from external areas the overall visual impact is low to moderate. The site has low to moderate visual impact essentially because it cannot be readily seen from any public use areas. Buildings on the ridgeline have the potential to be visually prominent only when viewed internally within the estate or far out to sea.

Noise

A noise assessment report has been prepared by Heggies. The subject site is clearly not affected by road traffic noise emanating from the Pacific Highway during the daytime or at night.

Infrastructure Provision

Water

The provision of water supply to the site is dealt with in the Coffs Harbour City Council Water Supply Infrastructure report. That report investigates the

augmentations required to service the projected growing population for Coffs Harbour City.

For the development and the surrounding area, the report proposes the following:

- Provide a 150mm water main link from the existing 225mm main located on the western side of the Pacific Highway. It will be necessary to underbore the highway to prevent disruption to traffic on the highway.
- The 150mm main is to be extended along Hearnese Lake Road to the development site.
- All internal subdivision pipework to be generally 100mm upvc.
- In addition, a future link to Willis Street is to be provided by others. This would occur with the development of the adjoining parcels of land.

Gravity sewerage

- Either:
 1. Provide temporary pumping station adjacent to south western corner of proposed lot 20 if the site for the permanent pumping station shown in the DSP cannot be acquired. This pumping station is to be decommissioned when main pumping station is constructed by Council in Hearnese Lake Road to service whole Hearnese Lake area.
 2. Provide a permanent pumping station in the road reserve as close as possible to the location shown in the DSP.

- Construct a 150mm gravity sewerage main from the site to the pumping station.
- Internal sewage would be in accord with Council's Subdivision guidelines.

Sewerage Rising Main

The main would be constructed in two stages:

-
- Stage 1 - to run from the pumping station along Hearn's Lake road and the Pacific Highway and connect to existing gravity sewer in Bosworth Road.
 - Long Term – The rising main would be extended to Treatment Plant as per Coffs Harbour City Council Wastewater Treatment and Carrier System Developer Services Plan 2003.

Power and Telecomms

The site is currently served by power and telecommunications. The proposal includes amplification of these existing services to provide for the proposed subdivision.

Traffic and Access

A Traffic Report has been prepared by RoadNet Pty Ltd dated December 2007 giving consideration to the proposed access arrangements and in particular the intersection of Hearn's Lake Road and the Pacific Highway.

The report advises that Information supplied by the RTA indicates that the proposed Pacific Highway bypass may commence in the next 5 to 7 years. It is understood from information provided by Council and the RTA that an interchange may be provided in the vicinity of (but not at) Hearn's Lake Road as part of the Highway Upgrading works.

The Hearn's Lake/Sandy Beach DCP restricts the development of the northern precinct to a maximum of 80 lots until such time as the Pacific Highway by-pass works are complete or an alternate access is provided via Bosworth Road and the Pacific Highway. The subject development being for 41 lots is well within the 80 lot restriction. However, the traffic study has been carried out to determine the safety of the Hearn's Lake Road/Pacific Highway intersection.

The Hearnese Lake Road junction currently operates at a level of service 'B' in normal traffic conditions with an average delay to the right turn movement of 20 seconds in the peak hour.

The Hearnese Lake Road junction would operate at a level of service 'C' in average traffic conditions in 5 years time (year 2008) with an average delay to the right turn movement of 31 seconds in the peak hour. This assumes completion of 41 lots of the subdivision and the current Highway traffic flow would increase by an annual rate of 600 vehicles per day.

In 10 years time under average traffic conditions the junction would operate at a level of service 'C' with an average delay to the right turn movement of 38 seconds. This assumes completion of 180 lots. The amount of traffic that would turn right onto the Highway from Hearnese Lake Road when the subdivision is fully developed is 75 vehicles per hour (just more than one car per minute), which is not a high volume.

The report confirms discussions with the RTA which has agreed to allow access to the subdivision via Hearnese Lake Road while the number of new lots on Hearnese Lake Road remains below 80.

The proposal includes the construction of a bus turning circle at the end of Hearnese Lake Road. A fire trail is proposed beyond the bus turning circle which will continue to give access to the permissive occupancies without formalising the road. The bushfire trail will be kept locked with access only provided for the Bushfire Services and the permissive occupancies.

The beach access is currently provided via an unmade road from the end of Hearnese Lake Road giving access to the beach, picnic area and parking. The proposal does not intend to create any new access points.

Hazard Management and Mitigation

A report has been prepared by Patterson Britton and Partners Pty Ltd giving consideration to Coastal Processes and hazard definition. It is noted that detailed report was commissioned from WBM Oceanics by CHCC for Hearnese Lake and the Environs. The findings of this report informed the strategy adopted in the Hearnese Lake/Sandy Bay DCP which has in turn informed the current proposal.

A study of aerial photography has evidenced that seaward of the subject property the vegetation line has generally migrated seaward since 1943 and south of the subject property is generally stable. There is consistent evidence that Hearnese Lake Beach has been accreting over the past 61 years and the relative stability of Hearnese Lake Beach is expected to continue into the future.

The report noted that none of the permissive occupancies has been under threat from coastal erosion during the past 45 years and that the storm demand at the subject property is particularly low possibly because the beach profiles are relatively flat.

The report gave consideration to the effects of climate change on sea level rises and modelled conditions for the subject site. The study adopted a sea level rise of 0.2m at 2054 and 0.5m at 2104, these values being consistent with the Intergovernmental Panel on Climate Change predictions for upper limit rises.

Consideration has been given to coastal inundation hazard. It is noted that the existing dunes seaward of the proposed development are generally a few metres above 9m AHD. Consequently, the coastal inundation hazard at the subject property is considered to be negligible for the 100 year AFI storm event. There are no minimum habitable floor level requirements for the proposed development from a coastal engineering perspective.

A geotechnical assessment has been prepared by Holmes and Holmes Pty Ltd for the subject site, which considers contamination in particular.

The report notes that the land has previously been used for grazing purposes which is not considered to pose any significant risk of contamination to the soil. The CHCC mapping of former banana plantations indicates there have been no banana plantations on the site. It is considered that the site is suitable for residential use.

A geotechnical assessment has been prepared by Holmes and Holmes Pty Ltd for the subject site, which considers acid sulphate soils in particular.

The Soil Conservation Service 1:25000 Moonee Beach Map identifies the ephemeral wetland as an estuarine swamp with a high probability of acid sulphate soils occurring within one metre of the surface. However, given that this area is to be retained as a wetland and undeveloped the occurrence of acid sulphate soils is seen as irrelevant.

While no other potential area of acid sulphate soils has been mapped the report does note that the poorly drained low lying area on the adjoining site where the Hearn's Lake/Sandy Bay DCP proposes the sewer pumping station to be located may have the potential for acid sulphate soils. The report recommends further testing in this location if the sewer pumping station is located in this position.

A bushfire protection assessment has been carried out by Australian Bushfire Protection Planners Pty Ltd for the site and the proposed development.

The Coffs Harbour Bushfire Prone Land Map indicates that a small portion of bushfire prone vegetation is located within the eastern portion of the site with the site being impacted by the buffer zone to bushfire prone vegetation on the Coastal Dunes to the east, the Littoral Rainforest in the Hearn's Lake Foreshore Reserve

to the south and the Category 1 Bushfire Prone Vegetation on the land to the west of the site.

The site is therefore deemed to be bushfire prone and for the purpose of addressing the provisions of Section 45 – Plan Preparation – Hazards of the *North Coast Regional Environmental Plan*, to be subject to the impacts of a bushfire hazard.

The widths of the Asset Protection Zones provided by the perimeter road/fire trail/Asset Protection Zone and building setback exceed the deemed-to comply setbacks provided by Table A2.5 of *Planning for Bushfire Protection 2006*, required for Level 3 construction of the future dwellings which adjoin the bushfire hazard.

The report makes number of recommendations which are adopted by the proposal in dealing with the risk of bushfire.

The report notes that the site is generally suitable for residential type development from a geotech point of view. The substrata are typically silty clay at a relatively shallow depth on the higher ground. The clays are moderately reactive and warrant a general site classification of M. The site is considered to be satisfactory for residential development from a geotechnical point of view.

Local flooding has been considered in a flood study by Worley Parsons prepared for Hearn Lake in relation to the Sandy Beach North Development. This flood study has been assessed by de Groot and Benson for the subject application.

The report concludes that the subject development would not be affected by flooding concerns because it is located well above the 100 year ARI flood level. The subject site has a residential low point at RL4.5 rising to RL20.0. This is well above the Hearn Lake opening at RL1.5 and the 1:100 flood level of 2.6AHD and the 100 year design recurrence of 2.95AHD.

It is not considered that flooding is a matter for concern relating to the subject site.

Water Cycle Management

A report has been prepared by BMT WMB dealing with the Hydrologic and stormwater quality investigations undertaken for the proposed residential subdivision. The report notes that the stormwater quality management strategy incorporated in the proposal follows the requirements of the Hearnese Lake/Sandy Beach DCP – Appendix 2.

The strategy incorporates treatment measures in series to capture, convey and/or filter stormwater prior to discharge into the receiving waters. The stormwater quality management measures include filter strips, vegetated swales, a combined bioretention/detention basin, rain gardens and rain water tanks to manage common stormwater pollutant loads.

The proposed stormwater quality management strategy was also configured and sized conceptually using MUSIC software and compare against the “modified source” and conveyance control treatment strategy”. The measures are considered to not only meet the standards set in the Hearnese Lake/Sandy Beach DCP – Appendix 2 but to achieve a level of treatment that exceeds current best practice.

The Hearnese Lake/Sandy Beach DCP indicates that a 50m buffer should be provided between a proposed development and a SEPP 26 Littoral Rainforest boundary for the protection of water quality. The subject site would be separated from the development by an ephemeral wetland that intermittently captures and stores runoff prior to infiltration/evaporation. The ephemeral wetland would therefore intercept runoff from the development site preventing it from flowing into

the SEPP 26 Littoral Rainforest. To minimise the potential for elevated loads of stormwater pollutants to be conveyed to the ephemeral wetland, a series of rainwater tanks, vegetated swales and rain gardens are proposed along the rear of Lots 1 – 10. It is considered that the proposed measures in this area would effectively perform the role of water quality buffer for the ephemeral wetland.

It is considered that the proposal meets the requirements of the Hearnese Lake/Sandy Beach DCP – Appendix 2 and exceeds best practice.

Heritage

A report has been prepared by Jacqueline Collins dealing with Aboriginal Cultural Heritage for the site. The site does not contain any listed European Heritage Items nor has a survey of the site shown any matters of significance in terms of European Heritage.

To further assess cultural heritage values and determine whether any previously unidentified sites/places of significance would be affected by the subdivision proposal, consultation was undertaken with the registered Aboriginal Stakeholders, including a field reconnaissance with Mudjay Elders Steven Hart and Terry Carberry on the 7th of November 2007. Apart from the lagoon within proposed Lot 28, no significant sites/places or attachments were reported in the study area itself. Steven Hart and Terry Carberry advised that their primary concern with respect to the proposed development lies in its potential to adversely affect Hearnese Lake and its resources. These Stakeholders regard Hearnese Lake to be part of their 'Dreaming'. The foredune beyond the study area's south-eastern corner was also assessed to have a high level of potential cultural sensitivity. However, the subject section of dune is covered by an existing bungalow and its associated yard and would be neither directly nor indirectly affected by development of Lot 21.

A field survey and assessment of an area that included Lot 21 was undertaken by the consultant with the assistance and input of CHLALC and Yarrawarra Aboriginal Corporation/Garby Elders representatives in 2004. These Stakeholders advised that further field survey of Lot 21 was not warranted or required, and that they endorsed the 2004 recommendation for subsurface investigation of the level terminal end of the Lot 21 ridge crest.

Given that they were not involved in the 2004 field survey or assessment, a general field inspection of Lot 21 was conducted with Mudjay Elders Stakeholders Steven Hart and Terry Carberry on the 7th of November 2007. As a result of this inspection, Steven Hart and Terry Carberry concluded that Lot 21 would be unlikely to contain significant archaeological sites owing to the close proximity of sensitive dune landforms. The inspection undertaken with the Mudjay Elders confirmed that exposure and visibility conditions have not improved since 2004, and that any further detailed survey of Lot 21 would be similarly unproductive and arrive at the same conclusions and management recommendations as previously reached.

An identified natural mythological site (#22-1-232) extends into the north-eastern corner of Lot 21. This area comprises a back-barrier lagoon, which along with its surrounding wetlands and banks would be rehabilitated and preserved as an area of Environmental, Habitat and Catchment Protection (proposed Lot 28) within the residential subdivision context. Aboriginal Stakeholder advice indicates that the significant values attached to this site would not be compromised providing proposed Lot 28 is spared any direct or indirect development disturbance or contamination.

With the possible exception of the lagoon/wetland to be preserved within proposed Lot 28, the study area has been cleared of its original vegetation and no longer offers flora or fauna of Aboriginal resource use value. However, Hearn's Lake to the south has been associated with historical camping and the on-going use of wild resources, and is held to be a significant landscape feature in its own right.

Preservation of the cultural heritage values of Hearn's Lake will be contingent upon the minimisation or avoidance of pollution effects associated with the Lot 21 development.

The site #22-1-234 artefact scatter recorded on a ridge crest 500 metres north-west of Lot 21 is considered likely to be associated with transit activities. The existence of this site raises the possibility that additional undetected artefact scatters could occur along other reasonably level and intact sections of the same ridgeline. This ridgeline extends through Lot 21 and terminates near the southern bank of the lagoon/wetland, which forms part of a registered natural mythological site (#22-1-232).

Owing to the gradient of most of the ridgeline and European modifications that have occurred, only the level terminal end (which has been cleared and supports grass cover and some small regrowth trees) is considered to have any substantial archaeological potential. This potential was recognised in 2004, when it was recommended that the subject section of crest be further investigated to determine its archaeological status. Given the erosional soil conditions, it was suggested that this investigation could be effectively achieved by 'scraping off' the grass cover with a suitable machine to reveal the ground surface and facilitate a more thorough inspection.

This investigation was undertaken during February 2009. The stakeholders advised that their cultural concerns have been satisfactorily addressed and that the development be allowed to proceed without further Aboriginal cultural heritage constraints.

It is considered that the proposal appropriately addresses the Aboriginal and European Cultural Heritage of the site.

Flora and Fauna

A Flora and Fauna report has been prepared for the development by Eco Logical Australia dated July 2007.

The data search for TSC Act and EPBC Act threatened species, populations and communities produced a total of 52 threatened fauna species and 16 threatened plant species known to occur, or considered likely to occur, in the study area (note that fish, sea birds, marine mammals and marine reptiles were excluded from this search). These species are listed, with those considered likely or potentially to occur on, or utilise, the subject site (based on field-based habitat assessment), highlighted in bold.

A total of 124 plant species was recorded during a traverse of the subject site. In comparison, JWA (2003) recorded 81 species. Of these, 32 (26%) were introduced species, the majority of which were recorded in Areas 1 and 2. A list of plant species recorded on the subject site, and the assessment area in which they were recorded, is provided. Note that it is likely that not all plant species present on the subject site were recorded, although the likelihood is low considering that some level of flora survey has now been carried out on the subject site across all seasons.

A thorough search of the subject site located one threatened plant species, Austral Toadflax *Thesium australe*. A subsequent detailed search for Austral Toadflax on the subject site revealed approximately 700 plants in eight discrete patches in the south-eastern sector of the site.

The following four Endangered Ecological Communities (EECs) were recorded on the subject site:

-
1. Swamp sclerophyll forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions (SSF EEC). This EEC is represented on the subject site by community 3.2.4.1 Broad-leaved Paperbark Forest.
 2. Freshwater wetlands on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions. This EEC is represented on the subject site by Freshwater Wetland.
 3. Littoral Rainforest in the NSW North Coast, Sydney Basin and South East Corner bioregions. This EEC is represented on the subject site by Littoral Rainforest Regeneration.
 4. Sub-tropical Coastal Floodplain Forest of the NSW North Coast bioregion (SCFF EEC). This EEC is represented on the subject site by Forest Red Gum / Broad-leaved Paperbark / Swamp Oak / Swamp Box Remnant Forest.

The subject site contains potential habitat for 26 threatened fauna species, as listed. The remnant vegetation communities may provide foraging and shelter habitat for some of the threatened species that are considered likely to occur there, but the subject site supports very few, if any, hollow-bearing trees. The site's value as roosting and breeding habitat for hollow-dependent species is, therefore, negligible. However, the site may provide seasonal foraging for mobile hollow-dependent species in the local area.

One threatened fauna species, Wallum Froglet *Crinia tinnula*, was recorded on the subject site. Approximately six individuals were heard calling in and adjacent to the freshwater wetland in the eastern sector of the subject site.

Examination of the trunks and the ground beneath the crowns of Koala food trees on the subject site failed to locate Koala scratches or scats. No koalas were recorded during fauna survey. Lunney *et al.* (1999) reports that koala records are concentrated in the south-east of Coffs Harbour Shire, with a significant drop-off in Koala numbers north from Korora on the coastal strip. It is therefore considered

that the subject site constitutes very low quality Koala habitat, although it does support known Koala food trees.

The report concludes that a number of threatened species and communities were identified on the subject site. An assessment of the potential impact upon these species and communities of a proposed residential subdivision concluded that a number of ameliorative measures were required in order to meet ecological objectives for the site.

It is considered that the proposed measures will ensure the protection, persistence and ongoing viability of those threatened species and communities known to occur within and adjacent to the subject site.

Justification for the Project

The background studies and site investigations have all had a significant influence in guiding and shaping the outcome of the proposed development.

The proposal is consistent with the relevant Commonwealth and State Legislation, SEPP SL, SEPP 71, SEPP Major Projects, North Coast Regional Strategy, CHCC LEP's and the Draft Amendment 29.

This EA demonstrates that the proposal is consistent with the planning framework and housing within a rapidly growing community. The EA addresses key environmental issues relating to flooding impacts, water quality, flora and fauna, bushfire risk and cultural heritage. The Project delivers an environmentally responsible and sustainable outcome that successfully addresses each of these inter-related environmental, social, community and economic issues.

Certification by Author

Part 3A Assessment prepared under the Environmental Planning and Assessment Act 1979.

Environmental Assessment prepared by:

Name: Andrew David Darroch of Mersonn Pty Ltd
Qualification: BA (Env. Sc.) MCRP MPIA
Address: 6/20 Wylde Street, Potts Point
NSW 2011

Project to which Part 3A applies:

Project: Torrens title residential subdivision containing 43 allotments (being 41 residential allotments). The proposal includes the construction of the roads, sewer and water infrastructure and associated bulk earthworks.

Land to be developed: 45 Hearnese Lake Road, Woolgoolga

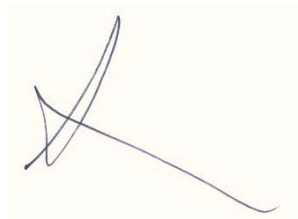
Lot & DP: Lot 21 DP714858

Applicants Name: BBK Development Corporation Pty Ltd

Applicants Address: c/- Mersonn Pty Ltd
6/20 Wylde Street
Potts Point NSW 2011

Declaration: I certify that I have prepared the contents of this document and to the best of my knowledge the assessment:

-
1. has been prepared in accordance with the requirements of Part 3A and the Regulations; and
 2. does not contain false or misleading information.

A handwritten signature in blue ink on a light yellow background. The signature is stylized, starting with a small loop, followed by a large, sweeping 'A' shape, and ending with a long, horizontal stroke that tapers off to the right.

Signature:

Name: Andrew D. Darroch
Date: April 2009

Director General's Environmental Assessment Requirements		
	KEY ISSUE	REFERENCE IN REPORT
1.	An Executive Summary	Following TOC
2.	An outline of the scope of the project including: - Any development options; - 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; - Outline of the staged implementation of the project, if applicable.	Section 3 Section 3.2 Section 3.1, 3.2, 3.3,3.4,3.5
3.	A thorough site analysis and description of existing environment.	Section 2.0
4.	Consideration of any relevant statutory and non-statutory requirements and identification of any non-compliances with such provisions, in particular relevant provisions of Environmental Planning Instruments, Regional Strategies (including draft Regional Strategies) and Development Control Plans.	Section 4.0
5.	Consideration of impacts, if any, on matters of national environmental significance under the Commonwealth Environment Protection and Biodiversity Act 1999	Section 5.1
6.	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.	Section 3.1-3.2 Section 7.0 Section 8.0
7.	Plans and Documents	Submitted with Application
8.	A Quantity Surveyor's certificate of cost to verify the capital investment value of the project.	Submitted with Application
10.	A detailed assessment of the key issues and a table outlining how and where in the EA document these key issues and requirements have been addressed.	Executive Summary

	KEY ISSUE	REFERENCE IN REPORT
1.	1. Strategic Planning - Justify the proposal with reference to relevant local, regional and State planning strategies. Provide justification for any inconsistencies with these planning strategies. - Demonstrate consistency with the Sustainability Criteria set out in the relevant Regional Strategy (including draft Regional Strategies).	Section 5.1
2	2. Subdivision Design/Layout and Desired Future Character - Demonstrate consistency of the proposal with the <i>'Environmental Constraints & Development Potential Map, Lot 21 DP 714858, 45 Hearn's Lake Road, Woogoolga attached to Environmental Constraint Analysis, Lot 21 DP 714858, 45 Hearn's Lake Road, Woogoolga, (Sainty and Associates, September 2006)</i>. Should development be proposed outside the identified future development potential areas, then suitable justification and sound technical arguments are required. - Demonstrate the consistency of the proposed subdivision design and layout with relevant policies and guidelines and with other expected residential development in the locality. - Identify the type of subdivision proposed ie. community, Torrens, strata. - Outline the long-term management and maintenance of any areas of open space or conservation including ownership and control, management and maintenance funding, public access, revegetation and rehabilitation works and bushfire management.	Section 5.2
3	3. Visual Impact Address the visual impact of the proposal in the context of the surrounding environment/development and relevant mitigation measures.	Section 5.3
4	4. Noise Address impacts from road traffic noise (specifically Pacific Hwy) and if relevant provide details of appropriate mitigation measures.	Section 5.4
5	5. Infrastructure Provision - Address existing capacity and requirements of the development for infrastructure provision in consultation with relevant agencies. Describe staging, if any, of infrastructure works. - Address and provide the likely scope of any planning agreement and/or developer contributions with Council/ Government agencies.	Section 5.5
6	6. Traffic and Access - Address the traffic impacts of the proposal having regard to the following matters: - Any impacts of the RTA's proposed Pacific Highway upgrade, Sapphire to Woolgooga. - Limitations nominated in Council's Hearn's Lake/Sandy Beach DCP on access to Pacific Highway pending completion of alternative access via Bosworth Road. - Address access requirements via Hearn's Lake Road in consultation with Crown Lands NSW, including access for adjacent permissive occupancies. - Address public access requirements to Coffs Coast Regional Park and the adjacent beach, including controlled access routes, and parking facilities.	Section 6

7	7. Hazard Management and Mitigation • <u>Coastal Processes</u> - Address coastal hazards and consider impacts associated with coastal erosion, climate change, sea level rise, potential changes to the coastal hazard zone and increased beach berm height. • <u>Contamination</u> - Identify any contamination on site and appropriate mitigation measures. • <u>Acid Sulphate Soils</u> - Identify the presence and extent of acid sulphate soils on the site and, where relevant, appropriate mitigation measures. • <u>Bushfire</u> - Address the requirements of Planning for Bush Fire Protection 2006 (RFS). • <u>Geotechnical</u> - Provide an assessment of any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations that address these limitations. • <u>Flooding</u> - Provide an assessment of any flood risk on site. Demonstrate the proposal will have no adverse impact on flood behaviour in the catchment and that flood free access will be provided. Consider the potential impacts of any filling on the flood regime of the site and adjacent lands.	Section 5.7
8	8. Water Cycle Management • Outline measures for Integrated Water Cycle Management (including stormwater) based on Water Sensitive Urban Design principles which address impacts on the surrounding environment, drainage and water quality controls for the catchment, and erosion and sedimentation controls at construction and operational stages. • Assess the impacts of the proposal on surface and groundwater hydrology and quality during both construction and occupation of the site.	Section 5.8
9	9. Heritage • Identify whether the site has significance to Aboriginal cultural heritage and identify appropriate measures to preserve any significance (Aboriginal community consultation should be undertaken in accordance with relevant guidelines). • Identify any items of European heritage significance and, where relevant, provide measures for the conservation of such items	Section 5.9
10	10. Flora and Fauna • Outline potential impacts on aquatic and terrestrial flora and fauna and their habitats (within the meaning of the <i>Threatened Species Conservation Act 1995</i> and the <i>Fisheries Management Act 1994</i>). Provide measures for their conservation, where relevant. • Outline measures for the conservation of existing wildlife corridor values and/or connective importance of any vegetation on the subject land. • Address measures to protect and manage adjacent aquatic habitats including Hearn's Lake, including impacts due to increased recreational usage/visitation.	Section 5.10

	You should undertake an appropriate and justified level of consultation with the following agencies during the preparation of the EA: (a) <i>Agencies or other authorities:</i> • Coffs Harbour City Council; • Department of Environment and Climate Change; • Department of Water and Energy; • Department of Primary Industries; • Department of Lands; • NSW Rural Fire Service; • Roads and Traffic Authority; • Solitary Islands Marine Park Authority; • Local Aboriginal Land Council/s and other Aboriginal community groups; and • Relevant infrastructure providers. (b) <i>Public:</i> Document all community consultation undertaken to date or discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy. The consultation process and the issues raised should be described in the EA.	Section 6.0
--	--	-------------

1.0 INTRODUCTION

1.1 Background

Coffs Harbour City Council rezoned much of the subject land as Residential 2(E) on 20 April 2000 releasing what was formerly grazing lands for urban use. The NSW Government gazetted State Environmental Planning Policy (Major Projects) 2005 on 25 May 2005 which identified any subdivision comprising more than 25 lots outside of the metropolitan area as being a Major Project.

The subject land has been used for grazing for more than 50 years and was purchased by the current owners BBK Development Corporation Pty Ltd ATF BBK Development Trust, BBK Development Corporation Pty Ltd ATF BBK Investment Trust, Barry France, Kerry Shambly and Barry Mann in 2003.

The proposal is a Part 3A project under the provisions of State Environmental Planning Policy (Major Projects) 2005 (SEPP Major Projects) and the Minister is the consent authority.

The application is for the residential subdivision of the land known as Lot 21 DP714858 Hearnese Lake Road, Woolgoolga. This development will involve a Torrens title residential subdivision comprising 43 allotments (41 residential allotments) and is proposed to be constructed in one stage but released in five stages.

Stage 1 will comprise 10 allotments, 9 being residential allotments varying in size from 537m² to 1,031m² and an allotment containing the stormwater management infrastructure (Lot 10) Lot 10 is proposed to be dedicated to CHCC. Stage 2 will comprise 5 residential allotments varying in size from 711m² to 842m². Stage 3 will comprise 8

residential allotments varying in size from 665m² to 715m². Stage 4 will comprise 11 allotments being 10 residential allotments varying in size from 712m² to 1,093m² and an allotment containing a proposed Environmental Protection 7(a) zoned land and its buffers (Lot 28). Stage 5 will comprise 9 residential allotments varying in size from 695m² to 1,060m².

Those parts of the site which are environmentally constrained land are proposed to undergo long term environmental rehabilitation to provide a high quality setting for the development and to enhance the environmental and recreational values of the site and its locality. The entire development has been designed to minimise environmental impact with the use of vegetated swales, bio-filters, rain-gardens and bio-retention basins to prevent pollutants from entering Hearnese Lake and to manage the flow of water leaving the site. All areas of environmental significance on the site have been identified and protected in a single lot (lot 28).

Access to the site will be from Hearnese Lake Road and then to the Pacific Highway. However, in the longer term access will be via a collector road from Hearnese Lake Road to Bosworth Road once residential development utilising Hearnese Lake Road has achieved a threshold.

The site is able to be adequately serviced for sewer, town water, power and telecommunications. Sewer is to be extended along Hearnese Lake Road from the existing rising main on the Pacific Highway. The sewer within the development will be gravity fed to this sewer extension in Hearnese Lake Road. Reticulated water will be provided by a new water main laid within the Hearnese Lake Road Reserve and connected to the existing main on the western side of the Pacific Highway.

The application is a project application and the staging is only intended to facilitate the release of the land over time.

1.2 Application History

Coffs Harbour City Council (CHCC) rezoned the subject land from Rural to Residential 2E under the provisions of the CHCC Local Environmental Plan 2000 (LEP 2000). The Residential 2E Tourist Zone aims to provide for tourist accommodation and recreational land uses.

On 26 November 2003 BBK lodged a Master plan application with the then Minister for Infrastructure, Planning and Natural Resources under the provisions of State Environmental Planning Policy No: 71 (SEPP 71) for a residential beachside community. The proposal comprised a mix of traditional Torrens title lots, medium density, tourist accommodation and recreational facilities.

The Master plan application was refused by the Minister on 20 July 2005 on a variety of grounds, the not least of which being, that the Master plan proposed development beyond the boundaries of the site. The main focus of the reasons for refusal related to the Hearnese Lake ICOLL and that insufficient study and information was available to determine the impacts of the proposed development on this sensitive system.

On 8 December 2005 CHCC adopted a new DCP which applied to the site known as the Hearnese Lake/Sandy Beach Development Control Plan. The DCP covered a broad area which included the subject site but included specific site density requirements for the subject site of 49 lots.

CHCC exhibited draft Amendment 29 to the CHCC LEP on 6 February 2006 which proposed to rezone part of the land from Residential 2E Tourist Development to Environmental

Protection 7A. This amendment has not been gazetted and does not appear to have progressed since exhibition.

Following lengthy consultation with CHCC, BBK lodged a Staged development application for the subdivision of the land into 24 lots in the first stage and a long term concept plan for the redevelopment of the site on 16 June 2006.

On 4 July 2006 CHCC wrote to the applicant raising concerns with the adequacy of the application submitted and advised that it would not begin the notification process until the inadequacies had been addressed. A prolonged period of correspondence was entered into between the Council and the applicant on various aspects of the application.

The submission of the draft Amendment 29 to the Minister initiated a study undertaken on behalf of the Department of Planning by Sainty and Associates Pty Ltd to consider and identify high conservation lands relating to 3 major developments in the immediate vicinity. The resulting Sainty Report recommended specific buffers on the subject site.

A subsequent review of the Sainty report was prepared by Eco Logical Australia which challenges aspects of the Sainty Report and recommends alternate buffers for the site.

In April 2007 Mersonn Pty Ltd was retained by BBK to review the Staged Development Application before CHCC. Mersonn wrote to the Minister under the provisions of Clause 6 of Part 3A of the Environmental Planning and Assessment Act to confirm that the application should in fact fall within the provisions of Schedule 2 of the SEPP which describes forms and scale of developments that qualify as Major Projects on specified sites. SEPP (Major Projects) was gazetted on 25 May 2005 and identifies which types of development are considered state significant development. The proposal was believed to qualify as a Major Project under Schedule 2 by

virtue of the fact that it occurs within a Coastal Area and involves subdivision of land in a residential zone into more than 25 lots (Schedule 2, Cl.1 (1) (i)).

The applicant wrote to the Department of Planning requesting the Director General's requirements for the project. The applicant received the Director-General's requirements in accordance with the provisions of SEPP (Major Projects) on 24 August 2007. A copy is attached in Appendix 1.

This Environmental Assessment has been prepared to address these requirements.

The Staged development application before CHCC has been withdrawn by the applicant.

2.0 SITE ANALYSIS

2.1 Property Description and Area

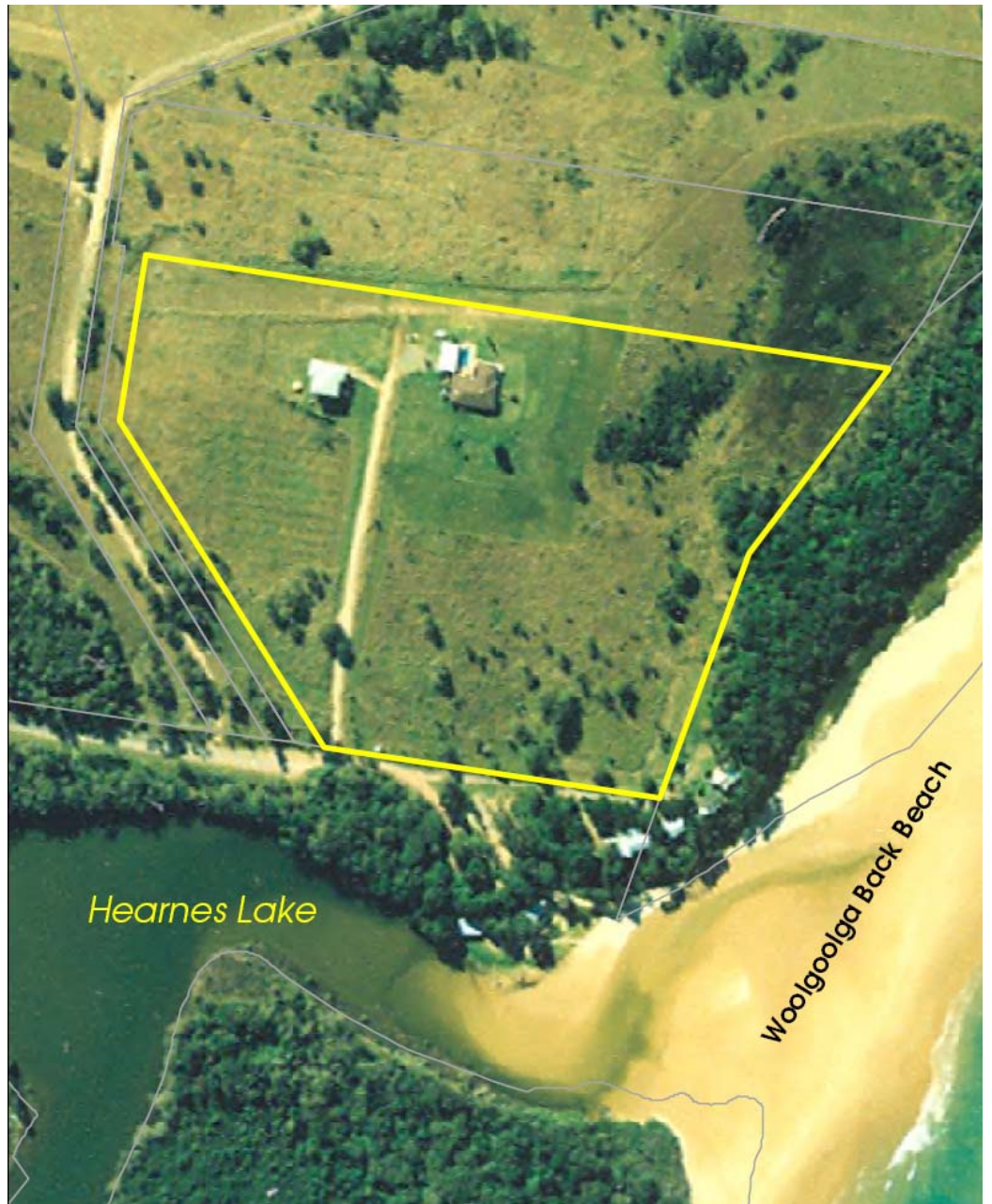
The subject site comprises an irregular shaped parcel of land described as:

- Lot 21 DP 714858

The site occupies approximately 5.54ha of land bounded by Hearn's Lake Road to the south, an existing residential subdivision and pasture land to the north and west, and Coastal Littoral Forest and the Pacific Ocean to the east.

Boundary	Dimensions
North	335m
North-West	75m
South-West	172m
South	151m
South-East	115m
North-East	106m

To the north are three privately owned residential allotments with access to Hearn's Lake Road via separate access handles which abut the western boundary of the subject site. This can be seen on the following aerial photograph.

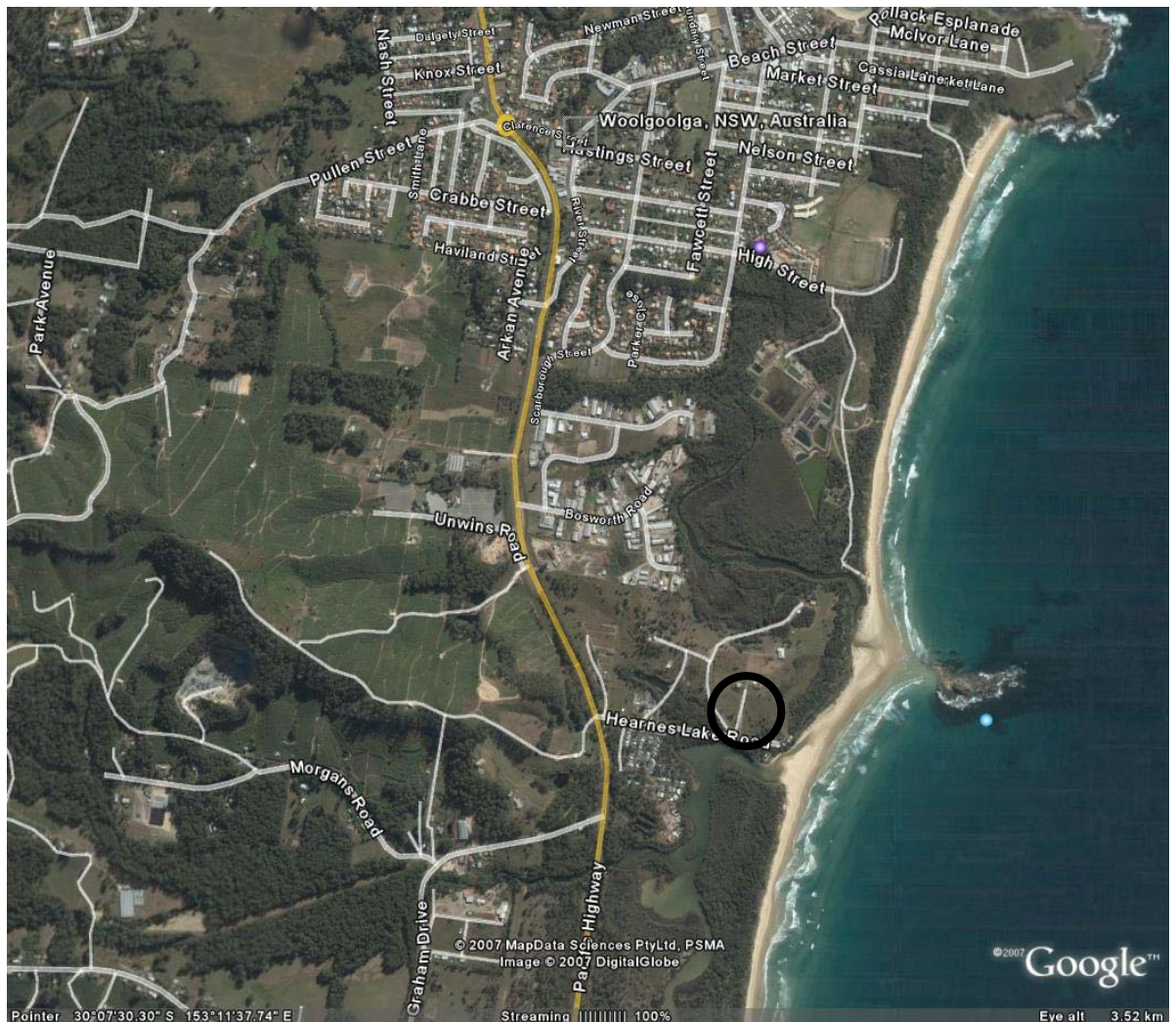


The site rises approximately 16m from the southern-western boundary adjoining Hearn's Lake Road RL4.0 to a low knoll in the central northern part of the site which is generally at RL20.0. Hearn's Lake Road rises from west to east from RL4.0 to RL9.0.

The site slopes west, south and east from the central northern knoll generally between 5 and 10% with limited steeper slopes east where it falls to the Littoral Forest.

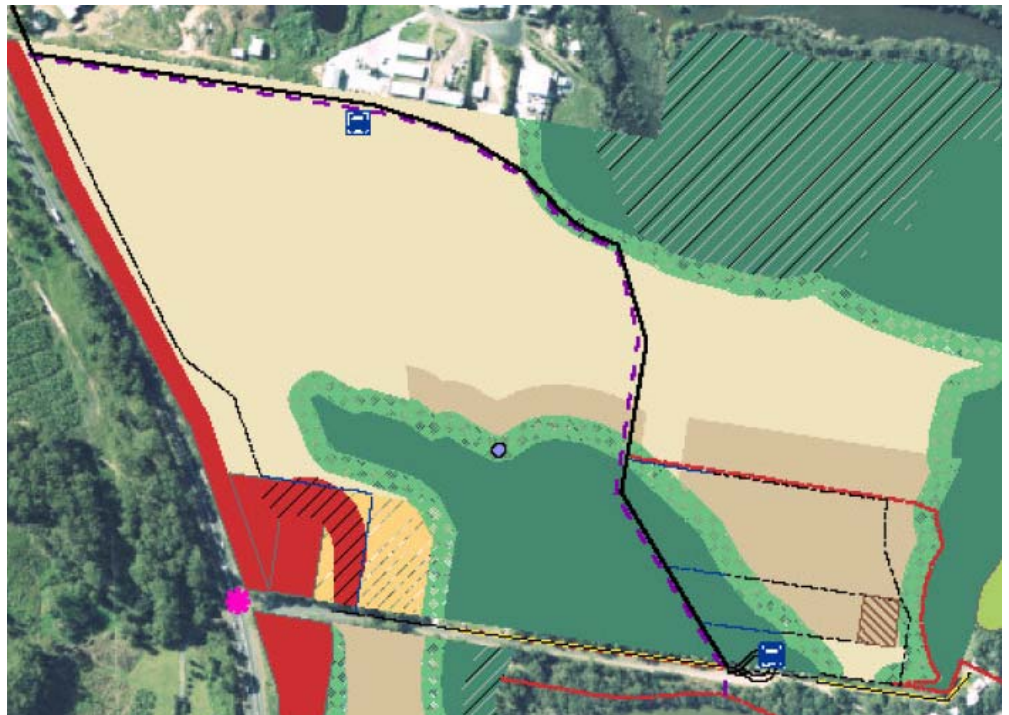
The land is generally cleared grazing land with the exception of the vegetated lands on the eastern boundary of the site. Two dwellings currently occupy the flat area on the crest of the knoll. An unsealed driveway services the dwellings with access from Hearnese Lake Road.

2.2 Location and Context





The subject site is located approximately two kilometres south of the Woolgoolga Town Centre on the eastern side of the Pacific Highway. The subject site is located 400m east of the Pacific Highway and Hearnese Lake Road intersection. Hearnese Lake Road is currently the only vehicular access to this area. A future collector road is proposed to minimise local trips on the Pacific Highway but Council planning instruments make provision for an increase in 80 dwellings before construction of this Collector Road is required.



The proposed collector road is shown dotted to the west of the subject site.

2.3 Surrounding Land Uses and Services

The subject site is located on the southern edge of the township of Woolgoolga. It is separated from the existing residential development to the north by land zoned and used for industry. However, the land to the immediate north of the site (and its adjoining residences) is an estuarine wetland system.

Immediately to the south of the site is the Hearnese Lake ICOLL (Intermittently Closed and Open Lake or Lagoon). A small area of land to the west of the ICOLL is used as a caravan park so that future residential land south of the Woolgoolga township is limited in supply.

The subject site forms part of a larger release area zoned 2E Residential Tourist most of which lies to the

west and north-west of the subject site. This larger area has been the subject of Preliminary Assessment under Part 3A for the site known as Lot 4 DP612977 1 Hearn's Lake Road for a subdivision of Residential Tourist 2E land into approximately 90 lots. While the Director General's requirements were issued in October 2006 no Part 3A application has been submitted.

The land to the south of Hearn's Lake is the subject of a Preliminary Assessment under Part 3A for the site known as Lot 2 DP813954 Sandy Beach North for a subdivision of Residential Tourist 2E and Residential 2 A land into approximately 300 lots. While the Director General's requirements were issued in October 2006 no Part 3A application has been submitted.

The land to the west of the subject site beyond the Pacific Highway is zoned rural and has extensive tertiary habitat reservations.

2.4 Site Conditions

The site has been significantly altered from that which would have originally existed as a result of 50 years of grazing. A knoll dominates the north sector while the land falls steeply to the ephemeral wetland in the north-east and the Littoral Forest beyond. The western and southern portion of the land has been modified over time through drainage and earth works but generally presents as gently sloping cleared grazing lands.



View from the top of the knoll looking south. The tree line in the distance shows the alignment of Hearnes Lake Road.



View from the knoll looking north-east at the ephemeral wetland and littoral forest beyond.

Two dwellings have been constructed on the land near the flatter section at the top of the knoll. The houses are in close proximity to the dwellings on the adjoining sites to the north which all take advantage of this high ground and the sweeping views it provides of the ocean.



Two existing dwellings at the top of the knoll on the northern part of the site



Adjoining dwellings to the north

Hearnes Lake Road, which forms the southern boundary to the site, becomes an unsealed road from the south-western corner of the site. The road becomes a track giving access to the permissive tenancies on the Crown Land beyond.



View west along southern boundary and Hearnes Lake Road extension.



View west from the south-western corner toward the sealed portion of Hearn's Lake Road.

The western boundary of the site adjoins the driveways and access handles of the dwellings located to the north of the subject site.



The site has been mostly cleared over time and aside from a few scattered shade trees the only significant vegetation is limited to the eastern edge of the site on the downhill slopes.



Remnant vegetation on east facing slopes.

2.4.1 Meteorological data

The climate of which applies to the subject site is classified as having warm humid summers and mainly reliable rainfall in summer.¹ Rainfall is seasonal with winter/spring having the least rain and summer/autumn the most. Mean rainfall varies from a minimum of 61mm in September to a maximum of 243mm in March with an annual average of 1668mm. The number of raindays throughout the year is 4 – 10 per month, with an annual total of 85.8 days. These are long term averages and do not reflect the typical drought/flood cycle of the Australian weather pattern.

The warmest months are December, January and February with mean daily temperatures of approximately 26⁰C. June, July and August are the coldest months with mean daily minimum temperatures of approximately 7.5⁰C.

The nearest meteorological monitoring station is Coffs Harbour Meteorological Office 14km to the south-east of the subject site. On an annual basis the predominant winds in the area are from the south-west sector with speeds of between 20 and 30km/hr. Winds from the north in excess of 10km/hr (most likely to increase any effect from the industrial development to the north were restricted to around 5% of the time.

2.4.2 Topography

The site contains a high point in the central north with an RL20. The land plateaus somewhat to the west but then falls to the west, south and east. A low spur occurs on the eastern boundary forming the drainage to the ephemeral wetland to the north-east.

The gradients across the majority of the site are generally quite gentle and in the 0 – 15% range. The greater slopes of up to 30% occur on the eastern side of the property and form the drainage towards the ephemeral wetland.

The land drains naturally to the eastern catchment and to a secondary catchment in the south-western corner.

2.4.3 Geomorphology

¹ Bureau of Meteorology (1991) Climatic Survey, New South Wales, AGPS Canberra

The site forms part of the Megan Soil Landscape, an erosional landscape of rolling hills based on Carboniferous metasediments of the Coffs Harbour Association.² The metasediments have decomposed to produce strongly acidic podzolic soils which are characterised by erodable hard setting soils. These are typically silty clays in the upper slopes with the lower slopes typically comprising high plasticity clays overlain with a silty surface layer.

Accessible stone material is largely restricted to laterite gravel and poorly cemented angular fragments of mudstone and shale. The land is dominated by cleared grasslands much of which appears to be ploughed and grazed in the past.

2.4.4 Flooding and Coastal Inundation

The natural drainage pathways within the site are directed by the central ridge through the site. Approximately, 60% of the runoff is directed west and south into an existing table drain in Hearnese Lake Road. This table drain conveys water westerly to a box culvert that drains to Hearnese Lake. Approximately, 30% of runoff is directed to an ephemeral wetland located adjacent to the SEPP 26 Littoral Rainforest. The remaining 10% drains overland in a northerly direction to the adjoining properties.³

Coastal inundation is the flooding of coastal lands by ocean waters during severe storm events. Elevated still water levels arise from wind setup, barometric setup and wave setup. Individual waves cause further

² Jacqueline Collins; Development Control Plan Hearnese Lake, NSW Mid-north Coast Aboriginal Heritage Assessment 2004 p4.

³ WBM Oceanics Australia; 45 Hearnese Lake Road, Woolgoolga 2006 p3.

temporary water level increases due to wave run-up or uprush. The wave run-up value calculated by Patterson Britton and Partners for the local conditions is RL 5.8m AHD.⁴ At the subject property existing dune levels seawards of the proposed development are RL9m AHD. Consequently, the coastal inundation hazard for the subject property is considered to be negligible for the 100 ARI storm event.⁵ Consequently, no minimum habitable floor levels are required from the point of coastal inundation.

2.4.5 Soil Types and Properties

Generally the site presents as suitable land for residential development with substrata typically a silty clay soil. The clays are considered to be moderately reactive and warrant a site classification of Class M (A.S.2870) for residential building work. The lower slopes tend to comprise an accumulation of erosion material resulting in a silty surface which readily takes up water becoming wet and soft after prolonged wet periods. However, site development drainage works would modify this classification.⁶

Most of the land has been used for grazing purposes which is not considered to pose any significant risk of contamination to the soil. The Coffs Harbour City Council mapping of former banana plantations indicates that there have been no banana plantations east of the highway in this area.

⁴ Patterson Britton and Partners; 45 Hearnese Lake Road, Woolgoolga Coastline Hazard Definition and Lake Entrance Processes. 2004 p63.

⁵ Ibid.

The Soil Conservation Service 1:25000 Moonee Beach Map identifies the ephemeral wetland in the north-east of the site as an estuarine swamp with high probability of acid sulphate soils occurring within 1m of the surface. If this area is retained, undeveloped, as a wetland then this occurrence would be irrelevant.

Homes notes two areas of slope risk on the eastern part of the site where a steep escarpment has formed along the former shoreline.⁷ The sea eroding the toe of this ridge has caused collapse of the slope to form the steep escarpment and the shoreline has then receded with time. Weaker beds in the escarpment have slumped forming a moderately unstable zone in a limited area while most of this slope is designated as low risk of slope instability provided good practices of hillside construction are observed. Significant earthworks and public roads should avoid this topography, lots should run up and down the slope and drainage should be devised to avoid ponding water on or above the slope.⁸

2.4.6 Ecological Information

Flora

A total of 124 plant species were recorded during a traverse of the subject site of which 32 (26%) were introduced species.⁹ While the site is considered to contain potential habitat for seven threatened plant species only one, Austral Toadflax *Thesium australe* has been identified.¹⁰ A detailed search of the site

⁶ Holmes and Holmes Geotechnical Assessment for Proposed Residential Development at Hearn's Lake, Woolgoolga 2003 p4.

⁷ Ibid. p6

⁸ Ibid. p7.

⁹ Eco Logical Australia Pty Ltd 45 Hearn's Lake Road, Flora and Fauna Assessment July 2007 p11

¹⁰ Ibid. p11

revealed approximately 700 plants in 8 discrete patches in the south-east of the site.

Six vegetation communities have been identified on the site. More than 80% of the site is slashed Kangaroo Grass/Broad-leaved Paspalum/Pigeon Grass Grassland created through the removal of the over storey and the management of the land as grazing. This community is not considered to be of conservation significance however in limited areas it does constitute habitat for the threatened plant *Thesium australe*.¹¹ The remaining 5 communities occur on the eastern part of the site in the vicinity of the freshwater Ephemeral Wetland and are described by Eco Logical Australia¹².

A total of four Endangered Ecological Communities were recorded on the subject site all in the eastern sector. These are listed as Broad-leaved Paperbark Forest, Freshwater Wetland, Littoral Rainforest Regeneration and Forest Red Gum/Broad-leaved Paperbark/Swamp Oak/ Swamp Oak Remnant Forest.¹³

Fauna

The subject site contains potential habitat for 26 threatened fauna species but because of very few hollow-bearing trees the site is considered sub-optimal habitat for microchiropteran bats.¹⁴ One threatened fauna species, Wallum Froglet *Crinia tinnula* was recorded on site in the freshwater wetland.¹⁵

No koalas nor scratches or scats were recorded on site. The subject site is considered to constitute very low quality koala habitat.¹⁶

¹¹ Ibid. p15

¹² Ibid. p15

¹³ Ibid. p15

¹⁴ Ibid. p16

¹⁵ Ibid. p16

¹⁶ Ibid p18

2.4.7 Acoustic Environment

The proposed site is located approximately 380m from the Pacific Highway at its closest boundary (west). A Road Traffic Noise Assessment has been carried out for the future residential site with noise monitoring undertaken and Road Traffic Noise Modelling to predict noise levels.¹⁷ The study showed that noise levels on the western boundary of that site did not exceed 50dBA.¹⁸ The study included consideration of the RTA Sapphire to Woolgoolga Pacific Highway Upgrade and the relevant figures are annexed to the report by Heggies. Consequently, the subject site which has its nearest boundary more than double the distance further east is not considered to be adversely effected by Road Traffic Noise.

2.4.8 Improvements and Services

The site currently accommodates two dwellings located in the northern part of the site making use of the low knoll to gain views. An unsealed driveway provides access to the dwellings from the unmade portion of Hearnese Lake Road.

The site is not sewered nor is it provided with reticulated water services. Power and telephone are currently provided to the site.

¹⁷ Heggies, Hearnese Lake Road Road Traffic Noise Assessment. 2008 p8

¹⁸ Ibid. P10

3.0 PROJECT DESCRIPTION

3.1 Introduction

The application is for the residential subdivision of the land known as Lot 21 DP714858 Hearn's Lake Road, Woolgoolga. This development will involve a Torrens title residential subdivision comprising 43 allotments (41 residential allotments) and is proposed to be constructed in one stage but released in five stages.

Stage 1 will comprise 10 allotments, 9 being residential allotments varying in size from 537m² to 1,031m² and an allotment containing the stormwater management infrastructure (Lot 10). Lot 10 is proposed to be dedicated to CHCC. Stage 2 will comprise 5 residential allotments varying in size from 711m² to 842m². Stage 3 will comprise 8 residential allotments varying in size from 665m² to 715m². Stage 4 will comprise 11 allotments being 10 residential allotments varying in size from 712m² to 1,093m² and an allotment containing a proposed Environmental Protection 7(a) zoned land and its buffers (Lot 28). Stage 5 will comprise 9 residential allotments varying in size from 695m² to 1,060m².

The application is a project application and the staging is only intended to facilitate the release of the land over time.

Those parts of the site which are environmentally constrained land are proposed to undergo long term environmental rehabilitation to provide a high quality setting for the development and to enhance the environmental and recreational values of the site and its locality. The entire development has been designed to minimise environmental impact with the use of vegetated swales, bio-filters, rain-gardens and bio-retention basins to prevent pollutants from entering Hearn's Lake and to manage the flow of water leaving

the site. All areas of environmental significance on the site have been identified and protected in a single lot (lot 28).

Access to the site will be from Hearnese Lake Road and then to the Pacific Highway. However, in the longer term access will be via a collector road from Hearnese Lake Road to Bosworth Road once residential development utilising Hearnese Lake Road has achieved a threshold.

The site is able to be adequately serviced for sewer, town water, power and telecommunications. Sewer is to be extended along Hearnese Lake Road from the existing rising main on the Pacific Highway. The sewer within the development will be gravity fed to this sewer extension in Hearnese Lake Road. Reticulated water will be provided by a new water main laid within the Hearnese Lake Road Reserve and connected to the existing main on the western side of the Pacific Highway.

3.2 Need for the Project

3.2.1 JUSTIFICATION FOR THE PROPOSAL

The proposed development provides for a range of residential accommodation within the urban bounds of Woolgoolga upon land which has been zoned for that purpose for almost 10 years. The proposal responds to housing needs for the growing local population.

The objectives of the local planning controls are to provide safe and attractive neighbourhoods that meet the diverse needs of the community and offer a wide choice of housing and leisure opportunities with associated community facilities. The proposal responds by providing a broad range of allotment sizes and types and seamlessly integrates this with the

surrounding environmentally sensitive lands while providing appropriate buffers.

The development complements the conservation of biodiversity by protecting areas of high conservation value. The development takes into account the environmental constraints including soil erosion, flooding and bush fire and protects the areas of natural and cultural significance.

The development incorporates best practice urban water management techniques relating to stormwater quality and quantity, water conservation and reuse, and eco-system health.

Environmental Impacts

Investigations of all potential environmental impacts have been undertaken as part of the Environment Assessment process. Investigations undertaken include examination of potential impacts on existing flora and fauna, impacts on European heritage and Indigenous archaeology, potential risk of acid sulphate soils, hydrological impacts as a result of the development and potential noise and vibration impacts. Where potential environmental impacts have been identified, mitigation measures have been proposed in order to alleviate these impacts. All mitigation measures have been incorporated into the Draft Statement of Commitments.

Site Suitability

The Plan has been developed as a result of a multidisciplinary site analysis. This site analysis included the assessment of existing vegetation, flood affected land, existing land use zonings, legislative

requirements for bushfire protection, soil and geotechnical investigations, European heritage and Indigenous archaeological considerations and access and transport options. Opportunities and constraints presented by the site analysis were used to identify the development areas and allowed for the remaining portion of the site to be retained for conservation purposes.

The site is located within the settlement boundary of the Woolgoolga township. The site is already zoned for residential development and the proposal is considered to be suitable with regard to local strategic planning controls. The site is also considered suitable with regard to regional planning controls including the North Coast Regional Strategy, which seeks to increase the population of Woolgoolga by encouraging sustainable development solutions.

Public interest

The proposal is in the public interest because of the environmental, social and economic benefits resulting from the development of a strategic site and has been identified for residential uses. The proposal will contribute to providing many housing options in the area, as well as conserving high value environmental land.

3.2.2 Alternatives

The proposal has arisen from a lengthy and detailed analysis and consideration of the site and its inherent characteristics. The site has been used as grazing land for many decades but it is clear that this is not the most economic and efficient use of the land. Years of use have seen the land adversely effected and in need

of rehabilitation. A component of the land is flood affected and requires support and maintenance following redevelopment of the site.

The residential zoning of the land limits the extent and form of development which can be realised on the site. The traditional Torrens title subdivision for residential use is considered to most effectively address the needs and requirements of the community and of the land itself.

3.3 Concept Plan

The proposal does not comprise a concept plan.

3.4 Project Plan

The Project Plan consists of the following elements:

- Bulk earthworks and site preparation;
- Construction of access from Hearnese Lake Road;
- Construction of internal access road, pedestrian paths and firetrails;
- Construction of telecommunications, power, sewer and water infrastructure;
- Construction of detention/bioretenion basin;
- Rehabilitation, regeneration and planting of environmental land;
- Subdivision of 41 Torrens title residential lots;
- Subdivision of 1 lot for stormwater management;
- Subdivision of 1 lot to buffer and protect environmentally sensitive land.

3.4.1 Proposed Lot Areas

The Project Application includes a Torrens Title subdivision as follows:

Allotment	Release	Size	Width	Depth	Use
1	1	754 m ²	19.9m	35.9m	Res
2	1	718 m ²	20m	35.8m	Res
3	1	817 m ²	25m	33m	Res
4	1	801 m ²	41.1m	25m	Res
5	1	854 m ²	14m	45.7m	Res
6	1	703 m ²	18m	31.6m	Res
7	1	537 m ²	31.9m	24.9m	Res
8	1	846 m ²	38.5m	49.7m	Res
9	1	1,031 m ²	23.6m	64.9m	Res
10	1	1,270 m ²	-	-	Stormw.
11	2	842 m ²	45.5m	20.9m	Res
12	2	711 m ²	36.6m	33m	Res
13	2	837 m ²	9.4m	33.3m	Res
14	2	825 m ²	10.8m	45.9m	Res
15	2	715 m ²	18m	39.7m	Res
16	3	715 m ²	18m	39.7m	Res
17	3	715 m ²	18m	39.7m	Res
18	3	715 m ²	18m	39.7m	Res
19	3	695 m ²	17.5m	39.7m	Res
20	3	665 m ²	19m	35m	Res
21	3	665 m ²	19m	35m	Res
22	3	665 m ²	19m	35m	Res
23	3	665 m ²	19m	35m	Res
24	4	716 m ²	20m	35.7m	Res
25	4	714 m ²	20m	25.7m	Res
26	4	712 m ²	20m	35.6m	Res
27	4	1,093 m ²	30.9m	35.6m	Res
28	4	8,890 m ²	-	-	Enviro
29	4	724 m ²	23.6m	35m	Res
30	4	717 m ²	20.5m	35m	Res

31	4	722 m ²	23.1m	30m	Res
32	4	1,036 m ²	20m	55.6m	Res
33	4	912 m ²	20m	45.6m	Res
34	4	889 m ²	20.4m	45.6m	Res
35	5	866 m ²	20.6m	42.3m	Res
36	5	770 m ²	25m	41.4m	Res
37	5	695 m ²	17.5m	39.7m	Res
38	5	812 m ²	28.9m	39.7m	Res
39	5	1,060 m ²	28.3m	49.9m	Res
40	5	953 m ²	20.9m	47.8m	Res
41	5	940 m ²	16.4m	45.3m	Res
42	5	921 m ²	20.6m	47.5m	Res
43	5	967 m ²	20.6m	48.2m	Res

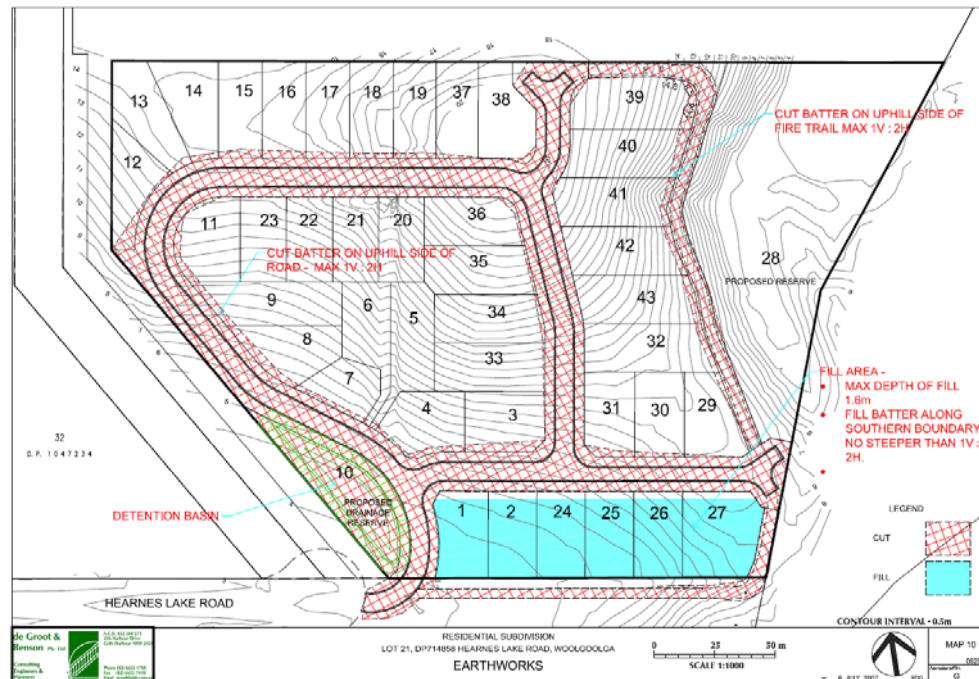
3.4.2 Bulk Earthworks and Filling

In order to achieve required detention and road levels some bulk earthworks and filling is required for this proposal. De Groot and Benson Pty Ltd have undertaken an assessment of the required earthworks and filling that is proposed on site and has developed management and mitigation strategies in order to ensure environmental protection throughout the construction phase. The following section should be read in conjunction the relevant sketches, being Proposed Earthworks Map 10.

The sequence of work for bulk earthworks will generally include:

- Provision of erosion and sediment control measures.
- Clearing of vegetation from the proposed development site and removal from site.
- Stripping of topsoil and organic matter from the site and stockpiling for future landscaping re-use on site.
- Stripping and stockpiling fill materials suitable for reuse as controlled fill.
- Removal of existing overburden material from the site.

- Proof rolling of exposed sub-grade and replacement of any soft spots with approved engineering fill.
- Placement of cut to fill material in layers not greater than 200mm in thickness and compacted to not less than 98% SMDD.



There is a possibility that large to massive granite boulders may be encountered during excavation and may require blasting or rock hammering as has happened in previous surrounding developments.

Soil Erosion and Sediment Control

Prior to any earthworks commencing on site, erosion and sedimentation control measures will be put in place generally in accordance with Council requirements and the NSW Department of Housing Manual, "Soils & Construction" 2004. These measures will include:

- The installation of a 1.8m high chain wire fence covered with Hessian, to the perimeter of the development area for security and wind protection.

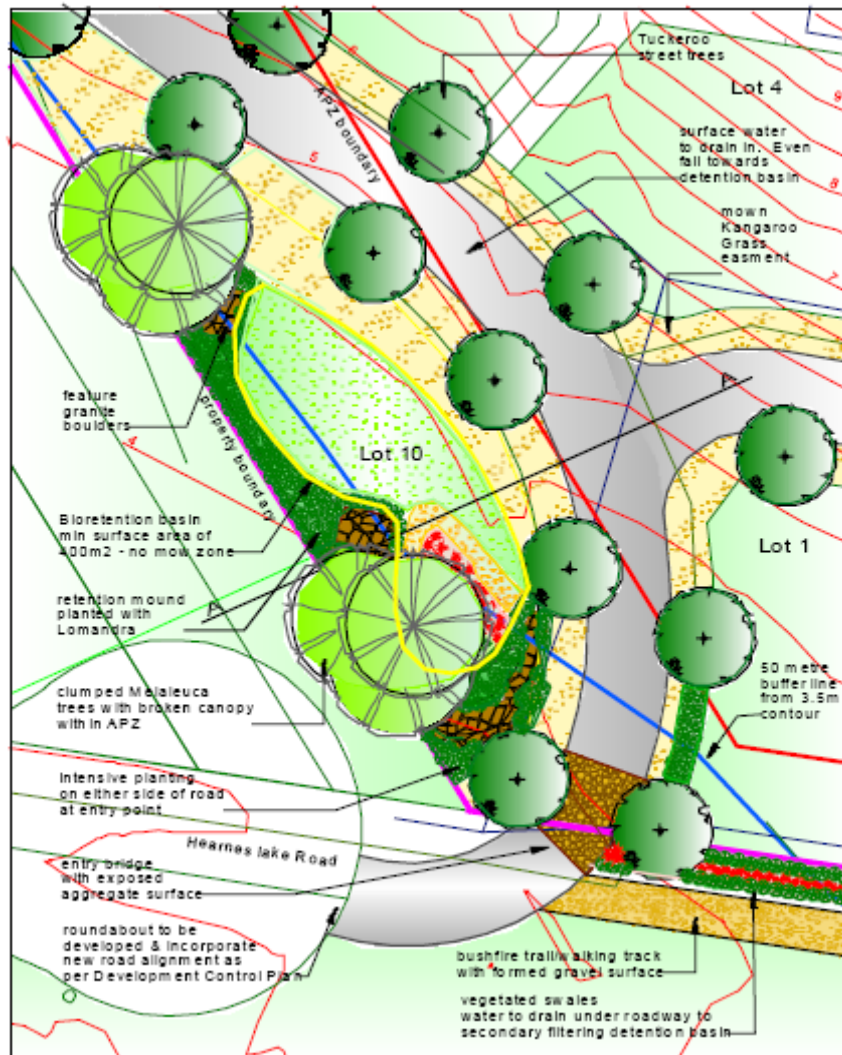
-
- The construction of silt fences on the low side of all site areas to be disturbed.
 - The provision of a sediment basin/s through which stormwater runoff shall be channelled. The basin will be located to suit the staged construction of the earthworks.
 - Provision of temporary truck wash down facilities as required, to the exits from the site.

3.4.3 Hearnese Lake Road Access and Bioretention Basin

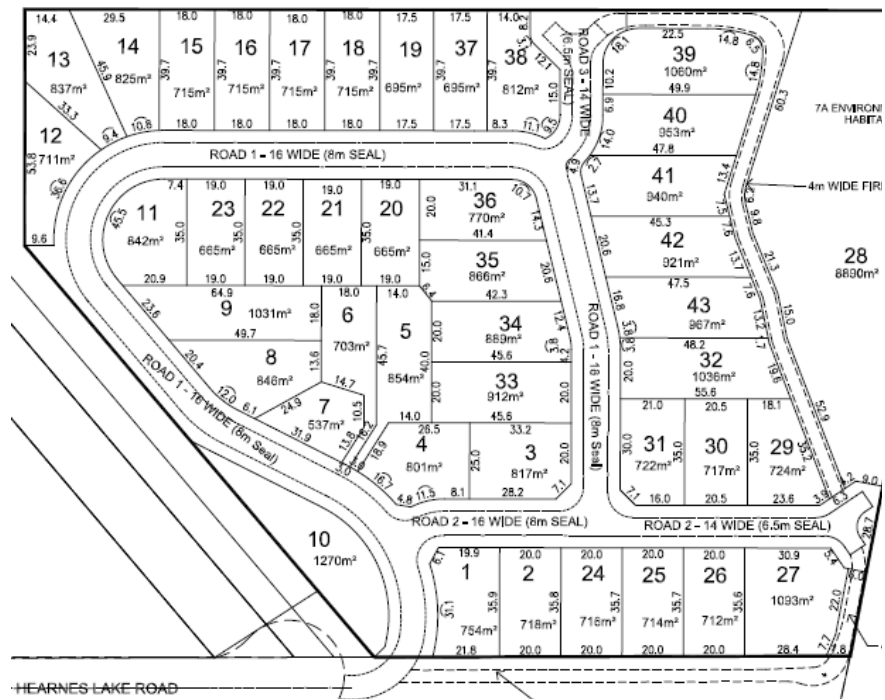
The project proposal incorporates a new access to the Hearnese Lake Road located in the south-western corner of the site. The access road will comprise a 8m wide carriageway in a 16m road reserve. The access road is proposed to intersect with Hearnese Lake Road in a new bus turning circle which will be constructed as part of the proposal.

The access road will be landscaped with layers of plantings from low plantings to the lot verges to tall eucalypts to the rain gardens. The landscaping concept is detailed in the report prepared by Anne Harrison - Landscape Architect¹⁹.

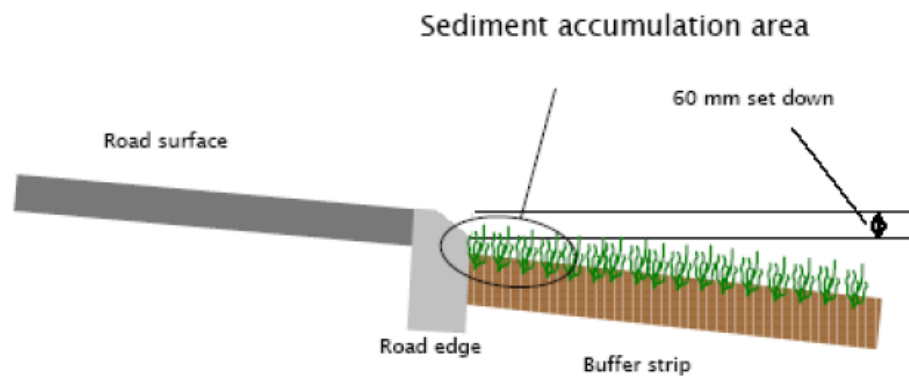
¹⁹ Anne Harrison Landscape Architect, Landscape Concept Plan and Visual Assessment, 45 Hearnese Lake Road, Woolgoolga p15

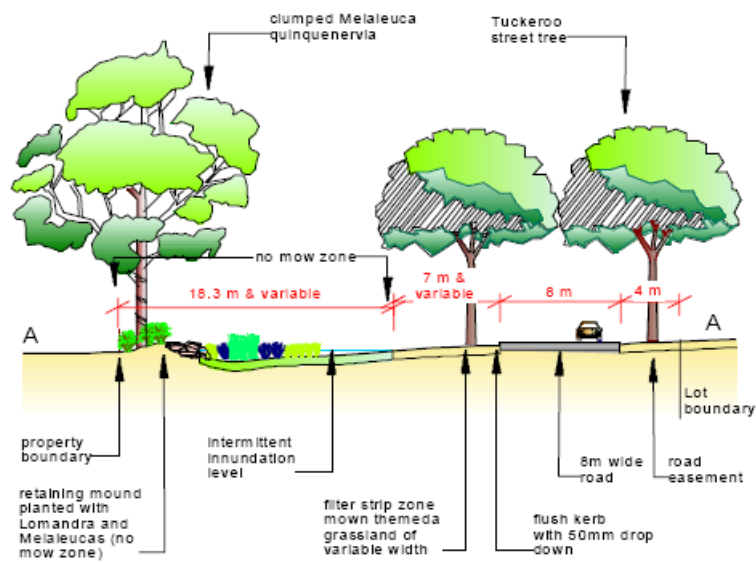


The access road will be the main structuring element within the development and will continue north and east and return on itself. This avoids the need for vehicles to turn around in the site and provides a hierarchy of choice for movement from any site within the development.



The access road will support both vehicular and pedestrian movement but will provide landscaped separation between the two. The road easements will contain footpaths, bollards, filter strips, swales and street tree planting.

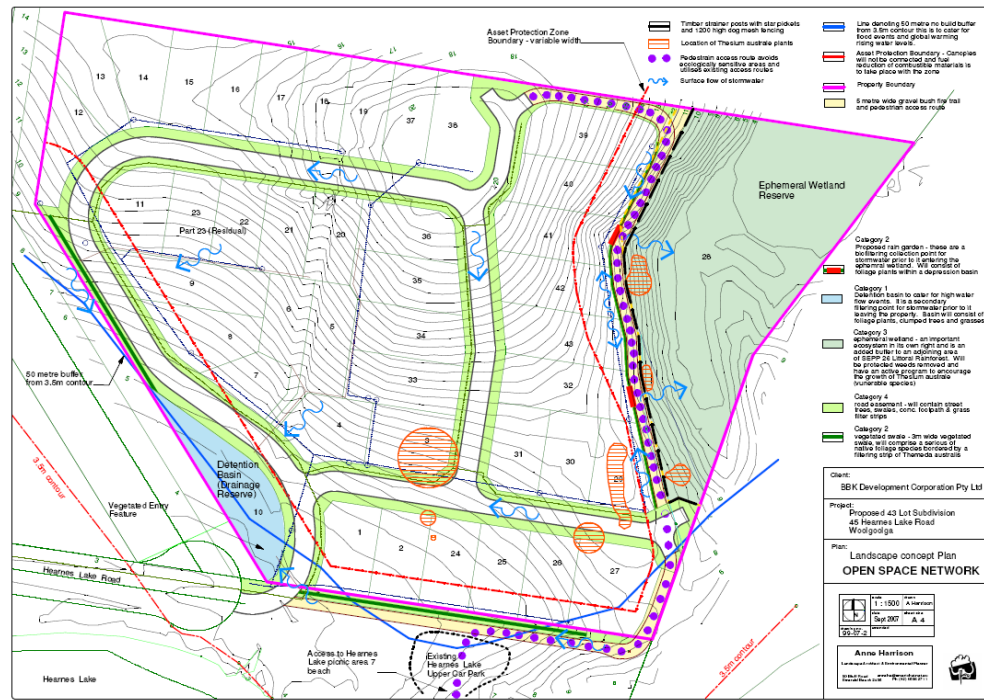




Section AA Road Reserve and Detention Basin – Typical Treatment

3.4.4 Grass Swales, Rain Gardens, Pathways and Bushfire Trails

The project application includes the grass swales, pathways and bushfire trails which make up the pedestrian movement network within the project. The landscape concept plan includes the open space network plan which details the locations and forms of these elements.²⁰



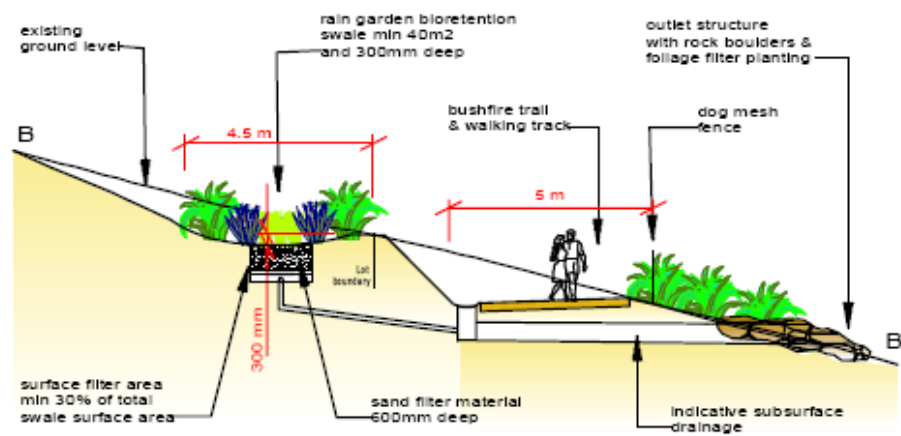
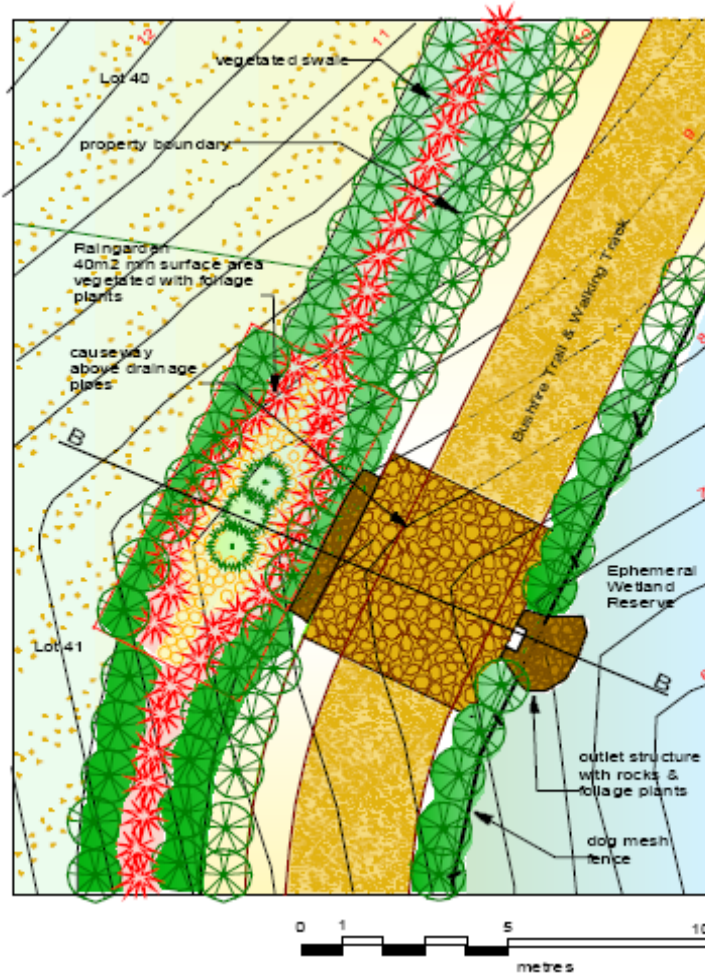
The vegetated swales serve a bio-filtering role and are located within the road reserves to collect runoff and overflows from residential allotments. Water within the subdivision is firstly directed into the swales to remove contaminants and slowly filter down to the detention basin.

²⁰ Ibid.



Rain gardens act as miniature detention basins. They are placed where two existing minor overland flow collection routes drain water into the ephemeral wetland. Their aim is to detain and filter water from allotments prior to it draining into the wetland catchment. This will ensure water quality is high and that existing patterns of water drainage are maintained.

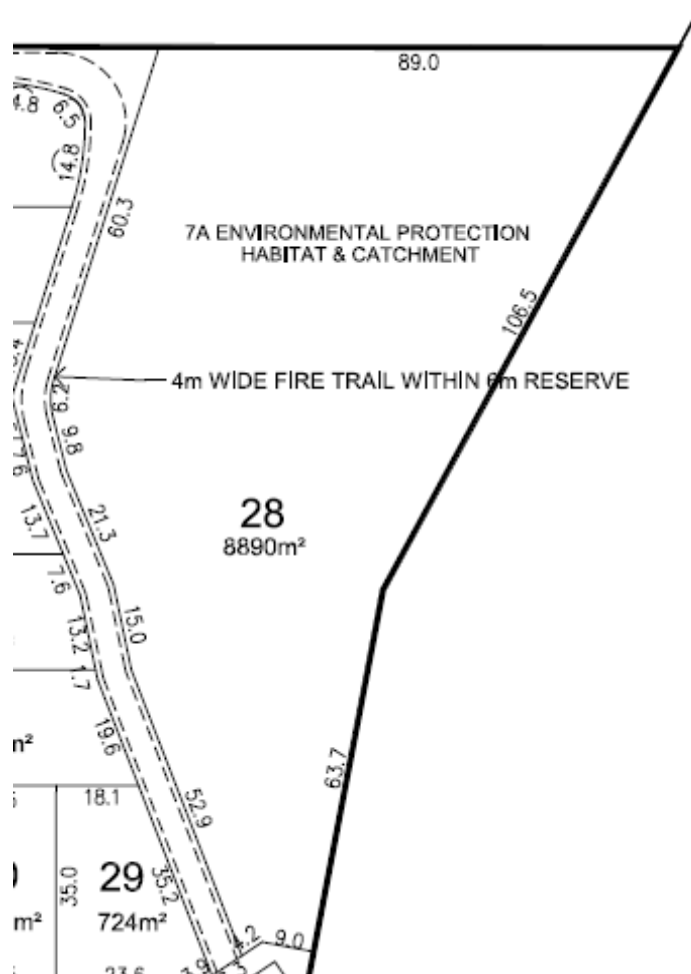
Rain Garden, Swale and Bushfire Trail / Walking Track



Section BB Rain garden & Bushfire / Walking Track

3.4.5 Ephemeral Wetland Reserve

It is proposed to contain the ephemeral wetland and all of the sensitive environmental land within a single lot of 8,890m² and dedicate this land to CHCC following its rehabilitation.



The reserve itself will act as an additional buffer to the ecologically sensitive dune system and Littoral Rainforest area to the north and east of the development site.



The wetland will be fenced off from the residential area using dog mesh and timber post and rail fence. Public access will be directed away from the sensitive zone via a gravel track down towards the existing Hearnese Lake day visitor area and beach. A detailed vegetation management plan will be developed in consultation with CHCC with a 5 year maintenance and management plan for weed removal, species protection and native vegetation strengthening.

The reserve will be dedicated to CHCC as part of the Coffs Coast Regional Park.



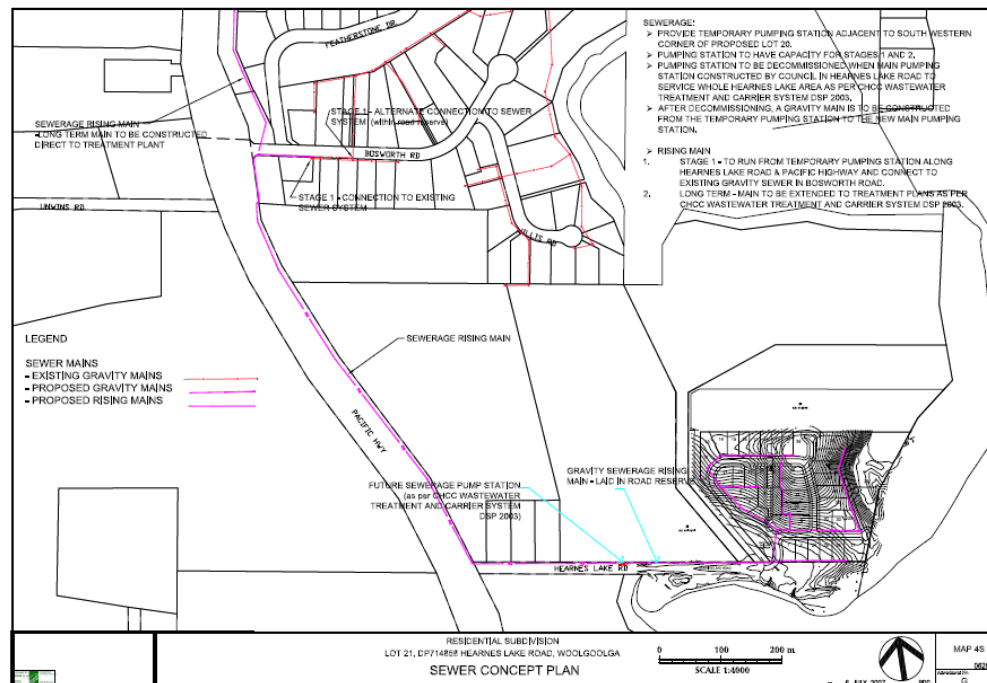
Post and rail fence with galvanised dog mesh attached. This style of fencing will be installed to protect the ephemeral wetland from suburban lots and uncontrolled human/pet access.



3.4.6 Utility Service Construction

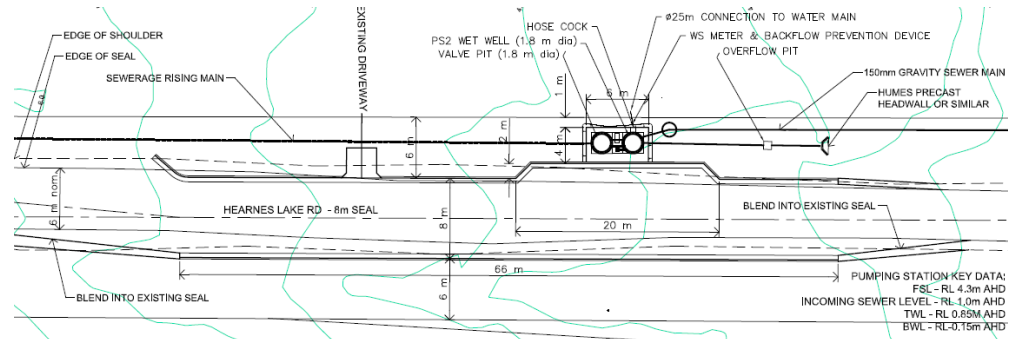
The project application includes the installation and provision of all utility services. This includes sewer, water, electricity and telecommunications. De Groot and Benson Pty Ltd have prepared a services plan which addresses the provision of all services in the Project application. The services generally are able to utilise the existing infrastructure with some amplification and improvement.

Sewer

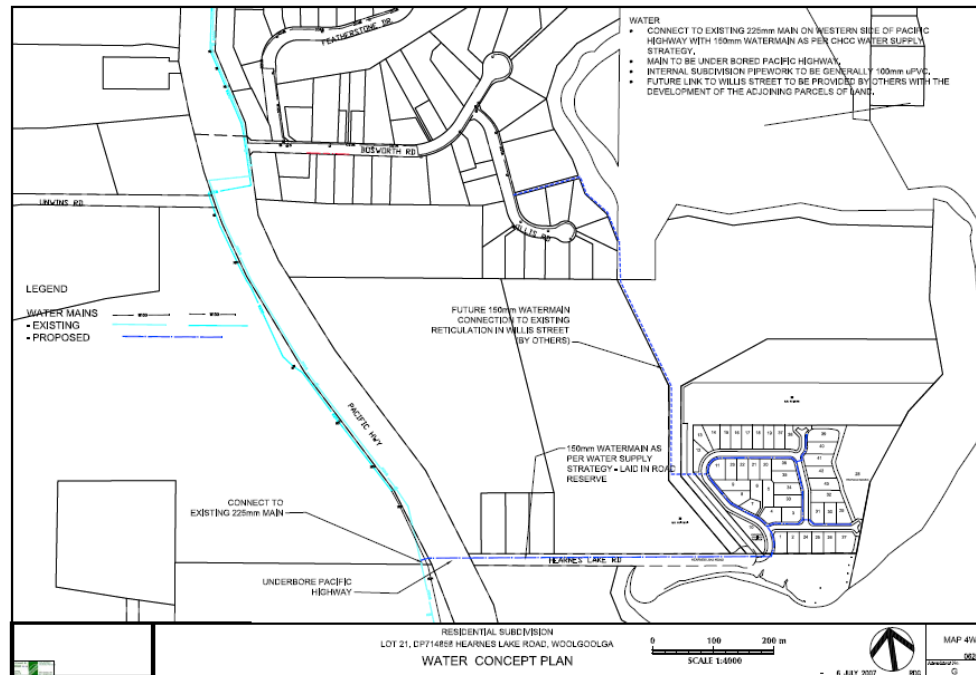


The proposed sewer system utilises the capacity within the existing CHCC sewerage system as dealt with in the Coffs Harbour City Council Wastewater Treatment and Carrier System Developer Services Plan 2003. The report proposes a sewerage pumping station be located approximately midway between the site and the Pacific Highway on private land. Consultation with the landowners has not been successful so two alternate strategies have been developed in consultation with CHCC. These involve locating a

temporary or permanent pumping station within the Hearnese Lake Road Reserve close to the nominated location.



Water

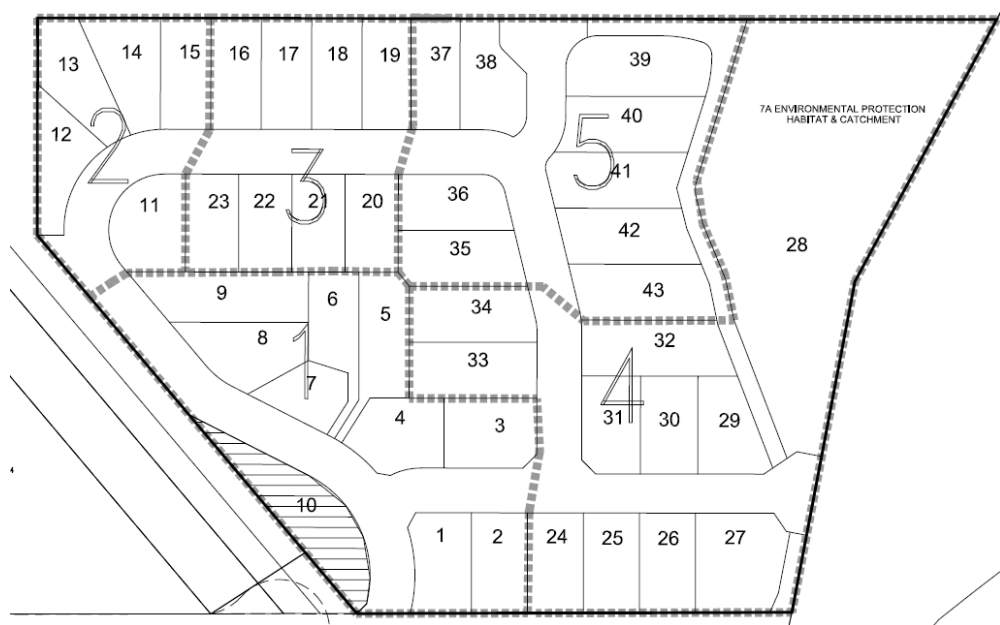


The provision of water supply to the site is consistent with the CHCC Water Supply Infrastructure Report. It is proposed to provide a 150mm water main link from the existing 225mm main located on the western side of the Pacific Highway. The highway will be underbored to avoid traffic disruption. The 150mm main will be extended along Hearnes Lake Road to the development site. The water reticulation will be provided within the road reserve in the subdivision.

3.5 Staging

It is not proposed to Stage the project. All of the infrastructure and public domain works will be constructed in one. However, the lots will be released in 5 phases and it is proposed that the S94 contributions be staged to reflect the release of the lots.

The phases are proposed to be initiated on market demand and will comprise the following:



Phase	Lots	Number
1	1 - 10	9 + 1
2	11 - 15	5
3	16 - 23	8
4	24 - 34	10 + 1
5	35 - 43	9
Total		41 + 2

4.0 STATUTORY PLANNING

4.1 Introduction

This section of the report provides an overview of all planning legislation and controls of relevance to this application. The Statutory Planning Assessment Section 4.2 of this report includes a detailed assessment of the proposal with respect to the controls.

4.1.1 COMMONWEALTH LEGISLATION

4.1.1.1 Environment Protection and Biodiversity Conservation Act 1999

Part 3 of the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 provides that an action which “has, will have or is likely to have a significant impact on a matter of national environmental significance” may not be undertaken without prior approval from the Commonwealth Minister for the Environment and Heritage, as provided for under the provisions of Part 9 of the EPBC Act.

The EPBC Act provides the following as matters of national environment significance for which Ministerial approval is required:

- World Heritage properties;
- Wetlands of International Significance (Including Ramsar wetlands);
- Listed threatened species and communities;
- Listed Migratory Species protected under international agreements (CAMBA and JAMBA);
- Protection of the Environment from Nuclear Actions; and
- Marine Environment.

The Administrative Guidelines for the EPBC Act set out criteria intended to assist in determining whether an action requires approval. In particular, the Guidelines contain criteria for

determining whether a proposed action is likely to have a significant impact on a matter of national environmental significance.

A search of the EPBC database has revealed that the subject site is not a World Heritage property, it is not a Commonwealth marine environment nor does it involve nuclear activities. However, the preliminary review of the database has revealed that threatened species, migratory species and listed marine species may occur on site.

A flora and fauna assessment, which includes an assessment of the provision of the EPBC Act, has been undertaken by Eco Logical Australia for the site. The findings of this study and the compliance of the project with the EPBC Act are discussed in detail in Section 5 of this environmental assessment report.

4.1.2 NSW STATE LEGISLATION AND PLANNING INSTRUMENTS

4.1.2.1 National Parks and Wildlife Act 1974

The National Parks and Wildlife (NPW) Act 1974 governs the establishment, preservation and management of national parks, historic sites and certain other areas. The NPW Act also provides the basis for the legal protection and management of threatened native flora and fauna and Aboriginal sites within NSW.

An Indigenous heritage and archaeological survey was undertaken by Jacqueline Collins (Consultant Archaeologist) for the subject site. The project was planned to accommodate the findings of the study as appropriate.

Section 5 of this Environmental Assessment report discusses the findings of the study and significance of the finds in detail. It also provides mitigation measures to ensure any potential impacts on indigenous heritage are mitigated and minimised.

4.1.2.2 Threatened Species Conservation Act 1995

The Threatened Species Conservation (TSC) Act 1995 provides for the conservation of threatened species, populations and ecological communities of animals and plants. It provides a framework for the assessment of any action that may impact on threatened species.

Eco Logical Australia have carried out investigations of flora / fauna and environmental values on the land and have found that the site has a number of important ecological features, including the presence of one threatened plant species Austral Toadflax *Thesium australe*. The site contains approximately 700 plants in eight discrete patches. The study also recorded four Endangered Ecological Communities on the subject site these comprised:

- Swamp sclerophyll forest in the form of Broad-leaved Paperbark Forest located in proximity of the Ephemeral Wetland.
- Fresh Water wetland
- Littoral Rainforest being a small regenerating patch adjacent to the intact Littoral Rainforest adjoining the eastern boundary.
- Sub-tropical Coastal Floodplain Forest represented by Forest Red Gum/ Broad-leaved Paperbark/ Swamp Oak/ Swamp Box Remnant Forest as clumps and individual trees over the southern and eastern parts of the site though highly modified by grazing.

The findings of the study and the compliance of the project with the TSC Act are discussed in detail in Section 5 of this Environmental Assessment report.

4.1.2.3 Native Vegetation Act 2003

The Native Vegetation Act 2003 provides for the conservation of native vegetation through the prevention of inappropriate clearing and promotion of rehabilitation practices.

The proposed development, being the residential is located within land zoned 2e Residential Tourist Development under the CHCC LEP. The Native Vegetation Act does not apply to this part of the site by virtue of Clause 14 of Schedule 1 of the same Act.

4.1.2.4 Heritage Act 1977

The Heritage Act 1977 provides for the protection of items of local, regional and State heritage significance. It contains a list of State Heritage Items and outlines processes for assessment of development which may impact items of heritage significance.

There are no items of European Heritage in the vicinity and an assessment of the Aboriginal cultural heritage of the site has been carried out by Jacqueline Collins Consultants. The assessment found that further investigation needed to be carried out in the northern part of the site and that the Lot 28 should be spared any development related disturbance and access be minimised. Section 5 of this Environmental Assessment report discusses this in more detail.

4.1.2.5 Water Management Act 2000

The Water Management Act 2000 (WM Act), through the creation of water sharing plans, regulates the use of all water bodies (including groundwater and rivers) in NSW. A licence is required under the WM Act for a broad range of activities which may impact water bodies and rivers, including Water Use Approvals under Section 89, Water Management Work Approvals under Section 90, and Activity Approvals under Section 91 of the WM Act.

Under the WM Act, permits and authorisations previously issued under the now repealed Rivers and Foreshores Improvement Act 1948 generally continue to be in force. Where the WM Act does apply, licences are required to be obtained from the Department of Water and Energy for a range of activities, for example, to undertake an activity which traverse a waterbody or disturb the soil adjacent to a waterbody.

A project declared to be a Major Project under Part 3A of the EP&A Act does not require any Water Use Approvals, Water Management Work Approvals or Activity Approvals to be obtained under the WM Act.

4.1.2.6 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment (EP&A) Act 1979 and its supporting Regulation, the Environmental Planning and Assessment (EP&A) Regulation 2000, provide the framework for the assessment and approval of proposed developments within NSW. Assessment of development is provided for in three parts of the EP&A Act: Part 3A, Part 4 and Part 5.

The proposed development of the subject site for the purpose of residential development falls under the provisions of Part 3A of the Act. Part 3A of the EP&A Act provides processes for the assessment of development applications which are considered to be a “Major Project” as declared by a State Environmental Planning Policy (SEPP), or by order of the Minister in the Government Gazette.

The proposed works will result in the subdivision of land into more than 25 lots. A request for the Minister’s opinion was lodged with the Department of Planning on 6 June 2007 pursuant to Clause 6 of SEPP (Major Projects) 2005. The Minister verified that the proposal constituted a Major Project under the Act in a letter to the applicant dated 24 July 2007. Consequently, the Department of Planning issued the Director General’s Environmental Assessment Requirements (DGR’s) for the proposal on 24 August 2007.

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

The Minister has verified that the proposed development constitutes a Major Project under the provisions of Schedule 2 of the Major Projects SEPP, under Clause 1(1)(i). This means that the Minister is the consent authority for the application.

4.1.2.6.2 State Environmental Planning Policy – Infrastructure

State Environmental Planning Policy (SEPP)– Infrastructure provides that development identified in the Schedules to the SEPP is to be referred to the RTA for comment.

Schedule 3 of the SEPP provides that for development which proposes the subdivision of land into 200 or more allotments referral to the RTA is required.

The development proposes the subdivision resulting in a total of 43 new allotments and the construction of public roads. Consequently, the proposal is not subject to the SEPP. Consultation with the RTA has been undertaken throughout the development of the proposal.

4.1.2.6.3 State Environmental Planning Policy 26 – Littoral Rainforest

The land which adjoins the subject site in the north-east is subject to the provisions of this instrument. The policy applies to land which is designated on the map with a heavy black line and land within 100m which is not zoned Residential.

The subject land is wholly contained within the 2E Residential zone and consequently not subject to the provisions of this instrument.

4.1.2.6.4 State Environmental Planning Policy 44 – Koala Habitat

The aim of SEPP 44 is to encourage the conservation and management of areas which provide habitat for koalas with a direction of establishing a permanent population over their present range and reverse the current trend of decline.

The subject site is located within Coffs Harbour LGA which is listed on Schedule 1 of the SEPP, and as detailed in Clause 6, is more than 1ha in area. Therefore SEPP 44 applies to the site.

The site has been extensively modified in the past, with much of the site vegetation being removed, flora and fauna investigations have been undertaken in order to assess the sites potential koala habitat which concludes that the site has low quality koala habitat. Section

5 of this report discusses in detail results of flora and fauna investigations.

4.1.2.6.5 State Environmental Planning Policy 55 – Remediation of Land

This instrument requires the consideration of whether land is suitable for residential use by way of contamination. The only known historical use of the site has been for cattle grazing. There has been no cattle dip or potentially contaminating activity on site and it is not an area in which bananas have been grown.

Consequently, it is not considered that further assessment for contamination is warranted.

4.1.2.6.6 State Environmental Planning Policy 71 – Coastal Protection

SEPP 71 is intended to provide a uniform approach to planning within the Coastal Zone. The SEPP states that a consent authority needs to consider the following when it determines a development application within the coastal zone:

- the aims of this policy set out in clause 2,
- existing public access to and along the coastal foreshore for pedestrians or persons with a disability should be retained and, where possible, public access to and along the coastal foreshore for pedestrians or persons with a disability should be improved.
- opportunities to provide new public access to and along the coastal foreshore for pedestrians or persons with a disability,
- the suitability of development given its type, location and design and its relationship with the surrounding area,
- any detrimental impact that development may have on the amenity of the coastal foreshore, including any significant overshadowing of the coastal foreshore and any significant loss of views from a public place to the coastal foreshore,

-
- the scenic qualities of the New South Wales coast, and means to protect and improve these qualities,
 - measures to conserve animals (within the meaning of the Threatened Species Conservation Act 1995) and plants (within the meaning of that Act), and their habitats,
 - measures to conserve fish (within the meaning of Part 7A of the Fisheries Management Act 1994) and marine vegetation (within the meaning of that Part), and their habitats
 - existing wildlife corridors and the impact of development on these corridors,
 - the likely impact of coastal processes and coastal hazards on development and any likely impacts of development on coastal processes and coastal hazards,
 - measures to reduce the potential for conflict between land-based and water-based coastal activities,
 - measures to protect the cultural places, values, customs, beliefs and traditional knowledge of Aboriginals,
 - likely impacts of development on the water quality of coastal water bodies,
 - the conservation and preservation of items of heritage, archaeological or historic significance,
 - only in cases in which a council prepares a draft local environmental plan that applies to land to which this Policy applies, the means to encourage compact towns and cities,
 - only in cases in which a development application in relation to proposed development is determined:
 - the cumulative impacts of the proposed development on the environment, and
 - measures to ensure that water and energy usage by the proposed development is efficient.

Director Generals Requirement No. 2.1 specifically refers to the requirements of SEPP No. 71 – Coastal Considerations. Section 5 of this report details the visual impact assessment that has been undertaken, which illustrates that the proposed development complies with the requirements of the SEPP and creates no negative visual impact.

4.1.2.6.7 North Coast Regional Environmental Plan

The Department of Planning is currently undertaking the development of Regional Planning strategies around NSW in order to manage expected growth in a sustainable manner, while protecting environmental assets, cultural values and natural resources.

The proposal is entirely consistent with the Strategy's objectives to accommodate the growing population of the North Coast within and around existing towns, to provide housing choice and to protect the character and environmental quality of the region.

4.1.2.6.8 Coffs Harbour City Council Local Environmental Plan

The Coffs Harbour City Council Local Environmental Plan (LEP) 2000 provides a legal basis for development control and land use for urban areas within the CHCC LGA.

Zoning Controls

The residential subdivision proposal will be developed on land zoned 2E Residential under the LEP and is permissible in this zone. The Torrens title subdivision component of the proposal is permissible within the zone as sub-division and dwelling houses. A plan overlaying the proposed subdivision on the LEP zoning plan is included in the drawing set.

4.1.2.6.9 Coffs Harbour City Council Local Environmental Plan Draft Amendment No 29

This draft plan was exhibited but not made which proposes to rezone most of the site to Residential 2A with a small pocket of Residential 2E retained. The proposal also rezones the sensitive lands Environment Protection 7A.

The proposal is consistent with this draft plan in its proposed use of the land and the draft zoning. The proposed residential subdivision

is consistent with the 2A zoning and the land proposed to be conserved is generally consistent with the draft 7A zoning. A plan overlaying the proposed subdivision on the dLEP zoning plan is included in the drawing set.

4.1.2.6.10 Hearnese Lake/Sandy Beach Development Control Plan

The Hearnese Lake/Sandy Beach DCP sets out Council's requirements for subdivision, low density residential development and other land use activities that are proposed within the Hearnese Lake/Sandy Beach area. Council's requirements are to ensure that the existing community is not burdened by the provision of public utilities and facilities required as a result of new development, to provide safe and attractive neighbourhoods, and to ensure that developments complements conservation of biodiversity.

4.1.2.6.11 Coffs Harbour City Council Subdivision Development Control Plan

The CHCC Subdivision DCP sets out Council's requirements for residential subdivision on land zoned under the LEP. These controls apply to that portion of the development which is the traditional Torrens title subdivision for future dwellings.

4.1.2.6.12 Coffs Harbour City Council Draft Vegetation Conservation Development Control Plan

The CHCC draft DCP has the following objectives:

- *complement Council's Local Vegetation Management Plan;*
- *provide a framework for vegetation management that achieves an outcome for vegetation conservation consistent with the Coffs Harbour Regional Vegetation Management Plan;*

-
- *introduce vegetation removal controls to ensure vegetation values are protected in the urban, rural residential and future growth areas of the City; and*
 - *ensure development on land containing native vegetation or adjoining native vegetation is consistent with the principles of ecologically sustainable development.*

The draft DCP maps vegetation and ranks it in terms of its value. The draft DCP does note that constraints exist in terms of the accuracy of the mapping and survey work. That part of the site which is identified as being of value is proposed to be retained and rehabilitated. It is proposed to be consolidated in a single lot and dedicated to the CHCC as part of the proposal.

The reports prepared by Ecological Australia carry out a detailed investigation of vegetation communities on the site and make recommendations with regard to their protection consistent with the draft DCP. See Appendix 5, 7 and 13.

It is considered that the proposal is consistent with the objectives and intent of the draft DCP.

- **KEY ISSUES**

This section of the report deals with the key issues as outlined in the Director-General's Requirements and which have arisen during the survey and analysis of the site for the proposed use.

5.1 Strategic Planning

The strategic planning strategies at local, regional and State level have been covered in detail in the previous section of the report under the statutory planning considerations.

The site has inherited a complex layering of instruments, policy and strategy at State, regional and local level. Some of these go back in excess of 10 years and were at the very root of coastal planning policy framework which is now in place. The statutory planning section of the report methodically gives consideration to each instrument and going through that process makes it clear that there is a good deal of duplication and repetition between the instruments at various levels.

However, the Hearn's Lake/Sandy Beach Development Control Plan would seem to be the most contemporaneous and relevant instrument which synthesizes what has been learnt from the previous policies with a healthy dose of community participation and contextual specificity.

It is clear that the underlying framework which consistently runs through all of these instruments is a desire to protect environmentally sensitive coastal land, while allowing the opportunity to meet housing demand in a way which is visually unobtrusive yet connected into the existing service and