CONCEPT PLAN

LOT 92 DP 1078055, LOT 5 DP 25886 & Lots 1 – 4 DP 45956 RAINBOW BEACH, BONNY HILLS



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1 Executive Summary

Concept Plan approval is sought for a number of environmental and urban elements of the subject land, consistent with Port Macquarie – Hastings Council's adopted Structure Plan for the Area 14 Urban Release Area. The whole of the subject land is currently zoned part Residential 2(a1) and Part Rural 1(a1) and no rezoning is required for any part of the ultimate development within this Concept Plan. In summary, Concept Plan approval pursuant to Part 3A of the Environmental Planning and Assessment Act 1979, is sought for the following:

- In respect of the residential component, delineation of the limits of the residential subdivision and future urban uses on the subject land. It is proposed that the detailed subdivision design will be the subject of a future project application or a development application;
- General location of the Greater Lake Cathie Bonny Hills Village Centre. The detailed design, including the size and extent of the centre, will be the subject of a future project application or a development application;
- Delineation of the extent of the two separate school sites on the subject land. The detailed design of the individual schools will be the subject of future project application(s) or development application(s);
- Delineation of the site for eco-tourist development. The details of the development to be the subject of a future project or development application;
- Delineation of the extent of the Open Space / Drainage / Habitat Corridor. A future project application will be submitted for the following elements within the corridor:
 - Open Space and Wildlife Corridors,
 - Stormwater treatment and management,
 - Constructed Wetland, &
 - District Sporting Fields and facilities.

The flowchart overleaf sets out the requested process for the delegation to Port Macquarie – Hastings Council for the assessment and approval of subsequent development applications and the submission and approval of the Open Space / Drainage / Habitat Corridor Project Application.



2 Introduction

The proposal is for a Concept Plan approval for part Lot 92 DP 1078055, Lot 5 DP 25886 and Lots 1-4 DP 45956 located at Rainbow Beach, Bonny Hills (collectively referred to in this report as "the subject land"). Lot 92 is just over 170 hectares in area and Lot 5 is 7.5 hectares in area. Lots 1 – 4 are smaller allotments (formerly road reserves) as shown in the DP extract. The land currently contains a large lake constructed in the 1980s as part of an approved residential / golf course estate. Additional wetland structures have more recently been completed as part of an approved residential estate in the southern portion of the property. Lot 92 is the current residue allotment, with a further 31 allotments to be developed in the southern portion of Lot 92, in accordance with the current approval. The location and extent of the currently approved development is shown on the Concept Plan. The area shown as Stage 3 is currently under construction and will complete the development approved under the current development consent.

The proposal seeks a Concept Plan approval for the delineation of the residential estate, village centre, school sites, ecotourist site, and open space/ drainage / habitat corridor area. The Concept Plan correlates with the Area 14 Structure Plan recently adopted by Port Macquarie – Hastings Council. The subject land comprises the majority of the land within the Area 14 Urban Release area. As the Structure Plan has no legal status, there is a need to bring these plans into a recognised planning document in the form of a Concept Plan.

It is noted that Port Macquarie - Hastings Council is currently preparing a draft DCP for the whole of the Area 14 Urban Release, consistent with their adopted Structure Plan.





General extent of existing subdivision approval.

Figure 1

3 Background

The subject land is located at Rainbow Beach, Bonny Hills. The subject land is situated between the coastal villages of Bonny Hills to the south and Lake Cathie to the north.

The subject land is bound to the west by Ocean Drive, existing residential development to the south and north, and coastal dunes and the Lake Cathie/Bonny Hills Sewerage Treatment Plant to the east.

The total area of the subject land is approximately 180 hectares.

Some seven hectares of the original parcel has already been developed as a residential estate (Rainbow Beach Estate Stages 1, 2 & 3 to the south). The Stage 3 plan of subdivision is yet to be registered but when registered, will be excised from Lot 92 DP 1078055. The remainder of the property contains two dwellings in a rural setting. The majority of the subject land is predominantly used for cattle grazing and other agricultural pursuits.













Historic landform modification conducted in association with a former development approval for an international sports resort during the 1980s resulted in the construction of artificial drainage lines and bulk earthworks. The golf fairways are still detectable in some of the aerial photographs, despite the development never approaching completion.

The 7-hectare, man made lake located in the southern portion of the property, was constructed as part of these mid 1980's development works. Excavated material from this water body was used to provide fill for the residential development located on the southern side of the lake (generally Stages 1, 2 & 3).

The southern portion of the site is currently being developed in accordance with the development consent for residential subdivision (Stage 3). These works include stormwater facilities and the 'mini' constructed wetland to the southwest of the existing man made lake.

The entire site has been zoned for residential development since 1984. A recent amendment to Hastings LEP 2001 introduced a rural zoning to formalise the buffer around the sewerage treatment plant located southeast of the subject land. Refer to an extract of the zoning map on the following page.





Figure 4: Extract from Hastings LEP 2001 showing subject land edged in red and zoned part 2(a1) Residential and part 1(a1) Rural under the provisions of this LEP.



In accordance with Port Macquarie - Hastings Council's adopted Urban Growth Strategy for Area 14 ("Structure Plan"), which encompasses the subject land, the proposed urban development of the land includes residential development, community facilities, a business centre, primary and high school facilities, with associated playing fields and the remainder of the site used for passive open space, drainage and habitat corridors. The passive open space areas, drainage and habitat corridors provide an opportunity to create a valuable resource for the surrounding community whilst presenting opportunities to improve the environmental quality of the locality.

The Structure Plan developed by Port Macquarie - Hastings Council went through a rigorous public consultation process. The development of the document was an interactive process involving the local Council, the Hastings Urban Growth Strategy (HUGS) Committee, State Government Agencies and the local community. A key stage of the document preparation was a conceptualisation workshop, which included site visits, visual assessments and meetings with the HUGS Committee. This was followed by a four day design workshop.

The four day design workshop included consultation with both state and local government departments and agencies. These included the Roads & Traffic Authority, Environmental Protection Agency, NSW Coastal Council, Koala Preservation Society, Economic Development Board, Area Health Service, Dept of Education & Training, Planning NSW, Port Macquarie Hastings Council representatives from Planning, Community & Cultural Development, Libraries, Parks and Infrastructure.

The design workshop considered the issues of: movement, street network, public transport, pedestrian/ cycle access, built form interfaces, environment and heritage, fauna/ flora, bushfire, aboriginal archeology, visual assessment, infrastructure, water, sewerage, soils, geotechnical, land slip, hydrology, drainage, flooding, community and cultural needs, community facilities, education, retail, employment and cultural issues.



A public meeting / community visioning workshop was also held. The participants of the workshop included: individual community members, representatives of local organizations and the Lake Cathie & Bonny Hills Progress Associations. The workshop focused on the same issues as used in the design workshop.

These various levels of consultation highlighted the Community Issues and Values. These were identified in the Structure Plan document as listed below.

Those qualities most valued by the community were identified as:

- The village atmosphere
- Wildlife and the natural environment
- Clean beaches & foreshores
- Views & vistas
- Existing safe road system
- Lifestyle & community spirit
- Lake Cathie



The most significant issues for the community, in priority order, were:

- Maintaining a village atmosphere & environmental values
- Sensitive water management
- Environmental management & wildlife corridors
- Adequate infrastructure for development
- Remedy existing infrastructure deficiencies
- Urban / community / environment relationships
- Integrated community centre
- Ensure road system adequacy
- Danger of overdevelopment

The Structure Plan notes that, whilst there are varying opinions within the local community as to the precise form that future development should take, there is broad support for an urban design master plan that will result in:

- A village atmosphere
- Conservation and care of the natural environment
- Infrastructure to meet the health, transport, recreational and other needs of the community.





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A complete copy of the adopted Structure Plan is included in Appendix One of this report. The key components of the ultimate development of the subject land, in accordance with the Area 14 Structure Plan as adopted by Port Macquarie - Hastings Council, are:

- Residential Development consisting of a residential housing estate incorporating both medium density and conventional subdivision styles, a Primary & High School and associated playing fields, a neighbourhood shopping centre, a parcel of land suitable for low scale "eco-style" tourism development, regional playing fields for the Lake Cathie / Bonny Hills area and other community facilities including a library and community centre. These landuses were identified by Port Macquarie Hastings Council and endorsed by the Department of Planning in the approval of the Urban Release Strategy, as being suitable for the site and have been included in the adopted Area 14 Structure Plan.
- The proposal is essential to the ultimate implementation of the Hastings Urban Growth Strategy for Area 14 as the subject land comprises the majority of the undeveloped land currently zoned residential within the Structure Plan area.
- The inclusion of the habitat corridors, the active open space area and the additional residential land will assist to create social, economic and environmental linkages between Lake Cathie and Bonny Hills whilst maintaining urban separation and buffering between the townships for sustainable urban settlement.
- A cycleway / walkway system is proposed through the development. Linkages will be provided through the adjoining properties to the north and south to Lake Cathie and Bonny Hills.
- The provision of public open space was a major part of public consultation during the formulation of Council's Area 14 Structure Plan that encompasses the surrounding area as well as the subject land.



4 Environmental Assessment

There have been numerous environmental studies undertaken for the subject land over a number of years. The following section provide a brief examination of broad results, and identifies the studies that have been used for background information in the development of the site proposal to date. In addition, Port Macquarie – Hastings Council, in the preparation of the Area 14 Structure Plan, provided additional environmental constraint mapping for the locality. An extract from the Structure Plan is shown on the following page.





Figure 6: Extract from Council's Area 14 Structure Plan showing the identified Environmental Constraints. The subject land is primarily unconstrained. This map identifies a small area of Regenerating Swamp Mahogany in the southwestern section of the subject land. The regenerating swamp is identified in the Concept Plan as Open Space/





4.1 Geomorphology

The study area is situated on a narrow coastal plain, backed by a coastal range 10 km inland of the coast. A series of smaller ranges, coastal lakes and wetlands are scattered within the coastal plain. Regionally the site is bordered to the north by the Hastings River valley and to the south by the Camden Haven River valley. Both these rivers have formed wide meandering paths to the coast.

The subject land is located within a low-lying coastal plain that extends from Port Macquarie to Laurieton, bounded by a western escarpment and the Pacific Ocean to the east.

The soils of the site are generally derived from sandy Pleistocene deposits, improving as the distance from the coast increases where they were formerly covered by forest. The only rocks exposed within the site are sedimentary siltstones. To the east is a frontal dune system approximately 300m wide. Underlying the frontal dunes is a reef of siltstone, (locally known as "coffee-rock"). This coffee rock formation has influenced the development of the barrier dune system. With the exception of the indurated (Pleistocene) sand plain in the eastern section of the study area, the lowlands are composed of alluvial sediments characterised by pockets of yellow duplex, grey duplex and dark drainage-impeded loams.

Tulau, M.J. (1999). <u>Acid Sulfate Soil management Priority Areas in the Lower Hastings -Camden Haven Floodplains Map</u> <u>Department of Land and Water Conservation, Sydney</u> describes the underlying geomorphology of the Hastings/Camden Haven river system and associated coastline and has been summarized below.



The Rainbow Beach area formed as an extensive Pleistocene barrier off the earlier coastline and connected the former offshore islands of Tacking Point, Lake Cathie and Bonny Hills headlands. Coastal lagoon formation behind this barrier was later in filled with marine sediments during the Holocene period and became exposed following the retreat of the ocean to present levels. This type of geology is conducent to the formation of acid sulphate soils. Extensive testing has been undertaken in this regard.

Due to the relative remoteness of the Rainbow Beach area from the formative effects of the proto-Camden Haven and Hastings Rivers, much of the upper sediments occurring on the site were deposited from weathering and erosion of the escarpment to the west rather than estuarine sediments from these rivers. This would indicate that potential acid sulphate soils would occur at lower levels and be overlain by more recent sandy soils from weathered rocks to the west.

4.2 Groundwater

The subject land and surrounds has been the focus of many groundwater studies for both water quality and flow investigations in conjunction with the adjoining sewerage treatment plant.

Port Macquarie - Hastings Council has undertaken extensive monitoring programs in the vicinity of the sewage treatment plant that is located to the southeast of the subject land.

Reports produced in conjunction with this testing include:

- Lake Cathie Bonny Hills STP Groundwater Investigation, 1996,
- Australian Water and Coastal Studies, Groundwater Monitoring Review September 1996,
- ERM Shortland Wetlands effluent disposal investigations October 2001.

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4.3 Acid Sulphate Soils

Port Macquarie - Hastings Council has identified various classes of land in their Local Environmental Plan (Hastings LEP 2001) in terms of their potential to develop acid sulphate soils. From the LEP 2001 plan it was noted that the subject land includes classes 2, 3, 4 and 5 lands. LEP 2001 sets out the various depths of works within each class that require development consent. This is as set out below:

Class 1	Any Works
Class 2	Works below the ground surface
	Works by which the watertable is likely to be lowered.
Class 3	Works beyond 1 metre below the natural ground surface
	Works by which the watertable is likely to be lowered beyond 1 metre
	below natural ground.
Class 4	Works beyond 2 metres below the natural ground surface;
	Works by which the watertable is likely to be lowered beyond 2 metres
	below natural ground.
Class 5	Works by which the watertable is likely to be lowered to below 1 metre
	AHD in adjacent Class 1,2,3 or 4 land.

Hastings Development Control Plan No. 34 – Acid Sulphate Soils notes that where it is proposed to carry out any activities that require development consent, the development application must be lodged with a Preliminary Soils Assessment Plan. Subsurface testing has already been conducted by Holmes & Holmes. The subsurface layer, which contains the potential Acid Sulphate Soil, is well defined.





4.4 Archaeology

measures.

The northern section of the site is within the area administered by the Birpai Local Aboriginal Land Council, whilst the southern section is within the area administered by the Bunyah Aboriginal Land Council. The northern area of the site was included in an archaeological assessment undertaken in December 1996 (Collins, 1996). The aim of the survey was to determine whether Aboriginal cultural materials were present on the subject land, and if so, to both assess their significance and recommend appropriate conservation

The survey by Collins (1996) resulted in the recording of 169 stone artefacts at 9 separate locations within and surrounding the subject land, in addition to a small open campsite and a larger campsite being recorded in the general vicinity. Refer to the attached plan for the location of these items. In terms of the then development proposal for residential development (the residential / golf course estate referred to in Part 1 – Summary), it was recommended that affected identified archaeological sites would require an application to the National Parks and Wildlife Service for consent to Destroy and Salvage. Once written

Figure 8: Extract from Collins (1996) Archaeological Assessment



Recorded site locations in relation to surveyed areas (shaded). SOURCE: <u>JP</u> <u>Collins - "Proposed Meridian Residential Subdivision Bonny Hills NSW Mid-North</u> <u>Coast: Archaeological Assessment December 1996.</u>

permission was obtained from the Director General, then it was recommended that a sites officer from the Birpai Local

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Aboriginal Land Council be engaged to collect the recorded artefacts and to re-inspect the area following vegetation clearance. If further artefacts were uncovered at that site, then these could also be collected.

The report noted that, "on the basis of field observations and the distribution and context of recorded artefacts, it is considered highly likely that further archaeological materials will be present beneath the current ground surface and that such materials may have escaped disturbance from past clearing activities". Further, some sites were recommended for subsurface investigations to establish the density, stratigraphic context and disturbance history of any artefacts that may occur there.

The report was comprehensive in its investigation and recommendations, including the consideration of the fact that increased residential occupation of the area would intensify human use of the lowland areas "rendering these sites vulnerable to both the activities of souvenir collectors and accidental disturbance from recreational users". Recommendations were made in relation to protection and stabilisation of sites prior to initiation of any development works.

Previously recorded midden sites in the area resulted in a recommendation that any pedestrian access to the beach remain confined to existing areas.

The long-term management of the sites identified by Collins, 1996 include:

- Documentation and removal of artefacts by authorised and appropriate persons following receipt of required consent and consultations;
- Stabilisation and access restriction of site such that no human disturbance would occur in the area; or
- Use of the land for urban development, but with notification of future landowners that the site may/does include aboriginal artefacts and include notification of the associated provisions of the National Parks and Wildlife Act, 1974.



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The final dot point above refers to sites that are highly likely to include small relics / artefacts that are suitable for documentation and then covering with earth for stabilisation purposes where their location is not within future residential allotments, such as within road, drainage or public reservations. However, it was recommended that, should these areas be part of a residential allotment, future use of the land for such excavations as might be required for a domestic swimming pool would potentially result in disturbance or destruction of artefacts, thus notification to residents was required to minimise accidental destruction. This notification would be included with the sales contracts via such mechanisms as inclusion in the s88B covenants, etc.

The southern portion of the property comes under the Bunyah Local Aboriginal Land Council area. This land has been investigated by a subsequent study by Jacqui Collins. The preliminary results of this study indicate that similar types of relics, as referred to in the study for the northern area, are located in this area.





Figure 9: Location of the study area and of recorded Aboriginal Sites (Excerpt from Grants Head 1:25,000 CMA mapsheet.) SOURCE: <u>JP</u> <u>Collins - "Proposed Meridian Residential</u> <u>Subdivision Bonny Hills NSW Mid-North Coast:</u> <u>Archaeological Assessment December 1996.</u>



4.5 Flora and Fauna

The subject land has been the subject of numerous development applications since the early 1980s and as such a number of flora and fauna investigations are available for the various proposals that have been made on the land.

These reports include a Vegetation Survey and Fauna Survey conducted by Greg P. Clancy and Rod Ayres on behalf of Cox and Corkhill Pty Ltd in 1983 prior to initial development in the area, and a more recent Threatened Species Impact Assessment including an 8-part test prepared by Mr. Kel Mackay and David Bray in 1997. The 1983 reports are useful in relaying the environmental condition of the land prior to substantial development, and provide information on flora species then present on the site that may be suitable for replanting during landscaping and habitat creation in the vicinity of the constructed wetlands system.

Since 1997 the site has continued to be used for grazing purposes and has not, since then, been substantially modified.

The 1997 report concluded that the existing conservation values of the land were considered to be low with no recovery potential. There were no endangered fauna and flora species identified within the development site and were not considered likely to occur in the future due to the absence of suitable habitat on the site. The report concluded that development of the site would not significantly affect endangered flora and fauna species due to the lack of habitat on the site.



More recently, the land was considered during the various studies undertaken by Port Macquarie – Hastings Council for the Area 14 Urban Growth Strategy, and the resultant Area 14 Structure Plan. The land was generally found to be unconstrained for urban development.

4.6 Surface Water/ Flooding

Stormwater enters the site via several multi-cell box culverts located in the western and south western quadrants of the site and then flows easterly across an alluvial plain and constructed lake system and discharges directly to the south arm of Duchess Gully.

Duchess Gully is a watercourse, the lower reaches being semi tidal, which separates the eastern boundary of the site from the Rainbow Beach frontal dune. The creek is a collector for all surface runoff from the site and discharges to the south across Rainbow Beach. The following topographic map extract shows the location of Duchess Gully.







Duchess Gully comprises two distinct arms. The northern arm of the Creek traverses the eastern side of the subject land before turning westwards into the site in its upper reaches. This arm would appear to have been the alignment of the Creek proper, prior to past agricultural development of the site. This type of "improvement works" of drainage was typical of the type occurring during the 1920's to 1940's. The second, or south arm of the Creek would appear to have resulted from the establishment of past formal irrigation channels constructed with a common outlet. The south arm of the creek is currently used as the outlet for the existing lake and drainage system.

The junction of the two arms of the Creek is located at a distance approximately 200m downstream of an existing weir and culvert. From this point, the Duchess Gully alignment follows the Rainbow Beach frontal dune for a distance of some 1300m before reaching the beach to discharge into the Pacific Ocean.

Over this length, the Creek has a well-defined channel varying in width from 5m (near the junction) to 20m approximately 300m upstream of the mouth. The banks of the upper 500m of this reach are heavily timbered with severe restrictions to stream capacity resulting from the presence of fallen timber and overhanging tree limbs. The lower section of the reach is less encumbered by tree growth and being wider, is therefore generally free of visible obstructions to flow.

The mouth of the creek is well defined and subject to beach movement. Currently the creek meanders across the rear of the beach to merge with Saltwater Creek (also known locally as Vinegar Creek) overflow before discharging to the ocean directly opposite Saltwater Creek. During investigations the sill level of the mouth remained at or near High Water (high tide) level, which is at RL 0.7m AHD.

Examination of aerial photographic surveys carried out in 1976, 1983, and 1985 did not reveal any apparent changes in



alignment of Duchess Gully. There were, however significant changes observed in the outlet conditions of Duchess Gully. In 1979 the Creek mouth was closed, with sand deposits forming a beach berm separating Duchess Gully from Saltwater Creek. The intervening photography between 1976 and 1985 show the Creek's outlet progressively meandering southward toward the Saltwater Creek outlet at Bonny Hills. The 1985 open mouth condition has retained the northern alignment. A site inspection conducted in April 1986 in conjunction with the study by Bond James et. al. found the Creek mouth to be as for the 1985 photography. The photography in all cases indicated significant water depth in the channel between Saltwater Creek and the vegetated barrier dune forming Rainbow Beach.

During the past twenty years a number of flood studies have been produced for the property. The reports include:

- <u>GMA "Flood Study and Hydraulic Analysis for International Sports and Leisure Village at Bonny Hills February</u> <u>1983</u>,
- GMA "Flood Study International Sports and Leisure Village at Bonny Hills November 1984,
- Bon James Laron & Murtagh Pty. Ltd "Rainbow Pacific" International Sports and Leisure Village Duchess Gully Upgrading – June 1986,
- Staniland Mounser Consulting Pty. Ltd. Flood Investigation Resort Development Ocean Drive Bonny Hills December 1994,
- Cardno MBK St Vincents Foundation Pty Ltd Proposed Development at Rainbow Beach July 2001., and
- <u>Supplementary Flood Study Proposed Development at Rainbow Beach St Vincents Foundation Pty Ltd. –</u> <u>September 2004.</u>



5 Proposed Development

The proposal has been developed in accordance with the Port Macquarie – Hastings Council's adopted Structure Plan. The adopted Plan is "an urban design concept" document. The Structure Plan notes:

- the existing villages of Bonny Hills and Lake Cathie are physically separated, providing sufficient land between to accommodate new discrete neighbourhoods or villages between them.
- There are environmental corridors restricting the area of expansion around Lake Cathie and Bonny Hills. Larger portions of the site are in single ownerships (in particular, the subject land). This allows appropriate areas of land for large scale uses: supermarkets, community facilities, schools, regional sporting facilities, to be incorporated and their inter relationships will be readily achieved.
- The land is undulating and elevated facilitating high quality urban design outcomes.
- The existing settlements will have less pressure and need for major redevelopment, allowing them to easily retain their existing character.
- Street systems can be designed to accommodate a variety of lot sizes and housing types.

This application seeks a Concept Plan approval for the subject land pursuant to Part 3A of the Environmental Planning and Assessment Act 1979. The following discussion provides a brief analysis of each component of the Concept Plan proposal along with extracts from Council's adopted Structure Plan demonstrating how the development proposed addresses the provisions of the adopted Structure Plan.



5.1 Residential Areas

The Structure Plan sets out a Vision for the Built Form for the Greater Lake Cathie Bonny Hills Village, as follows:

"The built form of the Greater Lake Cathie Bonny Hills village will have a distinctive character. Residential densities will vary to encourage a diversity of dwelling types. Medium density housing will be provided. Residential land will incorporate opportunities for home based employment."

The Structure Plan seeks the achievement of dwelling densities being higher adjacent to and within 400 metres of the Village Centre and becoming lower further away from the Village Centre. Council has been provided with various development scenarios demonstrating the likely yields for each stage. Within the entire Concept Plan area, the densities sought in the Structure Plan will yield approximately 930 residential lots.

The Concept Plan application seeks the approval of the residential subdivision footprint including the major road network. The details of secondary roads and streets, urban parks and lot layout will be contained in a future project or development application. It is noted that the Minister is requested to delegate the assessment and approval of such an application to Port Macquarie – Hastings Council.



5.2 Greater Lake Cathie Bonny Hills Village Centre

The Area 14 Structure Plan (the "Structure Plan") identifies a major village on the subject land. This village is identified in the Structure Plan as "The Greater Lake Cathie Bonny Hills Village Centre", which states it "will be the major village in the growing township and will contain all the higher order needs for this community of 10,000. The village design will take advantage of topographic and landscape features responding to economic, social and spiritual needs of the community. The village will have a centre focused on a main street and other high quality streets and public spaces."



Figure 11: Extract from the Structure Plan showing the location of the Greater Lake Cathie Bonny Hills Village Centre (blue), surrounded by medium density residential areas (dark pink) and standard residential areas (light pink). Civic / community areas are shown yellow.



"The Main Street is the focus of the village centre and contains the highest intensity uses for retail, commercial and community needs. Areas within the 400 metre radius walkable catchments of centres are developed at higher intensities, with a mix of uses including workplaces and variety of dwelling types. Land uses change at the rear of blocks. Large scale uses such as schools and retirement villages are located >400m from centres. The main street is the neighbourhood collector linking Lake Cathie with the greenway north of Bonny Hills. Ocean Drive is treated as a high amenity integrated street when passing through the village centre. Additional choices of access are provided onto Ocean Drive. Within a 400m radius of village centres, streets are interconnected and are laid out to provide direct access and choices of routes to village centres. Stormwater overland flow and treatment corridors are integrated into the street network. Parks, plazas, squares and greens, each with a different character and function are incorporated. They are located on places of high amenity such as hilltops and stands of significant vegetation and in close proximity to pedestrian vehicular access routes."

The above extracts from the Structure Plan provide an overview of the Village Centre. It is envisaged that this area will also provide an activity node for the existing villages, particularly with the inclusion of Civic and Community facilities such as the Community / Cultural Branch Library (1,200m²), Multi – purpose Community Centre (1,000m²), Child Care Centre (30 – 50 places) and Community Health Centre as detailed in the Structure Plan. Public Spaces such as a Village Green and Village Park may also be located within this area. A community of this size will require facilities and areas of land that will support the development of local employment within those industry sectors that are the most vital to the economy of the area. Those sectors are Retail, Community services, Tourism, Business, Retirement, Property and Financial Services.

The Structure Plan nominates the total retail floor space within the entire Structure Plan area to be around 10,000m². The Greater Lake Cathie Bonny Hills Village Centre (located within the subject land) is to act as the main centre, and is to include higher order retail uses with a retail floor area of up to 6,000m² to 7,000m². The Structure Plan recommends the other centres should have less than 2,000m² each.



The Greater Lake Cathie Bonny Hills Village Centre is to be located on land currently zoned 2(a1) Residential under the provisions of Hastings LEP 2001. Neighbourhood shopping centres are permissible within that residential zoning, subject to clause 31 of the Hastings LEP 2001.

Therefore, this Concept Plan approval simply seeks an identification of the neighbourhood shopping centre that is consistent with the adopted Structure Plan and does not seek a centre that would require any rezoning of the land. The detailed design of the centre would be subject to a future project or development application and it is noted that the Minister is requested to delegate the assessment and approval of such an application to Port Macquarie – Hastings Council.


5.3 School Sites

The Structure Plan and the proposed Concept Plan show areas for two schools in the northwestern and western portion of the subject land.

The Structure Plan notes: "The education department owns two sites within Lake Cathie and Bonny Hills. Both these sites are relatively small and highly vegetated. They are at the extreme ends of the Master Plan area and will not be centrally located to the majority of the future population. It is recommended that a large site with good vehicular access, collocated to open space, sport and recreation facilities within close proximity to the residential areas for future development. Should a second school site be justified due to demands from increasing population then the Lake Cathie Site is preferred".

Port Macquarie – Hastings Council consulted with the Department of Education during the preparation of the Structure Plan. The plan was amended so that one of the school sites was reduced to 4 hectares with no provision for a High School. This is reflected in the proposed Concept Plan. The Structure Plan notes that a government primary school will not be required until a threshold catchment population of some 6,000 – 7,000 is reached.

The other school site is identified in the southwestern portion of the land having an area of 12.9 hectares. This area is sufficient to cater for a 400 student Primary School and a High School with associated playing fields.

The proposed Schools are well placed to service the growing needs of the area, as well as utilise the proposed active and passive open space and environmentally enhanced areas of the Rainbow Beach area.



Schools are permissible within the current residential zoning of the land. The approval of the Concept Plan would identify these areas for school sites, and no rezoning would be required. The transport network developed by Council in the adopted Structure Plan and shown in this Concept Plan application has been designed to cater for the future school developments. The Concept Plan approval would then allow a future project or development application to be lodged, which would provide the details of the schools, including buildings and layouts. It is noted that the Minister is requested to delegate the assessment and approval of such an application to Port Macquarie – Hastings Council



5.4 Eco-Tourist Site

The eastern portion of the subject land (primarily Lot 5) is shown on the adopted Structure Plan, as a tourist development site, excluding a 50m corridor on the eastern boundary. This site adjoins the only formed beach access along this section of Rainbow Beach. It is proposed to formalise this access point to provide public access to the beach including provision for public parking facilities.

The Eco-Tourist Site is level land, located behind the foredune. Low scale eco-tourist buildings would not be visible from the public beach area. The Eco-Tourist Site is affected by the buffer to the adjoining STP, which restricts the location of habitable structures. This would be addressed in any development of the site.

Thus, the Eco-Tourist Site may be seen as an opportunity to create a low scale eco-tourist development, which formalises the beach access, but is located behind the foredune and is unlikely to be visible from the public beach area. The development of this site as an Eco-Tourist Facility with public beach access would provide significant benefits to the wider community.

The zoning of this Eco-Tourist Site land is part 2(a1) Residential and part 1(a1) Rural under the provisions of Hastings LEP 2001. Eco-Tourist facilities of various types are permissible with consent within both zones. Therefore, this Concept Plan application seeks the identification of the site for tourist development, as is consistent with the adopted Structure Plan, with the details of the development to be contained in a future project or development application. It is noted that the Minister is requested to delegate the assessment and approval of such an application to Port Macquarie – Hastings Council.



5.5 Open Space / Drainage / Habitat Corridor

The Structure Plan identifies a significant area within the subject land, being for Open Space / Drainage / Habitat Corridor. These corridors of land run both east – west through the central section of the property, with a further corridor running north – south. The corridors are multi-functional and integrated in their uses.

The location and large area of these corridors will result in the land forming various focal points for the existing and future residents of Lake Cathie and Bonny Hills. The land will be designed with judicious regard to its ultimate high community and environmental value.

A project application for the Open Space / Drainage / Habitat Corridor will be prepared to address all aspects of the land. The projection application will be submitted to the Minister for assessment and approval. The various elements of the corridor are:

- Open Space and Wildlife Corridor,
- Stormwater Treatment and Management,
- Constructed Wetland, &
- District Sporting Fields and facilities

Each element is separately considered in the following sections.



Open Space and Wildlife Corridor

The Structure Plan aims to achieve the following in relation to open space areas and wildlife corridors:

"Passive recreation is accommodated within the large areas of open space, in smaller local parks, and in buffer areas adjoining sensitive ecological areas. All significant areas of native vegetation are incorporated – in their entirety - into a system of open space reserves, habitat links and/or corridors. Environmental corridors link areas of significant environmental vegetation and habitat."

The final adopted Structure Plan is the diagram on Page 15 of this report, amended by resolution of Council, to the following extent in relation to the Open Space / Drainage / Habitat corridors on the subject land:

"Widths within St Vincents' (ie subject land) *reduced. There is to be a 10m buffer between Ocean Drive and residential development. Clearly state that drainage corridors are to be designed and constructed to also serve as wildlife corridors."*

The proposed Concept Plan is consistent with these aims and the adopted Structure Plan. The Concept Plan shows the east – west and north- south corridor identified in Council's adopted Structure Plan and complies with the specified widths. The open space corridor will serve as a wildlife corridor.



Stormwater treatment and management

Council has adopted an integrated Water Cycle Management Plan (IWCMP) for Area 14. The objectives of the IWCMP are:

- To require the implementation of water sensitive urban design techniques for stormwater management.
- To protect receiving waters from both the hydrological and water quality impacts of stormwater runoff.
- To provide for "at source" and a "treatment train" approach to storm water management (quality and quantity).
- To ensure that development is designed to minimize the risk posed by flooding.

The proposed constructed wetlands will:

- Function as an end-of-pipe device as a component of the Water Sensitive Urban Design (WSUD) treatment train.
- Provide detention of storm flows to maintain pre-development flow regime and protect existing Duchess Gully morphology.
- Meet the water quality objectives as required by the IWCMP.
- Minimise the risk from flooding to both existing and proposed developed areas by providing temporary flood storage.

Constructed Wetland

The proposal includes a Constructed Wetland. This structure serves a number of purposes in relation to stormwater treatment, stormwater detention, habitat creation, recreational areas, as well as providing a source of fill material. This is reflected in the objectives of the Constructed Wetland development, which are as follows:



Stormwater Treatment

- To mimic environmental processes in natural systems.
- Improve stormwater quality using Water Sensitive Urban Design Principles incorporating both catchment and end-ofpipe devices as part of the treatment train.

Stormwater Detention.

- Reduce downstream velocities within Duchess Gully.
- Opportunity to reinstate / restore the historical flow path of Duchess Gully.
- Environmental flows to the upper reaches of the watercourse.

Habitat Creation

- Encourage biodiversity and re-creation of former site landform.
- Provide habitat for migratory birds, insects, aquatic and amphibious animals.

Recreational Areas

- Educational opportunities of wetland environment.
- Attractive environment for residents and visitors.

Source of Fill Material

• Allow the filling of adjacent residential areas.

In order to fulfil these objectives, it is proposed to construct a 13 hectare Constructed Wetland incorporating macrophyte, open water and transition zones. The Constructed Wetland will be integrated into the landscaped wildlife corridor running generally east west through the subject land. The landscaping will complement the original vegetation on the property,

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creating habitat for targeted species and also minimising maintenance requirements. The design allows for the construction to be staged if required, in conjunction with the residential development. Excavated material from this wetland will be used as fill for some of the future residential development. The positioning of the wetland has also been designed to avoid known threatened species and archaeological sites within the subject land.

The design of the Constructed Wetland has been based on a number of environmental investigations. Studies into the geomorphology of the site have noted the land is located within a 10km wide coastal plain between the Pacific Ocean and the coastal range. The soils on the site were formed during the Pleistocene period as lagoons behind a coastal barrier connecting the former offshore islands of Bonny Hills and Lake Cathie headlands. The lagoons infilled with marine deposits and erosion from the coastal range during the later Holocene period, and the site covered with Aeolian (wind-blown) sand deposits.

Groundwater testing found that groundwater flows from west to east towards the Pacific Ocean. The existing ground water level is 3.4m AHD, which is the approximate level of the existing lake on the subject land. The groundwater is pH neutral to slightly acid with testing indicating compliance with the recreational water uses guidelines. There is little evidence of saline influence. Groundwater impact has been considered during and post construction within the proposed Management Plan for the Constructed Wetlands produced by Cardno MBK.

The Hastings Local Environmental Plan acid sulphate soils map identified part of the subject land as Class 4. Soil testing for potential acid sulphate soils has also been carried out over the site of the Constructed Wetland. The soil testing identified a well-defined acid sulphate soil layer located between RL 2.5m (west) and RL 1.5m (east). The invert of the Constructed Wetland will remain 0.5m above the acid sulphate soil layer wherever possible. The Constructed Wetland water level is to be maintained at RL 2.8m. Thus, the majority of the material to be excavated will not require acid sulphate soil treatment.



No untreated acid sulphate affected soil to be used for fill. An Acid Sulphate Soil Management Plan has been completed by Cardno MBK as part of the Constructed Wetlands Management Plan.

An updated Aboriginal Archaeological study has been undertaken for the area of the Constructed Wetland. The design of the Constructed Wetland footprint has been undertaken to avoid disturbance of known Aboriginal archaeological sites.

An updated flora and fauna study has also been undertaken over the site of the Constructed Wetland. Again, the design has ensured the Constructed Wetland development is undertaken so that threatened species are not adversely affected.

Currently, surface water flows from west to east under Ocean Drive through the existing 7 Ha lake, over a primitive weir to Duchess Creek south. The former flow path has been highly modified with a section of Duchess Creek bypassed by agricultural drainage works in 1920s. The Constructed Wetland will reduce surface water heights and peak velocities in Duchess Creek by providing extended stormwater detention.

Wetland Planting and landscaping will mimic as much as possible, the natural vegetation patterns and consider the original landscape prior to settlement. Landscaping of the wetland curtilage will consider maintenance as well as establishment costs, and strive for an attractive environment in addition to habitat considerations. Preliminary lifecycle costing has been undertaken to ensure the wetland is sustainable in the longer term.

The Constructed Wetland provides the best solution to address the dual aims of stormwater detention for the regional catchment, whilst simultaneously providing stormwater treatment as an end-of-pipe design as part of a Water Sensitive Urban Design scheme. The construction of the wetland, incorporating habitat provision, can result in a net gain for the environment including the reinstatement of historical flow patterns for Duchess Gully (including restoring environmental flow to the upper reaches of this watercourse).

The Constructed Wetland is an integral component of the overall development of the subject land and thus may be considered a Part 3A matter in accordance with 75B (3) of the Act – Related Development. The full details of the Constructed Wetland will be included in the Project Application for the Open Space / Drainage / Habitat Corridor.





District Sporting Fields and Facilities

The Structure Plan notes the following: "Local sporting facilities are at capacity and have no land available for expansion. There is both a local and regional demand for facilities for the following sports: Soccer, Rugby League, Baseball, Cricket, Tennis and Netball. Most of these facilities can be accommodated in a situation where the schools and the Council share land and sporting facilities. This land should adjoin the site for the state school and have good access from the through street system and Ocean Drive. Sufficient land is available to allow for off street parking, bus set-down and club / change room / toilet facilities."

The area and location of the District Sporting Fields shown on the proposed Concept Plan has been finalised in consultation with Port Macquarie – Hastings Council and are now identified within Port Macquarie – Hastings Council's Open Space Management Plan. These sporting fields will service the expanding district community.



1. Pursuant to Section 750 of the EP&A Act 1979, Concept Plan Approval for the following:

This application specifically seeks the following:

- a) In respect of the residential component, delineation of the limits of the residential subdivision and future urban uses on the subject land. It is proposed that the detailed subdivision design will be the subject of a future project application or a development application;
- b) General location of the Greater Lake Cathie Bonny Hills Village Centre. The detailed design, including the size and extent of the center, will be the subject of a future project application or a development application;
- c) Delineation of the extent of the two separate school sites on the subject land. The detailed design of the individual schools will be the subject of future project application(s) or development application(s);
- d) Delineation of the site for eco-tourist development. The details of the development to be the subject of a future project or development application;

6 Conclusion

The proposed Concept Plan for the subject land is in accordance with the adopted Port Macquarie – Hastings Council Structure Plan for Area 14. Approval of the Concept Plan will ensure that the Structure Plan is implemented, as is the desire of the community and Port Macquarie-Hastings Council.

The subject land has been significantly disturbed by agricultural and development works within the period of the last twenty years and has resulted in a highly modified and degraded site being unconstrained and suitable for urban development.



- e) Delineation of the extent of the Open Space / Drainage / Habitat Corridor. A future project application will be submitted for the following elements within the corridor:
 - Open Space and Wildlife Corridors,
 - Stormwater treatment and management,
 - Constructed Wetland, &
 - District Sporting Fields and facilities.

2. Pursuant to Section 75P of the EP&A Act 1979, and in conjunction with the approval of the Concept Plan, a determination is sought that the project application for the Open Space / Drainage / Habitat Corridor be submitted to the Department for assessment and determination by the Minister.

3. Pursuant to Section 75P of the EP&A Act 1979, and in conjunction with the approval of the Concept Plan, determination of the Minister is sought that approval for application(s) for residential development, the Greater Lake Cathie Bonny Hills Village Centre, schools and the eco-tourist facility be determined under Part 4 of the EP&A Act 1979. Therefore, Port Macquarie – Hastings Council becomes the consent authority for these applications.



7 Matters Under Part 3A

Please consider the below information in accordance with Part 3A requirements.

1. A description of the project and the location along with a map identifying the site,

Please refer to the Concept Plan and description provided in the body of this report.

2. The capital investment value (excluding land value) and direct employment,

The proposal is for a residential subdivision involving earthworks, and future school developments, eco-tourist facilities, open space areas, wildlife corridors, etc as outlined in this document. The total capital investment value is unknown at this time but based on the average cost of constructing a residential lot (currently approx \$65,000 per lot including development contributions), the total cost of construction of some 800 residential lots, other non-residential development sites (ie. schools, commercial sites and eco-tourist facilities) and the open space and drainage, construction is likely to exceed \$75 million. Later, building construction upon the developed sites is likely to exceed 4 times that figure – say exceeding \$400 million. Employment demand will be significant during the long period of construction activity, during and following which the community, commercial, schools, eco-tourist facilities and home based businesses will support ongoing employment activity.



3. The planning provisions applying to the site i.e. permissibility and development controls in the local environment plan provisions applying to the site.

The subject land is primarily zoned 2(a1) Residential under the provisions of Hastings LEP 2001. The zone objectives are as follows: (a) To identify land suitable for residential purposes; (b) To ensure the provision of services and facilities associated with residential land uses or which are unlikely to affect residential amenity; (c) To ensure a variety of housing choice; (d) To enable appropriate development where allowed with consent.

The landuse table for the 2(a1) zone is as follows:

Allowed without development consent

Nil

Allowed only with development consent Any development not included in Item 3

Prohibited

Development for the purpose of:

Aeroplane landing areas, Animal establishments, Aquaculture, Brothels, Car repair stations, Clubs, Commercial premises (other than those within neighbourhood centres), Depots, Extractive industries, Forestry, Heliports, Hotels, Industries, Institutions, Junk yards, Liquid fuel depots, Mines, Motor showrooms, Places of assembly, Radio or television transmission towers, Recreation facilities, Retailing of bulky goods, Roadside stalls, Rural workers' dwellings, Rural tourist facilities, Sawmills, Service stations (other than those within neighbourhood centres), Shops (other than those within neighbourhood centres), Warehouses.



The proposal is consistent with the 2(a1) zone objectives. Subdivision of land to create allotments down to $450m^2$ is permissible with consent in accordance with clause 17(1)(a) of LEP 2001. Clause 17(2) allows lot sizes of less than this area where dual occupancy or cluster housing developments are proposed.

A small area of the land is zoned 1(a1) Rural under the provisions of Hastings LEP 2001. The zone objectives for the rural zone are as follows: (a) To protect and encourage utilisation of the productive potential of agricultural, extractive and mineral resources located in rural areas. (b) To protect the amenity of rural residential subdivision areas. (c) To prevent the unnecessary, premature or sporadic fragmentation of rural land, to protect the agricultural potential of land and also to ensure that development does not create unreasonable or uneconomic demands for the provision or extension of public amenities and services. (d) To enable appropriate development where allowed with consent.

The landuse table for the 1(a1) Rural zone is as follows:

Allowed without development consent

Development for the purpose of:

Agriculture (other than buildings associated with agriculture), Forestry

Allowed only with development consent

Any development not included in Item 1 or 3.

Prohibited

Development for the purpose of:

Aeroplane landing areas within one kilometre of the coast, Boarding houses, Brothels, Car repair stations, Cluster housing, Commercial premises, Dual occupancies (detached dwellings only), Exhibition homes, Industries (other than offensive or hazardous industries and rural industries), Medical centres, Motor showrooms, Neighbourhood centres,



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Residential flats, Retailing of bulky goods, Road transport terminals, Shops, Tourist facilities (other than rural tourist facilities), Warehouses.

Port Macquarie – Hastings Council has adopted a Structure Plan for Area 14, which includes the subject land. The Structure Plan was the subject of a number of public meetings and workshops.

Port Macquarie – Hastings Council has resolved to prepare a Development Control Plan for Area 14. A draft DCP has not been exhibited at this stage.

4. The views of the local council if known (for Construction Criteria - the outcomes of consultation with the local council(s), and reasons why the project should not be determined by the council),

The proposal is consistent with the Port Macquarie – Hastings Council adopted Structure Plan. The Structure Plan was the subject of public consultation prior to adoption. Consultation with Council regarding the details of the relevant DCP is continuing. The Council is understood to be supportive of the proposed Concept Plan and to be prepared to be the consent authority for subsequent development applications.

5. Justification as to why the project should be considered to be a State significant development taking into consideration the criteria specified in the Major Projects SEPP (Source: Major Projects Guidelines – 24 July 2005).

Schedule 2 of the Major Projects SEPP, Section 1 Coastal Areas, Part 1(i) relates to development in the coastal zone, on residential zoned land, where the proposal involves a subdivision to create more than 25 lots. The number of residential lots proposed will be in excess of the 25 lot threshold. The subject land is within the coastal zone.



Therefore, the subdivision component of this development meets the Major Projects SEPP criteria. There do not appear to be any other provisions that would exclude the proposed development from Schedule 2 of the Major Projects SEPP.

Clause 6(1)(a) of the Major Projects SEPP, specifies - development that, in the opinion of the Minister, is development of a kind that is described in Schedule 1 or 2, is declared to be a project to which Part 3A of the Act applies. Clause 6(2) and (3) do not appear to apply to this proposal.

Based on the above, it would seem reasonably clear that at least the subdivision component of this proposal is subject to the provisions of Part 3A of the Act.

Details of the eco-tourist site have not been developed at this stage. However, it is likely that the development will provide accommodation for more than that identified in the Major Projects threshold for Part 3A, thus this area should be considered in the Concept Plan assessment.

The other components of the Structure Plan will not all meet the criteria for Major Projects, however the information has been provided to show the context of the proposed subdivision development. The Minister may advise the manner in which these matters are to be dealt with, and it is requested that the Minister delegate authority to the Council to enable the Council to be the consent authority for the necessary development applications to follow.



6. Pursuant to clause 2 of Schedule 2 of the SEPP, it is necessary to provide information on the proposed ceiling/maximum height of the building or structure. Should the proposed height contravene the height standard stipulated in any environmental planning instruments such as the Local Environmental Plan, it is necessary to indicate your intention to seek a SEPP 1 objection.

The proposal is to seek a Concept Plan approval for the subject land. There are no proposals at this stage that involve the erection of any structures. It is envisaged that the majority of the site would accommodate structures of 1 or 2 storey height. Buildings within and immediately adjacent to the Village Centre may, in some contexts, contain structures of up to 10 metres in height (eg. Commercial buildings).



8 APPENDIX ONE - Port Macquarie - Hastings Council's Adopted Area 14 Structure Plan

