



Planning

**MAJOR PROJECT ASSESSMENT:
RESIDENTIAL DEVELOPMENT CONCEPT
PLAN, SANDY BEACH NORTH
(MP 05_0083)**



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

December 2010

ABBREVIATIONS

CIV	Capital Investment Value
Department	Department of Planning
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning
EA	Environmental Assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
MD SEPP	State Environmental Planning Policy (Major Development) 2005
Minister	Minister for Planning
PAC	Planning Assessment Commission
Part 3A	Part 3A of the <i>Environmental Planning and Assessment Act 1979</i>
PEA	Preliminary Environmental Assessment
PFM	Planning Focus Meeting
PPR	Preferred Project Report
Proponent	Sydney NSW Property Consultants Pty Ltd
RtS	Response to Submissions

Cover Photograph: Oblique Aerial Photograph of the Site.

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EXECUTIVE SUMMARY

This is a report on a concept plan application by Sydney NSW Property Consultants Pty Ltd (the proponent) to carry out a residential subdivision at Sandy Beach North in the Coffs Harbour local government area (Lot 22 DP 1070182 & Lot 497 DP 227298) ("the proposal").

The concept plan seeks approval for residential subdivision of the site into approximately 280 lots. The development would be a community title subdivision carried out in six development stages.

The estimated project cost of the development is \$12 million.

During the exhibition period, the Department received a total of 8 submissions from public authorities and 54 submissions from the public. Of the public submissions, 50 raised objections to the proposal and 2 supported the proposal, while 2 were neutral. Key issues considered in the Department's assessment included:

- Strategic Context;
- Access;
- Flooding and Climate Change;
- Impacts on flora and fauna species, including Endangered Ecological Communities;
- Aboriginal Cultural Heritage; and
- Bushfire.

The Department has assessed the merits of the proposal and is not satisfied that all the impacts of the proposed development can be adequately mitigated via the proponent's Statement of Commitments or through further assessment requirements. In particular, the Department is not satisfied that development of the eastern precinct (parts of Stage 1 and all of 2) or Stage 6 is suitable and does not support these parts of the future development. In addition, the Department is not satisfied that the environmental impact of the proposed Stage 5 has been sufficiently offset and has requested that further information assessing this impact be submitted with the subdivision application for that stage. This will result in a reduction of development potential to approximately 200 lots. The Department considers that a level of development in the southern and western precincts can be achieved, subject to meeting stringent requirements. Modifications to the concept layout have been recommended.

The Department recommends that the Minister give partial approval to the concept plan for the project.

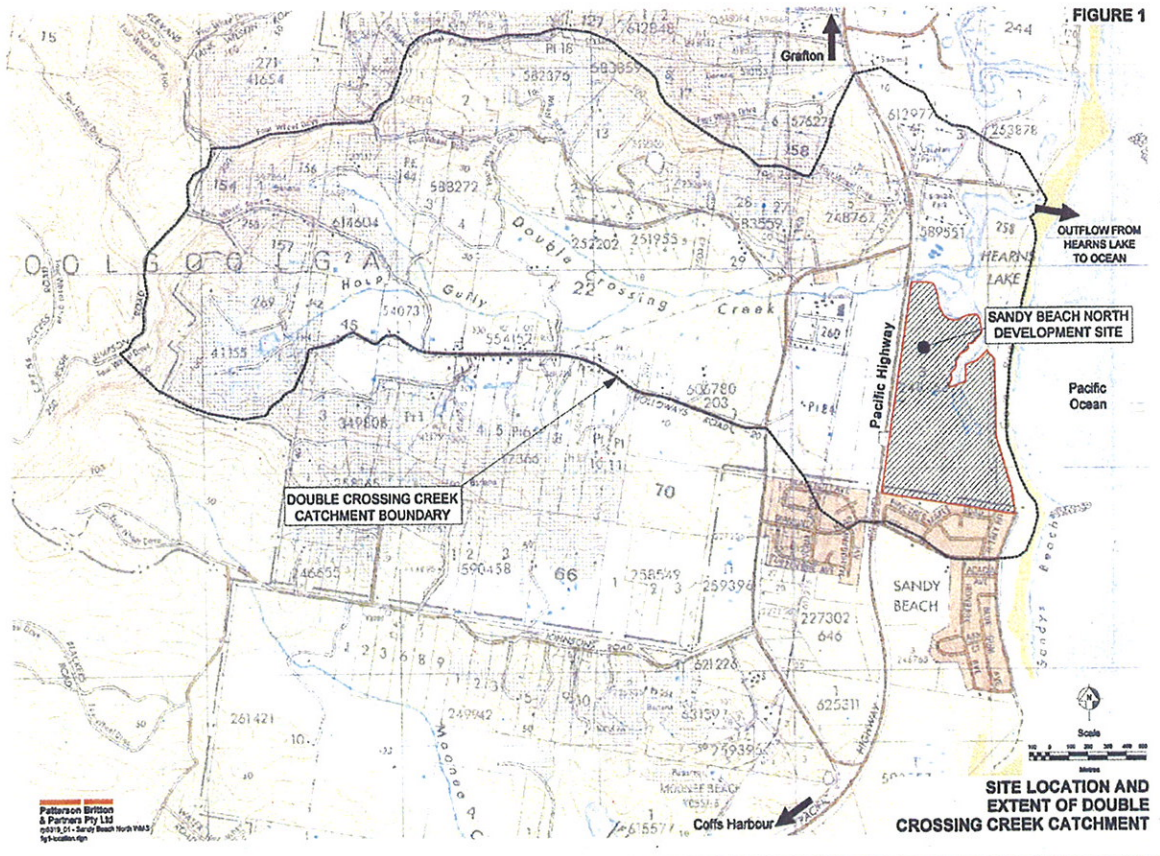
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1. BACKGROUND

Sydney NSW Property Consultants Pty Ltd proposes to construct a 280 lot residential subdivision at Sandy Beach North, a small coastal village located approximately 3km south of the township of Woolgoolga. The project location is shown in **Figure 1**.

Figure 1: Project Location



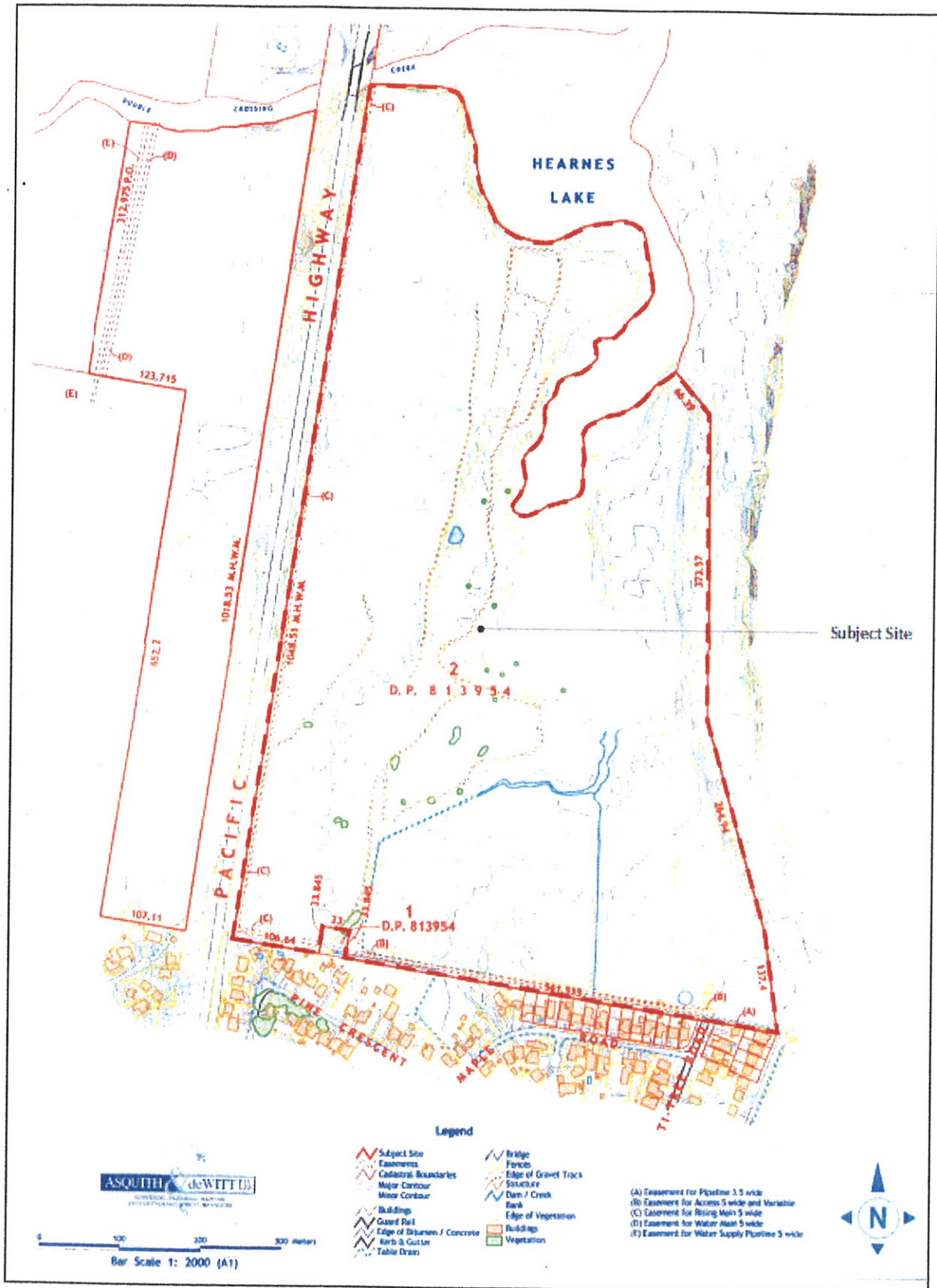
This irregularly shaped site has an area of 49.56 ha and is bounded by Coffs Harbour Regional Park to the east, the village of Sandy Beach to the south, the Pacific Highway to the west, and Hearnes Lake and Double Crossing Creek to the north (Refer **Figure 1**). Approval has been granted for the upgrading of the adjacent section of the Pacific Highway. Hearnes Lake forms part of Solitary Island Marine Park and is zoned Habitat Protection under the Solitary Island Marine Park Zoning Plan.

The site falls towards Hearnes Lake, with a crossfall of approximately 4m from the west and approximately 5m from the south and from the east.

The site is undeveloped, with an uneven coverage of various native and introduced plant species. Along parts of the western boundary, on the eastern side of the lake and parts of the southern boundary, the site has reasonable tree cover whilst the remainder of the site is covered in shrubs and low grasses. The proponent advises that the site has been used for cattle grazing for many years, which has had an adverse impact on the quality and variety of vegetation on site. Around the fringes of the lake, mangroves and saltmarsh are still present.

Land to the east and west is undeveloped while the land to the south is used for residential purposes and land to the north, on the opposite side of Hearnes Lake, is used for tourism purposes. Refer to Figure 2 for the existing site layout.

Figure 2: Existing Site Layout



Lot 2 DP 813954 - Sandy Beach North

2. PROPOSED PROJECT

2.1. Project Description

The layout of the proposed subdivision is shown in **Figure 3**. The key components of the project are listed in **Table 1**.

Figure 3: Project Layout

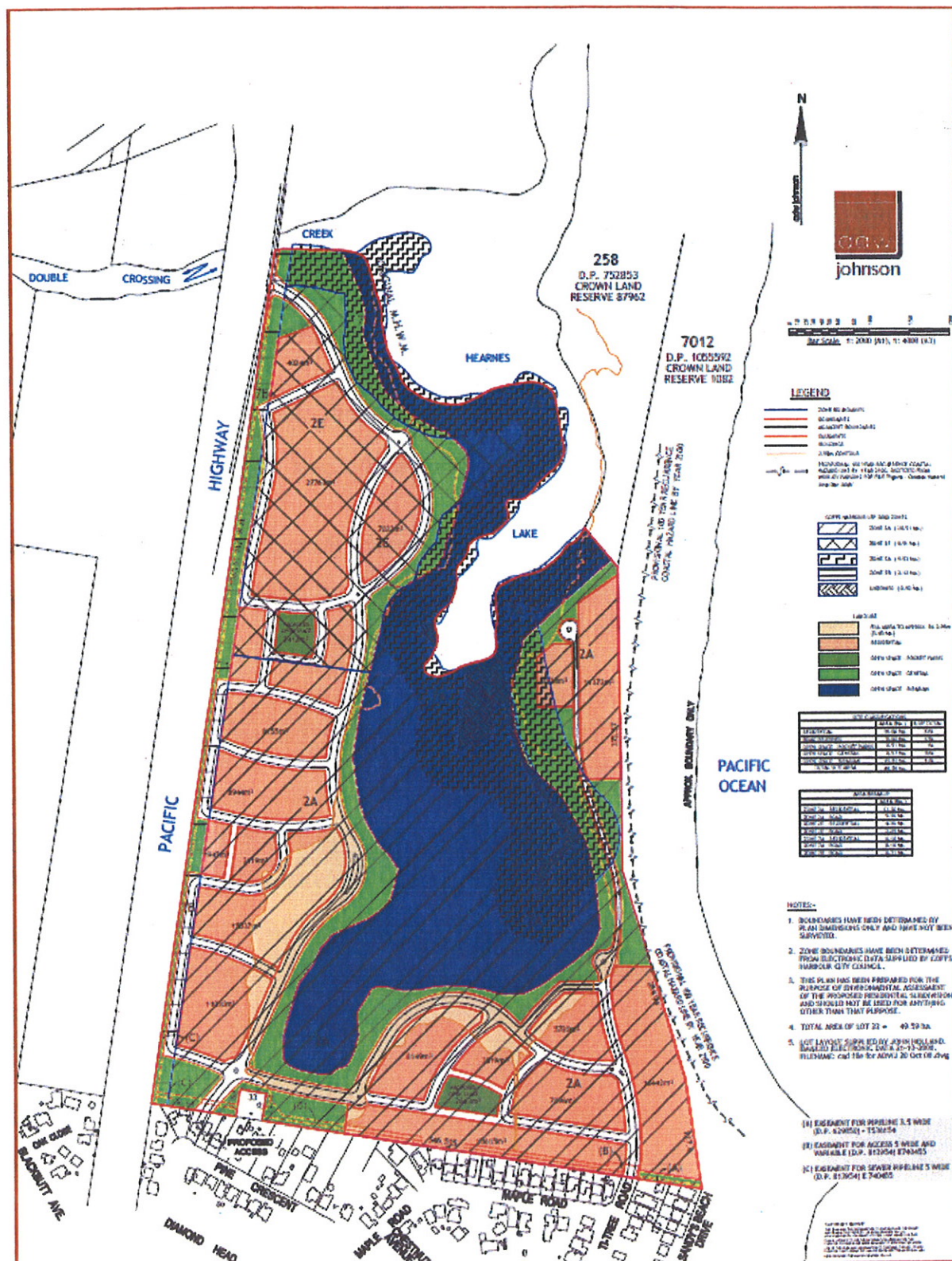


Table 1: Key Project Components

Aspect	Description
<i>Project Summary</i>	<p><i>Concept Plan for 280 lot Community Title subdivision, with lots ranging in size from 400m² to 2000m²;</i></p> <p><i>Associated road, cycle and pedestrian traffic routes;</i></p> <p><i>Indicative architecture concepts for six building types, varying in height from single to three storeys and a mix of 2, 3 and 4 bedroom freestanding, attached and multi-unit dwellings;</i></p> <p><i>Landscape concept;</i></p> <p><i>Noise attenuation barriers;</i></p> <p><i>Recreational open space;</i></p> <p><i>Ecological buffers and environmental protection areas;</i></p> <p><i>Vegetation, habitat, and bushfire foreshore management concepts; and</i></p> <p><i>Stormwater management concept.</i></p>

2.2. Project Need and Justification

The proposed development of the subject site for a large residential subdivision is generally consistent with the following:

- the designation of the site as 'Growth Area' under the *Mid North Coast Regional Strategy*;
- the relevant aims and objectives of the *North Coast Regional Environmental Plan* in relation to coastal planning;
- the relevant aims of *State Environmental Planning Policy 71 – Coastal Protection*; and
- the objectives of the current 2A Residential and 2E Tourist zoning of the site under the *Coffs Harbour LEP 2000*.

3. STATUTORY CONTEXT

3.1. Major Project

On 25 November 2005, the Director-General, as delegate of the Minister, formed the opinion that the development was of a kind that was described in cl. 1(1)(i) (subdivision of more than 25 lots in the coastal zone), Schedule 2 of the Major Projects SEPP (as it was at the time), and was a project to which Part 3A applied. Therefore the Minister for Planning is the approval authority.

3.2. Permissibility

Under the *Coffs Harbour Local Environmental Plan (LEP) 2000* there are 4 zones across the site (refer Figure 4). The southern 60% of the site is zoned Residential 2A Low Density, the north western corner is zoned Residential 2E Tourist, the perimeter of the lake is zoned Environmental Protection 7A Habitat and Catchment, and a 20m wide strip of land along the western boundary of the site is zoned Environmental Protection 7B Scenic Buffer.

'Subdivision' and 'roads' are both forms of development permissible with consent in all of these zones.



Figure 4: Existing Zones across the Site.

3.3. Environmental Planning Instruments

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

3.4. Objects of the EP&A Act

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

- (a) *to encourage:*
 - (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
 - (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) *the protection, provision and co-ordination of communication and utility services,*
 - (iv) *the provision of land for public purposes,*
 - (v) *the provision and co-ordination of community services and facilities, and*
 - (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) *ecologically sustainable development, and*
 - (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The approval of this Concept Plan will be consistent with the objects of the Act in that it will encourage:

- the promotion and coordinated development of land identified as suitable for a certain level of development by virtue of its predominantly residential zonings;
- the protection of the environment through the retention and subsequent rehabilitation of large areas of existing native vegetation along the eastern and western sides of the site and around Hearn's Lake; and
- the promotion of ecologically sustainable development through the implementation of Water Sensitive Urban Design principles throughout the subdivision.

3.5. Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle,*
- (b) *inter-generational equity,*
- (c) *conservation of biological diversity and ecological integrity,*
- (d) *improved valuation, pricing and incentive mechanisms.*

The assessment of the proposal against these ESD principles is included in Section 5 of this report.

The precautionary principle has been applied in the decision making process via a thorough and rigorous assessment of the environmental impacts of the project. Whilst recommending

that most of the proposal be approved, thus providing additional housing opportunities within the Sandy Beach area, the result is that much of the site will be protected and rehabilitated for future generations.

The subdivision has been designed in accordance with the principles of Water Sensitive Urban Design. The proposal also proposes the dedication of some 6 hectares of the High Conservation Value vegetation to the State Government. An on-site offset to protect Endangered Ecological Communities (EECs) and other high conservation value land has been recommended by the Department to compensate for removal of some EEC within other parts of the site. Therefore, it is considered that the proposal meets the valuation principle.

3.6. Statement of Compliance

In accordance with section 75I of the EP&A Act, the Department is satisfied that the Director-General's environmental assessment requirements have been complied with.

4. CONSULTATION AND SUBMISSIONS

4.1. Exhibition

Under section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment (EA) of an application publicly available for at least 30 days. After accepting the EA, the Department publicly exhibited it from 1 April – 4 May 2009 (34 days) on the Department's website, and at the Department of Plannings' Sydney CBD and Grafton offices, Coffs Harbour City Council, the Woolgoolga library and the offices of the Nature Conservation Council. The Department also advertised the public exhibition in the Woolgoolga Advertiser, Coffs Harbour Advocate and Coffs Harbour Independent and notified landholders, local community groups and relevant State and Local government authorities in writing.

The Department received 62 submissions during the exhibition of the EA - 8 submissions from public authorities and 54 submissions from the general public and special interest groups.

A summary of the issues raised in submissions is provided below.

4.2. Public Authority Submissions

8 submissions were received from public authorities – 6 objecting to the proposal and 2 raising no objection.

Land and Property Management Authority advised that, while the Crown Land on the northern side of the lake was unlikely to be affected by the proposal, the proponent should:

- detail anticipated management regimes for each environmental management area;
- extend the riparian zone for Double Crossing Creek to the Highway;
- further explain the need for removal of Swamp Sclerophyll Forest;
- locate fencing around riparian zones to protect from unrestricted pedestrian access;
- clarify what "appropriate" restoration of environmental areas means;
- remove water quality control devices from within the riparian zones;
- provide comment on the impact of additional water discharges into the lake;
- provide further detail on the water management system including the full lifespan of the proposed bioretention system; and
- assess the impact of flooding on all lands adjoining the lake.

The proposed "No Pets" policy is supported.

Northern Rivers Catchment Management Authority raised concerns regarding the adequacy of the ratio of offset to cleared land. They requested that the principles of the Native Vegetation Act be considered (although the Act does not apply in this instance), and that the proposal should provide a 50m buffer to native vegetation/habitat and include corridors for ecosystems and wildlife. They also supported the retention and restoration of riparian zones and the incorporation of a Water Cycle Management Plan into the proposal.

NSW Rural Fire Service made various recommendations regarding Asset Protection Zones, ensuring compliance with *Planning for Bushfire Protection 2006* in regards to water and utilities, and did not support the creation of the isolated eastern precinct as limited details were provided regarding access/egress to these lots.

Roads and Traffic Authority raised no objection in principle however advised that they do not favour, at this stage, the direct connection to the Pacific Highway.

The RTA also commented that:

- the traffic impact on the local road network had not been adequately addressed, particularly the likely higher dependency on private vehicle travel;
- road safety for all users (including pedestrians and cyclists) needs to be considered using relevant design standards;
- further assessment should be carried out on the proposed noise mitigation measures; and stormwater flows from the upgraded highway to and through the site.

Department of Industry and Investment raised concerns regarding:

- the need for the proponent to adopt a more conservative berm height; and
- insufficient riparian buffer.

The Department of Primary Industries recommended that all riparian buffers should be 100m wide and be rehabilitated with native endemic vegetation, and that water sensitive urban design features should be located outside the habitat buffer zones.

Department of Environment and Climate Change and Water (DECCW) (Incorporating comments from the Solitary Island Marine Park Authority) raised concerns regarding the overall environmental impact of the proposal on flora and fauna on the site. The DECCW recommended:

- that adequate buffers were retained to vegetation communities and the Lake;
- further assessment of the impact of the proposal on aboriginal site PAD1 and ongoing consultation with registered Aboriginal stakeholders is undertaken;
- that adequate assessment be undertaken, and provision made for, the impact of the Highway noise on the proposed development; and
- that the presence of littoral rainforest on the eastern side of the site be further investigated.

The DECCW provided support for the recommendations of the Hearn's Lake Estuary Management Plan and support for the proposed "No Pets" policy.

Coffs Harbour City Council raised concerns regarding:

- the impact of the development on the flora and fauna on site;
- development on the eastern side of Hearn's Lake;
- the impact of the additional traffic on the surrounding streets;
- the need for environmental buffers; and
- the impact of climate change and sea level rise on flooding levels.

NSW Office of Water (NoW) has raised no objection to the proposal however has advised that the project report has not adequately addressed the potential impacts to water quality within Hearn's lake, groundwater and coastal dunes adjacent to the development.

In their submission NoW recommended that buffer zones of at least 50m surround the lake and provided a list of issues requiring additional investigation.

4.3. Public Submissions

54 submissions were received from the public. They included submissions from the following special interest groups:

- Coffs Harbour Bushland Regeneration Group Pty Ltd;
- Sandy Hearn's Action Group; and
- North Coast Environment Council Inc.

Of the 54 public submissions, 50 (92.6%) objected to the project, 2 (3.7%) supported the project and 2 (3.7%) did not object but raised concerns. The key issues raised in public submissions are listed in Table 2.

Table 2: Summary of Issues Raised in Public Submissions

Issue	Proportion of submissions (%)
Overall Environmental Impact (flora, fauna, noise, dust, infrastructure etc)	74% (40)
Flooding, Sea Level Rise and Climate Change	67% (36)
Safe vehicular access	30% (16)
Incompatibility with Regional and Local Planning Policies	26% (14)
Inadequate existing infrastructure	22% (12)
Impact on Aboriginal heritage	7.5% (4)
Reduction in public access to the foreshore	7.5% (4)
To many lots/size of development	5.5% (3)
Acid Sulphate soils, and Impact on land values	3.7% (2 each)
Employment boost, bushfire threat, lack of environmental enforcement, inadequate buffers to existing properties, proximity of the Pacific Highway, prevalence of small lots, unsympathetic type of development, and poor subdivision design	1.9% (1 each)

The Department has considered the issues raised in submissions in its assessment of the project.

4.4. Proponent's Response to Submissions

Sydney NSW Property Consultants Pty Ltd provided a response to the issues raised in submissions. The response included a Preferred Project Report which did not propose any major changes to the scheme originally proposed. However, following a meeting with officers of the Department on 22 October 2010, the proponent submitted a scheme proposing the deletion of three lots from the precinct on the eastern side of Hearn's Lake and offered to dedicate approximately 6 hectares of the site to the State Government.

5. ASSESSMENT

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

- Noise;
- Urban Design;
- Ecological impact;
- Flooding, Sea Level Rise and Climate Change;
- Access;
- Aboriginal Cultural Heritage; and
- Water Management.

5.1. Noise Impact of Pacific Highway

As illustrated in **Figure 4**, a narrow 20m wide strip of the site is zoned Environmental Protection 7B Scenic Buffer under the provisions of the Coffs Harbour LEP 2000. This application proposes construction of some sections of road as well as an acoustic barrier wall within this strip.

The acoustic barrier wall will stand 4m tall, and will comprise a solid fence on top of a landscaped earth mound. It will run for the full length of the site's Pacific Highway frontage and is designed to shield future residents of this subdivision from the traffic noise emanating from the Highway. The sections of road are part of the internal road system designed to serve the western precinct of this subdivision.

While the need for each of these elements is acknowledged, the construction of both within the 7B zone is not supported for the following reasons:

- The acoustic barrier wall is a prohibited use in the 7B zone;
- The construction of sections of road and the acoustic barrier wall is inconsistent with the objective of the 7B zone with respect to the scenic quality of the highway in that their construction will destroy the existing vegetation within the 20m wide strip, whereas the retention and rehabilitation of this vegetation would retain a vegetated buffer to the Highway;
- The proponent has conceded that the proposed locations for these sections of road and acoustic barrier wall are densely vegetated; and
- There is no reason why both of these structures cannot be constructed outside the 7B zone.

The Department recommends that further acoustic modelling and assessment be undertaken to properly inform the design of the acoustic barrier wall and other architectural treatments to mitigate its impact. The design of any acoustic barrier wall shall demonstrate how it integrates with the design of the approved treatment proposed by the RTA for the adjoining properties.

5.2. Urban Design

The application states that the proponent has developed an 'urban concept' for the subdivision, involving 6 different building types. These are a mix of 1, 2, and 3 storey buildings, with Type 6 being a three storey multi unit structure. A total of 12 of these Type 6 buildings are proposed for this subdivision, and they are located at the northeastern corner of the site's southern precinct.

Council considered the Type 6 building type inappropriate for the setting and not consistent with Council's Low-Density Housing DCP which relates to the 2A zoning of the part of the site proposed for the buildings and has a 2 storey height limit. In response the proponent has claimed that their inclusion is consistent with the *Coastal Design Guidelines*, the incorporation of this type of dwelling into the development adds to the variety of housing stock and their orientation will reduce their visual impact.

Whilst the Department is of the view that if this type of building were to dominate the subdivision the urban design results would be unacceptable, given:

- the small number of such buildings in a subdivision of this size;
- the fact that they are located on the edge of the southern precinct and not surrounded by other built form; and
- that their visual impact when viewed from the adjacent public beach will be negligible,

their inclusion in the subdivision as described in the Urban Form and Landscape Concept document is supported.

The proponent has committed to preparing Development Design Guidelines to guide the design of housing within the development and to establish a Design Review Panel to ensure that these guidelines are consistently applied.

5.3. Ecological Impact

This site has been subject to grazing pressure for many years and this has led to varying degrees of degradation throughout the native vegetation. The vegetation to the east of Hearn's Lake is the most intact on the site, with canopy understorey and groundcovers present. Pockets of vegetation along the south of the site retain good canopy and a range of native species. Along the west of the site adjacent to the Pacific Highway, a band of open forest lies adjacent to more degraded grazing land that intergrades with wetland/saltmarsh along the margins of Hearn's Lake.



Figure 5 Regenerating vegetation within the buffer to Hearn's Lake

Sainty Report

The application was lodged at the same time as a number of other Major Project applications in this part of the Coffs Harbour coastal zone. Due to the environmental constraints on a number of these sites, an ecologist was contracted by the Department to identify the potential developable areas on three sites, including the subject site. The

consultancy that undertook the study was Sainty and Associates (Sainty) and the subsequent report has become known as 'The Sainty Report' (September 2006).



Figure 6 Woodland in the Western side of the site

Endangered Ecological Communities

In the report, Sainty considered the location of the endangered ecological communities (EECs) on the site and the need for any development to provide a buffer to these areas. The proximity of the ICOLL, Hearn's Lake, to the site was also a major consideration in the provision of buffers. Sainty recommended that all EECs on the site be protected with a 50m buffer, that a 100m buffer to saltmarsh vegetation on the lakes edge be provided to protect migratory bird habitat, and a 30m buffer be provided to the eastern boundary to protect the frontal dunes to the beach.

The Director-General's Environmental Assessment Requirements (DGRs) required the proposal to be consistent with the potential developable areas identified in the Sainty report. If the proponent was to propose development outside these boundaries, then suitable justification and sound technical arguments were required.

The EA that was exhibited provided technical ecological arguments on why the proposed development should proceed outside of those areas delineated by Sainty.

The Department, DECCW, the Department of Industry and Investment (Fisheries), the Department of Water and Energy (as it was known at the time), the Land and Property Management Authority, Coffs Harbour City Council and most public submission raised concerns with the scale of development on the site and the ecological impact likely to occur.

Following receipt of the public and agency submissions the proponent submitted their PPR, however no amendments of any consequence were made to the proposed layout. The

proponent and their ecological consultants accepted that some buffering to Hearn's Lake was required and that some of the vegetation communities on the site were likely to be EEC, however the extent of the buffers and the extent of the EECs differed to that proposed by Sainty.

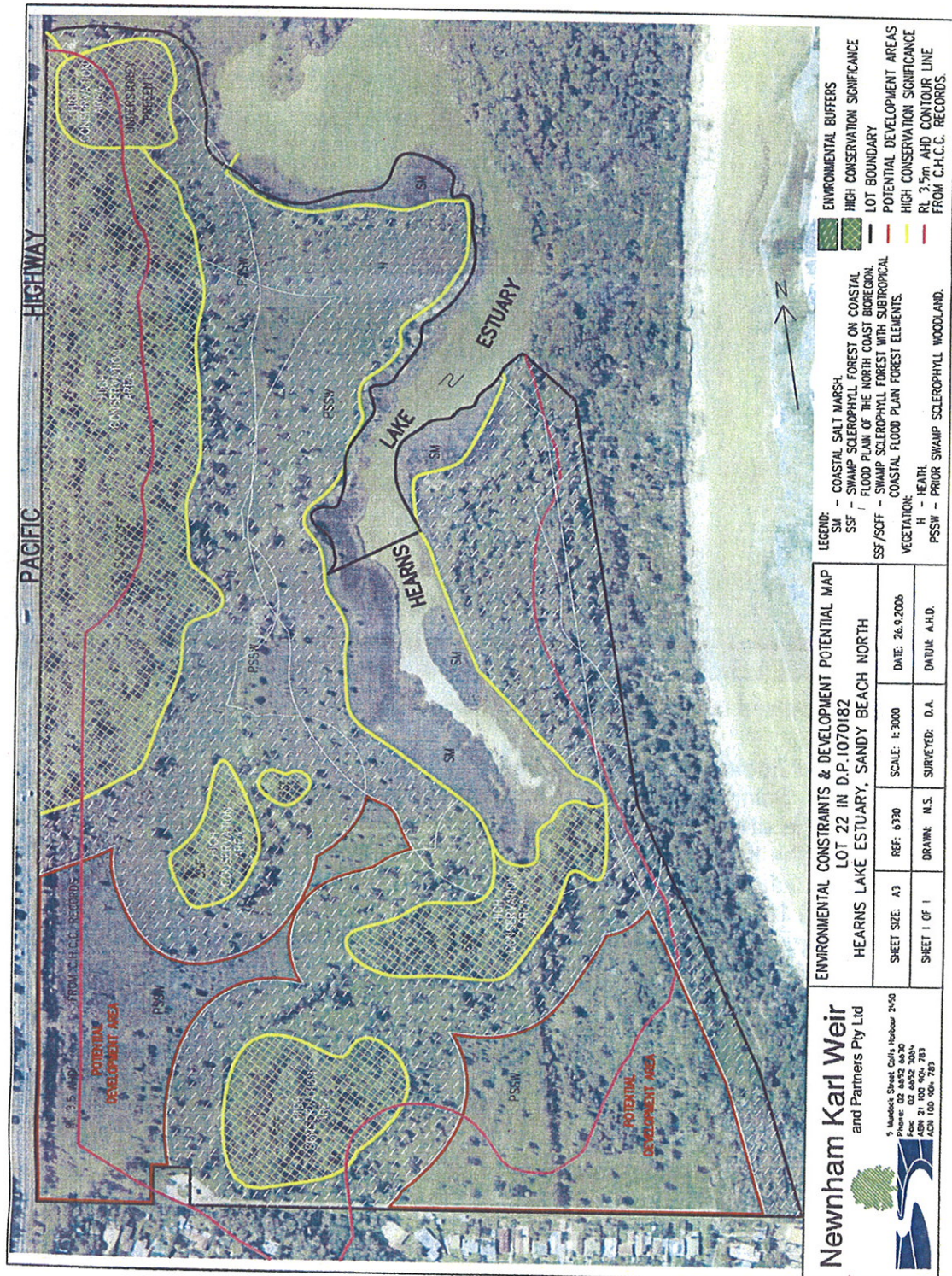


Figure 7: Sainty Development Potential Map

In order to find resolution on the issue of the extent of EECs on the site and the question of suitable buffer distances, the Department engaged ecological consultancy Biolink. Biolink reviewed all ecological reports written for the site and undertook soil sampling in relevant areas. Biolink considered that virtually the whole site was an EEC of one form or another albeit of varying quality.

The DECCW reviewed the PPR and the Biolink report and, amongst other things, supported Biolink's finding on the existence of EEC on the site and agreed on the varying quality of the EEC.

The proponent was provided a copy of the Biolink report but disputed most of its recommendations.

After discussions with the Department on issues of ecological and flooding impact the proponent amended the proposed layout plan to exclude 3 lots within the precinct to the east of Hearn's Lake and offered to dedicate approximately 6ha for inclusion into the Coffs Coast Regional Park (refer **Appendix C**).

With reference to **Figure 8 'Plan of Existing Vegetation Communities'** on the site, the development of the subdivision as proposed would result in the:

- removal of virtually all of the vegetation communities:
 - 'B', which Sainty and Biolink regard as EEC;
 - 'B/C' which all parties agree is EEC, and
 - 'I', parts of which the proponent's ecologist has accepted is EEC.
- removal of substantial parts of 'F' and 'H', which although heavily degraded through slashing/grazing, still meet the description of EEC according to Biolink;
- and would impact on:
 - 'C' that exists within the south of the site, as a result of road and stormwater infrastructure construction, which all parties agree is EEC; and
 - 'A' and 'D' in the east of the site.

While the Department acknowledges the varying quality of the EECs on site, the extent of the loss is considered unacceptable. The Biolink review recommends retention of the vegetation communities to the east and south-east of Hearn's Lake and recommends that EEC areas on the rest of the site, outside buffers to the lake, may be developable, subject to an appropriate offset.

The Department has determined that it can accept limited development within areas of EEC and has largely accepted the recommendations of the Biolink review. The Department believes a satisfactory offset for the removal and impact on EEC vegetation communities requires:

- the exclusion of development from vegetation communities 'A', 'D' and 'I' to the east and southeast of Hearn's Lake and that part of vegetation communities 'B' and 'H' that fall within the Stage 6 area of the Staging Area Plan (see **Figure 9**), and
- that the future subdivision application for Stage 5 be accompanied by an assessment to determine an appropriate offset for the development of this stage and the proposed arrangements to secure the offset for conservation purposes in perpetuity.

The Department has recommended that restoration and management of these vegetation communities, as well as those vegetation communities falling within the buffer to Hearn's Lake be guided by a Conservation Area Management Plan, to be finalised as part of a subsequent application for subdivision. The Proponent has committed to the provision of a vegetation and rehabilitation plan.

Threatened Fauna

The site has a range of habitats including forest, heath, sedgeland and woodland as well as the Hearnese Lake waterbody itself. Notwithstanding the disturbed nature of the site and the consequent reduced habitat complexity, a number of threatened species have been recorded (Wallum froglet, Black-necked Stork and Glossy Black Cockatoo, Eastern Freetail and Greater Broad-nosed bats) or are likely to use the site (Eastern Blossom Bat), while others are known to occur immediately adjacent to the site (Green Sea Turtle, Little Tern).

The Department has considered the habitat requirements of these species and has determined that with the recommended reduction in the extent of development and the addition of this land to the on-site Conservation Area an appropriate amount of habitats will be conserved for these species. The Conservation Area will contain a substantial number of hollow-bearing trees, protect large areas of Wallum froglet habitat and Eastern Blossom Bat habitat.

Further recommended requirements are that the Conservation Area be rehabilitated and that domestic animals, which can have a significant impact on threatened species, be prohibited from the development site and that opportunities are considered to maintain and enhance wildlife linkages (in particular Wallum froglets) to fauna habitat on the western side of the Highway through culverts currently in place under the Highway, particularly in the south-west of the site.

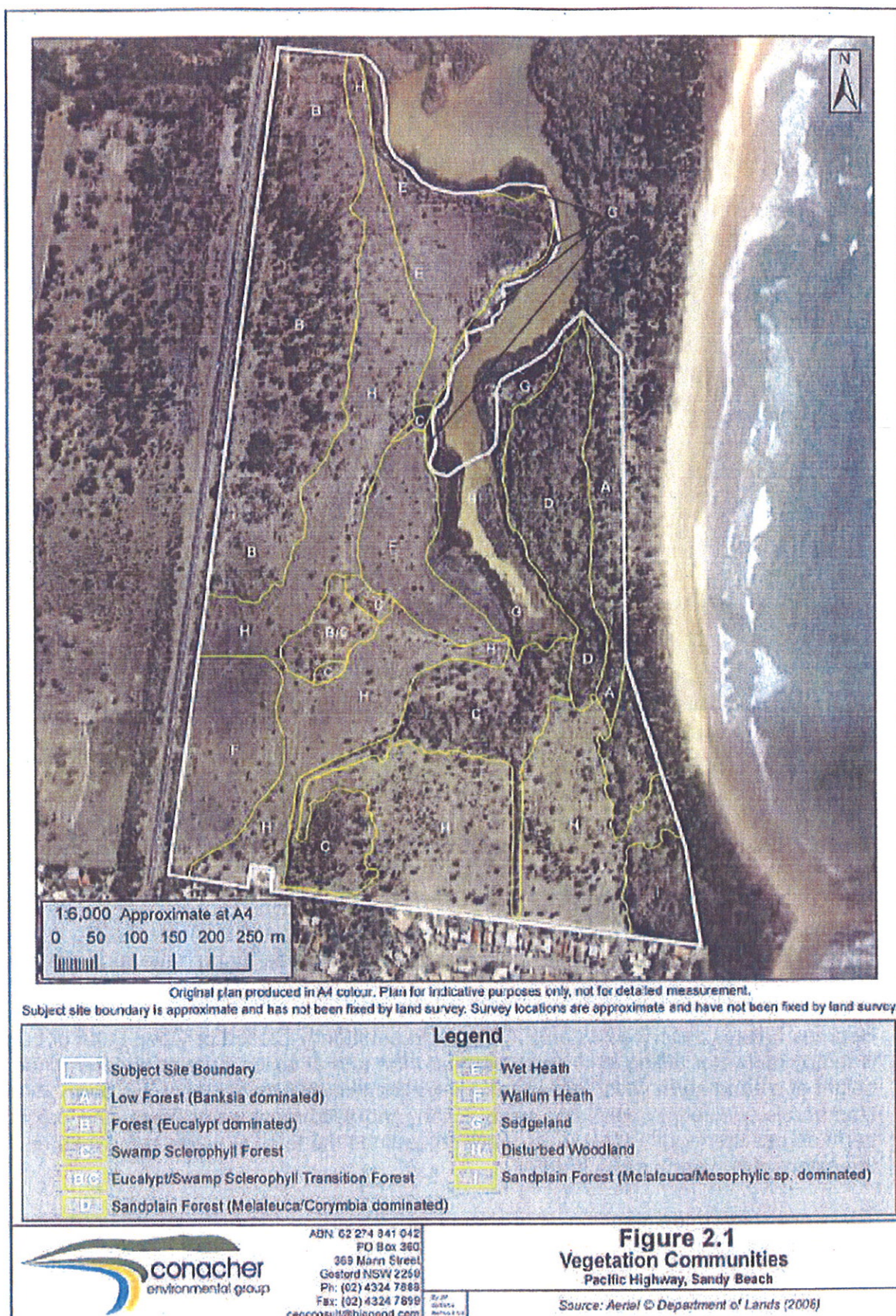
The areas excluded from development and to be added to a Conservation Area are shown on the marked up staging plan included at **Figure 9**.

This modification to the proposal, which would result in the loss of between 80 and 140 lots, would also have the following benefits:

- It would retain and allow the rehabilitation of a significant section of high conservation value vegetation, that has high rehabilitation potential;
- It would conserve hollow-bearing trees and potential koala habitat trees on the site;
- It would provide for the retention of vegetation around the lake edge;
- It would provide for the retreat of wetland/saltmarsh EECs as sea level rise increases;
- It would remove the isolated residential precinct to the east of the lake, which was not supported by the RFS;
- It would provide greater buffering to the lake for threatened wetland birds known to use the site;
- It would provide retention of habitat for threatened microbats and forage habitat for threatened flying foxes;
- It would provide greater protection to the Coffs Coast Regional Park which directly adjoins the site to the east;
- It would provide greater protection to the Solitary Islands Marine Park, of which Hearnese Lake forms a part;
- This retained area, once rehabilitated and in conjunction with the adjacent Wet Heath ('E'), would provide a substantial buffer to the lower reaches of Hearnese Lake and Double Crossing Creek, as sought by the Land and Property Management Authority, the Northern Rivers CMA, the Department of Industry and Investment (Fisheries) and Coffs Harbour City Council; and
- It would provide for a connection with the remnant vegetation on the western side of the Highway and enhance the wildlife corridor provided by the RTA as part of the Pacific Highway upgrade in this area.

In summary, the proposed development is considered to have an unacceptably high impact on vegetation communities of high conservation value, EECs and fauna habitat and is not supported in its current form. The Department recommend that certain parts of the site be excluded from development as depicted at **Figure 9**, and that the area identified as Stage 5

be the subject of further assessment to determine an appropriate offset area in order to an adequate offset for that area.



Source: Ecological Survey and Assessment Report by Conacher Environmental Group 2008

Figure 8: Plan of Existing Vegetation Communities

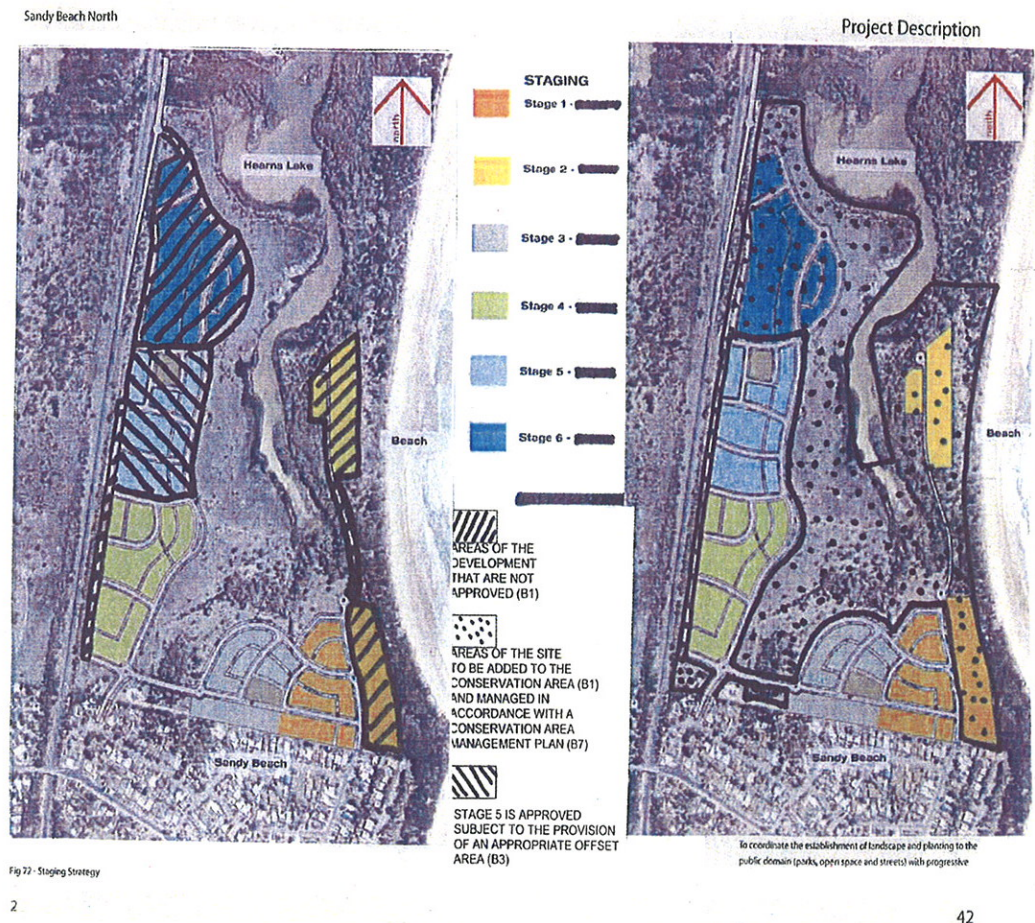


Figure 9: Staging Plan showing the Department's recommended modifications

5.4. Flooding, Sea Level Rise and Climate Change

As with the issue of ecological impact, the issue of flooding and the impact of flood waters on the development has been the subject of numerous studies by both the proponent and the Department.

Hearnes Lake is described as an ICOLL, an Intermittently Closed or Open Lake or Lagoon. It is fed by rainwater falling in its catchment and the rate at which it drains is determined by the height of a sand berm which separates it from the ocean. The height of this berm varies over time and is affected by wind and wave action, and catchment water flows. The height of the berm across the mouth of Hearnes Lake determines the level of water in the lake and hence the extent of flooding across the site.

There are contrary opinions on what should be adopted as the berm height level for flooding. In their submission dated 25 October 2010, the proponent has stated that the relevant height should be 2.2m AHD. The Department's consultant (WMA Water) has advised that an incorrect methodology was used to determine the 2.2m AHD berm height and the correct level should be the maximum recorded height of 2.6m AHD. The DECCW and Coffs Harbour Council support this height.

In order to determine the flood level for the year 2100 (as required by Government policy), two other factors need to be added to the berm height: the effects of climate change and sea level rise; and an allowance for the lag between the rate of water entering the lake and the rate at which water will leave the lake. There is agreement that, in line with NSW State policy, 0.9m is to be added for the effects of climate change/sea level rise, while allowances of 0.2 and 0.1 are suggested by the proponent and the Department's consultant respectively for the lag effect. This results in the proponent claiming a flood level of 3.3m AHD, while the Department recommends that a flood level of 3.6m AHD be used. Mechanical opening of the Hearn's Lake entrance is not favoured by DECCW, Council or the Hearn's Lake Estuary Management Plan and has not been considered as a solution to flooding impacts.

At a meeting on 22 October 2010, the proponent proposed that an approach be adopted where the roads on the lake side of the proposed subdivision be set to the Department's predicted flood level for the year 2100 (3.6m AHD), with the land behind these roads at a lower level (refer **Figure 10**). In this instance the roads would be acting as a buffer to the flood water. Some concern was expressed at how this approach would allow appropriate treatment and disposal of stormwater however the Department's consultant has advised that this solution is feasible, and that it would have a negligible effect on flood storage volumes.

It is common practice for development on flood prone land to be built to a level higher than the flood level. For residential development a freeboard of 0.5m is usually adopted. The proponent's consultant has suggested that a 0.3m freeboard be adopted as they claim that 0.2m of the 0.5m freeboard is to take account of sea level rise and as such, it represents a "double dipping". The Department's consultant does not share this view and maintains that the 0.5m freeboard should be applied to the floor levels of all habitable rooms in the proposed subdivision. The Department has accepted this advice. This would result in a minimum floor level of 4.1m AHD for all habitable rooms in future dwellings in this subdivision.

The Department is satisfied that a berm height of 2.6m AHD is the appropriate height to adopt and that this means that the 2100 flood level would be 3.6m AHD including the lag effect. The Department recommends that a minimum road level of 3.6m AHD be set for the lakeside roads and a minimum floor level of 4.1m AHD be set for future dwellings in this subdivision. This is addressed in the recommend terms of approval.

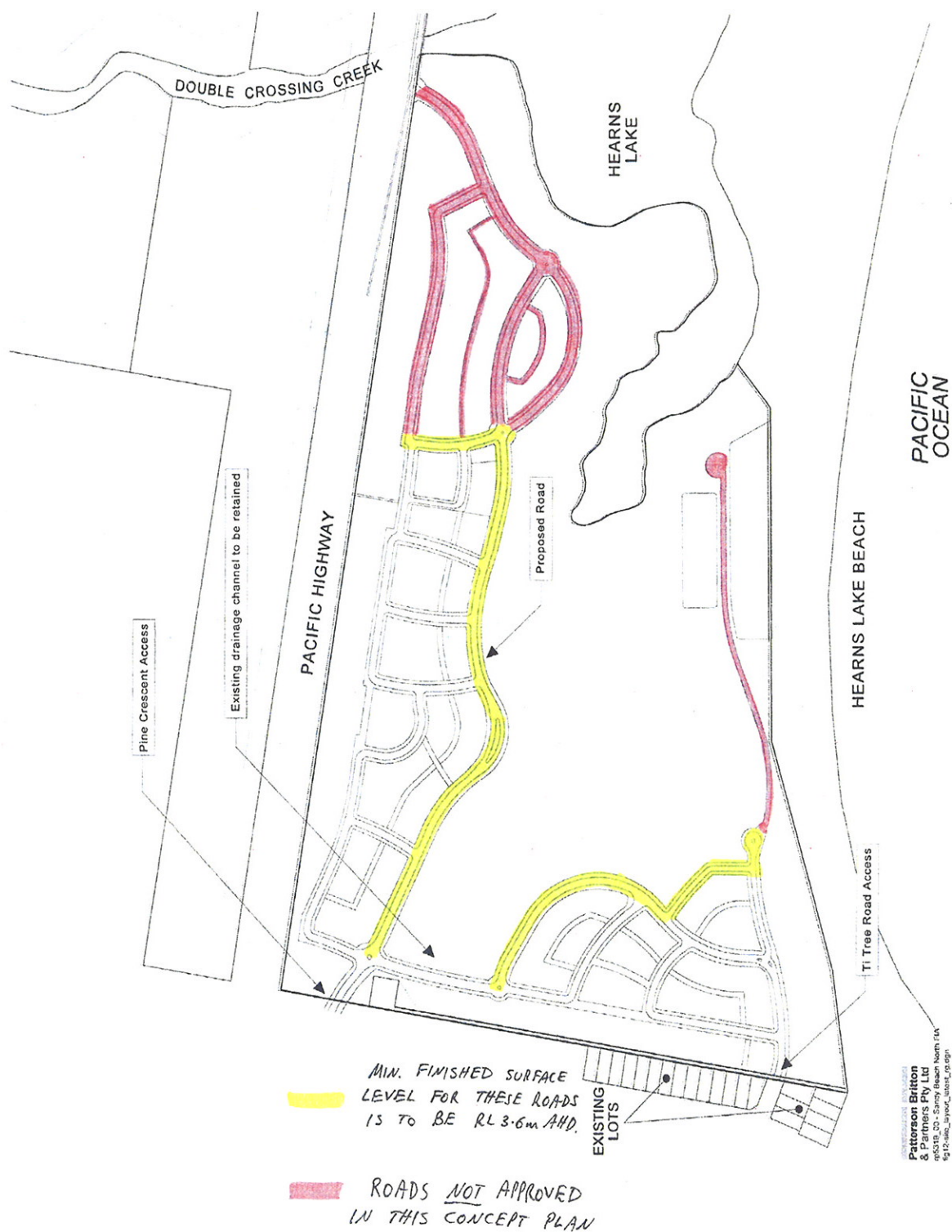


Figure 10: Extent of Roads with a finished Surface Level of RL3.6m AHD

5.5. Access

There are two main aspects regarding vehicular access to and from the site: the direct connection to the Pacific Highway, and the adequacy and capacity of Pine Crescent and Ti-Tree Road to accommodate the additional traffic coming from the subdivision.

Firstly, the application includes a direct connection to the Pacific Highway at the northern end of the site, just south of Double Crossing Creek (refer to **Figure 3**). The proponent states that the RTA has granted approval to a "left in and left out" connection to the Highway along the western boundary of the site. This connection to the Highway is not supported by Council.

In their submission on the PPR, the RTA stated that despite their approval in principle "*very little detail has been provided at this time of its design nor has it been demonstrated that it will operate safely and efficiently*" and that until the RTA has been satisfied that this can be achieved "*it would be preferable to exclude this connection from the approval*". They go on to advise that this connection can be negotiated, if required in the future and will need the approval of Council with concurrence from the RTA. The Department recommends that direct connection to the Pacific Highway not form part of this approval.

Secondly, the application proposes two entry/exit points along the southern boundary: one connecting into Pine Crescent in the south west corner of the site, and the other in the site's south eastern corner connecting with Ti-Tree Road (refer to Fig. 3). The link into Pine Crescent is by far the most direct connection from the proposed development to the Pacific Highway, with vehicles using the Ti-Tree Road exit having to drive along Ti-Tree Road and then Diamond Head Road to gain access to the Highway. Because of this, it is reasonable to assume that the majority of all traffic leaving the subdivision will use the Pine Crescent exit with the balance using the Ti-Tree Road exit.

Objections to these connections have been raised by the RTA, Council and members of the public on the following grounds:

- the existing road infrastructure is not capable of accommodating the additional traffic resulting from this subdivision;
- the traffic generation figures used to assess the impact are not accurate;
- sight distances at the Ti-Tree Road/Diamond Head Road intersection are inadequate;
- Ti-Tree Road becoming a through road; and
- The width of the proposed access to Pine Crescent is inadequate.

In response the proponent has advised that:

- Any appropriate upgrading of Pine Crescent can be implemented in conjunction with the development of the site in consultation with Council and the local residents;
- the traffic generation rates used are in accordance with the RTA Guidelines and the traffic flow will remain within acceptable limits;
- the sight distance issue is an existing deficiency in the road network and not one of its making, and the subject development should not be solely responsible for improving this situation. Nonetheless, the proponent has indicated a preparedness to discuss with Council the upgrading/re-profiling of this intersection;
- at present it is proposed to demolish one house to create the connection to Pine Crescent, however if necessary the adjoining house lot (also owned by the proponent) can be included in the connection point.

The Department raises no objection to these two road connections for the proposed subdivision because:

- the overall traffic impact will be less than anticipated given that fewer lots are now being recommended for approval;
- by virtue of the road configuration, the majority of the traffic entering and exiting this proposed subdivision will go via Pine Crescent/Diamond Head Road. This

- concentration of traffic will directly affect only the few residents in these sections of these two roads, and not the Sandy Beach community more broadly;
- similar to the previous point, with only a small percentage of traffic entering and exiting the subdivision via the Ti-Tree Road connection and surrounding roads, the impact of these additional vehicles on the amenity of the residential area and safety of the street is not considered to be significant;
- the Department recommends that future applications include additional traffic impact analysis to determine the overall impact of the additional traffic on the surrounding street network; and
- the additional house lot be included to ensure that there is adequate space for the construction of the Pine Crescent connection. To this end, owner's consent of this additional parcel has been provided by the proponent.

5.6. Aboriginal Cultural Heritage

The Aboriginal Archaeological (AA) report submitted with the EA relates to both the subject site and land on the western side of the Pacific Highway. It identifies the subject site as possibly containing one isolated stone artefact (ISF 2), the disturbed remains of one open campsite (SBN 1), and one area of potential archaeological deposit (PAD 1). In terms of the current proposal, ISF 2 and SBN 1 are located outside the development footprint while PAD 1 is located directly over the main southern precinct. Their location is shown on the marked up site plan sourced from the submitted AA report (refer **Figure 11**).

The AA report recommends that the SBN 1 site be managed for preservation, conservation and interpretation within the development context, and protected by the installation of suitable topsoil and grass cover, the PAD 1 site be the subject of preliminary test excavation to determine the presence or absence of Aboriginal cultural remains. No recommendations were made regarding ISF 2.

In their response to the EA, DECCW advised that further investigation was required into the nature, scale, extent and significance of PAD 1, that any investigation be undertaken in consultation with registered Aboriginal stakeholders, and that evidence of this consultation be provided to the Department prior to the determination of any consent.

The proponent's consultant has stated that further investigation of PAD 1 is required, however this is not necessary prior to the determination of the Concept Plan. Should the results of such investigation reveal the presence of a significant Aboriginal site the modification of any approved concept layout may be required.

Although the Department would have preferred this issue to be resolved prior to Concept Plan determination no objection is raised to postponing these further investigations subject to them being undertaken as part of any further applications for this site.

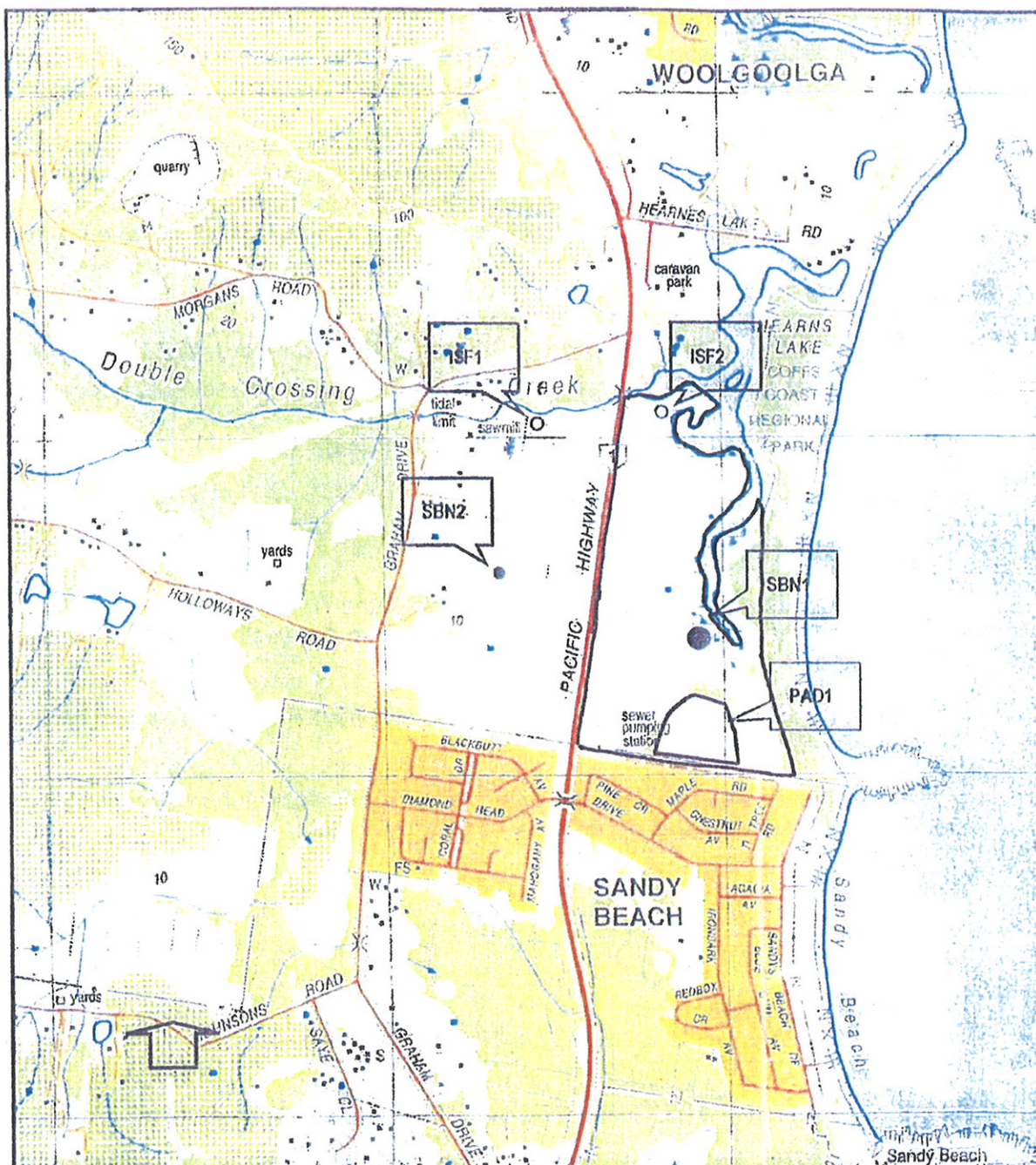


Figure 11: Potential Aboriginal Archaeological Sites

5.7 Water Management

Due to the location of the proposal, immediately adjacent to Hearn's Lake, there is concern that the proximity of urban development may lead to loss of environmental values of the Lake, in particular water quality. ICOLLs such as Hearn's Lake are particularly susceptible to water quality impacts due to reduced flushing caused by the entrance becoming regularly blocked. According to the Hearn's Lake Estuary Management Plan water quality in the Lake is already impacted to some degree by upstream agricultural activity and associated vegetation clearance as well as runoff from urban areas and roads. It is important to ensure that future urban development does not further threaten the hydrological regime of the lake or contribute to contaminant loads.

The proponent has recognised the necessity to protect the water quality of the lake and has committed to incorporating the principles of Water Sensitive Urban Design into their stormwater management system in accordance with the requirements of Council. In order to

minimise the impact on the existing vegetation communities and Hearn's Lake itself a condition has been imposed requiring all water quality control devices to be located within the development footprint and outside that part of the site identified as a Conservation Area.

The Office of Water has noted that Hearn's Lake is a marine reserve of high conservation and recreational value which is dependent on groundwater and in their response to the PPR has provided a number of further assessment requirements in order to ensure that stormwater discharged from the proposal has a neutral or beneficial effect on the surface and groundwater quality of Hearn's Lake. The Department has recommended these requirements be included in the terms of approval.

5.8 Impact of Modifications to the Concept Plan on Potential Lot Yield

In terms of impact on lot yield the recommended modifications will require the removal of the following:

1. Approximately 14 lots from the eastern side of Stage 1;
2. All of Stage 2, approximately 15 lots;
3. All of Stage 6, approximately 45 lots;
4. The relocation of an internal road to outside of the 7B zoned buffer to the Pacific Highway may require the removal of 6-8 lots from the western edges of Stages 4 and 5.
5. If the impact of Stage 5 can not be adequately offset and stage 5 is not constructed, this would reduce the yield by 60 lots.

These amendments are to be imposed through the modification of the Concept Plan and result in a subdivision capable of between 140 and 200 lots.

6. RECOMMENDATION

This application seeks Concept Plan approval for a residential subdivision of 280 residential lots. The site has been identified as having considerable environmental constraints including the presence of endangered ecological communities, the impact of flooding compounded by the effects of climate change and sea level rise, and the possible presence of items of Aboriginal cultural significance.


These constraints need to be balanced against the fact that the site is identified as a 'Growth Area' in the *Mid North Coast Regional Strategy* and the site's predominantly residential zoning under the Coffs Harbour LEP.

The Department recommends approval of a modified version of the concept plan, allowing for a subdivision of up to approximately 200 residential lots. This modified plan will provide for the retention and rehabilitation of large areas of the environmentally sensitive parts of the site, including the eastern side of the lake and the north western corner of the site. The construction of the perimeter roads to a height of RL 3.6m AHD so as to act as levies will take into account the anticipated impacts of climate change and sea level rise on the flooding of the site.

Matters identified as requiring further assessment as part of future development applications include the impact of the construction of Stage 5, the importance of a site of potential aboriginal archaeological deposit (PAD 1), stormwater and groundwater management, and ensuring that water quality control devices are located in such a way as to minimise impact on environmentally sensitive areas.


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