

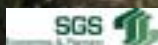
August 2006

Volume 1

Sapphire

Environmental Assessment

Report



PTW



Attentus

PTW Planning

Sapphire

Prepared for
Sapphire Beach Development Pty Ltd

**Environmental Assessment
Report**
Volume 1

August 2006

PTW Planning

Level 17
9 Castlereagh Street
Sydney NSW 2000

Peddle Thorp & Walker P/L
ABN 23 000 454 624
trading as PTW Planning

CERTIFICATION

This Environmental Assessment Report has been prepared by PTW Planning on behalf of Sapphire Beach Development Pty Ltd as trustee for Sapphire Beach Development Unit Trust.

The Environmental Assessment Report has been prepared in accordance with the Environmental Assessment Requirements issued by the Director General of the Department of Planning under Part 3A of the Environmental Planning and Assessment Act.

In accordance with the Environmental Assessment Requirements issued by the Director General it is certified that the information contained in this environmental assessment is neither false nor misleading.

A handwritten signature in black ink, appearing to read 'Janet Thomson', with a horizontal line above the first part of the signature.

Janet Thomson
PTW Planning

22 August 2006.

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PLANS





Executive summary

1

1.1 Introduction

In May 2006, a Preliminary Assessment for a Concept Plan, for a development at the site of the existing Pelican Beach Resort at Coffs Harbour, was submitted to the Director General of the Department of Planning. On 30 June 2006, the Minister for Planning (the Minister) formed the opinion that the proposal is a project and that Part 3A of the Environmental Planning and Assessment Act (EPA Act) applies to it. The Minister, on the same date, also authorised the submission of a Concept Plan for the proposal.

On 18 July 2006, the requirements of the Director General in relation to the Environmental Assessment of the proposal were received.

This Environmental Assessment Report accompanies a concept plan for the site. It addresses the matters raised by the Director General and sets out the major issues associated with the proposal. It includes an assessment of the likely impacts of the proposal and a statement of commitments for the development proposal.

1.2 The Site Analysis

The site is located on the Pacific Highway at Coffs Harbour approximately 6km north of Coffs Harbour. The site has frontage to the Highway and stretches from the highway to Campbell's Beach. It comprises the following:

- Lot 100 DP 629555
- Lot 101 DP 629555
- Lot 2 DP 800836

The site slopes steeply from the highway to the beach with a fall from 27.00m AHD to 6.00m AHD on the foreshore.

The site is currently developed as the Pelican Beach Resort which is a 114 suite hotel with associated facilities. This resort occupies only part of the site and there are large grassed areas on the northern section of the site.

There is a steep vegetated area in the central section of the site and this contains remnants of significant vegetation.

There is also a vegetated dune area on the beachfront section of the site. The site is not contaminated and there are no acid sulphate soils present. There are no heritage items on the site and it is not expected that there will be any cultural heritage items on the site.

The site is situated in a built up area along the Pacific Highway stretching north from Coffs Harbour. Immediately adjacent to the site there are residential flat buildings and the Nautilus Resort. Access to the site is via a shared road with these developments.

The site is zoned part Residential Tourist 2E and part Environmental Protection 7A Habitat and Catchment under the Coffs Harbour Local Environmental Plan. It is also subject to the provisions of SEPP Major Projects, SEPP 71 – Coastal Protection SEPP65 Design of Residential Flat Buildings and the North Coast Regional Environmental Plan

1.3 The Project Description

It is proposed to construct a residential/tourist development on the site comprising approximately 117 dwelling units. This is the number of dwellings which have been used for planning purposes and this and the type of dwelling may change as the development progresses.

Site investigations have shown that the site is steeply contoured in places with significant vegetation located both on the steepest part of the site and dune area adjacent to the beach. The site is also visually prominent when viewed from the water and some adjoining sites as well as from the highway.

The urban design objective is to retain the significant features on the site, linking them with the proposed 'green' corridors. The principle organizing element will be visual corridor extending east/west from the highway to the water creating a green open space spine. This spine will link to landscaped areas running north/south along the contours. Building zones are organized within development screened by vegetation.

An area on the water will be the principle common open space for the community at Sapphire Beach. The urban design structure will be reinforced by water sensitive urban design principles.

Built form will be integrated into the landscape structure noted above. Buildings will be within the 14 metre height line.

1.4 Key Issues

1.4.1 Design, Visual and Amenity

The development will be constructed to the highest standards of design and the proposals have adopted the principles of sustainability both in relation to the layout of the site and the design of the buildings. The buildings will be predominantly light weight with generous overhangs and sun shading devices. Colours used will complement the tropical vegetation.

A Landscape Master Plan has been prepared for the proposal, which will provide for landscaping which will soften the built form and contribute to the overall setting of the proposal. The landscaping will be carried out in distinct zones related to the natural features of the site. The 7A area and the dune area have been integrated into a vegetated core, which runs through the site with fingers stretching along the access ways to the buildings.

Although the development will have some visual impact it will be seen in the context of the landscaping on the site and the green escarpment behind. There will not be any blocking of views of the beach and the water from public viewpoints around the site.

1.4.2 Flora and Fauna

The proposal will not result in any loss of native vegetation and no threatened species will be impacted on by the proposals. A Management Plan has been prepared to provide for the revegetation and on going management of the 7A area and the dune area on the site.

The desired outcomes of the plan are:

- To conserve biodiversity and maintain ecosystem function of the reserve
- To rehabilitate and maintain the land to its natural state and setting;
- To provide for appropriate linkages with vegetation & access corridors;
- To ensure that the use and management of the foreshore and 7(a) areas is in keeping with NSW Coastal Policy 1997, The Guiding Principles of Ecologically Sustainable Development and other relevant legislation and policies

- To provide for community use of and access to the land in such a manner that will facilitate the ecologically sustainable use of the foreshore and to minimise and mitigate any disturbance on the foreshore caused by community use;
- To maintain the foreshore as a transition area between the aquatic and the terrestrial environment, and to protect and enhance all functions associated with the foreshore's role as a transition area;
- To ensure the principal values of the foreshore are protected and enhanced environmental, cultural heritage, recreational, visual, scenic tourism

1.4.3 Coastal Foreshore and Public Access

The Management Plan has set out a process for the restoration and ongoing management of the foreshore areas on the site. This will be an ongoing process in consultation with the Council and the local community. Public access will be provided along the northern boundary of the site to the beach to join to the coastal walk along the beach area.

1.4.4 Natural Hazards

A Bushfire Risk Management Plan has been prepared for the development of the site and it concludes that the development can be safely carried out on the site and that it complies with the requirements for Asset Protection Zones and that access is in accordance with the requirements in Planning for Bushfire Protection 2001.

There are no acid sulphate soils on the site and the site is considered to be suitable for the proposed development in terms of contamination issues.

The building development is proposed to be sited landward of the 100year Hazard Line as identified along the coastal area by Coffs Harbour Council.

1.4.5 Noise

The only sources of noise likely for the development are traffic on the Pacific Highway and wave noise. It has been concluded that construction measures can be adopted to deal with these matters.

1.4.6 Integrated Water Cycle Management

A system of Integrated Water Cycle Management has been proposed for the site and this will utilise the principles of water sensitive urban design within an holistic framework. to reduce the impacts of the development on all parts of the water cycle. The major aspects of the water cycle that are considered within the strategy include:

- Stormwater;
- Groundwater (licensed bore on site);

- Potable Water Demand (from the Coffs Harbour reticulated supply);
- Wastewater generation;
- Water Conservation; and
- Water Quality.

The strategy provides for the incorporation of detention basins, rainwater tanks, buffers and gross pollutant trap into the design. The incorporation of these treatment devices will ensure that there is no increase in pollutant export from the site as a result of the development. As a result there will be no additional impacts on the Solitary Islands Marine Park as a result of the proposal.

1.4.7 Traffic and Access

The current access to the site is shared with other development and it is proposed that this will continue to be the access point to the site. Although it is unlikely that there will be significant increase in traffic generated by the site over that at present, there is currently an issue with the operation of the intersection of the site and the Pacific Highway. This intersection operates extremely poorly during the am and pm peak periods which is due to insufficient gaps for traffic turning at the intersection. The RTA is currently formulating the Coffs Harbour Pacific Highway Planning Strategy and has prepared a number of options for improvements to the highway. The upgrade programme will be staged over a number of years. The improvements proposed to this intersection will be formulated as part of this process. The timing of work in this area could coincide with the proposed development. However, interim measures may be required and options for this need to be discussed with the RTA. These include:

- Construct a continuous median at the intersection to provide left-in, left-out movements for Campbell Close and Pelican Beach Resort access. Consideration is to be given for U-turn facilities either side of this location;
- Restrict movements from Campbell Close and Pelican Beach Resort access to left only. Again, consideration is to be given for U-turn facilities either side of this location, and;
- Provide a “seagull” intersection layout. This would eliminate the cross highway movement at the intersection in addition to limiting access to/from Campbell Close to left in, left out. The provision of this arrangement is included in one of the two upgrade options developed by the RTA as part of the Coffs Harbour Pacific Highway Planning Strategy.

As the planning of this development progresses, ongoing discussions will be held with the RTA in relation to this issue.

1.4.8 Infrastructure Provision

As the site is already developed with 114 tourist suites and associated facilities infrastructure is available to the site. This is considered sufficient for the development proposed in the concept plan.

1.4.9 Heritage

There are no heritage items on the site and it is unlikely that there will be any items of cultural heritage on the site. However, if any are found during construction measures will be adopted to deal with the finds.

1.4.10 Social and Economic Environment

The new development will create 3 – 20 jobs associated with the visitor accommodation after completion offsetting the 10 direct jobs lost in the existing Pelican Beach hotel and not picked up by other hotels. There will be 225 direct jobs created during the construction of the development.

The new development will provide housing for up to 235 persons and will provide additional holiday unit accommodation in Coffs Harbour which is a growth sector of the holiday accommodation market.

The development may attract high net worth individuals and this will further contribute to the economic development of the region.

Generally the redevelopment of the site is expected to have positive economic and social impacts in the Coffs Harbour area

1.5 Planning Assessment

The planning assessment of the proposal has shown that it complies with all the planning controls relating to the site. There will be no adverse impacts as a result of the development and the site is considered to be suitable for the development proposed. Overall, this development is considered to be in the public interest as it will have a positive impact on the natural environment and the social and economic environment of Coffs Harbour.





INTRODUCTION

2

2.1 Background

In May 2006, a Preliminary Assessment for a Concept Plan, for a development at the site of the existing Pelican Beach Resort at Coffs Harbour, was submitted to the Director General of the Department of Planning. On 30 June 2006, the Minister for Planning (the Minister) formed the opinion that the proposal is a project and that Part 3A of the Environmental Planning and Assessment Act (EPA Act) applies to it. The Minister, on the same date, also authorised the submission of a Concept Plan for the proposal.

On 18 July 2006, the requirements of the Director General in relation to the Environmental Assessment of the proposal were received. Copies of the correspondence in relation to these matters are included in Appendix 1 to this report.

This Environmental Assessment Report accompanies a concept plan for the site. It addresses the matters raised by the Director General and sets out the major issues associated with the proposal. It includes an assessment of the likely impacts of the proposal and a statement of commitments for the development proposal.

2.2 Location

The site is located at 740/742 Pacific Highway Coffs Harbour approximately 6km north of Coffs Harbour City Centre. It runs between the Highway and Campbell's Beach.

2.3 The Applicant

The Applicant for the proposal is Sapphire Beach Development Pty Ltd as trustee for the Sapphire Beach Development Unit Trust. The Applicant is the owner of the land.

2.4 Environmental Assessment Process

The proposed development of the site involves the preparation of a concept plan for the subdivision of the site into housing lots for single dwellings and larger lots for residential and tourist flat buildings and town houses and the subsequent development of these lots. The development also includes extensive areas of open space on the

site. The proposed development falls within the definition of a Major Project as it is a coastal site which is subject to the provisions of State Environmental Planning Policy 71 – Coastal Protection (SEPP 71). As such it is a project of a kind described in State Environmental Planning Policy (Major Projects) (Major Projects SEPP) Schedule 2 Clause (1) (g) and/or (i).

It has been agreed by the Minister that a concept plan can be submitted for the development of the site and that this will fulfil the requirements of SEPP 71 for the preparation of a master plan for the site. The concept plan has been prepared and assessed in relation to the Director General's requirements for the site.

In accordance with section 75H of the EPA Act, once the environmental assessment has been accepted by the Director General, the environmental assessment will be publicly exhibited for at least 30 days.

Once the concept plan for the site has been approved, a project application will be submitted for demolition, subdivision and construction of Stage 1, of the site generally as set out in the concept plan.



2.5 Context of this Proposal

Following approval of the concept plan, separate project applications will be lodged for consideration under Part 3A of the EPA Act for the subdivision of the land and the construction of housing and ancillary uses on the land.

2.6 Purpose of this Report

The purpose of this report is to provide information in relation to the development proposals for the site. The report has been prepared to implement the Director General's Requirements for the assessment of the proposals and the preparation of a concept plan for the site. The report describes in detail the development proposals for the site and is accompanied by plans, diagrams and montages of the proposals.

This report has been prepared by PTW Planning and is based on information and studies prepared by the following consultants:

Architects and Masterplanners	Cox Richardson
Landscape	Jackie Amos Landscape Architect
Engineering and Sustainability	GHD
Economics	SGS Economics & Planning
Flora and Fauna	Bushfire Safe (Aust) Pty Ltd
Bushfire Risk	Bushfire Safe (Aust) Pty Ltd
Tree Advice	Active Tree Services
Cultural Heritage	Coffs Harbour & District Local Aboriginal Land Council
Built Heritage	Davies Heritage Consultants Pty Ltd
Consultation	Brian Elton and Associates

2.7 Consultation

2.7.1 Procedures

During the preparation of this report, consultation was carried out with both authorities and the community in the area in relation to the preparation of the concept plan. In May 2006, a meeting was held in Coffs Harbour and the Council and all relevant Government Departments and authorities were invited. In August 2006, an information evening was held at the Moonee Beach Reserve Trust Hall and the immediate local community was invited to the presentation. Detailed minutes of both these meetings are included in Appendix 3 to this report. A Strategy has been prepared for the ongoing consultation as the proposal is developed and a copy of this is included in Appendix 2.

2.7.2 Council and Authorities

The meeting with Council and authorities was held on 25 May 2006 at Coffs Harbour Council Coffs Harbour. All relevant Government Departments and Authorities were invited together with representatives from the various sections of Coffs Harbour Council. Some of those Government Departments and Authorities who were unable to attend the meeting such as the Department of Natural Resources, Department of Environment and Conservation, Department of Primary Industry, Telstra, Country Energy and the Local Aboriginal Land Council were subsequently consulted by the individual consultants who were preparing reports. Several major issues relating to the site and the development proposals were discussed and a copy of the minutes of this meeting is included in Appendix 3.

2.7.3 Community

A community consultation meeting was held on 16 August 2006. A report on the meeting is included in Appendix 3. The consultations were undertaken in the form of a community information session, targeted at 42 local residences and businesses in the immediate vicinity of, or with views to, the site. In total, nine people attended the information session held on 16 August 2006 and two feedback forms were returned. Whilst the reaction to the proposal was mixed, the attendees did appear to be satisfied with the level of information presented, and the opportunity to have detailed technical discussions with key members of the project team.

Where possible, issues and questions were clarified by relevant project team members according to their area of specialisation. Several members of the community took away printed copies of the proposal and display material. Issues identified related primarily to view and privacy loss, traffic management and environmental protection. Positive comments were received in relation to the proposed rehabilitation of environmentally sensitive areas, including foreshore dunes.

Issues raised were as follows:

- Strong expression that the existing proposal does not sufficiently take into account the orientation of primary living spaces, private areas and balconies for adjacent townhouse properties on the northern boundary.
- Concern raised as to potential view loss to adjacent properties at the south-western boundary as a result of the two-storey beachfront housing.
- Concern raised as to potential view loss to adjacent townhouse properties on the northern boundary as a result of proposed three-storey housing.
- Positive impact on views through restoration of environmentally sensitive area and dunes.

- Clarification of the extent of the front setback from the foreshore line (50 or 100 metres) and the relationship to proposed beachfront properties.
- Request that the front setback be checked in relation to the high water mark.
- Clarification of the tenure of the foreshore lands and location of Crown Land, request for confirmation of ownership.
- Request a construction management plan be prepared to demonstrate compliance with planning controls.
- Clarification about construction management including hours of activity and truck ingress/egress from the site.
- Concern that proposed three-storey buildings along the northern boundary would have visual impact on adjacent properties.
- Concern about the proposed development density and need for new development to be in keeping with other development in the area in terms of height.
- Concern about loss of open space and increased development intensity.
- Clarification on the proposed layout and request for a footprint overlay to show relationship between existing site structures and proposed structures.
- Request for detailed information about the exact reduced levels of all proposed rooflines.
- Request for information about side setbacks along the northern boundary.
- Clarification about the design features that have been incorporated into the proposal to minimise impacts on neighbouring properties.
- Concern that the proposed three-storey buildings along the northern boundary would impact the privacy of outdoor areas and primary living spaces for adjacent properties.
- Concern about the potential overlooking of adjacent properties.
- Request for information about the proximity of development to existing balconies on adjacent properties.
- Request for information about management of construction activities in terms of noise and dust control.
- Clarification about the extent of coastal vegetation that would be rehabilitated along the front dunal area.
- Support for protection of native vegetation and restoration of dunal area.
- Request for information about the dune and vegetation management plans.
- Clarification as to number, species and location of trees to be planted along the boundary to replace any removed during construction.
- Clarification of traffic route for construction vehicles on site, and concern about access via the steep road along the northern boundary.
- Clarification of the ownership of the boundary road along the northern boundary and use of the existing easement and right-of-way.
- Concern that the existing car park surface was unsuitable for construction vehicles.
- Strong expression that the existing intersection capacity is limited and creates conflict for vehicle access and egress from the site in relation to slip ways, intersection and fast traffic along the Pacific Highway. Particular emphasis was placed on vehicles turning right and crossing the Pacific Highway to enter or leave the site.
- Expression of safety concerns associated with access to Pacific Highway from Campbells Close and having to be aware of vehicles leaving the site.
- Concern about increased volume of traffic from the site and tourists not being aware of the potential conflict at the intersection.
- Concern expressed that additional traffic will affect properties in proximity to the site access way.
- Clarification that informal rear access to adjacent properties via easement on site would be maintained for deliveries.
- Information regarding public pedestrian access route from Pacific Highway to the beach.
- Support for public pedestrian access to the beach to be retained.
- Concern that development will devalue adjacent properties.
- Concern that upper part of the site (immediately west of the environmentally sensitive area) is unstable.
- Request for geotechnical assessment of stability and information about the proposed building setbacks.
- Existing community understanding is that resort will remain and be refurbished.
- Request information about the project timeframe.
- Clarification of access to the sewerage pumping station, easement on privately owned property.

Where possible these issues have been dealt with in the proposal.

Attendees at the event had their contact details recorded so that they could be kept informed about the development process. Attendees were advised that the planning process would provide further opportunity for community input during the exhibition stage.

An additional community information session is proposed to be held during the exhibition phase and will be advertised in the Coffs harbour Advocate to target the wider community. This will also provide the opportunity for broader community input, and allow informed and considered written submissions to be made to the Department of Planning as part of the assessment process.





3.1 General

This section of the report provides all the information in relation to the analysis of the site and the existing conditions relating to the site and its environment.

3.2 Ownership and Legal Description

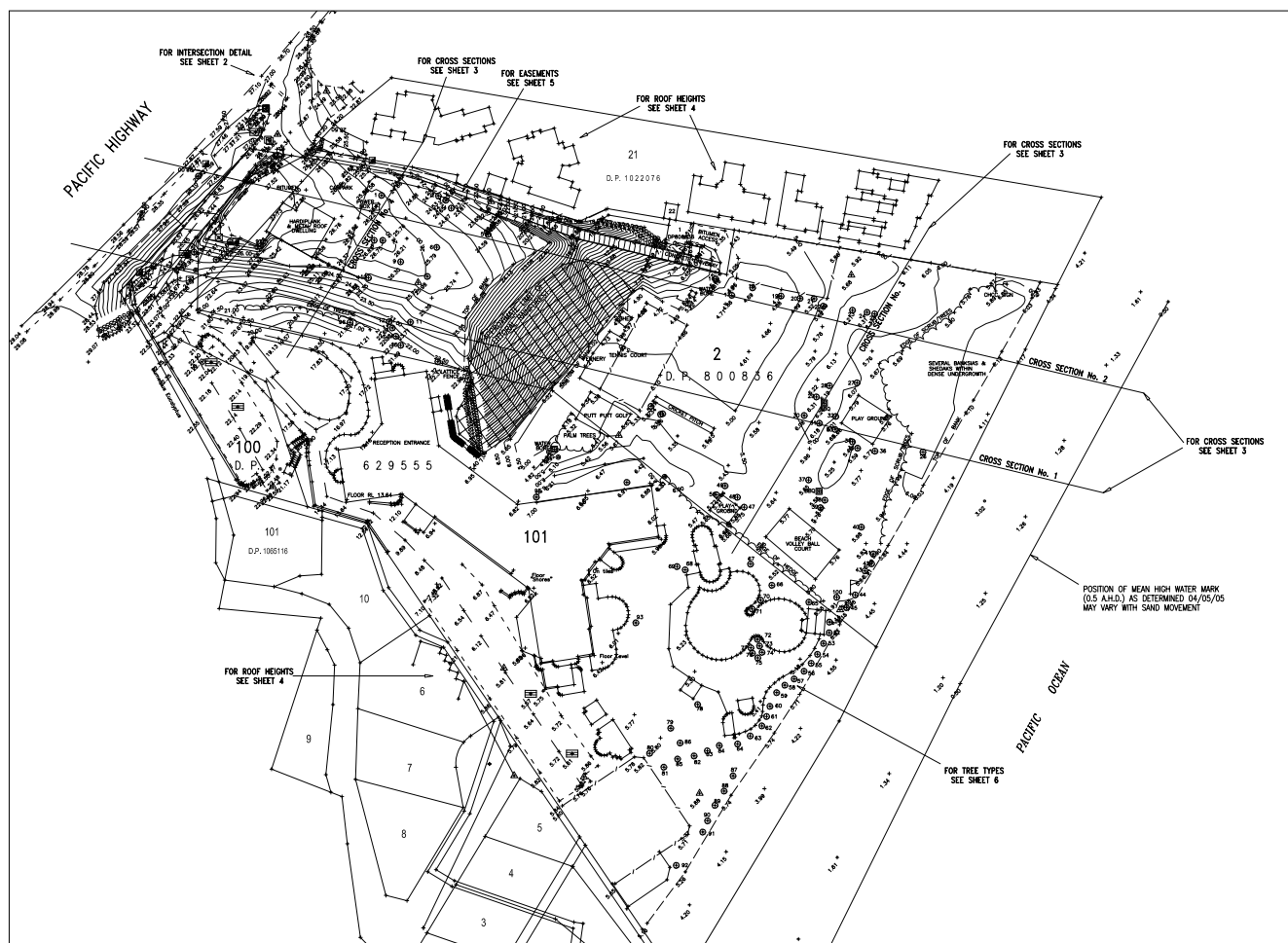
The site comprises three lots as follows:

- Lot 100 DP 629555
- Lot 101 DP 629555
- Lot 2 DP 800836

The owner of the site is Sapphire Beach Development Pty Ltd as trustee for the Sapphire Beach Unit Trust.

The site has an area of 41,503m².

The development will be known as Sapphire.



3.3 Existing Site Conditions

3.3.1 Topography

The site lies between the Pacific Highway and Campbell's Beach. The landscape in the area is undulating with the Korora basin to the west of the highway. The basin includes a series of natural drainage lines that ultimately drain under the highway and to the ocean. The site is located between two ridgelines, approximately 450m apart. The first traverses the northern part of Coachman's Close, south of the site. The second ridgeline runs west to east from the highway at Sapphire Beach Apartments. Located below the highway and below the ridgeline much of the site is tucked into a depression.

There is a fall from 27.00m AHD at the Highway to 6.00m AHD on the foreshore.

3.3.2 Geotechnical and Contamination

A Preliminary Site Investigation has been carried out by Network Geotechnics (Appendix 17) and it concluded that the site comprised clay and gravel fill. Aeolian sand, residual silty clay and extremely weathered argillite.

A Phase 1 Preliminary Site investigation has been carried out by David Lane Associates (Appendix 17), and it concluded that the site does not contain any potential or actual Acid Sulphate Soils. This report also concluded that the soils sampled on the site meet the acceptance criteria of NEHF A – Residential with Gardens and Accessible Soils. Remedial actions are not required on the site.

3.3.3 Improvements

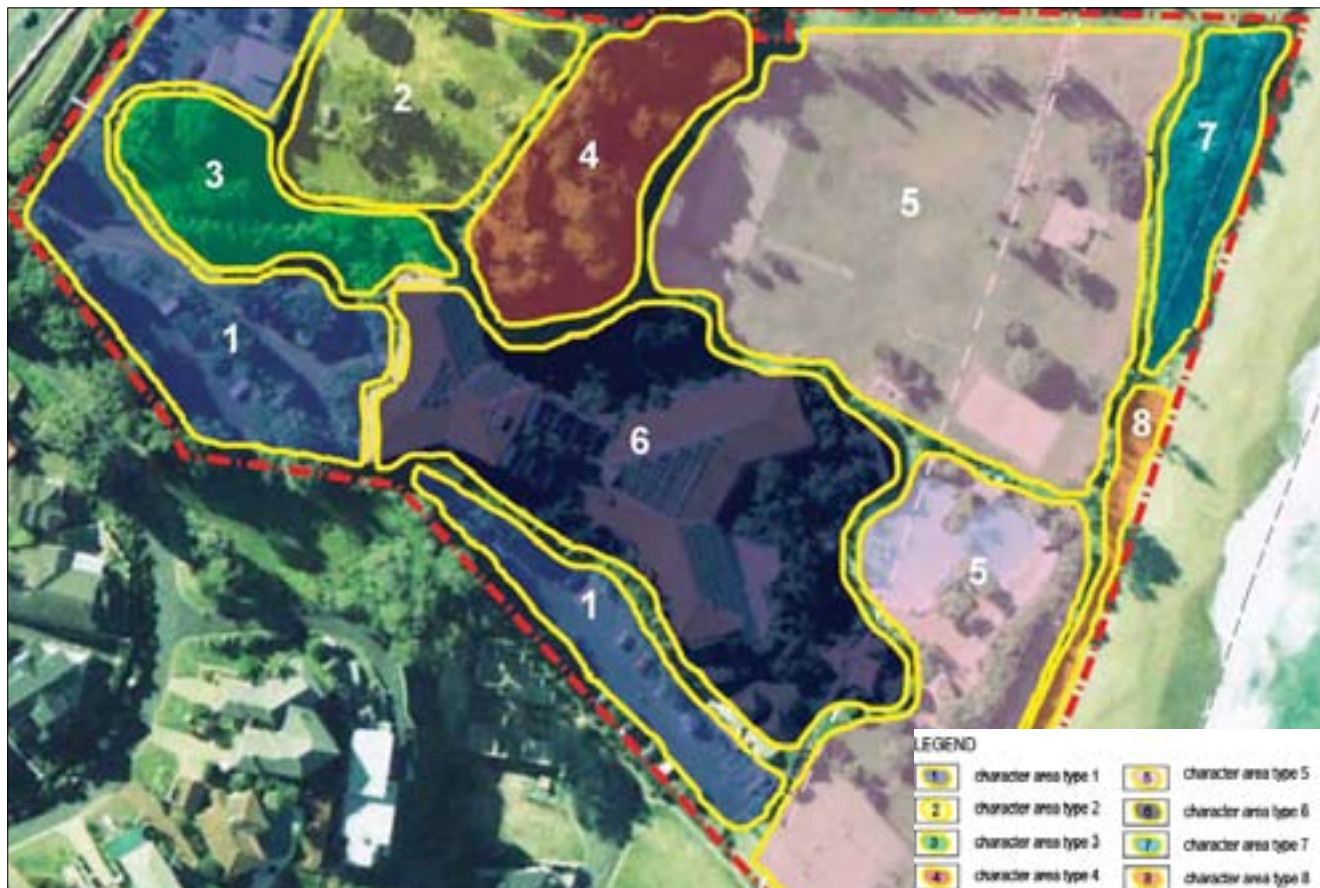
The site is currently developed with buildings and structures comprising a 114 suite resort. There is a disused restaurant building and car park on the higher part of the site and the main resort buildings are approximately halfway down on the lower level of the site. The resort recreation facilities, including a swimming pool, are on the lower ground behind the beach.

3.3.4 Heritage and Archaeology

A Heritage Assessment has been carried out of the site and a copy of this is included in Appendix 10. The Coffs Harbour and District Local Aboriginal Land Council has also been consulted in relation to the cultural heritage of the site and a copy of their letter is included in Appendix 11.

It was concluded that there were no items of heritage significance on the site and that it was likely to have only minimal cultural heritage significance.





3.3.5 Site Character and Landscape

A site character analysis has been prepared and the site has been assessed in 8 character areas.

Character Area Type 1: existing access road and car parking

This character area type includes two locations. The first is the existing entry to the Pelican Beach Resort, former Italian restaurant and associated car parking. The second is located south of the lower resort building and is an elongated car parking area with landscaping. The existing character of these locations is of a highly modified landscape with a focus on built infrastructure including road pavement, kerbing, services, drainage and signage. Both areas include retaining walls along their southern extent. The landscape surrounds to these areas are also highly manipulated with a focus on gardens of exotic species, in particular, palms and sub-tropical species. The lower car parking area includes a number of shade trees, however, due to the limited size of planting beds these are mostly struggling with the growing conditions. These locations are highly maintained, however, they generally appear fairly dated. Some garden areas include species that are now environmental weeds or are deemed inappropriate plant choices by the local authority e.g. Umbrella Trees.



Character Area Type 2 :elevated grassed area with isolated trees

This character area type is located on the highest part of the site, east of the former Italian restaurant. The area is a grassed spur with an easterly aspect. It overlooks the pocket of 7a vegetation and the lower part of the site. This area includes a scattering of isolated trees. The most visually obvious of these are a pair of Hoop Pines just to the south of the ridgeline, a single Hoop Pine further to the south and a line of four Hoop Pines on the south-eastern extent of the grassed area. Other trees include a Lilly Pilly, Mango tree and a Norfolk Island Pine. Given the age and species of these trees, it appears that all the trees at this location have been planted at some stage.

3 SITE ANALYSIS

A number of the Hoop Pines are showing signs of an illness, Mundulla Yellows (MY) Syndrome, which will require their removal and the area cleared of vegetation to an area of 18 metres from the affected trees to prevent the spread of the disease into the nearby 7a vegetation. Features of this location are the elevation, the easterly aspect and the ocean views.



Character Area Type 3: grassed batter with landscaping

This area is located south of the former restaurant and elevated grassed spur. It represents one of the steeper parts of the site with a fall from 26.50AHD to 20.00AHD. The area is part of the landscaped surrounds to the resort and includes isolated trees and grass. The location is south facing. Species include exotics such as Leopard Trees and native species (not local) such as a Bunya Pine.



Character Area Type 4 :7a vegetation

This area represents the steepest part of the resort site with an approximate slope of 1:2. The area is east of the grassed spur and extends to just above the recreational facilities associated with the resort. The area is zoned 7(a) Environment Protection Habitat/Catchment. The vegetation is described as Dry Sclerophyll Forest and is mostly regrowth vegetation. This pocket of vegetation is approximately 4000 square metres in size. The vegetation pocket is currently weed infested, particularly at the edges. The area represents one of only two pockets of remnant vegetation on the site. It includes a number of mature trees



Character Area Type 5 :existing landscaped recreational area

This character area is the largest at the site and covers the recreational facilities and open spaces associated with the existing resort. There are two main areas with the first east of the 7(a) vegetation. This space includes a basketball court, open grassed area with BBQs, a children's playground, a beach volleyball court and a mini golf course. There are also a number of isolated trees with the most common species being Norfolk Island Pines, Screw Pines (Pandanus pedunculatus), Coastal Banksias (Banksia

integrifolia). This area is relatively level and is located at the lowest part of the site. There is an existing depression at 5.50m AHD just to the east of the tennis court. The second location of this type is to the east of the main resort building and includes the pool, additional tennis courts, the access to Campbell's Beach and an area of parkland behind the beach. This area is slightly more manicured than the grassed open space. The pool area sits immediately behind the beach with the pool located below the dune level. The immediate surrounds include paving, shade shelters, tree planting of Pandanus pedunculatus and sub-tropical species. The dune area beyond this recreational area represents a highly manipulated coastal environment. Nearly all the dune vegetation has been removed and there is only a scattering of spinifex immediately behind the beach. The dune vegetation has been replaced with plantings of Pandanus pedunculatus and these are contributing to dune stability. Turf has been planted behind the dune and this virtually reaches the top of the sand.



Character Area Type 6 :resort and landscaped surrounds

The character area type includes the existing resort and its immediate surrounds. Those surrounds are highly maintained gardens, pathways and water features with a focus on sub-tropical planting. The building and landscape styles are reflective of the period of construction with a focus on bright 'beach' colours and '80s resort style planting. Predominant landscape species include Frangipanis, Cocos

and other palms species, Hibiscus, Mondo Grass, Umbrella Tree, Philodendrons and other foliage plants. There is no remnant native vegetation within this zone.



Character Area Type 7 :remnant dune vegetation

This area is located immediately behind Campbell's Beach at the north-eastern corner of the site. It represents the second area of indigenous vegetation within the site. Native vegetation includes Pandanus, Blackwood Wattle, Coastal Wattle, Coastal Banksia, Geebung and grass species. The area is highly infested with weeds and shows signs of previous garden waste having being dumped at this location. Of the entire site, this is the only area that represents a location where the hind dune has not been completely manipulated and grassed. The existing vegetation is providing stability to the hind dune.



Character Area Type 8 :Campbell's Beach

This area is located at the eastern extent of the site and is part of Campbell's Beach. This character area will be a key location in determining the new site character as it provides the coastal setting. The key features are the outlook to the ocean and islands and the views to the peninsulas at either end of the beach. Looking north the view along the beach takes in the small area of remnant hind dune vegetation. The existing Pandanus planted behind the beach, although not native, add to the distinct coastal character. There are some remnants of low dune vegetation. The beach is relatively steep.



3.3.6 Services

The site is currently serviced by water, sewer, electrical and telecommunications infrastructure.

Water

Council trunk water supply mains are located along the western frontage of the site, adjacent to the Pacific Highway. The existing resort is serviced by this water main.

Sewer

The current development discharges its sewer to Sewer Pump Station (SPS) 67 immediately north of subject site. From SPS 67 the sewer is conveyed through a series of sewer pump stations, rising mains, and gravity sewer systems to the Coffs Harbour Sewage Treatment Works. There are 6 sewer pump stations between the site and the Sewerage Treatment Works and 4 are currently under capacity.

Power Supply

Country Energy currently provide power to the site.

Telecommunications

A major optic fibre cable is located along the western boundary of the site. Local reticulation cable is located within the site servicing the current development.

3.3.7 Access

Access to the site for vehicles is via a shared driveway from an intersection with the Pacific Highway. This access way is shared with a residential apartment / townhouse building and the Nautilus Resort. The Roads and Traffic Authority is planning an upgrade of the highway at this location and the intersection which provides this access is to be upgraded.

Access through the site is via a road down the western side of the site to the front of the resort building and car parking area. There are car parking areas at the upper level of the site, in the centre of the site and along the western boundary of the site. There is currently a total of 134 car parks on the site and a parking space for a coach.

There is also a steep service access road way along the northern boundary of the site but is rarely used by vehicles. It does provide pedestrian access from the Highway to the beach area but is not a designated public access route.

Pedestrian access is available through the site and along the beach although there are currently no public access routes through the site.

3.3.8 Traffic

The Traffic Report (Appendix 15), has analysed the existing traffic conditions in the area.

Pacific Highway (State Highway 10)

The Pacific Highway provides the coastal link between Sydney and Brisbane and has been identified in the AusLink planning as a primary interstate route. The Pacific Highway performs the function of an interstate, interregional and local connection at this location.

At the intersection to Pelican Beach Resort, the Pacific Highway is a divided dual carriageway with lane widths of approximately 3.5 metres.

The RTA have identified pressures on the highway in this area and are developing the Coffs Harbour Pacific Highway Planning Strategy to address access issues and the mix of local and through traffic.

Local Access Road to Pelican Beach Resort and Quality Nautilus

A short road provides local access to Pelican Beach Resort, Quality Resort Nautilus and a residential apartment / town-house development. This road is a sealed two way road with a total carriageway width of approximately 5 metres.

Campbell Close

Campbell Close is located on the opposite side of the Pacific Highway to the site and is a local access road servicing approximately 6 properties.

Existing Road Conditions

The Pacific Highway in the vicinity of the development site is of good quality. Some minor potholing and patching was observed at the commencement of the access road during an onsite inspection. The internal access within Pelican Beach Resort is constructed with interlocking pavers and in good condition.

The Traffic Study found that the intersection of the site with the Pacific Highway was currently operating at a level of service F which indicates a poor performance. The poor performance is due to insufficient gaps for traffic turning at the intersection due to the volume of through traffic on the Highway. The capacity of the exit to the Pelican Beach Resort is being exceeded during the morning peak.

The crash history of the intersection was also analysed but it did not indicate a problem with the design of the road or the intersection.

3.3.9 Public Transport

An assessment of public transport in the Sapphire Beach area was undertaken by Samsa Consulting (2004): "Public transport in the surrounding area consists solely of bus services. In addition to various school bus services, Ryan's Bus Service operates the main public bus service. This travels between Coffs Harbour, Woolgoolga and Grafton on weekdays, with approximately 6 services day. Sapphire and Moonee Beach are major stops along the route.

There is no bus stop in the vicinity of the site but buses will stop if it is safe to do so.

Although XPT train services operate along the North Coast Railway between Sydney and the North Coast, the closest stop is at Coffs Harbour. There are no further stops north until South Grafton."

3.3.10 Pedestrians and Cyclists

Samsa Consulting (2002) also assessed pedestrian and cyclist facilities in the area: "Pedestrian and cyclist facilities are minimal in the area due to the sporadic nature of development, a high speed road environment along Pacific Highway, and relatively long distances between communities.

It is understood that Coffs Harbour City Council is investigating a cycleway between Coffs Harbour and Woolgoolga, which, it is envisaged, would pass by the development site. Details of whether it would be on street or off street are unavailable."

3.3.11 Flora and Fauna

A detailed assessment has been carried out of the existing flora and fauna on the site and a copy of the report is in Appendix 7.

Flora

Three vegetation communities were present on the site. These were as follows:

Community 1: Dry Sclerophyll Forest

This community occurs on the central area of the site on eastern facing slopes. It has an area of 4000m². It consists of predominantly regrowth forest red gum and brushbox. Other species include bleeding heart, blackwood wattle, silver-leaved desmodium, hairy pittosporum, sweet pittosporum, dogwood, beach acronychia and hairy psychotria. Shrubs and groundcovers include bungalow palms, celery wood, scentless rosewood, bolwarra, three veined cryptocaria, cudgerie, native ginger, bracken fern, gristle fern, maidenhair and false bracken. Weed species include wild tobacco, lantana, ochna and winter senna.

Conservation Status:

Under the CRA classification, this community is best described by Forest Ecosystem 106 (Open Coastal Brushbox) (NPWS 1999), though this site is of poor representation due to modification. The Regional Forestry Agreement document provides the following data on this ecosystem. This ecosystem is distributed extensively on coastal lowlands and foothills from the Manning River north to the Corindi River. It is reserved in several reserves along the Coffs coastal strip.

Community 2: Grassland

This community occurs over a large area of the overall site; it represents approximately 4.4ha of the site and consists of a maintained residential area. This community is dominated by kept lawns and landscaped gardens.

Conservation Status:

The community has no conservation value due to heavy modification of the area for domestic use.

Community 3: Coastal Hind- Dune

This community occurs over a small area adjacent to the coastline. It represents approximately 2.2ha of the site. This community is dominated by pandanus, blackwood wattle, coastal wattle, coast banksias, geebung and grass species.

Conservation Status:

The community has high conservation value due to its function as a barrier to erosion due to coastal processes.

No species of threatened flora was found on the site.

Fauna

Eighteen species of vertebrates (twelve birds, two mammals, one reptile and three amphibians) were recorded during the site survey, none of which are threatened. In terms of habitat for threatened species, the most important features of the site are the presence of coastal woodland tree species in Community 1. Although species are limited, this community represents the majority (80%) of suitable habitat.

Based on the habitat features present, and considering that the natural vegetation is woodland with little to no shrub layer and limited rainforest, an assessment was made of the suitability of the site as habitat for the threatened species listed. The site provides suitable habitat for threatened fauna species, however none were identified through the survey.

3.3.12 Bushfire

A detailed Bushfire Assessment has been carried out of the site and this is included in Appendix 9.

The Bushfire Risk Assessment was conducted through an onsite inspection and using the methodology set out in Planning for Bushfire Protection 2001, the onsite assessment included traversing the subject property and all lands within 140 metres from the proposed development sites. The bushfire risk assessment identified an Open Forest on the southern aspect of the proposed development as the dominate bushfire vegetation. The NSW Rural Fire Services document (Guidelines for Bushfire Land Mapping) identifies all lands within 100 metres from any category 1 bushfire vegetation shall be identified as Bushfire Prone Lands; as the identified category 1 bushfire vegetation occurs at a distance of 60 metres to the development property it would be considered as bushfire prone and would be required to comply with the recommendation outlined in Planning for Bushfire Protection 2001 (PBP).

The Coffs Harbour Bushfire Prone Land map identifies a Group 1 vegetation to the south of the subject property as bushfire prone; after assessing the proposed site, it was found that the Group 1 vegetation was an Open Forest community.

The terrain in relation to the Open Forest vegetation on the southern elevation of the proposed development was assessed as having an upslope of greater than 10° for a distance of approximately 50 metres followed by generally flat.

3.3.13 Coastal Issues

An analysis of the coastal issues relating to the site is included in the Coastal hazards Report in Appendix 13.

Foreshore Description

The section of Campbell's Beach fronting the site is characterised by a relatively narrow and steep beach berm consisting of coarse sands. A low dune backs the beach, becoming more prominent towards the north of the site, rising in height from approximately 5 m AHD to over 6 m AHD. Dune vegetation is generally limited to grasses in the southern half of the site, while the northern section is heavily vegetated with a mixture of grasses, shrubs and woody plants. Evidence of dune erosion is limited to some minor scarps up to 0.5 metres in height. These scarps are discontinuous in extent and are more exposed in the central, less vegetated section of the dune. Landward, the dune grades down to a swale, with a lower elevation of approximately 4.5m AHD.

Storm Bite and Coastal Recession

Geomarine (1998) have recommended the following hazard lines as drawn by Willings and Partners (1999) be adopted for Campbell's Beach: (see plan in s6.6)

- Immediate Hazard Line: 10 metre setback from the dune escarpment;
- 50 year Hazard Line: 29.5 metres setback from the dune escarpment; and
- 100 year Hazard Line: 50 metre setback from the dune escarpment.

These hazard lines are considered conservative estimates and include:

- Long term recession of the dune (0.3 m/yr) based on the historical aerial photography record;
- Sea level rise due to climate change (extra 4.5 m and 10 m recession over 50 and 100 years respectively); and
- Estimated design storm bite of 10 m.

The Geomarine report indicates that the southern part of Campbell's Beach (where the site is located) has seen the greatest amount of recession with a loss of sand in the order of 0.2 m³/m/yr over the period of record assessed (1942 – 1996). Geomarine attributed this loss of sand to a net decrease in the northward littoral drift of sand along the coast from the construction of the breakwalls at Coffs Harbour to the south.

Coastal Inundation

Geomarine (1998) has recommended that a coastal inundation level of 7.0 m AHD be adopted for Campbell's Beach. As the dune crest along this area is between 5.0 and 6.0 m AHD it is expected that the lower lying area of the subject site (down to 4.5 m AHD) could be inundated during large storm events.

3.3.14 Stormwater

A Water and Services Assessment has been prepared for the site and is included in Appendix 13.

An analysis of the 2m contours provided by Coffs Harbour City Council showed the catchment for the site includes elevated areas immediately beyond the western portion of the southern property boundary. As a result the site will receive some run off from areas beyond the site boundary. Run-off from the Pacific Highway is captured through the existing stormwater system, and therefore does not enter the site. The site drains from the west to the east with run-off collecting in the depression formed by the sand dune along the eastern boundary. Discharging of water from the depression occurs through one of the three mechanisms, either:

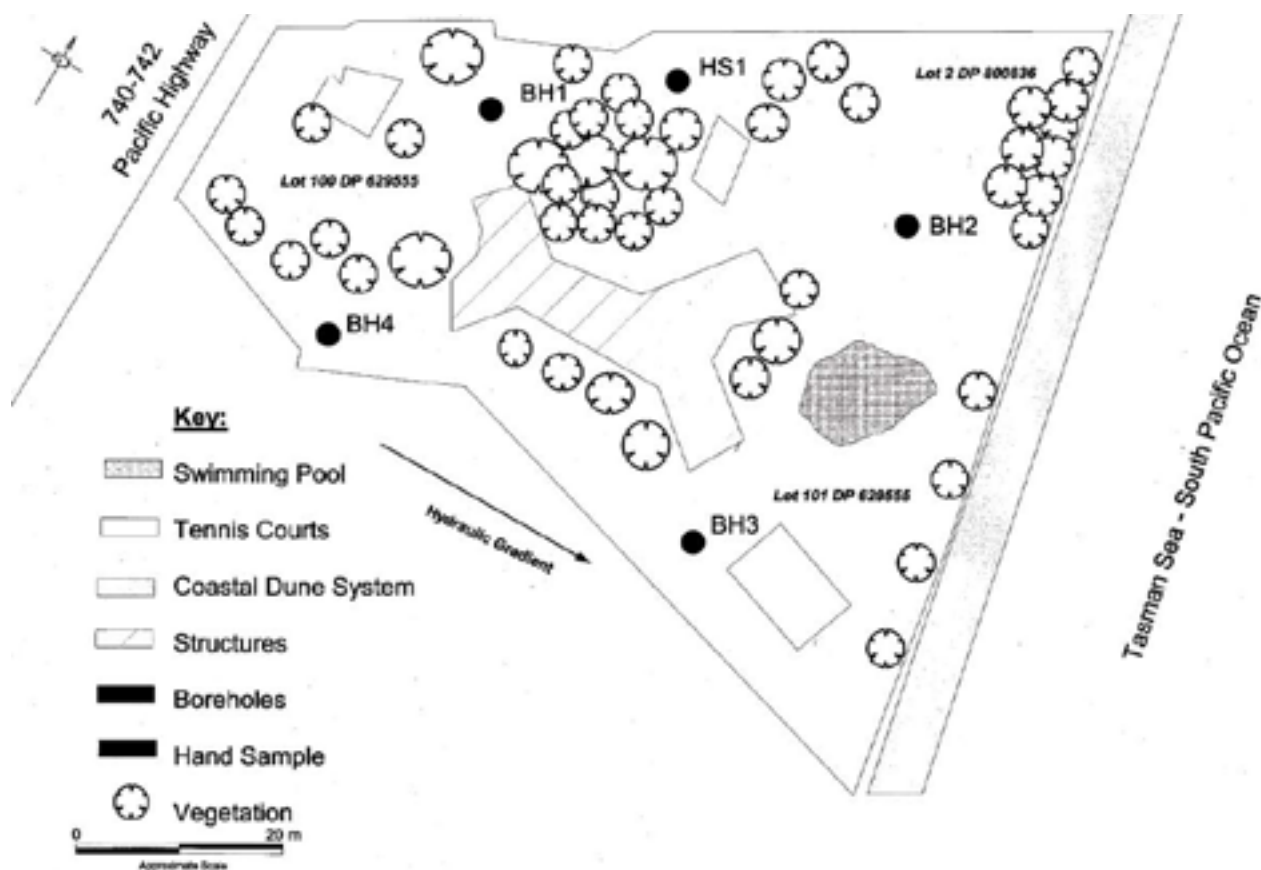
- Infiltration and the general groundwater movement towards the ocean; or
- An existing 750mm diameter stormwater pipe located on the adjacent southern property; or
- Flow across the northern boundary of the site onto the adjacent property when the depth of the ponded water exceeds approximately 1 metre or 5.5m AHD. This would only occur in rainfall events such as a 100 year ARI storm event of 24 hours duration.

Utilising both the daily rainfall data and assumed infiltration rate of the soil, the regularity and volume of run-off was established. From this it was found that run-off was generated on about 4,800 days (29%) of the 45-year assessment period. A further assessment of run-off was then undertaken for the 100-year design storm event. The peak volume of 15,500m³ was generated for the storm duration of 24 hours. This run-off would be contained in the natural depression to the west of the dune system.

It has been estimated that the natural depression area has a storage capacity of 4,500m³. In addition to this above ground storage, there is a corresponding soil store capacity. Based on the surface area and soil profile depth, this storage volume has been estimated as 4,500m³. The total storage capacity of the existing system is therefore estimated at 9,900m³.

Consideration was then given to the volume of this run-off and the corresponding depth of ponding. It was determined that surface ponding of the run-off in the depression would occur on approximately 300 days (2%) of the 45-year assessment period. The average depth of ponding was 0.13m with a maximum depth of 1.25m assuming no discharge to the adjacent northern properties. However, if this maximum depth were achieved discharge would occur over the northern boundary to the adjacent property.

Given the above total storage volume on the site, a potential discharge to the adjacent property of 5,600m³ could occur. This issue will need to be addressed by the development proposal.



3.3.15 Acoustics

An Acoustics Report for the site has been prepared and is included in Appendix 14.

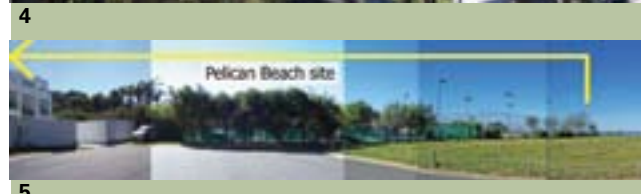
Noise monitoring was carried out at the site. Field observations noted that the ambient noise environment at the monitoring locations were typically dominated by relatively low background noise levels with intermittent noise contributions from the likes of Pacific Highway traffic and wave noise. These levels were more noticeable closer to the source.

3 SITE ANALYSIS

3.3.16 Views and Visual Environment

An analysis was carried out of the views of the site from various public locations around the site.

Pelican Beach is located within a highly developed corridor of coastal land north of Coffs Harbour. The site is surrounded by existing development. A key issue in developing the site will be the consideration of how the development is viewed from the surrounds. There are two main factors that affect how the ridgelines approximately 260 metres apart. Locations south of the southern ridgeline and north of the northern ridgeline do not have views to the project site. Secondly, the site is located below the highway with much of the site at the same elevation as the foreshore. This means that for many locations west of the highway, the site is at too low an elevation to be viewed and for locations that can view the site, it is only the higher part of the site that is visible. There are, however, a number of public sites from which the development site can be viewed. These include public roads to the south of the site, the Pacific Highway west of the site, Old Coast Road within the Korora Basin, Campbell's Beach and from the water immediately offshore from the Campbell's Beach. The following illustrations indicate the views that are possible to the project site from public locations within a 1km radius of the site.





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3.3.17 Social and Economic Issues

A report has been prepared on social and economic issues relating to the Coffs Harbour area including the site and a copy of this is included in Appendix 12.

The population of Coffs Harbour has grown considerably due to the immigration of lifestyle seekers. In 2006, the population was 66,980 and it is expected to grow to 86,850 by the year 2026. Net immigration to the area has been strongest in the 25 – 34 age groups and in the 55 – 69 age group. There is a strong departure of young adults aged 15 -25 from the area.

A few lifestyle migrants relocate their businesses, and many their staff, when moving to the area and this contributes to the economic growth of the area and is essential if population is to be retained.

In 2001 Coffs Harbour employed over 22,000 people. The most significant industry is the retail trade, which employs over 4,300 people. Tourism is widely represented in the economic base. Employment growth in Coffs Harbour has been considerable since 1991 and shows a shift towards a more service based economy in which wholesale and retail trade and tourism play a significant role. Tourism is a key economic driver of the local economy.

The demand for housing is going to be strong while the types of dwellings sought are changing. The household size is dropping, from 2.7 persons per household in 1991 to 2.5 persons per household in 2001. Business owners relocating to the region are relatively wealthy individuals who have a particular interest in higher value water front dwellings or those with an attractive natural environment and views of the sea.

The Pelican Beach Resort currently provides about 45 – 50 jobs and provides about 16% of the total hotel establishments and 6.2% of the available rooms in Coffs Harbour. Currently there are adequate numbers and variety of hotels in Coffs Harbour to meet the requirements of most visitors. There are few days when all hotels are at or near capacity. Many hotels in Coffs Harbour, including Pelican Beach Resort, are currently operating at occupancy levels that are marginally viable.

3.4 Surrounding Environment

3.4.1 General

An analysis has been carried out of the existing environment around the site.

The locality to the site includes:

- Korora
- Opal Cove Resort
- Hills Beach Reserve
- Residential area accessed from Coachman's Close
- Nautilus Resort
- Sapphire Beach Apartments
- Sapphire residential area to the north
- Korora Basin accessed from the Old Coast Road



3.4.2 Korora

The northern extent of the residential area of Korora is approximately 1km to the south of the site. It is accessed from James Small Drive off the Highway. Korora represents part of the continuous development between the Pacific Highway and the coastline north of Coffs Harbour to Sapphire but is separated from other residential areas by the Pacific Bay Resort to the south and Opal Cove Resort to the north.

Most of Korora represents an established residential area, however, there is some recent residential development immediately to the east of the highway. The street layout is organic in form with road locations determined by the undulating, and often steep topography. There are many mature garden and street trees and areas of reserves located

along a series of lagoons. There is also a large area of park on the beach front. The overall character is of a leafy, attractive suburb. The road verges are grassed and are generally without kerb and gutter.

The topography at Korora is undulating but in general falls from the highway to the coastline. The settlement is located between the northern headland of Charlesworth Bay and the rocky point north of Korora Beach. The undulating landscape falls to two main drainage lines. The southern drains to the ocean at the southern end of Korora Beach and the northern drains to the southern end of Opal Cove Beach. The majority of lots in this area appear to have been established at approximately the same time, and are generally in the range of 600 to 800m². Housing styles are varied, reflecting different eras of construction. Materials include brick, masonry and timber. New homes in the area tend to be of rendered block work with contemporary detailing.

West of James Small Drive, there are some remnant rural and banana properties. There is also a new subdivision which includes new homes and houses currently under construction. These newer homes tend to be of rendered block work with tile roofs. The street layout in the new residential area is also organic in format culminating in a number of cul-de-sacs. There are no street trees in this newer residential area.

At the southern extent of Korora a number of new large homes are currently under construction along Breakers Way. These homes are fairly contemporary in style compared to homes in the older area of Korora. They feature rendered, painted block work, contemporary roof lines and timber detailing. These homes are located on the northern slope of the ridgeline between Korora and the Pacific Bay Resort. Korora includes a local school located on James Small Drive and a number of small resort facilities. There is a car park and public access to the beach at the end of Sandy Beach Road. The Hills Beach Reserve is accessed by Norman Hill Road.



3.4.3 Opal Cove Resort

Opal Cove Resort is located approximately 600m south of the Pelican Beach site on the eastern side of the highway. The resort is accessed by Opal Boulevard. This established resort includes a golf course, a large resort building, recreational facilities such as a pool and tennis courts, an area of residential development and manicured streetscapes and gardens. The resort is separated from Korora to the south by the Korora Beach Reserve and a discontinuation of James Small Drive. The resort is separated from the residential area to the north by Pine Brush Creek, an area of reserve on the ridgeline and the headland at the northern end of Opal Cove Beach. From the highway, the prominent visual characteristics of the resort include the mature fig trees lining Opal Boulevard and the cultivated greens of the golf course.



3.4.4 Coachman's Close Residential Area

A newer residential area is located north of Opal Cove Resort and is also access from the highway by Opal Boulevard. This area is located along Coachman's Close and Daintree Drive. This residential precinct is immediately south of the Pelican Beach site. This development includes an organic layout with a number of cul-de-sacs. Homes are typically large and are either of brick or rendered block with a tiled roof. Gardens are new and there are few large trees. Most of the homes in this area are located on a south facing slope and subsequently look to the south rather than to the north. There are a small number of homes, approximately ten, that are located overlooking Pelican Beach. These homes are at the northern end of Coachman's Close or are accessed from Beachfront Close. A natural feature to this pocket of residential development is the heavily vegetated headland between Opal Cove Beach and Campbell's Beach.



3 SITE ANALYSIS

3.4.5 744 Pacific Highway and the Quality Nautilus Resort

Immediately north of the Pelican Beach site is a narrow site of recent residential units/townhouses. These are located at 744 Pacific Highway and are accessed from the same highway exit as the Pelican Beach Resort. The units are staggered down the hill between the highway and Campbell's Beach. They are of rendered block work and tile construction with a number of balconies overlooking the Pelican Beach site. The unit development includes a small area of open space immediately behind the beach. This area includes a number of mature Norfolk Pines and a small area of manicured grass and low gardens. The Nautilus Resort is to the north of these units and is also accessed by the same highway exit. This resort site drops off quickly from the highway and the bulk of the resort is located below the highway away from view. This resort includes resort facilities such as tennis courts, a swimming pool, a restaurant in addition to a number of individual tourist dwellings. The buildings are scattered throughout sub-tropical gardens. The buildings are typically of rendered block work and are painted white with terracotta tile roofs.



3.4.6 Sapphire Beach Apartments

This high density residential development is located on the ridgeline to the north of Pelican Beach and represents the furthestmost location from which the Pelican Beach site can be viewed east of the highway. This development includes two main towers located at the top of the site and a series of connected smaller buildings to the south. The residential dwellings are located on the high ground adjacent to the highway. A series of paved pathways provide access between the buildings and ultimately lead to a timber staircase. A series of steps and landings give access to the communal facilities that are located behind the beach. Significant natural features of this site include the vegetated drainage line to the south of the development. This drains out to Campbell's Beach. The other natural feature is the large group of Hoop Pines in the building surrounds. Given that the apartments are located on a ridgeline, these trees are a distinct visual feature when traveling along the highway. These trees are visible from the entry to the Pelican Beach Resort and the Nautilus Resort. The large hoop pine groups and vegetation along the drainage line assist in offsetting the bulk of the unit buildings. The buildings are rendered block work and are painted in a light colour.

Subsequently, they are visible from the highway, sites to the south, from the beach and from the water.



3.4.7 Sapphire Residential Area

This is a small residential pocket accessed from Sapphire Crescent off the Pacific Highway. This is an older residential area although a number of new large homes are currently under construction. Building materials are varied and include timber, brick, rendered block work and contemporary claddings. Emerald Avenue, off Sapphire Crescent, provides access to an informal car park and turn-around area behind Campbell's Beach.



3.4.8 Korora Basin West of the Highway

The land to the west of the highway is part of the Korora Basin and is relatively steep. It includes remnant banana farms, small rural holdings, residential properties and pockets of remnant vegetation. Immediately west of the Pelican Beach site, the Old Coast Road provides the main access to properties within the basin. This road leaves the highway opposite the access to the Opal Cove Resort and rejoins the highway north of the Pelican Beach site, opposite Sapphire Gardens.

