



Land and Property
Management Authority



Plan of Management

Terrigal Haven

December 2009



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1 Introduction

This Plan of Management has been prepared by Gosford City Council (Council), as Terrigal Recreation (R48416) Reserve Trust, for the Crown land described as Terrigal Haven, adjacent to Terrigal Beach and Foreshore within Gosford Local Government Area. The Haven covers an area of approximately 10.5 ha of Crown land and includes the area known as 'Reserve 48416'. This Reserve was notified by the then state planning agency for Public Recreation on 18 December 1912 with Council appointed as trustee on 24 April 1959.

Terrigal Haven lies on the exposed coast at the northern end of the Gosford Local Government Area. The Haven consists of a small protected bay, sandy beach and adjoining sandstone landforms which support remnants of coastal heathland. The Haven is characterised by a high headland known as Broken Head, of which a prominent feature is the steeply rising narrow rocky outcrop known as the 'Skillion'. Broken Head encloses an area of water which is protected from weather emanating from the southwest, south, southeast and east. The Haven is also partially sheltered from weather from the northeast and north, making it an important overnight destination for sailors moving up and down the NSW coast. It contains a number of permanent swing moorings for commercial vessels and some private boats.

Terrigal Haven and its surrounds are a popular local and tourist destination throughout the year, particularly in the summer months. The Haven is used for several recreational and commercial activities including: diving, fishing, swimming, sailing, football, cricket, canoeing, snorkelling, individual and group fitness activities, sightseeing, picnicking, dogwalking, BBQs and dining in cafes and restaurants,

There are two boat ramps within the Haven, the larger one is used for launching boats, while the smaller one is used by divers, canoes and small water craft.

In February 2007, the Federal Government announced that the HMAS Adelaide, a Royal Australian Navy Guided Missile Frigate, would be decommissioned and gifted to the NSW Government for the purpose of creating an artificial reef and recreational dive site in waters off the coast of Terrigal Haven. The NSW Land and Property Management Authority (LPMA) is responsible for the overall management of the artificial reef site and is developing a separate Plan of Management for this newly gazetted sea based reserve.

The emphasis of the Terrigal Haven Plan of Management is to balance community use and environmental considerations of the reserve with the sound financial management of the Terrigal Haven area. Consequently, the actions outlined in this Plan of Management aim to enhance the natural beauty of the Terrigal Haven area and encourage improvements to those facilities which allow residents and visitors to enjoy the natural environment.

Figure 1.1 illustrates the study area location.



Figure 1.1 Study area location

1.1 BACKGROUND

In October 1991, the Terrigal Chamber of Commerce, with Council's support, convened a workshop and resolved the need to develop a Landscape Masterplan for the waterfront that integrated and linked the foreshores from the western edge of Terrigal Lagoon to the Terrigal beachfront area and the Haven. A working group was formed to develop a Landscape Masterplan. The Masterplan was designed and prepared by Context Landscape Design in March 1996 and subsequently adopted by Council in May 1996 (Appendix 1).

A draft Plan of Management was prepared by Brown & Root in 2001 and reviewed by the NSW Land and Property Management Authority (formerly the NSW Department of Lands) in 2003, with the LPMA recommending that minor amendments be made. As a result, the Terrigal Haven Plan of Management was revised in 2005 by Kellogg Brown & Root Pty Ltd and adopted by the LPMA in May 2006.

This current version of the Plan of Management has been prepared by Gosford City Council, as Trust Manager for Reserve 48416, to reflect the changing environmental and recreational requirements of the Terrigal Haven area. This Plan of Management also intends to create a link with the newly gazetted sea based reserve which will facilitate the establishment of an artificial reef site for the sinking of the ex-HMAS Adelaide. It must, however be noted that the artificial reef project is separate to and not part of this Plan of Management.

1.2 AIM AND APPROACH

The aim of the Plan of Management is to provide a clear, concise and practical framework for the management of Terrigal Haven. The Plan uses a values-based approach to land planning and management. This approach facilitates strategies which will protect and enhance identified key values, whilst identifying opportunities which will ensure longer-term objectives of sustainable management.

1.3 OBJECTIVES

In accordance with the requirements from the LPMA and Council, the objectives for the Plan of Management are as follows:

- to preserve the open space area of the Haven for public recreational use and access while allowing for utilities for water safety and the convenience of the public that are required
- to conserve and reinforce the park's open space area, natural values and items of cultural significance for future users
- to encourage improvements to those facilities which will increase enjoyment of the natural environment by the local and visiting communities
- to identify further opportunities for increased sustainable management of the reserve
- to create a link between this Plan of Management and the newly gazetted sea based reserve which will facilitate the establishment of an artificial reef site for the sinking of the ex-HMAS Adelaide
- to include in the PoM a 'statement of significance' which will:
 - establish the natural significance of the Reserve as a whole
 - incorporate an assessment of significance in all facets, i.e. historic,

- aesthetic, social and scientific
- o consider the precinct as a whole, and in terms of its components.
- to provide policy recommendations for:
 - o short and long term management of the Haven
 - o broad future objectives for the Haven
 - o procedures for compliance with statutory instruments.

1.4 MANAGING CROWN LAND

1.4.1 Requirements of the Crown Lands Act 1989

Requirements of the *Crown Lands Act 1989* include:

- the Plan of Management must be prepared in accordance with the principles for land management under the Crown Lands Act 1989
- existing and proposed uses, developments, leases and management practices must be consistent with the dedicated public purpose of the reservation unless otherwise authorised by the Minister under the Crown Lands Act 1989
- the Plan must address any matters required by the Minister responsible for Crown Lands Act 1989
- there must be a public exhibition of the draft Plan for a minimum of 28 days and submissions must be referred to the Minister (responsible for the Crown Lands Act 1989) within a further 14 days prior to adoption
- once approved by Council and adopted by the LPMA, the Plan of Management process moves into the implementation stage.

1.4.2 Principles of Crown reserve management

Section 11 of the *Crown Lands Act 1989* provides a set of principles for Crown land management as follows:

- environmental protection principles be observed in relation to the management and administration of Crown land
- the natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible
- public use and enjoyment of appropriate Crown land be encouraged
- where appropriate, multiple use of Crown land be encouraged
- where appropriate, Crown land should be used and managed in a sustainable manner
- Crown land to be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.

1.4.3 ‘Public purpose’ and Zoning

The *Crown Lands Act 1989* provides for the reservation and dedication of Crown land for public purposes. In the case of Terrigal Haven the public purpose of the reserve is Public Recreation. The Haven area has been zoned 6(a) Open Space - Recreation under Council's Gosford Planning Scheme Ordinance. By this zoning, Council has recognised the importance of the Haven area for open space and recreation and plans

for further development, outside of this Plan of Management, in this area must be submitted to Council for approval and compatibility with its current zone use and objectives. It should be noted that the current Statewide review of Local Environment Plans (LEP) will result in the renaming of this zone to RE1 Public Recreation upon adoption of the revised Gosford LEP by the Minister of Planning.

1.4.4. Additional Purposes

The Minister for the LPMA may authorise Crown reserves to be used for additional purposes, under the *Crown Lands Act 1989* (CLA). Additional uses or purposes may be authorised in a number of ways, including;

- a. under a direct lease, licence, easement, or right of way; (Section 34A, CLA)
- b. notification in the government gazette; (Section 121A CLA) or
- c. by way of an adopted plan of management. (Sections 112, 114 & 115 CLA)

The Minister will cause an appropriate notice to appear in the Government Gazette under those provisions of the Crown Lands Act 1989. In considering whether to grant additional interests or purposes for which a Crown reserve may be used the Minister will consult with current reserve managers, consider the principles of Crown Land Management (see Section 11, CLA) and be satisfied that it is in the public interest to do so.

1.5 METHODOLOGY

The methodology of the preparation and revision of the Terrigal Haven PoM has been to determine the major values and issues affecting the area through site inspection, assessment and analysis of data. The following attributes have been addressed in this report:

- visitor usage and facilities
- locational factors and impacts
- cultural and historical significance
- natural systems influences
- arboricultural and horticultural aspects
- soils and drainage characteristics
- conceptual design considerations
- management and maintenance requirements.

1.6 COMMUNITY CONSULTATION

The original Terrigal Haven Plan of Management evolved through a team-approach with direction from a Stakeholder Group including key Council staff, members from the Terrigal CBD Building Committee, the Coastal Planning Committee (CLP Committee), a representative from the LPMA and a number of key local community stakeholders. A general community display and presentation was also organised to capture the issues and concerns of the public using the Haven as a resource. The 2006 version of the Terrigal Haven Plan of Management was placed on public exhibition by Council and gazetted by the LPMA prior to adoption, providing ample opportunity for community feedback.

In 2007, a further consultation was held with members of the original Stakeholder Group and current operators within the Terrigal Haven area. A number of issues were identified and feedback was provided at this meeting (Appendix 2).

This revised Plan of Management was placed on public exhibition from 7 January 2009 until 18 February 2009, notice of which was given in the Government Gazette, local newspapers and Council's website. The document was publicly exhibited for 42 days to allow opportunity for the community to provide feedback. Officers from the LPMA and Council held an information session for Stakeholders that had previously been involved in the revision process on 17 December 2008. Additional information sessions were held on 17 January 2009 and 28 January 2009 which members of the local community were invited to attend. A total of 56 days, from notification, was allowed to enable interested persons to make written submissions to Council.

Twenty six (26) written submissions were received from individuals and organisations within the local community. Submissions were reviewed by Officers from Council and the Land and Property Management Authority with amendments incorporated into the document where appropriate.

In July 2009, the NSW Land and Property Management Authority notified Council that a further amendment to the Plan of Management would be required to explore additional tourism opportunities that may be available in the area. As a result, due to the significance of this amendment, the plan is required to be re-exhibited, in part, for 28 days to allow the community to provide comment on this amendment prior to the finalisation of this plan. Submissions are required to be received within this timeframe and will be considered by Officers from Council and the Department of LPMA prior to the presentation of the document to Council and the Department of LPMA for adoption.

1.7 STRATEGIC DOCUMENTS USED IN THE PREPARATION OF THE PLAN

The following documents have been used to guide the strategic outcomes of this Plan, ensuring consistency with these values, principles and policies.

- Terrigal Foreshore Development - Landscape Masterplan Report prepared by Context Landscape Design, 1996
- Gosford City Council 'Vision 2025', 2007
- Gosford City Council 'Quality of Life Strategy', 2008
- Gosford City Council 'Disability Action Plan', 2008
- Hunter-Central Rivers Catchment Management Authority 'The Hunter-Central Rivers Catchment Action Plan', 2007
- New South Wales Department of Planning 'Central Coast Regional Strategy', 2008
- Coastal Council of New South Wales 'NSW Coastal Policy 1997'
- Gosford City Council/Wyong Shire Council Central Coast Sportsground Management Strategy, 2007
- Gosford City Council Sportsground Plan of Management, 1995
- Gosford City Council Foreshore Parks Plan of Management, 1996
- Gosford City Council Coastal Management Study and Coastal Management Plan, Gosford City Open Coast Beaches, 1995

Other relevant legislation and policies

The Plan and its management options must comply with the requirements and provisions contained within relevant legislation and policy guidelines, including but not limited to the following:

- Commonwealth Environment Protection and Biodiversity Conservation Act 1999
- Environmental Planning and Assessment Act 1979
- Environmental Planning and Assessment Regulation 2000
- National Parks and Wildlife Act 1974
- Protection of the Environment Operations Act 1997
- Native Vegetation Act 2003
- Threatened Species Conservation Act 1995
- Noxious Weeds Act 1993
- Fisheries Management Act 1994
- Disability Services Act 1993
- SEPP 19 - Bushland in Urban Areas
- SEPP 26 - Littoral Rainforests
- SEPP 71 - Coastal Protection

1.8 LIST OF ABBREVIATIONS IN THIS PLAN

Council	Gosford City Council
DECC	Department of Environment and Climate Change
LALC	Local Aboriginal Land Council
LPMA	Land and Property Management Authority
NPWS	National Parks and Wildlife Service
SEPP	State Environmental Planning Policy

2 Site Assessment

Preliminary site investigations were carried out in September 2001 and included several general reconnaissance surveys and a review of existing literature obtained from the Stakeholder Committee and the Local Gosford Library. Aerial photographs, orthophoto maps and topographic maps were also used to determine the physical character and context of the site.

Supplementary site inspections were carried out in June 2005 and September 2007 as part of the revision of the Plan of Management.

2.1 BIOPHYSICAL ENVIRONMENT

Local context

The Haven and Skillion represent approximately 10.5 ha of Crown land. The Skillion is clearly visible from the Scenic Highway, parts of Terrigal Beach and the main entrance road (Terrigal Esplanade) into the Terrigal Business Centre. It is generally recognised as a prominent landmark and a major element in terms of the visual and historic image of Terrigal. The Haven consists of a small protected bay, sandy beach and adjoining sandstone landforms that provide a wide ranging array of water and land based activities and opportunities. The uses of the Haven relate to and complement the Terrigal Business Centre and it is very important that a link remains between the two.

Regional context

Terrigal Haven forms one small part of a network of Crown land along the New South Wales coastline which represents open space and recreational use. It is just outside the City of Sydney and is one of the first mooring sites north from Sydney that is sheltered from the strong winds that are characteristic of the northern beaches of Sydney.

2.1.1 Land tenure and land use

Current leases and licenses

Terrigal Haven currently comprises three main tenures under the LPMA control and five under Council control. Figures 2.1 and 2.2 illustrate the current leases within the Haven.

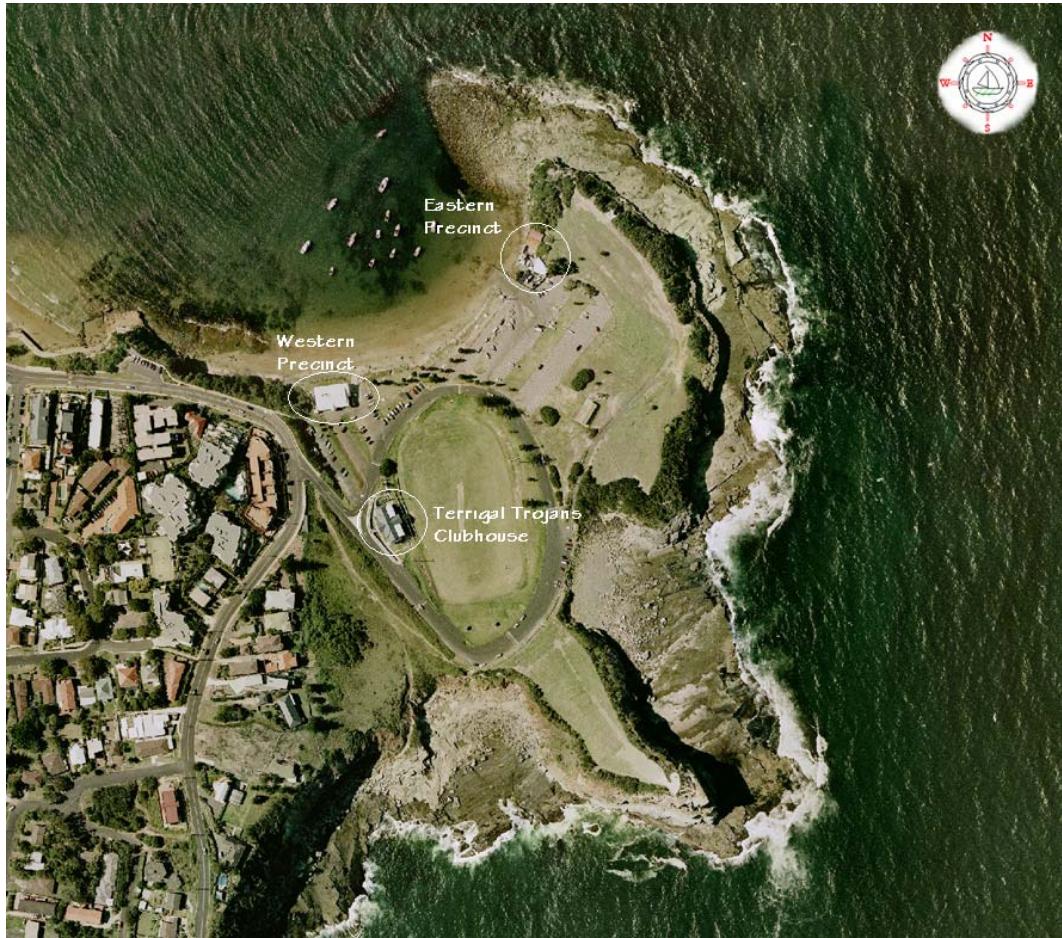


Figure 2.1 - Current leases and licences - Terrigal Haven

Terrigal Haven

Reserve 48416 notified 18 December 1912, addition notified 11 July 1975 comprises Lot 6 DP 805477 and Lot 247 DP 755234, Parish Kincumber, County Northumberland, LGA Gosford, at Terrigal. Terrigal Recreation (R48416) Reserve Trust appointed 23 November 1990. Gosford City Council is the Reserve Trust Manager.

Terrigal Trojans Clubhouse

1. Part of Lot 6 DP805477 - held under lease issued by Council as Terrigal Recreation (R48416) Reserve Trust and LPMA to the Terrigal Trojans Rugby Club.

Western Precinct

2a. Part of Lot 6 DP805477 - held under lease issued by Council as Terrigal Recreation (R48416) Reserve Trust and the LPMA to the Reef Restaurant & Grill. Lease approved for a period of 10 years from 1998 with an option for a further 10 years. Option taken up in 2008.

2b. Part of Lot 6 DP805477 - held under lease issued by Council as Terrigal Recreation (R48416) Reserve Trust and the LPMA to the Cove Café & Grill. Lease approved for a period of 10 years from 2001 with an option for a further 10 years.

2c. Part of Lot 6 DP805477 - held under lease issued by Council as Terrigal Recreation (R48416) Reserve Trust and the LPMA to the Terrigal Dive Centre. Lease approved for a period of 10 years from 1998 with an option for a further 10 years. Option taken up in 2008.



Figure 2.2 - Current Leases and Licences in the Eastern Precinct of Terrigal Haven

Eastern Precinct

- 3a. Reserve 96999 for Non-Profit Making Organisation notified 7 October 1983. Terrigal Haven Coastal Patrol (R96999) Reserve Trust appointed 23 November 1990. Royal Volunteer Coastal Patrol is Corporate Trust Manager.
- 3b. Proposed licence between Terrigal Recreation (R48416) Reserve Trust and Terrigal Sea Rescue Services Inc. Formerly occupied by Power Surf Rescue under an agreement with the Trust.
- 3c. Crown Licence 361496 issued to Terrigal Sea Rescue Services Inc 2 December 2003. Site revoked from Reserve 48416 for Public Recreation 12 August 1977.
- 3d. Lot 488 DP 728960 which comprises Reserve 170105 for Future Public Requirements (notified 19 May 1989) and Temporary Licence 410799 held by Zinga Rosa Pty Ltd executed by the Minister on 4 February 2009, due to expire 4 February 2010.

2.1.2 Land uses

An inventory of existing uses has been prepared from anecdotal evidence and observations during the course of the project. The following table outlines those land uses and provides a brief comment on each.

Table 2.1 Inventory of existing Haven land uses

Name of organisation or activity	Comment
Terrigal Trojans Rugby Club	Football training and games using the sports oval within Haven. Clubhouse on western side of Oval utilised for sporting and social functions.
Haven Beach Restaurant and Haven Seafoods	Restaurant and Café (fish and chips) situated in the eastern precinct overlooking the Haven Beach.
Reef Restaurant & Grill	Restaurant on the upper level of the old sailing club building adjacent to the entrance of the Haven and the first car park.
The Cove Café & Grill	Café on the lower level of the old sailing club building adjacent to the entrance of the Haven and the first car park.
Terrigal Dive Centre	The dive shop is on the lower level of the old sailing club building and operates scuba diving sessions from within the Haven.
Cricket association	Cricket association conducts training and games on the sports oval during the summer period.
Special events	Events that have occurred in the oval and/or adjoining areas of the Haven since 2005 include: <ul style="list-style-type: none"> • 2008 World Laser Championships • Terrigal Food and Wine Fair • Five Lands Walk • Gosford Hospital Super Test (Cricket Match) • NSW Outrigger Canoe Championships • Aboriginal Chronic Care Health Check Day • Aboriginal Dawn Ceremony Whale Dreaming • NSW Country Schools Representative Rugby Match • The Cluster Filmfest • wedding ceremonies (approx 20 per summer) • baptism ceremonies • approx 97 sporting events including training, competitions and school events (per annum).
Educational use/activities	School groups (sports); marine studies.
Volunteer coastguard activities	Volunteer coastguard services operating off the Haven; Royal Volunteer Coastal Patrol, Council's Lifeguard Service, Terrigal Sea Rescue Services.
NSW Maritime (offshore moorings)	Approximately 17 moorings within the Haven.
Conference activities	Conferences and other corporate activities (teambuilding activities etc).
Terrigal Beach Surf Lifesaving Club	Boating, nipper, training and education activities. Provision of rescue services.
General activities (active and passive)	Commercial fishing; recreational fishing; swimming/wading; walking/strolling/jogging/surfing; dog walking; sightseeing; picnicking/BBQs; cycling; jetskiing/powerboating; use of trig station; small watercraft activities; catamaraning/sailing; kite-flying; individual and group fitness training.

Lot 5 DP805477 - Pump Station

A small piece of land, adjacent to the Terrigal Haven Foreshore Reserve, is held by Council for the purposes of a Pump Station.

2.1.3 Adjacent land use

The land use adjacent to the Haven is highly developed with both commercial and residential zones. Within the Terrigal CBD, land is privately owned and leased to individual commercial and retail ventures. Commercial and retail premises include the following:

- food outlets (e.g. cafés/restaurants/supermarkets)
- services (e.g. banks/post office/hairdresser/dentist/optometrist/laundrette)
- other specialist shops (clothing boutiques/gift shops)

Seaward of Terrigal Haven lies a newly gazetted reserve over submerged Crown lands seaward of the Mean High Water Mark. The sea based reserve will facilitate the establishment of an artificial reef from the scuttling of the ex-HMAS Adelaide and will comprise a major attraction to the area and to this reserve.

2.1.4 Traffic access and circulation

Traffic and Transport Surveys Pty Ltd (1998) prepared a Terrigal CBD Traffic Report which outlined some of the existing traffic conditions. The main road through the Terrigal CBD and up to the Haven is the Terrigal Esplanade, which passes along the beachfront. Terrigal Esplanade joins the Scenic Highway after it passes the Haven and curves back around behind the hill at the Haven.

At present there is no separate cycleway in the Terrigal CBD, the cycleway is integrated into the travel lane.

The level of pedestrian activity and traffic generated by the beach and other recreational activities has major effects on the capacity of the present traffic arrangements. The effects are so great that the available traffic capacity is severely reduced during periods of high recreational activity such as during weekends and holiday periods.

The Haven currently has an entrance from Terrigal Esplanade that leads into the Haven via a one way route around the existing sports field. There are two main car parking areas with approximately 150 car spaces and a smaller car park adjacent to the Skillion which contains approximately 15 car spaces. There is also a road which extends to the Haven Beach Restaurant and car park at the eastern side of the Haven.

A multi-level parking station at Wilson Road in the Terrigal CBD was opened in July 2006, providing free 24 hour public parking. There are two public entry points and 330 parking spaces available in the station. The parking station is approximately 300 metres (or a 10 minute walk) from the entrance to the Haven.

2.1.5 Flora and Fauna

This section provides a brief overview of the Review of Environmental Factors (REF) prepared for the Terrigal Foreshore Improvements Proposal (KBR, 2002) and makes reference to a flora and fauna survey of the Haven conducted by Payne in 1999 and to

vegetation mapping of the Gosford LGA undertaken by East Coast Flora Survey (Bell 2004). A further detailed summary and vegetation mapping is provided as Appendix 3.

The wider locality of Terrigal Haven is urban in nature, and much of the Haven and vicinity has been disturbed as a result of urban development. Native terrestrial vegetation within the Haven is restricted to small, narrow patches. These occur in areas isolated by urban development, on the cliff tops and sides of Haven Headland and the Skillion.

Other vegetation within the Haven consists largely of planted trees and shrubs associated with landscaping works.

Plant communities

Three main plant communities have been identified within the study area based on previous vegetation mapping including:

- Coastal Headland Low Forest
- Coastal Headland Grassland
- Coastal Headland Shrubland.

A detailed description of these plant communities and location within the Haven is provided in Appendix 3.

Flora of conservation significance

Several threatened flora species listed under both the NSW *Threatened Species Conservation Act 1995* (TSC Act) and the Commonwealth *Environment Protection & Biodiversity Conservation Act 1999* (EPBC Act) have been recorded or are likely to occur within a 10 km radius of the study area (KBR 2002). Of these, the study area provides potential habitat for the following threatened flora species:

- Bynoe's Wattle, *Acacia bynoeana*
- Thick-lipped Spider-orchid, *Caladenia tessellata*
- Sand Spurge *Chamaesyce psammogeton*
- Camfield's Stringybark, *Eucalyptus camfieldii*
- Magenta Lilly Pilly *Syzygium paniculatum*.

Two of the three vegetation communities recorded within the study area are not currently listed as endangered ecological communities (EEC) on the TSC Act or the EPBC Act (they are Regionally Significant Vegetation). However, Coastal Headland Grassland is a component of *Themeda Grassland on seacliffs and coastal headlands in the NSW North Coast, Sydney Basin and South East Corner bioregions*, which is listed as an EEC under Schedule 1 (Part 3) of the TSC Act. The floristics of the Coastal Headland Grassland community recorded within the study area are consistent with this determination. The EEC is shown as map unit E51a in Appendix 3.

There is also the potential that some sections of Coastal Headland Shrubland recorded as littoral rainforest are components of the *Littoral Rainforest in the NSW North Coast, Sydney Basin and South East Corner Bioregions*, which is an EEC listed under the TSC Act.

Given that two EECs potentially occur within the area protection of the stands of Coastal Headland Grassland and sections of littoral rainforest will now be an important issue for management of the study area.

Significant trees

A number of trees listed as 'significant' under Council's Significant Tree Register occur within the Terrigal area, particularly along Terrigal Esplanade. Of these, Norfolk Island Pine *Araucaria heterophylla*, has been planted at various locations within the study area.

Threatened fauna species

No threatened fauna species (listed under either the EPBC Act or the TSC Act) have been recorded within the study area during the field investigations undertaken by KBR or by Payne (1999).

No endangered populations of fauna, as listed under the TSC Act, have been identified as occurring within the wider locality of the study area (NPWS 2008). The EPBC Act also does not list threatened populations.

Numerous threatened and migratory fauna species (listed under the TSC and EPBC Acts) have been recorded or are likely to occur within a 10 km radius of the study area. Whilst some of these species could occur on the site on a transient basis during foraging activities, none are likely to reside permanently (for nesting, breeding, or roosting) owing to the levels of human activity in the Haven and the lack of suitable habitat.

The following list indicates threatened fauna species that might occur within or transiently above (in flight) the study area:

- Lesser Sand-plover *Charadrius mongolus* – sandy beaches
- White tern *Gygis alba* – airspace over site (i.e. may occur throughout site)
- White-bellied Sea-eagle *Haliaeetus leucogaster* – airspace over site, coastal cliffs
- White-throated Needletail – airspace over site (i.e. may occur throughout site)
- Swift Parrot *Lathamus discolor* – street trees, parks, gardens
- Littlejohn's Tree Frog *Litoria littlejohni* – heathland
- Eastern Bentwing-bat *Miniopterus schreibersii oceanensis* – stormwater channels, buildings
- Black-faced Monarch *Monarcha melanopsis* – heathland
- Satin Flycatcher *Myiagra cyanoleuca* – low open forest
- Large-footed Myotis *Myotis aduersus* – bridges, buildings
- Powerful Owl *Ninox strenua* – heathland, large trees in public/private gardens
- Osprey – *Pandion haliaetus* - airspace over site
- Red-tailed Tropicbird *Phaethon rubricauda* – airspace over site (i.e. may occur throughout site)
- Little Shearwater *Puffinus assimilis* – airspace over site (i.e. may occur throughout site)
- Rufous Fantail *Rhipidura rufifrons* – heathland, parks, gardens
- Regent Honeyeater *Xanthomyza phrygia* – trees in streets, gardens.

Schedules 4 and 5 of the *Fisheries Management Act 1994* list threatened species (endangered or vulnerable), populations and ecological communities under the Act. The following species are listed as endangered or vulnerable and have the potential to occur within the marine areas of the Haven:

- Grey Nurse Shark *Carcharias taurus*
- Great White Shark *Carcharodon carcharias*
- Black Cod *Epinephelus daemelii*.

NSW Fisheries has identified the following protected species that have the potential to occur within marine areas of the Haven:

- Estuary Cod *Epinephelus coioides*
- Common Sea Dragon *Phyllopteryx taeniolatus*.

2.1.6 Indigenous and non-indigenous heritage

Indigenous heritage sites have been identified within the Terrigal Haven area however due to the sensitive nature of the information, specific details cannot be provided. It is recognised that the actions in this Plan of Management and the concept plan must be consistent with appropriate management of these culturally significant sites.

Although no field searches have been undertaken, investigations into non-indigenous heritage sites suggest that there are no heritage listed buildings or other non-indigenous heritage sites in the Terrigal Haven area.

Offshore shipwrecks

According to The Heritage Branch of the NSW Department of Planning's records, there are 104 shipwreck sites in the Central Coast region. Of these, there are currently three identified shipwreck sites located in the vicinity of Terrigal Haven.

The *Lord Ashley*, a 435 ton screw-driven steamship travelling from Newcastle to Melbourne, sprang a leak and was wrecked on Terrigal Reef on 8 September 1877.¹ The *Lord Ashley* was built in the United Kingdom in 1857 and initially operated on the trans-Tasman route to New Zealand.² The *Yambacoona*, a 184 ton screw-driven steamship travelling from Newcastle to Sydney, collided with rocks around the Skillion and sank on 24 February 1917 as a result of the failure of the vessel's steering gear. The *Galava*, a 412 ton steam collier, trading between Sydney and Newcastle, foundered and sank three miles off the coast of Terrigal on 9 February 1927. The *Galava* was built in Workington, in the United Kingdom, with a length of 141ft 4in. breadth 23ft 9in. and a depth of 10ft 6in.³

In addition to these identified sites there are two sites that have been investigated by the NSW Heritage Office within the Haven and reported in the document 'Investigation of Shipwreck Remains, Terrigal Haven, NSW' (December 1997). It is stated within the report that 'One site lies in approximately three metres of water in the Haven, the other

¹ Berry, G., 1994, Shipwrecks of the New South Wales Central Coast: Volume 1 1800-1899, Central Coast Shipwreck Research, Tacoma

² The Heritage Branch, NSW Department of Planning, 2009, 'All Shipwrecks in the Central Coast Region', Maritime Heritage Online New South Wales, viewed 18 May 2009

< http://maritime.heritage.nsw.gov.au/public/display_ship_region.cfm?v_row=41 >

³ Parkinson, L., 2003, Terrigal: A History of the Area, The Lazy Lizard, Terrigal

is located within the adjoining beach sands' and that 'While the identity of both sites has not be ascertained, the construction techniques employed would indicate that they date from the mid nineteenth century to early twentieth centuries'.

The ex-HMAS Adelaide

The *HMAS Adelaide* was built in the United States and commissioned in the Royal Australian Navy on 15 November 1980. *HMAS Adelaide* was the first guided missile frigate to be home ported in Western Australia. *HMAS Adelaide* participated in the 1990/91 Gulf War as part of operation DAMASK, Australia's participation in the international coalition against Iraq's invasion of Kuwait. More recently, the ship was deployed for peacekeeping operations in East Timor in 1999 and to the Persian Gulf as part of the International Coalition against Terrorism in 2001 and 2004.

The NSW Land and Property Management Authority has responsibility for the seabed on which the ex-*HMAS Adelaide* is expected to eventually sit. Consequently, the LPMA has taken on the role of the preparation, scuttling and ongoing management of the artificial reef site. Therefore, a separate Plan of Management is being prepared for the future management of the artificial reef site.

2.1.7 Scenic and visual analysis

Terrigal Haven is considered a local icon given the range of users it attracts and the quality of its landscape. It is a visually prominent site due to its distinctive bowl and prominent headland. The Haven has high scenic value due to its coastal setting, grassed areas, rising landforms, limited built form and vegetation including coastal heath and littoral rainforest. The Haven creates a sense of space through its continuous grasslands and the shape of the headland. The area around the Haven is typical of a coastal headland and beachside landscape in the Sydney basin. The Haven itself is a sheltered body of water with surrounding rocky sandstone cliffs. There is a grassed embankment behind the beachfront sand area that stretches along the length of the Haven Beach. There are large Norfolk Island Pines located on this grass strip, which add charm to the bay.

Terrigal Haven provides a hub of activity by the moorings of fishing trawlers. The water environment of the Haven is dominated by boat moorings of which can fluctuate up to approximately 20 at any one time. The Haven provides two boat ramps for use, the larger one for yachts and power boats and the smaller one for canoes/kayaks and other smaller watercraft.

The Haven also has a number of modest timber and brick buildings along the foreshore, which compliment the low key character of the area. The previous Sailing Club, constructed in the 1970s, is now home to the Terrigal Dive Shop and The Cove Café & Grill (lower level) and the Reef Restaurant & Grill (upper level). The Haven Beach Restaurant and Haven Seafoods is also along the Haven beach area at the eastern most tip of the Haven. A number of other buildings are present along the beachfront at the eastern end. One is home to the Volunteer Coastal Patrol and another two lots are used by Terrigal Sea Rescue. At the centre of the Haven is the oval, which provides for a number of formal sporting events, casual use and special events/seasonal events throughout the year.

2.1.8 Services and utilities

Services that exist within the Haven include the following:

- gas main
- sewerage main
- water main
- electricity - including overhead and underground lines in the vicinity of the foreshore area and underground power around the perimeter of the oval with flood lights.

2.2 HISTORIC CONTEXT

2.2.1 Haven naming

There is some conflict of opinion over the origins of the name 'Terrigal'. Some believe the name was derived from the Aboriginal word 'Tarriga', meaning a place of wild figs, while others believe it to be from the Aboriginal word 'Tarragal' meaning a place of little birds. There have been a number of variations on the spelling of the suburb prior to the accepted contemporary name of 'Terrigal' including Tarrygal, Tarrigal etc.

Terrigal Haven itself has been known by a number of names since the time of European settlement including Point Willoughby, Broxmouth Ville Common, Fishermen's Beach and Tarragal Village Reserve. Additionally, the Aboriginal people of the area named the Skillion within the Haven 'Kurrawyba' meaning 'big rock jutting out into the sea'.

2.2.2 Settlement

The original habitants of the Terrigal area are believed to be the Darkinjung tribe and the coastal Gurringai tribe. It is thought that the Nora clan of the Darkinjung tribe inhabited the Terrigal area.⁴

John Murray Gray (Deputy Harbour Master and Chief Pilot, Port Jackson) was the first to be granted land at Terrigal Haven by Governor Brisbane in 1825 (although the deeds were not authorised until 1833 by Governor Bourke). Gray quoted that Terrigal was 'one of the few havens from the bad southerlies experienced on the coast'. The Haven was a point of refuge between the reef to the north and Broken Head.

A chronology detailing the development of the Terrigal Haven area from the 1800's to the present day may be found in Appendix 4.

⁴ Parkinson, L., 2003, Terrigal: A History of the Area, The Lazy Lizard, Terrigal

3 Basis for Management

3.1 STATEMENT OF SIGNIFICANCE

Terrigal Haven is of regional significance in terms of environmental, biodiversity, scenic, historic, cultural, recreational and tourist based values. It exhibits a wide range of coastal environments of outstanding beauty within a discrete area. It is a tourist destination with a long history and has a mixture of natural and human elements of great charm.

3.2 VALUE MANAGEMENT

One of the main aims of the Plan of Management is to identify the values and significance of the Haven in terms of its characteristics in order to determine the appropriate management concepts for its future development. The identification of key values may otherwise be interpreted as determining 'why Terrigal Haven is important' to the owners, managers and users of the land. In this case, this includes the NSW Land and Property Management Authority, Gosford City Council (as Reserve Trust Managers) and the community.

The process of identification of key values involved community consultation throughout the development of the original Terrigal Haven Plan of Management and the Stakeholder meeting held at Terrigal Surf Club on 14 November 2007.

3.3 VALUES

Access and Circulation Value

- Pedestrian access
- Controlled vehicular access
- Car Parking
- Access to the Pacific Ocean
- Pedestrian connections to Terrigal CBD

Recreation/Tourism Value

- Retention of passive recreation and tourism
- Management of multiple land and water uses for the Haven
- Management of visitor numbers to Terrigal Haven
- Designated recreational space for passive uses such as picnicking and walking
- Designated recreational space for a dog exercise area (as determined by Council policy)
- Recreational facilities for passive uses (seating and picnic facilities)
- Designated formal eating areas
- Provision of appropriately themed waterfront buildings
- Provision of tourism services and facilities
- Access to the ex-HMAS *Adelaide* artificial reef site

Environmental/Biodiversity Value

- Shoreline protection
- Preservation of existing marine ecosystems
- Conservation of biodiversity
- Rehabilitation of Endangered Ecological Communities, Regionally Significant Vegetation and other remnant native vegetation
- Protection of biodiversity through feral animal control

Historic/Cultural Value

- Protection of indigenous culture and heritage
- Protection of non-indigenous culture and heritage

Active Open Space Value

- Haven Oval primarily designated for use by organised sporting and community groups
- Restricted special event use of Haven Oval by private/commercial entities
- Restricted use of Haven Oval during severe weather conditions
- Designated spectator areas
- Effective maintenance

Scenic Value

- Retain natural landscape quality
- Preservation of views to the Pacific Ocean
- Embellish natural vantage points
- Effective maintenance

Utility Value

- Improved drainage infrastructure
- Control of run-off from foreshore areas
- Provision of underground electrical wiring

3.4 DESIRED OUTCOMES

The desired outcomes of the reserve have been determined through community consultation and interpretation of the identified key values. These desired outcomes may be viewed as guiding principles for the management of the reserve.

Access and Circulation Value

- Maintain and improve pedestrian access within the reserve for all abilities, where appropriate.
- Provide controlled vehicular access within the reserve.
- Investigation into drop off/let down bays.
- Construct raised pedestrian crossings for oval access.
- Review and/or formalise existing car parks and circulation.
- Construct additional car park.

- Improve access to the Pacific Ocean.
- Strengthen pedestrian connections to Terrigal CBD.
- Promote increased utilisation of Wilson Road Car Park.

Recreation/Tourism Value

- Provide safe, designated recreational space for passive use.
- Encourage tourism within the Terrigal Haven area and Terrigal CBD.
- Improve the condition and availability of recreational facilities for passive and active use.
- Maintain levels of visitation while encouraging multiple uses of the reserve.
- Provide designated recreational space for dog exercise area in line with Council policy.
- Provide designated facilities and areas for formalised dining opportunities.
- Provide appropriately themed waterfront buildings incorporating services which are ancillary to the purpose of the reserve (e.g. restaurants, kiosks, recreation booking centres, aquatic services etc).
- Provide tourism and related opportunities which are ancillary to the purpose of the reserve and the adjacent sea based reserve.
- Investigate and implement measures for providing access to the ex-HMAS Adelaide artificial reef site such as an appropriate waterfront structure.

Environmental/Biodiversity Value

- Implement measures for shoreline protection.
- Protection and preservation of marine ecosystem.
- Protection of local flora and fauna species and their habitats.
- Rehabilitation of Endangered Ecological Communities, Regionally Significant Vegetation and other remnant native vegetation.
- Protect and provide interpretation for natural values of the Haven.

Historic/Cultural Value

- Investigate items of indigenous and non-indigenous cultural heritage significance within the reserve.
- Protect and provide interpretation, where appropriate, for any items of indigenous and non-indigenous cultural heritage significance within the reserve.

Active Open Space Value

- Undertake regular maintenance on the Haven Oval.
- Maintain high level of ground quality.
- Reduce impact of drought conditions on the Haven Oval.
- Formalise designated spectator area.

Scenic Value

- Undertake regular maintenance of the reserve.
- Preserve existing views to the Pacific Ocean from all points within the Haven.
- Construction of walkways and viewing decks.

Utility Value

- Improve reserve drainage.
- Design and implement stormwater management scheme.
- Implement measures to control runoff from passive reserve areas.
- Placement of all existing power lines underground.

3.5 CONCEPTS CURRENTLY IDENTIFIED FOR THE HAVEN

In undertaking the current review of the Terrigal Haven Plan of Management a number of concepts have been identified in line with the changing recreational and environmental needs of the Terrigal Haven area.

The concept plan provided in this document represents the main elements for the future use and development of the Haven. The concept plan is an adaptation of the 1996 and 2005 Landscape Masterplans. Cost estimates for each of the options are summarised in the Action Plan Table provided in Section 6.

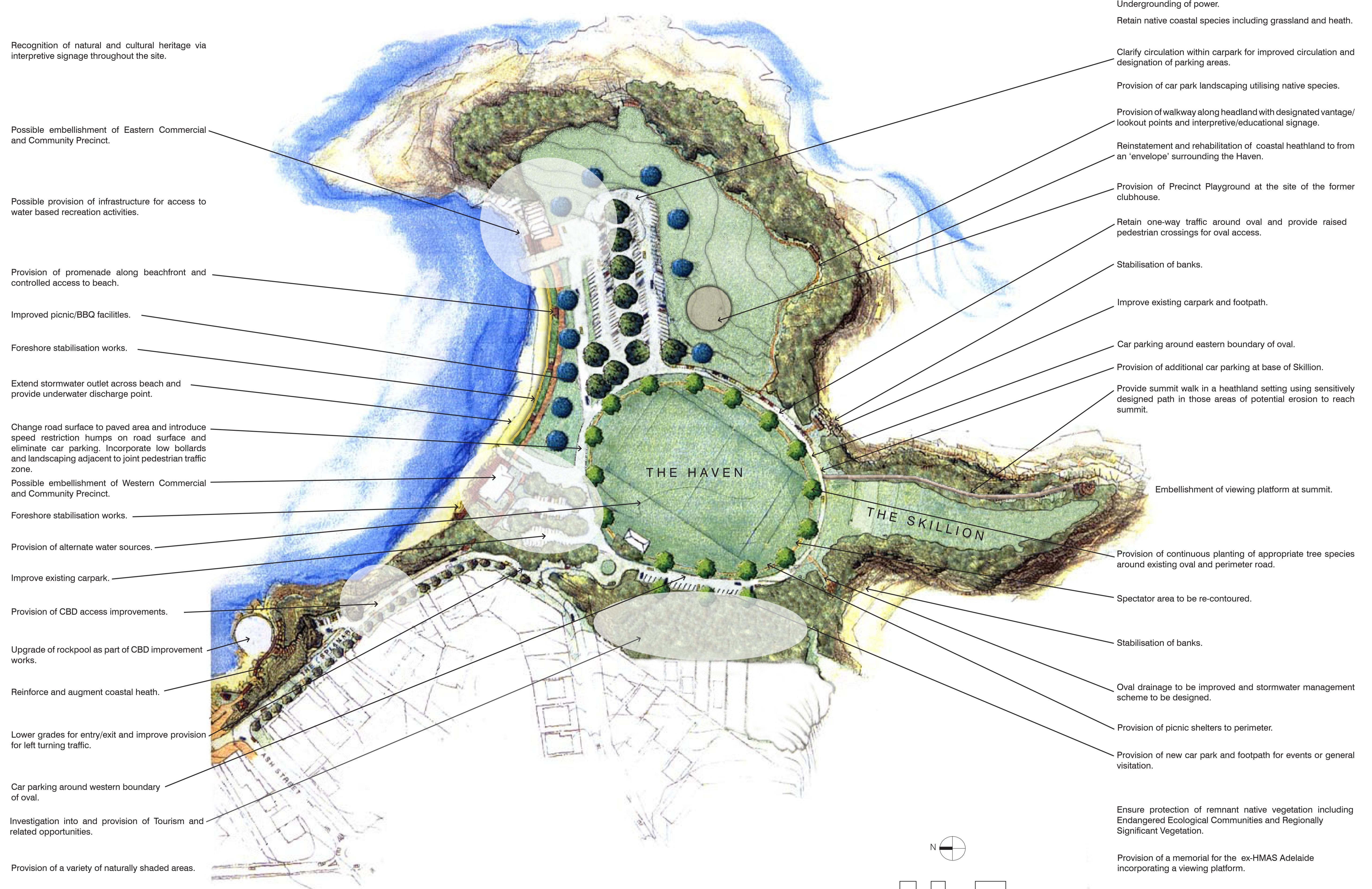
The concept plan was put on display during the 2007 and 2008 Stakeholder Meetings and 2009 community information sessions and available for review on Council's and LPMA's website during the Public Exhibition period.

The following is a brief overview of key concepts as outlined on the concept plan:

- Investigation into CBD access improvements.
- Car Parking and access.
- Coastal Walkway.
- Foreshore stabilisation works.
- Investigation into and possible embellishment of Eastern and Western Commercial and Community Precincts.
- Provision of infrastructure for access to water based recreational activities.
- Provision of a Precinct Playground.
- Embellishment of the Skillion Summit.
- Stabilisation of banks adjacent to the Skillion.
- Ex-HMAS Adelaide Memorial.
- Investigation into and provision of tourism and related opportunities in the south-western section of the reserve.
- Improvements to the Haven Oval.
- Protection of remnant native vegetation including Endangered Ecological Communities and Regionally Significant Vegetation.
- Provision of interpretative signage
- Undergrounding of Power Lines.

3.6 COMMUNITY DISPLAY COMMENTS

The comments received at the stakeholder and community displays of the concept plan held in 2007, 2008 and 2009 indicated that most were in favour of improvements to the existing facilities at the Haven. The stakeholders and general public that attended these meetings did not want to see too many major changes, but rather an upgrading of what already exists.



LANDSCAPE MASTERPLAN

Drawing No. SK-04

TERRIGAL HAVEN IMPROVEMENTS

Prepared for Gosford City Council
CONTEXT LANDSCAPE DESIGN

Concept Plan for Plan of Management.

Date	Amendment	Amended by	Amended for
November 2007	Text and graphics modified	Andrews Neil UDG	Gosford City Council
November 2008	Text modified	Andrews Neil UDG	Gosford City Council
May 2009	Text and graphics modified	Andrews Neil UDG	Gosford City Council

Figure 3.1 Terrigal Haven Concept Plan

4 Management Strategy

The management strategy and concept plan for Terrigal Haven have been formulated through an amalgamation of the requirements and stated aims of the various stakeholders: NSW Land and Property Management Authority, Gosford City Council and the community. The primary objective of the management strategy is to address the key values of the reserve, and outline methods for achieving desired outcomes. The concept plan maps these measures out.

4.1 MANAGEMENT OPTIONS

Access and Circulation Value

- Pedestrian access within the reserve is a key priority. The movement of pedestrians within the reserve should take priority over all other movements, including service and private vehicles, bicycles and other vehicular transport modes.
- Construct a walkway extending from the eastern boat ramp around the perimeter of the Haven including a formalised access path to the summit of the Skillion.
- Investigation into provision of drop off/let down bays.
- Investigate options to enhance access by public transport.
- Construct promenade on the beachfront.
- Vehicle access within the reserve is to remain controlled through the use of speed reduction measures and retention of one way traffic.
- Investigate the potential redesign of the Haven entry to enhance access value.
- Formalise and landscape car parking adjacent to the Haven entry to increase parking provision.
- Investigate redesign of existing eastern car park to determine possibility of redesign and upgrade and implement any viable changes which may increase parking potential.
- Formalise car park on the northern side of the Skillion and create accessible pathway.
- Formalise parking on the eastern and western boundaries of the Oval.
- Construct a new car park at the southern end of the oval utilising environmentally sensitive design and incorporating a pedestrian boardwalk.
- Investigate and implement actions which will strengthen pedestrian access to the Terrigal CBD and Wilson Road Car Park to ensure viable long term access management.
- Undertake further geotechnical studies to determine the viability of a cliff based structure linking the Haven to Terrigal CBD.
- Investigate options for formalising community access to coastal waters for the purpose of undertaking water based activities such as diving, snorkelling, recreational fishing and charter boat operations. Investigate the environmental impacts of the potential construction of such infrastructure. Construct appropriate infrastructure to assist with long term access management.

Recreation/Tourism Value

- Retain current recreation areas for their designated purpose (e.g. passive recreation on foreshore reserve, active recreation on the Haven Oval).
- Retain existing dog exercise area as per Council's Dog Exercise Area Policy.
- Liaise with NSW Maritime and other relevant stakeholders to investigate options to increase safety for all water users within the Haven area. Implement appropriate measures as required.
- Investigate the potential for refurbishing existing buildings in both the Eastern and Western precincts to accommodate commercial premises (such as restaurants, kiosks, recreation booking centres, or other uses which are ancillary to the purpose of the reserve) to assist with sustainable management of the Haven area, while incorporating bases for community organisations. Implement recommended actions as required.
- Construct decks to accommodate outdoor dining and beach access in the Western Precinct.
- Design and construct a playground that offers a high level of accessibility that caters for a broad range of ages and capabilities and is complementary to the facilities and infrastructure within the Haven whilst ensuring minimal environmental impact.
- Investigate tourism and related opportunities in the south western section of the reserve. Implement actions as required.
- Investigate options for formalising community access to the ex-HMAS Adelaide artificial reef site via an appropriate waterfront structure. Implement recommended actions as required.

Environmental/Biodiversity Value

- Undertake stabilisation works to the foreshore area utilising environmentally sensitive materials to reduce erosion and rehabilitating the eroded foreshore reserve whilst ensuring workable long term management options.
- Undertake stabilisation and rehabilitation works to the left and right banks of the Skillion utilising environmentally sensitive design and materials to prevent further erosion and reclaim eroded foreshore car park area.
- Reestablishment of native coastal vegetation along the edges of the headland and Skillion as required.
- Rehabilitation of Endangered Ecological Communities, Regionally Significant Vegetation and other remnant native vegetation.
- Construction of coastal walkway to assist with protection and promotion of natural values, including the Endangered Ecological Communities, through controlling pedestrian and vehicular access.
- Erection of interpretative/educational signage to provide information on significant local flora, fauna and marine life.
- Ensure compliance with environmental legislation when undertaking any proposed works.
- Undertake feral animal control in accordance with State and Commonwealth Government legislation to best practice standards for the location and its users, as required.

Historic/Cultural Value

- Undertake a comprehensive investigation into indigenous cultural and heritage sites prior to any future proposed development.
- Erection of interpretative/educational signage detailing information on offshore shipwrecks and relevant local cultural heritage.
- Investigate appropriate location for a memorial in honour of the ex-HMAS Adelaide and her crew. Construct environmentally sensitive viewing platform incorporating interpretative/educational signage and relevant relics from the vessel.

Active Open Space Value

- Upgrade oval drainage to improve surface drainage quality and design and implement stormwater management schemes to provide an alternate water source for oval irrigation.
- Extend the existing retaining wall and install additional retaining walls to create a more user friendly spectator area.
- Comply with recommendations as outlined under the Central Coast Sportsground Management Strategy (SMS) to ensure accurate management of the playing field surfaces during severe weather conditions.

Scenic Value

- Investigate options for the redesign of the platform at the summit of the Skillion. Implement any relevant changes which will enhance the visual amenity of the summit.
- Construct viewing platforms at various points along the coastal walkway.
- Include regular maintenance of the Haven area on Council's Works Schedule. Including both passive and active areas.
- Ensure compliance with Council's Development Control Plans and the Local Environmental Plan when undertaking any proposed development works.

Utility Value

- Extend stormwater outlet across beach and have an underwater discharge point.
- Install sand link drainage on the Oval.
- Provision of alternate water sources for the Oval.
- Overhead powerlines to be relocated underground to increase accessibility to the boat ramp and improve the aesthetics of the foreshore reserve area.

4.2 GOSFORD CITY COUNCIL COMMUNITY LAND MANAGEMENT

As Trust Manager of the reserve, Gosford City Council will be responsible for the implementation of the management strategy. As Terrigal Haven is a reserve under the care, control and management of Council it is essential that this Plan of Management remain consistent with the existing management regime which has been developed by Council for the management of Crown reserves and community land.

4.2.1 Planning

- To balance community use and environmental considerations of the reserve with the sound financial management of the Terrigal Haven area.
- Council will continue to further its knowledge of community demand and visitor preferences in order that existing facilities and spaces are managed to reflect the wide range of community needs.

4.2.2 Management

- Council will exercise its powers under the Local Government Act 1993 and Crown Lands Act 1989 to control the use of, and access to, Terrigal Haven.
- To encourage community involvement in the development and management of recreational facilities.
- To provide improved protection from the sun in open space areas used for passive recreation.

4.2.3 Development and Improvement

- The provision of quality open spaces commensurate with use and function is central to Council's Open Space and Leisure Services section planning.
- The provision of recreational facilities is to be incorporated with the protection of the environment.
- Council approval is required prior to any development on open space or improvements to existing facilities.
- Council will actively pursue external funding opportunities such as State and Federal Government grants in making improvements, and will encourage community groups to do the same.
- Additional funding opportunities will also be explored, in conjunction with the LPMA, regarding improvements to facilities and enhancement of the commercial and community precincts.
- Future playgrounds will be designed with safety softfall surfaces, such as synthetic grass or safefall material to decrease the risk of injury, and shade structures to protect users.
- Design plans will be developed for new projects where required.
- Adequate car parking will be provided where logically possible.
- All new playground equipment will comply with the current Australian Standards.
- Any new facilities to be funded (solely or partially) by Council will be approved through inclusion in Council's Capital Works Program, or allocated funds from Section 94 contributions (if appropriate).
- Nothing in this plan prevents Council from upgrading existing facilities and utilities.

4.2.4 Fees and Charges/Conditions of Hire

- Council will apply various fees and charges for use of Council facilities in order to:
 - Maximise opportunities for use of facilities
 - To allocate and regularise use
 - To contribute to cost recovery
 - To improve fairness and equity
- Such fees will be reviewed annually in line with Council's review of fees and charges
- Facilities are approved for use based on the conditions of hire as determined by Council's Open Space and Leisure Services section. Failure to comply with these conditions may result in forfeiting the opportunity for future use of Council facilities and loss of the security deposit.

4.2.5 Maintenance

- In order to maintain open spaces efficiently and within budget, maintenance standards and priorities will be reviewed on an ongoing basis.
- A cohesive approach to the management of open space reserves will be developed, ensuring communication between the various sections in Council responsible for different facilities.
- The reserve will be available to the community in a safe and accessible condition.
- Variety in the playground equipment will be sought, both in suiting different age groups and abilities and in the type of equipment.
- Regular maintenance and inspections will occur to ensure reserves meet safety requirements.
- Maintenance cycles match the level and type of use of a reserve. Wherever possible, users should be encouraged to help, for example keeping the reserve tidy by placing their rubbish in the bins provided.
- Garbage bins should be minimised to discourage the dumping of rubbish, particularly household rubbish. However, rubbish bins on the site should promote litter control.
- The grass will be regularly mowed to create a safe and tidy appearance, in accordance with Council's maintenance schedule.
- The trees will be subject to regular inspections to maintain safety standards.
- Council will take steps to prevent undesirable use of the park. For example, where possible slip rails/gates will be erected to keep vehicles out.
- Nothing in this plan prevents Council from maintaining existing drainage easements, pipelines and the like.

4.2.6 Use/Activities/Facilities

Facilities

- Recreation facilities that would be considered to be suitable include but are not restricted to:
 - Recreation facilities which promote or are ancillary to the use and enjoyment of a park as a public park, and for public recreation

- Facilities used for passive recreation activities such as playground equipment and picnic facilities
- Facilities which will assist with the sustainable management of the reserve whilst remaining ancillary to the purpose of the reserve (e.g. Booking centre for water based recreation activities).
- Facilities used to conduct sport & recreation activities
- Cycleway facilities
- Jetties, marinas, boatramps and wharves
- Fish cleaning tables and fishing platforms
- Tidal pools
- Boardwalks
- Floodlighting for sporting facilities
- Ancillary facilities such as parking, pathways, fencing, bubblers, barbecues, seating and shelter
- Amenity facilities for parks with a district-wide use

Signage

Permanent

- Permissible signage includes signs which are erected by Council to regulate various activities under Section 632 of the Local Government Act, signs which indicate the name of reserve and/or facilities contained within it, directional signs, traffic signs and interpretative/educational signage. Any other signage requires prior Council approval.

Temporary

- Temporary signs would include items such as banners used by community groups. Some temporary signs may still require Council approval.

Other Uses Considered Suitable

- Miscellaneous and utility mains & plant, and drainage facilities.
- Right of entry and access for plant maintenance purposes.

Permissible Activities Requiring Council Approval

Activities which would be permissible subject to the relevant Council approval include but are not restricted to:

- fetes
- cultural activities
- exhibitions/demonstrations
- celebrations/gatherings
- commercial photos/filming
- commercial activities of an educational nature and/or encourage active participation in a healthy lifestyle (e.g. personal training)

Any activities to be conducted on Terrigal Haven Oval must comply with the Sportsground Management Strategy to ensure safety and the longevity of the oval for the benefit of sporting groups, other community user groups and the community as a whole.

Permissible Activities Generally Not Requiring Council Approval

- Walking, informal use of recreation facilities, picnics, kite flying etc.
- If the reserve is to be reserved for a particular purpose such as a large picnic, a special event application is required to be submitted.

Activities Which Are Not Permissible

- Any activity which could be considered dangerous and/or which may unreasonably disrupt other users of the park and/or adjoining neighbours is not permissible. Examples of activities which are not permissible include, but are not limited to, off road trail bike riding, abseiling (with the exception of emergency services), horse riding, camping and any organised sport undertaken outside the Haven Oval area.
- Use of the park for commercial activities which are not ancillary to the recreational purpose of the reserve or adjoining coastal waters.

Sale of Alcohol

- The sale of alcohol requires the approval of the NSW Office, Liquor, Gaming and Racing through the issue of a Licence. The licence must be produced for Council in each instance when making application for the use of a passive recreation area if the sale of alcohol is intended.
- Applicants are required to comply with any requirements of the Licensing Authority
- The consumption or supply of alcohol on reserves under Council's care, control and management requires a permit from Council's Open Space and Leisure Services section.
- For further details concerning the sale, supply and consumption of alcohol refer to Council Policy R1.06 Consumption of Alcohol (Functions Licences).

4.2.7 Leases and Licences

Council will consider granting leases and licenses of land under the care, control and management of Council subject to the *Crown Lands Act 1989*.

Development should be for a purpose which promotes or is ancillary to the use and enjoyment of a park as a public park and for public recreation.

- Period will not exceed 20 years (including any period for which the lease or licence could be renewed by the exercise of an option).
- If the period is to exceed 5 years, additional requirements apply. Council will comply with the provisions of the Conveyancing Act 1919 and the Crown Lands Act 1989 for the granting of leases and licences for a period of more than 5 years.

4.2.8 Reserve Users

- Users will be encouraged to visit and help maintain the reserve. This may involve routine maintenance such as the correct disposal of rubbish, or the holding of special events, and participation in the design and management of particular areas or networks or areas.
- Users will be encouraged to report any vandalism, delinquent behaviour or littering to Council or the Police Service of NSW.

4.2.9 Erosion Control Works

Council may undertake erosion control works on foreshore reserve areas, if required, to ensure the future upkeep of the asset. Recent developments at foreshore reserves include the erection of sea walls and increased tree planting for the purposes of foreshore protection.

5 Planning Principles

5.1 PLANNING INSTRUMENTS AND LEGISLATION

There are a number of Federal, State and Local Government Planning Policies and Instruments that contain principles to take into account in the future management and development of the Haven.

Additionally, there are a number of authorities, who have Acts of Parliament under their administration, that require consultation when future development is proposed for the Haven.

The relevant Planning Acts, Policies and Instruments are listed below and the provisions contained in them would need to be complied with for any new development within the Haven. A further detailed summary of these Acts, Policies and Instruments is provided as Appendix 5.

LEGISLATION

- Crown Lands Act 1989
- Environmental Planning and Assessment Act 1979
- Environmental Planning and Assessment Act Regulations 2000
- National Parks and Wildlife Act 1974
- Commonwealth Environment Protection and Biodiversity Conservation Act 1999
- Protection of the Environment Operations Act 1997
- Native Vegetation Act 2003
- Threatened Species Conservation Act 1995
- Noxious Weeds Act 1993
- Fisheries Management Act 1994
- Disability Services Act 1993

PLANNING POLICIES AND INSTRUMENTS

- Gosford Planning Scheme Ordinance
- DCP 55 - Terrigal Town Centre (Amendment 1)
- DCP 89 - Scenic Quality
- SEPP 19 - Bushland in Urban Areas
- SEPP 26 - Littoral Rainforests
- SEPP 71 - Coastal Protection
- Central Coast Regional Strategy
- NSW Coastal Policy

Council Policies

- D1.04 - Environmental Assessment Procedure
- D2.07 - Environmental Policy
- D6.44 - Landscape and vegetation management policy

- R0.18 - Biodiversity Management
- R1.02 - Allocations - Seasonal Use
- R1.04 - Closure of Sporting Fields
- R1.06 - Consumption of Alcohol (Functions Licence)
- R1.07 - Playing Fields and Amenities (General Use)
- R1.09 - Public Amenities Buildings (Design or Erection)
- R1.12 - Advertising on Sportsgrounds
- T4.03 - Erection of street banners
- Schedule 1 - Tree Preservation Order

5.2 DEVELOPMENT ASSESSMENT GUIDELINES

The following guidelines represent the factors that must be considered by any proponent when submitting a Development Application (DA) to Council in regards to the Haven. These are additional to any necessary provisions of the *Environmental Planning and Assessment Act 1979*.

Future development proposals must address the following:

- a. ensure consistency with Crown Lands policies, Council's adopted policies and codes, all environmental planning instruments and the principles of Council's Planning Scheme
- b. environmental and biodiversity sustainability
- c. protection of identified values
- d. public accessibility, equity, exclusivity and alienation of Crown land
- e. public demonstration of a clear connection with the Haven's designated purpose, role and setting
- f. consistency with the character and scale of the Haven's existing recreational facilities
- g. protection of views to and from the Haven
- h. maintenance of the amenity and public safety in relation to noise emissions and pollutants (water and air)
- i. minimisation of traffic hazards and pedestrian conflicts in relation to vehicular and parking access, service and delivery areas
- j. ensure appropriate native planting
- k. protection of visual and environmental amenity
- l. development proposals which may directly or indirectly threaten the natural coastal heathland and grasses and/or other identified values
- m. development which may adversely affect scheduled heritage items. Development in the vicinity of a heritage item should complement its character and integrity
- n. proposed changes to any lease boundaries must address identified values associated with each parcel of land.

6 Action Plan

6.1 FINANCIAL MANAGEMENT

Special funding may be available from Government sources in order to implement or assist in the implementation of the Terrigal Haven Plan of Management. As the LPMA is the responsible authority for Crown land, funding for the works may be applied for by Council (as trustees) for the works proposed, from the Public Reserves Management Fund. Council, as trustee, may have to match these funds to make up the estimated costs. In addition, Council will continue to pursue avenues for funding through its own programs, including the Capital Works Program, to assist with achieving the desired outcomes of this Plan.

It is important to note that as with the development of any infrastructure, an important aspect associated with the implementation of the plan is to ensure that ongoing maintenance cost is minimised and that opportunities for required reserve enhancements are realised. Therefore additional opportunities for funding may be sourced by the LPMA or Council to assist with the management of the asset. This may comprise investigating the viability of obtaining financial benefit from the leasing of properties currently situated on the reserve. Leasing of these properties is required to comply with all statutory instruments and relevant legislation and would have to provide a service ancillary to the purpose of the reserve, unless otherwise authorised.

6.2 ACTION PLAN TABLE

The following table outlines the preferred management options for the Haven, and is aimed at providing tangible means in which the desired outcomes of the Plan of Management may be achieved. These options need to be managed to ensure minimal impact on social, aesthetic, cultural and ecological factors. The table outlines the management actions required, the roles and responsibilities required to complete the action and the estimated cost to fulfil those actions.

Table 6.1 Action Plan

Management Action	Responsibility	Priority	Desired Outcome	Estimated Cost*
Access and Circulation Value				
Clarify circulation within eastern car park for improved circulation and designation of parking areas	Council	Short	Review and/or formalise existing car parks and circulation	\$15,000
Improve existing car park adjacent to the entry of the Haven and the Reef Restaurant	Council	Short	Review and/or formalise existing car parks and circulation	\$300,00
Provision of new car park and footpath for events or general visitation	Council	Short	Construct additional car park	\$1,300,000
Provision of formalised car parking on the eastern boundary of the oval	Council	Short	Review and/or formalise existing car parks and circulation	\$10,000
Provision of formalised car parking on the western boundary of the oval	Council	Short	Review and/or formalise existing car parks and circulation	\$10,000
Provision of drop off/pick up zone	LPMA/Council	Short	Review and/or formalise existing car parks and circulation	To be determined
Improve existing car park and footpath adjacent to the Skillion	Council	Short	Review and/or formalise existing car parks and circulation	\$70,000
Provision of additional car parking at the base of the Skillion	Council	Short	Construct additional car park	\$150,000
Provision of raised pedestrian crossings for oval access	Council	Short	Review and/or formalise existing car parks and circulation	\$100,000
Provision of walkway along headland with designated vantage/lookout points and interpretative/educational signage	Council	Short	Maintain and improve pedestrian access within the reserve for all abilities, where appropriate	\$400,000
Provide summit walk in a heathland setting using sensitively designed path in those areas of erosion to reach summit				
Investigation into and potential provision of infrastructure for access to water based recreation activities	LPMA/Council	Short	Improve access to the Pacific Ocean	\$300,000
Investigation into and provision of improved access to the CBD (Estimated cost based on investigation only - Cost of implementation to be determined)	Council	Medium	Strengthen pedestrian connection to Terrigal CBD	\$40,000
Provision of a promenade along beachfront and controlled access to the beach	Council	Medium	Maintain and improve pedestrian access within the reserve for all abilities, where appropriate	\$400,000
Lower grades for entry/exit and improve provision for left turning traffic	Council	Medium	Review and/or formalise existing car parks and circulation	\$100,00
Incorporate low bollards and landscaping adjacent to joint use pedestrian zone	Council	Long	Maintain and improve pedestrian access within the reserve for all abilities, where appropriate	\$200,000

Table 6.1 Action Plan

Management Action	Responsibility	Priority	Desired Outcome	Estimated Cost*
Recreation/Tourism Value				
Investigation into and possible embellishment of Eastern Commercial and Community Precinct	LPMA	Short	Provide appropriately themed waterfront buildings incorporating services which are ancillary to the purpose of the reserve	To be determined
Investigation into and possible embellishment of Western Commercial and Community Precinct	LPMA/Council	Short	Provide appropriately themed waterfront buildings incorporating services which are ancillary to the purpose of the reserve	To be determined
Upgrade of rockpool as part of CBD improvement works	Council	Short	Provide safe, designated recreational space for passive use	\$400,000
Provision of a memorial for the ex-HMAS Adelaide incorporating a viewing platform.	Council/LPMA	Short	Investigate and implement measures for providing access to the ex-HMAS Adelaide artificial reef site	To be determined
Investigation into and possible provision of tourism and related opportunities in the south western area of the reserve	LPMA	Short	Provide tourism and related opportunities which are ancillary to the purpose of the reserve and the adjacent sea based reserve.	To be determined
Provision of a variety of naturally shaded areas	Council	Short	Provide safe, designated recreational space for passive use	\$60,000
Improved picnic/BBQ facilities	Council	Medium	Improve the condition and availability of recreational facilities for passive and active use.	\$200,000
Provision of Precinct Playground at the site of the former clubhouse	Council	Medium	Provide safe, designated recreational space for passive use	\$1,000,000
Maintenance of Dog Exercise Area	Council	n/a	Provide designated recreational space for dog exercise area as per Council Policy.	\$50,000 p.a.

Table 6.1 Action Plan

Management Action	Responsibility	Priority	Desired Outcome	Estimated Cost*
Environmental/Biodiversity Value				
Foreshore Stabilisation Works	Council	Short	Implement measures for shoreline protection	\$800,000
Bank stabilisation to the left and right of the Skillion	Council	Short	Implement measures for shoreline protection	\$600,000
Retain native coastal species including grassland and heath	Council	Short	Protection of flora and fauna and their habitats	\$15,000
Provision of car park landscaping utilising native species	Council	Short	Protection of flora and fauna and their habitats	\$30,000
Reinstatement and rehabilitation of coastal heathland to form an 'envelope' surrounding the Haven	Council	Medium	Protection of flora and fauna and their habitats	\$30,000
Provision of continuous planting of appropriate tree species around existing oval and perimeter	Council	Medium	Protection of flora and fauna and their habitats	\$100,000
Ensure protection of remnant native vegetation including Endangered Ecological Communities and Regionally Significant Vegetation	Council	n/a	Rehabilitation of Endangered Ecological Communities and Regionally Significant Vegetation	To be determined
Historic/Cultural Value				
Recognition of Aboriginal significance via interpretative signage	Council	Medium	Protect and provide interpretation, where appropriate, for any items of indigenous or non-indigenous cultural heritage significance within the reserve	\$5,000
Recognition of offshore coast shipwrecks via interpretative signage	Council	Medium	Protect and provide interpretation, where appropriate, for any items of indigenous or non-indigenous cultural heritage significance within the reserve	\$5,000

Table 6.1 Action Plan

Management Action	Responsibility	Priority	Desired Outcome	Estimated Cost*
Active Open Space Value				
Provision of picnic shelters to the perimeter of the Oval	Council	Short	Formalise designated spectator area	\$100,000
Oval drainage to be improved and stormwater management scheme to be designed	Council	Medium	Maintain high level of ground quality	\$300,000
Spectator area to be re-contoured	Council	Medium	Formalise designated spectator area	\$200,000
Scenic Value				
Embellishment of viewing platform at the summit of the Skillion	Council	Short	Preserve existing views to the Pacific Ocean from all points within the Haven	\$200,000
Utility Value				
Undergrounding of Power	Council	Short	Placement of all existing powerlines underground	\$150,00
Extend stormwater outlet across beach and provide underwater discharge point	Council	Medium	Improve reserve drainage	\$300,000
Appropriate drainage system to be used and soft engineering options to be introduced wherever practical				
Provision of alternate water sources	Council	Medium	Design and implement stormwater management scheme	\$165,000

*Notes:

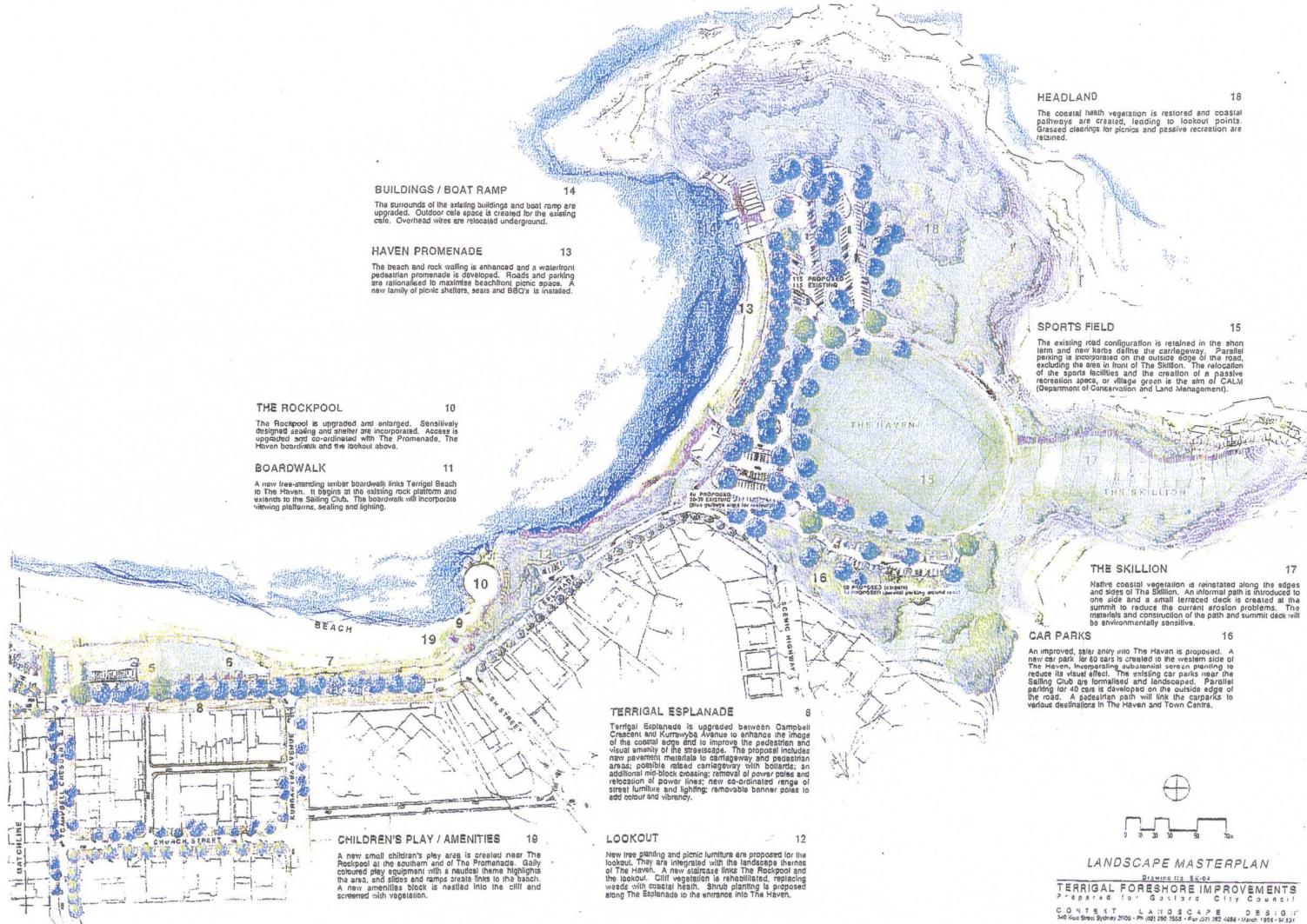
1. These cost estimates are exclusive of GST.
2. These cost estimates are current at the time the plan was prepared (November, 2008).
3. These costs have not allowed for project establishment and/or formal contractual arrangements between Contractors and Council. These estimates will be subject to changes for different work delivery methods and/or specific work packages.

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Appendix 1

1996 Landscape Masterplan



Concepts from the 1996 Landscape Masterplan

Appendix 2

Minutes Stakeholder Meeting

MINUTES

TERRIGAL HAVEN PLAN OF MANAGEMENT

REVISION 2007/08

STAKEHOLDER MEETING

Held at
Terrigal Surf Life Saving Club
On Wednesday 14 November 2007

MEETING COMMENCED at 4.20pm

FACILITATOR: Kellogg, Brown and Root (KBR)

ATTENDANCE: Gosford City Council (Council)
NSW Department of Lands (Lands)
NSW Maritime
Central Coast Artificial Reef Project Committee (CCARPC)
Community Environment Network (CEN)/Central Coast Marine
Discovery Centre Working Group
Terrigal Dive Centre
Haven Beach Seafoods and Restaurant
Reef Restaurant and Grill
Royal Volunteer Coastal Patrol
Professional Fishermen's Coop
Terrigal Trojans Rugby Club
Central Coast Cricket Association
Gosford City Sports Council

APOLOGIES: NSW Department of Environment & Climate Change
Terrigal Chamber of Commerce
Central Coast Tourism
Terrigal Sea Rescue Services
Terrigal Surf Life Saving Club
Andrews Neil

INTRODUCTION

Council's Manager of Open Space and Leisure Services (OS&LS) provided rationale on the current revision of the Terrigal Haven Plan of Management and briefly outlined the proposed amendments. Manager OS&LS introduced the consultant from KBR and facilitator of the stakeholder meeting. The facilitator provided a history on the HMAS Adelaide and opened the floor for discussion on the proposed amendments.

MATTERS LISTED FOR DISCUSSION

1. TIMEFRAME FOR REVISIONS

Terrigal Trojans representative enquired as to whether Council has a timeframe for the completion of the revision of the Terrigal Haven Plan of Management. Manager OS&LS stated that the aim is to have the revisions completed prior to the sinking of the HMAS Adelaide. A representative from Lands suggested that until State Departments have met and determination of the management of the HMAS Adelaide

has been made, adoption of a revised Plan of Management would not be considered. Therefore a designated timeframe could not be determined at this stage.

2. EXPECTED USAGE OF THE HAVEN AS A RESULT OF THE HMAS ADELAIDE

A representative from the Royal Volunteer Coastal Patrol asked if Council had any indication as to the expected increase in use of the Haven area as a result of the sinking of the HMAS Adelaide. Council's Manager OS&LS stated that at this stage expected increase in usage is unknown due to a number of variables including the management of the HMAS Adelaide. The Manager OS&LS advised that Council was, however, aware of the physical limitations of the site.

3. PREVIOUS INVOLVEMENT IN THE ORIGINAL TERRIGAL HAVEN PoM

Of the 21 attendees, 7 had been involved at various stages throughout the previous Terrigal Haven Plan of Management process. Primarily Council Officers that were involved after the plan had been adopted by Council and prior to adoption by NSW Department of Lands.

4. HISTORY & TIMFRAME ON THE SINKING OF THE HMAS ADELAIDE

The representative from Terrigal Dive Centre provided feedback on the history and expected timeframe for the sinking of the HMAS Adelaide. Information was provided on the background on lobbying that had taken place within the last 7-8 years to secure an offshore shipwreck site. HMAS Brisbane was lost to Maroochydore, HMAS Canberra was delegated to Victoria and the Adelaide was finally secured for Terrigal. It was advised that the representative from Terrigal Dive Centre had been informed that the Adelaide would be handed to the State Government on 30 June 2008 and would take approximately 5 months to strip.

5. EXPECTED IMPACTS ON THE HAVEN AREA

The facilitator enquired as to the expected impacts that may result due to the Adelaide. The representative from Terrigal Dive Centre suggested that the primary impact would be dive boats usage of the area. A representative from the Reef Restaurant enquired as to whether there will be restrictions on the number of dive operators that would be allowed to operate. Discussion occurred regarding the current circumstances with the HMAS Brisbane (4 Licences available - currently only 3 operators) however until the management of the Adelaide is determined this is an unknown.

6. DISCUSSION ON THE VIABILITY OF A JETTY OR FLOATING PONTOON

The following points were raised and discussed amongst the group:

- Construction of a pontoon
- Size of the boat will dictate whether a jetty or floating pontoon is required
- Need to keep boats away from current diving areas and moorings
- Jetty may see inexperienced boaters tying up to a jetty in bad weather and creating a lot of damage
- Jetty would be a more preferable option for divers for loading equipment
- Any proposal would have to be put to Council for consideration
- DA Requirements - ownership would need to be determined
- Compliance with Council Policy's and DCP's is essential
- Council is not responsible for catering for commercial operators. Council's role is to manage the reserve appropriately for NSW Department of Lands.

7. PERCEIVED IMPACT ON SPORTING CODES

A representative from the Terrigal Trojans believes the proposed jetty/pontoon will not affect their club so long as appropriate infrastructure is available to support the expected increase in use of the Haven area.

The representative from Central Coast Cricket Association (CCCA) suggested that all views must be considered for the Plan of Management, not simply the sinking of the HMAS Adelaide. This should include safety aspects, parking and special events. Although the usage by cricket within Terrigal Haven has been limited, the CCCA representative suggests that Council should be focusing on aspects such as amenities, ground pitch etc.

8. PARKING/TRAFFIC

Questions were put forward regarding parking at the south-western end of the oval on the hill. Council's Coordinator Natural Open Space provided an explanation on the Endangered Ecological Communities which need to be protected and that the optimal position for a formalised car park would be the site on the hill which had already been disturbed. Council's Manager OS&LS stated that preliminary discussions had occurred regarding a formalised walkway behind the proposed car park which would have interpretative and educational signage regarding the EEC's.

A representative from the Reef Restaurant enquired as to whether car parking near the Reef Restaurant and Grill will be formalised. Discussion occurred on the usage of the trailer parking on the eastern side of the Haven. Council's Manager OS&LS suggested that a review of the current car parks may need to be undertaken to optimise parking within the Haven. The facilitator enquired as to whether Council has a timeframe for formalising the car parks. Council's Manager OS&LS advised that funding is required to implement Terrigal Haven Plan of Management actions.

Manager OS&LS stated that the Terrigal Haven Plan of Management is part of the Civic Infrastructure Strategy and if approved, works to be undertaken in the Haven will be prioritised and implemented. A representative from Lands suggested that parking concerns would not be dependant on the sinking of the Adelaide. The representative from CEN suggested it would be a shame to place a car park at the south-western location in the Haven as it is a prime viewpoint. Manager OS&LS advised that Council encourages and urges greater use of the Wilson Road car park. Discussion occurred on greater signage for access into Terrigal CBD and Terrigal Haven. Manager OS&LS advised that the message is being passed on to the Traffic Committee. A representative from Lands stated that access issues are a common problem with Crown Reserves and various options have and may be considered such as the establishment of boardwalks and shuttle bus runs. Consideration of options needs to be included in the Plan of Management. The representative from CEN suggested the option of let down bays.

8. PEDESTRIAN ACCESS

Council's Manager OS&LS advised that he is aware of previous discussions having occurred regarding increased pedestrian access. Discussion occurred regarding the possibility of a boardwalk from the CBD to the Haven. Council's Coordinator Parks, Playgrounds and Foreshores advised that previous geotechnical consultants deemed the cliff-face too unstable. Council's Coordinator Active Open Space advised that the Plan of Management allows for further embellishment of the current access paths. The representative from the Haven Beach Seafoods and Restaurant expressed concern over access for the aged and families. Council's Manager OS&LS advised that potential works should ultimately accommodate for varying levels of access due to Council's stance on accessibility for all ages and abilities. The representative from Haven Beach Seafoods & Restaurant enquired as to whether access could be

formalised at the eastern end of the Haven. An Officer from Lands suggested that when the Crown is negotiating leases it may be put forward as a consideration for potential development.

8. GENERAL DISCUSSION

- Discussion regarding the potential inclusion of fitness equipment in the Haven.
- Discussion on an increase of lighting at the Haven.
- Discussion on the dog area remaining in the Haven.
- Discussion on alternate water source issue within the Haven. Council's Coordinator Active Open Space advised this is a priority for their service unit but is having difficulty with the logistics of storage.
- Further discussion occurred on the location of the proposed floating pontoon/jetty.
- Discussion on additional amenities for both divers and patrons of the Haven Restaurant. Suggestion put forward for a signage review to be undertaken to assist with general public locating amenities.
- Discussion on commercial operators (i.e. Personal Trainers) and potential charging of fees. Question raised as to where this income will go. Council's Manager OS&LS advised that any income generated from commercial licensing fees would be placed in a sinking fund for maintenance of the asset.
- Discussion occurred on a proposed Marine Discovery Centre. The representative from CEN (also representing the Central Coast Marine Discovery Centre Working Group) advised that a location is being sought within the Terrigal area and believes an educational component should be focused on within the area.

Council's Manager OS&LS requested that any additional suggestions or feedback be forwarded through to Council's Open Space and Leisure Officer.

MEETING CONCLUDED at 5.55pm

Appendix 3

Environmental and Biodiversity Values

Topography, geology, landforms and soils

Soil types and topography have been referenced from a number of sources including Gosford Soil Landscapes map (Murphy 1993) and a number of specific geotechnical assessments by Coffey Partners.

Terrigal Haven is made up of two distinct soil landscapes. The Narrabeen soil landscape is found along the beach and foreshore areas, and the Erina soil landscape is found behind the foreshore and along the headland.

The Narrabeen soil landscape is characterised by beaches and coastal foredunes on marine sands. Beaches are generally made up of loose coarse shelly brownish yellow beach sand, while foredunes consist of loose medium yellowish brown quartz sand. The Haven Beach is approximately 220 m long and 15 m wide.

The Erina soil landscape is characterised by undulating to rolling rises and low hills. Ridges and crests are moderately broad and valleys moderately narrow. Slopes are gently to moderately inclined. Three main soil types occur: soils formed on shale; soils formed on sandstone; and deep soils formed on weathered coarse sandstone.

The geology of the area is the Terrigal Formation of the Narrabeen Group, which forms relatively steep coastal cliffs below Hawkesbury Sandstone and consists of generally fine to medium grained quartzose to lithic-quartz ironstone banded sandstone in beds of 5 m to 30 m thick, with interbeds of siltstone. These interbeds of siltstone are some 5 m to 15 m in thickness, which preferentially weather and erode leading to the development of potentially unstable overhangs.

Cliff face morphology appears to be related to the local geology. Sandstone outcrops extensively in the base of the cliffs at Terrigal Beach and cliff face slopes tend to be vertical or near vertical. Basal erosion by waves of coastal cliffs is of prime importance for slope stability.

Terrigal headland can be described as having the lower half exposing moderately weathered beds of massive sandstone with interbeds of extremely to highly weathered siltstone/claystone, while the upper half of the escarpment is vegetated with steep slopes of 45-65 degrees. Much of the vegetated portion contains a thin soil cover over weathered rock.

The area south of the rockpool exists as a 6 m high sandstone face, above which is a vegetated soil covered slope. The slope contains a number of scattered sandstone boulders together with some fill and rubbish materials on the upper part of the slope. Landslide debris is evident at the rear of the rockpool indicating slope failures from the soil covered vegetated slopes onto the wavecut platform.

Historically, the sand at The Haven contained heavy concentrations of mineral sands which resulted in the mining of these sands and the importation of clean sand.

Climate

Climatic information has been obtained from the Bureau of Meteorology. Temperature and rainfall data has been sourced from the Norah Head Lighthouse station, approximately 20 km north of Terrigal.

The climate of the area is classed as being warm temperate with a maritime influence. Terrigal experiences warm to hot summers, with temperatures generally between 16 and 28 degrees Celsius, and cool to cold winters with temperatures reaching as low as 3 degrees Celsius at times.

On average, the region has fairly uniform rainfall throughout the year. However, totals from month to month and from year to year are quite variable and the rain tends to fall in concentrated bursts.

The primary rain-producing mechanisms in the region are:

- major storms (cyclones) - strong winds and heavy rainfall along the coast occurring up to six times per year with the frequency being greatest in autumn and winter months
- thunderstorms - localised heavy falls (heavy rainfall, strong gusty winds, lightning and thunder, and hail) occurring about once per month in winter and three to four times per month in summer.

Light southerly to south westerly or north easterly winds are the most frequent winds throughout the year. There are occasional stronger southerly winds in the summer months. Westerly and north westerly winds occur periodically throughout the year but predominate in autumn and winter.

Coastal processes and hazards

A coastal management study and coastal management plan was prepared in 1995 for Council by WBM Oceanic Australia and the planning workshop. This study indicates that Terrigal has a history of property and beach damage as a result of severe storms.

The coastline at Terrigal experiences a moderate to high energy but highly variable wave climate. Dominant wave direction is from the southeast.

Generally erosion occurs during storms when increased wave height results in wave attack, and sand is transported offshore from the beachface to the near shore region. Following storm conditions, sand is slowly transported back onshore, eventually building up the beachface once again. The time taken for beach erosion may vary from a few hours to a few days, while beach building following a storm event may take several months to several years.

The Haven provides protection from the predominant southerly weather and waves and anchorage for a small commercial fishing fleet and other small vessels. The small beach and boat ramps are largely unaffected by most storms and associated coastal processes, although they are exposed to less frequent storms and swell generated from the northeast. The storm tides in 1974 caused some damage to the foundations of the old sailing club, now the dive shop and Galley restaurant.

The Skillion may be inundated by waves during large storms from the South, resulting in inundation of the recreation area behind. While the foreshore of the Haven is generally protected from storm erosion, a severe storm event can result in damage to the back-beach earthen embankment. Rocks, gravel and debris transported by waves were also deposited on the recreation area in the 1974 storms.

Flora and Fauna

Plant communities

Three main plant communities have been identified within the study area based on previous vegetation mapping, including:

- Coastal Headland Low Forest
- Coastal Headland Shrubland
- Coastal Headland Grassland.

Coastal Headland Low Forest (E51c)

Coastal Headland Low Forest (map unit E51c, as mapped by Bell 2004) occurs within an area bounded by the Scenic Highway and the cliff top on the south western area of Broken Head. Coastal Headland Low Forest occurs on coastal clay headlands and slopes exposed to onshore winds and forms a complex of merging vegetation types dependant on local soil conditions and disturbance history, including Coastal Headland Shrubland and Grassland. Typical canopy species

within this community include *Eucalyptus capitellata*, *Eucalyptus paniculata* subsp. *paniculata*, *Eucalyptus umbra* and *Angophora costata*, which occur over a sparse shrub layer and a normally well developed herb layer (Bell, 2004).

Coastal Headland Shrubland (E51b)

Coastal Headland Shrubland (map unit E51b, as mapped by Bell 2004) occurs in narrow broken strips along the cliff face and cliff tops of Broken Head and the Skillion. Coastal Headland Shrubland occurs on coastal clay headlands and slopes in areas subjected to high levels of coastal exposure yet are still protected to some degree. Shrublands of species such as She-oak *Allocasuarina distyla*, Coast Rosemary *Westringia fruticosa*, Ball Honey-myrtle *Melaleuca nodosa*, Large-leaf Hop-bush *Dodonaea triquetra* and Finger Hakea *Hakea dactyloides* occur. Cliff top vegetation occurs as isolated patches surrounded by mown grasses, whereas cliff face vegetation forms a contiguous stretch of vegetation from Haven Beach in the north to the Skillion in the south.

Species recorded are those typically found in coastal environments within the Sydney, Gosford and Newcastle regions. Dominant upper stratum species are Coastal Banksia, *Banksia integrifolia*; Swamp Oak (dwarf form), *Casuarina glauca* and Coastal Tea-Tree, *Leptospermum laevigatum*. Dominant understorey species include Coastal Rosemary, *Westringia fruticosa*; Spiny-headed Mat-rush, *Lomandra longifolia* and Kangaroo Grass *Themeda australis*. Other species include Tick Bush *Kunzea ambigua* and the exotic weed Lantana, *Lantana camara*, which occurs occasionally.

On the north western side of Broken Head, a narrow belt of littoral rainforest occurs, beyond the boat ramp eastward along the cliffline. The previously mapped littoral rainforest grades into Coastal Heath/Shrubland on the northern side of Broken Head.

Dominant upper stratum native species are Tuckeroo, *Cupaniopsis anarcardoides*; Guoia *semiglaucia*; Flintwood, *Scolopia brauni*; Red-fruited Olive Plum, *Cassine australis* and Coastal Banksia, *Banksia integrifolia*. The exotic street tree Norfolk Island Hibiscus, *Lagunaria patersonii*, is a major weed in the canopy layer throughout this community and through other areas of clifftop vegetation.

The shrub layer comprises individuals of Coffee Bush, *Breynia oblongifolia*; Hairy Clerodendrum, *Clereodendrum tomentosum*; Boobialla, *Myoporum boninense* subsp. *australe*; Muttonwood, *Rapanea variabilis* and Common Hopbush *Dodonaea triquetra*.

Common groundcover species are Spiny-headed Mat Rush, *Lomandra longifolia*; New Zealand Spinach, *Tetragonia tetragonoides* and Kangaroo Grass, *Themeda australis*. Introduced species have colonised the groundcover layer, with Kurnell Curse, *Hydrocotyle bonariensis*; Japanese Honeysuckle, *Lonicera japonica*; Fireweed, *Senecio madagascariensis*; Vasey Grass, *Paspalum urville* and Buffalo Grass, *Stenotaphrum secundatum*, occurring commonly.

Other species that may occur include Swamp Oak (dwarf form), *Casuarina glauca*; Mirror Bush, *Coprosma repens*; Coastal Rosemary, *Westringia fruticosa* and Red Bloodwood, *Corymbia gummifera* (dwarf form).

Coastal Headland Grassland (E51a)

Stands of native grassland dominated by Kangaroo Grass, *Themeda australis*, occur in some parts of the open space areas of Broken Head and the Skillion, with a large stand occurring on the southern slopes adjacent to the Skillion. This community has been mapped as Coastal Headland Grassland (map unit E51a, as mapped by Bell 2004).

Evidence suggests that the Haven is the largest Coastal Headland Grassland on the Terrigal Formation geological unit (Robinson M 2000, unpublished data). There are a number of areas of remnant Kangaroo Grass and small localised patches or tussocks of native grass scattered in the exotic grassland above the existing clubhouse and on the Skillion. These patches of native grass are likely to regenerate naturally if mowing was to cease and weed control undertaken.

Within this area, some small areas have been planted with native species, including Norfolk Island Pine (*Araucaria heterophylla*, which is not indigenous to the area), Coast Banksia and Spiny-headed Mat Rush.



Vegetation Mapping (Bell 2004)

Intertidal zone

A marine biology assessment was prepared in 1999 by Laxton Environmental Consultants for the area between the rockpool and Broken Head. The following is a summary of the marine biology investigation.

The intertidal rock shelf and reef areas along this section of coastline exhibit ecological values typical of central NSW rocky shores exposed to high wave energy. Intertidal sandy shores were found to be inhabited by small numbers of animals or few species, mainly polychaete worms and small crustaceans. They provide habitats for a diverse array of flora and fauna dominated by green algae *Ulva* sp., Neptune's Necklace, *Hormosira banksii*; Cunjevoi, *Pyura solonifera*; red coralline algae, barnacles and littorinid molluscs (periwinkles).

These productive rocky shores also provide feeding and nursery habitats for a range of fish and crustacean species, many of which are of commercial and/or recreational fishing significance.

Subtidal sandy bottoms in the Haven were either inhabited by seagrasses or consist of exposed sand. Two species of seagrass were present (Ribbonweed *Zostera capricorni* and Paddleweed *Halophila ovalis*). The Haven is only one of two places on the NSW open coast that seagrasses grow. Seagrasses in the Haven are periodically subjected to mass mortality by smothering by detached kelp or from overgrowing by algae.

Some shorebird species, such as the Pied Oystercatcher *Haematopus longirostris*, Sooty Oystercatcher *Haematopus fuliginosus*, Little Tern *Sterna albifrons* and Hooded Plover *Thinornis rubricollis* could theoretically occur periodically within the littoral zone of the Haven. However, the current high levels of human activity in the area would preclude the presence of these species, certainly for nesting and breeding, except on rare occasions.

Fauna habitats

The study area is likely to provide only marginal low quality habitat for native terrestrial fauna species, for the following reasons:

- vegetation within the study area occurs only in small, narrow patches (unlikely to be suitable habitat for larger ground-dwelling mammals, reptiles or birds)
- there are no aquatic habitats to support native frogs, reptiles, or freshwater crustaceans and fish
- the likely presence of feral ground-dwelling predators, such as the red fox, feral cat, and domestic dogs
- potential habitat patches are surrounded by large tracts of cleared grass and/or urban development (i.e. roads, residential areas and structures) and are not connected to any larger, contiguous tracts of vegetation that may form part of a fauna movement corridor
- significant numbers of people utilise the study area on a daily basis and undertake recreational activities within this area. This is likely to disturb native fauna to some extent.

Consequently, native fauna diversity within the Haven is expected to be low. Fauna species (including a number of threatened species, such as the Regent Honeyeater, *Xanthomyza phrygia*) are known to occur in urban areas (including street trees, parks and gardens) and may therefore potentially occur throughout most of the study area. However, these species would only occur on a transient basis, and rarely, if at all.

The small pockets of littoral rainforest would provide dense canopy protection and seasonal food sources (i.e. flower, nectar and fruit) for a narrow suite of locally occurring bird species. Heathland provides scattered trees and dense understorey vegetation.

Fauna species

Payne (1999) recorded six fauna species within the study area, including the Australian Magpie, *Gymnorhina tibicen*; Caspian Tern, *Sterna caspia*; Feral Pigeon, *Columba livia*; Little Wattlebird, *Anthochaera chrysoptera* and the Silver Gull, *Larus novaehollandiae*. All these species occur commonly on a local and regional scale (Pizzey and Knight 1997). A much larger suite of fauna species, particularly birds, is likely to utilise the study area, at least on a temporary basis.

The National Parks and Wildlife Service (NPWS) have indicated that individuals of the Little Penguin, *Eudyptula minor*, use the Haven seasonally during moulting periods. Although no penguins, burrows or tracks were seen during site inspections, penguins were heard calling in the nearby coastal waters and they are known to forage in the waters around the cliff face. Penguins moult under the shelter of rocks or bushes or in burrows, favouring sites close to the sea. Moulting is completed in April and usually lasts 17 – 18 days with breeding beginning in August.

Feral Animal Control

Feral animals impact on native species by predation, competition for food and shelter, destroying habitat, and by spreading diseases. In Australia, feral animals typically have few natural predators or fatal diseases and some have high reproductive rates. As a result, their populations have not naturally diminished and they can multiply rapidly if conditions are favourable¹.

Terrigal Haven has been the subject of feral animal invasion, particularly in the form of the feral European rabbit (*Oryctolagus cuniculus*). 'Competition and grazing by the feral European rabbit' is listed by the NSW Department of Environment, Climate Change and Water as one of the key threatening processes in NSW². In addition, 'Competition and Land Degradation by rabbits' is listed as the number one key threatening process by the Australian Government's Department of Environment, Water, Heritage and the Arts³.

It is the responsibility of Council, as land manager, to control declared pest species on the reserve.

¹ Australian Government Department of the Environment, Water, Heritage and the Arts (2009), 'Feral Animals in Australia', viewed 18 November 2009,
<<http://www.environment.gov.au/biodiversity/invasive/ferals/index.html>>

² NSW Department of Environment, Climate Change and Water (2009) 'List of Key Threatening Processes', viewed 18 November 2009,
<<http://www.environment.nsw.gov.au/threatenedspecies/KeyThreateningProcessesByDoctype.htm>>

³ Australian Government Department of the Environment, Water, Heritage and the Arts (2009), 'Feral Animals in Australia', viewed 18 November 2009,
<<http://www.environment.gov.au/biodiversity/invasive/ferals/index.html>>

Appendix 4

Chronology¹

¹ Information in the following chronology was sourced from Liz Parkinson's *Terrigal: A History of the Area* (2003), Gwen Dundon's *The Shipbuilders of Brisbane Water NSW* (1997) and the Gosford City Council website. Please refer to reference list for further details.

1800's

In 1825, 640 square acres of land encompassing Terrigal Haven and its surrounds, was promised to John Murray Gray by Governor Thomas Brisbane. Although John Murray Gray had yet to receive finalised deeds for the grant, he took possession of the land and as he chose to remain in Sydney rather than residing at Terrigal, he set a number of convicts to work at the Haven to assist with clearing and improving his land.

In 1831 Gray began having difficulty trying to run his property from afar whilst it was under the control of wayward convicts. Even though a sizeable grant, Gray's land would not have been seen to be of much value at this time due to the inability to lay crops, inappropriateness for extensive livestock grazing and difficulty in negotiating the steep landforms. As a result, Gray was experiencing financial difficulty and finally took a mortgage out on the land.

Finalised deeds for 'Broxmouth Ville', as Gray's property was to be known, were authorised by Governor Bourke in 1833. However with John Murray Gray unable to make repayments on his grant, William Poudray was able to foreclose on Gray's land in 1839.

Due to the depression, land value plummeted and William Poudray, along with many other landholders, became indebted to the Bank of NSW who foreclosed on his property. As economic recovery commenced after the depression, Gray's grant was placed on the market by the Bank of NSW and purchased by George Alfred Lloyd in 1850 who added his new purchase to the 300 acres of land he had previously acquired in Terrigal.

In 1855 Lloyd decided to return to England and as a result chose to subdivide his land at Terrigal. 40 acres of this land was designated as a town common known as 'Broxmouth Ville Common' and encompassed what is now known today as Terrigal Haven.

In 1870 Tom Davis, a shipbuilder and timber dealer, leased an area of 'Broxmouth Ville Common' from the government and established a sawmill and shipyard. Next to the shipyard site was a rain filled lagoon that supplied the water for the sawmill's boilers (this is now the site of the Haven Oval). A tramway ran the sawn timber, including a variety of hardwood timber, to the jetty at Cockrone Lagoon where it was shipped to various destinations. Davis employed approximately 120 men who lived on the land and was therefore the major employer of labour in the locality at the time.

Davis was also a renowned shipbuilder whose ships included the Terrigal Jack (ketch, 1869), Terrigal (ketch, 1870), Terrigal Packet (schooner, 1874), Venture (schooner, 1875), Wonga Wonga (schooner, 1876), Electric Light (steamship, 1880), Bowra (steamship, 1883), Tweed (steamship, 1889), Byron (steamship, 1891) and the General Gordon (paddle wheel steamship, 1886). Prior to construction of the first bridge at the Hawkesbury River, the General Gordon was used to ferry railway passengers across the river.

In addition to his shipbuilding and timber trading activities, Tom Davis was reputed to have grown sugar cane on the Skillion slope and earlier David Wilson may have grown wheat there but this has not yet been verified.

After Tom Davis' death in 1893, his widow Susannah surrendered her family's rights to the 15 acre Broxmouth Ville Common to the Commercial Bank of Australia.

Tourism in Terrigal was promoted at the end of the 19th Century due to the focus on health and leisure and the opening up of the area to the general public with the completion of the railway line from Sydney to Newcastle in 1889 and the development of the roads.

1900's

Tourism

Early in the 20th century, Terrigal itself was being promoted as a 'new marine township' and was being subdivided into 1-6 acres, 8 and 18 acre blocks of land. At this time, Terrigal was becoming recognised as a good surfing and fishing area. With this came the development of surfing sheds, clubrooms, safe swimming, shelter sheds and a golf links at the Skillion. The fishing was promoted for snapper, bream, and deep sea fish. The fishing interest brought with it, motorboat launching, rowing boats and the areas that were recognised as good areas for fishing were the beach, the lagoon, and the rock face. The Skillion itself also became a well-known and much visited tourist landmark.

The 1928 Erina Shire Holiday and Touring Guide², in promoting visitation to the area, proclaimed that:

Visitors are well catered for by many boarding houses, cottages to let, stores, post office, picture show, public hall (in which many social gatherings are held), Public School, and churches. There is a Progress Association, and a Surf Club whose members regularly patrol the beach, and have a surf boat.

No person should come to Erina Shire without seeing Terrigal, THE show place. In addition to Terrigal's paramount attractions in summer, it also has a notable appeal as a winter resort. It is protected from the cold westerly and southerly winds by ranges of tree-clad hills, and is acclaimed "the sunniest winter spot in New South Wales." (p. 71)

In the late 1950's, the Florida Hotel and the Terrigal Hotel were constructed enhancing the tourist trade of the Terrigal area. The Florida Hotel brought not only tourists to the area due to its premium accommodation but was also widely renowned for its conference facilities and as a result drew businessmen from afar. From the 1950's through to the 1980's growth was also enhanced in Terrigal due to the development of the Newcastle freeway.

Terrigal Haven

In 1912, two acres of land were granted by the Lands Department for the construction of the Terrigal School at the Haven. This one room timber building existed at the Haven until 1937 when the Department of Education recommended its relocation due to the number of fisherman and campers living adjacent to the small building and concerns over the resultant safety of the children attending the school.

In the 1920's and 30's Terrigal was the site of a number of car rally's with participants utilising the Haven as part of their course and even driving to the summit of the Skillion. Also in the 1930's, Erina Shire Council utilised the area at the base of the Skillion as a quarry. Rocks and stones were taken to various worksites within the locality including ones at Terrigal Esplanade and Ocean View Drive.

From the 1940's until 1974, a major caravan park was located at Terrigal Haven. The 1954 'Summer Tourist Guide - The Beautiful Gosford District' describes the area as:

Under the lee of the famous Skillion and running down to the sheltered sand-beach of the Haven is the Terrigal camping area, where hundreds of caravans and camps are settled from November to April each year.³

² Gosford City Council, 2009, 'Erina Shire Holiday and Touring Guide 1928', Gosford District Guides 1900s - 1960s, viewed 18 May 2009, <http://www.gosford.nsw.gov.au/library/local_history/Tourist%20Guides/index_html>

The camping facility was however removed after extensive property damage resulted from the severe storms of 1974.

Current day

The demand for recreational use of the Haven has grown steadily as a result of the improved road system connections to Sydney and the development of the Crowne Plaza on Terrigal Esplanade. This development has added a major source of recreation demand at Terrigal over the last 15 years.

This demand for recreation also brings with it a demand on the natural resources of the Haven. It is therefore essential that a relevant Plan of Management is adopted for the Haven to ensure future development of the Haven is Ecologically Sustainable.

³ Gosford City Council, 2009, 'The Beautiful Gosford District 1954', Gosford District Guides 1900s - 1960s, viewed 18 May 2009, <http://www.gosford.nsw.gov.au/library/local_history/Tourist%20Guides/index_html>



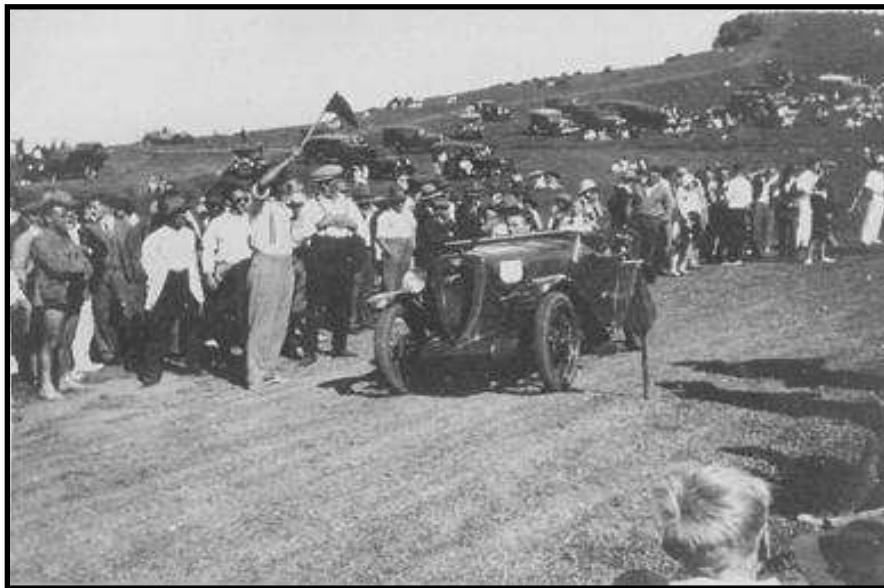
Terrigal Haven with remains of Thomas Davis' Sawmill c. early 1900's
Source: Gosford City Council Library



Fishermen's Beach, site of Davis' Shipbuilding Activities. Lobster pots in foreground
c. 1909-12
Source: Gosford City Council Library



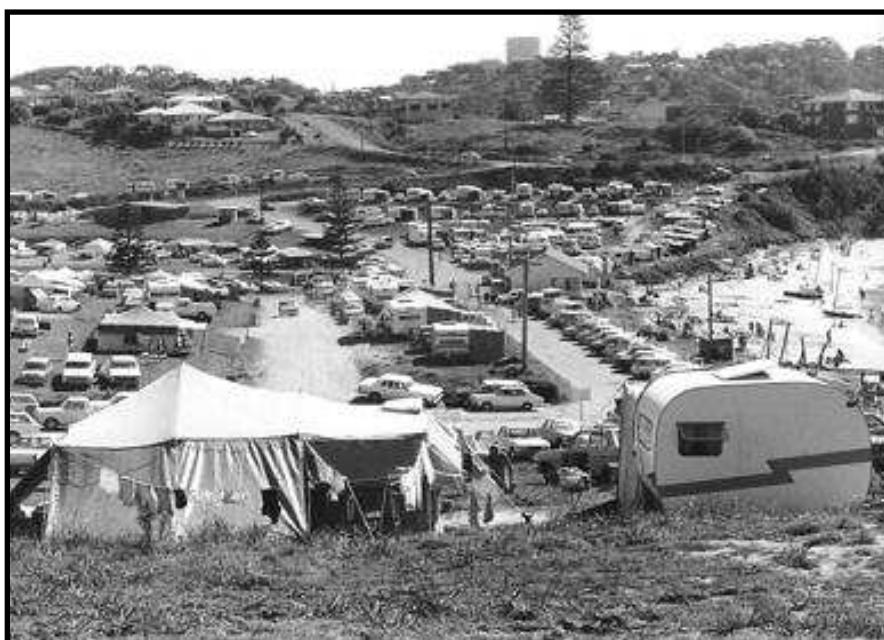
School children at the public school, Terrigal Haven c. early 1920's
Source: Gosford City Council Library



Austin motor car at Rally, The Skillion, Terrigal c. 1920's
Source: Gosford City Council Library



Picknickers at The Skillion, Terrigal c. 1920's
Source: Gosford City Council Library



Busy Summer Scene at the Camping Ground, Terrigal Haven c. 1970
Source: Gosford City Council Library

Appendix 5

Planning Instruments and Legislation

Planning Instrument	Year / Policy No.	Policy statement/objectives
Commonwealth and NSW Legislation		
NSW Crown Lands Act	1989	<p>The objects of this Act are to ensure that Crown land is managed for the benefit of the people of New South Wales and in particular to provide for:</p> <ul style="list-style-type: none"> • a proper assessment of Crown land, • the management of Crown land having regard to the principles of Crown land management contained in this Act, • the proper development and conservation of Crown land having regard to those principles, • the regulation of the conditions under which Crown land is permitted to be occupied, used, sold, leased, licensed or otherwise dealt with, • the reservation or dedication of Crown land for public purposes and the management and use of the reserved or dedicated land, and • the collection, recording and dissemination of information in relation to Crown land.
NSW Environmental Planning & Assessment Act	1979	<ul style="list-style-type: none"> • to encourage: <ul style="list-style-type: none"> ◦ 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, ◦ the promotion and co-ordination of the orderly and economic use and development of land, ◦ the protection, provision and co-ordination of communication and utility services, ◦ the provision of land for public purposes, ◦ the provision and co-ordination of community services and facilities, and ◦ 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 ◦ ecologically sustainable development, and ◦ the provision and maintenance of affordable housing, and • to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and • to provide increased opportunity for public involvement and participation in environmental planning and assessment.
NSW Native Vegetation Act	2003	<ul style="list-style-type: none"> • to provide for, encourage and promote the management of native vegetation on a regional basis in the social, economic and environmental interests of the State • to prevent broadscale clearing unless it improves or maintains environmental outcomes • to protect native vegetation of high conservation value having regard to its contribution to such matters as water quality, biodiversity, or the prevention of salinity or land degradation • to improve the condition of existing native vegetation,

Planning Instrument	Year / Policy No.	Policy statement/objectives
		<p>particularly where it has high conservation value</p> <ul style="list-style-type: none"> • to encourage the revegetation of land, and the rehabilitation of land, with appropriate native vegetation, in accordance with the principles of ecologically sustainable development.
NSW National Parks and Wildlife Act	1974	<p>Under the NSW <i>National Parks and Wildlife Act 1974</i> (NP&W Act), the National Parks and Wildlife Service (NPWS, now part of DECC) are responsible for the preservation and protection of relics and Aboriginal places in national parks, historic sites, nature reserves, state game reserves, Aboriginal areas, protected archaeological areas, state recreation areas and regional parks.</p> <p>As recommended by NPWS, the following steps would be a minimum to the assessment of Aboriginal Heritage within the Haven:</p> <ul style="list-style-type: none"> • consult with the Local Aboriginal Land Council (LALC) to identify the location of Aboriginal sites. They may be aware of sites that have not been registered with NPWS • contact the Aboriginal Sites Registrar at NPWS and request a site search to obtain a listing of registered Aboriginal sites. The Register only includes those Aboriginal sites which have been reported to NPWS • undertake an assessment of the known Aboriginal site/s and/or undertake survey of the subject land to locate Aboriginal sites. Test excavations may be required as part of this investigation to verify the location of Aboriginal sites. Such excavations need to be undertaken before the DA is submitted. A permit is required from NPWS for such investigation and if all information is attached to the application the processing time is eight weeks.
NSW Threatened Species Conservation Act	1995	<ul style="list-style-type: none"> • to conserve biological diversity and promote ecologically sustainable development • to prevent the extinction and promote the recovery of threatened species, populations and ecological communities • to protect the critical habitat of those threatened species, populations and ecological communities that are endangered • to eliminate or manage certain processes that threaten the survival or evolutionary development of threatened species, populations and ecological communities • to ensure that the impact of any action affecting threatened species, populations and ecological communities is properly assessed • to encourage the conservation of threatened species, populations and ecological communities by the adoption of measures involving co-operative management.
NSW Noxious Weeds Act	1993	<ul style="list-style-type: none"> • to reduce the negative impact of weeds on the economy, community and environment of this State by establishing control mechanisms to: <ul style="list-style-type: none"> ○ prevent the establishment in this State of significant new weeds, and ○ restrict the spread in this State of existing significant weeds, and ○ reduce the area in this State of existing significant

Planning Instrument	Year / Policy No.	Policy statement/objectives
		<p>weeds,</p> <ul style="list-style-type: none"> • to provide for the monitoring of and reporting on the effectiveness of the management of weeds in this State.
NSW Fisheries Management Act	1994	<ul style="list-style-type: none"> • to conserve fish stocks and key fish habitats • to conserve threatened species, populations and ecological communities of fish and marine vegetation • to promote ecologically sustainable development including the conservation of biological diversity and consistently with these objects • to promote the viable commercial fishing and aquaculture industries • to promote quality recreational fishing opportunities • to appropriately share fisheries resources between the users of those resources and • to provide social and economic benefits for the wider community of New South Wales.
Environment Protection and Biodiversity Conservation Act	1999	<p>The <i>Environment Protection and Biodiversity Conservation (EPBC) Act 1999</i> provides for the protection of the environment and the conservation of biodiversity for those aspects of the environment that are matters of national environmental significance.</p> <p>Matters of environmental significance under this Act fall under the following categories:</p> <ul style="list-style-type: none"> • World Heritage properties • wetlands of international importance • listed threatened species and ecological communities • listed migratory species • nuclear actions • Commonwealth marine environment • Commonwealth land • land clearing. <p>If any future Development Applications (DA) for the Terrigal Haven have the potential to impact any of the above mentioned aspects, then, a referral to Environment Australia will be required for Commonwealth approval.</p>
NSW Disability Services Act	1993	<ul style="list-style-type: none"> • to ensure the provision of services necessary to enable persons with disabilities to achieve their maximum potential as members of the community • to ensure the provision of services that: <ul style="list-style-type: none"> ◦ further the integration of persons with disabilities in the community and complement services available generally to such persons in the community ◦ enable persons with disabilities to achieve positive outcomes, such as increased independence, employment opportunities and integration in the community ◦ are provided in ways that promote in the community a positive image of persons with disabilities and enhance their self-esteem • to ensure that the outcomes achieved by persons with disabilities by the provision of services for them are taken into account in the granting of financial assistance for the provision of such services • to encourage innovation in the provision of services for persons with disabilities • to achieve positive outcomes, such as increased

Planning Instrument	Year / Policy No.	Policy statement/objectives
		<p>independence, employment opportunities and integration in the community, for persons with disabilities</p> <ul style="list-style-type: none"> • to ensure that designated services for persons with disabilities are developed and reviewed on a periodic basis through the use of forward plans.
Australian Standards		<p>Collection 005 of the Australian Standards contains 22 Australian Standards assembled to provide a guide to the range of standards available concerning access and mobility for people with disabilities. The standards cover, amongst other things, design for access and mobility, tactile ground surface indicators, parking facilities, public information symbols and other selected topics.</p>
State policies/strategies		
Central Coast Regional Strategy	2008	<p>The release of the final Central Coast Regional Strategy establishes the necessary planning framework to deliver a prosperous and sustainable future for the Region's current and future residents.</p>
NSW coastal policy	1997	<ul style="list-style-type: none"> • Protecting, rehabilitating and improving the zone's natural environment; • Recognising and accommodating the zones natural processes • Protecting and enhancing its aesthetic qualities • Protecting and enhancing its cultural heritage • Providing for ecologically sustainable development and use of resources • Providing for ecologically sustainable human settlement • Providing for appropriate public access and use • Providing information to enable effective management • Providing for the zones integrated planning and management.
SEPP 19 Urban Bushland	19	<p>General aim is to protect and preserve bushland within the urban areas because of its value to the community as part of natural heritage, its aesthetic value and its value as a recreational, educational and scientific resource.</p>
SEPP 26 Littoral Rainforest	26	<p>Mechanism that provides for the consideration of development applications that are likely to damage or destroy littoral rainforest areas and reserve their natural state.</p>
SEPP 71 Coastal Protection	71	<p>General aim is to provide for the protection and management of the natural, cultural, recreational and economic attributes of the New South Wales coast.</p>
Council Planning Instruments and Policies		
Gosford Planning Scheme Ordinance		<p>The objective of the zone is to identify and make provision for land for the purposes of leisure and recreation to promote community benefits and contribute to the amount and distribution of public open space areas at acceptable levels and at standards which meet the needs of the community. Development for the purposes of 'recreation areas' and exempt development do not require consent from Council under the ordinance. Development that needs consent from Council include; camping grounds or caravan parks, community facilities, roads and utility installations. Development that is prohibited includes any not included in</p>

Planning Instrument	Year / Policy No.	Policy statement/objectives
		the above.
Erection of street banners	T4.03	Council will give permission for the erection of banners advertising Tourist, Social, Cultural and other major events within Gosford City on permanent posts provided by Council.
Environmental assessment procedure	D1.04	To ensure that all activities/works undertaken by Council are assessed in accordance with the requirements of Part 5 of the Environmental Planning and Assessment Act, 1979.
Environmental Policy	D2.07	To effectively integrate the principles of ecological sustainability into all council and community functions so as to achieve a clean, healthy and ecologically sustainable environment for the City of Gosford.
Biodiversity Management	R0.18	Allows Council to conserve the diversity and abundance of locally occurring native plants and animals and microorganisms in Gosford City at the genetic, species and ecosystem level.
Allocations - Seasonal Use	R1.02	<p>Enables Council to control and manage the use of sports grounds within the local government area.</p> <p>Ensures the allocations of venues/fields is undertaken in a fair and equitable manner.</p> <p>Provides additional guidelines that relate specifically to the allocation of Gosford City Council (GCC) sports grounds.</p> <p>Ensures maximum usage of currently available sports grounds without creating overuse of venues /fields.</p> <p>Encourages co-operation between user codes.</p>
Closure of Sporting Fields	R1.04	Allows Council to maintain the condition of all sporting fields.
Consumption of Alcohol (Functions Licences)	R1.06	Enables Council to control and manage the consumption of alcohol at Council owned sporting venues and other recreation areas.
Playing fields and Amenities (General Use)	R1.07	Controls the use of playing fields and amenities, in accordance with the PoM, under Local Government Act.
Public Amenities Buildings (Design or Erection)	R1.09	Controls the design and erection of facilities on, or adjacent to, sporting fields.
Advertising on Sportsgrounds	R1.12	Encourages sponsorship funding to be used in the maintenance and embellishment of the sporting grounds.
Landscape and vegetation management policy	D6.44	To achieve a physical environment which capitalises on the landscape qualities of the natural topography and vegetation of the Central Coast and accommodates appropriate development.
Tree preservation order	Schedule 1	<p>Syzygium paniculatum (Magenta Lillypilly) which was found within a 5km radius of the Haven is found in Schedule 1 of the Tree Management Policy. This was found at Avoca Lake and can potentially be found at the Haven.</p> <p>Araucaria heterophyllas (Norfolk Island Pines) - A number of these species exist within the Haven and are an important tree species to Terrigal in terms of a historic landmark to Terrigal.</p>

Planning Instrument	Year / Policy No.	Policy statement/objectives
Terrigal Town Centre (Amendment 1)	DCP No. 55	To provide for a coordinated pattern to that of the Terrigal CBD village atmosphere.
Scenic quality	DCP.No. 89	<p>Key contents of DCP:</p> <ul style="list-style-type: none"> -Protection of vegetated ridgelines and upper slopes -New development to have regard to character of area both built and natural - Retention of non-urban breaks between urban areas - Ensuring built environment does not dominate landscape features in non-urban areas. <p>Terrigal Beach and Skillion is of Regional Scenic Quality Significance. Careful attention to siting and scale of urban elements so as to not overpower natural elements of the Haven. Maintenance of co-dominance of landscape and development with regard to Scenic Protection and Conservation.</p>
Business Use of Public Footpath	A5.09	To encourage the establishment of appropriate outdoor dining areas throughout Gosford Local Government Area, which promote a safe, attractive and vibrant environment for local residents and visitors to the area.

Source: policies, codes and environmental planning instruments.