

GOSFORD CITY COUNCIL

ETTALONG BEACH RESERVE PLAN OF MANAGEMENT

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1.0 INTRODUCTION

BACKGROUND INFORMATION

This document is the Ettalong Beach Reserve Plan of Management for Ettalong Beach produced by mcgregor+partners on behalf of Gosford City Council. It outlines the management and design proposals for the revitalisation of the Ettalong Beach Foreshore in line with the consultancy brief. The Council brief required resolution of issues associated with:

- _ preservation of the beach
- _ conservation of the foreshore reserves open space
- _ appreciation of the reserve's character
- _ arrival of the new Fast Ferry

Recommendations cater for both the short term and long term management of the site and are prepared to comply with relevant statutory instruments. A masterplan which compliments this document was also prepared.

Any queries regarding this study should be directed to the Project Manager. David Medcalf, Gosford City Council.

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Figure 1 - regional context and distances from major cities

LAND COVERED BY THIS PLAN

Ettalong Beach is part of the Woy Woy Peninsula on the Central Coast of NSW (*fig 1*). It is located mostly on Crown Land being reserve R82759 for Public Recreation, on the west bank of Brisbane Water at the entrance to Broken Bay. Gosford City Council is appointed trustee of the reserve. The land covered by this Plan of Management extends a distance of 1.4 kilometres and is bounded by Ferry Road to the east, Kourung Street to the south, the waters edge to the east/south-east and The Esplanade to the west (*fig 3*).

The site includes the Kourung Street Boat ramp, the reclaimed grassed picnic and BBQ area, The Esplanade, Lance Webb Reserve, Palm Beach Ferry Wharf, beach and dunes. These are the defined parameters of the site however this Plan of Management also takes into consideration issues of the surrounding context (*fig 2*) which influence the site design outcomes.

CATEGORY OF LAND

The site is zoned 6(a) recreation, under Gosford Council's planning scheme. Land zoned 2(b) residential, abuts the site along The Esplanade from Kourung Street to Beach Street and along Lance Webb Reserve from Picnic Parade to Ferry Road. The land between

Memorial Avenue and Picnic Parade is zoned for business use and is referred to as Precinct A. The Ettalong Beach resort fronting The Esplanade from Beach Street to Memorial Avenue is Zoned 5(a) special uses (club).

STATUTORY CONSIDERATIONS

The following statutory instruments affect Ettalong Beach Reserve:

- _ Gosford Planning Scheme Ordinance
- Crown Lands Act 1989
- Leases and Licenses issued by the Department of Lands (DoL)
- Rivers and Foreshores Improvement Act (1948)
- Coastal Protection Act 1979

Further legislation includes, but is not limited to, the following:

- _ National Parks and Wildlife Services Act 1974
- _ Environmental Planning and Assessment Act 1979
- _ Native Title Act 1993
- _ Disabilities Services Act 1993
- _ Noxious Weeds Management Act 1993
- _ Fisheries Management Act 1994
- _ Threatened Species and Conservation Act 1995
- _ Native Vegetation and Conservation Act 1997
- _ State Environmental Planning Policy 71 - Coastal



Figure 2 - location of Ettalong Beach within the foreshore walk route, outlined in red (source: modified by mcgregor+partners from Hawkesbury to Hunter Coastal Walking 2000, p 21-22)

The study area comprises of Council and Crown land. Lot 500 DP 1021944 within the study area is owned by Council. Council also holds a term lease over lot 501 DP879142 from the Department of Lands which is proposed for development as a Fast Ferry Terminal. As the site is located on Crown Land, this Plan of Management must address the principles of Crown Land management laid out under the Crown Lands Act (1989).

These principles are as follows:

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

A search by the National Native Title Tribunal on the 28 November 2001, as requested by the consultant, was

Protection

_Local Government Amendment (Ecologically

Sustainable Development Act 1997)

_ Relevant Australian Standards

carried out to see whether a Native title determination, a native title application and/or an agreement under the Native Title Act 1993 exists for this site. No relevant entries were found, but this does not mean that Native Title will not be relevant in the future, as it is yet to be determined whether Native Title exists for this site.

PREVIOUS COMMUNITY CONSULTATION

The drive for revitalising the Ettalong Beach foreshore was instigated by the residential and business community of Ettalong Beach who have joined together to promote the revitalisation of the township and foreshore.

The consultation process for this Plan of Management began in 1995 when the Ettalong Beach Heritage Committee was formed to find ways to upgrade and revitalise the town. The process consisted of numerous public meetings and a Strategic Planning Workshop for the beach and town in 1998.

As a result of the consultation process an 'old world' or 'heritage' theme was adopted for guiding the revitalisation. Upgrading of the town centre began in 1996 utilising funding from both Government and the community.

Concurrent with the revitalisation program two significant projects were proposed. The first project being the

Ettalong Beach Resort, which has been built between Memorial Avenue, Beach Street and Broken Bay Road, by the Ettalong Beach Memorial Club. The second is the Fast Ferry Service proposed to operate between Sydney's Circular Quay and **Ettalong Beach**.

Groups that have participated in workshops and expressed interest in the revitalisation of Ettalong Beach are listed below and a summary of issues raised from this consultation follows.

- _ Gosford City Council (GCC)
- _ Ettalong Beach Heritage Committee
- _ Ettalong Beach CBD Improvements Building Committee
- _ Ettalong Beach War Memorial Club
- _ Ettalong Beach Ratepayers Association
- _ Department of Lands (DoL)
- _ NSW Planning (was DUAP)
- _ The Peninsula Chamber of Commerce
- _ Fast Ships Pty. Ltd.
- _ Individual residents and shop owners

The community workshop in 1998 identified the following weaknesses of the Ettalong Beach town and foreshore (Wales 1998):

- _ lack of cycle tracks
- _ poor drainage
- _ speeding motorists

- _ deficient footpaths
- _ vandalism
- _ dilapidated public toilets
- _ lack of fast transport to Sydney
- _ lack of street and beach lighting
- _ untidy beach front
- _ lack of parking in town centre
- _ poor overall strategic planning
- _ lack of sporting facilities
- _ poor access to Ferry Road public wharf
- _ lack of tourist guides



Figure 3 - study site boundary

In respect to foreshore upgrading, the majority of the community from this workshop agreed on the following guidelines (Wales 1998):

- _ Demolish old toilet blocks
- _ clean up the beach and foreshore

- _ construct a boardwalk
- _ upgrade cycleway
- _ improve foreshore lighting
- _ remove sand dunes at town beach
- _ clean up scrub at beach front
- _ construct beach front wall
- _ support the Fast Ferry

Gosford City Council has the responsibility to care, control and manage the site under the guidance of the Department of Lands. It is in this capacity that Gosford City Council addressed the concerns of the community and engaged mcgregor+partners to produce a Plan of Management and masterplan for the site.

Section 5.0 below details the more recent community consultation processes and results of public exhibition of the draft Plan of Management.

PREVIOUS STUDIES

Previous planning studies and reports that guide and inform this Plan of Management are listed below and the related issues from these documents are included in the text as relevant. These studies are listed in the bibliography and are summarised in chronological order as:

- _ Ettalong Beach Photogrammetric Analysis, 1992
- _ Community Parks Plan of Management, 1996

- _ Ettalong Beach Boat Ramp Study, 1996
 - _ Foreshore Parks Plan of Management, 1996
 - _ Ettalong Beach Resort Traffic and Parking Report, 1998
 - _ Broken Bay Beaches Coastal Management Plan, 1999
 - _ Brisbane Water Plan of Management, 1995
 - _ Gosford District Management Plan, 1999
 - _ Ettalong Beach Foreshore Management Study and Plan, 2000
 - _ Ettalong Beach Centre Study, 2000
- The Ettalong Beach Foreshore Management Study and Plan 2000, and the Ettalong Beach Centre Study 2000, outline the need for the undertaking of this Plan of Management. The Ettalong Beach Centre Study recommends implementing particular management options which were proposed by the Patterson Britton & Partners report 2000. A summary of these is located in *Previous Study Recommendations in The Masterplan Process* section. This report should also be read in conjunction with the recently completed Ettalong Beach Dune Management Plan, 2006.

2.0 THE VISION

THE BRIEF

The brief (GCC 2001, p.2-3), requires the establishment of the major values and issues affecting the Beach Reserve with regard to the following topics:

- _ The cultural and historical significance of the site
- _ Natural Systems Influences
- _ Arboricultural and Horticultural Performance
- _ Soils and Drainage Characteristics
- _ Perceptual and Design Considerations
- _ Visitor Usage and Facilities
- _ Management and Maintenance Requirements
- _ Locational factors and impacts

The brief requires submission of a prioritised program of works for the implementation of the Plan of Management.

AIMS AND OBJECTIVES

The aim of this study is to prepare a Plan of Management for adoption by Gosford City Council and the Minister for the NSW Department of Lands by September 2007.

The objectives of the study as outlined in the brief (GCC 2001, p. 1-2) are:

- _ Resolve the issues involved with the preservation of the beach and movement of sand with the need for an attractive functional open space allowing appreciation of the natural landscape;
 - _ Ensure the conservation and reinforcement of the foreshore reserve's open space area and items of cultural significance for future users;
 - _ Ensure the identification and reinforcement of the distinctive functional, architectural and symbolic characteristics of the reserve;
 - _ Include a "Statement of Significance" which will;
 - _ Establish the natural significance of the Beach Reserve as a whole.
 - _ Incorporate an assessment of significance in all facets, i.e. historic, aesthetic, social, scientific.
 - _ Consider the precinct as a whole, and in terms of its components.
 - _ Prepare the Beach Reserve for the impending arrival of the Fast Ferry and the potential attributes that it will bring, together with its increased user requirements and management;
- Provide policy recommendations for;
- _ short and long-term management of the Beach Reserve.
 - _ broad future objectives.
 - _ procedures for compliance with statutory instruments.

3.0 SITE VALUES

STATEMENT OF SIGNIFICANCE

All present and future development of the site should be based on a commitment to sustainability, to maintain the present quality of life for our future generations. This commitment is in line with the aims of the 1992 Rio Earth Summit's Agenda 21 and Australia's 1992 National Strategy for Ecologically Sustainable Development (NSES) which have, to varying degrees, been translated into National, State and Local Government legislation. Sustainable development ensures that economic and social development occurs within the bounds of ecological limits.

To be sustainable, the township of Ettalong Beach must be financially secure, produce minimal environmental impacts and encourage social well-being. A balance should be found between the need for promoting business and tourism, encouragement of job diversity, protection of the foreshore from erosion, enhancement of water quality in Brisbane Water, conservation of native flora and fauna, reduction of pollution, and provision for social equity within a quality foreshore recreational area.

ENVIRONMENT

Ettalong Beach forms a small part of the larger system of

shoreline ecosystems within Brisbane Water and any local modification potentially can harm the greater system. Although the foreshore has been highly modified and urbanised (Public Works Department 1992), remnant ecosystems must be protected and enhanced. The Ettalong Beach shoreline ecosystem is under pressure from recreation, tourism, commercial development and sand movement. These pressures must be managed in an ecologically sustainable way.

More specifically, in environmental terms, Brisbane Water should be protected from polluted stormwater running off the site. Public transport to and from the site should be provided and its use encouraged. Solar or other renewable energy sources should be used for providing power to the site.

Construction materials such as stone, concrete, plants etc. should be sourced locally, should be robust, long-lived, resistant to vandalism, recycled/recyclable, have low embodied energy and be non-toxic in their manufacture and disposal.

Vegetation ideally should be locally indigenous to enhance the local gene pool and reproductive capacity of existing indigenous species. Vegetation should be selected to provide food and shelter for native fauna.

ECONOMY

The business and tourism sector of Ettalong Beach needs to be protected and revitalised. This can be initiated by the revitalisation of the foreshore as a catalyst for the improved economic vitality of Ettalong Beach. A more prosperous town is more able to channel funds into the protection of the foreshore, maintenance and towards environmental values mentioned above.

SOCIAL

Incorporating social values is important in maintaining and creating community well being. Community well being can be enhanced on the site by creating diverse spaces which encourage passive and active interaction. Thus providing places for fun, diverse activities and recreation. These spaces can also form meeting and sitting places and should present a safe, clean and healthy environment.

The site should meet the needs of all the community including minority groups, disadvantaged, disabled and people of all ages. Physical interventions should ensure uniqueness and innovative design such as contemporary sustainable strategies. A community space should have landmarks or objects people can identify with and should create a sense of local pride. A community space such as a foreshore park should remain public property; therefore any commercial venture on or near the site should not alienate the general public from using the space around it.

Social values can be divided but not limited to the following subheadings:

Heritage

Cultural heritage includes both Aboriginal and European associations with the site. Important historical items and events should be preserved, recognised and interpreted appropriately.

Recreation

Use of the Ettalong Beach foreshore for recreation is highly valued by the local community. The use of bicycles and other non-motive transport should be encouraged as well as the use of non-motor pleasure craft and hire boats. Recreation should encourage health and fitness and should be guided by environmental values, which minimise fossil fuel consumption.

Education

The site should be interactive and convey aspects of the site history, which can be interpreted. The user should be able to read into the landscape and be aware of the underlying ecological and historic processes that occur on the site.

Visual

The views towards Wagstaff Peninsula, Broken Bay and Lion Island are one of Ettalong's greatest assets. Any management of the foreshore should aim to maintain and enhance access to these views. The scenic quality of the town and foreshore as viewed from the water is also important. As increased water access to Ettalong Beach occurs via the proposed new Fast Ferry, these views will be seen more frequently and will form the first impression of Ettalong Beach.



Figure 4 - 'Bungaree, chief of the Broken Bay Tribe, N.S.Wales' (Source: Blair 2001, p49. - illustration by Charles Rodius, 1802-1860)



Figure 5 - Group believed to be 'Bungary' and his family, Circa 1815



Figure 6 - Ettalong Beach circa 1924 (Source: Gosford Library collection)



Figure 7 - fig 7_Ettalong Beach circa 1924 (Source: Gosford Library collection)

4.0 SITE ANALYSIS

GENERAL

The study site abuts the shoreline, which is situated one block from and approximately parallel to the town's main street (Ocean View Road) and parallel to The Esplanade (fig 3). The water edge location provides the site with high quality views across the Brisbane Water entrance towards Broken Bay from most locations. The visual quality of the foreshore and town from the water is quite poor, except for the backdrop of Blackwall Mountain. This is because of the urban development on this side of the foreshore, as contrasted to the undeveloped Bouddi National Park bushland on the opposite shoreline at Wagstaff.

The waters are mostly shallow shoals except for a narrow navigation channel on the Wagstaff side.

The site has three distinct character zones.

- _ A south facing beach situated between Ferry Road and Beach Street which has a reputation for safe swimming. Backing onto this beach is a series of dunes and vegetation and parkland which form a buffer to the urban fabric behind.

- _ An east facing beach located from Kourung Street to the access way at Lemon Grove Reserve is used for launching boats and is popular for fishing and some swimming.



Figure 9 - Ettalong Beach circa 1927 (Source: Gosford Library Paddison Collection)



Figure 10 - Ettalong Beach circa 1927 (Source: Gosford Library collection)



Figure 8 - Ettalong Beach, believed to be a view looking north between the present day Beach Street and Picnic Parade, with Blackwall Mountain in the background circa 1927

_ A foreshore park and picnic area located at the mid portion of the site and between the two beaches, which was reclaimed by the construction of a rock revetment.

SITE HISTORY

The Brisbane Water area was originally the home of the Darkinjung people and Ettalong is an Aboriginal word meaning *Place for Drinking*. No direct descendants of these people survive today to tell their story, however the Centre for Indigenous Higher Education Research - UMULLIKO is currently researching for a more detailed history of the Darkinjung lands, waters peoples and cultures. A key subject in this study is an Aboriginal by the name of Bungaree (fig 4 & 5), who was named as the

'chief of the Broken Bay Tribe' by the white colonials. He may be the most documented Indigenous person from the early days of Colonial settlement and research on him may help to shed more light on the history of the Darkinjung People (Blair 2001).

Europeans first visited the area in search of reliable food and water supplies just five weeks after the First Fleet arrived at Sydney Cove in 1788. According to Pratt (1978) drinking water was obtained by the crews of early ketches from a hole sunk in sand behind Ettalong Beach, which was known at the time as either *Giffen's Lagoon*, after an early resident, or *Dogherty's Beach* (pronounced Dockerty). The source of water was called *Dogherty's Hole*.

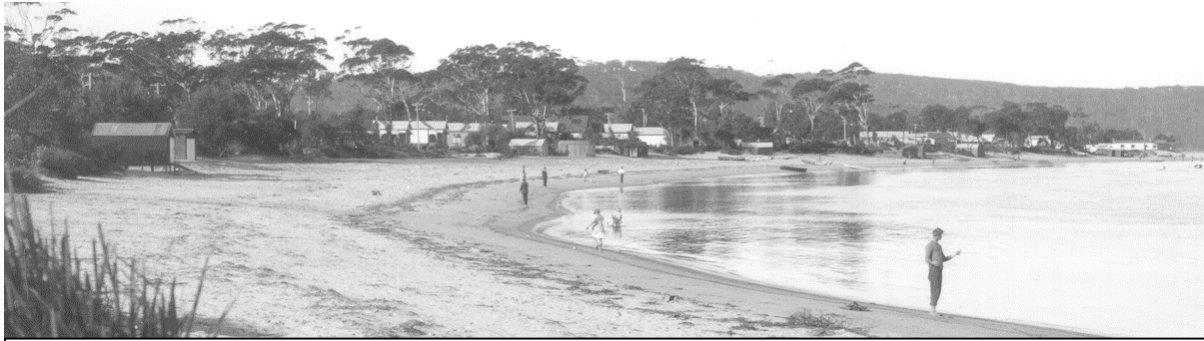


Figure 12 - Ettalong Beach, view looking east circa 1927 (Source: Gosford Library collection)



Figure 11 - Ettalong Beach, believed to be a view looking north east from the eastern end of the beach circa 1927

The first white person, by the name of James Webb, was granted land in the area in 1824. He settled at 'Mulbong

Farm' near Orange Grove on the Woy Woy peninsula (known at the time as Wye Wye). The area was used by timber-getters, ship-builders and lime burners. Lime was

obtained from shells, which were collected from Aboriginal midden sites and natural shell deposits along the shorelines (Fenton 2000; Potter 2001).

Around the 1880's the area became attractive for tourists and holiday makers as access became a little easier with the completion of the railway in 1887 to Woy Woy. This saw the introduction of boarding houses and guesthouses. After WW1 various developers bought the land and subdivided. The flat ground at Ettalong allowed for the streets to be laid out in a grid pattern, which could create maximum return for the developers. The isolated location and sandy soil foundations inhibited development and it wasn't till the late 1950's that it started to take on a more urbanised form.

Although the access to Ettalong Beach was made easier with the introduction of the rail, psychologically, Ettalong Beach was still a long way from anywhere and visitors saw it as an exotic getaway.

During the last twenty years the area has experienced rapid growth, and is becoming increasingly urbanised. The Peninsula is sometimes regarded as an extension of Sydney's suburbs. There is a perception that some of Ettalong's exotic character and quaint charm of yesteryear has been lost with this increase in its permanent population. Commuting is a feature of everyday life for many residents, whose work lies mainly in Sydney. (Woy Woy railway station is used by an

average of 15,000 people every week day.) Tourism on the Peninsula has received a boost in recent years, with the proposed introduction of a Fast Ferry, and improvements on the F3 freeway. The natural beauty of the Broken Bay area with its extensive beaches and National Parks will continue to attract tourism, particularly ecotourism-based activities for day-trippers and short-stay visitors (Potter 2001, pers.comm.).

In an attempt to bring back more visitors, the community has initiated the revitalisation of the town which includes the proposed Fast Ferry service and the new Ettalong Beach Resort. The new Fast Ferry, to operate between Circular Quay and Ettalong Beach will form a direct access route from the Central Coast to Sydney, creating a doorway at Ettalong Beach.

In terms of historical importance, there are no specific items of significant heritage value recognised within the site. This includes aboriginal sacred sites, buildings and structures. Presently no object of historical significance and no historical event have been requested for preservation or recognition on the site.

COASTAL PROCESSES

According to Patterson Britton & Partners (2000), the location of the urban development is within the zone of natural variability of the shoreline. This is the reason for



Figure 13 - Ettalong Beach 1970's looking south towards Broken Bay



Figure 14 - Ettalong Beach 1970's looking south towards Broken Bay

the perception that the beach is receding and explains why there has been a history of foreshore protection work on the site.

Shoreline recession had become a problem by 1941 and was accelerated by a period of severe storms and wind action. Since the 1940's attempts have been made to curb the erosion of Ettalong Beach by a range of remedial measures. These included construction of rock groynes and revetments along the beach concurrent with four sand nourishment works events. These measures have had varying success over the years and may contribute to the conclusion that no gross changes have been evident in the shoreline configuration since 1901 (Public Works Department 1992).

The conceptual model for sand transport, explained in its simplest terms, is a clockwise movement of sand from Ettalong Point northwards then eastwards toward Pretty Beach. From here it is carried back out through the channel to the entrance shoals, at Ettalong Point, by the ebb tides. This occurs in a continuous cycle with no net losses from the system, although, sand is lost by the action of wind and storms. This sand is not replenished naturally. The beach needs to be renourished on a periodic basis to protect undermining of urban infrastructure (Patterson Britton and Partners, 2000).

A brief chronology of foreshore management work within this site follows. This is compiled from the Patterson

Britton and Partners report (2000) and the Public Works Department Photogrammetric Analysis (1992):

1940's

Ad-hoc retaining walls east of Ferry Road constructed by individual property owners sometime prior to 1940's.

Beach nourishment undertaken between Memorial Avenue and Schnapper Road.

1959

Sandstone block revetment constructed between Memorial Avenue and Schnapper Road. Each of these large sawn blocks weighs between three and four tonnes.

1967-1968

Lemon Grove Reserve (According to local resident Peter Brell, was once a swamp/wetland with a large number of Cabbage Tree Palms) was reclaimed from sand pumped from Ettalong channel.

Beach nourishment between Memorial Avenue and Ferry Road

1970's

During this time most of the rock revetments and groynes that exist today between Kourung Street and Bangalow Street were constructed.

1980

Beach nourishment came from sand dredged from Pretty

Beach Shoal and Half Tide Rocks, which was Placed in large groynes opposite Bangalow Street Memorial Avenue and Picnic Parade.



Figure 15 - Ettalong Beach following the major beach nourishment of 1980 (Source: Gosford Library postcard collection)

1983

Dune stabilisation works carried out sometime around 1983 involved reshaping of the dunes, re-vegetation and fencing (Hickman, P. 2001, pers. comm., 18 October). Documentation reveals minimal dune vegetation on the site up till this point in time.

1990 The section of foreshore between Bangalow Street and Beach Street protected by rock revetment.

1999

Beach nourishment undertaken using sand excavated from the Ettalong Beach Resort complex.

In summary, although the shape of the shoreline has not changed substantially over recorded history, the profile of the beach and dunes at present is almost totally artificial. This is because of the extensive amount of work carried out along the foreshore over the years to curb shoreline recession and the subsequent damage to the town.

These human-made changes include the construction of sandstone block walls, rock revetments and groynes and the dredging of sand from local shoals onto the foreshore to reclaim the beach and to form dunes. The dune profiles constructed between Picnic Parade and Memorial Avenue attempt to create a coastal dunal ecotone and habitat. These systems are normally found in a coastal environment and not in an estuarine situation.

The Patterson Britton and Partners report (2000, p. 9-10) define coastal hazards as severe storm erosion, shoreline recession and recession because of sea level rise. The 50-year hazard zone is defined as the addition of these three hazards which will cause an expected 15 metre recession from the start of the dune in the next 50 years. Based on 1996 predictions, if no remedial action is undertaken between Picnic Parade and Memorial Avenue in the next five years then undermining of the road will most probably occur after this time if there is a severe storm. According to Patterson Britton and Partners, long-term protection of the beach from coastal



Figure 16 - Town Beach used for swimming and boat hire



Figure 17 - South beach is a popular fishing location

hazards requires an ongoing program of nourishment, in conjunction with monitoring beach behaviour. A seawall/revetment is also an option but, it would have to be combined with beach nourishment to maintain a sandy foreshore.

PICNIC AND BBQ AREA

The Picnic and BBQ area is located on the reclaimed foreshore park adjacent to the sandstone revetment. Given its prime location the area is under utilised with limited recreational opportunities. The general character of this foreshore park is bare, exposed and unshaded, with open views across Brisbane Water. The grassed picnic area has 16 picnic tables (*fig 43*) staggered along either side of a bitumen footpath which runs north-south through the middle. One BBQ shelter is located to the northern end of the picnic area and carpark, near the Beach Street stormwater drain. The tree planting is sporadic with recent plantings of young fig trees and small groves of Casuarinas.

The area has considerable significance to the Peninsula's Vietnam Veterans. On the third Sunday of every second month around 35-40 veterans and their wives meet for a BBQ at the undercover BBQ area. The most important commemorative event for the Vietnam Veterans is the battle of Long Tan, which took place on the 18th of August 1966. This day is comparable to Anzac Day in terms of its significance to the Vietnam Veterans and usually involves a function at the Ettalong Beach Club. There is a Vietnam Veterans Memorial constructed adjacent to the picnic shelter near Beach Street.



Figure 18 - Bare picnic area near Bangalow Street toilet block, looking north

RECREATION

The beach is currently unpatrolled throughout the year; however, it has a local reputation as a safe swimming area for families because of the calm, shallow water.

Fishing, boating, cycling, swimming and dog walking (on leashes) are popular existing recreational activities. Presently, dogs must be leashed on all areas of the site. The picnic area is used extensively which includes Vietnam Veteran BBQ's held every two months.

Gosford Council in association with the RTA is expanding the bicycle path network with links to Gosford and West Brisbane Water, as well as within the peninsula. Ettalong Beach foreshore will be incorporated in this network.



Figure 19 - Dune planting near Ferry Road



Figure 20 - Dune grasses at the southern end of the beach

VEGETATION

Apart from the remnant indigenous Cabbage-Tree Palms (*Livistona australis*) near the netball courts at Lemon Grove Reserve and the remnant Swamp Mahogany (*Eucalyptus robusta*) stand and Banksia species in Lance Webb Reserve, the majority of the existing vegetation on the foreshore consists of introduced species. These include a few large Norfolk Island Pines (*Araucaria heterophylla*), Eucalyptus species and Coral Trees (*Erythrina x sykesii*), extensive lawn areas, introduced native dune vegetation and an eclectic mix of other species including weeds.

The vegetation contained within the fenced dune areas has the function of stabilising the sand and preventing wind blown sand from encroaching on the urban areas. There have been significant problems with deposition of sand on the road in the past and a continual problem exists with sand on footpaths. The dune vegetation does not have the same succession structure of small ground covers, shrubs and emergent species found on coastal dune systems. This is because the vegetation is not subject to the same processes at a coastal beach and because most of this vegetation has been introduced.

The overall existing site vegetation (*fig 38*) is somewhat unkept and sporadic, with no unifying structure or theme and adds little to the visual identity of the town and beach area.

A study of aerial photography taken prior to 1977 and photos from Gosford Library's Paddison collection (circa 1927, *figs 8-10*) indicate that dune vegetation between Picnic Parade and Beach Street was sparse probably due to logging and urbanisation. The 1927 photos also indicate that the profile depth of the sand in this area was low.

RESIDENTIAL

The residential buildings that front the shoreline consist of one and two storey detached dwellings which have commanding foreshore views, except for areas screened by dune vegetation. The dwellings run along most of the shoreline, except for the area between Beach Street and Picnic Parade. Residences on the Lance Webb Reserve side of the foreshore between Picnic Parade and Ferry Road, are fronted with a grass reserve, which replaces the road. The location of houses along the foreshore promotes passive surveillance of the beach during the day, enhancing the safe character.



Figure 21 - Small residence fronting Lance Webb Reserve



Figure 22 - Residences along Lance Webb Reserve



Figure 23 - Lance Webb Reserve and residential dwellings near Ferry Road Dune

LANCE WEBB RESERVE

As noted above Lance Webb Reserve is the grassed reserve between Picnic Parade and Ferry Road. This reserve has a number of mature native and exotic trees. Public access to the foreshore is restricted by erosion and a vertical sandstone block wall that was constructed during emergency remediation works by Council in 2005. The existing timber stairs that previously provided access have collapsed and become unserviceable. Public access to the foreshore is also difficult east of Ferry Road as the residential properties front onto the shoreline.

LANDS BOUNDED BY THE ESPLANADE, MEMORIAL AVENUE, OCEAN VIEW ROAD AND PICNIC PARADE (PRECINCT A)

A vacant site zoned 3(a) Business General and 3(b) Business Special, is currently used as a temporary bitumen carpark. It is located adjacent to the resort site (fig 39), on the corner of Memorial Avenue and The Esplanade in precinct A. It provides parking for the commercial precinct during the week. It currently adds little to the overall visual and physical quality of the foreshore.



Figure 24 - Memorial Avenue and temporary carpark to the left



Figure 25 - Town Centre along Ocean View Road with the Town Beach to the south

TOWN CENTRE

Consisting of small-scale one to two storey commercial and retail shop fronts, the town centre predominantly runs along the length of Ocean View Road. This road runs east-west one block behind and parallel to the shoreline. Picnic Parade and Memorial Avenue are the main north south roads which cross Ocean View Road leading to the foreshore, creating the strongest physical links from the foreshore to the town centre.

In the last 10 years the town centre has undergone upgrading works including footpath repaving, street upgrading and street tree planting.

Buildings in the town centre have main street frontages and do not address the foreshore.

AMENITY FACILITIES

Three brick toilet blocks are presently located along the foreshore (*fig 40*); each terminates the end of a road leading to the foreshore. These roads are Bangalow Street, Picnic Parade and Snapper Road. Overall these buildings are poorly located because they obstruct major visual links to the water and views to the sea, Wagstaff and Lion Island.

STONE SEA WALL

The stone sea wall, or rock revetment, is constructed of random size sandstone boulders and stretches the length from the Beach Street stormwater drain to the Lemon Grove stormwater outlet (*fig 41*). It was constructed in stages and completed around 1990. It forms a linear edge between the water and the reclaimed recreational land abutting The Esplanade. The irregular alignment and poor quality of construction of the wall adds little to the visual quality of this important land/sea junction.



Figure 26 - Picnic Parade toilet block



Figure 28 - Rock wall looking north

FORESHORE CARPARK

Located within the picnic area between Bangalow Street and Beach Street, is a foreshore bitumen carpark for 34 vehicles. It is used mainly on weekends and holidays. The carpark occupies valuable recreational space close to the waters edge, detracting from the visual quality of the foreshore edge.



Figure 27 - Schnapper Road toilet block



Figure 29 - Rock wall looking south



Figure 30 - Foreshore carpark looking north

BEACH AND DUNES

The town beach begins at the end of the rock revetment at Beach Street and continues east past the site boundary at the Ferry Road wharf. The water at this beach is calm and flat because of its protected location, hence its reputation as a safe swimming beach. The beach has been nourished with sand four times since 1941. In 1983, dune stabilisation work was undertaken involving reshaping of the dunes, re-vegetation and fencing. These works have helped to protect the foreshore and The Esplanade from erosion. Some small rock groynes are located in the intertidal zone of this beach.

Dunes along Lance Webb Reserve are higher and steeper in areas compared to the low dunes along The Esplanade.

A smaller beach approximately 200 metres long remains between the southern end of the rock wall to the Kourung Street boat ramp. It is segmented by two rock groynes, which are popular fishing spots. The dunes here are low and sparsely vegetated, mostly with grass only.



Figure 31 - Dunes, vegetation and dwellings near Lance Webb Reserve

BOAT RAMP

The main boat ramp is located near Kourung Street at the southern most part of the site (*fig 40*). The boat ramp and associated carpark built in 1968 is under utilised and needs repairing. The carpark, which is protected by rock walls is unsealed and eroded with potholes. A line of sandstone blocks adjacent to carpark and parallel to The Esplanade are exposed here, which were used for earlier foreshore protection works. Potentially, these blocks can be removed and re-used on future site works. Apart from the poor physical state of the ramp area, launching problems exist due to inadequate space for manoeuvring and parking at the ramp, as well as its location to the

open sea and the inconsistency of the sand levels at the end of the ramp (Connell Wagner 1996).

A second boat ramp is located at the end of Bangalow Street. It is a boat slide made of two treated pine logs angled down to the water above the rock wall. This is rarely used due to its location away from the road and its limited capabilities for launching boats. The launch however, helps to ease the congestion of the Kourung Street boat ramp, as a launching facility for small dinghies and non-powered vessels.



Figure 32 - Dune stabilisation work near Memorial Avenue

STORMWATER

The largest outlet along the foreshore within the site is located opposite Lemon Grove Reserve (*fig 40*) and consists of a concrete headwall with three 1050mm-diameter concrete pipe outlets. The outlet is flanked by the sandstone revetment on either side and it is significantly exposed so that it detracts from the visual quality of the foreshore.

The large stormwater outlet near Beach Street consists of a 1350mm diameter round concrete pipe, which protrudes where the rock wall meets the beach. The pipe obstructs foreshore access from the beach to the

park.

According to local residents, the series of smaller pipes adjacent to Lance Webb Reserve wash sand off the beach during storm events.

EXISTING AND PROPOSED FERRY

An existing public timber wharf at the southern end of Ferry Road is utilised by the ferry to Palm Beach. This area acts as a 'park and ride' location for commuters to the Northern Beaches of Sydney. Poor parking facilities are located at the end of Ferry Road where commuters leave their cars during the day. This area is also a

popular swimming and fishing location.

Fast Ships Pty Ltd were granted approval by Council in 1999 to provide a Fast Ferry Service at Ettalong Beach. The proposed ferry will carry 450 passengers, six times a day to Circular Quay, Sydney and will take approximately 55 minutes each way. The proposed location of the Fast Ferry jetty will be at the end of Bangalow Street on the foreshore (*fig 39*). Fast Ships Pty Ltd is promoting the use of public transport links to this interchange to help limit the use of cars, as land is limited for parking in this area.



Figure 33 - Carpark at the Kourung Street Boat Ramp, looking north-east



Figure 34 - Stormwater outlet near Lemon Grove Reserve entrance



Figure 35 - Palm Beach Ferry leaving the mouth of Brisbane Water



Figure 36 - Existing Ferry wharf at Ferry Road looking south-west

SUMMARY

The foreshore edge is the major natural resource of the Ettalong Township. At present it is in a degraded state due to various uncoordinated interventions, lack of adequate maintenance and erosion. Attempts have been made in the past to improve and protect the foreshore. It is evident that new upgrading and foreshore protection must be carried out in the near future.

The urban fabric of the town was built too close to the

natural zone of shoreline movement. The sand lost from the beach is not replaced naturally and an ongoing commitment is needed to maintain the foreshore to prevent undermining of The Esplanade. This work should be coordinated with other developments in the vicinity of the site and in a way which benefits the town economically, socially and environmentally.

Considering the demographic, the foreshore has poor connections both visually and physically to the town centre and provides only limited open space and

recreational amenity along its length. Given its location on the bank of Brisbane Water, the approved Fast Ferry connection to Sydney and the unique quality of the town centre, the site offers potential to re-establish Ettalong as a vibrant town and tourist destination in an ecologically diverse natural setting.



Figure 37 - Broken Bay View with the rock revetment, foreshore park and Beach Street stormwater outlet to the right



Figure 38 - Existing vegetation

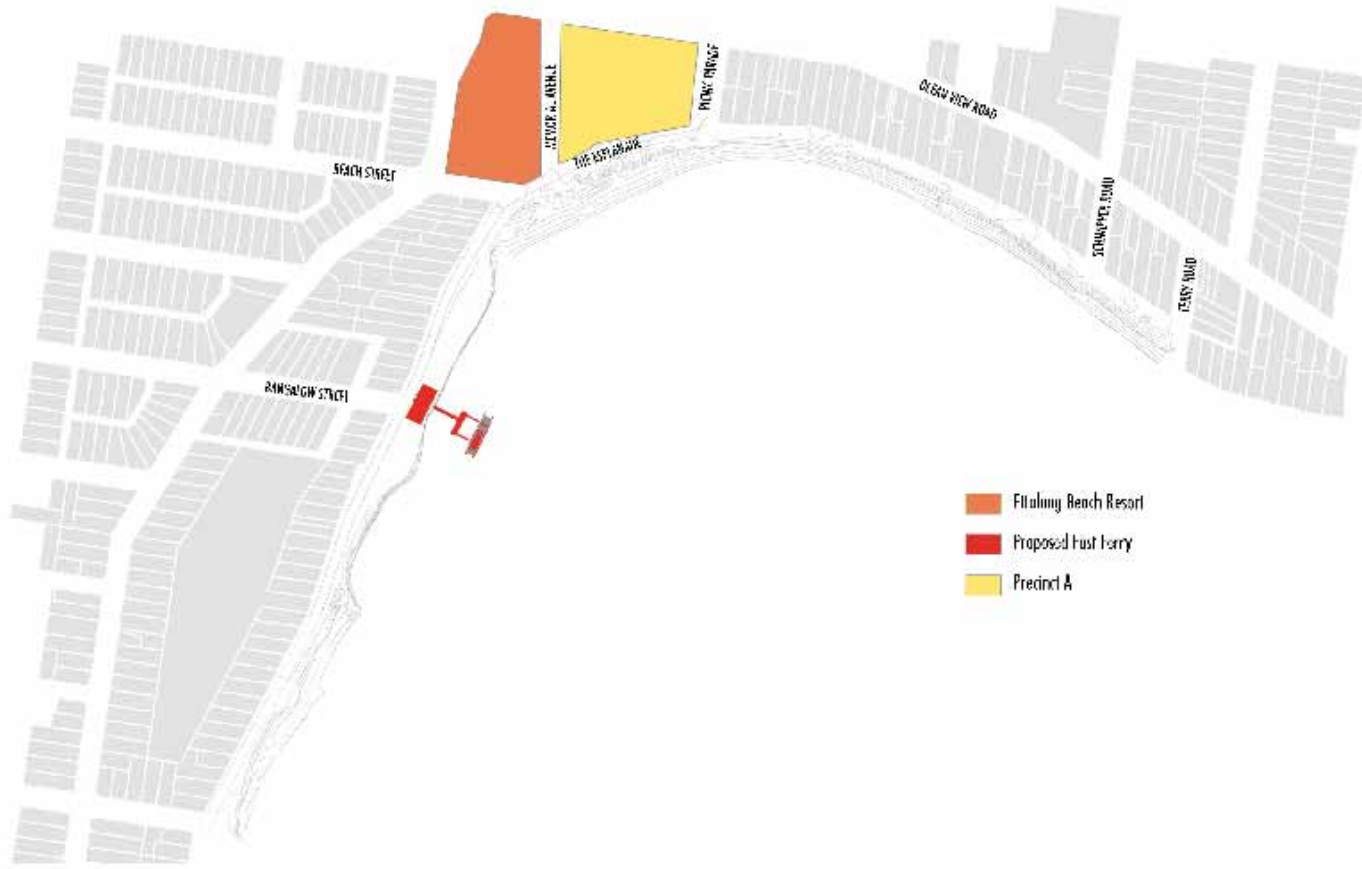


Figure 39 - Concurrent developments

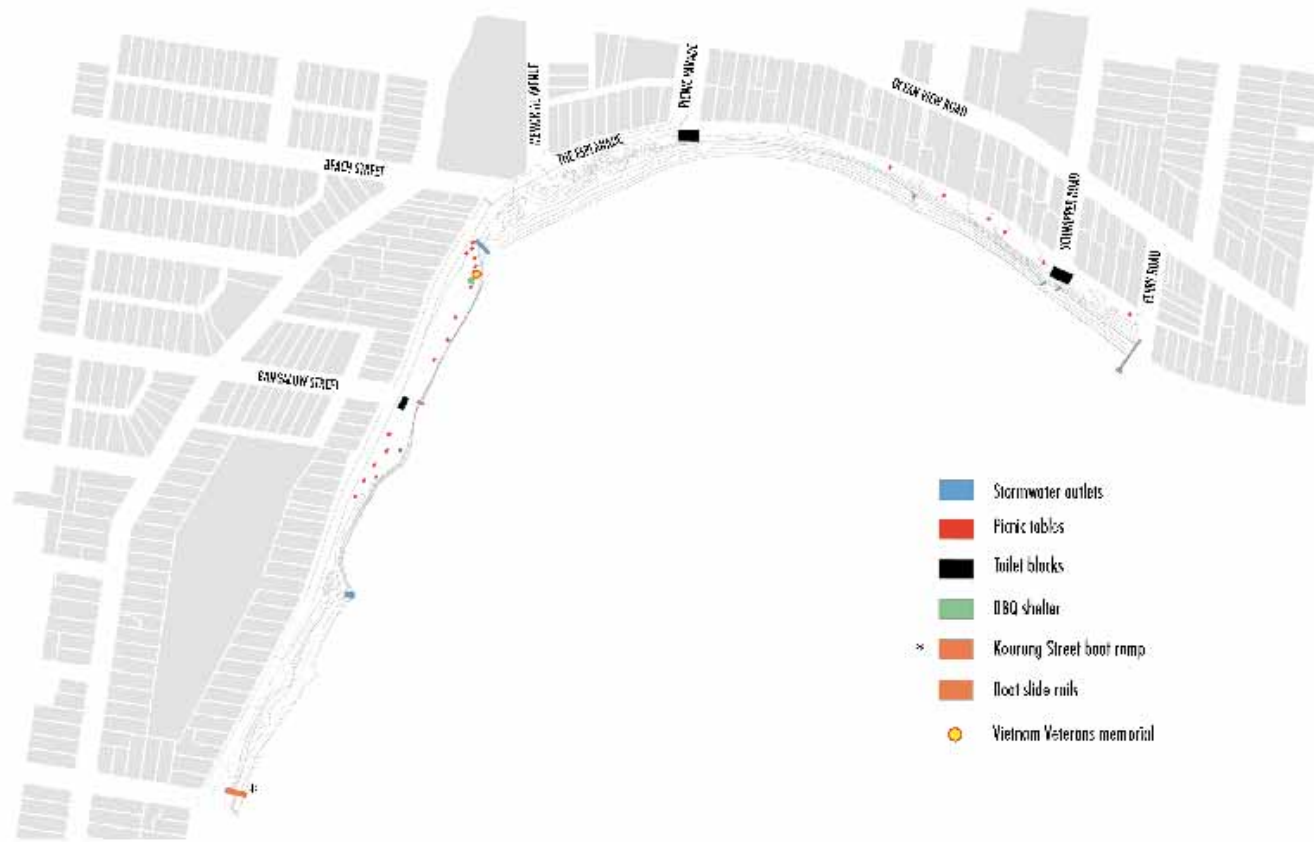


Figure 40 - Existing structures

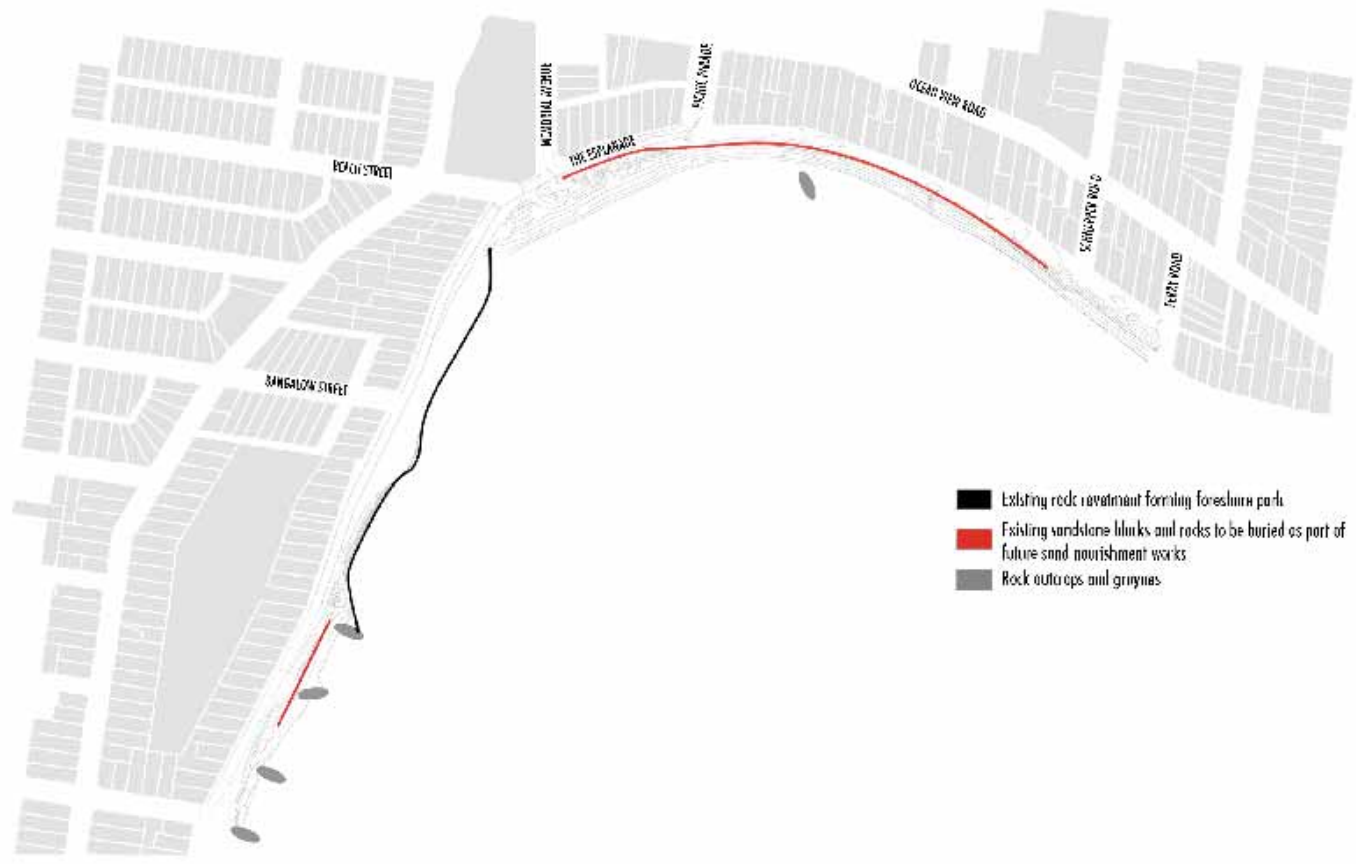


Figure 41 - Simplified location of foreshore protection works

5.0 THE MASTERPLAN PROCESS

PROCESS

The masterplan represents the culmination of the review of past studies, consultation processes, the site analysis and research.

The investigation of both Aboriginal and European history was conducted to supplement the information provided by the Local Studies Librarian at Gosford Library. The Aboriginal history presented is minimal due to the scarcity of information available. There are no surviving elders to consult, however a detailed account of Aboriginal history is presently being undertaken by a working party on the Darkinjung land.

The issues raised with shoreline protection (i.e. the protection of the urban infrastructure from beach recession) and hence the protection of the dunes and vegetation are the foremost concerns of the Department of Lands and Gosford City Council. The masterplan which accompanies this document provides immediate resolution of the issues raised.

PREVIOUS STUDY RECOMMENDATIONS

A number of management strategies were proposed in the Patterson Britton & Partners foreshore study (2000). The following recommendations were generally

supported by the community (Wales & Associates 2000, p.48-49) and some have been deemed suitable for implementation in the masterplan.

- _ Make provision for a long-term revetment between Picnic Parade and Memorial Avenue.
- _ Revetment work in this locality should be located seaward of the vegetation line to mitigate losses in major storm events and to reduce the impact on existing vegetation during construction.
- _ Modify the existing dunes to provide viewing areas, low vegetation types, more practical beach access ways and widen footpath areas.
- _ Reduce the width of The Esplanade, re-landscape and provide traffic calming.
- _ Renourish the beachfront and improve dune fencing and sand trapping.
- _ Extend Beach Street culvert and rock sea wall.

These recommendations as well as the feedback gained from community consultation undertaken during the study have informed the design of the masterplan.

PREVIOUS STAKEHOLDER CONSULTATION

A presentation to local stakeholders of the first draft masterplan was made by mcgregor+partners at a meeting of the Ettalong CBD Committee at the Ettalong Beach Club on the 4th October 2001. Present at the meeting were representatives from the Ettalong Beach CBD Committee, the Ettalong Beach Ratepayers

Association, Gosford City Council and the NSW Planning. The draft masterplan was accepted and a motion passed to proceed with a public exhibition. Modifications to this draft were requested by the Department of Lands prior to the public exhibition. These requested changes resulted in the modification of the masterplan.

Separate contact was established with the Gosford City branch of the Vietnam Veterans Federation and further consultation is needed relating to the location of the BBQ area and the location of the war memorial by Gosford City Council.

The draft Plan of Management was exhibited by Council for six weeks and received 5 submissions.

In response to the five submissions Council elected to hold an additional public meeting on Saturday 19th October 2002 at the Ettalong Senior Citizens Club to allow the community to give further feedback. 120 people attended the session and a report was compiled by Elton Consulting (November 2002) summarising the comments and feedback.

An extract of the executive summary on page 2 follows:

- _ While there was general support for the need for improvements to Ettalong Beach Reserve, there was a variety of opinions about the form the improvements should take
- _ A number of participants had difficulty divorcing the Plan of Management process for the Ettalong Beach Reserve from

other planning and other traffic management issues in the area
_ Some participants believed the Plan of Management was a way of supporting the proposal for the Fast Ferry.

There was general support for the overall vision of the Plan of Management and for the protection of environmental values of the Ettalong Beach Reserve.

The major issues nominated by the community were as follows:

- _ The importance of preserving the existing heritage of the area
- _ The importance of preserving the natural environment / beauty of the area
- _ The importance of incorporating pedestrian and cycle ways
- _ Possible traffic and parking impacts of the proposal
- _ Concern about the possible adverse impacts of the Fast Ferry and Terminal

Considerable opposition was made to the proposed cycleway with a submission of a petition to Council of 1600 signatures in a process undertaken prior and separate to this community feedback session. The cycleway was subsequently approved by Council.

RECENT CONSULTATION

The initial draft Plan of Management document was presented to the Department of Lands for consideration in 2005. The Department subsequently requested a review of the document and further public consultation phase be undertaken as required by the Crown Lands Act and to ensure currency.

Lands and Gosford City Council have revised the draft plan of management with regard to current conditions and issues raised through the public consultation process. The revised Plan of Management was placed on public exhibition in conjunction with a Dune Management Plan from 2 August 2006 until 30 August 2006.

Additional public meetings and information sessions were also conducted due to local interest, where Council presented and explained the updated plans. The exhibition was subsequently extended until 15 September 2006.

Fifty seven individual submissions and several petitions were received during exhibition. There is a wide range of community views on this area and its needs and the amended Plan aims to balance these divergent needs to the greatest extent possible. The main points raised during the exhibition period included:

- the extent of vegetation removal from Town Beach
- urgent erosion protection needed for Lance Webb reserve
- concern over removal of car parking, modification to streets and general parking in town
- removal of toilet blocks prior to construction of replacements
- naming options for reserve precincts
- modification of landscape art and sculpture to include reference to aboriginal heritage
- opportunities for improved water management be explored

6.0 THE MASTERPLAN

CONCEPT

The key concepts in the masterplan are:

- _ To ensure the long term environmental, economic and social sustainability of Ettalong Beach.
- _ Creation of a linear park which supports linear functions such as unobstructed movement along the foreshore length.
- _ Revitalisation of the town by drawing on the natural resource of the foreshore by connection to the town centre.
- _ To balance the need to provide foreshore access and views for existing residents with the need to provide foreshore access and an ecologically diverse shady park for the general public and promote foreshore stability.
- _ To maintain and enhance Ettalong's identity as a tourist destination and as a quality foreshore recreational area and improve facilities for these.
- _ Enhancement of local social community values by ensuring access to public lands is equitable and commercial activities are located to service the recreational uses.

The masterplan is divided into four precincts (*fig 42*). These precincts are defined by existing site character, intended physical appearance and proposed recreational

use. The four precincts are:

1. Lance Webb Reserve
2. Town Beach
3. Ferry Park
4. South Beach

* Note that the latter three precinct names are for planning delineation purposes only. The Plan includes the need for appropriate naming of the reserve.

Figure 42 - Ettalong Beach masterplan showing the four precincts

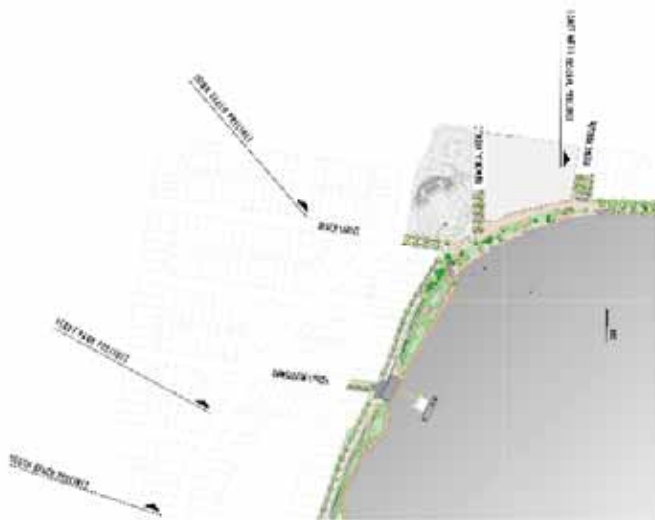




Figure 43 - Totem style sign used at Tote Park, Zetland, Sydney.

SITE WIDE STRATEGIES

Materials

Materials used should be sourced from sustainable industries and practices. Materials should be consistent throughout the site.

Maintenance

Council will need to commit resources for ongoing maintenance, which includes footpath sweeping of sand, dune vegetation maintenance, lawn mowing, garbage collection, litter removal and BBQ area cleaning. The bioswale may need to be cleared of litter on a periodic basis.

Vegetation

The masterplan aims to retain as much of the existing vegetation on the foreshore as practicable given the objective of increasing public amenity and improving site lines from the streetscape to the foreshore and beyond. Any new planting should be of Australian native origin and be locally indigenous where practical to enhance biodiversity. The tree species proposed include an extensive use of mature Cabbage Tree Palms (*Livistona australis*) and species in keeping with the previous town centre upgrading work such as White Cedar (*Melia azedarach*) and Tuckeroo (*Cupaniopsis anacardioides*).

Dune Management

Future management of the dunes should entail selection of appropriate indigenous plants to cater for views, sand trapping and dune stabilisation. It is acknowledged some existing vegetation will require removal and regular maintenance pruning to preserve site lines and public amenity for the area. Dune management needs to be closely aligned with ongoing assessment of wind blown sands into the adjacent streets and public areas. Modification of sand dune fencing, vegetation height and density should all be considered viable options should conditions warrant intervention.

Foreshore Stability

Future management of the foreshore generally will aim to monitor its stability and address any erosion and recession by exploring practicable options in consultation with the Gosford Coast and Estuary Management Committee. This committee is currently preparing an Estuary Processes Study with the aim of preparation of an Estuary Management Plan. Longer term management of coastal areas will need to be consistent with these studies and plans.

Amenity Facilities

The redevelopment of the foreshore will involve removal

of existing toilet blocks and provision of new toilet facilities at the new Fast Ferry Terminal, proposed beach facility building and adjacent to the wharf at Ferry Road. It is proposed that only one toilet block should be demolished at a time and that the replacement facilities should be constructed prior to further demolitions. It is recommended that a BBQ and toilet facility be located at Picnic Parade pending further consultation during the Development Application stage with adjoining land owners to reach a satisfactory conclusion concerning site lines and elevations to ensure maintenance of amenity to adjacent residences.

Traffic and Parking

The masterplan makes a number of strategic traffic and parking recommendations. These are:

- _ The intersection in front of the proposed Fast Ferry Terminal at Bangalow Street should be paved to calm traffic, forming a zebra crossing with signals at each street.
- _ All parking along The Esplanade should remain parallel to the west kerb side and be integrated with tree planting islands. Existing driveway crossovers to houses should be retained.
- _ The upgrading proposed for Ferry Road comprises 90° angled parking on the east side, a turning circle at the end near the wharf and new street tree planting.
- _ Appropriate numbers of disabled parking should be provided in accordance with Australian Standards along

The Esplanade.

It is recommended that a Traffic and Parking Study be commissioned for the precincts covered under this Plan of Management and the associated on-site and off-site parking issues resulting from the proposed Fast Ferry, proposed carpark removal, proposed upgrade in facilities and the above recommendations.

Lighting Furniture and Signage

Lighting should be provided at a level which is necessary for safety along the timber promenade and the other pedestrian paths. Lighting suggested for the promenade is a solar powered pole mounted type. In keeping with the vision for the *Town Beach* precinct, lighting should be bright enough to provide security. Attention should be made to provide the appropriate level of light for safety and aesthetics. Solar powered lighting should be used throughout the site. The overall lighting and signage scheme should be undertaken as part of the detail design stage.

Selection of new furniture such as seats and bins will be part of the detail landscape design. Furniture should be simple, robust and modern.

Signage and graphics should be site specific. Signs should be concise and only included as necessary for site navigation, warnings and rules (fig 49). The educational and historical component should be incorporated into the actual built landscape and

sculptures.

Heritage Interpretation through Public Art

The foreshore may incorporate a series of sculptural elements similar to those along the annual Bondi Beach sculpture walk or Pyrmont Point Park, Sydney. These may be inspired by the cultural heritage of both Aboriginal and European association with the site; or historical events, such as Governor Arthur Phillip sailing past Ettalong Beach on the first expedition through Brisbane Water in March, 1788. The playground is a prime location for some of the sculptural and educational elements.

The incorporation of a war memorial is important to commemorate Australia's role in Vietnam as the local Vietnam Veterans meet several times a year for social gatherings on the site.

All existing official memorials and plaques will be respected and retained within the reserve. Management or final locations of these will be subject to ongoing consultation with relevant stakeholders.

Foreshore Recreation

Part of the foreshore upgrade involves enhancing its use as a recreational area. The recreational activities proposed are similar to the existing uses, with a focus on non-motor driven activities such as cycling, sailing,

walking, swimming and non-team activities. Dog walking can be retained as long as the dogs remained leashed and dog litter bins should be provided.

The proposed shared pedestrian/cycle path will continue the whole length of the site and form part of the greater Hawkesbury to Hunter coastal walking system (fig 2).

Reserve naming

For the Town Beach, Ferry Park and South Beach precincts, Council will consider the merits of adopting appropriate naming of these areas of the reserve (either separately or collectively) in consultation with Lands, the community and Geographical Names Board.

Water Management

Contemporary water management options will be investigated to ensure efficient water use and that storm water is managed in a sustainable manner. Options for modifications to existing storm water outlets will be explored as part of this process.

LANCE WEBB RESERVE PRECINCT

General

The *Lance Webb Reserve* precinct begins at the Ferry Road wharf and continues to Picnic Parade. The intervention is aimed at maintaining the present character as a beach with a vegetated fore dune and an upper level grassed open space.

Interventions include the construction of a shared pedestrian/cycle path and new planting parallel to the residential fence line. Speed calming devices should be designed into the cycleway to overcome pedestrian/cycle conflicts. The existing timber stairs that previously provided access to the beach that have collapsed should be repaired or replaced in conjunction with the restoration of the seawall to maintain public access and the sand dunes conserved. It is intended to remove the Schnapper Road toilet block and provide new facilities near the Ferry Road wharf.

Protection and Stabilisation

In 2005 Gosford City Council undertook emergency remedial action to stem the erosion along the Lance Webb Reserve. The sandstone blocks that were previously dumped ad-hoc along the waterfront in the 1940s were stacked to form a solid vertical wall. A section to the east of this wall still requires attention. The



Figure 44 - East end of Lance Webb Reserve precinct showing improvements at Schnapper Road and Ferry Road

resulting vertical interface created during these works has created a number of issues such as lack of public access and has potentially increased beach erosion possibly leading to future wall failure. A coastal engineer should be engaged to design a structure to dissipate wave energy in a more effective and environmentally sustainable way. This combined with an effective ongoing sand nourishment program would result in the amenity of the beachfront being restored for users and the environment alike. Studies of the area indicate the estuarine system does not naturally replenish sand deposits on this beach area. Timing of cyclic renourishment should be determined by trigger values to be identified. These actions are essential for long term protection of the reserve and ultimately adjacent assets.

Vegetation

Dune vegetation is now virtually non-existent in this area due to erosion and remedial action. Re-vegetation works are required here following completion of the sea wall restoration. Use of vegetation alone for beach stabilisation does not appear feasible in this locality due to natural erosion pressures. Vegetation should be established above the seawall to stabilise fill material behind the seawall and to prevent soil loss from the reserve.

All the existing *Angophora* and *Eucalyptus* species in this precinct are to be retained. Additional indigenous species which have clear stems to allow for views under

the canopies should be planted. The addition of a low band of vegetation up to 500mm high is intended along the residential fence line. This new vegetation will be segmented to allow for access to residences.

Dune vegetation should be properly maintained so it forms a distinct community of species suitable for the location, while at the same time stabilising the dunes and providing access to views. This may include removal of weeds and augmentation of locally indigenous planting along the dune as well as pruning the vegetation at the viewing areas.



Figure 45 - The junction of Lance Webb Reserve and the Town Beach precincts, showing dune protection areas and removal of the amenity block

TOWN BEACH PRECINCT

General

The *Town Beach* precinct begins at Picnic Parade and continues to the northern end of the rock wall at the Beach Street stormwater outlet. Foreshore protection is a major focus in this precinct, to accommodate a high level of use whilst protecting public infrastructure located in the beach and immediately to its rear.

The aim is to bring together the Ettalong Beach Resort, the town centre and precinct A, to form a vibrant connection with the beach. Entertainment and social activity are to be focused along The Esplanade, such as shopping and dining uses during the day and restaurants/bars in the evening whilst enhancing existing natural values.

Town Centre

Connection of the town centre to the *Town Beach* precinct by upgrading Memorial Avenue and Picnic Parade will integrate the foreshore work with the previous town centre upgrading works. Native Australian street trees such as Tuckeroo (*Cupaniopsis anacardioides*) and Mangrove Hibiscus (*Hibiscus tiliaceus*) should be used.

Beach

Ramps and viewing decks are to be constructed at various locations overlooking the beach which will also provide access points. The southern most access ramp proposed for this locality is also to provide access to the beach for emergency and maintenance vehicles. The existing dune vegetation is to be protected with appropriate fencing and the vegetation enhanced as detailed in the Ettalong Beach Dune Management Plan. The effectiveness of the reduced vegetation combined with sand trap fencing as an effective barrier for wind borne sand is to be continually monitored.

All efforts are to be made to retain existing Banksia trees located within the dune area however some may require removal due to dune reshaping works. Mature Banksias removed during these works will be replaced by mature plantings.

Picnic Parade Amenities Building

This facility is to be demolished along with revetment at its base in accordance with the recommendations of the Patterson Britton Partners report and replaced with a timber viewing platform over the existing building pad as outlined in the Ettalong Beach Dune Management Plan.

Beach Facilities Building

A new building is proposed which will house a café/kiosk, beach hire and toilet facility. It will be located at the junction between the Town Beach precinct and the Ferry

Park precinct at Beach Street. Adjacent to this building will be an observation tower with good visual access to the beach for use by the hire concession operator.



Figure 46 - Detail area of dune protection areas, timber decks and ramps associated with the proposed works near the Beach Street stormwater drain.

Figure 47 - Foreshore park with bioswales playground and proposed fast ferry terminal



FERRY PARK PRECINCT

General

The *Ferry Park* precinct comprises all the reclaimed land bounded by the rock wall which begins at the Beach Street stormwater outlet and continues to the Lemon Grove Reserve access way. The proposed Fast Ferry terminal and wharf is to be located midway, in front of Bangalow Street and is currently subject to an approved Development Application subject to conditions. In the interim, this precinct will remain a picnic area with new improved facilities, paths and vegetation.

The intended improvements for this precinct will consist of a foreshore promenade, a cycleway, roadside bioswales, the proposed Fast Ferry terminal, picnic/BBQ areas, a playground and shade planting. Should the ferry proposal proceed, additional works and modifications to this area will be undertaken, consistent with the Development Application.

Vegetation

The dune vegetation (*Leptospermum laevigatum*) located near the entrance to Lemon Grove Reserve is to be retained as well as the Norfolk Island Pines and Banksias near Beach Street. The new trees are to be mature with a high canopy to maintain water views from nearby residences. Trees along the residential side of The

Esplanade are to be planted at property boundaries so that views are not obstructed.

Stormwater outlets

In conjunction with the proposed foreshore boardwalk will be the extension of the Beach Street stormwater pipe to the edge of the sea wall. This 'would provide greater dilution and less risk to the health of beach users' (Patterson Britton & Partners 2000, p.21). The boardwalk will then be built over the top of the extended drain. Access will be greatly improved from the beach to the reclaimed foreshore park along the rock wall.

The large stormwater outlet opposite Lemon Grove Reserve will be covered by the new boardwalk which will angle out to the water and back again providing a vantage point (viewing area) for views to Broken Bay.

Bioswales

Stormwater runoff from The Esplanade will be directed into a series of roadside bioswales which will treat and clean this water before entering Brisbane Water. A series of small footbridges will cross the bioswales at strategic places connecting the pathway system.

The bioswales are a vegetated open drain which slows the velocity of water so that it has a greater chance of infiltrating into the ground. Bioswales are not designed to hold stagnant pools of water, they will retard and treat

road runoff before it enters Brisbane Water. Bioswales do not hold water continuously and are primarily made of free draining sand substrates. These bioswales will require regular maintenance, such as litter removal.

Foreshore Carpark

The removal of the foreshore carpark is highly recommended, as it will greatly enhance the quality of open space within the *Ferry Park* precinct. Replacing this



Figure 48 - South end of the Ferry Park precinct from proposed Fast Ferry to the Lemon Grove stormwater outlet

carpark will be a fenced playground and bioswale system. Ninety degrees (90°) angled parking, between Bangalow Street and Beach Street, shall replace the car park. These additional parking spaces shall service the adjacent barbeque area, foreshore recreation facilities and the proposed Fast Ferry interchange.

Considerable community concerns exist over parking and the potential impacts of the ferry proposal if and when implemented. Parking options should be explored as part of an overall Traffic Management Plan prior to implementing any works in the existing car park area.

Picnic and BBQ Area

The proposed revitalised foreshore area retains the existing BBQ pavilion but also has improved BBQ and picnic facilities located at three locations along the *Ferry Park* precinct. The grassed areas are slightly raised and sloping towards the waters edge.

Memorial

In recognition of the battle of Long Tan and the men and women who served in Vietnam, a war memorial has been erected to the north of the playground near the existing BBQ pavilion. It is envisaged to integrate the memorial with the overall design of the foreshore, either sculpturally or as part of the utility of the landscape.

Stone Sea Wall

It is intended to retain the existing wall in its present location except for a minor alignment change for the installation of a timber promenade/boardwalk above. This boardwalk will partly disguise the sea wall and run the entire length from Lemon Grove Reserve access way to Beach Street. Maintenance requirements for the seawall and boardwalk should be determined prior to construction of the boardwalk. Public foreshore access should be permitted in front of the proposed Fast Ferry Terminal, ensuring the timber promenade will not be blocked providing continued access along the waters edge from the town beach to the small southern beach. The timber should be sourced from a sustainable resource.



Figure 49 - Kourung Street boat ramp at the South Beach precinct

SOUTH BEACH PRECINCT

The *South Beach* precinct begins at the Lemon Grove Reserve access way and continues to the Kourung Street boat ramp. The character of this precinct will remain much the same. It is intended to make improvements to the boat ramp facilities, dunes and paths. A new sitting edge is proposed along the dune edge of the bikeway.

Kourung Street Boat Ramp

The location for the boat ramp is to remain at Kourung Street under the proposed masterplan. Upgrading will include construction of a new reinforced concrete ramp and an adjacent sealed vehicle and trailer turning area. Associated car and trailer parking will be provided off the site and will be addressed as part of an overall Traffic Management Plan. The launching of small boats/dinghies may take place adjacent to the main ramp.

Dunes and Paths

The shared pedestrian/cycle path is located adjacent to The Esplanade. The dunes in this precinct are to be extended to 10-20m in width towards the water in areas where they are narrow. The dune work will include new fencing, timber access ramps and new low dune

vegetation and grasses. Some of these species may include fore dune plants such as *Hibbertia scandens* and *Carpobrotus glaucescens*.

7.0 IMPLEMENTATION AND PERFORMANCE

REVIEWS AND REVISIONS

Future management and design development of the masterplan for the Ettalong Beach foreshore should be prepared in line with the values outlined in the Statement of Significance to ensure sustainable outcomes are achieved. These revisions and developments should be appended to this report. Results of the ongoing foreshore monitoring program may be also included in this report.

The consultant recommends a traffic and parking management study be urgently undertaken to support the revitalisation of the foreshore resulting from this Plan of Management. The opportunity to create a one way traffic system along The Esplanade incorporating an on road cycleway and additional parallel parking should be investigated in consultation with the community. These ideas were suggested during community consultations and should be investigated further.

Realisation of the pending Fast Ferry program will substantially change the economic, social and environmental climate of Ettalong. Should this impact

occur we recommend that the masterplan be reviewed to address the effects of these impacts.

MANAGEMENT ACTIONS

The management tables on the following pages summarise the proposed short term changes to the Ettalong Beach foreshore on a precinct to precinct basis. Ratings have been determined as a result of the site analysis, design and consultation processes.

SITE WIDE STRATEGIES

ISSUE	ACTION	RESPONSIBILITY	TIMING	PRIORITY
Foreshore Maintenance	Sweep footpaths and surrounding hard surfaces after buildup of sand.	GCC	Ongoing	Medium
Traffic and Parking	Commission traffic and parking study.	GCC	Immediate action required.	
Vegetation	All new vegetation should be native, which is indigenous to the locality.	GCC	Stage One, Two, Three & Four	Medium
Foreshore Recreation	Encourage non-motor watercraft such as sailing boats and catamarans. Encourage bicycle and other non-motor pedestrian activities along the foreshore such as volleyball.	GCC	Ongoing	Medium
Bike Path	Construct a shared pedestrian and bikeway the entire length of the site.	GCC	Stage One	High
Storm water Outlets	Extend the Beach Street stormwater pipe to the line of the existing rock wall. Cover both the Lemon Grove stormwater outlet and the extended Beach Street outlet with the boardwalk and reclaimed park. Investigate contemporary water management options to ensure efficient water use and that storm water is managed in a sustainable manner. Explore options for modifications to existing storm water outlets at Lance Webb Reserve.	GCC	Stage Two	High
Erosion	Monitor beach behavior and nourish shoreline when required. Beach nourishment materials should be obtained from shoals within the local estuarine system to minimize risk of imbalance of system processes.	GCC (As outlined by Patterson Britton and Partners, 2000)	Ongoing	High
Memorials	All existing official memorials and plaques will be respected and retained within the reserve. Management or final locations of these will be subject to ongoing consultation with relevant stakeholders	GCC	Ongoing	High

LANCE WEBB RESERVE PRECINCT

ISSUE	ACTION	RESPONSIBILITY	TIMING	PRIORITY
Schnapper Road Toilet Block	Remove toilet block and build new facilities near Ferry Road wharf.	GCC	Stage Four	High
Ferry Road	Construct a turning circle at the end of Ferry Road and angular parking on the west side of the road. Plant street trees formally.	GCC	Stage Four	Medium
Ferry Road Wharf	Retain existing wharf and ferry service.	n/a	n/a	n/a
Cycle/Pedestrian Path	Construct the shared cycle/pedestrian path next to the dune vegetation fence line.	GCC	Stage Four	High
Residential Frontage	Build timber paths flush with ground level, connecting residential gates to cycle/pedestrian pathway. Plant a low band (500mm high) of locally indigenous vegetation along residential fence line.	GCC	Stage Four	Medium
Dunes	Reconstruct access stairs. Remove weeds including Coral trees and Lantana. Retain native dune vegetation and rehabilitate with new species to imitate an estuary foreshore system.	GCC	Stage One	High
Vegetation	Remove all weeds and replace with locally indigenous vegetation. Retain all significant large established trees except for large Coral trees. Use ground covers and low shrubs up to 1.5m high on bare dune areas to retain views.	GCC	Stage Two	Medium
Rock Revetment	Undertake an assessment of current structures for effectiveness. Supplementation works	GCC	Stage One	High

	required toward Ferry Road and Town Beach.			
Sand Nourishment	Develop a regular program of works required to maintain the protection zone for adjacent houses, public infrastructure and reserve amenities.	GCC	Stage One	High

TOWN BEACH PRECINCT

ISSUE	ACTION	RESPONSIBILITY	TIMING	PRIORITY
Beach	Retain/reshape dunes and selectively remove, prune and replace vegetation. Construct viewing platforms and access ramps at suitable locations. Build appropriate dune vegetation fence around protected dune areas.	Gosford City Council (GCC)	Stage one	High
Town Centre	Upgrade Picnic Parade and Memorial Avenue to integrate with foreshore design.	GCC	Stage One	High
Picnic Parade Amenities Building	Demolish the existing toilet block. Toilet facilities will be located adjacent to the Ferry Road wharf beach facilities building and the proposed Fast Ferry wharf. Remove rock wall seaward of Picnic Parade toilet block.	GCC	Stage One	High
Beach Facilities Building	Construct a new multi-use building near the existing stormwater drain at Beach Street. This building is to house a café/kiosk, hire facilities and public toilets.	GCC	Stage One	High

FERRY PARK PRECINCT

ISSUE	ACTION	RESPONSIBILITY	TIMING	PRIORITY
Picnic and BBQ Area	Retain existing BBQ and picnic facilities. Install three BBQ pavilions in the Ferry Park precinct.	GCC	Stage Two	Medium
Foreshore Carpark	Remove foreshore carpark to allow for greater open space. Replace with grassed areas, playground, bioswale and 90° angled parking between Beach Street and Bangalow Street.	GCC	Stage Two	High
Foreshore Parking	Replace parallel parking along the foreshore side of The Esplanade with a bicycle track, which is to run the entire length of the site.	GCC	Stage Two /Three	Medium
Fast Ferry	Build a raised zebra crossing at the new Ferry interchange at Bangalow street. Provide parking along The Esplanade for three busses.	GCC/Fast Ships Pty Ltd	On completion of Fast Ferry Terminal Stage Two	High
Stormwater	Construct bioswale adjacent to The Esplanade to filter the road runoff before it enters Brisbane Water.	GCC	Stage Two	High
Stone Sea Wall	Retain existing wall to accommodate the extension of the Beach Street stormwater drain. Construct a timber boardwalk along its length.	GCC	Stage Two	High

SOUTH BEACH PRECINCT

ISSUE	ACTION	RESPONSIBILITY	TIMING	PRIORITY
Kourung Street Boat Ramp	Upgrade existing boat launching facilities, including a new reinforced concrete ramp and build an appropriate sealed vehicle and trailer turning area.	GCC	Stage Three	High
Small Boat Launch	Construct a new boat launching facility for small dinghies adjacent to the Kourung Street ramp	GCC	Stage Three	Medium
Dunes	Build a seating wall adjacent to the shared cycle/pedestrian footpath. Extend dune planting toward water where dune is narrow and build new fencing. Rehabilitate dune vegetation. Introduce new groundcovers such as <i>Hibbertia scandens</i> and <i>Carpobrotus glaucescens</i>	GCC	Stage Three	Medium

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