



MANLY COUNCIL

Manly Ocean Beach Coastline Management Plan



Issue No. 4
March 2008



WorleyParsons
resources & energy


**Patterson Britton
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MANLY COUNCIL

MANLY OCEAN BEACH COASTLINE MANAGEMENT PLAN

Issue No. 4 MARCH 2008

Document Amendment and Approval Record

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Note that the Plan was developed, publicly exhibited and endorsed prior to changes in some legislation

Note: This document is preliminary unless it is approved by a principal of Patterson Britton & Partners.

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DOCUMENT 2: ACTION PLAN



MANLY COUNCIL

Manly Ocean Beach Coastline Management Plan

Support Document



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EXECUTIVE SUMMARY

GENERAL

A Coastline Management Plan (CMP) has been prepared for Manly Ocean Beach to identify issues relevant to future management of the coastline and to identify appropriate management options for each issue. The development of a CMP is identified in Council's Manly Management Plan (2007-2010) and the Manly Sustainability Strategy 2006.

KEY ISSUES AND MANAGEMENT OBJECTIVES

Management objectives for Manly Ocean Beach were established through assessment of the values and significance of the beach and identification of key issues for management. The key issues and management objectives are set out in the table below.

Key Issue	Management Objectives
Beach Erosion and Shoreline Recession	<ul style="list-style-type: none">to manage the beach erosion and shoreline recession hazards now and into the future in a manner that:<ul style="list-style-type: none">maintains or improves beach amenityensures an acceptable risk of damage to beachfront assets; andto take into account the potential for future climate change to affect the magnitude of coastline hazards.
Water Quality	<ul style="list-style-type: none">to ensure water quality meets the community's expectations and provides water quality suitable for swimming and fishing.
Access	<ul style="list-style-type: none">to improve and control access for pedestrians, cyclists and service vehicles, minimising conflicts and negative impacts; andto improve access for people with disabilities.
Recreational Activities	<ul style="list-style-type: none">to provide for the continuing, enjoyable and sustainable use of Manly Ocean Beach for a range of recreation and tourism activities, minimising the impact of these activities on the environment by responding to the area's carrying capacity and patterns of use; andto recognise the place of Manly Ocean Beach as an iconic tourism and recreation attraction.
Safety	<ul style="list-style-type: none">to minimise the risks to human safety from the use of and access to the coastline.
Aquatic Ecology	<ul style="list-style-type: none">to ensure activities at Manly Ocean Beach are carried out in a manner that maintains or improves the ecological condition of aquatic habitats.
Aboriginal Heritage	<ul style="list-style-type: none">to maintain and protect the indigenous heritage values of Manly Ocean Beach.

Cont'd

Key Issue	Management Objectives
Historic Heritage	<ul style="list-style-type: none">• to manage and protect the tangible historic heritage assets of Manly Ocean Beach and its immediate surrounds; and• to acknowledge the place of Manly Ocean Beach in the Australian identity and popular beach culture.
Aesthetics	<ul style="list-style-type: none">• to maintain the iconic or symbolic key visual elements of the beachscape of Manly Ocean Beach – notably the Norfolk Island Pines, promenade, long wide arc of largely uninterrupted sandy beach, and major vistas; and,• to reduce the adverse impacts of features that detract from the visual quality of Manly Ocean Beach, and to enhance the area’s aesthetic appeal.

MANAGEMENT OPTIONS AND RECOMMENDATIONS

The focus was on identification of realistic management options to address the key issues. Options that were unlikely to satisfy the management objectives of the CMP were quickly dismissed. Issues were grouped under ‘study area wide’ issues and ‘specific area’ issues, as noted below:

Study Area Wide Issues	Specific Area Issues
<ul style="list-style-type: none">• beach erosion• shoreline recession• coastal inundation• climate change• recreation and competing beach user groups• waste management and beach raking practices• aquatic ecology• water quality• conservation items of heritage significance• aesthetics	<ul style="list-style-type: none">• Manly Lagoon entrance• stormwater outlets

The management options recommended in the CMP to address a number of the key issues are summarised below:

Key Issue	Recommended Management Option
<ul style="list-style-type: none">beach erosion	<ul style="list-style-type: none">implementation of an Emergency Action Plan (EAP) to deal with the erosion hazard when it occurs and where it occurs along the beach (the EAP is included in a stand-alone report);investigation of structural measures to stabilise the toe of the seawall and allow removal of rock aprons, particularly south of the Corso.
<ul style="list-style-type: none">shoreline recession	<ul style="list-style-type: none">beach nourishment, ideally involving use of an offshore source of sand, combined with ongoing implementation of the EAP.
<ul style="list-style-type: none">inundation	<ul style="list-style-type: none">monitoring of sea level rise, measuring of wave runup levels at times of storms and undertaking repairs to any overtopping as and when required. Consider raising coping levels, or create coping, should the risk of overtopping become unacceptable.
<ul style="list-style-type: none">climate change	<ul style="list-style-type: none">monitoring of sea level rise and other climate change factors;beach nourishment to address shoreline recession due to sea level rise;investigation of groundwater behaviour.
<ul style="list-style-type: none">recreation	<ul style="list-style-type: none">numerous strategies, including supporting and enhancing the existing informal/self-regulating dispersal of differing uses and visitor groups along the beach and foreshore.
<ul style="list-style-type: none">water quality	<ul style="list-style-type: none">numerous strategies, including initiatives and measures to manage the quantity and quality of stormwater flows to the beach, such as rainwater tanks, detention and infiltration systems, and gross pollutant traps.
<ul style="list-style-type: none">aesthetics	<ul style="list-style-type: none">numerous strategies, including maintenance and enhancement of key visual elements of Manly Ocean Beach, specifically the Norfolk Island Pines, promenade and the long wide area of largely uninterrupted sandy beach.
<ul style="list-style-type: none">Manly Lagoon entrance	<ul style="list-style-type: none">continuation of current management regimes in regard to help removal from the low flow pipes, operation of the flood outlet channel and sediment removal near Queenscliff Bridge.
<ul style="list-style-type: none">stormwater outlets	<ul style="list-style-type: none">a number of strategies including stormwater volume reduction measures in the catchment, investigation of diversion and shortening options, and detailed hydraulic analysis including consideration of sea level rise.

ACTION PLAN

A specific Action Plan has been developed for the key issues which identifies recommendations/strategies, priorities, responsibilities for implementation, and funding opportunities.

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1 INTRODUCTION

1.1 INTRODUCTION TO COASTLINE MANAGEMENT IN MANLY

The Manly Ocean Beach Coastline Management Plan (CMP) has been developed in response to legislative requirements and community issues in accordance with current best practice for the management of coastal and estuary foreshores. The development of Coastline Management Plans is also identified in Council's Manly Management Plan 2007-2010 and Sustainability Strategy 2006.

This CMP is intended to be a strategic plan for the study area with a long-term time frame of 10-20 years (with appropriate revisions). Implementation of the CMP will involve considerable expenditure and therefore implementation must have regard to resource availability and to other priorities of Council and the other agencies identified in the Action Plan.

The CMP was developed to identify issues relevant to management of the coastline and to identify appropriate management options for each issue identified.

While Council does not have management responsibility or jurisdiction for a number of the issues considered in this CMP, Council sought to liaise with relevant state government agencies, responsible for each of those issues during the CMP development. Please note that this CMP may not reflect the thoughts, ideas and perspective of those government agencies, however, Council will be seeking endorsement of the CMP and a commitment to its implementation.

1.2 STUDY AREA

The study area lies between Manly Lagoon entrance and Manly Surf Life Saving Club (SLSC) extending both seaward and landward from the shoreline (refer **Figure 1.1**). The study area is dominated by Manly Ocean Beach, the adjoining parklands and promenade immediately behind the beach. The beach is separated from adjacent development by a constructed seawall along its full extent. The parks and reserves behind the beach have been largely modified from the natural landscape and are characterised by landscaping, a public pedestrian pathway, cycleway, surf pavilions and amenities, public shelters, picnic tables and play equipment.

Land and aquatic areas outside the immediate study area boundaries, which impact on the biophysical or social environment within the study area, have also been considered in the development of the CMP in order to establish holistic management strategies.

A description of the area's values and what the community would like the area to look like and be like in the future is detailed in **Section 1.8**.

FIGURE 1.1



1.3 DEVELOPMENT OF THE MANLY COASTLINE MANAGEMENT PLAN

1.3.1 General

The NSW Coastline Management Manual (1990) and the NSW Hazard Policy (1988) were introduced to provide a management system for local councils to make balanced, merit based decisions. They set out the Government's requirements and provide information for coastal processes, hazards and hazard management measures. The management system uses an integrated planning approach that incorporates the management of coastline hazards with social, economic, aesthetic, recreational and ecological factors.

The steps involved in formulating a CMP are summarised in **Figure 1.2** and include:

- establishing a coastline management committee. The Manly Coastline Management Committee has been formed under the stewardship of Manly Council and includes representatives of relevant government departments, environmental groups and the local community;
- identifying the type, nature and significance of the various coastal processes and hazards that affect the area of interest. A Coastline Hazard Definition Study for Manly Ocean Beach was undertaken by Patterson Britton & Partners (2003) on behalf of Manly Council;
- undertaking a coastline management study including the identification of management options with regards to social, economic, aesthetic, recreational and ecological issues;
- preparing a CMP that consists of the best combination of options for dealing with the various social, economic, aesthetic, recreational, ecological and hazard issues and problems; and,
- developing an Action Plan to implement the management options.

1.3.2 Committees

As noted above, the NSW Coastline Management Manual (1990) identifies the establishment of a Coastline Management Committee as the initial stage in the preparation of a CMP.

The Manly Coastline Management Committee, under the stewardship of Manly Council, has overseen the formulation of the CMP for Manly Ocean Beach. The Committee includes Council Officers and representatives of relevant government departments, environmental groups, key stakeholders and the local community. The relevant government departments include:

- State Emergency Services (SES);
- Department of Environment and Climate Change (DECC);
- NSW Maritime; and,
- Department of Primary Industries (DPI).

The Manly Coastline Management Committee is being guided by the NSW Government's *Coastal Protection Act* (incorporating the *Coastal Protection Amendment Act 2002*), *Coastline Hazard Policy 1988*, *Coastline Management Manual 1990*, *NSW Coastal Policy 1997*, *Sydney Regional Coastal Management Strategy 1998* and *State Environmental Planning Policy No 71 – Coastal Protection*. The *Coastline Management Manual* documents the Government's *Coastline Hazard Policy* and outlines a structured management process leading to the adoption and implementation of a CMP.

The Committee has met at strategic milestones throughout the development of the CMP and provided information as requested by the project manager.

1.3.3 Community Consultation

The program of stakeholder and community consultation undertaken for the study has involved the following key tasks:

- consultation with key Council officers;
- consultation with the Manly Ocean Beach Coastline Management Committee;
- identification and development of a mailing list of key stakeholders;
- consultation with Manly's Precinct Committees;
- a Precinct Forum Evening;
- a Community Information Day; and,
- internal and external stakeholder meetings.

The key community consultation activities were advertised in the *Manly Daily* and *Precinct newsletters*.

1.3.4 Development of Coastline Management Study

A Manly Ocean Beach Coastline Management Study was undertaken to identify issues and set objectives to be addressed by the CMP. The study also provides a general review of the relevant planning systems and management frameworks relevant to the study area, which have been considered when developing management options for inclusion in the CMP.

A range of studies were carried out including aesthetic and ecological factors, recreational amenity, social and economic studies, and risk and hazard assessment as input into the *Coastline Management Study*.

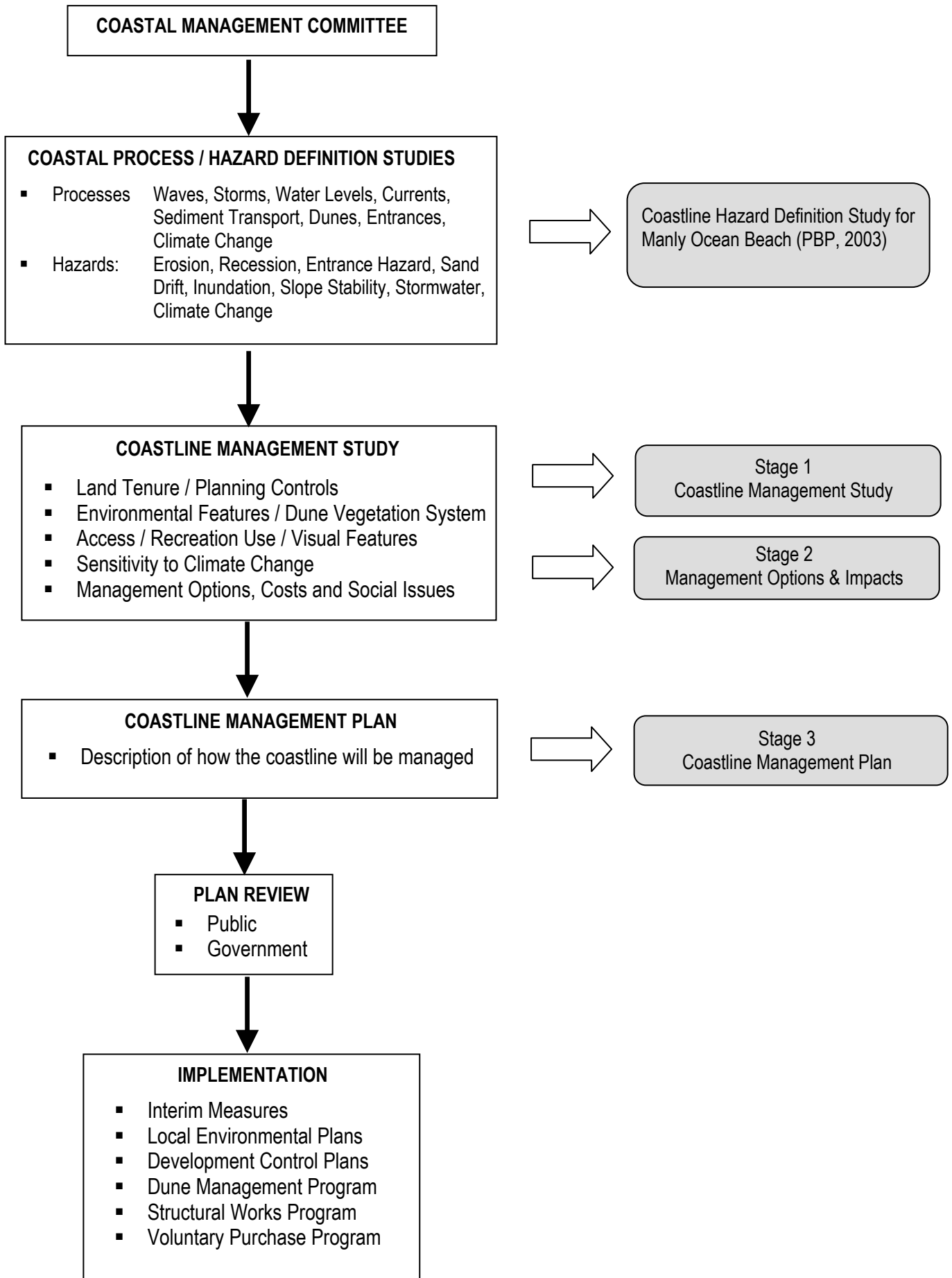
1.3.5 Approval from Department of Lands

The study area includes community land owned by the NSW Department of Lands, which is leased to Council. The CMP will be forwarded to the Department of Lands for comment prior to public exhibition, and the Department of Lands endorsement of the final Plan will be sought prior to implementation of the CMP.

1.3.6 Plan Exhibition

The draft Manly Ocean Beach CMP was placed on public exhibition for comment for a period of four weeks between 3 September 2007 and 1 October 2007.

FIGURE 1.2



Reference: Coastline Management Manual (NSW Government, 1990)

The draft Manly Ocean Beach CMP and EAP were placed on public exhibition at the following locations:

- Manly Environment Centre;
- Manly Library;
- Manly Council's Web-page; and
- Manly Council Offices.

Exhibition of the plans was advertised in the Manly Daily, on Council's Web-page and via the Community Precincts.

1.3.7 Adoption of the Plan

Following the public exhibition period, Council considered those submissions received. Following subsequent amendments of the CMP, Council adopted the CMP on 11 February 2008.

1.4 PLAN OBJECTIVES

The overall objective of the CMP is to develop a strategy to guide the sustainable management of the area now and in the future. Management objectives have been identified through the assessment of the values and significance of Manly Ocean Beach and the identification of key issues for the management of Manly Ocean Beach.

The CMP is being developed to meet the objectives of the *Coastal Protection Act 1979*, NSW Coastline Hazard Policy 1988 and the NSW Coastal Policy 1997. The objectives of the CMP have also been developed having regard to the objectives of the following acts and management plans to ensure consistency between existing and future management objectives for Manly Ocean Beach:

- *Crown Lands Act 1989*;
- *Local Government Act 1993*;
- *Environmental Planning and Assessment Act 1979*;
- Manly Council Plan of Management for Community Lands; and
- Plan of Management for Manly Ocean Beach.

The management objectives for Manly Ocean Beach are set out below.

Beach Erosion and Shoreline Recession

- to manage the beach erosion and shoreline recession hazards now and into the future in a manner that:
 - maintains or improves beach amenity
 - ensures an acceptable risk of damage to beachfront assets
- to take into account the potential for future climate change to affect the magnitude of coastline hazards

Water Quality

- to ensure water quality meets the community's expectations and provides water quality suitable for swimming and fishing.

Access

- to improve and control access for pedestrians, cyclists and service vehicles, minimising conflicts and negative impacts; and
- to improve access for people with disabilities.

Recreational Activities

- to provide for the continuing, enjoyable and sustainable use of Manly Ocean Beach for a range of recreation and tourism activities, minimising the impact of these activities on the environment by responding to the area's carrying capacity and patterns of use; and,
- to recognise the place of Manly Ocean Beach as an iconic tourism and recreation attraction.

Safety

- to minimise the risks to human safety from the use of and access to the coastline

Aquatic ecology

- to ensure activities at Manly Ocean Beach are carried out in a manner that maintains or improves the ecological condition of aquatic habitats.

Aboriginal Heritage

- to maintain and protect the indigenous heritage values of Manly Ocean Beach.

Historic Heritage

- to manage and protect the tangible historic heritage assets of Manly Ocean Beach and its immediate surrounds; and
- to acknowledge the place of Manly Ocean Beach in the Australian identity and popular beach culture.

Aesthetics

- to maintain the iconic or symbolic key visual elements of the beachscape of Manly Ocean Beach – notably the Norfolk Island Pines, promenade, long wide arc of largely uninterrupted sandy beach, and major vistas; and,
- to reduce the adverse impacts of features that detract from the visual quality of Manly Ocean Beach, and to enhance the area's aesthetic appeal

1.5 PLANNING FRAMEWORK

The planning framework for Manly's coastline has been described in a separate document (refer **Appendix A**). The document describes the planning framework in which the CMP was prepared and in which it will be implemented.

For example, the overall introduction outlines requirements for community land management under the *Local Government Act 1993*. It also identifies the process for coastal management as detailed in the State Government's Coastline Management Manual.

The document also outlines the management responsibilities of a variety of government agencies.

1.6 HOW TO USE THIS PLAN

The Manly Ocean Beach CMP consists of two parts, the **Support Document** and the **Action Plan**. The Support Document provides the framework for preparing the management recommendations, which are outlined in the Action Plan.

1.7 COUNCIL'S MANAGEMENT PLAN & BUDGET

The CMP has a direct relationship with Manly Councils Management Plan (2007-2010) through the performance targets and management recommendations (strategies) identified. The management recommendations identified to achieve the agreed performance targets shall be integrated into Council's Management Plan so that appropriate monetary and staff resources shall be allocated to achieve this Plan's performance targets.

1.8 VALUES

In making decisions about the future use and management of Manly Ocean Beach, it was important to gain an appreciation of the multiple values of the area and what the community would like the area to look like and be like in the future. As part of the community consultation for the study, and to facilitate stakeholder and community input and comment for the first stage of the study, a Community Information Day was held on Sunday 28th August 2005. A Community Comment Form was prepared and distributed to people who attended the information day with additional copies distributed to key stakeholders

The values of Manly Ocean Beach as a whole and its special individual features listed in **Table 1.1** were identified by the community and key stakeholders.

The following values and significance of Manly Ocean Beach were identified from:

- literature reviews undertaken for specialist studies for the Manly Ocean Beach Coastline Management Study;
- discussions held with relevant Council and State Agency officers; and,
- local knowledge.

Coastal Ecology

- key habitats include: dry upper beach; swash zone; surf zone; and near shore zone in deeper water
- four main groups of biota include: infauna and epifauna; plankton; fish; and birds
- no marine vegetation and no threatened or protected species, populations or ecological communities occur in habitats on Manly Ocean Beach
- some listed threatened or protected species may occur in adjacent habitats, particularly Cabbage Tree Bay Aquatic Reserve

Table 1.1 Summary of values from Community Comment Form

VALUES	Number of responses
Natural Values	
Clean beach and water	11
Green grass and trees	4
The visual / natural aspects – location, views, beauty	4
Ocean environment	1
A naturally beautiful place that should be protected	1
Ability to watch dolphins catching a wave	1
Lots of sand, no rocks	1
Protection of aquatic life	1
Large beach	1
The beach is the reason I live in Manly	1
Social or Community Values	
Open space	4
Unique character	3
Relaxed family fun and family atmosphere	3
Esplanade walk along seawall and other walkways	3
Our backyard and a place of serenity and peace	2
Place to relax away from work	2
Iconic beach with great surf and associated surf scene, which is great to come to.	2
A place to walk, swim, have a picnic	2
Cost-free access and space	2
Well maintained beach front including children's play equipment, grassed areas, clean benches and picnic tables.	1
The beach and the cove / all the activities associated with the beach and the cove.	1
The community coming together around the beach and the cove – at a yacht club, surf club, café on the Steyne, bar on the wharf etc.	1
Retention of historical heritage while being modern for locals and visitors	1
A place of concentration and celebration of life due to the combination of people and nature together in a central place.	1
A well preserved swimming/surfing beach	1
A place where people can enjoy themselves	1
Everything about Manly Ocean Beach – it is an important part of my life	1
Protection for all future users so they can also enjoy the benefits	1
Safe waters and beach	1
Easily accessible to enter water	1
Showers	1
Ability to watch people enjoying the sand, the surf, cafes, the promenade and bike track.	1
Free volleyball courts	1
Electric nature of the place	1
Cycleways	1
Variety of people	1
Bushland track above The Bower / Shelly Beach	1
Seaside enclave surrounded by water, beaches, wildlife and nature, combined with café and beach culture.	1
Economic Values	
Surf lifesaving clubs – ability to participate in these clubs and also their valuable function.	4
Good mix of cafes, bars, restaurants open day and night, attracting visitors and locals.	1

Indigenous Heritage

- Manly Ocean Beach is part of the lands traditionally occupied by the Gayamaygal Aboriginal Clan
- the area would have in the past contained an abundant assemblage of the evidence of thousands of years of occupation and use by Aboriginal people
- the district would also be expected to have had a rich layering of cultural and spiritual values or traditions
- no recorded sites remain today within the study area although this does not preclude the occurrence of unrecorded Aboriginal sites within the study area

Historic Heritage

- “Manly Beach and Surrounds” was listed on the Register of the National Estate in 1999 and recognises the Beach’s cultural associations for surfing as well as beach recreation and scenery
- the entire beach front reserve along Manly Ocean Beach – Merrett Park and The Steyne – is listed by the Manly Local Environmental Plan (LEP) as a significant landscape feature
- also listed in the LEP are:
 - Queenscliff Surf Life Saving Club
 - North Steyne Surf Life Saving Club; and
 - public shelters

Aesthetics

- the wide sandy beach - the stage for much of the beach culture and events
- the surf zone - which is in constant motion and provides a highly variable setting for the range of active surf pursuits, from relaxed to highly challenging activities
- the rows of Norfolk Island Pines – presenting a very strong green element between the open space of the beach and the highly urban environment to the west
- the seawall and promenade – despite the varied built form and height of the seawall, they unify the beach from north to south while separating the promenade from the sand and surf
- the fringing parklands of formalised and landscaped open spaces

Recreation – Surf Zone

- more popular uses - surfing, body/boogie boarding, body surfing, swimming, paddling and water play, surf life saving and nipper activities, surf schools and surf competitions
- board riders cluster at varying location along the surf zone according to wave quality
- scuba diving and snorkeling occurs especially at southern end near Cabbage Tree Bay Aquatic Reserve
- swimmer and paddlers use entire beach with higher concentrations in patrolled sections

Recreation – Sandy Beach

- more popular uses - surf life saving and nipper activities, surf schools, surf competitions, sunbathing, socialising, sand play, jogging, walking, beach volley ball
- beach goers tend to congregate in front of the three surf life saving clubs
- the southern section is typically more heavily used as The Corso has the effect of funnelling visitors
- beach volley ball courts create a pinch point leaving a comparatively small strip of sand

- overall the beach makes a transition from a busy, vibrant, strongly tourist area in the south to a quieter local beach in the north at Queenscliff

Recreation – Promenade and fringing Parklands

- more popular uses – sightseeing and tour groups, walking, jogging, socialising, picnicking, sitting, relaxing, reading, bicycling, roller-blading, skateboarding
- the more hardened and developed southern section receives the highest level of tourism and visitor use
- the southern section is also well patronised at night
- to the north the promenade and parklands become increasingly less developed and formalised and widen considerable north of North Steyne SLSC
- Norfolk Pines, SLSC and visitor facilities located along the promenade

1.9 IMPLEMENTATION, REVIEW & EVALUATION

1.9.1 Implementation

Implementation of the Manly Ocean Beach CMP is identified in the Manly Sustainability Strategy (2006) and is included in Council's Manly Management Plan (2007-2010).

Whilst Council is not responsible for all areas and issues identified in the CMP, implementation of the recommendations contained in the Plan will rely heavily on an integrated approach by the relevant key stakeholders agencies, which have been involved in the development of the Plan.

Manly Council will be seeking the endorsement of all responsible agencies to adopt and implement this plan.

Implementation will be assisted by the Manly Coastline Management Committee, under the stewardship of Manly Council.

Funding sources for implementation of the Plan are listed below in **Section 1.9.3** and detailed in Council's "Coastline Management Plans: Introduction and Planning Framework document".

1.9.2 Review

The Manly Ocean Beach Coastline Management Plan Support Document is to be reviewed every five (5) years and updated on an as needs basis.

The Manly Ocean Beach Coastline Management Plan Action Plan is to be reviewed every two (2) years, or as required, to ensure that the Plans' strategies and priorities are kept up-to-date.

1.9.3 Funding Sources

There are a number of possible options for funding of management recommendations (strategies) identified by this Plan. These include but are not limited to:

- Council's Environment Levy (subject to a budget bid process);
- Council's General Revenue Budget (subject to a budget bid process);
- State Government's Coastal Management Program (50% subsidy funding subject to a submission process);
- State Government's Estuary Management program (50% subsidy funding subject to a submission process);
- State Government's Floodplain Management program (50% subsidy funding subject to a submission process);
- Department of Lands - Public Reserve Management Fund (Council must be appointed as Trust Manager to be eligible); and
- Natural Heritage Trust.

1.9.4 Evaluation

Evaluation of the effectiveness of recommendations identified in the Action Plan should be undertaken to determine whether the vision (to be established), the Plan's objectives performance targets and values have been achieved.

In order to evaluate the CMP, in particular the effectiveness of the Action Plan's management recommendations in achieving the Plan's objectives, it is essential that specific and measurable performance targets and indicators be established from the start. Therefore the initial implementation of the Plan shall involve the establishment of a set of indicators (performance measures), which can be used in the evaluations of the CMP. The indicators should be:

- simple;
- measurable;
- achievable;
- reliable; and
- timely.

Evaluation is to be undertaken every 2 years and a full review every 5 years.

2 LAND OWNERSHIP, ZONING AND CATEGORISATION

2.1 LAND OWNERSHIP

Land ownership details for the study area, provided by Manly Council's Land and Property GIS Officer are shown on **Figure 2.1**.

As indicated by **Figure 2.1**, there is a mix of land tenure within the study area including:

- Manly Council – Community Land;
- Crown Land – Park; and
- Crown Land - Public Reserve.

2.2 LAND CATEGORISATION

Under the *NSW Local Government Act 1993* (LG Act) a Council must classify Public Land as either 'community' or 'operational' land. Operational land has no special restrictions other than those that may apply to any piece of land. However, the use of community land must be in accordance with an adopted Plan of Management.

Manly Council has adopted an overarching Plan of Management for Community Lands (1996) and has also adopted a Plan of Management for Manly Ocean Beach (2002), which addresses the legislative requirements for the management of Community Land and, in accordance with the Coastal Policy 1997, also includes the management of Crown Land within the foreshore study area in order to streamline the management of public open space along Manly Ocean Beach.

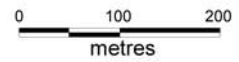
It is understood that it is Council's intention that the CMP and the adopted Plan of Management for Manly Ocean Beach (2002) will remain as separate documents, together co-governing the future management of the study area. The CMP has therefore been developed so as to support the values, objectives and actions identified in the adopted Plan of Management.

2.2.1 Crown Land

The *Crown Lands Act 1989* (CL Act) governs the planning, management and use of Crown lands for a range of public purposes. Crown Land must be used and managed in accordance with the following principles, as established by the CL Act:

- that environmental protection principles be observed in relation to the managed 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;

FIGURE 2.1



Legend	
Council owned: community land	█
Council owned: operational land	█
Crown land: crown reserve	█
Crown land: public park	█

- 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, licenced or otherwise dealt with in the best interests of the State consistent with the above principles.

The Coastal Crown Lands Policy 1991 also applies to the study area. The CMP is to be consistent with the following objectives

- conserve and maintain the intrinsic environmental and cultural qualities of coastal Crown Land;
- retain all coastal Crown Lands of an environmentally sensitive nature and/or required for public purpose, in public ownership;
- optimise public access and use of coastal Crown Lands;
- provide Crown Lands, as appropriate, for recreation, tourism, residential and commercial coastal development with due regard to the nature and consequences of coastal processes;
- encourage the rehabilitation of degraded coastal lands; and
- continue to acquire significant coastal lands for future public use.

2.2.2 Community Land

The Plan of Management for Manly Ocean Beach is required under the LG Act to further categorise Community Land. **Table 2.1** summarises the categorisation of public open space land within the study area as established by the Plan of Management.

Any leases, licences and other estates relating to community land must be expressly authorised by the Plan of Management (PoM) for that land, which is required to specify any purposes for which a lease, licence or other estate may be granted. The Plan of Management for Manly Ocean Beach (2002) has expressly authorised the granting of leases, licences and other estates for uses permissible pursuant to the Manly LEP 1988 noting that the land is zoned 6(a) open space. In order to determine whether a use is permissible reference should be made to the objectives of the 6(a) open space zone and also the development table in clause 10 of the Manly LEP, as summarised in **Table 2.2**. Under the LG Act no lease, licence or other estate may exceed a period of 21 years.

The Plan of Management also authorises the granting of a lease, licence or other estate on community land that has been categorised within the study area so long as the use is compatible with the core objectives for that land category (refer to **Table 2.1**). The PoM, more specifically, provides for the lease of the Visitor Information Centre for its commercial use as a 'refreshment room' in addition to other uses compatible with the core objectives for the land category.

2.2.3 Operational Land

No areas of Public – Operational Land under Manly Council's Ownership are located within the study area.

Table 2.1 Categorisation of Community Land

Area	Category	Core Objectives ¹
The Ocean Beach (including all land from Lagoon Park east of North Steyne to the natural rocky point adjacent to the Manly SLSC)	Cultural Significance	To retain and enhance the cultural significance of the area (namely its Aboriginal aesthetic, archaeological, historical, technical or research or social significance) for past, present or future generations by the active use of conservation methods. Those conservation methods may include any or all of the following methods:- <ul style="list-style-type: none"> • The continuous protective care and maintenance of the physical material of the land or the context and setting of the area of cultural significance; • The restoration of land, that is, the returning of the existing physical material of the land to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material; • The reconstruction of the land, that is, the returning of the land as nearly as possible to a known earlier state; • The adaptive reuse of the land, that is, the enhancement or reinforcement of the cultural significance of the land by the introduction of sympathetic alterations or additions to allow compatible uses (that is, uses that involve no changes to the cultural significance of the physical material of the area, or uses that involve changes that require a minimum impact); and • The preservation of the land, that is, the maintenance of the physical material of the land in its existing state and the retardation of deterioration of the land.
Three Surf Pavilions and the Former Visitor Information Centre	General Community Use	To promote, encourage and provide for the use of the land, and to provide facilities on the land, to meet the current and future needs of the local community and of the wider public: <ul style="list-style-type: none"> • In relation to public recreation and the physical, cultural, social and intellectual welfare or development of individual members of the public; and • In relation to purposes for which a lease, licence or other estate may be granted in respect of the land (other than the provision of public utilities and works associated with or ancillary to public utilities).
The beach between mean high water mark and the seawall	Natural Area - Foreshore	<ul style="list-style-type: none"> • To conserve bio-diversity and maintain eco-system function in respect of the land, or the feature or habitat in respect of which the land is categorised as a natural area; • To maintain the land, or that feature or habitat, in its natural state and setting; • To provide for community use of land access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion; • To assist in and facilitate the implementation of any provisions restructuring the use and management of the land that are set out in a recovery plan or threat abatement plan prepared under the Threatened Species Conservation Act 1995 or the Fisheries Management Act 1994. • To maintain the foreshore as a transition area between the aquatic and the terrestrial environment, and to protect and enhance all functions associated with the foreshores' role as a transition area; and • To facilitate the ecologically sustainable use of the foreshore, and to mitigate impact on the foreshore by community use.
All remaining areas within the study area	Park	<ul style="list-style-type: none"> • To encourage, promote and facilitate recreational, cultural, social and educational pastimes and activities; • To provide for passive recreational activities or pastimes and for the casual playing of games; and • To improve the land in such a way as to promote and facilitate its use to achieve the other core objectives for its management.

¹ These Core Objectives are applied by the *Local Government Act 1993* and can not be changed unless the land is re-categorised.

Table 2.2 Current Leases, Licences and Other Estates – Manly Ocean Beach Open Space Lands

Land	Lease / Licence / Other Estate	Lease Details
Reserve (South Steyne) 5120-3000 Community Land	Leased to Manly Surf Life Saving Club	Lease of Manly Surf Pavilion (ie: South Steyne) from 14 February 2005 to 13 February 2025
Reserve (South Steyne) 4156-3000 Community Land	Leased to Manly Surf Life Saving Club	Lease of Manly Surf Pavilion (ie: South Steyne) from 14 February 2005 to 13 February 2025
Reserve (Ashburner Street) 2801/728431 Crown Reserve	Leased to Manly Surf Life Saving Club	Lease of Manly Surf Pavilion (ie: South Steyne) from 14 February 2005 to 13 February 2025
North Steyne Reserve 7183/1074329 Community Land	Lease to North Steyne Surf Life Saving Club	Lease of North Steyne Surf Pavilion from 17 March 1999 to 17 March 2009
Merrett Park 7098/1077174 Crown Park	Lease to Queenscliff Surf Life Saving Club	Lease of Queenscliff Surf Pavilion from 17 March 1999 to 17 March 2009
North Steyne Reserve	Lease to Excell Bistro Pty Ltd for the operation of the Manly Ocean Beach House	Lease of the former Visitor Information Centre for a period of 10 years, expiring in December 2011.
Manly Ocean Beach	Beach Licence	Licence for the Use of the Beach Volleyball Courts from October 2005 to October 2009
Manly Ocean Beach	Beach Licence	Licence for the Use of Manly Ocean Beach to operate the Learn to Surf Program from October 2005 to October 2009
Manly Ocean Beach	Beach Licence	Licence for the Use of Manly Ocean Beach to operate the Surf Education Awareness Program from October 2005 to October 2009
Manly Ocean Beach	Beach Licence	Licence for the Use of Manly Ocean Beach to operate a Beach Equipment Hire venture from October 2005 to October 2009
North Steyne Reserve	Beach Licence	Licence for the Use of North Steyne Reserve to operate a Beach Lockers Hire venture from October 2005 to October 2009

2.3 LEASES, LICENCES & OTHER ESTATES

Existing leases, licences and other estates within the study area are listed in **Table 2.2**.

2.4 EVENTS

In addition to Leases and Licences, Council approves beach events. Council's Events Approval Policy allows in the order of 40 events per annum, and no more than one major event each month. These numbers have been reduced in the recent past to maintain residential amenity and reduce the impact on non-structured beach users. Council's Events Approval Policy does not permit commercial signage or products promotion.

2.5 LAND ZONING

The *Manly Local Environmental Plan 1988* (Manly LEP) is the main statutory control over local development within the Manly Local Government Area. The Plan applies to all land within the Municipality of Manly. The boundary of the LEP extends 1 km seaward of Manly Ocean Beach.

The Manly LEP provides broad controls for environmental planning. It is supported by more detailed planning provisions identified in Council's Development Control Plans (DCPs).

The LEP also identifies Items of Environmental Heritage, Environmentally Sensitive Areas, Foreshore Scenic Protection Areas and acid Sulfate Soils.

The Manly LEP establishes land use zones and requires general restrictions on development within each of those zones. Land within the study area is zoned by the Manly LEP as 6(a) open space as shown on **Figure 2.2**. Land adjacent to the study area is primarily zoned residential with some areas around The Corso zoned business or special use.

2.5.1 Zone 6(a) Open Space

The objectives of the 6(a) zone are as follows:

- a) to ensure there is provision of adequate open space areas to meet the needs of all residents and provide opportunities to enhance the total environmental quality of the Municipality;
- b) to encourage a diversity of recreation activities suitable for youths and adults;
- c) to identify, protect and conserve land which is environmentally sensitive, visually exposed to the waters of Middle Harbour, North Harbour and the Pacific Ocean and of natural or aesthetic significance at the water's edge;
- d) to facilitate access to open areas, particularly along the foreshore, to achieve desired environmental, social and recreation benefits;
- e) to conserve the landscape, particularly at the foreshore and visually exposed locations, while allowing recreational use of those areas; and,
- f) to identify areas which:
 - i. in the case of areas shown unhatched on the map are now used for open space purposes, and
 - ii. in the case of land shown hatched on the map are proposed for open space purposes.

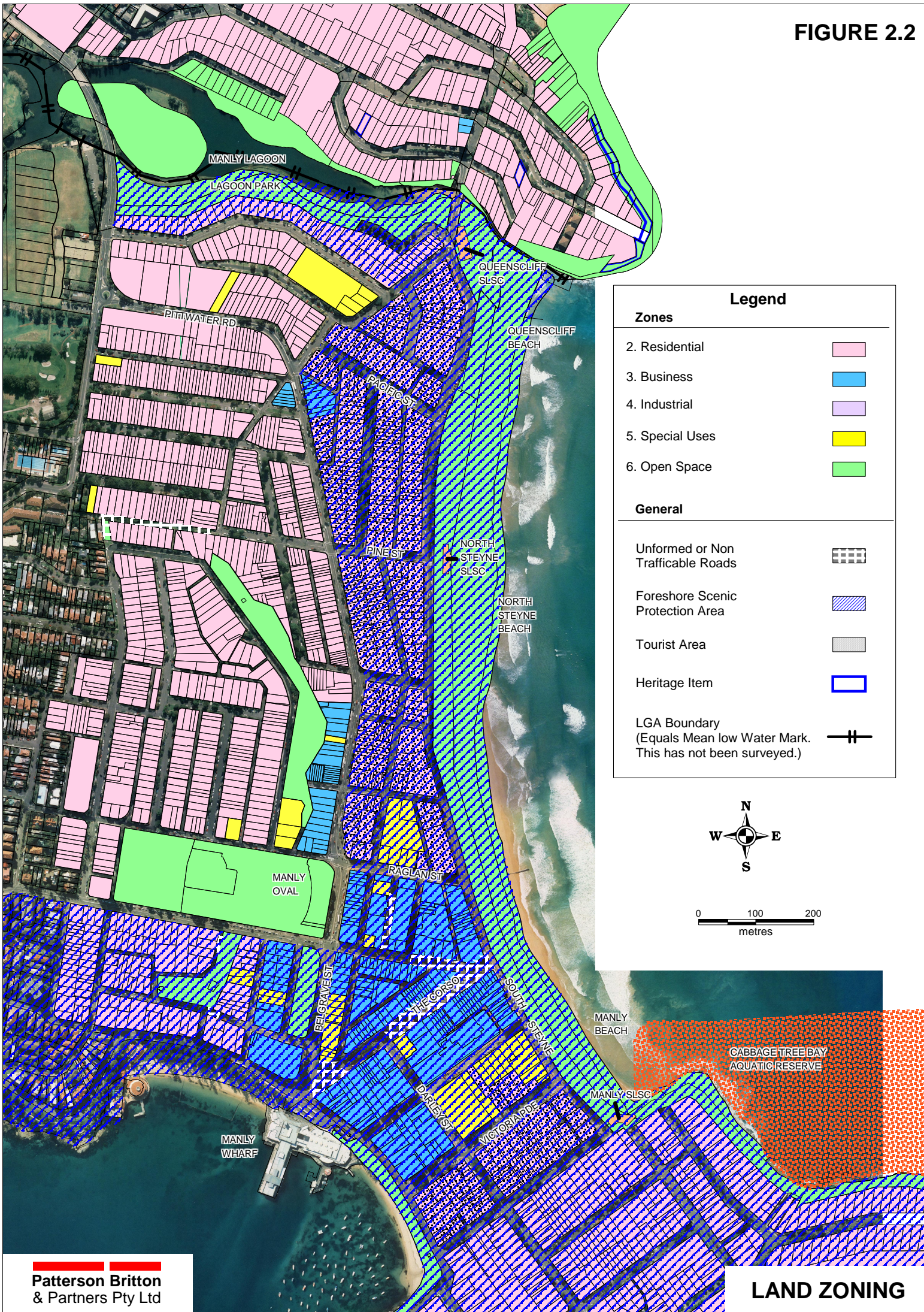
Within this zone works for the purposes of landscaping, gardening or bushfire hazard reduction are permitted without development consent.

Refer to the LEP for uses requiring development consent, prohibited uses, exempt development and complying development.

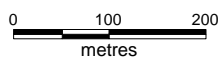
2.5.2 Heritage Provisions

Manly LEP 1988 identifies the following list of items of heritage significance within the study area:

FIGURE 2.2



Legend	
Zones	
2. Residential	
3. Business	
4. Industrial	
5. Special Uses	
6. Open Space	
General	
Unformed or Non Trafficable Roads	
Foreshore Scenic Protection Area	
Tourist Area	
Heritage Item	
LGA Boundary (Equals Mean low Water Mark. This has not been surveyed.)	



- North Steyne Surf Club
- Queenscliff Surf Club
- Public shelters at South Steyne
- North and South Steyne Beach Reserves (Merrett Park and The Steyne)
- The Ocean Foreshore

2.5.3 Environmentally Sensitive Areas

Manly's LEP (1988) (Amendment 34. Exempt and Complying Development) identifies Environmentally Sensitive Areas. These areas are parts of the Manly LGA where development or works are required to be sensitive to actual or potential environmental conditions. Development is not complying development if it is carried out within an environmentally sensitive area. The whole of the study area falls within an environmentally sensitive area.

2.5.4 Foreshore Scenic Protection Area

A Foreshore Scenic Protection Area has been established by the Manly LEP. As identified in **Figure 2.2**, all of the land within the CMP study area forms part of the Manly Foreshore Scenic Protection Area.

The Manly LEP states that a Consent Authority shall not grant consent unless it is satisfied that proposed development requiring consent will not have a detrimental effect on the amenity of the Foreshore Scenic Protection Area.

2.5.5 Development for Certain Additional Purposes

The Manly LEP refers to land listed in Schedule 5 of the LEP, with regard to specific development. Land being 93–95 North Steyne is identified in Schedule 5.

Nothing in the Manly LEP prevents the carrying out of development on that land for the following purposes:

- the hire and sale of goods associated with recreational activities on the Manly Ocean Beach and beach front reserve in shops on the ground floor of the building situated on the land;
- subject to any specified conditions of consent.

2.5.6 Acid Sulphate Soils

The Manly LEP refers to development on land identified on Acid Sulfate Soils (ASS). Map 5 of the Manly LEP identifies ASS by various Classes. The study area is identified on Map 5 as Class 4 or Class 5 land. Unless otherwise indicated by Council, consent is required for the carrying out of works² described in **Table 2.3** on land of each relevant class.

² Works are defined by the Manly LEP as

- (a) any disturbance of more than one [1] tonne of soil (such as occurs in carrying out construction and maintenance of drains, extractive industries, dredging, the construction of artificial waterbodies [including canals, dams and detention basins] or foundations, or flood mitigation works), or
- (b) any other works that are likely to lower the watertable regardless of how much soil they disturb.

Table 2.3 Acid Sulfate Soils Classifications

Class of Land	Works
4	Works beyond 2 metres below natural ground surface; works by which the water table is likely to be lowered beyond 2 metres below natural ground surface.
5	Works within 500 metres of adjacent Class 1, 2, 3 or 4 land which are likely to lower the watertable below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land.

3 ISSUES AND MANAGEMENT OPTIONS

3.1 GENERAL

Key issues for the management of Manly Ocean Beach were identified as part of the Manly Ocean Beach Coastline Management Study through:

- consultation with the community and key stakeholders;
- literature reviews undertaken for specialist studies;
- discussions held with relevant Council and State Agency officers; and,
- local knowledge of the study team.

An overview of the key issues identified is provided below. A more detailed description of each issue can be found in Section 7 of the Manly Ocean Beach Coastline Management Study.

An assessment of management options to address the identified key issues was also undertaken as part of the Manly Ocean Beach Coastline Management Study. Identification of management options was based on:

- consultation with groups of internal (Manly Council) and external stakeholders;
- a review of management options included in the Coastline Management Manual (NSW Government, 1990); and,
- the experience of the study team.

In the identification of management options there was a focus on realistic management options. Those options that were unlikely to meet the objectives of the CMP set out in **Section 1.4** were quickly dismissed.

The detailed assessment of options and identification of a preferred option(s) for each issue can be found in Section 9 of the Manly Ocean Beach Coastline Management Study. The preferred management options have been discussed briefly below and presented in the Coastline Management Plan: Action Plan.

3.2 STUDY AREA WIDE ISSUES & MANAGEMENT OPTIONS

3.2.1 Beach Erosion

Beach erosion has in the past and will continue in the future to threaten foreshore assets, since the volume of sand available on the beach is not sufficient to accommodate sand losses in severe storms. The level of threat into the future will be exacerbated due to predicted shoreline recession (refer **Section 3.2.2**).

The detailed assessment of management options for beach erosion undertaken for the Manly Ocean Beach Coastline Management Study included consideration of the following options³:

- Option A - implementation of an Emergency Action Plan (EAP) to deal with the erosion hazard when it occurs and where it occurs along the beach.
- Option B - structural works to ensure the integrity of the seawall in the design erosion event such that implementation of an EAP is not required.
- Option C - nourishment of the beach such that there is always an adequate volume of sand on the beach to accommodate the design erosion event and thus prevent damage to the seawall.

An EAP has been prepared for Manly Ocean Beach and includes, among other things, emergency protection measures that might be implemented to mitigate erosion damage. The EAP is contained in a stand-alone report and incorporates Council's 'Draft Emergency Response to Rock Exposure Action Plan'.

The detailed assessment of management options for beach erosion undertaken for the Manly Ocean Beach Coastline Management Study indicated that the preferred management option for beach erosion, on mainly economic grounds, is implementation of the EAP to deal with the erosion hazard when it occurs and where it occurs along the beach (Option A).

The Coastline Management Study also noted that investigation of structural measures to stabilise the toe of the seawall and allow removal of the rock aprons along the beach should be pursued due to the amenity and safety benefits that could be achieved. The greatest benefit of such work is likely to be derived in the section of beach between about the former Tourist Office and the stairs at Victoria Parade, due to the high recreational usage in this area, generally narrower beach width and lower beach level, and past consequences of rock exposures.

3.2.2 Shoreline Recession

Shoreline recession as a result of Greenhouse sea level rise is a concern for Manly Ocean Beach and would result in ongoing loss of beach width over time with consequent loss of beach amenity, greater erosion threat to foreshore assets, and adverse economic effects.

The detailed assessment of management options for shoreline recession undertaken for the Manly Ocean Beach Coastline Management Study included consideration of the following options:

³ Note that a 'Do Nothing' option is not realistic for Manly Ocean Beach; it is not the historical practice of Council having regard to the social, environmental, heritage and economic consequences of erosion. The 'Do Nothing' option was rejected by the Coastline Management Committee at its meeting on 23 August 2006.

- Option A - upgrading of the seawall to accommodate the design erosion event and the greater erosion threat over time as the beach narrows due to shoreline recession.
- Option B - beach nourishment combined with ongoing implementation of the EAP.
- Option C - beach nourishment combined with seawall upgrading

Assessment of the options was undertaken against a number of parameters comprising:

- recreational values including beach safety;
- aesthetic values;
- cultural heritage values;
- aquatic ecology;
- benefit / cost ratio.

The assessment indicated that the preferred management option for shoreline recession comprises beach nourishment combined with ongoing implementation of the EAP (Option B).

3.2.3 Coastal Inundation Hazard

Existing wave runup levels in severe storms overtop the crest of the seawall and in the past have lead to some damage to coping and parapet walls along the seawall. Widespread or prolonged flooding due to wave runup is not a significant issue since overtopping occurs as a 'pulse' with each wave uprush and the astronomical tide component of the elevated ocean water level ensures that water levels (and runup levels) drop within hours.

The risk of overtopping and damage to existing coping and parapet walls will increase over time due to the predicted Greenhouse sea level rise. However, the appropriate course of action over the next 5-10 years is considered to be one of monitoring of sea level rise and measurement of runup levels at times of storms (as data is generally limited) and undertaking repairs to any damage as and when required.

There is scope to raise coping levels, or create coping, in particular areas at a future time should the risk of overtopping (risk = likelihood x consequences) be considered unacceptable. Raising of the promenade level is not considered necessary, nor desirable, for the foreseeable future.

3.2.4 Climate Change

During the course of the stakeholder consultation an issue was raised regarding the potential impact on flooding and groundwater levels within the adjacent residential and commercial areas as a result of Greenhouse sea level rise, particularly given the number of existing basements in these areas and the likelihood of additional basements in the future associated with redevelopment of properties.

Flooding due to oceanic inundation is not considered to be a concern for the foreseeable future. However, this situation should continue to be monitored and sea level rise should be considered during detailed hydraulic analysis for stormwater upgrading.

Groundwater levels can be expected to rise behind the beach in response to a rise in mean sea level. The attenuation of this rise with distance from the beach and the implications for basements is difficult to assess without more investigation. Investigations are a recommended management option.

3.2.5 Recreation and Competing Beach User Groups

Issues relating to recreational use of the study area identified in the Manly Ocean Beach Coastline Management Study include the following:

- the local community has demonstrated a past reluctance to accept significant or sudden changes to the beach's use, management or appearance, with a preference for incremental change or evolution clearly shown;
- visitor safety is a central management issue in challenging environments such as surfing beaches, especially when large numbers of inexperienced users may be present. Maintaining adequate signage, visitor information and a comprehensive lifeguard/volunteer lifesaving service at key points along the beach will be a critical continuing visitor safety requirement;
- the two large stormwater pipes that cut the lower beach and intrude into the surf zone are a serious potential hazard to swimmers and surfers in their vicinity, especially under rough or difficult conditions;
- sand quality and coverage is a critical determinant of visitor satisfaction on Manly Beach. Substantial long-term reductions in sand area, or sand quality, would seriously adversely impacts visitors' enjoyment of the area;
- visitor use of Manly Beach, and especially the location of different users groups and crowding, has to-date been largely successfully self-regulating. However any serious reduction in sand coverage/quality or usable beach area, or a major sustained increase in visitor numbers or alterations to usage patterns, may exacerbate crowding or increase user conflicts. This would especially be the case on the southern end of the beach, which is already crowded during peak use periods;
- the landscaped promenade area opposite the seaward end of The Corso is a very high use zone. The limited capacity of this comparatively narrow area may become a crowding and visitor management issue in the mid term;
- to ensure equitable access and enjoyment of the beach Council will need to continue to be vigilant in balancing special event, commercial and organised usage of the beach with maintaining public accessibility, use and quality beach settings;

- to avoid over-commercialisation, crowding, the disruption of other users, and diminishing visitors' experience of Manly Ocean Beach Council will need to continue to be vigilant in managing commercial use and commercial tourism operators within the study area;
- Manly Ocean Beach has a reputation as a significant surfing beach, as well as a long association with surfing and the surf lifesaving movement. The continued quality of the area's surf breaks, and the sandbanks that significantly influence this, should be considered in any management of sand volumes and movement along the beach;
- visitor use is not evenly spread along the beach. Additional capacity, both on the sand and in the surf, can be found in the North Steyne to Queenscliff section of the beach. The present more informal, relaxed and less tourism-oriented character of this end of the beach should be preserved;
- access to the beach zone for people with disabilities or mobility challenges is only fair at present, and could be improved as part of any additional works;
- high usage levels will require that Council continue to invest in the routine high quality maintenance and periodic refurbishment of the landscape works and visitor facilities across the study area in order to maintain current amenity and enjoyment levels. Further development and hardening of the now less formal parts of the beachfront should only be undertaken as a planned process, rather than incremental or maintenance-driven development;
- visitors' use and enjoyment of the beach will need to be balanced with the amenity of local residents/neighbours in the area's future development and management.

A number of management strategies have been identified to address the issues listed above, these include:

- maintain adequate signage, visitor information and other educational efforts, as well as a comprehensive lifeguard/volunteer lifesaving service at key points along Manly Ocean Beach to ensure the safety of visitors and beach users;
- investigate options for expanding the promenade and formal landscape area opposite and south of the seaward end of The Corso, to increase the capacity of this comparatively narrow and at times crowded high use area;
- improve physical access to the beach zone for people with disabilities or mobility challenges;
- support and enhance the existing informal/self-regulating dispersal of differing uses and visitor groups along the beach and foreshore, largely through indirect design and management measures (such as the location of beach access points, special activity areas, picnic facilities, and so on);

- continue the licencing process and special management arrangements for major events, commercial and organised usage of the beach and foreshore areas. Regularly review the approval processes and frequency/occupation levels for such commercial or organised beach uses to ensure equitable visitor access and enjoyment of Manly Ocean Beach and avoid over-commercialisation, crowding, or reduction in the area's visitor appeal;
- ensure that Manly Beach's key surf breaks and reputation as a "quality surf spot" are considered in the identification of any beach management actions impacting the surf zone and are not unduly compromised;
- continue to invest in the routine high quality maintenance and periodic refurbishment of the landscape works and visitor facilities along Manly Ocean Beach, in keeping with the proposed unifying Landscape Masterplan and avoiding incremental or maintenance-driven development/hardening of less formal beachfront areas;
- continue to balance park use and visitor enjoyment of the beachfront with the amenity of local residents/neighbours.

3.2.6 Waste Management and Beach Raking Practices

As is the case for many urban beaches, Council maintains the aesthetics, amenity, utility and safety of Manly Ocean Beach through regular cleaning. A mechanical rake / sieve operates 7 days per week, cleaning Council's eight accessible beaches. The BeachTech 2000 rake / sieve rakes the surface sand and can sift sand in the upper 200 mm layer (although sifting depends on conditions and the time available).

Raking collects litter and debris (e.g. wrack, bottles, cans and cigarette butts) while sieving gives a more thorough clean. A 'grooming' device across the rear of the machine, gives a 'combed' finish to the sand. Due to the need to complete this work during times of least use, (i.e. early morning) there are occasions when wrack or litter may be deposited on beaches after the daily cleaning.

Issues identified in the Manly Ocean Beach Coastline Management Study regarding beach raking include:

- regular removal of wrack may adversely impact on faunal diversity and sand loss - faunal diversity - wrack is an essential component to a thriving and diverse sandy beach ecosystem, as it acts as a direct food source and shelter for many species living above the sand and provides nutrients to fauna living in the sand. Hence, its regular, wholesale removal through beach cleaning is a removal of an important component of the beach;
- regular removal of wrack may result in sand loss - accumulations of wrack can buffer wave action and help to keep sediment stable (Fairweather and Henry 2003). Raking and sifting can break the hard pan of the beach subsurface, making it more susceptible to wind erosion. Hence, at the extreme, the result of wrack removal may enhance sediment (sand) loss; and,

- litter on the beach – the effectiveness and need for more frequent raking.

A management option involving the development of appropriate ecological indicators would assist in determining the ecological significance of the removal of wrack due to beach raking at Manly Ocean Beach (refer **Section 3.2.7**).

The current waste management approach, involving initiatives such as Council’s litter avoidance strategy and waste minimisation policy, is considered appropriate.

3.2.7 Aquatic Ecology

The ecological issues associated with Manly Ocean Beach are related to the potential interaction of socio-cultural systems and natural systems. Potential impacts to natural systems of Manly Ocean Beach are important as they can affect sensitive nearby environments and biota, and effect different user groups of the beach.

Aquatic ecology issues identified in the Manly Ocean Beach Coastline Management Study include:

- beach raking - may have the adverse side effects of removing wrack, which contains beach organisms or their food. Raking may also potentially compact areas of the beach or enhance sediment loss;
- trampling by recreational users - may compact areas of the beach. Barros’ (2001) findings of fewer ghost crab burrows on beaches in urban areas may indicate such an effect;
- beach nourishment – results in impacts on organisms caused by changes in habitat. In addition, nourished sand may move out of the nourished area to neighbouring habitats or to somewhat deeper water, potentially affecting benthic communities offshore (Verhagen 1996). An impact of particular concern would be the potential for leakage of sand from a nourished beach to reef habitats in Cabbage Tree Bay Aquatic Reserve;
- water quality - although recent Beachwatch data for Manly Ocean beach indicates that water quality is good during dry weather, Manly Ocean Beach is exposed to some stormwater discharges. Any impacts to natural systems of Manly Ocean Beach could potentially affect biota in adjacent habitats. Cabbage Tree Bay Aquatic Reserve would be sensitive to degradation of natural systems at Manly Ocean Beach, particularly changes to water quality or parts of the food webs that support species in the reserve;
- lack of local information - virtually no published information specific to the beach is available. More information on components of the natural systems of Manly Ocean Beach will enable better management.

Management strategies identified to address the issues listed above include:

- commission ecological studies to learn more about the aquatic ecology of Manly Ocean Beach.
- establish ecological indicators to monitor the condition of beach habitats.

Aquatic ecology issues were also considered in the assessment of management options for waste management, shoreline recession, water quality and the stormwater pipes.

3.2.8 Water Quality

Dry weather water quality at Manly Ocean Beach has been shown to be good. However, the key water quality issue for Manly Ocean Beach is water quality following rainfall events. Bacterial densities for Manly Ocean Beach generally increase with increasing rainfall. Faecal coliform and enterococci levels often exceeded the median guideline limit after significant rainfall of more than 5 to 20 mm in the previous 24 hours (DEC, 2004). The main sources of pollutants are from:

- stormwater pipes; and
- Manly Lagoon.

Manly Lagoon is subject to a range of management initiatives contained within the Manly Lagoon Estuary Management Plan (1998). Many of these management initiatives have been implemented or are proposed by Council.

Recently, the SEA (Stormwater Environment Awareness) Change program was commenced around Manly Council's catchments. This program was developed through multi-organisational partnerships with funding provided from the Stormwater Trust. The program aims to restore Manly Lagoon and other waterways, both ecologically and in a recreational capacity, by systematically targeting pollution "hotspot" catchments.

The Sea Change program has also led to the recent development and adoption of an Integrated Catchment Management Strategy. The Manly Lagoon Integrated Catchment Management Strategy (2004) was prepared to provide a co-ordinated approach to managing the Manly Lagoon catchment within both Warringah and Manly Councils. The strategy includes a 5 year action matrix and targets. Listed actions include further improvement in the quality of water entering the Lagoon through improving sewerage infrastructure, urban runoff and creeks; the removal of contaminated sediment in the Lagoon; and the maintenance and enhancement of waterway features, flows and tidal interchange.

Initiatives under the Manly Estuary Management Plan, the Sea Change Program and the Manly Lagoon Integrated Catchment Management Strategy that improve the water quality of Manly Lagoon are endorsed as they will assist in meeting the objectives of the Manly Ocean Beach CMP.

Exposed stormwater pipes extend across the sand and into the ocean at Pine Street near North Steyne SLSC and at Raglan Street. In addition, stormwater enters the beach at three other locations along the seawall. Gross pollutant devices are secured to the end of some pipes to prevent rubbish polluting the beach. However, stormwater from the pipes on Manly Beach can be polluted and adversely affect the water quality at the beach after heavy rain.

Manly Council has undertaken numerous initiatives/measures to improve stormwater that flows to Manly Ocean Beach. In addition, Manly Council is proposing a range of initiatives in the catchments such as rainwater tanks, detention storage and infiltration which would have the effect of reducing stormwater flows from the catchments to Manly Ocean Beach. Proposed measures Manly Council is considering include:

- targeted rainwater tank subsidies in key catchments on Manly Flats;
- Ivanhoe Park detention and infiltration system;
- Pine Street end of pipe storage and aquifer injection;
- Kangaroo Lane stormwater detention and on-use; and
- feasibility assessment of removing or shortening stormwater pipes.

Measures implemented and proposed by Council that improve the quality of stormwater flowing to Manly Ocean Beach are endorsed as they will assist in meeting the objectives of the Manly Ocean Beach CMP.

Sydney Water made a submission to Manly Council following public exhibition of the draft CMP and advised that:

- Sydney Water is supportive of Council's catchment based initiatives to improve stormwater quality and reduce stormwater flows through the Raglan Street outfall, and is prepared to explore these initiatives with Council;
- Sydney Water agreed that options to remove or divert the Raglan Street outfall require peak storm flows through the outfall to be reduced.

Section 3.3 notes issues and management options associated with the Manly Lagoon entrance and the stormwater pipes. Water quality issues along Manly Ocean Beach will be addressed by the adoption of the identified management options for the Manly Lagoon entrance and the stormwater pipes.

3.2.9 Conservation Items of Heritage Significance

Although there would have been abundant evidence of Aboriginal occupation and land use of Manly Ocean Beach, almost all have been destroyed or hidden by urban development and land uses. No recorded sites today remain within the study area.

Issues relating to Aboriginal heritage identified in the Manly Ocean Beach Coastline Management Study include the following:

- a range of Aboriginal sites were previously known in the Manly Ocean Beach area, and as yet unknown or unrecorded sites may still be found along the oceanfront and elsewhere within the study area. The possibility of unknown/unrecorded Aboriginal sites warrants consideration in the development assessment process;
- tangible Aboriginal heritage objects and sites are protected by legislation. Any objects and sites within the study area that may be located, including sites uncovered during development or management works, will require appropriate protection and management;
- the Manly area's Aboriginal history, heritage, sites and contemporary associations/significance are all of potential interpretive interest to residents and visitors.

A number of management strategies have been identified to address the issues listed above, these include:

- establish and maintain a co-operative working relationship with the Metropolitan Local Aboriginal Land Council, and other Aboriginal people or groups as required, regarding the identification, appropriate management, and culturally appropriate presentation of Aboriginal heritage sites/values - both tangible and intangible - along Manly Ocean Beach;
- require Aboriginal heritage investigations to be carried out as part of the development planning and approval process for any major proposals located in the vicinity of previously known or suspected Aboriginal heritage sites along Manly Ocean Beach;
- incorporate "awareness, identification and response" provisions regarding unknown/unrecorded Aboriginal cultural sites in development/building approvals for major excavations works along Manly Ocean Beach;
- establish protocols for managing any unknown/unrecorded Aboriginal heritage sites that may be located during development/construction works along Manly Ocean Beach;
- incorporate information regarding the Manly area's Aboriginal history, heritage, sites and contemporary associations/significance in future interpretation measures - both on and off site - for Manly Ocean Beach;
- investigate the dual-naming of Manly Ocean Beach and the wider public use and recognition of the area's traditional Aboriginal name.

Issues relating to historic heritage identified in the Manly Ocean Beach Coastline Management Study include the following.

- Manly Ocean Beach is listed on the Register of the National Estate as an iconic location for surfing, beach culture and recreation that is inextricably associated with the imagery of the "bronzed Aussie" as well as having a long history as an urban ocean-side resort. The place of Manly Beach in the Australian identity and popular culture, as well as its

tangible heritage sites and assets, requires sensitive and sympathetic treatment to maintain these cultural associations and values;

- several identified sites of historic heritage significance occur within or adjacent to the study area. These sites are of different levels of significance and are afforded varying degrees of legislative protection. The impact of any proposed works on the heritage values of these places must in all cases be identified and fully considered in the planning and development process;
- Manly Ocean Beach has a long association with surfing and surf lifesaving. The beach and surf zone as a quality “surf spot” should be maintained.

Management strategies identified to address the issues listed above include:

- acknowledge and actively maintain the iconic “bronzed Aussie”, surf culture and seaside recreation values of Manly Ocean Beach in all aspects of the area’s future planning and management in ways that ensure the protection but evolution of these values and cultural associations;
- continue to manage Manly Ocean Beach consistent with its listing on the Register of the National Estate, recognising its nationally significant built and cultural heritage values in all aspects of the area’s future planning and management;
- ensure appropriate recognition, consideration and protection of sites identified, and listed, as having historic heritage significance along Manly Ocean Beach and its curtilage in the development planning and approval process;
- ensure that Manly Beach’s key surf breaks and reputation as a “quality surf spot” are considered in the identification of any beach management actions impacting the surf zone and not unduly compromised.

3.2.10 Aesthetics

Issues relating to beach aesthetics identified in the Manly Ocean Beach Coastline Management Study include the following.

- Manly Ocean Beach is renowned for its Norfolk Island Pines and long wide arc of sandy beach. These trees are of great importance due to their symbolic nature, contribution to the beachscape, vulnerability (relative to the sandy beach) and the effort and resources invested in them to date.
- the current landscape features a gradual transformation of the beachfront from a more formalised (paved) promenade and landscape in the south to a less formal (green) open parkland in the north. It is important that these areas retain their intended role and characters- rather than being progressively formalised or altered under the influence of maintenance convenience and unplanned change.

- the local community has expressed a strong reluctance to endorse any rapid or significant change in the presentation of the Manly beachscape.
- the northern end of Manly Ocean Beach is bounded by Queenscliff headland, which falls within Warringah Council LGA. Development and change of this area's visual character strongly impacts upon the visual quality of Manly Ocean Beach.
- while visitors may desire trees along the beach front for shade and aesthetic reasons, local residents may find these trees obstruct their views. Without careful planning and management conflict may arise.

Management strategies identified to address the issues listed above include:

- maintain and enhance the key visual elements of Manly Ocean Beach - specifically the Norfolk Island Pines, promenade, and long wide arc of largely uninterrupted sandy beach;
- prepare a Tree Management Plan or Tree Conservation Plan to guide future management of the Norfolk Island Pines;
- prepare and implement a revised landscape masterplan for Manly Ocean Beach based on Council's previous landscape plan prepared in 1995 to guide the character and presentation, visitor use and enjoyment, and maintenance of the area;
- maintain a process of incremental change or evolution in the presentation and aesthetics of Manly Ocean Beach, avoiding major significant alteration to the area's appearance;
- ensure appropriate recognition, consideration and protection of the visual qualities of Manly Ocean Beach in the development planning and approval process for major proposals likely to adversely impact the area's appearance and the experiences of users;
- liaise with Warringah Council regarding co-operative planning and development assessment/approvals across the south-side of Queenscliff Headland, to minimise the potential adverse impacts of development in this area on the visual quality of Manly Ocean Beach;
- continue to balance park use and visitor enjoyment of the beachfront with local residents' desire for amenity and views in all future planning and management of the landscape of Manly Ocean Beach.

3.3 SPECIFIC AREA ISSUES

3.3.1 Manly Lagoon Entrance

Low Flow Pipes

Following large southerly swells, kelp often gets washed into the low flow pipes and channel. This inhibits tidal exchange between the ocean and Manly Lagoon. If the kelp

remains in the channel for an extended period of time, the kelp starts to putrefy and becomes odorous which results in considerable community complaints.

The current management regime to deal with kelp is as follows:

- the Manly Council beach rake driver notifies relevant staff if there is a noticeable buildup of kelp on the beach and around the entrance to the low flow pipes;
- based on this advice a decision may be taken to lift the stainless grate at the landward end of the original low flow pipes (downstream end of the low flow open channel) in an effort to have the kelp to disperse naturally⁴;
- if it becomes necessary to mechanically remove the kelp, Manly Council seeks the approval of the Department of Primary Industries (Fisheries) to do so. Following approval, mechanical removal is undertaken using a backhoe and the kelp is stockpiled adjacent to the channel on the sand for about two days to allow dewatering. The kelp is then loaded into trucks by Warringah Council and disposed of to landfill.

The current management regime for dealing with kelp is considered the best approach in the circumstances. Removal of the stainless steel grates at the landward and seaward ends of the low flow pipes to reduce the risk of clogging is not advisable due to safety concerns for swimmers and boardriders. Over time as greater knowledge of the circumstances surrounding the introduction of kelp is developed and the success of the current management regime is reviewed, current practices can be revised if considered necessary.

Flood Outlet Channel

A flood outlet channel for Manly Lagoon is located at the northern end of Queenscliff Beach and is regularly maintained by Manly Council (on behalf of both Manly & Warringah Councils) for flood mitigation purposes. The current maintenance procedure for the flood outlet channel is in accordance with the method outlined in the Manly Lagoon Flood and Estuary Management Plans.

The channel is maintained as a precautionary measure to allow Council to act quickly in the event of heavy rainfall to prevent damage due to flooding of Manly Lagoon. The response time required to open the lagoon to prevent flood damage can be quite short, in the order of 1-2 hrs. It takes the dozer about 40 minutes to open the sand headwall at the end of the channel.

The existence of the flood outlet channel across the beach is of some concern to the community due to impacts on beach amenity and the potential for water quality problems if the channel is excavated too deep and intercepts the water table leading to stagnation and collection of litter.

From time to time Manly Council receives complaints from the community in regard to the impact of the maintained flood outlet channel on beach amenity. While it would be

⁴ Council officers have also advised that loose rocks at the bottom of the low flow pipes were recently removed to allow better movement of the kelp and assist with the mechanical removal of the kelp.

inappropriate for Council not to maintain the channel due to the flooding risk, a number of management practices should continue to be employed to minimise impact on beach amenity and impact on coastal and lagoon processes. These are outlined below:

- the flood outlet channel should be located as close as practicable to the low flow channel to provide as large a useable berm area as possible for the public south of the channel, whilst having regard to:
 - the level of bedrock, which may constrain excavation depths;
 - the risk that sand stockpiled north of the excavation may slip or be blown into the low flow channel and thereby contribute to blockage of the low flow channel;
- the flood outlet channel should not be excavated so deep that it intercepts the groundwater table on the beach as this can create shallow stagnant pools of water within the berm area which also can be a trap for litter. Consequently, it can lead to health concerns and detracts from the aesthetics of the beach;
- some sand from the excavation of the flood outlet channel should be pushed towards the seawall in front of the Queenscliff SLSC to create a berm and reduce the risk of undermining of the seawall in flood flows.

Sediment Removal near Queenscliff Bridge

Every three years or so Manly Council undertake removal of marine sand from the entrance area of Manly Lagoon, just upstream of Queenscliff Bridge, that enters the lagoon from the adjacent beach as a result of wave, tide and wind processes. The purpose of the sediment removal is to improve tidal exchange between the lagoon and the ocean, remove restrictions to fish passage, avoid continued migration of sand upstream that could impact on aquatic vegetation and provide recreation benefits.

The method of removal involves a bulldozer pushing sand to the southern edge of the lagoon. Here it is temporarily stockpiled for several weeks to allow “bleaching” and testing prior to its removal by truck and placement on Manly Ocean Beach in eroded areas.

The current approach to management of the marine sand that enters Manly Lagoon, as described above, is considered the most appropriate. Any clean marine sand that is removed from the entrance area should continue to be placed on Manly Ocean Beach so that it is retained in the local coastal system. Practices that have the potential to cause accelerated infilling of the lagoon, such as the method of stockpiling of sand excavated for the flood outlet channel, should continue to be monitored and revised where required.

3.3.2 Stormwater Outlets

Stormwater outlets are located along the beach. Issues relating to the stormwater outlets include water quality, beach erosion, safety and visual impacts.

The major stormwater outlets along Manly Ocean Beach are listed below.

- opposite Raglan Street, two 600 mm dia pipes pass under the seawall to an ocean outfall – an overflow is provided in the form of two grated apertures in the face of the

seawall. It is evident that the overflow structures can become filled with sand up to the beach level;

- opposite Steinton Street, a concrete box culvert 525mm high by 1050mm, fitted with a steel end piece (which includes a detachable net for capturing gross pollutants), that discharges at a distance of approximately 6m from the seawall. The invert level of the box culvert is generally at or above the typical sand level at the beach. The scour action of the stormwater flows tends to sustain a depression or swale in the beach profile. Council has a practice of grooming the beach profile so that the detachable net is situated on the sand surface and does not become buried in the sand. Recently, floats were attached to the net to reduce the risk of it becoming buried.
- immediately to the north of North Steyne SLSC opposite Pine Street, a pipe approximately 600 mm in diameter passes under the seawall and extends across the beach into the surf zone. A surcharge outlet is located near the seawall and shows some risk of blockage with sand; and,
- opposite Pacific Street, a pipe approximately 300 mm in diameter protrudes at the wall with its invert approximately 2.6 m below promenade level. Rock has been placed near the outlet to reduce the impact of beach scour at times of stormwater discharge. These rocks are arranged haphazardly on the beach and detract from the beach amenity when exposed.

Following a detailed review of available background information undertaken for the Manly Ocean Beach Coastline Management Study and discussion with Manly Council officers, a short list of options for management of the stormwater outlets along the beach were identified and were referred to as Options A, B, C and D (refer below). It was viewed that all options would benefit from a reduction of stormwater volumes entering the drainage networks in the first place from the catchment, and that such works should be carried out in conjunction with the preferred option.

Major stormwater peak flow reductions into drainage networks could be accomplished through targeted rainwater tank subsidies to residents in surrounding catchments; and stormwater detention, harvesting, re-use, and/or aquifer injection schemes by Council. Such schemes have already achieved major local peak flow reductions from Manly CBD buildings (Corso amphitheatre storage and irrigation) and at North Steyne (stormwater harvesting, storage under beachfront reserve , and irrigation).

The four options can be briefly described as follows:

- Option A - diversion of all stormwater to a single outlet at Queenscliff Headland, a distance of approximately 1000m from the southern-most outlet at Raglan Street
- Option B - termination of all outlets at the seawall (noting that the Pacific Street and Steinton Street outlets already terminate at or near the seawall)
- Option C - termination of those outlets that cross the beach (Pine Street and Raglan Street) higher up the beach ie. a shortening of these two outlets,

together with installation of warning signage at these outlets to alert beach users to the safety hazard. Pacific Street and Steinton Street outlets remain at the back of the beach

- Option D - retention of the existing configuration of all the outlets, with installation of warning signage at the Pine Street and Raglan Street outlets

On the basis of a detailed assessment of the short listed management options undertaken for the Manly Ocean Beach Coastline Management Study, the preferred approach to management of stormwater outlets on Manly Ocean Beach is considered to be as follows:

Pine Street and Raglan Street Outlets

- install warning signage in the immediate term (this has now been completed);
- investigate the risk of blockage of the overflow structure at Pine Street outlet in the short term;
- implement stormwater volume reduction measures in the catchment;
- when upgrading of the stormwater systems in the catchments is considered:
 - undertake a detailed hydraulic analysis of the stormwater systems with particular consideration of ocean tailwater level, consider the implications of sea level rise,
 - prepare designs and carry out an environmental assessment for Option B and for Options C and D,
 - in the case of Options C and D, critically review the ARI flow to be delivered across the beach,
 - in the case of Options C and D, retain the warning signage.

Pacific Street Outlet

- formalise existing rock scour protection in the short term;
- implement stormwater volume reduction measures in the catchment;
- when upgrading of the stormwater system is considered:
 - undertake a detailed hydraulic analysis of the stormwater system with particular consideration of ocean tailwater level, consider the implications of sea level rise,
 - maintain the outlet as a back-beach discharge,
 - critically review the ARI flow to be conveyed to the beach,
 - re-examine scour provisions in front of the seawall since an upgraded outlet would take more flow in the rarer events.

Steinton Street Outlet

- implement stormwater volume reduction measures in the catchment;
- when upgrading of the stormwater system is considered:
 - undertake a detailed hydraulic analysis of the stormwater system with particular consideration of ocean tailwater level, consider the implications of sea level rise,

- maintain the outlet as a back-beach discharge,
- critically review the ARI flow to be conveyed to the beach,
- re-examine scour provisions in front of the seawall since an upgraded outlet would take more flow in the rarer events.

Sydney Water made a submission to Manly Council following public exhibition of the draft CMP and advised that:

- Sydney Water agree that implementing Water Sensitive Urban Design in the catchment and reducing stormwater flows discharging to the beach is a priority and critical to water quality and options for the stormwater outfalls;
- Sydney Water would offer its assistance to Council in exploring and investigating the four options for stormwater management, in respect of the Raglan Street outfall.

4 ADMINISTRATIVE MANAGEMENT

In order to successfully implement the recommendations of the CMP it will be necessary to record the level of agreement amongst the various stakeholders to the recommendations made and their commitment to implementing the Action Plan. Various stakeholders should be requested to review the recommendations that fall within their delegations and record their agreement to the implementation. Similarly, concerns regarding the recommendations should be indicated and negotiated with Council.

To ensure Council's commitment to the implementation of this CMP it is recommended that the implementation of the CMP be integrated into Council's Corporate Plan and that the Manly Ocean Beach Coastline Management Committee be responsible for steering the implementation of the CMP.

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APPENDIX A

PLANNING FRAMEWORKS



MANLY COUNCIL

Manly Ocean Beach Coastline Management Plan

Planning Frameworks



Issue No. 4
March 2008



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MANLY COUNCIL




MANLY COASTLINE MANAGEMENT PLAN

PLANNING FRAMEWORKS

Issue No. 4 MARCH 2008

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Note that the Plan was developed, publicly exhibited and endorsed prior to changes in some legislation

Note: This document is preliminary unless it is approved by a principal of Patterson Britton & Partners.

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1 INTRODUCTION

1.1 PURPOSE OF THE COASTLINE MANAGEMENT PLANS

Council is developing Coastline Management Plans (CMPs) for its coastal and harbour foreshore areas to guide the sustainable management of these significant areas now and for the future.

1.2 STUDY AREA

CMPs have been or will be prepared for Manly's coastal foreshores between Queenscliff and Shelly Beach Headland, as well as those areas within the harbour, which are exposed to coastal processes.

The CMPs cover a range of issues, both terrestrial and aquatic. Lands covered by the plans extend beyond land under Council's control and management in order to establish an integrated and holistic management approach.

1.3 IMPLEMENTATION RESPONSIBILITY

Whilst Manly Council is not responsible for all the areas and issues identified in the Coastline Management Plans, implementation of the recommendations contained in the Plans will rely heavily on an integrated approach by the relevant key stakeholder agencies, which have been, and will continue to be, involved in the development of the plans.

While some of the recommendations may identify other agencies as responsible for implementation, Manly Council will be responsible for encouraging and facilitating the Plan's implementation and will oversee the implementation.

1.4 COASTLINE MANAGEMENT PLAN STRUCTURE

This document was prepared by Manly Council. It has been updated in places by Patterson Britton. It details the planning frameworks in which the Manly Coastline Management Plan has been developed and will be implemented.

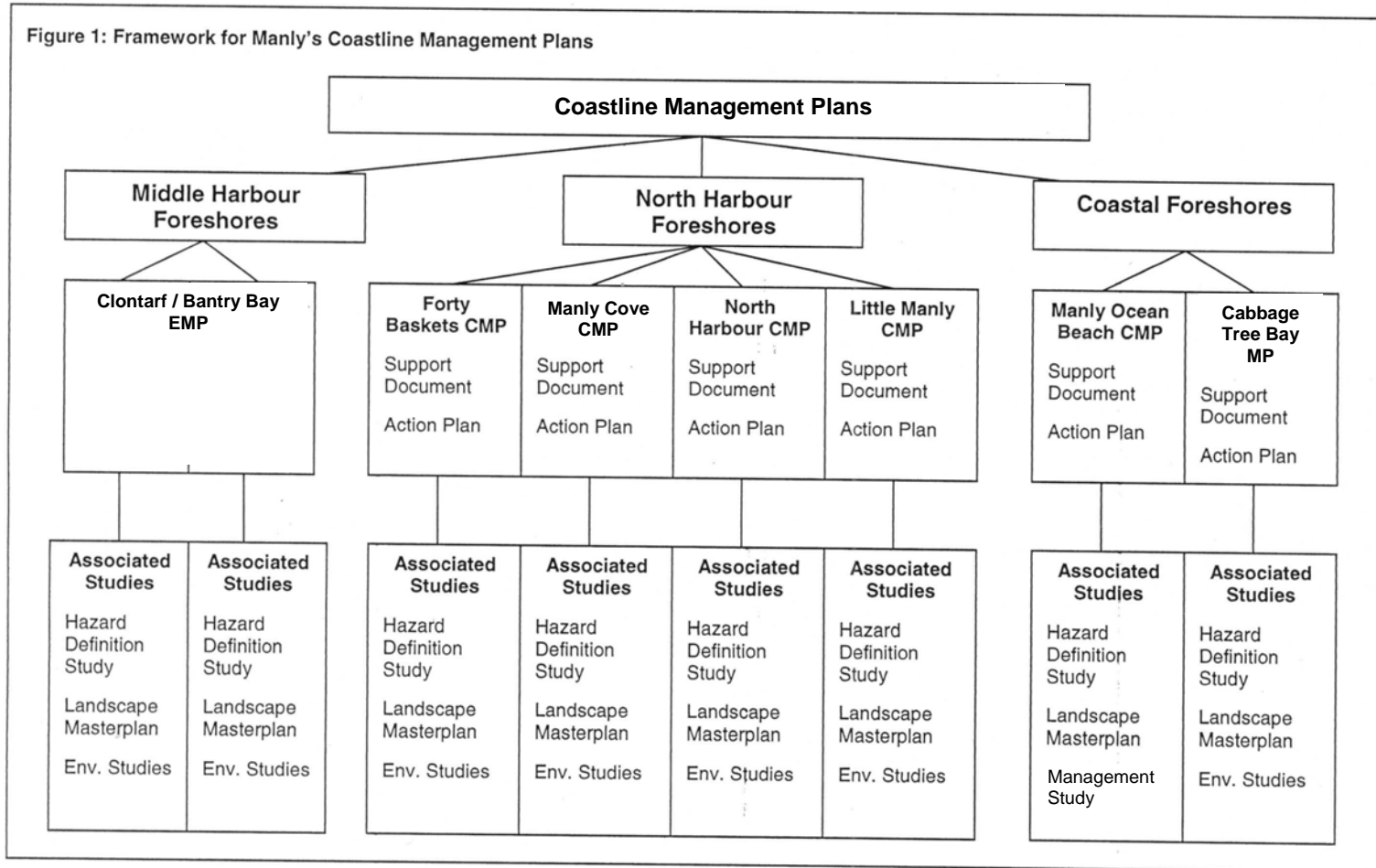
The Coastline Management Plan consists of two main documents, a Support Document and an Action Plan. The Support Document provides the background information on the study area and relevant issues, it provides insight into how each of the management strategies were derived and how the Plan meets legislative requirements. The Action Plan draws out the Plan's management objectives and recommendations, details implementation priorities and those agencies responsible for, or involved in, implementation of each strategy.

The Manly Coastline Management Plan is supported by a number of studies, including a coastal process and hazard definition study and a management study, which identifies the range of issues to be addressed by the Plan and possible options for their management.

The way that all these documents are linked together is shown in **Figure 1**.

1.5 EVALUATION

This planning frameworks document is to be reviewed every 2 years to ensure that all changes to the planning framework are incorporated.



2 MANAGEMENT PLAN FRAMEWORK

2.1 NSW COASTAL POLICY

Manly's Coastline Management Plans have been developed in accordance with the State Government's Coastal Management Manual 1990 and the Coastal Hazards Policy 1988. The Coastal Management Manual 1990 and Coastal Hazards Policy 1988 are described in further detail in **Section 3**.

2.2 COMMUNITY LAND PLANS OF MANAGEMENT

Under the *NSW Local Government Act 1993* (LG Act) Council is required to prepare Plans of Management for Public Land classified as 'Community' Land.

Manly's Coastline Management Plans (CMPs) have been developed to address all requirements for community land management under the *NSW Local Government Act 1993* and *NSW Crown Lands Act 1989*.

In the case of Manly Ocean Beach, Manly Council has adopted an overarching Plan of Management for Community Lands (1996) and has also adopted a Plan of Management for Manly Ocean Beach (2002), which addresses the legislative requirements for the management of Community Land within the Study Area. It is understood that it is Council's intention that the Coastline Management Plan and the adopted Plan of Management for Manly Ocean Beach (2002) will remain as separate documents, together co-governing the future management of the study area.

3 LAND OWNERSHIP AND MANAGEMENT

3.1 FRAMEWORKS FOR COASTAL MANAGEMENT

Manly's Coastline is presently divided into two distinct coastal management areas comprising the foreshore areas of Sydney Harbour and the more open coast areas of the 'coastal zone'. The overarching management system / framework for the 'coastal zone' is described below.

The NSW *Coastal Protection Act 1979* (as amended, 2002) defines the State's 'Coastal Zone'. Under the *Coastal Protection Amendment Act 2002*, the coastal zone includes those areas of Manly outside Sydney Harbour, that are affected by, or affect coastal processes, which were previously excluded from the coastal zone.

On 18 November 2005, the Minister for Natural Resources gazetted a notice extending the area declared as the NSW Coastal Zone to include the greater Sydney metropolitan region (from Newcastle to Shellharbour), which includes Manly's coastal areas. This gazettal has brought into force the NSW Coastal Policy 1997 and State Environmental Planning Policy No. 71 – Coastal Protection, and means that State Environmental Planning Policy (Major Projects) 2005 will apply to some development in the Coastal Zone of Manly.

The management of the 'coastal zone' is the responsibility of a range of government agencies, local councils and the community. The NSW Coastal Policy 1997 provides a framework for the co-ordinated management of the NSW coastal zone. The Policy draws into a single document the State's various management policies, programs, standards and plans in order to co-ordinate the approach to coastal management.

The NSW Coastal Policy identifies a range of coastal management strategic actions. Strategic Action 1.4.3 states that coastline and estuary management plans will continue to be prepared and implemented (for areas in the coastal zone to which the Coastal Policy applies).

The role of the Sydney Coastal Council Group in the management of Sydney's coastal zone is detailed in **Section 3.2.1**.

3.2 COASTAL MANAGEMENT: AGENCY RESPONSIBILITIES

Detailed below are some of the relevant responsibilities of each agency, which share in the management of Manly's coastal areas.

3.2.1 Sydney Coastal Councils Group

The Sydney Coastal Councils Group (SCCG) was established in 1989 and provides leadership and encourages a focused and coordinated approach to sustainable coastal management undertaken by and in partnership with the member councils to protect and conserve terrestrial and marine ecosystems, and to manage social and economic conditions to achieve this. The Group facilitates outcomes concerning coastal issues, exceptional to those the member councils could achieve individually.

The Group consists of 15 councils adjacent to Sydney marine and estuarine environments and associated waterways (Botany Bay, Hornsby, Leichhardt, Manly, Mosman, North Sydney, Pittwater, Randwick, Rockdale, Sutherland, City of Sydney, Warringah, Waverley, Willoughby and Woollahra). The Sydney Coastal Councils Group is a Regional Organisation of Councils that provides strong advocacy and support for its 15 member councils on coastal and natural resource management issues. Being a member council also allows council elected and professional staff the opportunity to exchange ideas at a regional level through SCCG forums, presentations, meetings and conferences.

3.2.2 Manly Council

Council is responsible for the overall management of the Local Government Area (LGA) and enforcing the requirements of the *Local Government Act 1993*, *Environmental Planning and Assessment Act 1979* and the *Crown Lands Act 1989* (where Council has care and control).

Community Land Management

Council is responsible for the preparation and implementation of Plans of Management for community lands (under the *Local Government Act 1993*).

Coastline Management Plans

As a result of amendments to the *Coastal Protection Act* in 2002, areas of the Manly coastline are now included in the NSW 'coastal zone' as defined under that Act. As a result Council is also responsible for preparing Coastline Management Plans for those areas, in accordance with the Coastal Hazards Policy 1988 and the Coastline Management Manual 1990 (soon to be amended).

Development Consent

Council plays a role in controlling development within the Local Government Area boundary under the *Environmental Planning and Assessment Act 1979*. Council is the consent authority for most land-based developments and activities.

3.2.3 Department of Planning

The Department of Planning (DoP), is responsible for managing the NSW Planning System. DoP has no direct ownership or responsibility for the seabed in coastal areas.

The principal legislation under which DoP operates, which is relevant to Management of Manly's coastline is the *Environmental Planning and Assessment Act 1979*.

3.2.4 Department of Environment and Climate Change & Department of Water & Energy

The former Department of Natural Resources (DNR) has recently been abolished and most of its function now incorporated into the Department of Environment and Climate Change (DECC) and Department of Water & Energy. Responsibilities relevant to Manly's Coastline Management Plans include:

- developing policies on resource use and management;
- maintaining databases on the condition of the State's land, soil, water and vegetation;
- providing expertise in management of the coast, estuaries and floodplains;
- managing the planning and sharing of water across the State; and
- providing survey and mapping services (the geographic information infrastructure), ensuring the fundamental interests and rights in land of individuals.

The principal legislation under which DECC operates which is relevant to Manly's Coastline Management Plans is the *Coastal Protection Act, 1979*.

DECC offers funding for coastal and estuary management in addition to providing guidance for the management of the 'coastal zone' through the provision of the coastal and estuary management manuals and expert advice.

In addition, the NSW National Parks and Wildlife Service (NPWS), which is part of the DECC, is responsible for protecting the State's flora and fauna, and for managing and maintaining National Parks and Nature Reserves. NPWS is also responsible for Aboriginal Heritage and sites.

In 2007, the responsibility of aquatic reserves was transferred from the Minister for Primary Industries (DPI) to the Minister for Environment, Climate Change and Water (DECC).

3.2.5 Department of Lands

The Department of Lands is the primary NSW Government agency responsible for managing state-owned land. In a number of cases however, Council manages Crown Land in accordance with the *Crown Lands Act 1989*.

3.2.6 NSW Maritime

NSW Maritime is responsible for the on-water management of all NSW navigable waters, including coastal areas, estuaries, rivers, lakes and dams to three nautical miles offshore. On-water management responsibilities include the management of safety, the protection of the marine environment from degradation by vessels, the provision of waterways infrastructure for vessels, the licensing of vessel operators, commercial vessels, on-water events, and mooring management.

NSW Maritime is therefore responsible for management of waterways and the sea bed from mean high water mark (MHW) seaward.

NSW Maritime is now also responsible for the investigation of on-water pollution incidents and issuing cleanup and prevention notices in relation to vessels (in navigable waters that are not required to have a pilot).

3.2.7 Department of Primary Industries

Department of Primary Industries (DPI) is responsible for administering the *Fisheries Management Act 1994* (as amended) and for jointly administering the *Marine Parks Act 1997* with NSW Department of Environment & Climate Change.

DPI has jurisdiction over all fish and marine vegetation in all waters of the state (including all private and public waters and permanent and intermittent waters) extending to 3 nautical miles offshore (and to 80nm offshore in those fisheries for which it has jurisdiction under the Offshore Constitutional Settlement). This means that DPI has management responsibility for all aquatic animals (with the exception of aquatic mammals, reptiles, amphibians and birds, which are managed by DECC and responsibility for all marine vegetation and key aquatic habitats including seagrass, mangroves, gravel beds and snags.

While DPI is responsible for the management of all aquatic animals, the department is a state government authority with limited on-the-ground staff to effectively regulate the management of aquatic environments. As a result Manly Council's rangers are presently licensed as DPI officers to assist Fisheries with some of their on-the-ground 'localised' regulation functions.

DPI's management responsibilities also include threatened fish species, populations and ecological communities.

3.2.8 Sydney Water Corporation

Sydney Water is an unlisted public company (100% owned by the NSW Government). The Corporation provides fresh water and sewage management services and is responsible for the management and remediation of sewage infrastructure and trunk stormwater drainage.

Sydney Water's long-term blueprint for action is WaterPlan 21.

Relevant legislation includes:

- *Water Board (Corporatisation) Act 1994* as amended; and
- *State Owned Corporations Act 1989* as amended.

3.2.9 Sydney Harbour Federation Trust - (Commonwealth)

The Commonwealth established the Sydney Harbour Federation Trust to manage sites no longer required by the Department of Defense.

North Head Former School of Artillery on North Head is the only site presently vested in the Trust within the Manly Local Government Area.

4 PLANNING FRAMEWORKS & PROJECT PROCESS

There is currently no single or overall plan for the NSW Coastal Zone and no single authority with management responsibility. Planning and management of Manly's Coastline is complex, made up of a number of plans, policies and other documents, which are administered by a number of different agencies. The following section details the planning framework that applies to Manly's coastline.

4.1 GUIDING POLICIES, DOCUMENTS AND PROCESSES - LOCAL PLANS AND POLICIES

The following documents have specific relevance to Manly's Coastline Management Plans. The documents discussed below play a significant role in setting the planning framework for the management of Manly's coastline.

4.1.1 Manly Local Environmental Plan 1988

The Manly Local Environment Plan (LEP) establishes Council as the consent authority for all purposes of the LEP and is the main statutory control on development within Manly Local Government Area.

The LEP details the zoning of land within the Manly Council area. It enables Council to make particular Development Control Plans regulating development in any zone and to make provisions for exempt and complying development within Manly.

The LEP also identifies Items of Environmental Heritage, Environmentally Sensitive Areas, Foreshore Scenic Protection Areas and Potential Acid Sulphate Soils and provides planning controls for the ongoing appropriate management of each of these items and areas.

4.1.2 Draft Manly Management Plan 2007-2010

The draft Manly Management Plan 2007-2010 is the key planning document driving the operations of Manly Council. It is a rolling three year plan that identifies a range of objectives and strategies that Council will implement in providing programs, services and facilities to the community.

The development of Plans of Management for community lands are identified in the Draft Management Plan 2007-2010. It is recommended that the development and implementation of Manly's Coastline Management Plan be included in future Management Plans.

4.1.3 Manly Sustainability Strategy 2006

The Manly Sustainability Strategy 2006 aims to direct the following areas of action:

- managing and improving Council's own sustainability performance;
- integrating sustainability, Ecologically Sustainable Development (ESD) and Total Catchment Management Principles into Council's Policies and activities;
- awareness raising and education;
- involving the broader community;
- partnerships with the community, business and other government agencies; and
- measuring, monitoring and reporting on progress towards sustainability.

The strategy identifies goals, objectives and actions for each of the following aspects of ESD:

- land and geodiversity;
- aquatic systems;
- biodiversity;
- air;
- waste;
- noise;
- Aboriginal and non-Aboriginal heritage; and
- social environment,

Where appropriate the goals, objectives and actions for each aspect have been integrated into the management responses detailed in the CMPs.

4.1.4 Manly Social Plan 2004-2009

Council is required to prepare a Social Plan under the *Local Government Act 1993* (Social and Community Plans amendment 1998). Manly's Social Plan assists Council to address social development concerns.

4.1.5 Plan of Management for Community Land

Under Part 2, Division 2 of the *Local Government Act 1993* as amended, Council is required to prepare Plans of Management for Community Land.

Council has adopted an overarching Plan of Management for Community Lands (1996). The document sets out a number of objectives under four (4) areas. Under the following subject headings the relevant objectives for these parks are to:

Natural Environment

- look after our bushland and comply with the legislative requirements of State Environmental Planning Policy No. 19 (Urban Bushland);
- manage our open spaces on a sustainable basis by addressing ecological systems and biodiversity in conjunction with user needs and demands;
- integrate local drainage needs into park design and bushland management.

Cultural Environment

- include heritage conservation and cultural identity matters in design criteria when designing and maintaining our reserves.

Recreation

- manage all open space land in a flexible manner, and ensure that local needs are met;
- provide a major open space connection between harbour and ocean foreshores, creek and lagoon edges, and the National Parks;
- maintain our active sporting areas and manage them to maximize choice.

Operation and Finance

- recognise the role of each open space within the wider community and in relation to other objectives;
- encourage local participation in design, development and management;
- provide for user health, safety and enjoyment;
- retain opportunities to use open space land for special events or projects and for future activities or structures if need becomes apparent;
- improve management of open space in Manly in order to achieve the objectives of this Coastline Management Plan.

Council has also adopted a Plan of Management for Manly Ocean Beach (2002), The adopted Plan of Management for Manly Ocean Beach sets the following general objectives:

- protect and conserve those physical elements and qualities that are of heritage significance;
- retain the dominance of the natural environmental setting of the surf pavilions and adjoining lands, and the open undeveloped character of the foreshore;
- assist in providing public access to the surf pavilions and adjoining lands, including access for people with disabilities;
- maintain in good condition the community and Crown lands and their improvements for the purposes for which each category of land is intended or reserved;
- enable and encourage informal recreational activities on the land;
- lease or licence the existing Visitor's Information Centre for purposes permissible in the Open Space zone under Manly LEP 1988, including but not limited to a refreshment room;
- Council to seek funding for conserving heritage items held by Manly Surf Life Saving Club;
- improve environmental standards in water conservation, waste removal and stormwater management; and
- lease or licence the Queenscliff Surf Pavilion, the North Steyne Pavilion and the Manly Surf Pavilion for uses permissible on that land under the applicable environmental planning instrument (currently the Manly Local Environmental Plan 1988).

4.1.6 Other Council Policy

Manly Council Draft Litter Avoidance Strategy

Council has developed a Litter Avoidance Strategy (2003) to provide a plan to address litter in the Manly Local Government Area. The strategy outlines litter issues in Manly and details specific actions to be implemented to address those issues identified.

Manly Council Towards Zero Waste Strategy

The Manly Zero Waste Strategy (2004) aims to develop and promote a set of actions and tasks designed to guide the Manly community towards the goal of zero waste.

4.2 NATIONAL PLANNING FRAMEWORKS

Commonwealth Legislation and Policies relating specifically to the coast includes the following:

Seas and Submerged Lands Act 1973. This Act declares that the Commonwealth has sovereignty over, and is therefore responsible for, offshore waters, the airspace above them and the seabed below them, extending from the low water mark to the limits of the territorial sea. This has since been extended to 12 nautical miles.

Coastal Waters (State Powers) Act 1980. Under the Commonwealth's Coastal Waters (State Powers) Act 1980, each of the States have been granted general power in the marine area to 3 nautical miles from the territorial sea baseline (ie: mean low water mark).

Coastal Waters (State Title) Act 1980. The States were also granted title of the seabed of coastal waters through the Commonwealth's *Coastal Waters (State Title) Act 1980*.

Environment Protection and Biodiversity Conservation Act 2000 as amended. The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) protects the environment, particularly matters of National Environmental Significance. It streamlines national environmental assessment and approvals process, protects Australian biodiversity and integrates management of important natural and cultural places. Under the assessment and approvals provisions of the Environment Protection and Biodiversity Conservation Act 2000 (EPBC Act), actions that are likely to have a significant impact on a matter of national environmental significance are subject to an assessment and approval process.

Environmental Protection (Sea Dumping) Act 1981. This Act deals with the prevention of marine pollution and regulates the dumping of wastes and other matter in Australian waters.

The Commonwealth Coastal Policy May 1995

The aim of the Commonwealth Coastal Policy is to promote the ecologically sustainable use of Australia's coastal zone. It presents the Commonwealth's vision for a co-operative, integrated approach to coastal management. While this Policy only applies to those activities for which the Commonwealth has responsibility the document provides some direction in terms of coastal management standards.

4.3 STATE PLANNING FRAMEWORKS

A number of statutory controls, documents and policies have been developed by the State Government that are relevant to the scope of Manly's CMPs. These are discussed in the following sections.

4.3.1 NSW Coastal Protection Act 1979.

Changes to the *Coastal Protection Act 1979* were gazetted in November 2002.

These included the redefinition of the land that comprises the 'coastal zone', which now includes areas of Manly affected by, or likely to affect, coastal processes such as coastal wave and wind action.

On 18 November 2005, the Minister for Natural Resources gazetted a notice extending the area declared as the NSW Coastal Zone to include the greater Sydney metropolitan region (from Newcastle to Shellharbour), which includes Manly's coastal areas. This gazettal has brought into force the NSW Coastal Policy 1997 and State Environmental Planning Policy No. 71 – Coastal Protection, and means that State Environmental Planning Policy (Major Projects) 2005 will apply to some development in the Coastal Zone of Manly.

4.3.2 NSW Coastline Hazard Policy 1988

The Coastline Hazard Policy is detailed in the NSW Government's Coastline Management Manual 1990. The Policy applies to the 'Coastal Zone' as defined and mapped under the *Coastal Protection Act 1979*.

The primary objective of the NSW Coastline Hazard Policy is to reduce the impact of coastal hazards on individual owners and occupiers and to reduce private and public losses resulting from natural coastal forces. Consequently it is the policy of the NSW Government that:

- *The impact of coastal forces on existing developed areas shall be reduced by works and measures and the purchase of property on a voluntary basis, where appropriate;*
- *The potential for coastal damage in respect of any proposed coastline development shall be contained by the application of effective planning and development controls by local councils; and*
- *A merit approach to all development and building decisions which takes account of social, economic and ecological as well as oceanic process considerations, shall be followed by local councils and developers. (NSW Coastline Management Manual 1990: A-1)*

Application of the Policy can best be achieved through the development of a coastline management plan by the relevant local council.

All Government agencies are required to comply with the Policy for those coastal areas included in the 'coastal zone' as defined under the *Coastal Protection Act 1979*. In so

doing, government agencies are required to give regard to social, economic, aesthetic, recreational and ecological factors, as well as coastal processes.

The Policy and steps to implement the Policy are detailed in the NSW Government Coastline Management Manual 1990. At the time that this document was written, the NSW Coastal Policy was under review by the State Government.

4.3.3 NSW Estuary Management Policy

The NSW Estuary Management Policy, a component policy of the State Rivers and Estuaries Policy is detailed in the NSW Government's Estuary Management Manual 1992.

The primary goal of the Estuary Management Policy is to encourage the integrated, balanced, responsible and ecologically sustainable use of the State's estuaries. Specific objectives of the Policy are:

- protection of estuarine habitats and ecosystems in the long-term, including maintenance in each estuary of the necessary hydraulic regime;
- preparation and implementation of a balanced long-term management plan for the sustainable use of each estuary and its catchment, in which all values and uses are considered, and which defines management strategies for:
 - conservation of aquatic and other wildlife habitats;
 - conservation of the aesthetic values of estuaries and wetlands;
 - prevention of further estuary degradation;
 - repair of damage to the estuarine environment; and
 - sustainable use of estuarine resources, including commercial uses and recreational uses as appropriate.

The Policy is logically implemented through the preparation and implementation of Estuary Management Plans as set out in the State Government's Estuary Management Manual 1992.

4.3.4 NSW Coastal Policy 1997

The NSW Coastal Policy applies to the NSW Coastal Zone as defined in the *Coastal Protection Act 1979* (as amended in 2002).

The NSW Coastal Policy sets a direction for coastal zone management, planning and conservation in NSW, it provides a framework for the balanced and coordinated management of the coast's unique physical, ecological, cultural and economic attributes. The Policy draws into a single document the State's various management policies, programs, standards and plans in order to co-ordinate our approach to coastal management.

The 1997 Coastal Policy is Government policy and all NSW State Government agencies and local councils are obliged to take account of it in the preparation of their own specific policies and programs. The Policy recommends that councils address their implementation of the Policy through the Management Plans councils are required to prepare under the *Local Government Act 1993*.

It is recommended that the implementation of relevant sections of the NSW Coastal Policy be included as an action in Council's Corporate Plan.

4.3.5 Local Government Act 1993

Community Land Plans of Management

Under the *Local Government Act 1993*, Councils are required to prepare Plans of Management for all community land. Community land is then required to be managed in accordance with the adopted Plan of Management applying to the land.

The *Local Government Act 1993* specifies minimum requirements that community land PoMs must include. PoMs must:

- categorise the land;
- establish objectives for the management of the land;
- establish performance targets;
- specify the means of achieving the objectives and performance targets (ie: strategies); and
- specify how achievement of the objectives and performance targets is to be assessed.

Manly's Coastline Management Plans have been designed to address these community land management requirements under the Act.

Under the *Local Government Act 1993* a PoM may apply to one or more areas of community land (ie: a 'generic' PoM) or to just one area (ie: a 'specific' PoM). Councils may determine which type of PoM they prepare except in the following cases, for which 'specific' PoMs are required:

- land declared to be "critical habitat" under the *Threatened Species Conservation Act 1995* (TSC Act) or *Fisheries Management Act 1994*;
- land directly affected by a recovery plan or threat abatement plan under the TSC Act or FM Act;
- land declared by Council to contain 'significant natural features';
- land declared by Council to contain an 'area of cultural significance'.

There are additional minimum requirements for 'specific' PoMs described in section 36(3A) of the LG Act.

The Coastal Policy 1997 states that where possible joint PoMs will be prepared for foreshore lands where Crown lands and community lands adjoin each other. The Coastline Management Plans include both Crown and Community Lands where appropriate.

Ecologically Sustainable Development

Under section 7 of the *Local Government Act 1993* Council, Councilors and council employees are required to have regard to the principles of ecologically sustainable development (ESD) in carrying out their responsibilities.

Section 8 of the LG Act 1993 defines Council as having the following charter:

"to properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ESD."

The NSW LG Act states that ‘.. ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- *the precautionary principle - namely, that is there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;*
- *inter-generational equity - namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;*
- *conservation of biological diversity and ecological integrity - namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration;*
- *improved valuation, pricing and incentive mechanisms - namely, that environmental factors should be included in the valuation of assets and services....”*

The integration of ESD principles into Council's planning and activities is also required by a number of state and regional policies, strategies and plans. For example ESD is an integral part of the Sydney Regional Coastal Management Strategy and is required under the NSW Coastal Policy 1997.

Council has sought to integrate ESD into the management decisions and actions identified in each of its Coastline Management Plans in order to meet its responsibilities under the LG Act with regards to those Plans.

4.3.6 Crown Lands Act 1989 and Coastal Crown Lands Policy 1991

Crown Lands Act 1989

The *Crown Lands Act 1989* governs the planning, management and use of Crown Land, including reservation or dedication for a public purpose, and leasing and licensing.

The Department of Lands is the principal NSW government agency responsible for managing state-owned land together with the Reserve Trusts appointed by the Minister.

The *Crown Lands Act 1989* provides for the reservation and dedication of Crown Land for a range of public purposes. When land is reserved or dedicated, management of the reserve is mostly undertaken either by:

- The Department of Lands;
- A Reserve Trust; or
- Local Government Councils, by devolvement under the *Local Government Act 1993*.

In the case that Council is appointed as Trustee, Council has the ongoing responsibility to provide care, control and management of Crown Land in accordance with the *Crown Lands Act 1989*.

To ensure that Crown Land is managed for the benefit of the people of New South Wales, Council as Trustee is required to have regard for the principles of Crown land management. Crown land must be used and managed in accordance those principles under Section 11 of the *Crown Lands Act 1989*.

The principles of Crown land management include:

- 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 Plan of Management will satisfy the *Crown Lands Act 1989* if the following points are addressed:

- the Plan of Management and its outcomes must incorporate the principles for Crown Land management (listed above);
- in addition to incorporating the requirements of Section 36 of the *Local Government Act, 1993* the Plan of Management must address any matters required by the Minister responsible for the *Crown Lands Act* under Section 112 of the Act;
- any proposed uses, developments and management practices must conform to the public purpose for the reserve;
- the draft Plan of Management is referred to the Department of Lands for comment prior to the public exhibition;
- the draft Plan of Management must be publicly exhibited, including a public notice in the NSW Government Gazette;
- public submissions regarding the draft Plan of Management are to be referred to both the Minister for Lands and Manly Council as Trust Manager for consideration by the Minister prior to adoption;
- any alterations to the Plan of Management by the Minister are made;
- adoption of the Plan of Management by the Minister for Lands;
- the Trust must follow the Plan of Management, with all operations being in accordance with the Plan.

Coastal Crown Lands Policy

The Coastal Crown Lands Policy issued in 1991 applies to all coastal Crown Lands within 1 km landward and 3 nautical miles seaward from low water mark.

Objectives of the Policy are to:

- conserve and maintain the intrinsic environmental and cultural qualities of coastal Crown Land;
- retain all coastal Crown Lands of an environmentally sensitive nature and/or required for public purpose, in public ownership;
- optimise public access and use of coastal Crown Lands;
- provide Crown Lands, as appropriate, for recreation, tourism, residential and commercial coastal development with due regard to the nature and consequences of coastal processes;
- encourage the rehabilitation of degraded coastal Crown Lands;
- continue to acquire significant coastal lands for future public use.

The Policy identifies the assessment of coastal Crown Land and the dedication of beaches for a range of public purposes as a high priority to facilitate sound land management of the coastal environment. Where estuary and coastline management plans exist they may form the basis for a land assessment waiver (by the minister or delegated authority), requiring no formal assessment under the *Crown Lands Act*.

The Policy provides support for the acquisition of unique or environmentally sensitive coastal lands by the State Government, under the Coastal Lands Protection Scheme.

Crown Lands are identified in each of the land ownership sections of the relevant Coastline Management Plans.

4.3.7 Fisheries Management Act 1994 & Fisheries Management Amendment Acts 1997 and 2001

The *Fisheries Management (FM) Act 1994* and the *Fisheries Management Amendment Acts 1997 and 2001* were developed to conserve, develop and share the fisheries resources of the state for the benefit of present and future generations.

Habitat and Species Conservation

The Act established provisions for DPI to conserve fish habitat such as the development of Habitat Protection Plans, the designation of aquatic reserves, regulation of damage to or removal of marine vegetation and the protection of fish spawning areas.

Under the FM Act approvals are required to undertake work or activities, which interfere with marine vegetation or fish.

Threatened Species

The *Fisheries Management Amendment Act 2001* includes new threatened aquatic species provisions including fish and marine vegetation. It also amends the *EP&A Act 1979* and a range of other legislation including the *Threatened Species Conservation Act 1995*.

Marine Protected Areas

The major aim of NSW marine protected areas is to manage and conserve marine biodiversity on coastal, estuarine or oceanic areas. Marine protected areas generally fall into the categories of marine parks, aquatic reserves and intertidal protected areas.

Marine parks are designed to protect marine animal and plant life along the NSW coastline but also allow many recreational and commercial uses. They fit into a broad framework for managing coastal and marine biodiversity.

The *Marine Parks Act 1997* establishes the legal basis for creating a system of marine parks in NSW. Marine parks may take in:

- coastal waters
- lakes, river mouths (estuaries) and creeks
- offshore waters
- beaches
- islands
- headlands
- reefs.

The NSW Government set up the Marine Parks Authority in 1997. In 2007 the Authority became part of the Department of Environment and Climate Change. The Marine Park Authority reports to the Minister for Climate Change, Environment and Water (DECC) and the Minister for Primary Industries (DPI). The Marine Park Authority's main role is to:

- investigate and recommend where marine parks should be established
- make recommendations on which areas in each marine park should be set aside for conservation, recreational and commercial purposes (this is called zoning)
- manage activities in marine parks so as to protect the marine environment
- tell the public about marine parks
- carry out and encourage research on how marine parks affect the marine environment and nearby communities.

Aquatic Reserves

The FM Act provides for the creation and management of Aquatic Reserves in NSW Waters to conserve the biodiversity of fish and marine vegetation in the area.

Aquatic Reserves are permanent reserves established to protect biodiversity and representative of samples of our marine life and habitats. They can also be established to protect important habitat and nursery areas and protected species, or for research and education.

In 2007, the responsibility of Aquatic Reserves was transferred from the Minister for Primary Industries (DPI) to the Minister for Environment, Climate Change and Water (incorporated into the new DECC).

At the time that this document was adopted, the Manly's coastline contained two (2) Aquatic Reserves, the North (Sydney) Harbour Aquatic Reserve and Cabbage Tree Bay Aquatic Reserve.

4.3.8 DPI Policy and Guidelines - Aquatic Management and Fish Conservation 1998/1999

The Policy and Guidelines apply to all planning and development proposals that affect freshwater, estuarine and marine ecosystems. These documents aim to assist councils and other government agencies in their assessment of proposals and documents such as licenses, development applications and Environment Impact Statements in order to ensure that they are sensitive to, and mitigate impact on, the aquatic environment.

The Policy identifies a number of general Policies for the conservation of fish, marine vegetation and aquatic habitats, which have been considered in the preparation of this Management Plan.

The Policy and Guidelines is currently going through a review process

Fish Habitat Protection Plans

To assist in the protection of key fish habitats, the *Fisheries Management Act 1994* enables the creation of Fish Habitat Protection Plans for the protection of any fish habitat. This document presently has two Fish Habitat Protection Plans:

- Plan No 1

The Plan applies to the following habitats and features; the quantity and quality of waters, mangroves, seagrass, saltmarshes, wetlands (3), mudflats, sand and gravel substrates, rocky reefs, snags (primarily fallen trees and rocks), reed beds and other aquatic plants.

This Plan also applies to the following activities: dredging and reclamation, damaging marine vegetation, de-snagging and impeding fish passage.

- Plan No 2

This Plan is specific to the protection of seagrass and as a result its primary objective is to "*ensure there is no net loss of seagrass within the coastal and estuarine waters of NSW.*" The Protection Plan identifies a number of broad strategies for achieving this objective.

The *Fisheries Management Act 1994* states that "*A person must not cut, remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any land or lease...*" Seagrass is included in the definition of marine vegetation. Therefore penalties apply for cutting, removing, damaging or destroying seagrass.

This Plan covers all of NSW's coastal and estuarine waters. Activities to which this Plan applies include: collection or 'trimming' of live seagrass, collection of seagrass from oceanic or estuarine beaches, dredging, reclamation, construction of groynes and breakwaters, construction of jetties, wharves, bridges, ramps and pontoons, moorings, boating and anchoring, fishing, construction and operation of aquaculture facilities, bait digging and collecting and point source pollution. Guidelines for the management of each of these activities are provided in the Plan.

4.3.9 Threatened Species Conservation Act 1995

The *Threatened Species Conservation Act 1995* (TSC Act) protects all threatened plants and animals native to NSW (with the exception of fish and marine plants, which are covered by the *Fisheries Management Act 1995*). It provides for the identification, conservation and recovery of threatened species, populations and communities. It also aims to reduce the threats faced by those species.

Recovery plans are prepared by the NSW NPWS (now DECC) for each threatened species, population and ecological community listed under the TSC Act. The Act specifies that Council must not undertake actions that are inconsistent with a recovery plan and must manage the threatened species, population or ecological community in accordance with the relevant recovery plan.

The TSC Act also requires government planners to take account of threatened species before they make environmental plans and policies at a statewide, regional and local level. Consideration is therefore required by Manly's CMPs.

The TSC Act (and the EP&A Act), require that a determining authority cannot carry out or approve an activity that is likely to significantly affect threatened species, populations or ecological communities, or their habitats, unless a Species Impact Statement (SIS), or an EIS has been prepared.

4.3.10 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) provides the statutory basis in NSW for:

- the proper management, development and conservation of natural and artificial resources;
- the planning and co-ordination of development on land and water;
- the sharing of the responsibility for environmental planning between the different levels of government in the state; and
- achieving ecologically sustainable development on land and water, while promoting orderly and economic development and use on land and water.

There are a number of State Environmental Planning Policies (SEPPs) which operate under the EP&A Act, only a few of which are relevant to the CMP. These are detailed below.

State Environmental Planning Policy (SEPP) No 19 - Bushland in Urban Areas

The general aim of this Policy is to protect and preserve bushland within the Greater Sydney area. It requires that bushland not be disturbed without the consent of Council. This Policy is integrated into Council's Development Application process.

The SEPP also provides for the preparation of management plans for SEPP 19 Bushland. The Manly LGA has a number of SEPP 19 bushland areas. These are detailed in the Terrestrial Ecology chapter of each of the relevant Coastline Management Plans.

State Environmental Planning Policy (SEPP) No 71 - Coastal Protection

The State Environmental Planning Policy (SEPP) No 71 - Coastal Protection, applies to land within the 'coastal zone' as defined by the *Coastal Protection Act 1979* (as amended 2002). The SEPP specifies certain development conditions and approval processes that apply within the zone.

State Environmental Planning Policy (Major Projects) 2005

This newly created SEPP identifies development that requires consent under the newly created Part 3A of the *EP&A Act*. Development that is considered under Part 3A of the Act is subject to the consent of the Minister for Planning rather than Council. Such development was formerly referred to as *State Significant Development*, however, under the new planning reforms is referred to as *Major Projects* and is subject to a different assessment and consent process to development assessed under Part 4 of the *EP&A Act*.

4.3.11 Native Vegetation Conservation Act 1997

The *Native Vegetation Conservation Act 1997* (NVC Act 1997) was established to deal with the conservation and management of native vegetation on a State-wide basis.

Manly Local Government Area is partially excluded from the application of the NVC Act under Schedule 1. For the most part the NVC Act does not apply to Manly LGA however, the Act does apply to land within the local government area to the extent to which the land comprises 'State protected land'.

At the time that this document was written there were no State Protected Lands within the Manly Local Government Area.

4.3.12 NSW Heritage Act 1977

The NSW *Heritage Act 1977* provides for heritage management by government agencies. Section 170 of the Heritage Act outlines the special obligations of government agencies.

4.3.13 Heritage Impact Assessment Guidelines (NPWS)

The National Parks and Wildlife Service (now DECC) have drafted guidelines that must be followed by developers and consent authorities in their assessment of the impacts on Aboriginal heritage.

4.3.14 Rivers and Foreshore Improvement Act 1948

The *Rivers and Foreshores Improvement Act 1948* (R&FI Act) applies to natural and artificial water bodies, which are known as 'protected waters', and to the 'protected land' surrounding them.

Under Part 3A of the R&FI Act a permit is required when a proposed development is in, or within 40 metres of the top of the bank or shore of, "protected waters". Permits are not required if a development proposal is undertaken by a Council.

4.4 REGIONAL PLANNING FRAMEWORK

4.4.1 Metropolitan Strategy (2005)

The Metropolitan Strategy, *City of Cities—A Plan for Sydney's Future* was released in December 2005. The Strategy supports continuing economic growth while balancing social and environmental aspects and sets the guiding principles for Sydney to develop in a sustainable way.

City of Cities allows the State Government and local government to secure Sydney's future on a sustainable basis, providing a growing number of residents with stronger cities and centres; a spread of jobs in Western Sydney and along the global economic corridor; fair access to a diversity of housing, jobs, services and open space; safeguarded resource lands; improved environmental outcomes; and improved transport connections.

The Strategy is a long-term plan, providing the NSW Government's framework to manage the growth and development of Sydney over the next 25 years.

4.4.2 Sydney Regional Coastal Management Strategy 1998

This strategy was prepared by the Sydney Coastal Councils Group to coordinate and integrate relevant coastal planning and management activities, and the responsible organisations, to improve coastal management in Sydney. This strategy originally applied to the coastal areas between Pittwater local government area and Sutherland local government area, including all areas that were previously excluded from the NSW Coastal Policy 1997. This strategy will be reviewed due to re-definition of the coastal zone under the Coastal Protection Amendment Act 2002.

The primary aim of the present strategy is "to protect and conserve terrestrial and marine ecosystems in the study zone, and to manage the social and economic conditions to achieve this, through the implementation of identified, sustainable coastal planning and management practices."

4.4.3 Stormwater Management Plans

There are two Stormwater Management Plans that apply within the Manly LGA including the Northern Beaches Stormwater Management Plan and the Middle Harbour Catchment Stormwater Management Plan.

The primary goal of the Stormwater Management Plans is to facilitate coordinated management of stormwater within catchments to maximise ecological sustainability and the social and economic benefits of sound stormwater management practices.

A formal update and review of the Stormwater Management Plans was undertaken during late 2002 and early 2003 as required by the NSW EPA (now DECC). The review and update focused specifically on the SMP management actions, many of which had been completed. Manly Council decided that the main updated management actions detailed in the two relevant SMPs should involve an evaluation of measures undertaken to date. Once the evaluation is undertaken and the effectiveness of each action has been determined, Council will look at further management responses to be included in the updated Plans.

4.4.4 Sydney Harbour Federation Trust - North Head Plan

A Plan for North Head was placed on public exhibition towards the end of 2002. Following receipt of submissions, a revised plan was submitted to the Minister for Environment and Heritage in March 2003. The Plan has now been adopted.

The vision for North Head is to create an ecological sanctuary where native wildlife, habitats, and plant communities are managed in a sustainable way by all landholders; where endangered species are protected and conserved and feral animals managed effectively; where native species may be carefully re-introduced.

4.4.5 North Head Planning Strategy (Clouston, 1996)

This report comprises the study findings and planning strategy for the peninsula of North Head (including the Little Manly area).

The purpose of this strategy is to establish management and planning principles for both land managers, the statutory bodies and the community in guiding decision making and implementation processes.

This has not been adopted by the State.



MANLY COUNCIL

Manly Ocean Beach Coastline Management Plan

Action Plan



Issue No. 4
March 2008



WorleyParsons
resources & energy

**Patterson Britton
& Partners Pty Ltd**
consulting engineers

Manly Ocean Beach Coastline Management Plan

ACTION PLAN: March 2008

Priorities:

High – within 2 years of adoption of the CMP

Medium – within 4 years of adoption of the CMP

Low – within 5 years of adoption of the CMP

Ongoing – throughout the time that this Coastline Management Plan is current

Authority Abbreviations

NSWM – NSW Maritime

DPI – Department of Primary Industries

NPWS – NSW National Parks & Wildlife Service (now part of the Department of Environment & Climate Change)

DoP – Department of Planning

DECC - Department of Environment & Climate Change

MC – Manly Council

SPA – Sydney Ports Authority

Police – NSW (Manly) Police Service

SAP – Manly Scientific Advisory Panel

SW – Sydney Water

SCCG – Sydney Coastal Council Group

MC - Manly Council

MEC – Manly Environment Centre

Please note that these priorities are intended as a guide only and represent the desirable timeframes for addressing each action. The priorities may be revised to be in accordance with available resources and in consultation with the responsible agency and/or department/division of Council, bearing in mind that this is a strategic plan with a timeframe of 10 to 20 years (with revisions). Implementation of this plan will also be required to have regard to other Council Priorities.

Note the status column is to be filled out during the implementation of the Plan. When a recommendation is completed the status column is to read 'complete' and the date of completion recorded.

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Beach Erosion and Shoreline Recession

Objective / Performance Target:

- To manage the beach erosion and shoreline recession hazards now and into the future in a manner that maintains or improves beach amenity and ensures an acceptable risk of damage to beach front assets.
- To take into account the potential for future climate change to affect the magnitude of coastline hazards.

Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
ER1 - Implement an Emergency Action Plan (EAP) to deal with the beach erosion hazard when it occurs and where it occurs along the beach		MC Priority – High as required	MC, DECC – Coastal management program	
ER2 – Investigate structural measures to stabilise the toe of the seawall and allow removal of the existing rock apron, particularly in the section of beach between the former tourist office and Victoria Parade stairs		MC Priority – High	MC, DECC – Coastal management program	
ER3 – Should the impact of shoreline recession become unacceptable, consider nourishment of the overall embayment combined with ongoing implementation of the EAP, as required	Continue to liaise with other Sydney Coastal Councils regarding the potential use of offshore sand sources for beach nourishment	MC Priority – Medium as required	MC, DECC – Coastal management program	
ER4 – Consider raising coping levels of the seawall, or creating coping, in particular areas at a future time should the risk of overtopping be considered unacceptable		MC Priority – Medium as required	MC – Coastal management program	
ER5 – Ensure that some sand from the excavation of the flood outlet channel is pushed towards the Queenscliff SLSC seawall to create a berm and reduce the risk of undermining of the seawall in flood flows		MC Priority – Medium	MC	
ER6 – Investigate changes in groundwater levels behind the beach in response to a rise in mean sea level		MC Priority - Medium	MC	
ER7 – Ensure the impact of climate change on coastal processes continues to be monitored and sea level rise is considered during detailed hydraulic analysis for stormwater upgrading		MC Priority - Medium	MC	
ER8 - formalise the existing rock scour protection at the Pacific St stormwater outlet		MC Priority - Medium	MC	
Refer also to strategy AS7				

Water Quality

Objective / Performance Target:

- To ensure water quality meets the community's expectations and provides water quality suitable for swimming and fishing.

Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
WQ1- Consider subsidising rainwater tanks in key catchments on Manly Flat		MC Priority - Medium	MC	
WQ2 – Consider a detention and infiltration system for Ivanhoe Park		MC Priority - Medium	MC	
WQ3 - Consider end of pipe storage and aquifer injection at Pine Street		MC Priority - Medium	MC	
WQ4 - Consider stormwater detention and re-use at Kangaroo Lane		MC Priority - Medium	MC	
WQ5 - Investigate the risk of blockage of the overflow structure at Pine Street outlet		MC Priority - Medium	MC	
WQ6 – Continue the current management approach for the removal of marine sand that enters Manly Lagoon	Monitor the rate of infilling following removal of sands	MC Priority - Medium	MC	
WQ7 – Ensure that practices that have the potential to cause accelerated infilling of the lagoon are monitored and revised where required		MC Priority - Medium	MC	
WQ8 – Continue the current management approach to improve the quality of water entering the Lagoon through improving sewerage infrastructure, urban runoff and creeks		MC Priority - Medium	MC	
WQ9 – Continue with initiatives including systematically targeting pollution “hotspot” catchments to improve the quality and reduce the volume of stormwater entering Manly Ocean Beach and Manly Lagoon		MC Priority - Medium	MC	

Refer to also to strategies AS1, AS2, AS7 and AS8

Access

Objective / Performance Target:

- To improve and control access for pedestrians, cyclists and service vehicles, minimising conflicts and negative impacts.
- To improve access for people with disabilities.

Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
AC1 – Construct a new access ramp at The Corso beach access steps for people with disabilities or mobility challenges.		MC Priority – High	MC	

Access (continued)				
Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
AC2 - Investigate the cost-benefit of upgrading the existing access ramps at Manly and North Steyne Surf Life Saving Clubs		MC Priority – Low	MC	
Refer also to strategies RA4, RA5 and AS4				
Recreational Activities				
<u>Objective / Performance Target:</u>				
<ul style="list-style-type: none"> To provide for the continuing, enjoyable and sustainable use of Manly Ocean Beach for a range of recreation and tourism activities, minimising the impact of these activities on the environment by responding to the area's carrying capacity and patterns of use. To recognise the place of Manly Ocean Beach as an iconic tourism and recreation attraction. 				
Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
RA1 - Ensure that the flood outlet channel is located as close as practicable to the low flow channel to provide as large a useable berm area as possible for the public south of the channel		MC Priority - Medium	MC	
RA2 - Maintain adequate signage, visitor information and other educational efforts, as well as a comprehensive lifeguard/volunteer lifesaving service at key points along Manly Ocean Beach to ensure the safety of visitors and beach users		MC Priority - Medium	MC	
RA3 - Investigate options for expanding the promenade and formal landscape area opposite and south of the seaward end of The Corso, to increase the capacity of this comparatively narrow and at times crowded high use area		MC Priority - Medium	MC	
RA4 - Support and enhance the existing informal/self-regulating dispersal of differing uses and visitor groups along the beach and foreshore, largely through indirect design and management measures (such as the location of beach access points, special activity areas, picnic facilities, and so on)		MC Priority - Medium	MC	
RA5 - Continue the licensing process and special management arrangements for major events, commercial and organised usage of the beach and foreshore areas		MC Priority - Medium	MC	

Recreational Activities (continued)				
Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
RA6 - Regularly review the approval processes and frequency/occupation levels for commercial or organised beach uses to ensure equitable visitor access and enjoyment of Manly Ocean Beach and avoid over-commercialisation, crowding, or reduction in the area's visitor appeal		MC Priority - Medium	MC	
RA7 - Ensure that Manly Beach's key surf breaks and reputation as a "quality surf spot" are considered in the identification of any beach management actions impacting the surf zone and are not unduly compromised		MC Priority - Medium	N/A	
RA8 - Continue to invest in the routine high quality maintenance and periodic refurbishment of the landscape works and visitor facilities along Manly Ocean Beach, in keeping with the proposed unifying Landscape Masterplan and avoiding incremental or maintenance-driven development/hardening of less formal beachfront areas		MC Priority - Medium	MC	
RA9 - Continue to balance park use and visitor enjoyment of the beachfront with the amenity and views of local residents/neighbours in all future planning and management of the landscape of Manly Ocean Beach		MC Priority - Medium	N/A	
Refer also to strategy AS4				
Safety				
<u>Objective / Performance Target:</u>				
<ul style="list-style-type: none"> To minimise the risks to human safety from the use of and access to the coastline. 				
Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
S1 - Install warning signage at the Pine Street and Raglan Street Stormwater Outlets (now completed).		MC Priority - High	MC	
S2 - Monitor seawall to ensure visitor safety and consider upgrading to enhance safety as required		MC Priority - ongoing	MC	
Refer also to strategies AS8 and RA2				

Aquatic Ecology

Objective / Performance Target:

- To ensure activities at Manly Ocean Beach are carried out in a manner that maintains or improves the ecological condition of aquatic habitats.

Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
AE1 - Commission ecological studies to learn more about the aquatic ecology of Manly Ocean Beach and interconnected areas		MC Priority - Medium	MC	
AE2 - Establish ecological indicators to monitor the condition of beach habitats		MC Priority - Medium	MC	

Refer also to strategies WQ6 and WQ7

Aboriginal Heritage

Objective / Performance Target:

- To maintain and protect the Aboriginal heritage values of Manly Ocean Beach.

Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
AH1 - Establish and maintain a co-operative working relationship with the Metropolitan Local Aboriginal Land Council, and other Aboriginal people or groups as required, regarding the identification, appropriate management, and culturally appropriate presentation of Aboriginal heritage sites/values - both tangible and intangible - along Manly Ocean Beach		MC Priority - Ongoing	MC	
AH2 - Require Aboriginal heritage investigations to be carried out as part of the development planning and approval process for any major proposals located in the vicinity of previously known or suspected Aboriginal heritage sites along Manly Ocean Beach		MC Priority - Ongoing	MC	
AH3 - Incorporate "awareness, identification and response" provisions/protocols regarding unknown/unrecorded Aboriginal cultural sites in development/building approvals for major excavations works along Manly Ocean Beach		MC Priority - Ongoing	MC	
AH4 - Incorporate information regarding the Manly area's Aboriginal history, heritage, sites and contemporary associations/significance in future interpretation measures - both on and off site - for Manly Ocean Beach		MC Priority - Ongoing	MC	

Aboriginal Heritage (continued)				
Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
AH5 - Investigate the dual-naming of Manly Ocean Beach and the wider public use and recognition of the area's traditional Aboriginal name		MC Priority - Low	MC	
Built and/or Cultural Heritage				
<u>Objective / Performance Target:</u>				
<ul style="list-style-type: none"> To manage and protect the tangible built and/or cultural heritage assets of Manly Ocean Beach and its immediate surrounds. To acknowledge the place of Manly Ocean Beach in the Australian identity and popular beach culture. 				
Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
BH1 - Acknowledge and actively maintain the iconic "bronzed Aussie", surf culture and seaside recreation values of Manly Ocean Beach in all aspects of the area's future planning and management in ways that ensure the protection but evolution of these values and cultural associations		MC Priority - Ongoing	MC	
BH2 - Continue to manage Manly Ocean Beach consistent with its listing on the Register of the National Estate, recognising its nationally significant built and cultural heritage values in all aspects of the area's future planning and management		MC Priority - Ongoing	MC	
BH3 - Ensure appropriate recognition, consideration and protection of sites identified, and listed, as having historic heritage significance along Manly Ocean Beach and its curtilage in the development planning and approval process		MC Priority – Medium	MC	

Aesthetics

Objective / Performance Target:

- To provide for the continuing, enjoyable and sustainable use of Manly Ocean Beach for a range of recreation and tourism activities, minimising the impact of these activities on the environment by responding to the area's carrying capacity and patterns of use.
- To reduce the adverse impacts of features that detract from the visual quality of Manly Ocean Beach, and to enhance the area's aesthetic appeal.

Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
AS1 – Continue the current management regime for dealing with kelp build up in the low flow pipes		MC Priority - Ongoing	MC	
AS2 – Ensure the flood outlet channel is not excavated so deep that it intercepts the groundwater table on the beach as this can create shallow stagnant pools of water within the berm area which also can be a trap for litter		MC Priority - Ongoing	MC	
AS3 - Maintain and enhance the key visual elements of Manly Ocean Beach - specifically the Norfolk Island Pines, promenade, and long wide arc of largely uninterrupted sandy beach		MC Priority - Ongoing	MC	
AS4 - Prepare and implement a revised landscape masterplan for Manly Ocean Beach to guide the character and presentation, visitor use and enjoyment, and maintenance of the area		MC Priority – Staged according to available funds	MC – General Revenue and Environment Levy, DECC – Coastal management program	
AS5 - Ensure appropriate recognition, consideration and protection of the visual qualities of Manly Ocean Beach in the development planning and approval process for major proposals likely to adversely impact the area's appearance and the experiences of users		MC	N/A	
AS6 - Liaise with Warringah Council regarding co-operative planning and development assessment/approvals across the south-side of Queenscliff Headland, to minimise the potential adverse impacts of development in this area on the visual quality of Manly Ocean Beach	Develop a “Memorandum of Understanding” between the two councils	MC, Warringah Council	N/A	

Aesthetics (continued)				
Recommendation / Strategy	Additional Action	Priority, Responsibility & Collaboration	Funding	Status
AS7 – Pacific St and Steinton St stormwater outlets - upgrade the stormwater systems.	<ul style="list-style-type: none"> - formalise existing rock scour protection (Pacific Street) - implement stormwater reduction measures in the catchments - undertake a detailed hydraulic analysis of the stormwater systems with particular consideration of ocean tailwater level, consider the implications of sea level rise, - maintain the outlet as a back-beach discharge, - critically review the ARI flow to be conveyed to the beach, - re-examine scour provisions in front of the seawall since an upgraded outlet would take more flow in the rarer events. 	MC Priority – High as required	MC, DEC – Stormwater trust grants	
AS8 – Pine St and Raglan St stormwater outlets - upgrade the stormwater systems. In the case of Raglan Street outfall, consider a partnership approach with Sydney Water to assess options.	<ul style="list-style-type: none"> - investigate the risk of blockage of the overflow structure at Pine Street - implement stormwater reduction measures in the catchments - undertake a detailed hydraulic analysis of the stormwater systems with particular consideration of ocean tailwater level, consider the implications of sea level rise, - prepare designs and carry out an environmental assessment for Options B, C and D*. - in the case of Options C and D, critically review the ARI flow to be delivered across the beach, - in the case of Options C and D, retain the warning signage 	MC Priority – High as required	MC, DEC – Stormwater trust grants	
Refer also to strategy RA9				

- * Option B – Termination of all stormwater outlets at the seawall (noting that the Pacific St and Steinton St outlets already terminate at or near the seawall).
Option C – Termination of those outlets that cross the beach (Pine St and Raglan St) higher up the beach, together with warning signage at these outlets.
Option D – Retention of the existing configuration of all outlets, with installation of warning signage at the Pine St and Raglan St outlets.