



Hunter Coast and Estuary Management Committee



March 2003

EXECUTIVE SUMMARY

The Newcastle Coastline Management Plan provides Newcastle City Council with an integrated management planning framework that provides for a balance between the long term use of the coastline and its conservation. Implementation of the prioritised strategic actions within the Plan, over time, will guide the improvement of coastline facilities and infrastructure. The Plan has been designed to cater for users of all ages and abilities, enhance the visual amenity and functionality of the coastline, and assist in protecting the many public and private structures against coastal hazards.

The Plan applies to the immediate coastal zone of the Newcastle Local Government Area, stretching from the Rifle Range at Fern Bay in the north, to Glenrock Lagoon on Burwood Beach in the south. It is the final document in a long process involving numerous technical studies and public consultation. **The Plan has been compiled in accordance with relevant Council and State Government policies and seeks to provide the most appropriate combination of options from the Newcastle Coastline Management Study for dealing with the various issues and problems associated with the management of the Newcastle coastline.**

The coastal landscape of Newcastle that we see today is the result of a lengthy geological formation, impacted upon by a relatively short history of human activity. The coastline was originally inhabited by the Awabakal and Worimi Clans who used the Hunter River foreshore and coastline as a source of food and shelter. Campsites and shell middens would have extended along the banks of the Hunter River and sections of the coast, but very few remnants of Aboriginal occupation remain today. By far the greatest influence on the coastal landscape came with European settlement of the area 200 years ago.

European settlement began initially as a penal colony, however the Hunter River quickly became an active port for the exploitation of the coal and timber resources of the area, and settlement subsequently grew. At that time Nobbys Island was separated from the mainland by an open stretch of water that created hazards for shipping. Construction of Macquarie Pier (completed 1846) to address these hazards connected Nobbys Island to the mainland. This provided a breakwater for ships and resulted in the creation of Nobbys Beach. As development of the city spread and met the beach foreshores, major roads and car parks were constructed along the coastline's beaches and cliffs. These remain today in the form of Shortland Esplanade, Memorial Drive and Scenic Drive. This development has resulted in a coastline reserve system south of the Hunter which is heavily protected by coastal protection structures and dominated with hard surfaces. Little vegetation exists for shade and amenity, and there are few facilities to attract visitors to the area.

To the north of the Hunter, a vastly different landscape exists. Stockton is a flat, sand peninsula that separates the ocean from the Hunter River. The construction of the Stockton breakwater (1899) on the northern side of the Hunter River, in addition to the already constructed southern breakwater, established the port for long term use. Subsequent land reclamation created Griffith Park and Little Park Beach. Similar to the south of the Hunter, development spread to meet the foreshore of Stockton Beach with Mitchell Street aligned parallel to the beach on what was previously a sand dune. Subsequent erosion periods of Stockton Beach resulted in the construction of a seawall, however, much of the foreshores private and public property remains at risk to coastline hazards today.

To better plan for the future of the coastline it is necessary to understand the processes at work in conjunction with the many issues associated with the use of the coastline. Under the guidance and co-ordination of the Hunter Coast and Estuary Management Committee, Newcastle Council embarked on the first stage of gathering information about the Newcastle Coastline in 1996. The Stockton Beach Coastline Hazard Study was completed in 1997, as a first phase response to identifying and managing the coastal hazard that presented a risk to the infrastructure at Stockton. Subsequently, the Newcastle Coastline Hazard Definition Study was completed in 2000, which identified a number of areas of high risk. The Study provided estimates for beach erosion over the

next 50 year period and delineated potential hazard zones associated with the estimated beach erosion.

The next step towards planning for the future was the compilation of the draft Newcastle Coastline Management Study, from which the Coastline Management Plan is developed. The Study is an investigation and assessment of management options for effective management of the coastal processes and hazards identified in the Hazard Definition Study, as well as the many social, economic, cultural, recreational, ecological, aesthetic and tourism values and issues. As part of the development of the Management Study all existing relevant information, data and studies were reviewed. Further, Community Working Group workshops were held with relevant community stakeholder groups, such as environment groups and recreational clubs, to gain an understanding of the values and issues held by a diverse range of groups with an interest in the coastline.

The draft Management Study documents the many significant issues, some of which are unique to individual beaches and others that are relevant to the entire coastline. **Options relevant to the environmental planning and management needs of Newcastle's coastline were considered in the draft Management Study and this draft Coastline Management Plan details strategic management actions to deliver those options considered most appropriate in this stage of the Plan's development.**

Particularly relevant to whole coastline is the lack of native coastal vegetation communities and natural environment. Opportunities are identified in the Management Study for the maintenance, enhancement and conservation of many of the natural features that help to define the Newcastle coastline. A planned native revegetation program as part of a Coastal Habitat Management Plan can repair much of the damage and re-establish natural dune and bluff vegetation. However, dune areas require on-going, active management and this requirement will increase as recreational use of Newcastle's beaches becomes more intensive in the future. To assist in the regeneration process, the establishment of formalised pedestrian access to beaches and cliffs and bluffs is proposed as part of the long term management of coastal vegetation.

The Management Study notes that the Aboriginal archaeological record today is a fragment of the original evidence. The recorded sites and the Newcastle coastline landscape are of importance to the local Aboriginal community and provide an opportunity to educate the general public regarding Aboriginal culture and history in the area. Similarly, the European heritage of the coastline is valued by the community, although at present none of this is at threat from inappropriate development.

A key finding of the Management Study is that Newcastle City Council is in an extraordinary position to manage the coastline when compared to other councils in the region. This is because the coastline is almost entirely in public ownership and zoned for open space, recreation or special uses under its Local Environmental Plan. Public ownership provides a range of key amenity and community use opportunities, particularly the provision of integrated coastline reserves to cater for numerous uses and numerous age groups along the coastline, to which Newcastle Council's proposed Bathers Way (walk) can be linked. This should include the provision of mixed use buildings adjoining the coastline reserves between Merewether Beach and Nobbys Beach through to Stockton Beach, as well as appropriate facilities within the coastline reserve system. Areas of intense facility provision along the coastline ('activity nodes') can expand on services currently provided by surf pavilions, ocean baths and public change rooms, to include low key eateries, outdoor seating and shade provision, equipment hire and picnic facilities. Such activity nodes can also be better linked to other existing recreational facilities such as neighbouring coastal parks such as Dixon Park, Empire Park and Griffiths Park. Under the Plan the highest priority for the coastline as a whole is the need for integrated planning and management of the individual beaches and coastline reserves that make up the Newcastle coastline. To this end the Management Plan proposes to provide for the above through:

- A review of the Newcastle Landscape Structure Plan (NLSP) to confirm strategic principles and priorities for landscaping the coastline corridor in a more integrated manner than currently exists.
- Preparation of Master Plans for sections of the coastline corridor to reinforce the NLSP and Plans of Management (Crown and Local Government), to provide shade, shelter and visual amenity, particularly for areas of high use such as Griffith Park, King Edward Park, Dixon Park Beach area and Newcastle Beach. Master Plans are seen as a key tool in implementation of the Coastline Management Plan as there is now ample information and guidance provided to redevelop certain coastline parks and beaches in accordance with community values and expectations.
- Update existing Plans of Management prepared under the *Local Government Act 1993* or *Crown Lands Act 1989* to include the guiding principles of the coastline Management Plan
- A Coastline Development Control Plan, or similar, that addresses the high aesthetic and recreational value of the coastline, the desired character of the coastline corridor, preservation of views, and controls for height and scale of future development.

As well as the amenity and community use of the coastline there is a range of social and economic opportunities and constraints addressed in the Management Study. Unlike many of Sydney's beaches, there are few situations where commercial activities extend down to the urban/coastal interface. The Beach Hotel at Merewether is the only current example of this kind of opportunity in Newcastle. Options for commercial development include the derelict Merewether Surf House and other currently leased areas such as the Newcastle City Bowling Club site and soon to be decommissioned Stockton Wastewater Treatment Plant. Further, there is an increase in community expectation for greater pedestrian amenity, comfort and safety. The location of the major traffic route through the coastline corridor has reduced these qualities, particularly at Nobbys, Newcastle, Bar, and Merewether Beaches. Car parking areas have also created similar problems in reducing the amenity of pedestrian areas. Actions to address this reduced amenity are outlined in the Plan.

A range of management options were identified and costed in the Management Study to address the coastal process hazards delineated by the Coastline Hazard Definition Study. For Stockton Beach, options included various forms of sand nourishment programs, extension of existing seawalls, a large artificial submerged nearshore reef, two smaller artificial submerged nearshore reefs and a planned retreat option that involved the removal of those structures determined to suffer destruction within the next 50 year period. These options were based on the assumptions within the Hazard Definition Study. Subsequent additional analysis of available hydrosurvey information that dates back to 1816 has been undertaken. Analysis of this survey data indicates that a significant volume of sand has moved off Stockton Beach. This has resulted in the seabed lowering (since the mid-1860's) by four to seven metres adjacent to the end of the northern breakwater with greatly accelerated rates of erosion observed between 1988 and 1995. The analysis demonstrates that the erosion off Stockton Beach is ongoing and not a cyclic fluctuation in response to variations and prevailing wave conditions, as was previously thought. What is not known at this time is where the sand is going and what is causing the observed ongoing erosion. As a consequence of the observed changes, i.e. lowering of the seabed profile, it is considered that previous erosion and hazard line predictions within the Hazard Definition Study are an underestimate of the likely magnitude of possible erosion. As a result, it is likely that the extent of the hazard zones is landward of those previously predicted. Management solutions for beach erosion and their costs will not be known until detailed modelling of the sand movement has been undertaken.

The Plan recommends the following actions to cater for the recent findings concerning erosion at Stockton Beach:

1. Fully developed and detailed emergency response procedures for Stockton Beach as part of Council's Disaster Action Plan (DISPLAN), which is planned for release in 2002.
2. Further detailed analysis of coastal processes off Stockton Beach and consideration of long term management options. This includes the undertaking of detailed analysis to identify the cause of the long term erosion, the pathway of sand movement from the beach system and appropriate structure / systems that can be implemented to address the erosion of the beach.

Once defined these works will form part of a subsequent amendment to the Plan.

3. Works recommended for immediate action prior to the implementation of management options to address long term erosion processes at Stockton Beach, on the basis that major works would not be recommended, if at all, without further detailed coastal process understanding being developed.

A contingency plan to protect community and private assets is currently in place and includes the use of emergency sandbagging under the control of the local State Emergency Service (SES).

While considered a high priority within the Plan, stormwater management is not as major an issue as it is on other stretches of the NSW coastline, as the majority of stormwater is diverted to the Hunter River and only a relatively small proportion of stormwater is directed to Newcastle's beaches. However, stormwater does pond in back beach areas after periods of high rainfall, which has the potential to create a public health hazard that Council needs to manage through an outlet maintenance and education programs to reduce the health risk to beach users.

Nobbys Beach is the highest used beach on the coastline, with close proximity to public transport routes, the CBD and Newcastle Beach. To provide for the public safety of users of the area works such as the provision of warning signage from rock fall at key locations, including Nobbys Headland and Shortland Esplanade, and the calming of traffic, particularly along Shortland Esplanade and the car park/roundabout area, are required as a high priority. The provision of appropriate facilities and management of companion animals within the Horseshoe Beach area is recommended to cater for the high number of users and visitors to the area.

The provision of a Master Plan for Newcastle Beach is of the highest priority to address the greater Newcastle Beach area, which includes Pacific Park, Shortland Park, Fletcher Park, the Beach Promenade and, the traffic flow and car parking issues associated with Shortland Esplanade. Redevelopment guidelines that include controls for the scale, height, setback, colour, design quality of new development are also a high priority due to the redevelopment potential of the area, particularly the Newcastle Hospital site. In addition, the long term solution for solving slope instability at South Newcastle Beach must involve a public consultation program for this highly valued area that provides access to the Shepherds Hill area and forms part of the annual Mattara Hill Climb event.

A Master Plan and Guidelines for the protection of views, which are almost 360 degrees in certain parts of the Shepherds Hill area, is proposed within the Plan as a priority. A similar priority is the provision of safe access throughout the area due to its elevation, and protection of the area's remnant native grassland.

Similar to other beaches, provision for the enhancement of public amenity in the Bar Beach to Merewether stretch, currently dominated by roads, car parks, concreted promenades and under utilised reserve systems in Empire, Dixon and Jefferson Parks, is considered a high priority for management by the Plan. The Plan supports Newcastle City Council's recent resolution to continue to field enquiries regarding the Merewether Surf House's reuse opportunities for the provision of community services and/or commercial opportunities, as well as redevelopment potential of other buildings such as the Newcastle City Bowling Club site.

The Plan suggests the joint management of the Burwood Beach area in respect to linking the coastal walk from Lake Macquarie with Newcastle's proposed Bathers Way, and the appropriate catchment management of Glenrock Lagoon between the many stakeholders, being Lake Macquarie City Council, National Parks and Wildlife Service, Hunter Water Corporation, the Scout Association and Awabakal Local Aboriginal Land Council. In addition, National Parks and Wildlife are proposing a Conservation Management and Cultural Tourism Plan for the Glenrock State Recreation Area. Such a Plan should be compatible with the management principles of this Coastline Management Plan.

A key to implementation of the Plan is through a newly proposed "Coastline Program and Planning Co-ordination Committee", which forms part of the Plan's Implementation Framework (Section 2.3). The function of this committee will be to implement components of the Coastline Management Plan on an integrated locality basis. This means that particular coastline assets or individual beach areas are not considered in isolation, but as part of an integrated coastline system. The committee is to ensure the multiple Teams within Council's structure are integrated in their management and implementation of coastline projects, such as the 'Bathers Way', Master Plans and components of the Major Asset Presentation Program (MAPP). In addition, it is proposed that a database be created of all relevant projects within the coastline and used as a tool for the Committee in its decision-making process.

The time frame for the program of works identified by the Coastline Management Plan has been set at approximately 30 years. Within this 30 year time period, priorities and completion timeframes have been set for all works and actions relating to the Newcastle Coastline Management Plan. The Plan also makes provision for a review and reporting process to enable the broader community to be informed and proposed actions and priorities refined as necessary.

The Study and Plan were on public display for six weeks in September and October 2002. During that period comment from the community and Government agencies was sought. Following the display period, the Plan was modified where necessary and then finalised for adoption by Council.

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- 1 Summary of Public Display Submission Issues**
- 2 Potential Sources of Funding**

1.0 BACKGROUND AND PROCESS

1.1 INTRODUCTION

The Newcastle Coastline Management Plan provides a management framework for the entire coastline of Newcastle City, which is bounded by the southern and northern extremities of the Newcastle Local Government Area. These are Glenrock Lagoon in the south and the southern boundary of the Rifle Range at Fern Bay in the north.

The seaward and landward extent of the study area is variable and includes both marine and terrestrial areas about the shoreline. This extent includes coastline areas as defined in the Coastline Hazard Policy (within the State Government's Coastline Management Manual) and the Revised NSW Coastal Policy (1997). As well as the coastline, the study area includes a series of small catchments, which drain to the coastline south of the Hunter River. These include the catchments of Glenrock Lagoon, Murdering Gully, and several heavily urbanised stormwater catchments in the Merewether, Bar Beach and inner Newcastle areas.

A key challenge with such a large and diverse study area is to maintain focus on the principal issues for sustainable management of the coastline. To facilitate focus on the key issues, we have introduced the concept of a *Core Area* and a *Context Area* (or area of influence). These two zones within the overall study area are defined by the following criteria.

The *Core Area* includes the coastal hazard zone, as defined in the Coastline Hazard Definition Study (WBM, 2000a), and adjacent marine and terrestrial areas that are directly associated with the coastline, in terms of physical processes and socio-economic functions. It includes:

- drainage outlets that directly discharge across the beach to the ocean;
- the nearshore (water) zone and its water quality, where most recreation takes place;
- access tracks;
- parking areas;
- coastal amenities and facilities; and
- some residences and commercial activities.

The *Context Area* is a much larger area where activities interact with the management of the core area. For the present study, this includes the small coastal catchments and broader components of the Newcastle urban area. The Management Study and Plan take into account the features and activities of these areas, but address them in less detail than the Core Area.

The Newcastle coastline has a number of features that distinguish it from other coastlines and from other environments. They combine the physical and ecological processes of the coastline, and the ways in which the local community has interpreted, managed and developed the coastline over time.

The distinguishing features of the Newcastle Coastline include:

- A great diversity of coastal environments, including pocket beaches, a small Intermittently Open and Closed Lagoon or Lake (ICOLL), the mouth of one of the largest river estuaries in NSW, high rocky cliffs, coastal bluffs, and the southern end of

the largest coastal sandy barrier in NSW, Stockton Bight. This coastline is representative of the broadest range of coastline hazard and coastal management issues in NSW.

- The southern section of the Stockton Bight. The Stockton Bight coastal sand barrier system is dominated by multiple transgressive dune episodes. The morphology and structure of the coastal dune system that separates the coastline from the estuary of the Hunter River, has high scientific, ecological, and visual significance.
- It was formerly the home of the Awabakal and Worimi Aboriginal people, and remnant evidence of their activities is preserved, as is evidence of early interaction between European settlers and Aboriginal people. Much of the raw material that was used for artefacts found along Stockton Bight came from the cliffs within the Newcastle coastline. The study area has significance in terms of the regional pattern of Aboriginal occupation.
- It is one of the areas of longest European settlement in Australia, and its history includes early convict settlement, pioneering extractive and processing industries, the development of major maritime industries, national defence initiatives, and community recreational activities. These features alone would attribute the area high cultural significance that warrants extensive conservation efforts.
- It is highly valued by the local and regional community for recreational purposes, and has been so for more than 100 years. The Newcastle City beaches are accessible by public transport, making them a particularly important recreational resource for young people who live in suburbs that are remote from the coastline.
- The study area lies within the Greater Metropolitan Region. This area is covered by a range of planning policies that are designed to manage intensive population and development pressures in a broadly coastal environment.
- It lies within the second largest urban area in NSW. The coastline is valued by a regional population that extends well beyond the boundaries of the Newcastle local government area. During community consultation programs, Newcastle residents have identified the city's beaches as its most valuable asset.
- The regional economy of the Hunter has traditionally relied on heavy industry as the main driver of growth and employment. This is no longer the case. The city of Newcastle and regional businesses have worked hard in recent years to promote the natural and cultural values of the city, to overcome the dirty industrial image, and to foster new economic activity that builds on the aesthetic, recreational, heritage and natural values of the coastline. This planning context of recasting the regional image is highly significant in NSW.

1.1.1 What is the Newcastle Coastline Management Plan?

The primary objective of the Newcastle Coastline Management Plan is to develop an integrated management planning framework for Newcastle coastline that effectively ensures a balance between long-term use and conservation.

To achieve this objective, management options relating to coastline values, issues and hazards have been investigated and assessed as part of the Newcastle Coastline Management Study and the Newcastle Coastline Management Study Reference Document. Having identified issues of relevance to the Newcastle coastline and considered these issues, and then weighed up all management options, the findings of the Coastline Management Study

are incorporated in a Coastline Management Plan. The Plan describes how the coastline will be used and managed to achieve desired outcomes. Strategic actions have been developed for the effective management of:

- coastal processes and hazards;
- social, economic, cultural, recreational, ecological, aesthetic and tourism values;
- public access;
- land tenure, use and management;
- human impact on the coast;
- the natural environment; and
- coastal ecology.

The Plan has been prepared in accordance with the State Government's Coastline Management Manual (NSW Government 1990) and will facilitate local government access to joint funding programs. Having an adopted Coastline Management Plan is an important consideration when prioritising grant funding to local Councils through the Coastal Management Program, administered by the Department of Land and Water Conservation (DLWC). Funding is discussed further in **Section 2.1**.

1.1.2 A Framework for Coastal Management

In 1988 the NSW Government adopted the Coastline Hazard Policy with the primary objective to reduce the impact of coastline hazards on owners of private and public land. The Coastline Management Manual (1990) was released with the Hazard Policy in order to provide local Councils with a better understanding of coastal processes, hazards and coastline management so that balanced, merit based decisions could be reached. The Manual sets down a management system that requires other planning factors, such as social, economic, recreational, aesthetic and ecological issues, be weighed along with coastline hazard considerations and beach amenity requirements, when making decisions regarding coastal development (see **Figure 1.1**).

The application of the Coastline Management Plan is given direction through the Coastal Policy 1997. The Policy provides guidance about a range of objectives for the implementation of the principles of ecologically sustainable development (ESD) in the coastal zone. Council has demonstrated a strong commitment to implementing the principles of ESD in its decision-making and has provided regional leadership in this regard. Council is looking to the Coastline Management Plan as a fundamental part of its sustainable management strategy. This means that Council's objectives for the project extend beyond the generic objectives of the Coastline Management Manual.

The following overriding principles, as referred to in Section 1.2.2 of the Management Study, must be considered in the implementation of the Plan, before any works are undertaken and in the assessment of proposed activities:

- 1) protect, rehabilitate and improve the natural environment;
- 2) recognise and accommodate the natural processes;

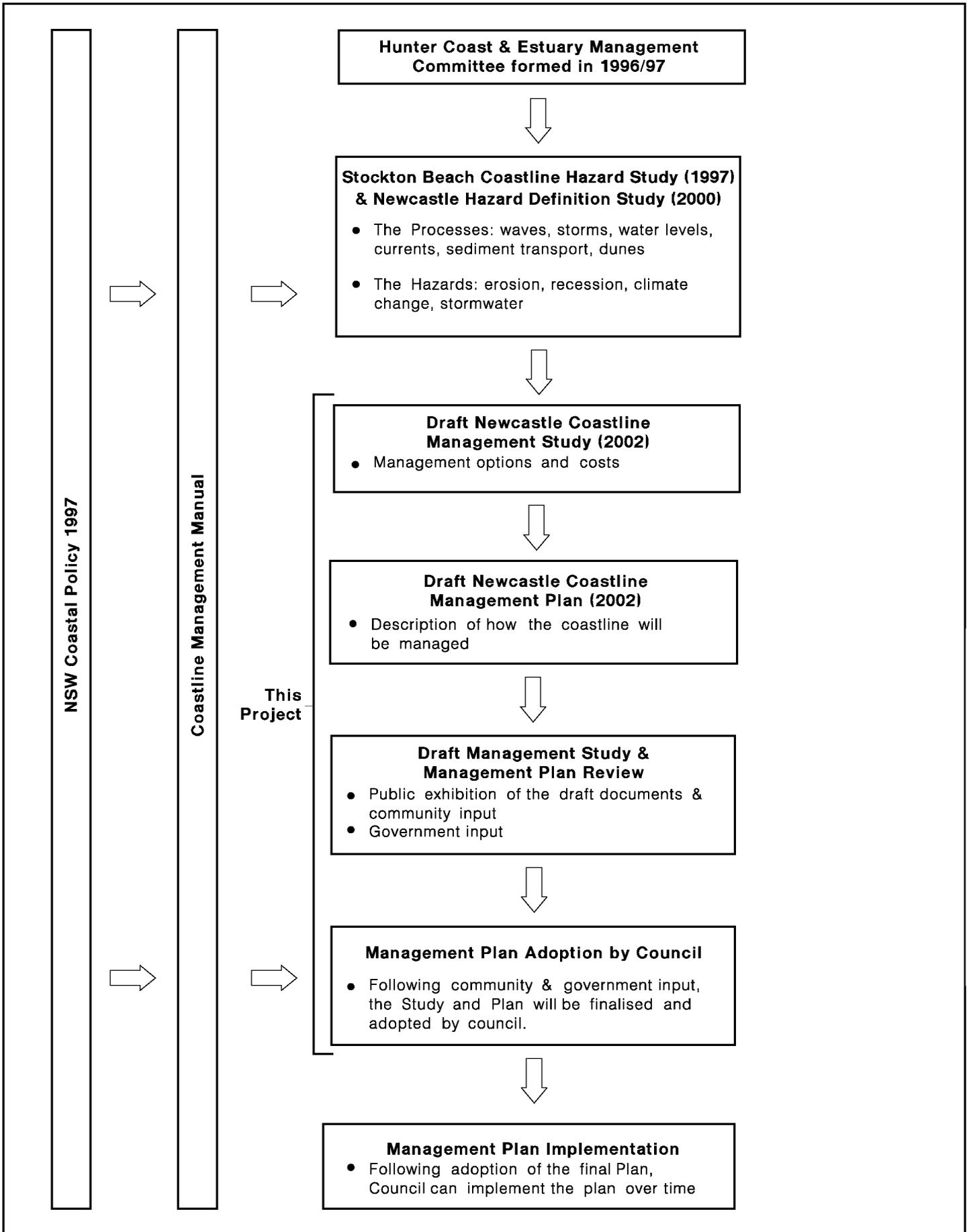


FIGURE 1.1
The Coastline
Management Framework

- 3) protect and enhance its aesthetic qualities;
- 4) protect and conserve its cultural heritage;
- 5) provide for ecologically sustainable development and use of its resources;
- 6) provide for ecologically sustainable human settlement;
- 7) provide for appropriate public access and use;
- 8) provide information for its effective management; and
- 9) provide for integrated planning and management.

In addition to the above overriding principles, there are numerous policies and legislation that must be considered. In particular, in relation to the Crown lands of the Newcastle coastline, the *Crown Lands Act 1989* provides for the proper development and conservation of Crown land having regard to principles contained within the Act.

1.2 WHO IS INVOLVED?

1.2.1 Hunter Coast and Estuary Management Committee

In 1996 Newcastle City Council (NCC) convened the Hunter Coastal Management Committee to provide an effective framework on which to base investigations into the processes causing beach erosion at Stockton. In 1997 the Committee also broadened its focus to include issues within the Hunter River estuary, resulting in the formation of the Hunter Coast and Estuary Management Committee.

The preparation of the Coastline Management Plan is supervised by the Hunter Coast and Estuary Management Committee. The Committee was established by Newcastle City Council to provide broad representation of local and State Government authorities, coastal user groups and community conservation interests in planning for the sustainable use of the Newcastle coastline. Establishment of the committee represented the first step in formulating the Coastline Management Plan (a list of the committee representatives is provided in the Management Study). The preparation of the Coastline Management Plan provides opportunities for Council and the community to create a partnership with the NSW Government to meet the objectives of the NSW Coastal Policy (1997).

1.2.2 Community Input

Community input to the development of the Management Plan is fundamental in ensuring that the wide range of community views are taken into consideration and that a sense of ownership is developed amongst community members. To this end two community workshops have been held to discuss issues and potential management options for the coastline and input has been received from the community throughout the preparation of the Study.

A Community Working Group was formed that consisted of key stakeholders and community groups, Councillors, Council staff and State agency officers. The group provided a 'sounding board' throughout the iterative Coastline Management Plan development process by identifying and prioritising issues, clarifying linkages, assessing impacts and suggested management options.

In February 2001, Council's consultants conducted the first Community Working Group workshop. This workshop provided the Working Group with an opportunity to contribute to the development of the Study and Plan early in the planning process. A second workshop was held during the Management Study compilation, to finalise the issues and management options before the draft Management Study public exhibition.

On 13 August 2002 Council adopted the Draft Plan and Study for exhibition, between 2 September 2002 and 21 October 2002. At the closing of the exhibition period, Council officers and consultants, Umwelt (Australia) Pty Limited, collated over 160 submissions from internal and external stakeholders (see **Appendix 1**), analysed them for content, then prepared a report for the revision of the Plan and Study. Council held two public meetings, one at Stockton and the other at Dixon Park Surf Lifesaving Club, to document public responses, to explain the Plan and to provide enough information for people to submit written responses.

1.2.3 Newcastle City Council

In addressing issues and developing management options for the coastline, several meetings were held with key Council staff who are responsible for development and future management of the coastline. These meetings have provided both a valuable insight into the issues and resources required to manage the coastline and a sound framework for future implementation of coastline management measures.

A further meeting for Council staff during the Plan and Study exhibition period in September and October 2002 documented the issues surrounding the implementation and use of the Plan. The results of this meeting have been incorporated into the final Plan.

1.2.4 State Government

There are numerous state government authorities with management and regulatory responsibilities relevant to the Newcastle coastline. These authorities have been directly consulted where necessary, throughout the process, and they will continue to be involved in the implementation of the Plan. Of these authorities, the key stakeholders include the State Lands Service (SLS) arm of DLWC, the Newcastle Port Corporation, NSW National Parks and Wildlife Service and the Hunter Water Corporation.

2.0 MANAGEMENT ACTIONS

The management actions detailed within **Section 2** have been drawn from the management options identified in the Draft Coastline Management Study. The management actions in this Draft Coastline Management Plan have been chosen as a result of liaison between Council and relevant government agencies and community input. The management actions were finalised after comments received from the public exhibition of the documents were reviewed and, where appropriate, incorporated into the final Coastline Management Plan.

2.1 SOURCES OF FUNDING

It is envisaged that the full extent of the works identified by the Coastline Management Plan will take several decades to fully implement. In addition, the extent and detail of some works will not be able to be defined until in some instances strategic planning decisions are made and in other cases end land uses are determined (ie. Stockton Waste Water Treatment Plant and Merewether Surf House).

Where works have been defined, indicative cost estimates have been prepared and these are provided in **Section 2.2**.

Potential external funding sources for identified works include the State's Coastal Management Program that is administered by the Department of Land and Water Conservation. The Coastal Management Program provides funding for works identified in the Coastal Management Plan that are required to mitigate or offset coastal hazards and other eligible capital works. However, there are statewide competing demands on available funding. Funds from the State government are typically matched by Newcastle City Council. Other funding sources and resources include works undertaken by community groups such as Dunecare and Coastcare, developer contributions and the Commonwealth government. In addition, in the past Council has contributed funds to dune rehabilitation works and to support community groups.

Coastcare currently facilitates consultation at the local level by promoting projects which involve partnerships between the local community and the local land manager which is in most cases the local Council. The program also provides for funds for preparing integrated coastal area management strategies based on partnerships between the three spheres of government, the community and industry. However, whilst finalising this Management Plan, the Coastcare Program was reportedly scheduled to cease, without a replacement program anticipated.

Under the National Heritage Trust extension, conservation and natural resource management activities along the coastline can be funded. This will provide funding mainly for the conservation, sustainable use and repair of Australia's coastal marine environments. However, similar to the NSW Coastal Management Program, there are statewide competing demands on available funding.

Details on specific funding programs are provided in **Appendix 2**.

2.2 MANAGEMENT ACTION PLAN

2.2.1 Management Issues and objectives

To ensure a balance between long-term utilisation and conservation of the Newcastle Coastline the following nine objectives have been derived through the process of preparing the Management Study and Plan:

Objectives

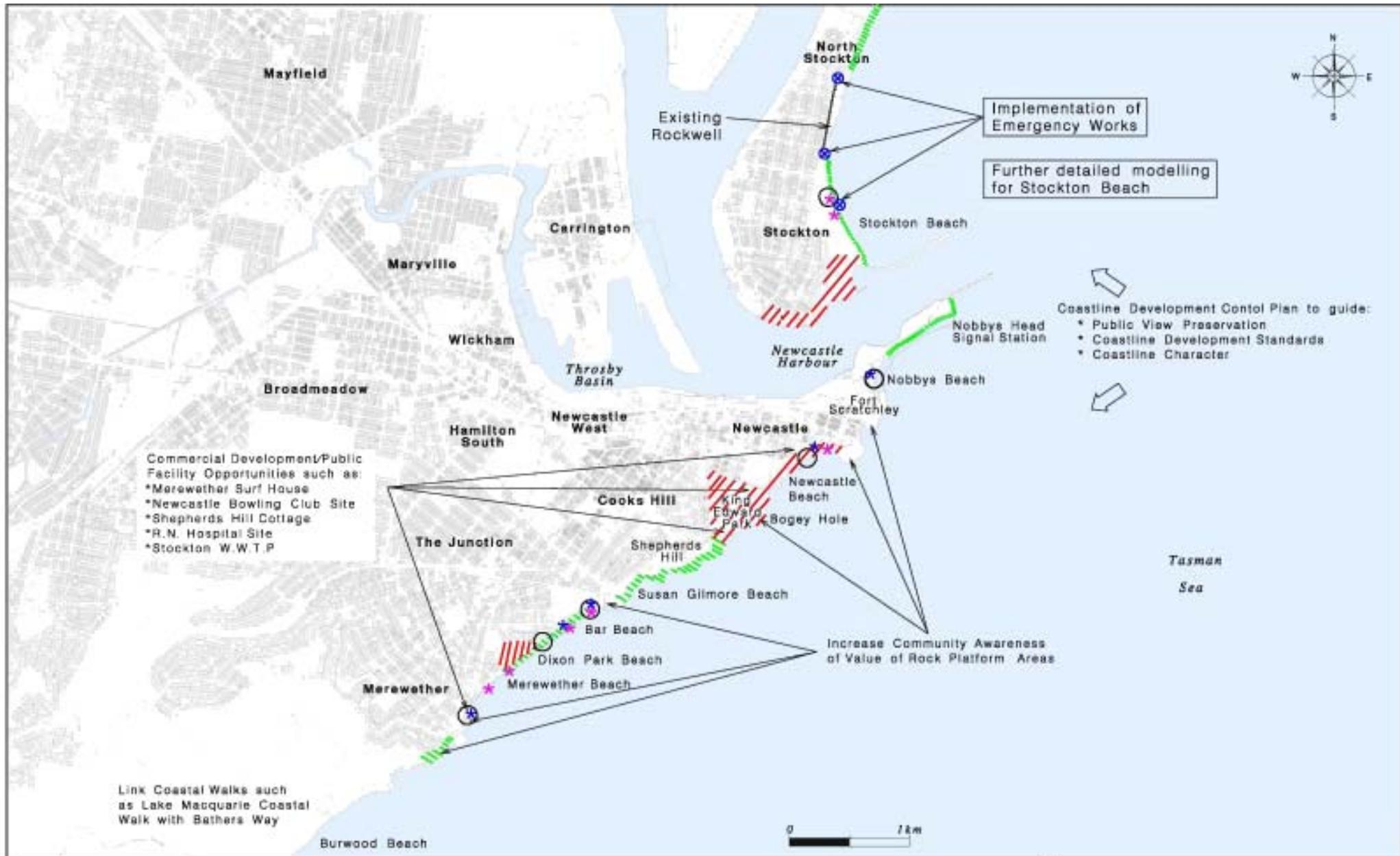
1. Ensure Council's coastal policy and management is integrated and involves community participation and information exchange.
2. Ensure the risks to human safety from the use of coastline resources is minimised.
3. Provide for equity in access to the coastline and its facilities, where it does not conflict with environmental objectives.
4. Enhance the environmental quality and amenity of the coastline.
5. Restore and enhance degraded aspects of the coastline.
6. Minimise the long-term cost to the community, in terms of loss of dwellings and social and economic disruption, through long term planning for coastline hazard management.
7. Effectively manage and conserve cultural heritage places, items and landscapes.
8. Identify and protect areas of natural or built aesthetic quality.
9. Identify and facilitate opportunities for the sustainable development and use of resources.

A number of relevant management issues have been identified during the development of the Management Study that need to be addressed to satisfy these objectives. Issues that are relevant to the 'Whole of Coastline' are listed in **Section 2.2.2**, while issues that are relevant to specific beach areas are listed in **Sections 2.2.3 to 2.2.8**. The objective to which each of the issues relate is also identified.

2.2.2 Whole of Coastline Management Actions

Newcastle City Council has the management responsibility of almost the entire Newcastle coastline and as such, must manage and plan for the management of its beaches individually as well as components of a unique stretch of the New South Wales coastline. The Coastline Management Plan provides the first opportunity for Newcastle City Council to approach management of the coastline as one complete unit (see **Figure 2.1**).

The Coastline Management Study has revealed that there are numerous issues requiring holistic management by Newcastle City Council, in conjunction with the relevant State agencies. The whole of coastline issues include the ongoing maintenance of existing infrastructure such as roads, surf clubs, ocean baths and the structures that protect them from coastal processes. The cost associated with such maintenance is high and integral to maintaining the coastline facilities however, management of the coastline requires more than the maintenance of structures in regard to coastal processes. Council must also manage for sustainable use of the entire coastline providing safe access to all members of the community, and a range of recreational opportunities without deteriorating the natural and



Commercial Development/Public Facility Opportunities such as:
 *Merewether Surf House
 *Newcastle Bowling Club Site
 *Shepherds Hill Cottage
 *R.N. Hospital Site
 *Stockton W.W.T.P

Link Coastal Walks such as Lake Macquarie Coastal Walk with Bathers Way

Coastline Development Control Plan to guide:
 * Public View Preservation
 * Coastline Development Standards
 * Coastline Character

Legend

○ Promote Key Areas along Coastline as 'Activity Nodes', which include theme (or signature) trees
 * Stormwater Outlet Maintenance Program to reshape Dunes after Heavy Rainfall
*Umwelt (Australia) Pty Limited
 Source: Newcastle City Council*

★ Traffic Calming at High Use Areas
 🌿 Dune/Civil Revegetation & Weed Maintenance Management Plan
 ⚙️ Emergency Works (e Sandbags)

🔴 Master Plans for :
 *Griffith Park/Pitt St. Reserve Area
 *Newcastle Beach Area including Fletcher & Pacific Parks
 *King Edward Park
 *Dixon Park Beach Area

FIGURE 2.1
 Whole of Coastline Management Plan

A3 Scale 1:50 000

Ref No.:R03_V2/1411_144.dgn

cultural environment of the coastline. The many issues relevant to the coastline include the management of the numerous rock platforms from Nobbys to Burwood Beaches, the increase in demand for lifestyle recreation, provision of additional picnic facilities, facilitation of appropriate commercial opportunities, maintenance of public access and the aesthetic quality of the coastline as a whole.

In addition, the rehabilitation of degraded environments has been identified as important in providing for the ecological and aesthetic amenity of the coastline. Newcastle Council has the opportunity to plan for the rehabilitation of degraded environments in a holistic manner. The natural vegetation along almost the entire length of the coastline from Merewether to Stockton Beaches is in a degraded state. Through planning for the long-term management of the vegetation along the coast in conjunction with the provision of activity nodes along the coast, such as surf club areas, the opportunity exists to create a well planned and linked coastline for use by all users into the future.

The highest priority for the coastline as a whole is the need for integrated planning and management of the individual beaches and coastline reserves that make up the Newcastle coastline, rather than the *ad hoc* approach adopted to date. This includes:

- The need for a Coastline Development Control Plan (DCP), or similar, to address the high aesthetic and recreational value of the coastline, the desired character of the corridor, the preservation of views, and the height and scale of future development.
- A review and implementation of the Newcastle Landscape Structure Plan (NLSP), or its contemporary, and preparation of Master Plans for areas of high use and amenity such as Griffith Park, King Edward Park, Dixon Park Beach and Newcastle Beach, and establishment of Activity Nodes.

Master Plans¹ are seen as a key tool in implementation of the Coastline Management Plan (see **Section 2.3**). There is now ample information and guidance provided within the Coastline Management Plan, Council policies and other Plans of Management, to better manage existing facilities and redesign certain coastline parks and beaches in accordance with the Coastline Management Plan, through appropriate Master Planning.

- Existing Plans of Management prepared under the *Local Government Act 1993* (LG Act) or *Crown Lands Act 1989* (CL Act), which include areas of the coastline covered by the Coastline Management Plan, will need to be updated to ensure the guiding principles of the Coastline Management Plan are included in such Plans of Management. Example Plans of Management include the Playgrounds Plan of Management, Neighbourhood Parks Plans of Management, The Foreshore Plan of Management, and Heritage Places Strategic Plan and Plans of Management
- A Whole of Coastline Coastal Habitat Management Plan, as almost the entire coastline is in a similarly degraded state which will benefit from a co-ordinated approach within one plan. Such a Plan will need to be integrated with all Master Plans prepared along the coastline.
- Coastline European Heritage and Aboriginal Heritage Studies to ensure proposals / Development Applications with the potential to greatly impact on the coastline values is referred to the Coastline Committee for comment and a consistent approach to coastline planning and management.

¹ For the purposes of this Coastline Management Plan, a Master Plan is to be the link between the Coastline Plan and “on-the-ground” works. It is a ‘blueprint’ or ‘concept plan’ for the layout of an area, eg. foreshore area, and may be as simple as an annotated map.

There is also a need for educational signage at the entrance to the many rock platforms along the coast to preserve the biodiversity of the Newcastle coastline.

Stormwater management along the coastline is a high priority and Council is currently implementing numerous initiatives, particularly in the Nobbys Beach catchment. These initiatives would be assisted by an outlet maintenance and education program to reduce the health risk to beach users.

While there are increased expectations for greater pedestrian amenity, comfort and safety, the introduction of the major traffic route through the coastline corridor has reduced these qualities. Car parking areas have created similar problems in reducing the amenity of pedestrian areas and displacing opportunities for pedestrians to enjoy the coastline. An appropriate balance is needed between the requirements of through traffic, vehicular access and parking for coastline users and at the same time, maintaining the amenity of the coastline attractions. Public transport access to the beaches south of Newcastle Beach, in conjunction with other actions such as the linking of activity nodes and beaches through appropriate access ways, will assist in reducing the need for large car parks along the coastline, and cater for future demands. The Plan recommends, through implementation of a Coastline DCP and projects such as Bathers Way, providing for a whole of coastline approach to integrating the provision of car parking and traffic flow with pedestrian amenity.

The Bathers Way provides an opportunity for Newcastle's visitors and community to enjoy the values of the coast and the City's tourist attractions, and its natural and historical features. It is intended to also provide an opportunity for natural and cultural conservation, re-use of functional assets as design and interpretive features, and an integrated approach to Council responsibilities for land management and risk management of coastal lands. Completion of the pathway, from Nobbys SLSC to Merewether Baths, is still required to make the Bathers Way fully functional. Currently there are missing links in sections of the proposed alignment, such as; the lower section of King Edward Park; sections at Shortland Esplanade at Soldiers Baths; at Newcastle south; Bar Beach south of SLSC, and; Merewether south of SLSC.

Tables 2.1 and **2.2** contain a schedule of the likely cost associated with the replacement of the numerous structures and infrastructure present in the immediate coastal zone for assets south of the Hunter River. Assets north of the Hunter River (ie. on Stockton Beach) are discussed further in **Section 2.1.2**. Maintenance and replacement of this infrastructure is largely being incorporated into Council's Major Asset Presentation Program. A list of assets and maintenance costs are provided here to give an indication of the costs associated with such maintenance to assist Council in prioritising its maintenance or replacement of such structures in regard to those costs associated with possible new works recommended in **Table 2.3**.

Table 2.1 - Replacement Costs for Existing Infrastructure South of Hunter River

Asset Description	Present Day Cost to Replace (\$) ¹	5 Year Cost to Replace ²	20 Year Cost to Replace ²
Immediate Coastal Zone			
Nobbys Beach/Shortland Esplanade Seawall	670,000	939,710	2,592,689
Newcastle Ocean Baths	5,900,000	8,275,055	22,831,138
Newcastle Beach Seawall	730,000	1,023,863	2,824,870
South Newcastle Beach Seawall	218,000	305,756	843,591
Bogey Hole Baths (Access)	3,400	4,769	13,157

² Based on cost estimates provided by Newcastle City Council

Asset Description	Present Day Cost to Replace (\$)¹	5 Year Cost to Replace²	20 Year Cost to Replace²
Bar Beach Seawall	90,000	126,230	348,272
Merewether/Dixon Park Rock Seawall	4,000,000	5,610,207	15,478,738
North of Merewether Beach Seawall	321,000	450,219	1,242,169
Ladies Baths Merewether	5,000	7,013	19,348
Merewether Baths	4,100,000	5,750,462	15,865,706
Sub-total	\$16,037,400	\$22,493,283	\$62,059,678
Facilities Reliant on Protection			
Nobbys Surf Club	1,125,000	1,577,871	4,353,395
Nobbys Surf Club Equipment Shed	130,000	182,332	503,059
Nobbys Surf Club northern Car Park - 1400 m²	57,022	79,976	220,657
Nobbys Shade Structure	46,800	65,639	181,101
Nobbys Shade Structure Car Park - 750 m²	30,547	42,844	118,207
Shortland Esplanade (Nobbys to Ocean Baths-500 metres)	305,475	428,444	1,182,092
Newcastle Beach Shade Structure	41,040	57,561	158,812
Newcastle Surf Life Saving Club	5,670,000	7,952,468	21,941,111
Shortland Esplanade (South Newcastle Beach-350 metres)	213,832	299,910	827,462
Bar Beach Pavilion	2,805,000	3,934,158	10,854,465
Bar Beach Pavilion Car Park - 750 m²	30,547	42,844	118,207
Bar Beach South Car Park - 1250 m²	50,912	71,407	197,013
Cooks Hill Surf Life Saving Club	450,000	631,148	1,741,358
Memorial Drive (Bar Beach) - 400 metres	277,380	389,040	1,073,373
Dixon Park Surf Life Saving Club	2,647,500	3,713,256	10,244,990
Dixon Park Kiosk	73,440	103,003	284,190
Dixon Park Shade Structure	71,200	99,862	275,522
Dixon Park Car Park - 4900 m²	199,577	279,917	772,300
John Parade – 300 metres	183,285	257,067	709,255
Merewether Surf Life Saving Club	1,512,000	2,120,658	5,850,963
Merewether Surf House	2,016,000	2,827,544	7,801,284
Merewether Beach Shade Structure	1,512,000	2,120,658	5,850,963
Merewether Baths Car Park - 2000 m²	81,460	114,252	315,224
Sub-total	\$19,530,017	\$27,391,859	\$75,575,003
TOTAL	\$35,567,417	\$49,885,143	\$137,634,681

1 Based on cost estimates provided by Newcastle City Council

2 assumed 7% discount rate

As detailed in **Table 2.1** it is estimated that there is approximately \$35.6 million worth of assets south of the Hunter River either within the immediate coastal zone or reliant on existing Coastline facilities for protection. Estimated replacement cost of these assets in 20 years is approximately \$101.6 million.

³ Based on cost estimates provided by Newcastle City Council

Table 2.2 - Estimated Annual Maintenance Costs for Infrastructure South of Hunter River

Asset Description	Maintenance (\$/year)¹
Immediate Coastal Zone	
Nobbys Beach/Shortland Esplanade Seawall	23,345
Newcastle Ocean Baths	206,077
Newcastle Beach Seawall	25,830
South Newcastle Beach Seawall	7,623
Bogey Hole Baths (Access)	144
Bar Beach Seawall	3,150
Merewether/Dixon Park Rock Seawall	140,000
North of Merewether Beach Seawall	11,246
Ladys Baths Merewether	215
Merewether Baths	144,900
Sub-total	\$562,530
Facilities Reliant on Protection	
Nobbys Surf Club	39,375
Nobbys Surf Club Equipment Shed	5,000
Nobbys Surf Club northern Car Park - 1400m ²	2,500
Nobbys Shade Structure	2,012
Nobbys Shade Structure Car Park - 750m ²	1,200
Shortland Esplanade (Nobbys to Ocean Baths-500 metres)	12,000
Newcastle Beach Shade Structure	1,765
Newcastle Surf Life Saving Club	198,450
Shortland Esplanade (South Newcastle Beach-350 metres)	7,200
Bar Beach Pavilion	98,175
Bar Beach Pavilion Car Park - 750m ²	1,200
Bar Beach South Car Park - 1250m ²	2,000
Cooks Hill Surf Life Saving Club	15,750
Memorial Drive (Bar Beach) - 400 metres	9,500
Dixon Park Surf Life Saving Club	92,667
Dixon Park Kiosk	3,158
Dixon Park Shade Structure	3,062
Dixon Park Car Park - 4900m ²	10,000
John Parade - 300 metres	6,800
Merewether Surf Life Saving Club	52,920
Merewether Surf House	70,560
Merewether Beach Shade Structure	52,920
Merewether Baths Car Park - 2000m ²	3,000
Sub-total	\$691,214
TOTAL	\$1,253,744

1 Based on cost estimates provided by Newcastle City Council

⁴ Based on cost estimates provided by Newcastle City Council

From **Table 2.2** estimated annual maintenance costs for assets south of the Hunter River is approximately \$1.25 million or approximately 3.5% of the current value of the assets.

The above opportunities and constraints, values and issues associated with the whole of the coastline have been drawn from the Coastline Management Study, in particular **Section 7.0**. The following list (**Table 2.3**) of the key issues need to be addressed to satisfy the Management Plan's objectives (referred to in **Section 2.2.1**). The objective to which each of the issues relate is also identified in **Table 2.3**

Table 2.3 - Whole of Coastline Management Issues and Objectives

Issue	Objective No
Coastline infrastructure and structure maintenance.	6 and 2
The management of the rock platforms along the coastline, from Nobbys to Burwood Beach, particularly regarding human impacts such as food and bait gathering.	4
The unauthorised use of companion animals such as dogs on all beaches, in particular Nobbys Beach.	4
Sustainable exploitation, promotion and management of tourism opportunities.	9
Equity of access to the coastline involving both the maintenance of public access to all parts of the coastline and the idea of physical access to the coastline itself. An important part of this issue is the need to provide for public safety along the coastline therefore accepting the need to restrict or control access to dangerous areas, particularly along the unstable bluffs and cliff tops.	3
The increasing demands for "life style" recreation which commonly involves the enjoyment of food and drink in coastline locations, especially in restaurants and cafes where outdoor eating is a significant emergent demand.	9 and 3
The need for eateries along the coastline to meet the needs of different groups. At present, the only food and drink services within the immediate coastline reserves are available at the surf club kiosks.	3
The length of the period of any lease issued to provide for facilities.	9
New development/redevelopment and its obstruction of lookout vistas.	7
Stormwater impacts on beach amenity due to scour and water quality, particularly of ponded stormwater on the beach.	4
Increased expectations for greater pedestrian amenity, comfort and safety, is hindered by the major traffic route through the coastline corridor.	3
Ensuring that there is adequate scope for tourist accommodation in the urban areas immediately adjoining the beach. However, especially noisy activities carried on late at night, can be disturbing for local residents and the resolution of such conflicts require special management measures.	9
The lack of signage along the coastline – comprising directional, site and interpretative. Importantly, an associated issue is the co-ordination of the planning design and implementation of projects involving large expenditures by the Council and government agencies such as the Bathers Way coastline walk, and subsequent development and upkeep in response to a common set of objectives and priorities.	8
The importance of place and identity and the need for a range and choice of settings of different character.	1

The rehabilitation of degraded environments to secure the coastline cultural landscape as a high quality corridor and perhaps the City's most significant aesthetic experience. Weed infestation, in particular Bitou Bush, exists along the entire coastline and includes the dunal systems and cliffs and bluffs. The potential for rehabilitation of entire lengths of dunes exists at all locations.	5
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Table 2.3 - Whole of Coastline Management Issues and Objectives (cont)

Issue	Objective No
The height, bulk, scale, setback and siting of new development should ensure that beaches and recreation reserves are not overshadowed, and should consider the aesthetic impact on the public reserves.	9
The aesthetic quality of the coastal public reserves, or the coastline as a whole, is diminished by the general lack of vegetation and the lack of shade, shelter and softening and screening of development along the urban edge of the reserves. However, the preservation of views to the coastline from private property is one of the most highly valued aspects of coastline living. Vegetation can obstruct views of the coastline from streets, the reserves and from private property and the impact on loss of views should be an important consideration for any landscaping proposals.	8
An Aboriginal cultural heritage management study and plan has not been prepared for the Newcastle coastline area and consequently the archaeological resources in the area are not well understood or managed.	7
The Aboriginal cultural heritage along the Newcastle coastline is of symbolic and social value rather than of scientific value. The remaining physical evidence of traditional Aboriginal occupation is a small fragment of the original evidence.	7
The Aboriginal community, represented by the Worimi and Awabakal Local Aboriginal Land Councils, have a concern and interest in the conservation and management of the remaining Aboriginal sites and in the coastline landscape as a whole.	7
Aboriginal cultural heritage issues need to be integrated into planning, management, and interpretation of the Newcastle coastline, even though there is a lack of physical evidence. The Aboriginal community should be involved and consulted throughout the process.	7

Table 2.4 provides a list of management actions and associated priorities, responsibility, costing and performance measures that are relevant to the whole of the coastline. The actions have been drawn from the management options identified in the Coastline Management Study. Management options that are not considered feasible or warranted have not been included in the list of management actions.

Table 2.4 – Whole of the Coastline Action Plan

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure Council's coastal policy and management is integrated and involves community participation and information exchange.						
Review and implement Newcastle Landscape Structure Plan (NLS), or its contemporary, to confirm strategic principles and priorities for landscaping the coastline corridor.	High	NCC	Short	\$10,000	N/A	Review completed and Plan finalised and adopted by Council.
Develop community awareness of the impact of catchment activities on the quality of stormwater as part of LGA catchment management program.	High	NCC/Environment Protection Authority	Ongoing	To be determined	\$5,000-\$10,000	Awareness program implemented and community awareness increases.
All proposals and DAs with the potential to impact on the coastline are referred to the Hunter Coast and Estuary Management Committee for comment.	High, Ongoing	NCC	Short	N/A	N/A	Proposals and DAs reviewed by Committee.
Employment of Coastal Zone Management Officer at NCC, within City Strategy.	Medium	NCC	Medium	N/A	\$80,000-\$110,000	Officer employed by Council.
Extend present public transport services to provide for bus and taxi services to the activity nodes to support tourist one-way trips along the Bathurst Way.	Medium	State Transit Authority /NCC	Long	To be determined	N/A	Public transport caters for coastline users.
Ensure the risks to human safety from the use of coastline resources is minimised.						
Erect signs regarding rainfall events and associated ponding of stormwater on the beach to warn public of public health risk on a permanent basis.	High, Ongoing	NCC/Hunter Water Corporation	Ongoing	\$11,000 (11 signs @ \$1,000 per sign)	\$3,000	Signs erected, human activity in ponds decreases.
Erect signage and undertake media campaign at beaches where the public is likely to be at health risk from pollution associated with high rainfall events, identifying when health risk is likely to occur.	Ongoing	Hunter Water Corporation/NCC	Ongoing	To be determined	To be determined	Signs erected and campaign initiated

Table 2.4 - Whole of the Coastline Action Plan (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Enhance the environmental quality and amenity of the coastline.						
Continue preparation of Master Plans for the coastline corridor, reserves and adjoining streets in accordance with NLSPP to provide shade, shelter and visual amenity, which also include:	High	NCC	Short - Medium	N/A	As required	Plans completed, funding secured and works scheduled.
<ul style="list-style-type: none"> • Exploration of themes for whole of coastline and individual areas to provide identity i.e. similar species of medium to large trees to identify activity nodes. 	High	NCC	Long	\$5,000-\$10,000	\$1,000-\$2,000	Trees/ theme identified, funding secured and works scheduled.
<ul style="list-style-type: none"> • View preservation from public and private lands should be investigated for each master plan; 	High	NCC	Short - Medium	\$10,000	N/A	Plans completed, funding secured and works scheduled
<ul style="list-style-type: none"> • Provision of footpath/cycleways as a continuous link between activity nodes within the foreshore reserves; 	High	NCC	Long	\$60,000 (500 metres @ \$120 per metre)	\$500	Pathways constructed and unrestricted access provided.
<ul style="list-style-type: none"> • Provision for the completion of the Bathers Way between Nobbys and Bar Beach Pavilion, addressing gaps and inadequate sections as the highest priority. 	High	NCC	Medium	To be determined	To be determined	Pathway constructed and unrestricted access provided.
Landscaping to provide footpath/cycleways, shade, shelter and visual amenity including softening or screening of urban development where it is close to the route of Bathers Way.	High	NCC	Long	To be determined	To be determined	Landscaping completed and amenity improved.
Implement stormwater outlet maintenance program for the coastline, particularly after heavy rain events, to reshape dunes and remove ponding as part of beach cleaning and maintenance program.	High, Ongoing	NCC	Short	N/A	\$5,000	Maintenance program finalised and adopted by Council. Management practices implemented.
Increase the accountability of people who fail to install sediment traps at new developments in a coastal catchment.	High, Ongoing	NCC	Ongoing	N/A	N/A	Appropriate sediment controls implemented as part of development.
Install international standard educational signage at each entrance point to rock platforms – targeting collection of intertidal species and ecological information, in conjunction with a public awareness campaign.	Medium	NCC/NSW Fisheries	Medium	\$9,000 (9 signs @ \$1,000 per sign)	\$3,000	Signage installed and community awareness is increased.

Table 2.4 - Whole of the Coastline Action Plan (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Enhance the environmental quality and amenity of the coastline (cont)						
Enforce policing of NSW Fisheries bag limits for taking of individual species on rock platforms.	Medium	NSW Fisheries	Ongoing	N/A	N/A	Bag limits enforced.
Public Awareness Campaign into the unauthorised use of companion animals on beaches. Associated actions are:	Medium	NCC	Short	\$5,000	\$5,000	Campaign completed and signage installed, with ranger service numbers.
<ul style="list-style-type: none"> Install new, and upgrade existing, signs regarding use of companion animals on beaches; 	Medium	NCC	Short	\$5,000 (10 signs at \$500 per sign)	\$500	Signs installed.
<ul style="list-style-type: none"> Empower Council lifeguards with the authority to fine offenders. 	Medium	NCC/SLSC	Medium	N/A	\$1,000-\$3,000 for training.	Issue of empowerment resolved.
<ul style="list-style-type: none"> Council's ranger service telephone number be placed on signs and other locations; 	Low	NCC	Short	\$3,000	\$1,000	More numbers included.
Apply to be part of the 'Project Aware on the rocks' training program for Newcastle LGA.	Medium	NCC	Medium	\$500	N/A	Project Aware training completed and improved awareness of rock platforms.
Promote the conservation of rock platform/ intertidal areas as part of the Council Coastcare education program.	Medium	NCC	Ongoing	N/A	\$2,000-\$4,000 (?)	Increase in community awareness of coastcare program.
Install more bins on foreshore to aid in rubbish removal	Low	NCC	Medium	To be determined	To be determined	Bins installed where necessary
Review existing stormwater outlets through a catchment and flooding analysis and identify appropriate stormwater solutions according to Council's Urban Water Cycle Management Policy.	Low	NCC	Long	To be determined	To be determined	Review completed and solutions identified
Restore and enhance degraded aspects of the coastline						
Continue to support regional Coastcare facilitator at Newcastle.	High	NCC	Ongoing	N/A	\$2,500 and in-kind support	Coastcare facilitator continues to function at NCC.
Undertake Coastal Habitat Management Plan for entire coastline including cliffs, bluffs and beaches.	High	NCC/NPWS	Short	\$25,000	N/A	Management Plan completed, funding secured and works scheduled.

Table 2.4 - Whole of the Coastline Action Plan (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Restore and enhance degraded aspects of the coastline (cont)						
Assist Landcare/Dunecare/Coastcare group(s) for entire coastline or individual coastline management areas.	Ongoing	NCC	Ongoing	N/A	\$2,000 per group	Groups continue to function in Newcastle LGA.
Remove redundant infrastructure, fences, signage	High	NCC	Short	To be determined	N/A	Redundant infrastructure removed.
Minimise the long term cost to the community, in terms of loss of dwellings and social and economic disruption through long term planning for coastline hazard management.						
Implement Council's DISPAN in relation to coastal hazards, as taken from the ERIAP.	High	NCC, State Emergency Service	Ongoing	To be determined	To be determined	DISPLAN fully detailed and documented.
Implement Council's MAPP in relation to coastal hazards for immediate coastal zone structures ongoing and in accordance with Coastline Management Plan priorities.	High	NCC / DLWC	Ongoing	To be determined	To be determined	MAPP implemented.
Implement Council's MAPP in relation to coastal hazards for infrastructure reliant on protection and in accordance with Coastline Management Plan priorities.	High	NCC / DLWC	Ongoing	To be determined	To be determined	MAPP implemented
Ensure any future proposals / works for the Hunter River estuary / port consider impacts / implications on the adjacent coastline, particularly Stockton Beach.	High	NCC / DLWC / Newcastle Port Corporation	Ongoing	N/A	N/A	Coastline considered in all proposals / works
Investigate the viability of a Newcastle Port levy to fund coastal protection for the adjacent beaches to the Port entrance.	High	NCC/Newcastle Port Corporation/ State Government	Short	To be determined	To be determined	Investigation complete and funding source identified or dismissed.
Effectively manage and conserve cultural heritage places, items and landscapes.						
The resources of European heritage associated with the Newcastle City coastline be further studied.	High	NCC / Heritage Office	Long	\$25,000 (not including a consultation management plan if needed)	N/A	Study complete.

Table 2.4 - Whole of the Coastline Action Plan (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Effectively manage and conserve cultural heritage places, items and landscapes (cont).						
In the event that any activity is undertaken, planned or foreshadowed that could have the effect of disturbing, damaging or destroying the fabric, visual amenity or curtilage or precinct of any heritage resource, the party responsible for any such activity should be required: <ul style="list-style-type: none"> to complete a detailed archaeological study; and to demonstrate compliance or intended compliance with the requirements of all relevant NSW and Commonwealth legislation. 	High, Ongoing	NCC / Heritage Office	Ongoing	N/A	N/A	Heritage resources appropriately assessed.
A detailed management plan be compiled for the Aboriginal cultural heritage values along the coastline.	Medium	NCC / NPWS / Local Aboriginal Land Councils	Long	\$20,000	N/A	Aboriginal Heritage Management Plan prepared.
Produce interpretative/educational material, such as interpretative signs, to illustrate their lifestyle and history and how the landscape was used.	Medium	NCC / NPWS / Local Aboriginal Land Councils	Medium	\$20,000 (@ \$1,000 per sign)	\$2,000	Interpretative material established.
Identify and facilitate opportunities for the sustainable development and use of resources.						
Condition and significance of previously recorded Aboriginal sites within the coastline be assessed and appropriate management actions determined.	Low	NCC/NPWS/ Local Land Council	Medium	\$50,000	N/A	Sites assessed and appropriate management actions implemented.
Adopt a Coastline DCP, or similar, to include: <ul style="list-style-type: none"> Prepare a comprehensive set of guidelines for the coastline corridor to reflect its significance as a recreation area of high aesthetic quality including: <ul style="list-style-type: none"> principles for the whole of coastline, principles for sub-units / beaches, and detailed land use and master plans according to priority; 	High	NCC/DUAP	Short	\$80,000 (?)	N/A	DCP prepared and adopted by Council and PlanningNSW.

Table 2.4 - Whole of the Coastline Action Plan (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Identify and facilitate opportunities for the sustainable development and use of resources (cont)						
<ul style="list-style-type: none"> Detailed guidelines for the type, location, scale of uses appropriate within the public reserves, Crown Special Lease areas and Special Uses 5(a) zones should these become available for redevelopment; Include guidelines for the future desired character of the corridor and sub units and guidelines for the design of facilities to achieve the desired character, including the provision and linking of car parking space; Include guidelines for the preservation of views from existing lookouts where these may be threatened by development carried out in accordance with present controls – Strzelecki Lookout, the Obelisk; Include controls for the scale, height, setback, colour, and design quality of new development or redevelopment on headlands; Adopt standards to ensure no overshadowing of beaches and reserves by buildings, for example, adopt the NSW Government Coastal Policy Guideline of no overshadowing before 3.00 pm mid winter and 6.30 pm summer daylight saving time. Alternative options for beach management, such as beach manipulation, should be considered in the future management of Newcastle's beaches, as they arise. 	Ongoing	NCC/DLWC	Ongoing	To be determined	N/A	Alternative options considered, as appropriate.
Prepare guidelines for the management and operation of facilities within the public reserves and Special Lease areas including appropriate leasing and licensing arrangements. The guidelines need to:	Medium	NCC/DLWC	Medium	\$10,000 (?)	\$2,000 (to review guidelines annually)	Guidelines prepared and adopted by Council and DLWC where necessary.

Table 2.4 - Whole of the Coastline Action Plan (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Identify and facilitate opportunities for the sustainable development and use of resources (cont)						
<ul style="list-style-type: none"> Maintain flexibility of control over uses in the coastline reserves by allowing only short to medium term leases; Ensure flexibility to meet changing needs for services and activities within the coastline corridor to take precedence over income earning considerations. 						
Investigate the viability of a permit system for property owners with no off-street parking, in suburbs affected by beach parking demands during the summer months.	Medium	NCC/RTA	Medium	\$15,000	\$5,000	Investigation complete.
Undertake study of rock platform organisms to better understand the ecology of local rock platforms and use as baseline data for long-term conservation management.	Low	NCC/Coastcare/ NSW Fisheries	Long	\$5,000	To be determined	Study complete and specific management recommendations identified.
Investigate the provision of "link" or "feeder" services from inland car parks or transport nodes, using privately owned vehicles (eg. buses).	Medium	NCC/Newcastle Buses	Medium	\$3,000	To be determined	Investigation complete
Develop guidelines for temporary use of public reserves for a range of events in support of community activity and development of the tourist industry including short-term exclusive use of suitable areas to facilitate private events.	Medium	NCC/DLWC	Medium	\$5,000-\$10,000 (?)	N/A	Guidelines prepared and adopted by Council and DLWC

Legend to Table

M	Million
*	Compatible with Bathers Way document
**	Compatible with Heritage Places Plan of Management
#	Compatible with ERIAP (Emergency Response Interim Action Plan)
(?)	Cost is indicative only and is to be confirmed
DCP	Development Control Plan
DA	Development Application
Short	Within 5 years
Medium	Within 10 years
Long	15+ years
Ongoing	Required on ongoing basis

2.2.3 Stockton Beach

Stockton Beach is unique to the Newcastle coastline both in its geological formation, and its relatively natural state when compared to the built environment which characterises the beaches south of the Hunter River. This provides Council with an opportunity to maintain a natural beach within its Local Government Area particularly with a major tourist attraction in Stockton Caravan Park located at the south of the beach. However, a major issue for Newcastle City Council is the management of the coastal erosion at Stockton Beach. The erosion of the foreshore along the urban precinct of Stockton and the threat to coastal properties and facilities is considered severe and currently outweighs the majority of management issues for the Stockton Beach area.

As such the main priority is the implementation of interim measures to protect the existing coastal protection structures until such time as further study is completed detailing long-term management options to protect Stockton Beach from coastal hazards.

In addition to the management of coastal hazards other issues include the redevelopment potential of the sites to the north of Stockton such as the Stockton Wastewater Treatment Plant, Fort Wallace and the Stockton Centre. Further, Stockton attracts tourists to the Newcastle Coastline which must be catered for in the long term planning of the Stockton

Peninsula through the provision of appropriate planning controls, facilities such as shade structures and picnic facilities, and the maintenance of the Stockton Beach amenity.

Figures 2.2 to 2.5 illustrate the key management actions for Stockton Beach.

Structures present in the Stockton coastal zone that are subject to the risk of failure from coastal erosion processes and their estimated value are scheduled in **Table 2.5**.

Table 2.5 - Assets and Infrastructure at Stockton

Asset Description	Capital (\$)*	Tenure
Residential Lots (37 @ 450 k)	16,650,000	Private
Day Care Centre	200,000	Crown – NCC Control
Stockton Surf Club	2,175,000	Crown – NCC Control
Stockton Pavilion	840,000	Crown – NCC Control
SLSC Car Park (2500 m ²)	101,825	Crown – NCC Control
Shade Structure (near SLSC)	50,000	Crown – NCC Control
Bowling Club Shed (Brick)	30,000	Crown – Leased to Club
Bowling Club Green (x1)	80,000	Crown – Leased to Club
Tennis Courts (x3)	210,000	Crown – NCC Control
Bed & Breakfast (Old Kiosk)	150,000	Crown – NCC Control
Area of Caravan Park Sites	160,000	Crown – NCC Control
Caravan Park Amenities Block	50,000	Crown – NCC Control
Dalby Oval	165,000	Crown – NCC Control
Road Surface (1200m)	733,140	NCC
Relocate Coroba Park oval west	10,000	Crown – NCC Control
Relocate War Memorial	20,000	Crown – NCC Control
TOTAL	\$21,624,965	

*present day value



0 75 150 300m

Umwelt (Australia) Pty Limited
 Photo Source: Cozzini Surveillance Aerial Photo 1999

FIGURE 2.2
 Newcastle / Port Stephens
 Boundary Management Actions

A4 Scale: 1:8000

Ref No.:R03_V2/1411_159.dgn



FIGURE 2.3
Stockton Beach (North of Stockton Town) Management Actions

A4 Scale: 1:6000	Ref No.:R03_V2/1411_160.dgn
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Legend

- Provide Tree Landscaping with Seating and Picnic Facilities at Road Intersections
- ▬▬▬ Dune Rehabilitation through Establishing Native Vegetation, Removing Bitou Bush and Installing Dune Fencing



FIGURE 2.4
Stockton Beach (North of Seawall)
Management Actions



Legend

-  Immediate Placement of Sand at the Root of the Northern Breakwater to Protect Caravan Park
-  Dune Rehabilitation through Establishing Native Vegetation, Removing Bitou Bush and Installing Dune Fencing

0 75 150 300m

FIGURE 2.5
Stockton Beach (South of Seawall)
Management Actions

The extent of infrastructure subject to risk of failure from coastal erosion as provided in **Table 2.5** is based on the assumption that the existing seawall remains intact. As shown in **Table 2.5** under these circumstances, it is estimated that approximately \$21.6 million assets are at risk from coastal erosion. If the seawall collapses or is removed it is estimated that an additional 46 residences and 1.9 km of road will also be subject to risk from erosion. The estimated value of the additional residential lots and road is approximately \$21,860,805, making the total value of assets and infrastructure that is potentially at risk from coastal erosion processes approximately \$43,485,770.

Analysis of available hydrosurvey information dating back to 1816 demonstrates that there has been a significant loss of sand from the beach profile below the low water mark and that this loss is continuing at an accelerated rate. Available data indicates that the erosion from Stockton Beach is not cyclic as was previously thought, but is progressive. These findings have identified the need to obtain a greater understanding of sand movements and coastal erosion processes at Stockton Beach to enable appropriate infrastructure to be designed for the future and ongoing protection of Stockton Beach.

To address the erosion issues at Stockton Beach sand has been placed at the root of the northern breakwater to obviate a breakthrough at this location and minimise the potential for oceanic inundation of the caravan park, and the following management actions are proposed:

1. While the detailed process analysis and management options are being completed, a number of actions for immediate implementation are proposed. These are shown on **Figure 2.6** and include:
 - large sandbag protection works to be installed as an extension of the existing rock seawall along Mitchell Street;
 - additional large sandbags are to be installed to prevent the sandbagged seawall at the surf club from being outflanked; and
2. Fully developed and detailed emergency response procedures for Stockton Beach as outlined in the Newcastle Coastline Emergency Response and Interim Action Plan as part of Council's Disaster Action Plan (DISPLAN). This has been undertaken concurrently with the Study and is planned for release in 2002. A contingency plan to protect community and private assets is currently in place and includes the use of emergency sandbagging under the control of the local State Emergency Service (SES).
3. Detailed process analysis and management options to address the long term erosion of Stockton Beach. This includes the undertaking of detailed analysis of the coastal processes impacting on Stockton Beach to identify the cause of the long term erosion, the pathway of sand movement from the beach system and appropriate structure / systems that can be implemented to address the erosion of the beach.

The above opportunities and constraints, values and issues associated with Stockton Beach have been drawn from the Coastline Management Study, in particular **Section 7.0**. The following list (**Table 2.6**) of the key issues need to be addressed to satisfy the Management Plan's objectives (referred to in **Section 2.2.1**). The objective to which each of the issues relate is also identified in **Table 2.6**.

Table 2.6 - Stockton Beach Management Issues and Objectives

Issue	Objective No
Erosion of the foreshore along the urban precinct of Stockton and the threat to coastal properties and facilities at risk due to coastal processes. Associated with this issue are the maintenance of the existing rock seawall and the loss of amenity as a result of the loss of usable beach area seaward of the wall.	6
Sand encroachment in the northern extremity of Newcastle LGA due to the westward dune migration.	6
Compatible coastline management with Port Stephens Council, which includes the management of 4WD usage at north Stockton as a result of gaining access from Port Stephens.	4
The Fullerton Street corridor is a distinctive and potentially attractive approach to Stockton.	8
The Stockton peninsula presents some significant issues for future development of the local economy through the pursuit of tourist activities.	9
At Stockton there are opportunities for strengthening the relationship between the reserves and commercial activities. The draft LEP 2000 provides for an extensive frontage of 2(b) zoning to the reserves.	9

In addition to these actions, a number of other management actions for the Stockton Beach management unit have been proposed and are listed in **Table 2.7**. These management actions have been derived from the management options identified in the Coastline Management Study. Management options listed in the Coastline Management Study that are not considered feasible or warranted have not been included in **Table 2.7**.

Table 2.7 - Stockton Beach Management Actions

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure the risk to human safety from the use of coastline resources is minimised.						
Provide traffic calming devices along the Mitchell St beach frontage and/or slower speed limits	High	NCC	Medium	To be determined	To be determined	Devices installed and pedestrian safety is enhanced.
Install and maintain signage regarding unauthorised 4WD access to Stockton Beach.	Medium	NCC/PSC	Short	\$1,500 (3 signs @ \$500 per sign)	\$1,000	Signs installed and 4WD movements reduced.
Physically restrict unauthorised 4WD land access points from within Newcastle LGA to Stockton Beach	Medium	NCC	Short	\$4,000 (2 access points @ \$2,000 per access point)	\$2,000	Barriers constructed and 4WD movements stopped.
Investigate, in liaison with Port Stephens Council and user groups, alternative options for the management of beach access by 4WD vehicles, including the provision of one constructed all-weather access point.	Medium	NCC/PSC	Short	To be determined	To be determined	Investigation complete
Provide for equity in access to the coastline and its facilities, where it does not conflict with environmental objectives.						
Provide a directory of facilities available in Stockton and surf pavilion area at Ferry Wharf	Medium	NCC	Short	\$5,000	\$1,000	Directory constructed and used by visitors to Stockton.
Enhance the environmental quality and amenity of the coastline.						
Angle parking front to kerb and footpath extensions for landscape islands to define parking bays on both sides of street and to facilitate pedestrian crossings	Medium	NCC	Long	To be determined	To be determined	Landscape islands constructed and pedestrian enjoyment of area is increased.
Prepare Master Plan for Griffith Park and Pitt Street Reserves to provide adequate shade structures, picnic and barbecue areas and implement tree planting at Griffith Park, Pitt Street Reserve and Rawson Park.	Medium	NCC	Long	\$40,000 (?)	To be determined	Master plan prepared, adopted by Council and funding secured.
As part of any beach protection works provide for footpath / cycleway within public reserve along Mitchell Street.	High	NCC/DLWC	Long	To be determined	To be determined	Footpath / cycleway provided for.

Table 2.7 - Stockton Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Enhance the environmental quality and amenity of the coastline (cont).						
Provide for large tree landscaping at road intersections along Mitchell Street with seating and picnic facilities, with trees positioned to maintain views for residents	Medium	NCC	Long	\$20,000 (5 sites @ \$4,000 per site)	\$5,000	Landscaping established.
Minimise the long term cost to the community, in terms of loss of dwellings and social and economic disruption through long term planning for coastline hazard management.						
Further detailed investigations include:						
<ul style="list-style-type: none"> Detailed quantitative description of existing coastal processes. Data acquisition. Options study. Historical Sand Transport Study 	High	NCC/DLWC	Short	\$40,000	N/A	Study completed.
	High	NCC/DLWC	Short	\$80,000	N/A	Study completed.
	High	NCC/DLWC	Short	\$100,000	N/A	Study completed.
	High	NCC/DLWC	Short	\$100,000	N/A	Study completed.
Construct following works immediately to provide protection while detailed studies are being undertaken:						
<ul style="list-style-type: none"> Install large sand bag protection works as an extension to the rock seawall Install large sand bags to prevent sandbag wall at surf club from being outflanked. Sand to be placed at root of the northern breakwater. 	High	NCC/DLWC	Short	\$70,000	N/A	Works completed and protection offered in coastal events.
	High	NCC/DLWC	Short	\$40,000	N/A	Works completed and protection offered in coastal events.
	High	NCC/DLWC	Short	\$30,000	N/A	Works completed and protection offered in coastal events.
Finalise details and requirements for implementation of DISPLAN at Stockton should it be required.	High	NCC / State Emergency Service	Short	\$10,000	N/A	DISPLAN implementation details completed.

Table 2.7 - Stockton Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Identify and facilitate opportunities for the sustainable development and use of resources.						
Provide for low key refreshment facilities at Stockton Ferry Wharf.	Med	NCC/NSW Waterways	Medium	\$20,000	\$2,000-\$4,000	Facility constructed or mobile facility leased to the wharf area.
In a coastline DCP for new development include a section specifically to address the Fullerton Street corridor/ Stockton north development.	Low	NCC	Short	\$10,000 (?)	N/A	Fullerton Street corridor included in DCP.
Support the development of small scale commercial uses within mixed use buildings at the edge of the reserves in the proposed 2(b) zoning under draft LEP 2000.	Ongoing	NCC	Long	To be determined	To be determined	LEP 2000 amended.
Wider promotion of the Stockton Caravan Park as Newcastle's only such coastal facility, through different mediums.	Ongoing	NCC	Medium	N/A	\$2,000 (?)	Visitors to Stockton Caravan Park increases.
Ensure a Decommissioning Plan for Stockton WWTP identifies sustainable future opportunities for the site.	High	Hunter Water Corporation/NCC	Medium	To be determined		The site is identified for appropriate future use

Legend to Table

- M Million
- * Compatible with Bathers Way document
- ** Compatible with Heritage Places Plan of Management
- # Compatible with ERIAP (Emergency Response Interim Action Plan)
- (?) Cost is indicative only and is to be confirmed
- DCP Development Control Plan
- DA Development Application
- Short Within 5 years
- Medium Within 10 years
- Long 15+ years
- Ongoing Required on ongoing basis

2.2.4 Nobbys Beach

Nobbys Beach forms part of the identity of the Newcastle Coastline and is the highest used beach on the Newcastle Coastline. High usage of Nobbys Beach is partly attributable to its proximity to transport routes and Newcastle Harbour. Nobbys occupies a unique position in that it is linked to the Newcastle Harbour foreshore and Newcastle Beach as well as the Newcastle CBD. It is also part of the southern breakwater or Macquarie Walk. Nobbys Beach is of high aesthetic value due also to it being surrounded by Newcastle icons such as Nobbys Headland. In addition to this the beach has high usage for swimming and surfing and is patrolled all year round by Council lifeguards.

Due to the large number of people the area attracts, there is increasing pressure for the provision of facilities such as picnic areas and shade structures and the need to provide for safe use of the area by the community. Management actions to achieve this include traffic calming works and landscaping of the carriageway and surrounding area, particularly in proximity to the roundabout and Nobbys Road.

Public safety is a high priority at Nobbys Beach. The provision of warning signage at key locations including Nobbys Headland and Shortland Esplanade is required to make users of the area aware of the hazards associated with the headlands.

The maintenance of views from the coastline (ie. Nobbys Beach and Nobbys Headland) are an integral part of a proposed Coastline DCP.

The above opportunities and constraints, values and issues associated with Nobbys Beach have been drawn from the Coastline Management Study, in particular Section 7.0. The following key issues have been identified to be addressed to satisfy the Management Plan's objectives (referred to in **Section 2.2.1**). The objective to which each of the issues relate is identified in **Table 2.8**.

Table 2.8 - Nobbys Beach Management Issues and Objectives

Issue	Objective No
The risk of rockfall at Nobbys Head and along Shortland Esplanade between Nobbys and Newcastle Ocean Baths.	2
The leash free dog use at Horseshoe Beach and the unauthorised extension of this practice onto Nobbys Beach.	4
Links to CBD and harbour foreshore – opportunities for commercial development.	9
The siting and appearance of car park spaces and associated vehicular access is intrusive and has reduced aesthetic quality and amenity at Nobbys Beach.	8
Vehicle congestion and public safety near the roundabout.	2
Sand drift onto southern breakwater behind the dunes and seaward of Nobbys Headland.	2
The maintenance of views from the lookout area of Fort Scratchley may be threatened by future development.	8

Figure 2.7 illustrates the key management actions for Nobbys Beach. Specific management actions for Nobbys Beach and associated priority, responsibility, cost and performance measures are detailed in **Table 2.9**. These management actions have been derived from management options identified in the Coastline Management Study. Management options that are not considered feasible or warranted have not been included in the management actions listed.



Legend

- Dune Rehabilitation through Establishing Native Vegetation, Removing Bitou Bush and Installing Dune Fencing

*Umwelt (Australia) Pty Limited
Photo Source: Coastal Surveillance Aerial Photo 1999*

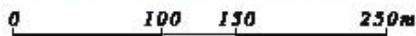


FIGURE 2.7
Nobbys Beach
Management Actions

A4 Scale: 1:5000

Ref No.:R09_V2/1411_163.dgn

Table 2.9 - Nobbys Beach Management Actions

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure the risks to human safety from the use of coastline resources is minimised.						
Erect warning signage with international standard warning diagram in regard to rock fall from Nobbys Headland #	High	NCC	Short	\$1,000	<\$1,000	Signage erected.
Erect warning signage near areas of instability above Shortland Esplanade between Nobbys and Newcastle Ocean Baths.	High	NCC	Short	\$3,000 (3 signs @ \$1,000 per sign) To be determined	\$1,000	Signage erected.
Implement appropriate slope stabilisation and improvement strategies, which includes public consultation.	Medium	NCC	Long	To be determined	To be determined	Funding secured, rock fall hazard controlled.
Provide for traffic calming devices and carriageway landscaping to narrow carriageway at pedestrian crossing points.	Medium	NCC	Medium	\$70,000 (?) (2 sites at \$35,000 per site)	\$3,000	Devices installed and pedestrian access enhanced. Landscaping provided and traffic slowed.
Investigate the provision of a new access point to the Horseshoe Beach car park, nearer the Navy Cadet facility.	High	NCC	Medium	\$40,000 (?)	<\$1,000	Investigation complete
Undertake dune rehabilitation through establishing native vegetation to reduce sand drift on to southern breakwater, and clear sand as necessary and place on beach #.	Medium Ongoing	NCC/Coastcare or Landcare Group / Newcastle Port Corporation	Medium and Long	\$20,000-\$30,000	As required \$3,000	Bitou bush controlled and native vegetation has reduced need for sand clearance. Access to breakwater maintained.
Enhance the environmental quality and amenity of the coastline.						
Better manage the dog exercise area at Horseshoe Beach, through updating Council's Companion Animal Management Plan and a review of appropriate management options with Council's Companion Animal Advisory Committee.	High	NCC	Medium	To be determined	To be determined	Area better managed and user conflict reduced.
Relocate "dog poo bin" from current location to a less conspicuous location within dog exercise area at Horseshoe Beach.	Medium	NCC	Short	\$1,000	N/A	Bins relocated within dog exercise area from high visual aspect.
Extend Bathers Way concept to include Nobbys Beach.	Medium	NCC	Long	To be determined	To be determined	Bathers Way concept extended to Nobbys.
Provide picnic and barbecue facilities within foreshore park of Horseshoe Beach.	Medium	NCC	Medium	\$30,000 (2 sites @ \$1,500 per site)	\$2,000	Facilities provided and being used.

Legend to Table

M	Million	DCP	Development Control Plan
*	Compatible with Bathers Way document	DA	Development Application
**	Compatible with Heritage Places Plan of Management	Short	Within 5 years
#	Compatible with ERIAP (Emergency Response Interim Action Plan)	Medium	Within 10 years
	Long	15+ years	
(?)	Cost is indicative only and is to be confirmed	Ongoing	Required on ongoing basis

2.2.5 Newcastle Beach

Newcastle Beach has had a long history of development since European settlement and many changes have occurred over time to the foreshore promenade area. The city has encroached onto the foredune area of Newcastle Beach. This includes the development of Shortland Esplanade. The promenade of Newcastle Beach has been severely reduced in area and amenity. Whilst Newcastle Beach is the closest beach to the Newcastle CBD, its link to the CBD has been greatly reduced through the development of Shortland Esplanade, and the current design of Pacific Park and Fletcher Park.

As one of the highest used areas of the Newcastle coast, the highest priority is the completion of a Master Plan to confirm the location and design principles of improvements that will improve the area's austere appearance. The Master Plan should address the provision of traffic calming along Shortland Esplanade, in conjunction with the improvement of promenade and park facilities. The net result should be to attract the community and its visitors to the area for a range of experiences and uses, in addition to providing for safe swimming and surfing.

Redevelopment guidelines for this "iconistic" part of the Newcastle coastline, as part of the previously discussed Coastline DCP is also a high priority.

Similar to Nobbys Beach, there is a priority safety issue associated with rock fall along Shortland Esplanade adjacent to south Newcastle Beach. While clear signage is urgently required to address public safety, a long term solution is needed if the road is to remain open, to maintain the link to King Edward Park and the Bogey Hole. A part of finding the long term solution must involve a public consultation program, as the area is highly valued aesthetically and forms part of the annual Mattara Hill Climb event.

In addition, there is a minor issue regarding the infrequent wave overtopping and inundation of the lower promenade areas and sections of Shortland Esplanade near the Cowrie hole.

The above opportunities and constraints, values and issues associated with Newcastle Beach have been drawn from the Coastline Management Study, in particular **Section 7.0**. The following list (**Table 2.10**) of the key issues need to be addressed to satisfy the Management Plan's objectives (referred to in **Section 2.2.1**). The objective to which each of the issues relate is also identified in **Table 2.10**

Table 2.10 - Newcastle Beach Management Issues and Objectives

Issue	Objective No
Car parking congestion and traffic management on Shortland Esplanade. The coastal arterial road is visually and physically intrusive because of its alignment and design and detracts from the amenity of recreational places.	8
The siting and appearance of car park spaces and associated vehicular access within is intrusive and has reduced aesthetic quality and amenity at Newcastle Ocean Baths.	8
Wave overtopping and inundation of the lower promenade areas and sections of Shortland Esplanade, particularly near the Cowrie Hole, which may cause damage and presents a risk to users of the area.	2
Cliff erosion and rock fall onto Shortland Esplanade at South Newcastle Beach.	2
Integration of adjacent public space with Newcastle Beach such as Pacific Park, Fletcher Park, and the promenade area (Shortland Park).	1
The link to CBD and harbour foreshore, especially via Pacific Park, is an issue in terms of safety and amenity.	9

Table 2.10 - Newcastle Beach Management Issues and Objectives (cont)

Issue	Objective No
Existing development is visually intrusive at the Royal Newcastle Hospital site. This is an area where future redevelopment is likely and where special care with design is necessary to protect and enhance aesthetic quality.	8
Commercial development opportunities of the Newcastle Beach precinct.	9
The maintenance of views from the lookout area of Fletcher Park may be threatened by future development.	8
Sand blown up and onto the promenade and road.	2
Usage of skate ramp facility and public safety.	3
Unstable soil structure in cliffs and associated rock fall, especially along Shortland Esplanade, which present risk to users of the area including the annual Mattara Hill Climb event.	2 and 4

Figure 2.8 illustrates the key management actions for Newcastle Beach. Specific management actions for Newcastle Beach and associated priority, responsibility, cost and performance measures are detailed in **Table 2.11**. These management actions have been derived from management options identified in the Coastline Management Study. Management options that are not considered feasible or warranted have not been included in the management actions listed.



FIGURE 2.8
Newcastle Beach
Management Actions



Table 2.11 – Newcastle Beach Management Actions

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure the risks to human safety from the use of coastline resources is minimised.						
Provide for traffic calming and/or slower speed limits through Shortland Esplanade.	High	NCC	Short	\$20,000	\$5,000	Traffic calming provided.
Erect warning signage with international standard warning diagram of rock falls in high use areas of Shortland Esplanade #	High	NCC	Short	\$2,000 (2 signs @ \$1,000 per sign)	\$1,000	Signage erected.
Implement appropriate slope stabilisation and improvement strategies for Shortland Esplanade between South Newcastle Beach and King Edward Park. The strategy must include a review of the risk management in light of community values regarding the access the road provides.	High	NCC	Medium	To be determined	To be determined	Strategies implemented.
Close Shortland Esplanade during periods of coastal inundation and assess any damage to infrastructure	High	NCC	Ongoing	\$3,000	N/A	Road closed during inundation events
Investigate preventative works for future, such as “wave return” on top of existing seawall	Ongoing	NCC	Long	\$60,000	\$design	Investigation complete and works, if necessary, scheduled
Restore and enhance degraded aspects of the coastline.						
Prepare a Master Plan for Newcastle Beach.	High	NCC	Short	\$40,000	N/A	Master Plan completed, adopted by Council and funding secured.
The Master Plan is to include:						
<ul style="list-style-type: none"> Provision for sheltered seating in pedestrian areas allowing for views to the beach and Shortland Esplanade; 	High	NCC	Medium	\$20,000	\$1,000	Sheltered seating provided.
<ul style="list-style-type: none"> Provide for landscaping in Shortland Park and pedestrian areas to provide shade and further picnic facilities at Newcastle Beach; 	High	NCC	Medium	\$36,000 (3 sites \$1,200 per site)	\$1,500	Landscaping provided.
<ul style="list-style-type: none"> Provide additional parking at Newcastle Beach with redevelopment of the Hospital site; 	High	NCC	Long	To be determined	To be determined	Parking provided.
<ul style="list-style-type: none"> Reduce the dominance of hard surfaces; 	Medium	NCC	Long	To be determined	To be determined	Hard surfaces reduced.

Table 2.11 – Newcastle Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Restore and enhance degraded aspects of the coastline (cont)						
<ul style="list-style-type: none"> Widening of footpaths between the Newcastle and Nobbys Surf Pavilions; 	Medium	NCC	Long	To be determined	To be determined	Footpaths widened.
<ul style="list-style-type: none"> Provide public parking behind a commercial street frontage to Shortland Esplanade; 	Medium	NCC	Long	To be determined	To be determined	Public parking provided.
<ul style="list-style-type: none"> Replace pedestrian underpass with a signal controlled intersection and restore Shortland Park; 	Low	NCC	Long	\$150,000+ (?)	To be determined.	Underpass removed and traffic control device introduced.
<ul style="list-style-type: none"> Establish terraced areas north of the Pavilion to provide a broader pedestrian area suitable for outdoor eating facilities; 	Low	NCC	Long	To be determined	To be determined	Terraced areas provided.
<ul style="list-style-type: none"> Redesign Pacific Park to allow smoother transition for pedestrians between Hunter St and the beach. 	Low	NCC	Medium	\$250,000	\$5 – 10,000	Pacific Park redesigned.
Redesign area at the Ocean Baths to include:	Medium	NCC	Long	\$175,000	\$5 – 10,000	Area redesigned, funding secured and works scheduled.
<ul style="list-style-type: none"> Regulate parking; 						
<ul style="list-style-type: none"> Provide disabled parking; 						
<ul style="list-style-type: none"> Restore the former picnic area; 						
<ul style="list-style-type: none"> Provide a children's playground. 						

Table 2.11 – Newcastle Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Identify and facilitate opportunities for the sustainable development and use of resources.						
Consider establishment of low-key café at the Ocean Baths Pavilion.	Medium	NCC	Short and Long	To be determined	To be determined	Potential for provision of café reviewed and decision made.
Support commercial development of the street frontages along Newcastle Beach when considering redevelopment proposals, especially the hospital site, in between the beachfront hotels and the street frontage.	Ongoing	NCC	Short and Long	N/A	N/A	Diversity in development exists along Shortland Esplanade.

Legend to Table

M	Million	DCP	Development Control Plan
*	Compatible with Bathers Way document	DA	Development Application
**	Compatible with Heritage Places Plan of Management	Short	Within 5 years
#	Compatible with ERLAP (Emergency Response Interim Action Plan)	Medium	Within 10 years
	Long	15+ years	
(?)	Cost is indicative only and is to be confirmed	Ongoing	Required on ongoing basis

2.2.6 Shepherds Hill Area

The Shepherds Hill area is a highly prominent and valued feature of the coastline that is otherwise dominated by beaches. The area includes King Edward Park, one of the most highly used coastline reserves in Newcastle. Situated between Bar Beach and Newcastle Beach the area offers views of the coastline to both the north and south as well as the city to the west. Accordingly, the protection of views at key locations through a DCP and redevelopment guidelines is a high priority.

Equally high in priority is the necessity to preserve remnant vegetation that exists in the area and provide pedestrian links to Newcastle Beach, the obelisk, the Bogey Hole, Bar Beach and Nesca Park, thus maintaining King Edward Park as a focal point for passive recreation and enjoyment of the coastline amenity. The area is rich in European cultural assets which includes the Shepherds Hill cottage. Shepherds Hill cottage and Newcastle Bowling Club buildings provide the potential for commercial opportunities to enhance the use of the area as a recreational coastline asset.

Due to the elevation of the area, user safety is also a priority. A particularly high priority is the closure of the dangerous cliff access and the need to highlight the dangers of cliff viewing points to the general public.

Remnant areas of native grassland (*Themeda australis*) have been identified at Shepherds Hill. This is considered significant as one of the only existing remnants of native vegetation on the Newcastle coastline outside of Glenrock State Recreation Area, and as a representative of headland vegetation prior to the invasion of Bitou Bush. As such, a review of Council's mowing maintenance practices is required to ensure long term survival of the species on Shepherds Hill. Additionally, a Coastcare / Landcare group is currently attempting the regeneration of the area, which will benefit the area if funding is provided.

Figure 2.9 illustrates the key management actions for the Shepherds Hill area. Specific management actions for the Shepherds Hill area and associated priority, responsibility, cost and performance measures are detailed in **Table 2.12**. These management actions have been derived from management options identified in the Coastline Management Study. Management options that are not considered feasible or warranted have not been included in the management actions listed.

Table 2.12 – Shepherds Hill Area Management Issues and Objectives

Issue	Objective No
Extreme wind exposure and the lack of protective structures/vegetation.	3
Fragmented trails and access along area and within King Edward Park.	8
Erosion from runoff down cliff face at Bogey Hole.	5
Commercial opportunities at sites, such as the Newcastle Bowling Club and Shepherds Hill Cottage.	9
Existing development is visually intrusive on headlands at Cliff Street, The Hill and at Newcastle Bowling Club Ordnance Street. These are areas where future redevelopment is likely and where special care with design is necessary to protect and enhance aesthetic quality.	8
The maintenance of views from the lookout areas of Shepherds Hill, which include Strzelecki Lookout and the Cottage, may be threatened by future development.	8
Pedestrian links within the park system, especially to the Obelisk.	3
Hang glider take-off point at Strzelecki Lookout.	3
Protection of remnant Themeda grassland.	4



0 75 150 300m

Legend

-  Rehabilitation through Establishing Native Vegetation, Removing Bitou Bush

Dmwell (Australia) Pty Limited
 Photo Source: Coastal Surveillance Aerial Photo 1999

FIGURE 2.9
 Shepherds Hill
 Management Actions

A4 Scale: 1:8000

Ref No.:R03_V2/1411_168.dgn

The above opportunities and constraints, values and issues associated with the Shepherds Hill Area have been drawn from the Coastline Management Study, in particular **Section 7.0**. The following list (**Table 2.13**) of the key issues need to be addressed to satisfy the Management Plan's objectives (referred to in **Section 2.2.1**). The objective to which each of the issues relate is also identified in **Table 2.13**

Table 2.13 - Shepherds Hill Area Management Actions

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure Council's coastal policy and management is integrated and involves community participation and information exchange.						
Develop design guidelines to ensure any redevelopment of adjoining private property does not intrude on amenity of reserve at Strzelecki Lookout.	High	NCC	Medium	\$5,000 (?)	N/A	Design guidelines developed.
Ensure the risks to human safety from the use of coastline resources is minimised.						
Erect warning signage along crest of cliff at Memorial Drive and The Terrace, with international standard warning diagram in conjunction with restricting access by erecting visually unobtrusive fencing.	High	NCC	Short	\$10,000 (?) (3 signs @ \$1,000 per sign plus fencing)	\$1,500	Signage and fencing erected.
Erect warning signage regarding rock falls, with international standard warning diagram, above Bogey Hole Baths.	High	NCC	Short	\$1,000	<\$1,000	Signage erected.
Erect warning signage with international standard warning diagram at unstable areas of cliff top viewing points.	High	NCC	Short	\$3,000 (3 signs @ \$1,000) per sign	<\$1,000	Signage erected.
Permanently close existing walking track along cliff crest between Susan Gilmore Beach and Strzelecki Point.	High	NCC/DLWC	Short	\$5,000	\$2,000	Track closed.
Provide formalised pathways/fencing/to control access at cliff top viewing points.	Medium	NCC	Long	\$250,000 (?)	\$10,000	Formalised pathways provided.
Geotechnical and hydrological investigation to assess risk and risk mitigation measures at cliff top viewing points.	Medium	NCC	Long	\$50,000 (?)	N/A	Geotechnical assessment undertaken.
Enhance the environmental quality and amenity of the coastline.						
Line marking to formalise parking activity and circulation at Strzelecki Lookout.	Medium	NCC	Short	\$2,000	\$1,000	Line marking completed.
Create a formal path or boardwalk from Bar Beach to Strzelecki Lookout.	Medium	NCC	Medium	\$150,000	\$25,000	Path or boardwalk constructed and used by community.
Create a viewing platform at Strzelecki Lookout, in conjunction with hang glider take-off area	Low	NCC	Long	\$40,000	\$2,000	Platform constructed and designated areas created.

Table 2.13 - Shepherds Hill Area Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Restore and enhance degraded aspects of the coastline.						
Prepare Master Plan, in accordance with the Crown Lands Act 1989, for King Edward Park which incorporates:	High	NCC	Short	\$20,000	N/A	Master Plan prepared.
• Heritage Places Plan of Management recommendations	High	NCC	Medium	N/A	N/A	
• Upgrade of paths throughout the Park	High	NCC	Long	\$100,000 (?)	\$2,000	Paths upgraded and maintained.
• Traffic calming between the Obelisk and King Edward Park	High	NCC	Long	\$20,000 (?)	\$1,000	Traffic calming devices installed.
• Access viability from Shortland Esplanade						
Investigate the modification of mowing practices of native <i>Themeda australis</i> grassland communities, with the view to returning the area to a natural state.	High	NCC	Short	N/A	To be determined.	Mowing practices modified.
Replant suitable areas with indigenous heath species and remove Bitou Bush infestations, as part of the Coastline Revegetation Management Plan.	Medium	NCC	Short	\$15000-\$20000	\$5,000	Revegetation Management Plan implemented.
Investigate means to reduce visual intrusion of communications facilities at lookout.	Low	NCC/Telstra	Medium	\$5,000	N/A	Visual intrusion investigated.
Create a pedestrian link to Nesca Park from Memorial Drive	Low	NCC	Long	\$15,000 (?)	\$2,000	Pedestrian link created.
Identify and protect areas of natural or built aesthetic quality.						
Remove existing treated log fencing and barriers and replace with more appropriate fencing to reveal rather than obscure the heritage of the cottage site.	Medium	NCC	Short	\$10,000 (?)	\$2,000	Fencing replaced.
Investigate the potential of the cottage as a visitor attraction.	Low	NCC	Long	To be determined	N/A	Potential investigated and acted upon.

Table 2.13 - Shepherds Hill Area Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Identify and facilitate opportunities for the sustainable development and use of resources.						
Consider sustainable commercial opportunities at sites within the Shepherds Hill area, through:						
<ul style="list-style-type: none"> • Review of the special lease for bowling club, particularly in light of structural integrity of building. Possible future uses of the land and/or building, if not a bowling club, may include: - Café, kiosk, souvenirs gallery, toilets and/or interpretation centre, and/or - Provision of parking to support greater pedestrian use of the Rotunda/picnic area and/or for special events in King Edward Park. - Incorporation of the land into King Edward Park's open space. 	Medium	DLWC/NCC	Medium	To be determined	To be determined	Commercial opportunities investigated. Structural integrity of building is determined. The club site's future use is compatible with the use of King Edward Park. Commercial opportunities utilised.
<ul style="list-style-type: none"> • Investigate incorporation of a low-key refreshment facility, in part of the cottages to provide for users of the Bathers Way. 	Low	NCC	Short and Long	To be determined	N/A	Potential investigated and acted upon.

Legend to Table

M	Million
*	Compatible with Bathers Way document
**	Compatible with Heritage Places Plan of Management
#	Compatible with ERIAP (Emergency Response Interim Action Plan)
(?)	Cost is indicative only and is to be confirmed
DCP	Development Control Plan
DA	Development Application
Short	Within 5 years
Medium	Within 10 years
Long	15+ years
Ongoing	Required on ongoing basis

2.2.7 Merewether/Dixon Park/Bar Beaches

The Bar Beach to Merewether Beach stretch is the longest developed section of beach south of the Hunter River and provides a multitude of uses including swimming and surfing, active and passive recreation opportunities. The area also provides the greatest potential for commercial and tourist facilities with a view of the beach through development and use of buildings such as the Merewether Surf House.

However, the aesthetic value and public amenity of this stretch of beach is greatly reduced by the positioning of arterial roads such as Memorial Drive and Scenic Drive, the siting and appearance of numerous car parks spaces, and the hard steep surfaces of the foreshore along Bar Beach and Merewether Beach. Additionally, the three main coastline reserves associated with this stretch of beach are severed from the beach by either road or car park. This creates a safety risk for beach users moving between the reserves and the beach as well as reducing the visual amenity of the reserve area.

In August 2001, Newcastle City Council resolved to:

- Continue to field the enquiries regarding the Merewether Surf House reuse opportunities and submit grant applications for the restoration of the building;
- Continue to maintain the building to a level to prevent further deterioration; and
- Council receive a report detailing the cost of repairs to bring the building to a state that would encourage the commercial and/or civic use of the building by public amenities. Council's resolution is in line with the recommendations of the Coastline Management Plan as the building is seen as a major opportunity for the long term development of the commercial precinct associated with the area of Merewether Beach, which includes the Beach Hotel.

Similar to other parts of the coastline, user safety is a high priority, particularly in high use beach areas below the cliffline.

Public transport to and from the Bar Beach and Merewether Beach precinct is currently inadequate and links to the major transport routes, such as bus and rail, is required in the long term to reduce the pressure on the facilities provided by the more accessible Nobbys and Newcastle Beaches.

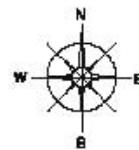
The Bar Beach to Merewether Beach area is also the lifeline to the hang gliding community which attracts hang gliders from around the nation. Hang gliders take off from Strzelecki lookout in the Shepherds Hill area, with the more proficient gliders landing in the northern part of Empire Park, while the novice glider users Dixon Park during favourable weather conditions. However, both of these parks are situated close to the beach and will be under increased pressure by the community for use as passive recreation areas. Therefore, in planning for the provision of facilities within these reserves consideration of the hang glider community is necessary, and issues such as the height of structures and vegetation has a major influence on the ability for the use of these reserves by hang gliders.

The above opportunities and constraints, values and issues associated with Merewether, Dixon Park and Bar Beaches have been drawn from the Coastline Management Study, in particular Section 7.0. The following key issues have been identified to be addressed to satisfy the Management Plan's objectives (referred to in **Section 2.2.1**). The objective to which each of the issues relates is identified in **Table 2.14**.

**Table 2.14 - Merewether, Dixon Park and Bar Beach
Management Issues and Objectives**

Issue	Objective No
Stormwater impacts on cliff stability and the viability of cliff top access infrastructure at Susan Gilmore Beach and associated rock falls from the cliff of Susan Gilmore/Bar Beach.	2
Susan Gilmore is an unpatrolled beach, however public access is encouraged via the cliff top car park.	2
Hard steep surfaces of the foreshore at Bar Beach exacerbate runoff, hinder access and detract visually.	5
The coastal arterial road (Memorial Drive) at Bar Beach is visually and physically intrusive because of its alignment and design and detracts from the amenity of recreational places. Access between the beach and Empire Park is particularly dangerous.	8 and 2
The siting and appearance of car park spaces and associated vehicular access is intrusive and has reduced aesthetic quality and amenity at Bar Beach, in particular the main car park above Susan Gilmore Beach, and at the Merewether Baths and Beach. Vehicular access to Merewether baths is particularly confusing and congested.	8
Parkway Avenue is one of the most important links between Newcastle's residential areas and the coastline and is a major design feature with its wide landscaped central median. Landscaping of the median and the design of the arrival point at the Bar Beach car park is aesthetically disappointing and does not recognise the significance of this nodal point.	8
The intersection at Parkway Avenue/Memorial Drive/ Bar Beach Avenue is dangerous for pedestrians and parking.	2
The maintenance of mown areas between Memorial Drive and the sand dunes south of the Surf Life Saving Club is encroaching into dunal vegetation areas	5
Risks from rock fall along the cliff section at Dixon Park - Kilgour Avenue.	2
Visual amenity improvement of Dixon Park is needed through vegetation planting, and is exposed to strong salt-laden winds.	8
Hang glider landing at Dixon Park lacks a formally designated area/facilities.	3
Existing development is visually intrusive on headlands at Lloyd Street Merewether and the northern end of Ocean Street Dixon Park. These are areas where future redevelopment is likely and where special care with design is necessary to protect and enhance aesthetic quality.	8
Commercial opportunities at the Merewether Baths precinct, which include the Surf House.	9
Public transport to/from Merewether commercial centre is inadequate.	9 and 3
Public shade is poor along Merewether promenade, and not equitable for all users.	3
Merewether Surf House is derelict and detracts from the amenity of the beach in its current conditions. The building has architectural and heritage value and presents a significant opportunity for adaptive reuse.	4

Figures 2.10 and **2.11** illustrate the key management actions for the Bar Beach to Merewether area. Specific management actions for Merewether / Dixon Park / Bar Beaches and associated priority, responsibility, cost and performance measures are detailed in **Table 2.15**. These management actions have been derived from management options identified in the Coastline Management Study. Management options that are not considered feasible or warranted have not been included in the management actions listed.



Legend

-  Redesign Park Area for Picnicking and Hang Glider Landing
-  Dune Rehabilitation through Establishing Native Vegetation, Removing Bitou Bush and Installing Dune Fencing

0 75 150 300m

FIGURE 2.10
Bar Beach / Susan Gilmore
Beach Management Actions



Master Plan for Dixon Park to Include:
 *Provision of Shade Facilities
 *Redesign Park
 *Reduction of the Beachfront Car Park

Provide for Traffic Calming

Dixon Park Beach

Stormwater Outlet Management

Provide Shelter and BBQ Facilities In Jefferson Park

Merewether Beach

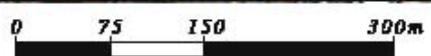
Maintain Surf House Structure and Promote Re-use

Redesign Traffic Flow and Restrict Parking

Erect Educational Signage at Entry Point of Rock Platform

Merewether

Install Warning Signage of Rock Fall



Legend

- Dune Rehabilitation through Establishing Native Vegetation, Removing Bitou Bush and Installing Dune Fencing

Umwelt (Australia) Pty Limited
 Photo Source: Coastal Surveillance Aerial Photo 1999

FIGURE 2.11
Merewether / Dixon Park Beaches Management Actions

A4 Scale: 1:6000	Ref No.:R03_V2/1411_168.dgn
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Table 2.15 - Merewether/Dixon Park/Bar Beach Management Actions

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure the risks to human safety from the use of coastline resources is minimised.						
Erect warning signage with international standard warning diagram at the northern end of Bar Beach regarding erosion of cliff scarp.	High	NCC	Short	\$1,000	\$500	Signage erected.
Erect warning signage with international standard diagram along cliff section at Dixon Park, Kilgour Avenue. #	High	NCC	Short	\$2,000 (2 signs @ \$1,000 per sign)	\$1,000	Signs erected.
Erect signage warning of hazard with international standard warning diagram in high public use area south of Merewether Baths #	High	NCC	Short	\$2,000 (2 signs @ 1,000 per sign)	\$1,000	Signs erected.
Provide for traffic calming and/or slower speed limits of Memorial Drive in the vicinity of:						Traffic calming provided.
<ul style="list-style-type: none"> The Bar Beach Bowling Club; and Cooks Hill Surf Club building. 	High High	NCC NCC	Med Med	\$20,000 (?) \$20,000 (?)	\$5,000 \$5,000	
Provide short term measures to improve traffic control at the intersection of Parkway Avenue / Memorial Drive and Bar Beach Avenue	High	NCC	Short	\$20,000 (?)	\$5,000	Traffic control provided
Permanently close access to Susan Gilmore Beach from cliff top car park and install warning sign at entrance point from Bar Beach, regarding the unpatrolled beach and access dangers associated with a rising tide.	High	NCC/DLWC	Short	\$500	<\$500	Access closed and signed installed
Undertake geotechnical investigation to assess risks and risk mitigation measures at northern end of Bar Beach #	Medium	NCC	Long	\$20,000	N/A	Risk assessed and acted upon.
Geotechnical investigation to assess risk and risk mitigation measures at cliff section of Kilgour Avenue #	Medium	NCC	Long	\$20,000	N/A	Risk assessed and acted upon.
Continue lifeguard patrols after normal hours during daylight savings period at the discretion of the lifeguards.	Medium	NCC/SLSC	Medium	N/A	\$10,000	After hours Life Guards provided.

Table 2.15 - Merewether/Dixon Park/Bar Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure the risks to human safety from the use of coastline resources is minimised (cont)						
Provide for traffic calming of John Parade and Merewether Baths car park access and create one-way traffic flow along John Parade.	Medium	NCC/DLWC	Medium	\$50,000 (2 devices @ \$20,000 per site and traffic flow changes.	\$5,000	Traffic calming provided and traffic flow redesigned.
Provide for equity in access to the coastline and its facilities, where it does not conflict with environmental objectives.						
Develop shade through the provision of trees and structures in Jefferson Park including picnic/BBQ facilities and link the Beach Hotel with the Surf House via a pathway through Jefferson Park, including picnic tables in park design	High	NCC	Medium	\$70,000 (Pathway from \$65 per m ² ; Shade structures, seating and picnic facilities \$50,000)	\$5,000	Facilities provided and used by all sectors of community.
Provide disabled access to Merewether baths **	High	NCC/DLWC	Short	\$3,000 (?)	\$500	Access provided and used.
Address weekend and public holiday public transport access to beaches to Merewether, Dixon Park and Bar Beach **	High	NCC/State Transit Authority	Long	To be determined		
Provide terraced areas with shade and sitting structures along promenade at Merewether Baths precinct.	Low	NCC	Long	\$50,000 (?)	\$3,000	
Enhance the environmental quality and amenity of the coastline.						
Planting of suitable trees growing indigenous species on grassed embankments and open spaces along beach promenade, in consultation with the hang glider community.	High	NCC	Medium	\$5,000	\$2,000	Suitable trees planted and hang glider community consulted.
Undertake Master Plan for Dixon Park particularly in consultation with hang glider community.	High	NCC	Short	\$30,000	N/A	Master Plan completed, funding secured and a works schedule completed.
Master Plan for Dixon Park to include: <ul style="list-style-type: none"> Provide shade facilities at Dixon Park using trees and shade structures. 	High	NCC	Long	\$25,000	\$2,000	Shade facilities provided.

Table 2.15 - Merewether/Dixon Park/Bar Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Enhance the environmental quality and amenity of the coastline (cont)						
<ul style="list-style-type: none"> Install further picnic facilities wind breaks at Dixon Park * Relocate or greatly reduce Dixon Park car park and enlarge Dixon Park Surf Club car park. 	High	NCC	Short	\$50,000	\$2,000	Picnic facilities installed.
Remove parking along eastern side of Memorial Drive and establish trees within existing parking spaces.	High	NCC	Medium	\$100,000 (?)	\$3,000	Car park modified.
Resurface car parks in Jefferson Park with a porous paving system.	Medium	NCC	Medium	\$25,000	\$5,000	Parking removed and trees planted.
	Low	NCC	Long	To be determined	To be determined	Car parks resurfaced.
Restore and enhance degraded aspects of the coastline.						
Replace all unnecessary hard surfaces within the Bar Beach precinct and replace with grassed areas.	High	NCC	Long	\$15,000 (?)	\$2,000	Hard surfaces replaced.
Plant native tree species in car parks.	High	NCC	Long	\$5,000	\$2,000	Trees planted
Review mowing maintenance practices along Memorial Drive, south of Cooks Hill Surf Club to be less encroaching into dune vegetation, in consultation with Coastline Dune Maintenance Management Plan.	Medium	NCC	Short	N/A	Associated with dune management	Practice reviewed and areas of dune regeneration expanded.
Provide long term measures to redesign the intersection to provide for a fitting termination of Parkway Ave at the coastline.	Medium	NCC	Long	\$300,000 (?)	\$5,000	Intersection redesigned and modified.
Install picnic facilities and shade structures at the northern corner of Empire Park in consultation with the hang glider community.	High	NCC	Medium	\$55,000 (3 sites @ \$15,000 per site)	\$2,000	Picnic facilities and shade structures installed.

Table 2.15 - Merewether/Dixon Park/Bar Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Restore and enhance degraded aspects of the coastline (cont)						
Restore Surf House as a centre providing a range of facilities under separate tenancies, if necessary, to include a café, interpretative centre or restaurant, in accordance with Council's resolution: <ul style="list-style-type: none"> Council continues to field enquiries regarding the buildings re-use opportunities and submit grant applications for the buildings restoration. Council continue to maintain the building to a level that further deterioration is prevented. Council receive a report detailing the cost of the repairs to bring the building to a state that would encourage the commercial and/or civic use of the building and provide public amenities. 	High	NCC/DLWC	Short	\$1 million (?)	\$40,000 (?)	Surf House restored and utilised.
Reduce the dominance of hard surfaces in the Merewether Beach and Baths precinct.	Medium	NCC	Long	\$150,000+	\$2,000	Hard surfaces reduced.
Identify and facilitate opportunities for the sustainable development and use of resources.						
Support compatible commercial development of the Merewether local centre in the vicinity of the Frederick St / Ridge St intersection	Low	NCC	Long	To be determined.	To be determined.	Commercial development supported.

Legend to Table

M	Million
*	Compatible with Bathers Way document
**	Compatible with Heritage Places Plan of Management
#	Compatible with ERIAP (Emergency Response Interim Action Plan)
(?)	Cost is indicative only and is to be confirmed
DCP	Development Control Plan
DA	Development Application
Short	Within 5 years
Medium	Within 10 years
Long	15+ years
Ongoing	Required on ongoing basis

2.2.8 Burwood Beach

The Burwood Beach area is dominated by Glenrock State Recreation Area which is under the management of National Parks and Wildlife Service.

A high priority for Newcastle City Council is the joint management of the Beach and SRA area, between the many stakeholders, which include Lake Macquarie City Council, National Parks and Wildlife Service, Newcastle City Council, Hunter Water Corporation, Awabakal Local Aboriginal Land Council and Department of Land & Water Conservation. The introduction of a committee to oversee the catchment management of Glenrock Lagoon and linkage of the Great North Walk and Coastline Walk to the Bathers Way is a major issue for Newcastle Council.

There is a need to formalise the informal lookout area off Dixon Street to provide line marking for car spaces and a lookout area. This may require joint funding by National Parks and Wildlife Service and Newcastle City Council.

National Parks and Wildlife Service is currently funding a Conservation Management and Cultural Tourism Plan for Glenrock Lagoons cultural landscape. This will form the basis for the overall strategic management of these places to facilitate the long term conservation and future use as a cultural tourism destination in line with National Parks and Wildlife Service management objectives. Therefore, it is important that the Management and Cultural Tourism Plan co-ordinate with the management principles of the Newcastle Coastline Management Plan. This may be achieved through the formation of a co-operative management committee between the key stakeholders.

The above opportunities and constraints, values and issues associated with Burwood Beach have been drawn from the Coastline Management Study, in particular **Section 7.0**. The following list (**Table 2.15**) of the key issues need to be addressed to satisfy the Management Plan's objectives (referred to in **Section 2.2.1**). The objective to which each of the issues relate is also identified in **Table 2.15**

Table 2.15 - Burwood Beach Management Issues and Objectives

Issue	Objective No
Compatible coastline management with Lake Macquarie City Council and National Parks and Wildlife Service, at Burwood Beach, particularly regarding the naturally significant Glenrock SRA.	1
Hand gliding location lacks a formalised area.	1
Rock falls from high cliffs south of Merewether Baths.	2
Glenrock Lagoon water quality.	4
Wastewater Treatment Plant outfall offshore.	1

Figure 2.12 illustrates the key management actions for Burwood Beach. Specific management actions for Burwood Beach and associated priority, responsibility, cost and performance measures are detailed in **Table 2.16**. These management actions have been derived from management options identified in the Coastline Management Study. Management options that are not considered feasible or warranted have not been included in the management actions listed.



0 100 250 500m

Umwelt (Australia) Pty Limited
 Photo Source: Coastal Surveillance Aerial Photo 1999

FIGURE 2.12
Burwood Beach
Management Actions

A4 Scale: 1:10 000	Ref No.:R03_V2/1411_186.dgn
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Table 2.16 – Burwood Beach Management Actions

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Ensure Council's coastal policy and management is integrated and involves community participation and information exchange.						
Continue to monitor beaches under the Environment Protection Authority Beachwatch program and inform public of results.	Ongoing	Hunter Water Corporation	Ongoing	N/A	Funded by EPA (?)	Program continues
Ensure the risks to human safety from the use of coastline resources is minimised.						
Erect signage warning of hazard of rockfall with international standard warning diagram #	High	NCC	Short	\$1,000	\$500	Signage erected.
Erect signs when water quality in Glenrock Lagoon is unsatisfactory for human use.	High	LMCC/Hunter Water Corporation/ NCC	Ongoing	\$2,000 2 signs at \$1,000 per sign)	\$1,000	Signs erected as soon as poor water quality is detected.
Consider options raised by NPWS Risk Management Report, currently being prepared for Glenrock SRA.	Medium	NPWS	Long	N/A	N/A	Options considered.
Provide for public phone at Hickson Street lookout for hang glider safety.	Low	Telstra/NCC	Long	To be determined	Telstra's expense	Phone installed.
Provide for equity in access to the coastline and its facilities, where it does not conflict with environmental objectives.						
Investigate the provision of a viewing platform, provide formalised car parking spaces and lookout at Hickson Street and interpretative signage, in conjunction with NPWS, at Hickson St lookout.	Medium	NCC/NPWS/ Awabakal Land Council	Long	\$150,000	\$5,000	Investigation completed and acted upon.
Enhance the environmental quality and amenity of the coastline.						
Provide appropriate signage at entry and exit of Burwood Beach and Glenrock SRA.	Medium	NCC/NPWS	Medium	\$3,000 (3 signs @ \$1,000 per sign)	\$1,000	Signage erected.
Maintain and enforce feral animal and companion animal management strategies to assist with protection of endangered or vulnerable flora and fauna.	Low	NPWS/NCC	Ongoing	N/A	\$5,000	Patrols undertaken.

Table 2.16 – Burwood Beach Management Actions (cont)

Action	Priority	Responsibilities	Completion Timeframe	Indicative Capital Cost	Maintenance Cost (pa)	Performance Measures
Link the Great Northern Walk and LMCC Coastal Walk with proposed Bathers Way walk through maintaining access routes and signage.	Low	NCC / NPWS	Long	\$4,000 (4 signs @ \$1,000 per sign)	\$2,000	Linkages made.
Restore and enhance degraded aspects of the coastline.						
Close existing unneeded beach and dune access tracks.	High	NPWS	Short	\$3,000		Tracks closed.
Identify and protect areas of natural or built aesthetic quality.						
Provide designated hang gliding area on existing site in Glenrock SRA.	Medium	NPWS	Long	\$15,000	\$2,000	Hang gliding area provided
Initiate joint committee/working group between LMCC, NCC, NPWS, Hunter Water Corporation and Awabakal particularly in regard to catchment management issues of Glenrock SRA. Investigate the need for water quality monitoring survey over numerous seasons and conditions to determine health of lagoon.	Ongoing, High	NCC / LMCC / NPWS / Hunter Water Corporation/EPA	Short	N/A	\$5,000	Committee formed and functioning. Investigation of the need for monitoring complete.
Financially assist landcare group to undertake restoration of Glenrock SRA.	Ongoing	NPWS/ NCC/ Hunter Water Corporation	Ongoing	N/A	\$3,000	Landcare groups funded on ongoing basis.

Legend to Table

M	Million
*	Compatible with Bathers Way document
**	Compatible with Heritage Places Plan of Management
#	Compatible with ERIAP (Emergency Response Interim Action Plan)
(?)	Cost is indicative only and is to be confirmed
DCP	Development Control Plan
DA	Development Application
Short	Within 5 years
Medium	Within 10 years
Long	15+ years
Ongoing	Required on ongoing basis

2.3 IMPLEMENTATION AND REVIEW

Typically coastal management issues fall into numerous categories, each with different costs, timeframes and technical complexities with respect to implementation of works and strategies. It is unlikely any coastline management plan that involves expenditure of substantial public funds could be implemented immediately in its entirety. Availability of funding will determine when certain actions can be implemented. Consequently, the strategy recommended for the Newcastle Coastline Plan involves staged implementation to address the high priority actions first, taking into consideration their cost and completion timeframe. This does not preclude low or medium priority actions from being implemented before a high priority action, if funding becomes available.

The key to implementation of the Plan is through the newly proposed “Coastline Program and Planning Co-ordination Committee”. The function of this committee (as illustrated in **Figure 2.13**) will be to implement components of the Coastline Management Plan on an integrated locality basis, such as an individual beach area. The intention of this committee is to ensure the multiple Teams within Council’s structure are integrated in their management and implementation of coastline projects, such as the ‘Bathers Way’, Master Plans and components of the Major Asset Presentation Program (MAPP). In addition, it is proposed that a database be created of all relevant projects within the coastline and used as a tool for the Committee in its decision-making process.

Newcastle’s coastline has previously attracted little funding through the Coastcare program, however, in 2000, a Coastcare Facilitator for the Hunter Region was created, and is based at Newcastle Council’s Administration Building. This provides a major opportunity for the implementation of actions regarding the natural environment of the coastline, particularly through the involvement of community volunteers.

Whilst it is clear that there are local opportunities for participation in coastal management planning, this does not address the issue of the appropriate level of community participation and community endorsement of potential management actions. This issue arises at the local scale (e.g. Coastcare and Dunecare projects), but more importantly, in relation to major choices about the focus, structure and direction of management on the Newcastle coastline. In this regard, the Coastline Management Plan is a strategic planning tool, but it complements and is closely aligned with existing strategic planning processes for which community comment has already been, or is currently being, invited. Investigation into building effective partnerships between the community and relevant government agencies is encouraged. The approach would need to address the specific challenges encountered on the coast and the needs of local users. It is essential that other activities, such as the Hunter Catchment Blueprint, continue and are progressively informed and adjusted in light of any partnership building activity (or agreement).

Partnership building opportunities may also involve the inclusion of State authorities, such as the Newcastle Port Corporation, that currently have no direct coastal management responsibility. Involvement of such an authority may initiate funding avenues not previously available for management of the Newcastle coastline.

Council’s annual State of the Environment (SoE) report is a tool that can be used to report the implementation of the management plan, both to Council and the community. The annual reporting of the implementation progress of the Plan within the SoE report will also greatly assist Council when review of the Plan is required.

The full costs of some management actions have not been determined as they may rely on the completion of other actions first, such as the Coastline DCP or Master Plans. In such cases, it may be necessary to review the priority or timeframe associated with those actions. It is envisaged that the proposed Coastline Program and Planning Co-ordination Committee

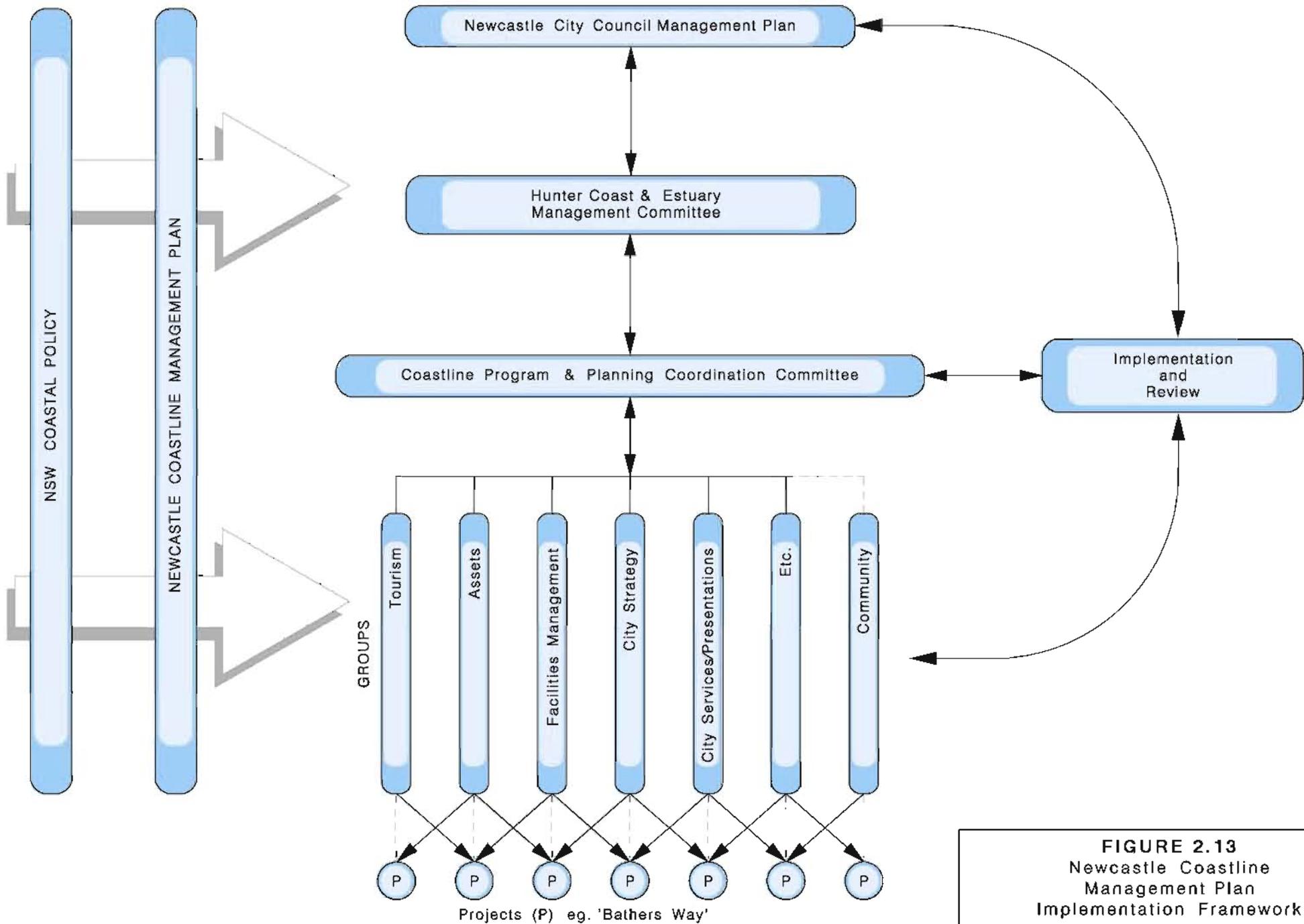


FIGURE 2.13
Newcastle Coastline
Management Plan
Implementation Framework

will also oversee the review of the Coastline Management Plan, to ensure all Teams within Council provide input where required. As a minimum, the Coastline Management Plan should be reviewed in five years from its adoption, as this is the timeframe in which most short term actions are scheduled to be addressed or completed. Further, funding sources such as the National Heritage Trust may cease to exist or be replaced with new grant schemes in the short term. As a result, the five year review of the plan would need to address those strategies or actions likely to be affected by such changes in funding availability.

The New South Wales Premier made an announcement (26 June 2001) that a review of the State's Coastline Management Program will commence in the near future. This review will include extending and updating the NSW Coastal Policy, and reviewing and combining the Coastline Management Manual and Estuary Management Manual. Proposed changes to the NSW Coastal Policy will result in Newcastle's coastline forming part of the area to which the policy applies. Proposed changes to the Coastal Policy and the Coastline and Estuary Management Manuals are likely to require the Coastline Management Plan to be reviewed and modified where necessary.

To assist in implementation of strategic actions within the Plan, performance measures have been provided. During review of the Plan, performance measures need also to be reviewed and updated as necessary.

APPENDIX 1

Summary of Public Display Submission Issues

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
<p>GENERAL</p> <p>The Plan is commendable and integration of the recommendations within the Plan and Study into other Council Strategies and Plans will result in improved management of the coastline</p>		No change to plan
<p>The contact details for the "Environmental Restoration and Rehabilitation Trust" are incorrect in Appendix 1. Correct details at</p>		Amend contact details in Appendix.
<p>The Coastline Program and Planning Coordination Committee needs broad community representation</p>	<p>Community representation is on the parent committee, the Hunter Coastline Committee and is not intended for the co-ordination committee. The co-ordination committee is to</p>	No change to plan
<p>All Master Plans must be integrated and consistent amongst the different areas</p>	<p>The plan constantly refers to the need for integrated management of the coast line</p>	No change to plan
<p>Master Plans are a HIGH priority in the Plan, but their completion timeframe should be made</p>		Change timeframe to "short to medium" for all Master Plans
<p>Concern the funding of Stockton coastal protection works will see a greater percentage of Council's budget going to this area at the detriment of other</p>	<p>Council needs to be aware of this community concern, in the implementation of the Plan</p>	No change to Plan
<p>Page 2.6 requires references in 3rd paragraph</p>	<p>Any direct quote not referenced will be</p>	Add references where required
<p>Figure No.Site No are incorrect</p>	<p>The number of figures representing the European Heritage items was reduced in the final draft of the Study, however, the corresponding references to those figures in</p>	Change Figure No references in Table 2.2
<p>Reword paragraph 5 on page 4.1</p>	<p>Rewording of paragraph does not change the content of the paragraph</p>	Reword paragraph in accordance with suggestion.
<p>Port Corp should be shown as owners of Nobbys</p>	<p>Further investigation required before any change is needed to the Study</p>	Change Plan accordingly, to reflect current tenure
<p>Change breakwall to breakwater on page 4.4</p>		Change Plan to use same term throughout
<p>Hunter Port Corp should be referenced as Newcastle Port Corporation on Figure 4.1</p>		Change figure 4.1 accordingly
<p>Port Corp maintains that available information is not sufficient to conclude the southern breakwater has cut off any littoral drift to the north - page 6.3</p>	<p>The Plan does not state this exactly, but refers to the potential for breakwaters to impact on littoral drift</p>	No change to Plan
<p>Continual reference to the 1816 survey data is misleading. This data is considered to be too vague and limited to warrant such reference (Port</p>	<p>It tis the earliest available survey and is useful to the research of change in channel depth as well as showing the location of the</p>	No change to Plan
<p>Macquarie Pier was not constructed in 1812, as suggested in the documentation. The foundation stone was laid in 1818.</p>		Amend any erroneous reference to the construction date of Macquarie Pier
<p>Newcastle Port Corp does not own the lighthouse</p>		The correct ownership details will be added to the Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
Many Performance Indicators are not useful and/or testable. Will more specific indicators be developed as part of the Master Plans? Also, as an example, the performance indicator for the Revegetation Management Plan should document exactly the area of coastline to be rehabilitated in exactly how many months etc.	The Performance Indicators have been considered acceptable to Council. Further, it is not appropriate for such a "strategic" document, that is the Coastline Management Plan, to provide exact detail in its Performance Indicators prior, as the exact details of a Revegetation Management Plan	No change to Plan
Up-date the funding section regarding NHT 2.		Update the Funding section of the Plan to include the latest information regarding the Natural Heritage Trust funding arrangements
A mechanism for close linkages between local government, the community and state agencies should be considered as a recommendation within the Plan		Add a brief discussion to Section 2.3 - Implementation and Review, regarding the investigation of effective partnerships
The Plan does not appear to adequately cover urgent improvement of all public shower / toilet facilities	The Plan refers to the requirement of Council's Major Asset Presentation Program (MAPP), which is a forward works program for the improvement of such facilities. The	No change to plan
The inland boundary of the study area is not well defined in the Plan, and should be further inland than is currently defined.	The definition of the study area within the Management Study should be included into the Plan to assist the reader in understanding the delineation of the Newcastle coastline as	Add the Study Area section of the Management Study to the Plan.
The Newcastle Environmental Management Plan needs insertion into the implementation framework within the Plan		Insert reference to the Newcastle Environmental Management Plan within the Implementation Framework of the Plan.
EROSION AT STOCKTON		
Accelerate the installation of the Stockton	This is based on Council's work program	No change to plan
Funding for Stockton Emergency Works through the Port Corporation	This recommendation requires communication between Council and the Newcastle Port Corporation, as part of	No change to Plan
Investigate the introduction of a levy on shipping into the Port of Newcastle as a means of providing on-going funding for the protection of the beaches adjacent to the port	This is a feasible option for investigation into funding sources	Add an action to the Plan that provides for the investigation of a Newcastle Porty levy to fund coastal protection for the adjacent beaches to the Port.
Research and development of artificial reef structure be accommodated within the Plan	Artificial reefs will form part of future management option analysis.	No change to Plan
Newcastle Port Corp provided funding for the Offshore Reef Study		Amend Study to reflect the Newcastle Port Corp's Contribution
"Ongoing, not cyclic" is an unsubstantiated claim (Port Corp). The pattern of long term erosion needs further substantiation based upon identification of main sediment movement pathways and quantification of sediment levels to a primary level.	Our review of past studies and past hydrosurveys, in light of current management practices, does not lead us to agree that it is cyclic. However, we agree, as the Plan states, that further processes understanding is required for before the appropriate	No change to Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
Figure 2.6 is not readable	Figure 2.6 is a reduced version of the original plan (A1 size), and is considered satisfactory for the Plan. Those needing finer detail of the A1 figure can view the plan at Council's	No change to Plan
Hazard Works should be delayed until further coastal processes are undertaken	This is stated in the Plan	No change to Plan
The preparation and adoption of a Coastline DCP should be reduced from medium to a short' timeframe.	DCP has been identified as a high priority within the Plan and it will guide the implementation of many other actions and future development along the coast. Other similar high priority actions have a short	Change the timeframe to short, in Table 2.4
There is concern Council is being swayed that further studies alone are necessary , before committing to implementing long-term solutions on Stockton Beach, and that other beach stabilisation	The Study investigated all feasible options, but found that none were practical until further understanding of the coastal processes was completed	No change to Plan
It appears that Council alone does not have the funds to undertake the beach stabilisation programme recommended, or to meet the maintenance requirements, and we need to know	Council is currently investigating appropriate sources of funds. These funds are mentioned in the Plan.	No change to Plan
A lengthy submission was submitted that details an opinion of the erosion problem.	This submission should be reviewed when considering management options for Stockton after the further coastal process	No change to Plan
Support the recommendations with respect to sand nourishment.		No change to Plan
Support the recommendations with respect to hard engineering options		No change to Plan
Adopt the philosophy of working towards removing the existing seawall	The Study investigated all feasible options, but found that none were practical until further understanding of the coastal	No change to Plan
<p>DOGS</p> <p>Don't close or part close Horseshoe Beach to dogs it provides for social interaction it provides an area for outdoor recreation and exercise for dogs & their owners it is safe and secure there are few areas elsewhere in the city the majority of owners are responsible dog owners make up 65% of the population easy access for inner city dwellers horse trainers also use the area</p>		
Horseshoe beach is now less attractive for family use anyway restricting the use may force dog-owners to other		
Oppose dogs in or adjacent to any marine environment, including Horseshoe beach.		
More leash-free beaches are needed eg north Nobbys or South Newcastle		
More dog waste bins are needed		
To relieve congestion at Horseshoe, link Horseshoe with north end of Nobbys sand dunes, and restrict times during summer eg between 6pm -		

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
The dog poo bins are always overflowing and often do not have a supply of bags		
Unauthorised use on Nobby's beach is not an		
Bins are needed at both ends of the beach		
Concern the extra picnic facilities may create other		
Increase the fine for failure to remove faeces rather than restrict activities		
Can Dixon Park be made available for leash-free usage during certain hours of the day		
Extend the leash-free area at Horseshoe into the parkland to enable the elderly to walk their dogs		
Unleashed pets are constantly taken to Bar and Susan Gilmore Beaches as well as Macquarie Walk. This may worsen in light of changes at Horseshoe Beach. The stepping on dog faeces on Macquarie Walk by tourists is not very attractive to		
The problem at Horseshoe is due to a minority of its users and changing signs and rules wont change them. Can NCC negotiate with NPWS for		
Education and enforcement of existing conditions of access to beaches (most notably Horseshoe) by dog users be undertaken, then evaluated for success, before other solutions embarked upon	This is a feasible option for review by Council's Companion Animal Advisory Committee	
		The recommendations to accommodate the issue of dog management are: Replace "reduce" with "better manage" in the wording of the Action in Table 2.9 Add a reference to Council's Companion Animal Management Plan, and that it may need updating regarding the use of companion animals on beaches. Add a reference to Council's Companion Animal Advisory Committee, and that the committee will need to review other options.
CAR PARKING		
There is not enough parking spaces at Newcastle Beach in summer	This is addressed in the plan	No change to Plan
The Plan proposes to reduce Bar Beach car parking without identifying replacements (FORM LETTER)	Page 2.38 - remove parking on eastern side of Memorial drive & establish trees. There is ample parking in major parking area to the north, and should be addressed as an integrated strategy. This action addresses	Add an action for whole of coastline regarding a car parking strategy for the entire coastline, as part of the proposed Coastline DCP.
Dixon Park car park could be redesigned rather than removed and relocated to the SLSC car park	This is a possible option for investigation under the Master Plan for Dixon Park Beach	No change to Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
	<p><i>It should be noted that no new car parking spaces have been proposed, other than at Newcastle Beach. There is adequate parking at most beaches for a large percentage of the year. However, public transport access to the beaches south of Newcastle Beach, in conjunction with other actions, will need to improve to cater for future demand. Council can never provide enough car parking for the population of Newcastle and its visitors, therefore alternative measures must be addressed. The intention of the Plan, either through Bathers Way or other means, is to better link the activity nodes and beaches through appropriate access ways, thus reducing the need for large car parks along the coastline.</i></p>	
<p>Rather than reduce car parking why not soften existing car parks with vegetation etc.</p>	<p>The Plan already recommends this.</p>	<p>No change to Plan</p>
<p>The spill-over from the car parks in summer (weekends and some week nights) into the streets is getting worse</p>	<p>The streets are public domain and if parking is legal it should be allowed to continue. If property owners have no off-street parking a permit system can be introduced for their property / street. The Principles of ESD do not cater for the construction of more car</p>	<p>Include an action that investigates the viability of a permit system for land owners with no off street parking.</p>
<p>A continuation of the path around the edge of Bar Beach car parks would remove the risk of pedestrians being hit by random car movements</p>	<p>Such detail should be determined in the design stage of any proposed redevelopment of the car park</p>	<p>No change to plan</p>
<p>Ramps are required from the path to the car park at Bar Beach to facilitate pram and disabled access. The same applies to access from the car park to make crossing Memorial Dr safer.</p>	<p>Such detail should be determined in the design stage of any proposed redevelopment of the car park</p>	<p>No change to plan</p>
<p>Upgrading Bar Beach carp park would; formalise traffic movements and make it safer; improve visual appearance through the use of kerbs and planting; reduce the "hoon" activity; provide stormwater quality controls; upgrade the pavement</p>		<p>#NAME?</p>
<p>Better public transport to the beaches on weekends could alleviate the problem of limited</p>	<p>The Plan recognises this issue and suggests an action to improve public transport</p>	<p>No change to plan</p>
<p>Access to the Horseshoe Beach car park could be provided via a new access point closer to the Navy Cadet facility</p>	<p>This may be a viable option in alleviation of the traffic congestion and pedestrian safety issues associated with the Nobbys Beach car park and roundabout area.</p>	<p>Add an action to investigate the option of providing a new access point nearer the Navy Cadet facility</p>
<p>TRAFFIC Increasing access along John Parade is highly laudable. Often congestion occurs, through prams, dog walking etc. Suggest directing one-way traffic from north to south, with a round-a-bout at the intersection with Helen St. The Memorial Dr - Helen St - Livingstone St - John Pde circuit is a</p>	<p>This is catered for within the plan in table 2.15, page 2.36.</p>	<p>No change to plan</p>
<p>Too many cars intimidating pedestrians / cyclists in the Bar Beach car park</p>		<p>No change to plan.</p>
<p>The traffic calming devices are most welcomed. Such devices should also be extended to include</p>	<p>Wharf Road is outside the core area for the Plan</p>	<p>No change to Plan</p>

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
Crossing the roads to get to Horseshoe Beach and Nobbys Beach are dangerous.	This is catered for in table 2.9, page 2.22.	No change to plan.
A pedestrian crossing is required on Scenic Dr, outside the Beach Hotel, as a high short-term	Such a link is referred to in table 2.15 on page 2.36.	No change to plan.
Traffic calming devices are OK, but maybe Memorial Dr from Susan Gilmore car park to Bar Beach Bowling Club should be one-way. This stretch needs to be "hoon-proofed", preferably not	This option was investigated but not deemed feasible due to the traffic volumes of Memorial Drive.	No change to plan.
Shortland Esplanade access to KE Park should remain open, with either 40km zones, one-way, or as-is with restrictions.	The management options for Shortland Esplanade in this vicinity should be part of the recommended master plan of King Edward Park in Table 2.13 on page 2.30.	The action regarding Shortland Esplanade between K.E. Park and South Newcastle Beach will be expanded to require a review of the risk management in light of community values and recent, and past, rock falls.
Shortland Esplanade should be closed to traffic	"as above"	"as above"
Appropriate signage could best manage the rock fall issue at South Newcastle Beach	"as above"	"as above"
Urge Council to elevate traffic calming measures on Mitchell Street to high priority	The change in priority is warranted based on the reported usage of Mitchell Street, particularly during high use periods such as	Change priority to "high" for traffic calming of Mitchell Street in Table 2.7
The Newcastle Greens have detailed quite specific options for connecting beaches and parks through altered traffic flows, including the need for traffic plans.	Many of the suggestions are compatible with recommendations within the Plan and/or should form part of the options development at the Master Planning stage of the Plan's implementation	Add a paragraph to Section 2.2.2 - Whole of Coastline Management Actions, that highlights the importance of calming the traffic along the immediate coast, as discussed in the Management Study, and the need for integrated planning of the immediate coast road network.
AMENITY / AESTHETICS		
Support introduction of shade, shelter and visual improvements such as local art.		No change to Plan
Support trees in car parks, particularly Bar Beach		No change to Plan
Improved public toilet facilities are required along entire coast	The plan did not discuss the maintenance of existing public toilets. Previous comments have been made regarding the upgrade of existing toilets before the introduction of new	No change to Plan
Propose a designated path paralleling the one-way road between the top and bottom sections of King		No change to Plan
If the proposal to re-open the Fern Bay gets approved there are ramifications for tourism, recreation, amenity etc in the area, particularly in	This is only a proposal at this stage.	No change to Plan
Dixon Park is a disgrace. Upgrading facilities such as BBQs, shade, playground and hang-glider area	This will form part of the Masterplan for Dixon Park under Table 2.15, on page 2.37.	No change to Plan
Improved landscaping of parks and car parks is necessary. Empire Park is a blight on the landscape [at present], it is barren and unattractive	This is provided for in Table 2.15, on page 2.38.	No change to Plan
More trees are needed along the tourist circuit and Merewether Bar Beach strips	This is provided for in Table 2.15, on page 2.37.	No change to Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
The area between Merewether Surf Club and the Baths is a problem. The footpath is too narrow to accommodate cyclists and pedestrians and there	This is provided for in Table 2.15, on page 2.37.	No change to Plan
Port Corp will not be providing refreshment facilities at Stockton Ferry Wharf	On page 2.19 of the Plan (Table 2.7), the Port Corp and Council are identified as having responsibility, however, NSW	Add NSW Waterways to the Responsibility column, and omit Newcastle Port Corporation.
The gravel road and car parking facilities for access to Stockton breakwall is eroding and potholed. It needs upgrading.	The master plan for Griffith Park and Pitt St Reserve may need to include this area.	Change figure 2.5 to incorporate the gravel road and car parking.
Private property owners do not own the view and therefore trees should form part of the revegetation program for the beautification / ecology of the coastline. Council could possibly sponsor a 'Trees are part of our View' program aimed at adjoining	Important point for consideration in revegetation of the coastline. Suggestion such as this should be investigated as part of the Plan's recommended Revegetation Management Plan for the whole coastline.	No change to Plan
The removal of redundant infrastructure, such as signage and fencing, (Table 2.4) should be considered in the short term rather than the long timeframe, to greatly improve aesthetic qualities of	The installation of new signage has a short timeframe, therefore, this could be incorporated with the removal of old infrastructure	Change timeframe to short, in Table 2.4
Any additional pathways, especially through sensitive sites like the Trig site, will need careful consideration and a low-key approach. The suggested construction of a boardwalk should be just one of the options available.	The Plan does not suggest exact locations for such pathways, however, the significance of certain areas of the Shepherds Hill area has been recognised. A formal pathway between Bar Beach and Strzelcki Lookout	No change to Plan
The creation of a pedestrian link from Nesca Park to Memorial Drive should be raised in priority.	This link is seen as a more longer term action, particularly when compared to other existing degraded infrastructure along the	No change to Plan
There is a lack of facilities between Stone and Hereford Streets at Stockton	The provision of such facilities is provided for in Table 2.7 of the Plan	No change to Plan
Urge Council to commission a design for modern landscaping improvement on Mitchell street	Improved pedestrian access eg. Cycle/pathway is to be undertaken as part of the preferred beach protection works. Also, landscape islands are recommended along Mitchel street, to accompany traffic calming	No change to Plan
ECOLOGY / VEGETATION Support the plan to reduce and eradicate weeds.		No change to Plan
Commend the need for vegetation studies and rehabilitation, however, fauna studies are needed as well to improve biodiversity.	Expand Dune and Cliff Revegetation and Weed Maintenance Management Plan to include fauna.	Change title of the Management Plan to Coastal Habitat Plan
Port Corp involvement in dune rehabilitation yet to be determined	Page 25 (Table 2.9) lists the Port Corp as one of the many with responsibility to undertake dune rehabilitation to reduce sand on to the southern breakwater, and clear the sand as necessary and place it on the beach. The Port Corp were nominated as the breakwater comes under their ownership and	No change to Plan
The Merewether Beach Rehabilitation Project provided details of their project	This and other landcare / dunecare groups have not been given specific mention, however, the plan consistently refers to, and	No change to Plan
The regeneration of native grassland at Shepherds Hill is supported		No change to Plan
The rock platform signage and education program		No change to Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
The rock platforms require detailed investigations to require specific management recommendations to ensure their protection for future generations. Council should consider roping off areas to allow degraded areas to rehabilitate.		Include an action in the Plan regarding the need for further data collection of existing rock platform organisms, which is necessary to better manage their long-term conservation.
The 'Medium' timeframe for the preparation of the Revegetation and Weed Maintenance Management Plan shows no urgency in the completion of this document. The timeframe should be completed in the next 2 years to provide	This is a key action for implementing the 'Restore and enhance degraded aspects of the coastline' objective and should have the "Short" timeframe as suggested in the submission. No other Whole of Coastline	Change the timeframe to "short" for the action in Table 2.4.
The \$2000 per annum assistance to Landcare/Coastcare groups should be an absolute minimum, and increased accordingly as other		Change estimated maintenance cost to reflect this point.
Section 2.2.6 focuses on King Edward Park and gives no indication of the management actions relating to the rehabilitation and management of native vegetation in the rest of the management	The rehabilitation and management of native vegetation in the rest of the management area is to be addressed by the Revegetation and Weed Management Plan.	No change to Plan
The Plan should provide clear indication that DuneCare groups' momentum will be supported	The Plan provides for ongoing-support of such groups and the regional Coastcare	No change to Plan
STORMWATER /WATER QUALITY Support stormwater outlet notification and		No change to Plan
EPA support the measures to reduce stormwater discharge impacts through education campaigns, pollution control structures and beach reshaping to avoid pending of urban run-off on beaches when		No change to Plan
The EPA does not collect water data of Newcastle Beaches, Hunter Water does. The EPA's Beachwatch is responsible for reporting the data		Add Hunter Water to the Responsibility column of Table 2.16
EPA supports actions regarding water quality issues addressed within the Glenrock SRA, through a collaborative approach. However, implementing a potential public health risk should		Add High to Ongoing in the Priority column of Table 2.16
HWC can not justify the need for public campaign and signage at those beaches where the public is likely to be at health risk from sewerage outfall. This based on good monitoring results over the past.	It is probably best to change the signage to be a more generic warning, such as that used by Lake Macquarie to warn the community of public health issues associated with using the Lake after periods of heavy rainfall.	Reword appropriate action to reflect the need for a generic health warning associated with periods of heavy rainfall and the condition of the water.
HWC need to be part of the decision-making process regarding appropriate location etc, for signage relating to stormwater on beaches		Add Hunter Water Corp to the Responsibility column for this action
HWC will continue to liaise with Council to discuss possible future options for the Stockton		No change to Plan
It is necessary to identify the objectives for a monitoring program [for Glenrock Lagoon] in order to deliver the best outcomes and HWC would like to discuss this further with Council	HWC have been identified within the Plan as one of the agency's with responsible for implementation of a water quality monitoring program.	No change to Plan
ECONOMIC Support reuse of Merewether Surf House		No change to Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
Oppose retention of derelict Surf House. It is an eye-sore	The value of the Surf House is well documented within the Management Study	No change to Plan
Oppose any additional building on public land. Any additional shops etc could be located in	This view is supported within the Management Study and Management Plan.	No change to Plan
Loss of views because of proposed shade and BBQ facilities in Jefferson Park. What dimensions and what access to plans and drawings will be	Any structures proposed for this and other parks should be designed in accordance with surrounding land use.	No change to Plan
Linkage of Bathers Way to Lake Macquarie Coastal Walk is a great idea that will provide many	This is provided for in the Management Plan in Table 2.16 on page 2.43.	No change to Plan
Provision of temporary/mobile carts sounds a wonderful option to permanent buildings. We enjoyed the use of coffee carts during the Olympics, and could be used / hired out by Council for the beach as well as other events such as race	This is provided for throughout the Management Plan particularly in Table 2.4 on page 2.14.	No change to Plan
The existing café/coffee shop at Merewether Beach should be supported by Council (if		No change to Plan
Section 2.2.6 focuses on King Edward Park and gives no indication of the management actions relating to the rehabilitation and management of native vegetation in the rest of the management	The rehabilitation and revegetation of the entire coastline is addressed in Section 2.2.2.	No change to Plan
Any future commercial use for the former Newcastle Bowling Club site is opposed	A meeting has been held with DLWC staff, since the public advertisement of the draft Plan. The lease for the site is currently under review. The commercial potential of the site is encouraged within the plan, provided it is in character with the surrounding land use,	Reword the current recommendation to include similar potential future uses of the site, pending the outcomes of the lease review
RECREATION		
Support designated areas in Empire and Dixon Parks for hang-glider landing, but not "hang-glider area only" zones. Perhaps signage is needed	Signage warning users of occasional hang-glider landing could be included in a hang-glider management strategy	No change to Plan
Access to the beach by 4WD should not be allowed. The installation of signage is supported.	The Plan only reinforces the current rules for Newcastle LGA	No change to Plan
A well-maintained and constructed all-weather 4WD access point could resolve the numerous illegal access points	This may be a viable alternative to the options provided in the Management Study.	Add an action to Table 2.7 to provide for an investigation into alternative options.
Surf wave quality has been poor in the last year or so, due to nature, but this could be improved through Council intervention, such as changing beach maintenance procedures by moving a small amount of sand in front of a small sand bank. This will allow natural processes to take the sand out to the small sand bank and hence enhance the surfing. This may help stop "surf rage" due to the	This may be a feasible option for the maintenance of surfing waves on a regular basis however the need for such a practice had not arisen during the development of the plan. This may be considered as a feasible option in the future.	Acknowledge in the Plan that management options such as that suggested i.e. "beach manipulation", can be considered and investigated as they arise in the future.
Provide a proper watercraft launching ramp on the western side of the car park into the harbour.	The Plan does not include boat usage of the harbour	No change to Plan
The ocean baths are important assets and they should be maintained		No change to Plan
Disabled access to the Merewether Ocean Baths is supported.	This is catered for in Table 2.15 on page 2.37	No change to Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
All pathways should accommodate cyclists as well as pedestrians	Bathers Way is intending to do this	No change to Plan
Based on the significant sporting, cultural and economic contribution to the city, the hang glider industry would appreciate consideration and consultation in issues such as redevelopment of	This has been articulated within the Plan	No change to Plan
SOCIAL Bar Beach car park / Empire Park and Dixon Park are alcohol free areas subjected to anti-social behaviour on Friday and Saturday nights	Council's management practices will need to account for this issue.	No change to Plan
Nobbys car park and foreshore is dangerous after dark due to anti-social behaviour. The Study claims that the attraction for youth and young adults on Friday and Saturday nights is significant socially and economically. This statement needs clarification. The plan also presumes it can provide a safe, attractive environment 24 hours a day	The statement (Section 5.0 of the Study) refers to two kinds of gatherings on Friday and Saturday nights. The "organised" events in The Foreshore or on beaches, such as film nights, provide an economic and social benefit. While large unorganised gatherings of youth at these locations, is also significant. The author of this submission does have a point regarding the other side of such The focus of this submission is on The Foreshore, which is only within the context area of the Plan, however, such anti-social behaviour does extend to Nobbys Beach and Newcastle Beach. The Study and Plan probably do not address the issue of night-time to the extent it deserves, however, this a	No change to Plan
Could the idle privately owned buses be used to service the recreational areas on weekends [in lieu of the public transport inadequacies]	The concept of private transport (buses) to act as links, or "feeder" services is a valid one. Whether from inland car parks or other	The Management Plan should incorporate this option in Table 2.4.
The landward boundary of the Study area should be expanded and include more heritage resources, as suggested in the submission	Upon review of the suggested resources for addition, it is believed the suggested resources were either, already discussed for their value to the coastline, or not relevant to	No change to Plan
The Aboriginal coastal heritage management plan should be elevated to a 'high' priority	Based on the limited evidence of recorded sites remaining along the coastline, it is not a high priority when compared to other issues	No change to Plan
Graffiti is a problem at South Newcastle Beach		No change to Plan
SAFETY Deaths have occurred on the headland (above Bar Beach ?). Council need regular inspections of the barriers to patch holes and missing rails	This is provided for in Table 2.13 on page 2.29.	No change to Plan
The closure of Susan Gilmore cliff access is		No change to Plan
The closure of Susan Gilmore cliff access has to happen for safety reasons, however, this may expose the rock platforms to increase pressure and there is a safety issue regarding rising tides if		Add an action to Plan regarding the need to warn of hazard if access to Susan Gilmore via Bar Beach is blocked by rising tide
Re-open cliff access to Susan Gilmore	This is not recommended for the reasons itemised in the Management Study and Plan	No change to Plan

Newcastle Coastline Management Plan - Public Submissions Review and Recommendations

Issue	Response / Comment (if any)	Recommendation / Implications for Plan
<p>Why is the closure of cliff access to Susan Gilmore the only option stated, and not restoration of the path, or warning signage. Also, access to the bogey hole remains open and Council seems prepared to accept a reasonable risk management approach to this site.</p>	<p>The Management Study had other options, the chosen option for the Plan was to close the access based on Council's "Duty of Care", particularly regarding public safety. Further the cost estimates associated with capital works and on-going maintenance</p>	<p>No change to Plan</p>
<p>A pedestrian refuge on Scenic Dr near the road access to the Merewether Baths is suggested.</p>	<p>This could form part of the link recommended between the Beach Hotel with the Surf House</p>	<p>No change to Plan</p>
<p>The proposed link recommended between the Beach Hotel and the Surf House area would be extremely dangerous. The subway currently serves the area well.</p>	<p>An assessment of the safety aspects associated with the recommended action would be undertaken at the feasibility stage of any such improvements. However, the Plan recognises an important link between the commercial sector of Scenic Drive with the Merewether Beach precinct, that can be</p>	<p>No change to Plan</p>
<p>Concerned over the hazardous areas below cliff faces along the coast.</p>	<p>The Plan has recommended geotechnical investigation and installation of appropriate signage where these hazards exist along the</p>	<p>No change to Plan</p>

APPENDIX 2

Potential Sources of Funding

SOURCES OF FUNDING

NATURAL RESOURCE MANAGEMENT FUNDING PROGRAMS

Table 1 - Natural Resource Management: Program Funding and Application Details

Program	Application	Timetable/funds available
DLWC Flood Management Program, Estuaries Program, Coastal Program and Waterways Program	<ul style="list-style-type: none"> Estuary program covers preparation of estuary management plans, foreshore improvements (eg boardwalks) funds for improving the health of the estuary (rehabilitation plans, targeted dredging), funds for monitoring programs. Waterways program provides funding for public use of waterways, such as jetties, pumpout stations, dredging for navigation and marinas etc. The coastal program provides funds for works in the coastal hazard zone such as coastline Management Plans and implementation. 	<p>All of these programs are funded 50/50 with local government. <i>The flood program may be funded 2:1 with Council or 4:1 (Federal Government/DLWC: Council</i></p> <p>The forward program for these funds outlines priorities for 2 to 3 years in advance, and is reviewed on an annual basis. Formal applications for funds under these programs are made by Councils in writing, including a commitment that Council will match the funds. It is best if a DA is in place.</p> <p>The program is generally signed by the Minister for DLWC in late October, with funds becoming available some time after that.</p>
DLWC Ports Program		Provides 100% funding for projects related to the fishing industry
DLWC country towns water supply and sewage program	Negotiation between local Councils and DLWC	75% subsidy for provision of reticulated sewage in sensitive areas
DLWC Public Reserves Management Fund (PRMF)	Assists in the development, maintenance and protection of Crown reserves in NSW.	The PRMF is self-funding with income derived from loan repayments by trust managers of Crown Reserves provided under the fund, and the payment of a levy from the operation of Crown coastal caravan parks. Applications are called in April of each year.
NPWS World Heritage funding/special grants		
NPWS funding for community projects		100% grants for NPWS lands
Waterways Authority Asset Development and Management Program	Infrastructure for the benefit of the boating community and the marine sector	Waterways will contribute 50% of project costs, jointly with local government, community. Up to \$2 million is available annually, on a 6 monthly cycle.
Hunter Catchment Management Trust Grants	Funds for community groups for small rehabilitation or restoration projects	Usually less than \$5000

Table 1 - Natural Resource Management: Program Funding and Application Details (cont)

Program	Application	Timetable/funds available
EPA Environmental Trust funds	Three program areas: <ul style="list-style-type: none"> • Restoration and rehabilitation (\$1 million) • Environmental education (\$0.5 million) • Research (\$0.5 million) 	Currently only available to community groups. Application forms sent to Landcare co-ordinators in May, close July
EPA Stormwater funds	Funds provided to local government to support the preparation of stormwater management plans and also for some works to improve stormwater management.	Decision on future direction of these funds are forthcoming
NSW Fisheries contributions to research programs that fit with core business		
NSW Fisheries funds contributed through NHT		
NSW Fisheries enhancement bids	Capital and facilities for special projects	
NHT - jointly administered by Environment Australia and Agriculture, Fisheries and Forestry Australia, and managed regionally through Catchment Management Trusts, Regional Catchment Management Boards	Set up by Federal government in 1997, the current extension of NHT has consolidated the 23 Trust programs to four. Relevant programs include: <ol style="list-style-type: none"> 1. Landcare 2. Bushcare 3. Rivercare 4. Coastalcare <ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Projects must have community involvement.

Table 1 - Natural Resource Management: Program Funding and Application Details (cont)

Program	Application	Timetable/funds available
<p>Other options include:</p> <ul style="list-style-type: none"> • Green corps - 10 week programs • Rivercare incentive schemes (50% funding for on ground works) • History and Education Program - National Council for the Centenary of Federation • Algal Management Initiative (DLWC) • NSW Wetlands Action Program (DLWC) • Land and Water Resources Research and Development Corporation • Fisheries Research and Development Corporation 		<p>Research funds may be available through LWRRDC, and Fisheries RDC.</p>