



Plan of Management

Crookhaven Headland



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SUMMARY

The overall goal of the Crookhaven Headland Plan of Management is to achieve integrated, balanced, responsible and ecologically sustainable use of the land and its associated resources. The Plan aims to protect the natural, visual, social, recreational, cultural, educational and scientific value of the Reserve.

The Plan more specifically aims to improve the value of the Reserve as a recreational and cultural resource for the local community and to develop and enhance its potential as an important nature-based tourism site in the Shoalhaven.

The principal strategies adopted in the Plan to achieve these goals are:

Vegetation Conservation

- Native vegetation will be restored in the degraded open areas not required for other uses to improve both the ecological qualities and visual appeal of the Reserve.
- Bush regeneration and noxious weed removal programs will continue to be encouraged and supported.

Facilities

- New scenic viewing areas and picnic areas with improved facilities shall be established.
- Improvements to water and sewerage services will be made including a new public toilet block to support recreational and tourist uses.

Heritage Conservation

- The Aboriginal cultural heritage of the site will be recognised, protected and interpreted through the agreement and involvement of the local Aboriginal community.
- An area will be set aside as an Aboriginal precinct to focus on Aboriginal culture. A small multi-purpose building is proposed for this area.
- Recognition will be given of the value of the maritime and associated European cultural heritage value of the site and implemented guidelines for protection and conservation of key structures such as the Crookhaven Lighthouse and the Pilot Station and surrounds.

Access

- Improvement of vehicular access arrangements to key areas of the Reserve through the realignment and sealing of the dirt access road and associated carparks. Provision will also be made for tourist coach access and set down.
- Improvement to pedestrian and bicycle access to the Headland Reserve through the construction of a shared path system linking the existing cycleway in Prince Edward Avenue.

Community Input and Interpretation

- Development of an integrated interpretive program focused on the nature conservation and cultural heritage qualities of the site.
- Recommendations have been made for ongoing leasing arrangements of key facilities such as the Pilot Station.
- Encouragement of community involvement in the process of "placemaking", maintenance and management of the site.

The Concept Plan is discussed on page 46 and shown in Figure 7.

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1. INTRODUCTION

Crookhaven Headland is a special place. It is a site which combines the natural and scenic qualities of a prominent and relatively undeveloped headland at the mouth of a major river estuary, with a rich cultural history of Aboriginal occupation and maritime activity. It has also been the site of a lighthouse and Pilot Station since 1872. In addition it provides a valuable recreational resource for the local community in a natural setting.

The value of this Headland as a conservation and recreation resource is made more significant by the demise of many other headlands along the New South Wales coast which have been cleared for grazing or developed for urban uses (Mills 1998).

Crookhaven Headland is a key part of Crookhaven Park, a 69 hectare Crown Reserve first set aside for public recreation in 1907. Crookhaven Park includes most of the Crookhaven peninsula and a continuous strip of foreshore land around nearby Orient Point. A Plan of Management for Crookhaven Park was prepared in 1986 (amended in 1988) by the then Department of Lands with Shoalhaven City Council as trustee.

The Waterways Authority recently relinquished all interest in the Crookhaven Pilot Station Reserve and this area was set aside as a reserve for "community use" purposes under the trusteeship of Shoalhaven City Council. As a consequence of this action it was decided that a Plan of Management should be established in full consultation with the community and user groups to guide the future direction for this Reserve and its existing buildings. Since the Pilot Station Reserve forms a key part of the Headland, the terms of reference for the Plan were extended to cover the whole of the Headland. This decision has provided an opportunity to develop a more detailed level of planning than that undertaken for the earlier Crookhaven Park Plan of Management.

This Plan of Management has been prepared to realise the very significant benefits and opportunities provided by this unique site while protecting, conserving and enhancing its natural, scenic and cultural heritage values.

The overall goal of this Plan is to achieve integrated, balanced, responsible and ecologically sustainable use of the land and its associated resources. It identifies shared community outcomes for the Headland and provides a way for achieving these outcomes through a series of clear strategies and detailed actions.

2. THE PLANNING AREA

2.1 Location (refer Figures 1 and 2)

The area to which this Plan applies is shown in Figure 2. This area includes all the land of the Headland, neck and island, and associated rock platforms and beaches immediately to the north and west of Crookhaven Caravan Park.

The planning area is a prominent coastal headland overlooking the mouth of the Crookhaven River at Crookhaven, near the coastal villages of Orient Point and Culburra on the south coast of New South Wales. It is located about 15km south-east of the town of Nowra in the City of Shoalhaven. The surrounding district is a popular seaside holiday destination that provides a range of coastal recreational opportunities.

2.2 Tenure and Land Use Zoning (refer Figure 3)

This Plan covers public land consisting of part of Crown Reserve R580073 (Crookhaven Park) as well as Crown Reserve 180073 (former Pilot Station and Signal Station Reserve R85175) and Crown Reserve R85167 (for Lighthouse and Signal purposes).

The land covered by this Plan is located in the Local Government area of the Shoalhaven City Council (Land Area Nowra, Parish of Wollumboola, County of St Vincent). The current land use zonings are set out in the Shoalhaven Local Environmental Plan 1985. Generally the Headland is zoned 6(a) Open Space - Recreation. The Pilot Station Reserve is zoned Community Purposes and the Lighthouse Reserve is zoned 5(a) Special Uses for Lighthouse and Signal Purposes.

Apart from R85167, management responsibility for the planning area lies with Shoalhaven City Council as appointed Trust Manager under Part 5 of the Crown Lands Act 1989. There is currently no appointed trust manager for the Lighthouse Reserve, however negotiations are underway to also have this Reserve placed under the control of Shoalhaven City Council.

2.3 Physical and Cultural Setting

The Crookhaven Headland consists of an elevated peninsula linked to a small rocky knoll to the north by an isthmus. The knoll is known locally as the "island". The Headland ranges in height from 22 metres above sea level at the trig point near the Pilot Station, to 28 metres above sea level near the lighthouse on the island. The Headland is surrounded by rock platforms at the northern end of Culburra Beach. There are small cliffs on the north-eastern edge of the island.

Most of the native vegetation on Crookhaven Headland was cleared many years ago and a significant area of the Reserve is now a grassland dominated by Kikuyu Grass *Pennisetum clandestinum*. Remnants of native vegetation survive around the edge of the Headland, however mainly on the steep slopes and cliffs. Some regeneration has occurred around the perimeter of the Headland and on the island, but a large part of the Reserve is maintained as mown grass.

Stands of Swamp Oak *Casuarina glauca* provide a pleasant visual character to the entrance to the Reserve from the south and along the edges of the access road.

The access road, which roughly bisects the peninsula, services both the Pilot Station complex and various parking areas utilised by picnickers, anglers and other people using the Reserve. There is currently parking for approximately 35 cars. There is no provision however for large buses or coaches. Unsealed sections of the road and parking areas have recently been badly eroded after a period of heavy rains.

Local employment programs have resulted in the construction of a number of structures on the site including timber steps to the rock platforms and beach, timber lookouts and various interpretation signs and structures. In addition, the local Culburra Beach Landcare/Dunecare Group has been involved in the regeneration of native vegetation in various areas of the Reserve.

The Crookhaven and Orient Point area has long had a rich Aboriginal heritage. This heritage was formally recognised through the granting of land in the adjoining Orient Point area through the New South Wales Land Rights legislation. There are no outstanding claims over the planning area under this legislation. The planning area is situated within the lands of the Wandandian speaking people and is now in the area covered by the Jerrinja Local Aboriginal Land Council. The Headland has a number of important Aboriginal sites of both traditional and contemporary value. These sites range from shell middens to mythological sites. The local Aboriginal community continues to have a close physical and spiritual connection with the Headland and surrounding area.

The Headland also has a very significant maritime heritage. A Pilot Station and a rudimentary lighthouse were first established in 1872 to support the coastal shipping which was so vital to the development of Nowra and the district. The physical layout and composition of the Pilot Station precinct varied over time with various cottages, boatsheds and other outbuildings built and subsequently demolished or destroyed. Similarly the lighthouses and other facilities on the island changed significantly over time. The current lighthouse, which was built in 1904, is the third lighthouse constructed on the island. The present Pilot's Cottage was built in 1940.

3. THE PLAN OF MANAGEMENT PROCESS

3.1 Broad Aims of this Plan of Management

The overall aims of the Crookhaven Headland Plan of Management are to:

- Identify the significant values of the planning area.
- Identify issues which need to be considered in relation to these values.
- Consider objectives and determine appropriate management strategies which will ensure the maintenance of conservation, recreation, cultural heritage, aesthetic and other values of the planning area.
- Develop a comprehensive action plan to achieve the management of objectives.
- Identify funding opportunities to implement the full package of management measures.

In addition to the above general aims of the Plan, the following specific planning objectives are to be addressed in relation to the newly gazetted Crown Reserve 180073 (the old Pilot Station):

- Provide a comprehensive plan that will guide the future use and development of the Reserve.
- Ensure the Reserve is developed as a community facility which meets the needs of the whole community.
- Ensure all use and development of the Reserve is compatible with the use of the surrounding environment, and will not detract from the natural, cultural and scenic qualities of the Headland.

3.2 The Process

The core process of preparing the Plan of Management has had three steps:

1. *Agreement upon a Basis for Management* which states "where we want to end up" (the desired outcomes). This provided the grounds for making further decisions.
2. *Development of Management Strategies* which provide general direction on how to achieve the desired outcomes - "how to get there".
3. *Formulation of an Action Plan* which describes manageable actions, shows whose responsibility they are and prioritises them.

Community input has been essential in the development of each part of the Plan.

The basis for management is founded on a set of agreed values for the study area. These values are the qualities of the Reserve that are significant, special or important, and that we wish to protect or enhance. A 'values' driven approach has been taken in preference to a methodology based on issues, since values will tend to remain fairly constant over time, whereas issues will inevitably continue to change and evolve.

The outcomes of the Plan have been developed by the community, and are a statement of "where we would like to end up", as well as a reflection of the values of the site. They define the end result of the Plan. Broad management objectives for the Plan have been developed from the desired outcomes of the Plan and the values of the site. They are established to protect and enhance the identified values.

Management strategies in turn are determined to allow the broad objectives of the Plan to be met. A number of individual actions support each strategy. For convenience and in order to facilitate implementation of the Plan the strategies and actions have been ordered against various convenient headings such as Nature Conservation, Fire Management, Recreational Tourism and so on. Under each heading the relevant issues are listed; existing conditions and options are discussed; and policies, strategies and actions are established to support the broad management objectives.

3.3 Consultation

A small working group consisting of representatives of the two principal local crown land management organisations (Department of Land & Water Conservation and Shoalhaven City Council) was set up to direct the project. The working group subsequently appointed a Project Officer to work on the development of the Plan of Management. To ensure that the views of all stakeholders were represented throughout the process of Plan preparation, a Reference Group was established. The functions and responsibilities of the Reference Group members were:

- To provide feedback and comment on the development of the Plan of Management.
- To represent the views of the various stakeholders and community groups.
- To provide information and to raise relevant issues.

The Reference Group consists of representatives from the following community groups and stakeholders:

- Culburra Beach Sports Fishing Club
- Orient Point Progress Association
- Culburra Beach/Crookhaven Non-Resident Owners
- Crookhaven Heads Tourist Park
- Jerrinja Local Aboriginal Land Council
- Culburra Beach Landcare/Dunecare Group
- Shoalhaven Marine Rescue Association
- Culburra Beach Progress Association
- Culburra Beach Chamber of Commerce
- Shoalhaven Catchment Management Committee

A number of formal and informal meetings were held with the Reference Group and other interested members of the community during the course of the development of the Plan of Management.

The Working Group, in conjunction with the Reference Group and others, established the various values of the Reserve, a list of issues to be considered and a series of desired outcomes. The planning objectives were established taking into account the legislative and technical framework and implementation issues.

In November 2005, following consultation with the local community - Principal Consultative Body and public exhibition, a number of minor amendments were considered and subsequently adopted in June 2006. These amendments related to:

- The re-positioning and relocation of the path/cycleway to the left of the entrance road and also off the roundabout;
- Incorporation of a playground, BBQ and picnic facilities in the picnic area;
- Clearing the area between the Pilot's Cottage and Bushcare shed, to form into a car park; and
- The planting of mature stock shade trees.

4. LEGISLATIVE AND POLICY SETTING

The overriding constraint in preparing the Plan of Management is the requirement that the Plan must conform to the requirements of government legislation and policies, of which the Crown Lands Act 1989 and the New South Wales Coastal Policy 1997 are the most significant. Both of these documents stress the conservation of natural resources and their management in an ecologically sustainable manner, while at the same time providing appropriate opportunities for public use.

4.1 Crown Lands Act 1989

As Crookhaven Headland is a Crown Reserve, the Plan of Management is to be prepared strictly in accordance with Division 6 of the Crown Lands Act 1989 and the principles for Crown Land management as set out in Section 11 of that Act. The principles are that:

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

The Act sets out specific requirements in relation to the referral, display and adoption of a Plan. The Act requires that the draft Plan be placed on public display for not less than 28 days and that the Minister for Land and Water Conservation must consider timely comment before adopting the Plan. The Minister may adopt a Plan of Management without alteration or with such alteration as the Minister thinks fit.

Once a Plan is adopted, it must be carried out and no operations may be undertaken in respect of the Reserve unless they are in accordance with the Plan.

4.2 NSW Coastal Policy 1997

The planning area is entirely within the coastal zone as defined in the NSW Coastal Policy 1997. The Policy is based on the principles of Ecologically Sustainable Development as a framework for deciding and making choices between competing demands in the coastal zone. It represents an attempt by the NSW Government to better co-ordinate the management of the coast. There are nine broad aims of the Policy, which are to:

- Protect, rehabilitate and improve the natural environment.
- Recognize and accommodate natural processes.
- Protect and enhance the aesthetic values of the coast.
- Protect and conserve cultural heritage.
- Promote ecologically sustainable development and use of resources.
- Promote ecologically sustainable human settlement.
- Provide for appropriate public access and use.
- Provide information to enable effective management.
- Provide for integrated planning and management.

Statutory implications of the Policy include the need for Council to consider the Policy when preparing Local Environmental Plans regarding, amongst other things, foreshore development. The Policy will also continue to be a matter for consideration for Council under Section 90 of the Environmental Planning & Assessment Act 1979 for development applications.

4.3 Other Relevant Legislation

- *Environmental Planning & Assessment Act 1979*
Any land use proposed for the area must be consistent with the zoning that is applied to the land by Council's Local Environmental Plan LEP (1985). The LEP is established under the provisions of the Environmental Planning & Assessment Act. This Act requires environmental consideration of any proposed activities under Section 90. Other relevant planning instruments under this Act are:
 - Illawarra Regional Environmental Plan No 1 1986
 - State Environmental Protection Plan No 14 Wetlands.
- *Threatened Species Conservation Act 1995*
This Act makes provision for the conservation of threatened species and their habitat.
- *National Parks & Wildlife Act 1974*
Aboriginal heritage in NSW including all Aboriginal areas, sites and relics are protected under this Act. It is an offence under this act to knowingly destroy, deface or otherwise disturb an Aboriginal relic without the permission of the Director of the NSW National Parks and Wildlife Service.
- *NSW Heritage Act 1977*
This Act covers non Aboriginal heritage. The disturbance of significant sites and the management of archaeological and maritime archaeology sites are covered by this Act.
- *Local Government Act 1993*
- *Rural Fires Act 1997*
- *Noxious Weeds Act 1993*
- *Native Vegetation Conservation Act 1997*

5. ATTRIBUTES OF THE STUDY AREA

Crookhaven Headland is an important natural area. Its conservation significance arises mainly from its biological diversity and geological features. The area contains several ecological communities and demonstrates a range of dynamic geological and geomorphological processes. These natural attributes and features occur within a relatively small geographical area, yet the landscape is interesting and visually dynamic (Mills 1998).

A comprehensive study of the vegetation, fauna and the geological landscape of the Crookhaven Headland was undertaken by Kevin Mills and Associates in 1998, specifically to support this Plan of Management. Much of the following information was taken from this study.

5.1 Geology, Geological Features and Soils (refer Figure 4)

Crookhaven Headland is a rocky Headland which runs in a north-easterly direction to form the southern flank of the Crookhaven River. The topography of the Headland can be divided into a number of distinctive geomorphic units. These are rock platforms, boulder fields and sandy beaches which occur on the edges of the Headland and are connected to the plateau by steep slopes and cliffs. There are extensive rock platforms on the point, particularly on the seaward side.

The rocks on the Headland consist of stratified Wandrawandian Siltstones and Nowra Sandstones formed during the permian period more than 250 million years ago. These formations are within the Shoalhaven Group. It has been suggested that the Crookhaven Headland represents the eastern extremity of the occurrence of the Nowra Sandstone.

Abundant fossils occur in the rocks, including brachiopods, corals and bryozoans, as well as trace fossils formed by species of burrowing worms.

Other significant geological features include an igneous dyke which intrudes into the sedimentary strata, a fault which runs north-west/south-east through the cliff and rock platform, diverse jointing patterns (rectangular and circular) on the rock platforms and large sandstone boulders along the base of the cliff.

Crookhaven Heads also represents the north-eastern extremity of the Greenwell Point soil landscape unit (Hazelton 1992). The soils of this landscape unit, based on the distribution of Wandrawandian Sandstone, are described as having low fertility and high erodability.

5.2 Native Vegetation and Introduced Plants (refer Figure 5)

The vegetation of the Headland is associated with the sandstone soils and the exposed coastal environment. Although the native vegetation has been heavily modified in the past to suit the needs of the Pilot Station and lighthouse a substantial amount of remnant native vegetation remains. The condition and extent of the native vegetation has been improved in recent years through the efforts of the local Landcare/Dunecare group and several local employment programs.

Four native plant communities have been identified. The most extensive community is the **Swamp Oak** forest (dominated by Swamp Oak, *Casuarina glauca*, and Coast Banksia, *Banksia integrifolia*). It is believed this community originally covered the entire Headland plateau and island.

Coastal Teatree shrubland (Coast Teatree, *Leptospermum laevigatum*, Coast Banksia, *Banksia integrifolia* and Coast Wattle, *Acacia sophorae*) occurs on the sand dunes on the southern part of the planning area and occasionally on the slopes of the Headland.

Heathland (Swamp Banksia *B. Paludosa*, Coast Banksia, *B. integrifolia* and Coast Rosemary, *Westringiafruticosa*) occurs on the exposed cliffs on the eastern side of the island.

Spinifex Grassland (Hairy Spinifex, *spinifex sericeus*, Coast Wattle, *A. sophorae*) occurs on the northern end of Culburra Beach.

Other areas are cleared and consist of grassland dominated by Kikuyu grass, *Pennisetum clandestinum*.

Ninety eight (98) native plant species have been recorded in the planning area including several non-local native species inadvertently introduced during revegetation projects.

Conservation Significance of Plant Species and Communities

No threatened plant species were found to be present in the planning area. It does not contain any endangered populations or endangered ecological communities.

Two regionally significant species occur in the Reserve; these are the rainforest plants Celerywood, *Polyscias elegans* and the Slender Grape, *Cayratia clamatidea*. The occurrence of an unusual prostate form of *Acacia myrtifolia* is also worthy of note.

The shrubland on the cliff top at the north-eastern extremity of the island is, according to Mills 1998, particularly important because it appears to be unique in the region. It has an unusual floristic composition containing both coastal species and species more commonly found on sandstone soils.

Weeds and Introduced Plants

Weeds or introduced plant species are abundant on Crookhaven Headland. Not all introduced species seriously compromise the integrity of the native plant communities in the area or diminish the public's enjoyment of the area. Two categories of weeds, however, must be controlled; these are noxious weeds and environmental weeds. Noxious weeds are introduced plants listed under the Noxious Weeds Act 1993 (New South Wales 1993). Environmental weeds are introduced plant species that invade natural areas and have the ability to threaten the integrity of the native vegetation. They become naturalised, able to reproduce themselves and flourish. These species, too, should be controlled.

Four noxious weeds have been recorded. All are in the W2 category of weeds and, under the provisions of the Act, must be fully and continuously suppressed and destroyed. These species are Bitou Bush *Chrysanthemoides onilifera*, Blackberry *Rubus fruticosus*, African Boxthorn *Lycium ferocissimum* and Pampas grass *Cortaderia seloana*. Bitou Bush *Chrysanthemoides onilifera* is the most common noxious weed on Crookhaven Headland.

Three environmental weeds were also recorded. These species are Kikuyu Grass *Pennisetum clandestinum*, Lantana *Lantana camara* and Cape Ivy *Delairea odorata*. The first two species are rampant in the area.

The introduced native plants which are not locally occurring are Bracelet HoneyMyrtle *Melaleuca annularis*, Golden Wreath Wattle *Acacia saligna* and a purple flowered Westringia. The row of Norfolk Island Pines *Araucaria heterophylla*, which have heritage value, was also planted.

5.3 Native and Introduced Animals

Crookhaven Headland contains a variety of habitats for native fauna. These include the rock platforms, small areas of beach, native forest and shrubland, and cleared land. With the exception of the latter, all of these habitats are utilised by native fauna. The value of the habitats, however, is limited by its small size and relative isolation from other bushland.

A wide range of fauna species is known to occur on the Headland, although only brief field studies have been undertaken. Thirty-seven (37) native fauna species have been recorded, mostly birds, and many more species are expected to occur there. The Headland contains populations of at least two native mammals, the Common Ringtail Possum *Pseudocheirus eregrinus* and the Brown Antechinus *Antechinus stuartii*, despite its geographical isolation from other areas of bushland habitat. Bats would also forage in the area, and could conceivably roost in the lighthouse or along the cliffs on the island.

Fauna of conservation importance in New South Wales are listed on the schedules attached to the Threatened Species Conservation Act 1995.

Two threatened fauna species are known to occur at Crookhaven Headland, the Sooty Oystercatcher *Haematopus fuliginosus* and the Pied Oystercatcher *Haematopus longirostris*. The Sooty Oystercatcher is a regular inhabitant of the rock platforms while the Pied Oystercatcher, which prefers sandy shoals and mudflats, is expected to visit irregularly.

Several other threatened bird species (mostly waders) have been recorded on the estuarine flats around Comerong Island (Chafer 1989) but due to a relative scarcity of suitable habitat few would be expected to occur at the Headland.

No threatened mammals, reptiles or frogs have been recorded in the area and none are expected to occur there, with the exception, perhaps, of some threatened bat species (Mills 1998). While threatened insectivorous bat species may occur in the Reserve, the Reserve has no special attributes to attract them. There are vast areas of better habitat throughout the district. These bats, which are very wide ranging, are unlikely to depend on the habitats in the Reserve.

5.4 Climate

The climate is typical for an exposed location on the south coast with moisture laden sea breezes in summer from a predominantly north-easterly direction. Highest wind gusts over summer generally come as southerlies. Prevailing wind direction in winter is from the north-west to south-west quadrant.

5.5 Aboriginal Heritage

A study of the Aboriginal cultural heritage of the planning area was undertaken by Emma Midgley to specifically support this Plan of Management. Much of the information in this section and in Section 7.5 of this document is sourced from this study.

Aborigines have had a close traditional association with the area. Sullivan 1988 found a shell midden on the northern shoreline of Orient Point which was likely to be up to 2,000 years old. The confluence of estuarine and marine habitats at Crookhaven Headland would have provided a rich and wide range of foods including fish, shellfish, sea birds and other resources. A large shell midden on the western shore of the island confirms the importance of the area to Aboriginal people.

Aboriginal people were occupying both sides of the Shoalhaven/Crookhaven Estuary at the time of European contact. They continued to have a close association with the area which resulted in the establishment of the Roseby Park Aboriginal Reserve in 1900 and culminated in the granting of land under State Land Rights legislation some 84 years later.

The cultural significance of the area, including the Crookhaven Headland, to the local Aboriginal community, was recognised in 1979 when the NSW National Parks and Wildlife Service considered the area for declaration as an "Aboriginal Place" under Section 84 of the National Parks and Wildlife Act 1974.

The significance given to the area by the National Parks and Wildlife Service was based on the existence of a number of specific sites of importance to the Aboriginal people and the general importance of the area in the context of traditional tribal and reserve land. Various National Parks and Wildlife Service and consultant archaeologists have documented the specific sites of significance in the area and on the Headland (Kelly and Creamer 1978, Sullivan 1981, Paton and Cane 1985).

Specific cultural sites identified include traditional burial sites; bora grounds and other ceremonial sites; a massacre site; shell middens; water holes; and sites of particular importance based on natural features such as rock overhangs, natural swimming holes and so on. The NSW National Parks and Wildlife Service has recorded 16 sites in the Crookhaven/Orient Point area on its Aboriginal Sites Register Database.

The Crookhaven and Orient Point area is of importance to contemporary local Aboriginal people who regard the area as being central to their cultural identity through their continuing physical association with the land and its traditional and contemporary Aboriginal sites.

5.6 European Heritage

The site has a rich maritime history which is intimately linked and parallels the development of Nowra and the surrounding area. Until the arrival of the railway to the district in 1893, casual shipping was the only means of transport to the cities for people and local produce.

The rapid growth of the river and coastal shipping trade prompted the Marine Board to petition for a light and Pilot Station at Orient Point in the early 1870s. A Pilot Station was established at "Shoalhaven", as it was then called, in February 1872. Prior to the establishment of the Pilot Station and light a number of ships were wrecked on the seaward side of the Headland and on the bar.

The Station consisted of a marine captain (the first pilot was Captain John Craig), as pilot and officer-in-charge, and four boatmen. Cottages were erected for the staff and their families. A makeshift first light structure was erected in 1872 which was followed by a more substantial timber structure in 1882. The current lighthouse was erected in 1904, at which time the Station's name was changed to "Crookhaven". The Pilot Station staff provided pilot services and maintained the light. The pilot also undertook limited customs duties during the early period of occupation.

The Pilot Station precinct varied over time with cottages destroyed by fire, or demolished due to white ant attack etc, and new dwellings constructed. The area also contained various shedding, fencing, boatsheds and slipways, jetties, a flagstaff and water wells. The Pilot Station was downgraded to Lighthouse Keeper Station in 1919. By 1920 only three cottages remained to house the three staff. The current cottage was constructed in 1940 by NSW Public Works as a Lighthouse Keeper's Cottage (the pilot function had by then ceased).

5.7 Existing Facilities and Development (refer Figure 6)

The Reserve contains facilities and remnants of its former function as a Pilot Station and Lighthouse. The lighthouse continues to operate as a fixed red light on an automatic system. Likewise there are two solar powered navigational lead lights associated with the lighthouse. The Pilot's Cottage is a small hip roofed weatherboard structure which, although in good physical condition, has been insensitivity modified over the years. Associated with the Pilot's Cottage is a small timber garage or shed constructed in 1940 at the same time as the cottage and a very small gable roofed masonry walled shed probably used for the storage of flammable materials and constructed some time earlier than the cottage. The latter is in a poor state of repair.

There was a small freestanding toilet shed at the rear of the Pilot's Cottage which has recently been removed.

There is a large masonry flat roofed garage/shed originally constructed to support the Pilot Station but now in a separate fenced compound utilised by the local Landcare/Dunecare Group. There is also a small timber framed shade house in the same compound.

Adjacent to the Pilot's Cottage is a metal tower structure which functions as a wind monitoring facility to provide early wind warning to the Port Kembla coal dust storage.

In relation to site services, an aerial power line serves the Pilot Cottage and formerly served the lighthouse. There is town water supply to the Pilot Cottage but no sewerage connection.

A partially sealed road provides vehicular access to various parking areas and the Pilot Station. The unsealed sections of the road are in bad condition. There is parking for approximately 35 cars in made carparks. There is no provision for the needs of large vehicles including coaches.

Other facilities on the site are associated with passive recreational use. They include a small number of picnic tables and barbecues, various timber seats, timber information structures, two timber lookout structures on the island and various fencing and timber road edge barriers. There is also a made walking track across the island. The Greenwell Point trig station is also located on the site.

5.8 Existing Use and Future Demand

Two community groups currently have a lease arrangement for the use of buildings on the Headland. These leases are currently on a month by month basis with their future dependent on recommendations of this Plan.

The Shoalhaven Marine Rescue Association has established their headquarters and a radio base in the rear of the Pilot Station Cottage. They also provide a visual surveillance on the Crookhaven River from this location.

Apart from the two front verandah rooms, the Association uses the cottage as accommodation for a member couple and their family in return for 24 hour monitoring of the emergency radio system. The Association also occupies a fenced external yard and utilises a small timber shed.

Culburra Beach Landcare/Dunecare Group occupies the front two rooms of the Pilot Cottage. They also have the use of a large concrete block shed and a fenced compound adjacent to the Pilot Cottage. There is a shade house constructed by the group within their yard area used for the propagation of locally occurring native plants.

The lighthouse continues to function as a fixed automatic light using solar power. The two lead lights on the western edge of the area are solar powered.

The local Aboriginal community continues to regularly visit the Headland to continue their physical and spiritual association with the place.

The Headland Reserve provides a range of low key recreational opportunities for locals and visitors to the area. It is located adjacent to the Crookhaven Heads Caravan Park. Land based activities available in the Reserve include picnicking, walking, scenic viewing and nature study. Water based activities include rock and beach fishing, diving and various beach based pursuits.

The Headland area tends to attract mainly local residents and visitors staying in the adjacent Crookhaven Caravan Park and the nearby residential areas of Crookhaven, Orient Point and Culburra. There are no available specific use figures for the Reserve.

In terms of demand Crookhaven Caravan Park has 320 sites with a 90% occupancy figure over the summer holidays. This equates to about 700 potential users of the Reserve at peak periods.

The local population in the 1996 census (Crookhaven, Orient Point and Culburra) numbered 3,533 with a compound growth rate per annum of 2.42% over the previous five years. There is significant potential for future growth in the area dependent on the development of new land releases zoned residential.

Shoalhaven as a whole, in comparison with figures for the State, has a high percentage of the population over 55 years old (28.3% compared with 21.1% for NSW). The increased leisure time available to this group has obvious implications for the provision of appropriate recreation facilities and for tourism development. The Shoalhaven also has a relatively high growth rate for young people (3.09% compound growth rate per annum).

Crookhaven Headland was identified by the draft Nature Tourism Strategy Report (Lunnon 1997) as having nature-based tourism potential. (Nature Tourism is defined as tourism focusing on the natural and cultural features of a site rather than the activities undertaken.)

A Coastal Community Education Centre had been previously proposed for this site by the local Landcare/Dunecare groups and the now disbanded Illawarra Regional Community Landcare Committee.

6. VALUES, OBJECTIVES AND OUTCOMES

6.1 Values of the Reserve

The following values of the site, which describe what the community believes are the most important things about the site, were established by the Reference Group. The values are grouped conveniently under five headings:

Natural Heritage

- The remnant coastal vegetation has high conservation value.
- Crookhaven Headland provides a habitat for the conservation of native animal species, including threatened species.
- It is a significant location which contains both marine and estuarine shoreline and habitats.
- It provides a generic storehouse for local plant species.

Cultural Heritage

- Crookhaven Headland is an Aboriginal site of cultural heritage significance.
- It is a site associated with maritime activities (as a Pilot Station and Lighthouse) for over 120 years.
- It is a site strongly associated with the European development of the Shoalhaven District (through the use of sea and river transport).

Social/Recreational

- Crookhaven Headland is an important resource for the whole community.
- It is a favourite place.
- It is a place of peace and tranquility.
- It is an important tourist destination with considerable future tourist potential.
- The site has high recreational values for activities such as beach use, fishing, diving, walking, picnicking, scenic viewing, nature study, relaxation, etc.
- The existing buildings provide facilities for community use.
- The site is easily accessed from surrounding areas.

Visual

- The Headland is a significant local landmark which is easily seen from the surrounding area (Orient Point, Greenwell Point, etc) and from the sea.
- Outstanding views are available from the site, particularly of the Crookhaven River mouth.
- The physical form of the site has very high scenic qualities. It is a place of great beauty.

Educational/Scientific

- The area provides an excellent resource for studying coastal systems, including both sea and river environments and their rocky foreshores; a tied island; and a beach foredune system.
- The exposed and variable geological conditions of the Headland also provide a significant educational resource.

6.2 Management Objectives

The following objectives are based on the values of the Reserve and, as far as possible, on the community's desired outcomes. The objectives must of course take account of legislative and policy requirements. The objectives of the Plan of Management are:

- To protect and enhance the natural qualities of the site and its ecological values, whilst allowing for types and levels of use which are appropriate to individual locations. Both aquatic and terrestrial habitats are to be protected.
- To protect, enhance and interpret the high quality cultural heritage values of the site, particularly in regard to its significance as an Aboriginal site and its maritime history.
- To establish a multi-purpose community reserve which makes provision for a range of activities (recreational, educational, cultural, scientific and maritime) which are appropriate to the natural values of the site and are complementary to each other.
- To allow for the provision of low key, low impact recreational activities and supporting amenities and maintenance which will enhance the value of the site as a cultural and nature based tourism destination for both locals and visitors.
- To make provision for an equitable solution to the long term needs of the major stakeholders (the Aboriginal community, Shoalhaven Marine Rescue Association and local environment/Landcare groups) which is consistent with the needs of the wider community and the natural values of the site.
- To ensure that the use and management of the site is ecologically sustainable.
- To encourage community understanding and appreciation of the natural environment and cultural features of the Headland.
- To provide better linkages between the site and surrounding areas.

6.3 Broad Outcomes

The following outcomes have been prepared by the Working Group as a consolidation of the list originally prepared by the Reference Group. The outcomes are a statement of where we would like to end up with the Reserve. They provide the result which the Plan of Management is attempting to achieve. These outcomes are expanded through the document.

- The protection, enhancement and interpretation of the natural and cultural qualities and values of the site.
- The establishment of a multi-use community reserve which makes provision for a broad range of activities (recreational, maritime, tourist, educational, scientific, cultural, etc) which are appropriate to the site and which complement each other.

- The provision of an improved level of amenities to serve the proposed activities, together with an appropriate level of site maintenance.
- The protection of the native vegetation and fauna of the Reserve which includes the removal of weed and feral animal species.
- The development of low key, low impact tourist opportunities which are ecologically sustainable and which will provide economic benefit to the surrounding area.
- The provision of a place which provides a high quality, inviting and safe, secure environment for both visitors (tourists) and locals.
- The maintenance of clear views to the coast for navigational purposes and public access to all viewing points (from the site).
- The provision of a permanent home for the Shoalhaven Marine Rescue Association and appropriate provision for other key stakeholders.

7. MANAGEMENT ISSUES, STRATEGIES AND ACTIONS

The most important issues that require management action have been identified through consultation with the community, Council staff and relevant public agencies, and from specialist studies and reports.

Under each of the above headings, the desired outcome, a list of issues, a description of the existing situation and a discussion of possible options are presented. A set of management strategies and policies are then given followed by a number of specific actions to address these strategies.

The strategies and policies established provide an ongoing framework for management of the Reserve. It is expected that the strategies and policies should remain constant for five to ten years. The actions listed support and implement these policies. They are prioritised according to recommended order of implementation in Section 9 of this Plan. It would be expected that other management actions will be developed over the life of this Plan consistent with the above strategies and policy framework to reflect changing priorities and resource constraints.

The desired outcomes, management strategies and policies described in this section have been developed to allow the management objectives of this Plan of Management to be met. The management planning framework forms the basis of the Concept Plan presented in Section 8.

7.1 Nature Conservation

Outcome

The desired outcome is the protection and enhancement of the natural qualities of the site and its ecological values and wildlife habitats.

Issues

- Existence of significant areas of remnant coastal vegetation worth saving and enhancing.
- Degradation of the natural qualities and values of the site through inappropriate use and management practices.

Existing Situation and Discussion of Options

Crookhaven Headland is an important natural area. Its conservation significance arises mainly from its biological diversity and geological attributes. The area contains several ecological communities and demonstrates a range of dynamic geological and geomorphological processes. These natural attributes and features occur within a relatively small geographical area yet the landscape is interesting and visually dramatic.

The conservation significance of Crookhaven Headland is heightened by the demise of other headlands along the coast of New South Wales, most of which have been cleared and are now either grazed or have been developed for urban uses. One of the main strengths of Crookhaven Headland for conservation purposes is that, although it has been partially cleared, substantial remnants of native vegetation have survived, enabling viable ecological communities to be restored; and, of course, the geological landscape has remained intact and has retained its integrity regardless of any relatively transient changes to the vegetation on top of the plateau.

Due to its key location at the mouth of the Shoalhaven and Crookhaven River Systems, the Crookhaven Headland has long been a focus of maritime associated activities. Native vegetation was cleared from an early date from both the island and peninsula to provide a clear vision to and from the sea and river for lighthouse and pilot functions. Additional land was also cleared to accommodate the cottages of the pilot and his staff and families. The cleared land is now maintained in this condition for recreational purposes to provide roads, car parks and picnic areas.

The clearing of the native vegetation led to the removal of large areas of habitat for native fauna. Not only was habitat removed but, because of the clearing of native vegetation further inland, links to other areas of natural habitat were severed. This has inevitably led to a reduction in fauna species diversity on the Headland.

Natural regeneration of the native vegetation and fauna habitats has been prevented by regular mowing in order to maintain a large area of cleared land for recreation and other purposes. Weed infestations are also preventing and/or retarding native regeneration.

Successful bush regeneration programs have been undertaken at Culburra Beach by Landcare/Dunecare Groups and various employment schemes, particularly on the island, although the value of this work has been somewhat reduced despite the efforts of Landcare Groups by lack of resources to ensure adequate follow up maintenance. The clearing of the native vegetation has provided opportunities for weeds such as Lantana, Bitou Bush and Kikuyu Grass to become established on the Headland. Some of the infestations are severe.

Rabbits are established in the Headland in significant numbers. There is no obvious evidence of the presence of other pest animals (cats, dogs and foxes) although cats and foxes in particular may be impacting on native fauna.

Although the soils in the Greenwell Point soil landscape unit generally have a high erodability, until recently there has been only a few minor occurrences of erosion on the Headland. An erosion gully in the south east corner of the site adjacent to the beach carpark has now largely been stabilised. There has been a recent significant land slip on the steep eastern embankment behind the Pilot Cottage which requires urgent action.

There has been a recent significant land slip on the steep eastern embankment behind the Pilot Cottage which requires urgent action. The cause of this major soil movement is unclear, however it highlights the instability of the steep sides and edges of the Reserve. The clearing of vegetation in adjacent areas is potentially a contributing factor to the slippage. No future removal or clearing of vegetation in this area should be allowed without express permission from Council's Parks Section.

Because there are now no external toilets in the Reserve, some areas have been fouled with human excrement. However, there are few other examples of vandalism of the natural environment. There is little evidence that trees have been damaged by visitors wanting to obtain firewood, however some vegetation has been recently removed apparently to enhance views.

The biological environment will not recover from the impacts of previous land uses unless appropriate management practices are implemented soon. Without intervention, the native vegetation will never regenerate significantly, weeds will continue to flourish and fauna diversity will probably continue to decline.

Management Policies and Strategies

- Native vegetation will be restored to all areas not required for carparks, roads, picnicking and other recreational activities including new areas or activities associated with ongoing tenancies of certain facilities (the Pilot Cottage, the Landcare/Dunecare compound). The island, in particular, should continue to be returned to its natural vegetative state.
- Planned changes to roads and other facilities should avoid as much as possible areas with native vegetation or revegetation areas.
- The configuration and location of roads, carparks and picnic areas should be carefully considered so that they do not infringe unnecessarily on areas that it would be more appropriate to revegetate.
- Community bush regeneration programs should be encouraged in the Reserve to restore the natural vegetation of the Headland. The structure and floristic composition of the regenerated bushland should aim to eventually resemble the natural vegetation.
- Non-local plant species introduced to the Headland during previous planting programs should be removed. In the future, no introduced species should be planted in the Reserve. All introduced species should be removed from the Reserve, except the four large Norfolk Island Pines which have heritage value.
- Only local native plant species should be utilised in any future bush regeneration programs on the Headland. Propagation materials should be obtained from a local source. The dominant trees and shrubs in the Reserve should form the basis of planting programs; these species are Coast Banksia *Banksia integrifolia*, Swamp Oak *Casuarina glauca*, Coast Rosemary *Westringia fruticosa*, Coast Wattle *Acacia sophorae*, White Correa *Correa alba* and Coast Teatree *Leptospermum laevigatum*.
- Weed species should be removed from the Reserve concentrating on noxious and, where feasible, environmental weeds. Priorities need to be clearly established and pursued consistently with regular monitoring and remedial action. The highest priority will be given to noxious weeds where they are a threat to native species or where the infestation is small and readily managed.

- Weed removal procedures should be conservative and not remove large areas of vegetation such as Lantana on steep or highly erodible areas. An accepted method of bush regeneration will be utilised which incorporates revegetation activities.
- Any imported soil brought into the Reserve should be free of weed species.
- Tenants of on-site facilities such as the Pilot Cottage will strictly observe the site management requirements in regard to nature conservation established in this Plan.

Actions

- Encourage and continue to support community volunteer involvement in revegetation, bush regeneration and weed control utilising technical advice and direction from specialist Landcare officers.
- Rabbit control at the Headland should be undertaken as part of a general program for the wider Crookhaven/Orient Point area. The local introduction of Calicivirus should be also undertaken as an initial action. A cat and fox control program may also need to be undertaken in the Reserve.
- Stabilise and revegetate the existing land slip area on the western slope in front of the Pilot Cottage.
- Reduce the extent of open grassed areas to minimise lawn mowing maintenance. Where appropriate revegetate these areas with native vegetation.
- Degraded open areas will be closed to vehicular access and rehabilitated by ripping of the soil and other appropriate site preparation techniques and planted with local native species.
- Support the continuation of the Culburra Beach Integrated Bitou Bush Control Program.
- Apart from a designated small area around the lighthouse, continue to return the island to its natural vegetative state using locally occurring native plant species.
- Undertake weed control particularly in areas where native vegetation is currently being overgrown by Kikuyu Grass. The removal of all weed species in the Reserve, with the exception of Kikuyu Grass and Lantana, is an achievable short term goal.
- Non-local native plant species should be removed.
- Close off the informal access track through an eroded creek-bed adjacent to the beach carpark. Stabilise and revegetate bare areas.
- Undertake strategic additional planting of local native species to improve the enclosure of picnic areas on the eastern side of the access road, to reduce wind exposure and improve the visual qualities of the Reserve.
- Establish an appropriate interpretation program to focus on the natural values of the site (refer 7.9).

7.2 Fire Management

Outcome

To ensure the protection of life, property and the native vegetation in the Reserve from bushfire.

Issues

- Vulnerability of the remnant native vegetation in a small reserve to the impact of fire.
- Protection of life and property.

Existing Situation and Discussion of Options

Shoalhaven City Council as Trustee of the Crown Reserve has legal responsibility for fires on the land and the prevention of the escape of fires to adjoining properties.

The native vegetation in small reserves is often destroyed or becomes highly degraded if bushfires occur too frequently for the vegetation to recover. The dominant vegetation types (Swamp Oak Forest and Coast Teatree Shrubland) are highly flammable even in relatively moist, humid conditions. This vegetation is also very sensitive (in terms of change to its floristic composition), to fire and frequent burning.

Given the physical location of the Reserve, the vegetation type, and the existing breaks in potential fuel (open, mown grassed areas) the District Fire Control Officer considered that there is no need for fuel management through prescribed or controlled burning in the area, with the possible exception of the immediate precincts around the caravan park.

The greatest risk of fire in the Reserve would be from the south (from the caravan park, or fires lit or established in the coastal scrub on the Culburra Beach foredune). The highest risk situation would occur if a fire was driven by strong afternoon southerly winds after a hot summer day. It is likely that any potential threat of fire would need to be managed from this sector.

Natural features cleared of vegetation such as the rock platforms and beach, together with open grassed areas, could be utilised by the public for refuge in the event of a fire.

The proposed loop road for large buses and coaches will improve access for fire fighting appliances.

Management Policies and Strategies

- As far as possible fire will be excluded from the Reserve.
- Controlled or prescribed burning is not considered appropriate in the Reserve.
- Fire control should be achieved by mowing the grassed area and removing flammable weeds, particularly Lantana, from critical locations.
- Cleared areas should be maintained where possible around buildings and associated structures.
- The Ecologically Sustainable Development Principles of the Rural Fire Act 1997 will apply.
- Wood barbeques will be progressively replaced with gas or electric barbeques.

Actions

- Shoalhaven City Council will be responsible for the bushfire hazard reduction in the Reserve.
- The area around all buildings is to be kept clear of vegetation and other combustible material.

7.3 Recreation and Tourism

Desired Outcomes

- The provision of safe, high quality physical settings for undertaking a range of low key, low impact recreational activities, including playground and picnic facilities.
- The realisation of the considerable potential of the Reserve as a local and regional nature and cultural tourism destination.

Issues

- There is a lack of basic facilities to support current recreational activities as well as nature and cultural tourism opportunities, and to provide an acceptable level of amenity to support and protect the environment and human health.
- The physical degradation of the recreation values of the Reserve and various unacceptable impacts on the environment are occurring.
- The visual quality, and hence the recreational setting and value of the Reserve, should be substantially improved.

Existing Situation and Discussion of Options

Recreation

Crookhaven Headland is currently an important local recreational destination providing opportunities for low key activities such as picnicking, walking, scenic viewing, nature study and water based recreation which includes fishing, diving and beach activities. It is an important recreational resource for the occupants of the adjacent caravan park. People also come to the Reserve to visit the Shoalhaven Marine Rescue Association's headquarters in the Pilot Cottage.

People come to Crookhaven because of the natural landscape setting, the scenery and spectacular views of the surrounding coast. Passive, rather than active, recreational activities are appropriate. As a consequence public activity spaces such as picnic areas should be generally small, sheltered and relatively private. The present situation of relatively large, open grassed areas is not conducive to high quality recreational use and experiences.

Apart from scattered timber picnic tables and freestanding metal barbeques, there are no amenities for the public on the Reserve. There are no toilet facilities or water points, and the picnic areas have no shade structures. Because of the lack of toilets some areas have been fouled with human excrement. The nearest public toilet block is at the Crookhaven boatramp approximately one kilometre from the Headland. There is also no public access to the highly desirable western edge of the plateau (behind the Pilot Station). This area is relatively flat, sheltered from prevailing north-easterly winds, and has superb views of the estuary and the northern coastline.

While there is clearly a justification to provide for the needs of visitors and tourists, facilities provision should be at a level that the natural qualities of the setting are not compromised.

Tourism

The draft "Strategy for Integrated Management of Sustainable Nature Tourism in the Southern Highlands, Illawarra and Shoalhaven areas of New South Wales" prepared by P Lunnon for the Regional Tourism Task Force 1997, has established a list of priority destinations in the region for nature tourism. Crookhaven Heads is listed as a priority destination. It contains most of the features that identify a site as suitable for nature tourism use such as panoramic views, interesting native vegetation, significant natural features, Aboriginal sites suitable for interpretation and historic features with interpretive values.

This Reserve has very significant, and as yet untapped, potential to link low impact recreational pursuits based on the natural environment with culturally based activities. It has a unique mix of natural and cultural resources and heritage (both Aboriginal and European) within the one easily accessible and relatively small reserve.

The draft Nature Tourism Study recommends the Crookhaven Headland Reserve for tourism promotion and the provision of an on site interpretation focus. It is described as one of the key nature tourism sites in the northern Shoalhaven. The Study stresses the need to manage the site in a sustainable way; that is to limit activities and visitation to a level that does not cause degradation of the natural values of the site or the quality of visitor experience.

Access and limited parking facilities for coaches are needed to allow the Reserve to realise its nature tourism potential.

A detailed discussion of the integration of the natural and cultural values of the site in an interpretation package is described in Section 7.11 of this Plan.

Management Policies and Strategies

- Make provision for a suitable level of public amenities on site to support recreational and tourist use of the Reserve. The level of provision should not compromise the natural or visual qualities of the site.
- Break up existing unattractive large open grassed areas utilising native landscape planting. Smaller, more sheltered and discrete areas providing greater spatial variety will be provided for picnicking, scenic viewing, and other appropriate activities. Convenient vehicular access and parking is a fundamental requirement for picnic areas.
- Improve public access to the western edge of the peninsula and make provision for picnic facilities in this area.
- Improve recreational opportunities generally through modifications to the landscape, and improved access arrangements for pedestrians, vehicles and cyclists.
- Make provision for a limited number of tourist coaches.
- Integrate recreational and nature based and cultural tourism opportunities on the site.

- Make provision for community involvement in "place making" on the site (eg community art works etc).

Actions

- A centrally located public toilet facility in the maritime precinct will be provided. The toilet building will be designed to have an architectural character that is compatible with the adjacent maritime precinct. It will also be conveniently located to allow use by the Landcare/Dunecare Group.
- A new viewing area with limited parking and road access will be provided on the eastern side of the peninsula in the existing degraded open area (the "sea view" parking area). An appropriate low level screening of landscape planting will soften the visual impact. This proposal will prevent the need for illegal vehicle access in this area.
- Provide a new picnic area to the western edge of the peninsula by rationalising the size and position of the Pilot Station's private yard and the Landcare/Dunecare Group's compound. Picnic facilities should include tables, chairs and shelter structures, barbecues and refuse bins, as well as playground equipment. The shelter structures could follow the maritime theme.
- Provide vehicular access and parking to the existing picnic areas on the eastern side of the peninsula. As noted above, landscaping will be used to improve the visual character and quality of the open grassed area.
- Safe drinking water will be provided to the main picnic areas.
- Additional parking be provided between the Pilot's Cottage and Bushcare shed.

7.4 Access and Parking

Outcome

The provision of an appropriate level of access (pedestrian, cyclist and vehicular) and parking to support the broad range of activities associated with the multi-use community nature of the Reserve and to provide for appropriate nature tourism functions.

Issues

- The poor physical condition of the existing unsealed sections of the access road and associated carparking.
- Vehicles driving off the road to access picnic areas and scenic vantage points causing unacceptable impacts.
- No large vehicle access (tourist coaches) currently provided into the site.
- No constructed pedestrian or cyclist paths provided within the site or linking external routes.
- The walking track on the island is difficult to follow in places and is in poor condition in some areas.

Existing Situation and Discussion of Options

Convenient and appropriate access, both vehicular and pedestrian, is a critical factor in the effectiveness of the Crookhaven Headland as a resource for the public and the local community. Good access to the foreshore, scenic viewing points, buildings of interest and picnic areas is required by recreational users. Access is also required for various other groups who may need to enter the area for emergency purposes (fire fighting or ambulance) or to undertake tasks such as construction or routine servicing and maintenance of the site and its facilities. However, if the values of the area are to be protected and enhanced, then access arrangements must be carefully considered. It is essential that the number of people using the site is kept to a level that does not degrade the natural or cultural value of the site or the enjoyment of the recreational experience.

Vehicle Access and Parking

Good vehicular access is provided to the Reserve via the sealed Prince Edward Avenue which links the site directly to the Culburra Shopping Centre. Once in the Reserve the access road is partially sealed for about half its length. The unsealed section and its associated parking areas are not able to cope with current use pressures. They have become badly eroded after recent heavy rains with significant drainage problems also evident. In addition, the road is dusty with badly maintained verges which detracts from the visual qualities of the site. Pine log vehicle barriers and roadside mounds are unsightly and ineffective with vehicles breaching them to drive onto picnic areas and scenic viewing points.

The resultant damage to these off road areas, including compaction of the soil, further degrades the natural and scenic values of the Reserve. Consideration should be given to realigning and rerouting the road to take into account the access needs that are currently being expressed in an illegal manner. That is, access and parking should be located "where people want to go" (within acceptable environmental constraints).

In relation to parking it would be prudent to increase car parking numbers on the site by one third which would provide for a reasonable level of expansion without compromising the physical and perceptual carrying capacity of the site. Currently there are approximately 35 made parking spaces for cars on the peninsula and an additional 25 spaces in the Culburra Beach carpark. It is also considered essential to address the needs of coaches for future tourist opportunities. A loop road to allow coaches to access key areas of the site should be provided with appropriate parking and passenger set down areas.

Pedestrian and Bicycle Access

There are five timber stairs providing access to the river and beach foreshores but there is no linking pedestrian path on the peninsula. Visitors are forced to walk on the road or through unmarked open areas. The island has a made path from the neck to its northern tip, however it suffers from lack of directional signage and is difficult to locate in certain locations, particularly around the lighthouse and lookouts. There is clearly a need for a shared pedestrian pathway and cycleway through the Reserve linking the caravan park to the main carpark (adjacent to the stairway to the neck). There is the potential to use this path to link scenic viewpoints, picnic areas and other significant sites on the peninsula. A constructed pathway would also provide convenient access for less mobile visitors. There is also an opportunity to allow public pedestrian access to the western edge of the plateau (behind the Pilot Station).

The proposal to extend the existing cycleway from Prince Edward Avenue to the Headland Reserve and the new shared pathway in the Reserve is supported in principle by Council. It is consistent with the general philosophy of the Shoalhaven Bicycle Strategy (adopted by Shoalhaven City Council December 1977). However, the proposed route is not identified in the Bicycle Strategy and is unlikely to be a priority for implementation in the near future. Other sources of funding, such as the Public Reserves Management Fund, could possibly be utilised for this purpose.

Policies and Management Strategies

- Improve the quality and rationalise the location and design of existing roads and parking areas to address needs such as better access to picnic areas and scenic viewing points, and to prevent the need for illegal vehicle intrusions into landscaped areas.
- Provide a road system capable of allowing limited numbers of coaches or large buses to access the site.
- Assess and rationalise parking areas and roads and their design to reduce unacceptable visual impacts.
- Establish a safe, clearly defined, convenient, and stimulating walking track system linking various areas of the site, and in particular, provide better linkages to lookouts, the lighthouse and other sites on the island.
- Make adequate and convenient provision for pedestrians and cyclists on the peninsula and link to an existing cycleway on Prince Edward Avenue.
- Maintain carparking and coach facilities to a level that does not compromise the values of the site.

Actions

- Upgrade the condition and modify the alignment of the access road. The new section of the road is to be sealed and properly formed to allow adequate drainage. Existing road edge mounding will be removed.
- A new one way loop section of the road will be made to provide access for 15 metre coaches. Two coach parking bay spaces will be provided.
- Existing unsealed public carparks are to be properly graded and sealed. The Bream Hole carpark will be extended and a new carpark to service the south-eastern picnic area will be established. The existing Pilot Station carpark will be rationalised in shape to reduce its visual impact and landscaped. The new "sea view" carpark and lookout point will be constructed. The existing beach carpark will remain unaltered although additional landscaping is proposed for the central island.
- Provide adequate road access and parking to existing and new picnic areas and viewing points to obviate the need for illegal vehicular access. Improve the physical and visual quality of the roadside vehicle barriers.
- Complete the existing cycleway from Culburra to provide access to the Headland. This cycleway should be upgraded to a shared facility with pedestrians within the site. It should link key elements of the site (facilities, viewing points, cultural and natural heritage sites) to become part of a larger nature/cultural heritage walking track system.

- The walking track at the neck and island will require regular inspection and maintenance to ensure an appropriate level of safety and visibility and to prevent erosion processes. Similar inspections and maintenance will be required for the timber staircases.
- Provide limited low key directional signage at critical junctions of the walking track, particularly to improve access to the viewing platforms on the island.

7.5 Aboriginal Heritage

Desired Outcomes

- The protection from interference and damage, enhancement and interpretation of the Aboriginal cultural heritage of the area.
- Tangible recognition on the Reserve of the local Aboriginal community's historic and continuing spiritual and physical connection with the site.

Issues

- The importance of the Aboriginal cultural connection to the Reserve and the original Roseby Park Mission and the potential to tell the story of this cultural heritage to enhance the nature tourism values of the site and the meaning of the site to the local community.
- The need to recognise and interpret this heritage and maintain an appropriate Aboriginal "presence" on the Headland.
- The need to establish an ongoing consultation and development program with the local Aboriginal community concerning cultural interpretation and site protection.

Existing Situation and Options

As noted earlier Crookhaven Headland is a very important site for the local Aboriginal community. It has very significant historical and cultural associations. The timber carved poles with interpretive messages and the fenced area prepared for a bush tucker garden are examples of the community's ongoing involvement in projects on the site.

Currently no interpretation or signage exists which warn park users that there are Aboriginal sites in the area and that they are protected. Some sites have been and still are being damaged.

Cultural Significance

All of the Aboriginal sites contained within the Crookhaven Headland area are a direct example of, and a link to, traditional practices carried out by past generations of the Jerrinja people on this site (Midgley 1998). The "Kings Chair" is considered by some to be the 'most important mythological site in the entire Nowra district', and it exemplifies a powerful spiritual connection to the area through the site's traditional usage as a mythological site superimposed over a natural formation. The site's rarity and the importance of its previous function all contribute to it being of significant traditional value.

The shell middens in the area represent cultural continuity and can provide important information on details of previous occupation (through the age and physical extent of the middens). They can also provide information on sequence of occupation and dietary preferences (Midgley 1998). Such information can augment the body of cultural knowledge existing, hence the shell middens have a scientific value. A high level of traditional significance is assigned to the hidden artifact assortment due to their role in important ceremonial practices and also due to the fact that they were used as recently as 90 years ago and secretly hidden there afterwards.

The water holes and swimming holes retain a comparatively lower level of significance, however are a tangible reminder of the recreational activities enjoyed at the site by the Jerrinja people. The tribal burial site, while having no traditional meaning to today's Jerrinja people, is said to be respected in a contemporary sense.

The most prevalent value among the Crookhaven Headland site assemblage is arguably its social value - ie, the collective sites represent an attachment to the area through a longstanding physical and spiritual occupation. This attachment determines the importance of the site in establishing a strong sense of community identity which will continue to have significant social value for future generations of Jerrinja people (Midgley 1998).

Policies and Management Strategies

- The Jerrinja Local Aboriginal Land Council and other relevant Aboriginal community members are to be consulted and actively involved in all aspects of management of Aboriginal sites and values in the Reserve.
- Aboriginal sites will be protected from disturbance or damage by human activities.
- All works with the potential to impact on known Aboriginal sites will be preceded by an archaeological assessment.
- The location of Aboriginal sites will not be publicised except where:
 - The agreement of the Jerrinja Local Aboriginal Land Council and other relevant Aboriginal community members has been obtained;
 - Any management works necessary to protect the site from damage have been implemented;
 - The site will be interpreted to promote public knowledge and appreciation of Aboriginal culture.
- The interpretation of Aboriginal cultural values, subject to the controls noted above, should be integrated with other interpretive material and programs for the site.

Actions

- Erect suitable signs warning the visitors about the need to protect Aboriginal sites in the area.
- Protect exposed middens from inadvertent damage by visitors. Remove existing timber seats from middens and construct an elevated timber walkway and staircase above the midden where it cannot be avoided.
- With the agreement of the local Aboriginal community through the local Land Council develop a small precinct that focuses on Aboriginal culture and that contrasts in landscape and spatial character with the formal European maritime area.

- Establish ongoing consultation program with the local Aboriginal community.
- Involve the local Aboriginal community, particularly the young people, in any ongoing employment programs for the Headland.
- Develop the bush tucker garden and integrate it into the Aboriginal precinct.

7.6 Maritime/European Heritage and Conservation Management

Desired Outcome

- The protection, enhancement and interpretation of European cultural qualities and values of the site, and in particular the conservation and preservation of items of special heritage significance.
- Provision of practical strategies and actions to guide the proper conservation management of the Crookhaven Lighthouse and Pilot Station and other items of cultural significance.

Issues

- Crookhaven Headland has a rich maritime history spanning over 120 years yet little has been done in the past to research, interpret and value this aspect of the cultural heritage of the site.
- Little attention has been given to the conservation of historic buildings and associated structures and their curtilage.
- There is a need to provide guidance for future heritage management of the site and heritage structures.
- The need to resolve the future ownership and management responsibilities for the lighthouse.
- Problems with deterioration of the fabric of the lighthouse due to continuing vandalism.
- The Pilot Cottage currently has an inappropriate setting.
- Recent inappropriate changes to the fabric of the Pilot Cottage.

Existing Situation - An Overview

Crookhaven Headland contains a number of buildings, structures and landscape elements of maritime heritage value. These elements are those associated with the Pilot Station and lighthouse functions of the site which first commenced in 1872 with the construction and commissioning of the then named "Shoalhaven" Pilot Station and light. There were originally five timber cottages constructed to accommodate the Pilot, the four boatmen and their families. No structures exist on the site from this period, however four Norfolk Island Pines, which are now in poor condition, remain. These pines were planted in front of the original Pilot's Cottage. They were planted in the late 1870's having been brought out from Norfolk Island originally as pot specimens.

The existing buildings and structures date from more recent periods. The lighthouse was constructed in 1904, the third lighthouse on the island. The Pilot Cottage and associated timber shed were built in 1940. A small masonry shed near the Pilot Cottage reportedly used for the storage of flammable/explosive goods is probably the oldest building on site and dates from about the turn of the century. Other historic structures include fragments of the boatshed sliprail on the Reserve foreshore and footings for the signal mast adjacent to the lighthouse.

Other elements of former buildings, structures and objects may be on site but are now covered by vegetation or buried beneath the soil surface.

Heritage Status

Only the Crookhaven Lighthouse Complex is currently heritage listed. It is included in the Draft Shoalhaven City Council Heritage Study 1995-1997 (prepared by Peter Freeman Pty Ltd April 1997). The lighthouse is also noted as being within a National Trust Conservation Area (the Berry District Landscape Conservation Area) and listed in the supplement to the Illawarra REP and Illawarra Region Historic Buildings and Sites 1981.

The Statement of Significance for the Lighthouse (in the draft Heritage Study Citation) is:

"Federation period lighthouse of considerable historical and scientific interest. Important to shipping and transport which made economic development of the region possible. Regional significance (Illawarra)."

It has been assessed as having regional historical significance and social, scientific and local historical significance.

Currently the Pilot Station Cottage and associated structures are not included in the Draft Shoalhaven Heritage Study. A Statement of Significance has been prepared for the Complex as a component of this Plan.

The proposed Statement of Significance for the Pilot Station Complex is:

"The Cottage is significant in that it is the only remaining dwelling of a Pilot Station precinct which has existed at Crookhaven Headland for over 125 years. Crookhaven is unusual in that the site combined the piloting function and the light keeping function within the one site. Relatively few complexes of this type now survive intact. The building demonstrates an historical function and technology that is now radically changed. The complex was important to coastal shipping and transport which made economic development of the region centred on Nowra, possible. The station building is representative of pilot station cottages of the mid twentieth century, a type of building that is believed to be now uncommon."

It has been assessed as having regional historic and scientific significance and local social and scientific significance.

Statutory Responsibilities

Statutory protection for heritage in NSW began with the proclamation of the Heritage Act in 1977. The Heritage Act requires the State and Local Governments to identify, protect and conserve items of cultural heritage. Under the Environmental Planning and Assessment Act, 1979 councils are required to prepare local environmental planning instruments which make special provision for the conservation and management of cultural heritage.

The Draft Shoalhaven Heritage Study has been prepared to formulate as a heritage schedule under the Local Environmental Plan 1985. Heritage provisions in the LEP require Shoalhaven City Council, amongst other things, to protect heritage items and to provide an appropriate consideration of environmental factors in the development assessment process. Council is required under the EP and A Act to consider the affect of new development on the historic, architectural, aesthetic, social, scientific and natural character of schedule items of environmental and cultural heritage.

General Conservation Policies

- All conservation actions applied to the fabric of heritage buildings and structures will be undertaken in accordance with the Conservation Principles, Processes and Practice of The Burra Charter. (The Burra Charter is the Australia ICOMOS *Charter for the Conservation of Places of Cultural Significance*.) Both the Lighthouse and Pilot Station Complexes have been assessed as having cultural significance.
- Any future work on the buildings should prevent damage to or deterioration of the significant fabric.
- Conservation of the special values of the Headland and its key buildings and structures also must make provision for their security, their proper maintenance and long term viable future.
- Future activities or changes that require major changes to the site or significant buildings, and that are likely to reduce the cultural significance of the site or buildings, should be discouraged where possible.
- Uses should be found for the buildings (Pilot Cottage and Lighthouse) that are compatible with their cultural significance. That is, the uses should not require modification to the building fabric, and they should ensure the ongoing protection and appropriate maintenance of the building. They should also provide community benefit and help to interpret the Reserve as a whole.
- Interpretive programs and material should contribute to an understanding of the significance of the buildings and site and should be displayed in a way that does not compromise that significance.

The Lighthouse Complex

Existing Conditions and Management

The lighthouse continues to operate as a solar powered fixed light under the control and management of the Waterways Authority. It is physically isolated from the rest of the site, being on the island about 400 metres from the main carpark and accessed by a bush track. It is also screened from distant views by regrowth vegetation. The tower can only be glimpsed from the north-eastern side of the peninsula area.

This isolation and lack of vehicular access has implications for tourist potential and the security of the building. Access will be difficult for some people with limited mobility. There is also little opportunity for surveillance of the site, and as a consequence, vandalism will continue to be a concern.

The majority of the fabric of the lighthouse, including fittings and internal details, is in original 1904 condition and as such has heritage significance. The building is currently not secured from illegal entry and has suffered from ongoing vandalism. Timber fittings have been removed from the office area, and there is evidence of graffiti, minor fire damage and animal faeces in the building. The glazing to the lantern has been recently destroyed. External details such as water tank supports have been removed and there are signs of corrosion to external metal fittings such as the tower balustrade.

The original setting of the building in a landscaped area of vegetation to maximize visibility of the light has been altered. Native vegetation now encroaches up to the perimeter of the building. There is no interpretive information at the site. Adjacent to the lighthouse are the concrete footings of the original signal mast. The mast was used to signal the condition of the bar to shipping entering the river. There is no evidence of former structures on the island such as the former lighthouses which were located west of the current building or rocket shed.

Management Strategies

- Integrate the future care, control and management of the Lighthouse Reserve with the rest of the Crown reserve. It is essential that if Shoalhaven City Council is to take over management of the building as Trustee, that an appropriate handover budget is negotiated to fund initial repair and maintenance costs. The Waterways Authority is considering the option of erecting a solar powered beacon tower on a single pole adjacent to the lighthouse. Any rental received from such an arrangement with the Authority could provide the new Trustee with an ongoing income to assist with maintenance costs.
- As an item of heritage on Shoalhaven City Council's Draft Heritage List the building should be protected and conserved. Ideally a detailed Conservation Management Plan should be prepared for the lighthouse and its surrounds (curtilage).
- The general conservation policies noted previously will apply.
- In the absence of a Conservation Management Plan the following actions should be undertaken to conserve the building.

Actions

Note: The *significant fabric* is the original 1904 lighthouse building including fittings and internal details.

- The building should be initially secured from illegal entry with plain metal panels to the windows and a plain metal door. (If details of the original front door and windows can be found then they should be reconstructed subject to being able to resist illegal entry.)
- The significant fabric of the building should be conserved and maintained.
- Urgent attention should be given to the corroding external metalwork and the glazing to the lantern. Polycarbonate sheeting could be considered in lieu of glass for the lantern windows.
- Original 1904 details should be reinstated where possible - such as the repair of the building's weather vane structure, internal cabinet fittings and so on. If this action is not practicable, interpretive information on these features should be installed.
- Improve the setting of the building by removing some of the surrounding vegetation.

- Develop an interpretive strategy for the building and the nearby signal mast footings which could include external freestanding panels and material which could be located internally in the office area of the building (refer Section 7.9).
- Access to the tower should be restricted to supervised tours.
- The solar powered navigational lead lights will continue their function. Care must be taken to maintain clear lines of sight to these navigational beacons.
- Careful trimming of vegetation may be required from time to time.

The Pilot Station Complex

Until the recent handover of the Reserve, the Pilot Station Complex was owned and maintained by the then Maritime Services Board of NSW. The Reserve including all its building and structures is now the management responsibility of Shoalhaven City Council as Trustee.

While the building has been reasonably well maintained, a number of unsympathetic actions have been undertaken in connection with its ongoing maintenance and use. These include the design and detailing of the skillion roofed extension to the rear of the building, enclosure of the front verandah, installation of aluminium framed windows and the use of a vinyl faced false cladding over external weatherboard walls. Most of these changes are not irreversible although they do tend to diminish the cultural significance of the structure. Much of the interior also has been modified to suit the recent tenants' various requirements.

Most of the building fabric of the adjoining timber shed is in original condition. It clearly shows evidence of the original cladding, windows and architectural details once present in the cottage. The timber shed needs some urgent maintenance and attention.

Shed/Garage

The nearby unsympathetic flat roofed masonry shed detracts from the setting of the Pilot Station Cottage, as does the timber paling perimeter fencing to the compound. This shed was constructed at a much later date as a garage to serve the tenants at the time. It is not considered to have heritage significance.

Management Strategies

- The timber shed and cottage are part of the original 1940 curtilage and should be managed as an integral unit.
- No additional extensions should be permitted to the cottage.
- An appropriately designed and sited freestanding garage to support the functions of the Pilot Cottage is supported.
- The original 1940 fabric should be uncovered or recovered where possible when long term maintenance action is required. For example, the unsympathetic aluminium windows could be replaced with timber windows in the style of the original building. A pattern can easily be established through examination of original windows in the shed and on a (now inside) wall of the cottage.

- A better setting is required for the cottage with the building generally made more visible from public areas. In particular the front of the building should be enclosed by a sympathetic low timber painted post and rail or picket fence.
- The timber shed and explosives store are to be secured, conserved and maintained.

Actions

Note: The *significant fabric* is the original 1940 cottage and adjacent timber shed and all of the existing explosives store.

- The significant fabric of the buildings should be conserved and maintained.
- Develop a new more appropriate external private area including fencing and hedging to the cottage.
- Improve housekeeping around the cottage including the removal of debris and the attached poultry yard from the timber shed.
- Undertake new landscape treatment to enhance the maritime character of the precinct.
- Undertake urgent maintenance to the 1940 shed including replacement of damaged cladding (with cladding of a matching profile) and the construction of a new ledged and braced timber pair of doors to replace the temporary doors.

Norfolk Island Pines and Site of First Pilot's Cottage

As noted earlier these trees were planted in front of the first Pilot's Cottage. They are significant trees and should be retained and conserved. They also mark the site of the original cottage, the outline of which should be suitably interpreted and marked on the ground. (The outcome of the building could be delineated in paving for instance.) It should be noted that precise details of the plan configuration of this cottage are available from Surveyors Field Notebooks (J F Truscott 1895).

Management Strategy

- Maintain, conserve and replace the Norfolk Island Pines if necessary.
- Interpret the early buildings and structures on the site.

Actions

- The trees appear to be in decline and their condition should be assessed and a rehabilitation program be undertaken immediately if required.
- The significance of the trees on the site should be appropriately interpreted.
- Mark the site of the original Pilot's Cottage on the ground and install appropriate interpretive material.

7.7 Utilisation of Existing Services and Additional Facilities and Services

Outcomes

- The equitable and viable use of existing buildings and associated facilities.
- The establishment of additional facilities and services to protect and enhance the values of the site.

Issues

- The need to take into account the needs and claims of the groups wishing to have an ongoing presence at the Headland.
- The need to take into account the Community Use purposes identified for the Pilot Station through its Crown reserve status.
- The need to ensure the proper maintenance and conservation of heritage structures on the site.
- The need to provide additional facilities to improve recreational and other values of the Reserve.

Existing Situation and Options

Needs of Special User Groups

Currently the Shoalhaven Marine Rescue Association and the Culburra Beach Landcare/Dunecare Groups have lease arrangements on certain facilities within the Reserve. The future of these leases is dependent on the recommendations of this Plan of Management.

The ongoing use of the cottage as a residence, radio room and operations centre for the Marine Rescue Association has wide local community support. The Association provides a volunteer service and the Crookhaven Cottage is an ideal location for their needs. In addition the sea rescue nature of the Association's work continues the maritime traditions and history of the cottage and the site in a very appropriate way. Ongoing maintenance and management of the cottage and its surrounds, however, would need to be undertaken under strict conservation management guidelines.

A substantial skillion roofed extension to the rear of the existing cottage has been proposed in the past by the Association. This proposal is not considered acceptable and would substantially detract from the cultural and visual qualities of the cottage.

The Association has also indicated they are prepared to undertake additional roles on site including security, limited ground maintenance and interpretation tasks as part of their 24 hour presence and ongoing lease arrangements.

The Shoalhaven Marine Rescue Association has indicated their requirements for an ongoing 24 hour marine rescue service which includes a live in caretaker to man their radio facilities and a location to allow visual surveillance of the Crookhaven River bar.

The Culburra Beach Landcare/Dunecare Group wishes to maintain operational facilities on-site including a project room, training/educational facilities, propagation facilities, and materials storage within a secure compound. They also have indicated that they wish to retain user rights to the front rooms of the cottage and have requested the reinstatement of the outside toilet at the back of the Pilot's Cottage. Because it is serviced by an unacceptable septic system and located within the new public area, the freestanding toilet will not be reinstated.

The Jerrinja Local Aboriginal Land Council has also indicated an interest in establishing a cultural centre/meeting place on the site and a continuing involvement with the site through various employment programs, interpretive activities and so on.

Any new building or facility or extensions to existing buildings or facilities will become the property of Council and will be subject to lease arrangements.

Actions

Use of Existing Facilities

- It is recommended that the Marine Rescue Association be given ongoing tenancy of the whole Pilot Cottage with a rationalised and reduced private open space area. The lease arrangement will be subject to a number of conditions:
 - That the cottage and associated buildings and landscape are managed and maintained in an appropriate manner which respects its heritage significance.
 - That the Association undertake ground maintenance of the maritime precinct, together with security and interpretation duties.
 - That no extension be permitted to the existing cottage.
 - That if vegetation is required to be cleared to maintain necessary view lines that it is undertaken according to strict guidelines prescribed in the lease.
 - That the existing timber shed be conserved and refurbished to house maritime oriented interpretive material and managed by the Association.
 - That the private yard be reconfigured to allow public access to the area between the cottage and the western edge of the Headland.
 - That a new freestanding garage/shed be permitted to be constructed on the condition that its siting does not detract from the main views to the cottage and that it is designed to be sympathetic in form, materials and colours to the Pilot's Cottage and the external timber shed. It should have a hipped or gable corrugated iron roof with weatherboard external cladding.
 - Any additional accommodation required by the Association must be clearly justified in regard to the marine rescue function of the Association. It must be located within a freestanding building separate from the Pilot's Cottage.
 - The design should reflect the architectural style, scale and materials of the cottage.

- It is recommended that the Culburra Beach Landcare/Dunecare Group be granted a lease of the large shed building and an external compound incorporating the existing timber shade house.
 - The size and configuration of the associated fenced compound will be reduced to a more manageable area with improved, more direct access arrangements.
 - That grant funds be sought to refurbish the building to make it more useable for the Group (improved lighting, additional external windows, an insulated ceiling, power and water and so on).
 - Urgent maintenance action should be undertaken to repair roof plumbing, external doors and windows.
 - The shed space will be divided into two rooms with the more northern section able to be used by the Group or other community organisations for meetings, training and educational functions. A permanent interpretive display illustrating nature conservation issues could be mounted in the meeting room.
 - A possible extension of the northern side of the shed could be undertaken to provide improved meeting/training facilities.
 - As a condition of lease the Group would be required to allow other community organisations access to the meeting room when appropriate and to become involved in an on site interpretive program focusing on the natural environment and bush regeneration.
 - It is not considered feasible to reinstate the freestanding toilet.

New Facilities

- It is recommended that a small multi purpose building be constructed within the proposed Aboriginal precinct (incorporating the bush tucker garden) for the local Aboriginal community as a meeting room, craft and cultural room. The building would be fully serviced but would utilise the community public toilets, located elsewhere on the site.
 - The building should be designed to reflect Aboriginal cultural values and would contrast in architectural style with the maritime structures on the site. Adjacent picnic shelter structures would pick up the same architectural theme. The building would need to be constructed so that it could be secured to prevent vandalism. It would be located discretely in a natural landscape setting adjacent to the new picnic area in the south-eastern corner of the site.
- It is recommended that a public toilet block be provided on the Reserve in a central location to the picnic area and other facilities. A site within the maritime precinct is proposed.
- It is recommended that the Pilot Cottage be connected to the sewerage to prevent unacceptable impacts caused by the existing septic tank effluent disposal trenches. The nature of the geological conditions prevents deep absorption of the effluent.
- The stormwater system from the Pilot Cottage should be reassessed to determine its impact. It currently discharges in to absorption trenches via an open drainage system. A water tank collection system may be more appropriate and would have appropriate heritage connations and provide an additional water source. A similar water tank system should also be introduced for the masonry shed.
- Grant funding for new facilities be sought.

7.8 Visual Amenity and Quality

Desired Outcome

To protect and enhance the visual qualities within the site and the scenic qualities of the Headland when seen from external view points.

Issues

- The peninsula area of the Headland does not present as attractive and inviting to all visitors. The natural areas appeared graded and poorly maintained.
- Some of the building structures on the peninsula area further detract from the visual quality of the Reserve.
- Consideration must be given to the visual impact of any new landscape or built form proposals for the Headland when viewed from vantage points outside the site.
- There is no coherent visual theme utilised in the Reserve in terms of signage, park furniture design, materials and colours.

Existing Situation and Discussion of Options

Much of the Reserve is currently visually unattractive. Bare compacted open areas and native vegetation overgrown with Kikuyu Grass reinforce an uncared for image. The unsealed section of the access road and carpark areas has been poorly maintained. Various log vehicle barriers, inappropriate paling fences and ugly shed structures further reinforce the current poor visual quality image.

As noted previously, native vegetation should be restored to all open areas not used for access, recreation or other activities.

There is an opportunity to utilise more formal landscape elements to reinforce the maritime character and image of the Pilot Station area as a contrast with the informal character of native vegetation elsewhere.

There is also an opportunity to modify existing unsympathetic structures such as the flat roofed concrete garage to improve its visual character and compatibility with the architectural qualities of the Pilot Cottage.

The hipped metal roof of the Pilot's Cottage is able to be seen from distant views of the Headland. It reinforces the historic maritime character of the site and is not considered visually discordant. It should be noted that the historic view of the site from photographic evidence was very different from the present situation. The Headland was largely cleared of vegetation and as a consequence the various cottages, lighthouse and other structures were much more visible.

Management Policy and Strategies

- Utilise landscape planting to improve the visual qualities of the Reserve.
- Generally native vegetation should be established by various bushland regeneration techniques to as close as possible resemble the original natural vegetation using locally occurring species.
- Utilise hardy, non invasive, exotic planting to establish a more formal landscape character around the "maritime" precinct (adjacent to the Pilot Station Cottage).
- Establish a consistent and coherent visual system to reinforce the character of the various precincts through the site using a standardised palette of colours and a limited range of materials and forms.
- Modify or remove discordant structures and buildings where possible to improve the visual quality of the Reserve.

Actions

- Revegetate bare roadside areas and generally landscape all areas of the site not specifically set aside for recreational and other activities in such a manner that the Reserve presents as a natural area. The access road should generally be contained by vegetation and open up in key areas to reveal special places and vistas such as the site of the first Pilot's Cottage, the sea view lookout and the maritime precinct.
- A limited area around the lighthouse will be opened up to provide a more appropriate setting for the building. Vegetation should only be removed to a limit of 5 metres from the building edge. Existing low growing species such as Spiney Headed Mat rush (*Lomandra longifolia*) within this area should not be removed.
- Establish a distinctive visual character for the maritime precinct. This character would feature:
 - Mown lawn areas with limited hardy exotic plant species such as Agapanthus (there are already Agapanthus on the site).
 - White painted post and rail and picket fencing in key locations around the Pilot Cottage (this fencing was previously utilised on site).
 - Vertical hardwood bollards allowing a natural weathered finish.
 - Structures such as picnic shelters with simple pyramidal roof forms (structure and roof finished in a light grey colour).
 - White or light grey colours or natural weathered hardwood utilising suitable maritime style detailing for bollards, interpretive signs and so on will be used.
 - Reconstruction of certain elements such as the signal mast, which was originally located adjacent to the Pilot Cottages, to aid interpretation and understanding of the former functions of the site.
 - Signage and external interpretive material will be made consistent throughout the site. The use of large hardwood timber sections rather than treated pine logs should be encouraged for signage structures, vehicular and pedestrian barriers etc. The existing timber log road edge barriers could be reworked and incorporated as a horizontal element between square hardwood timber bollards.

- As noted previously there are opportunities to modify the existing concrete block garage to make the external form more compatible with the desired character of the area and to make the building more functional. A new hipped corrugated iron roof could be relatively easily provided to the building together with additional timber windows and doors and so on. The nature of this intervention would need to be made clear. It should not be read as an original historic structure.
- Signage at the entrance of the Reserve.
- Signage will be, in general, compatible with current Shoalhaven City Council external signage standards.
- Consideration be given to the removal of the aerial powerlines in the Reserve by utilising underground reticulation if cost effective at the time of road construction.
- Remove unnecessary powerlines to lighthouse (now on solar power).

7.9 Interpretation, Education and Promotion

Desired Outcomes

- The establishment of an appropriate coordinated program to interpret the special natural qualities of the site for the local community, tourists, and for educational purposes.
- The provision of an appropriate level of promotion to target different user groups and their levels of interest and understanding.

Issues

- There is currently very limited interpretive material or signage on the site.
- The site provides a unique opportunity as a nature tourism site for occasional visitors and tourists and as an educational resource for the community.

Discussion of Issues and Options

The provision of interpretive information is an essential element of sustainable nature tourism. An understanding and appreciation of the special qualities of the Reserve will enhance the visitor experience. In addition an appropriate interpretive message can help safeguard the site by encouraging better visitor behaviour.

Lunnon (Nature Tourism 1997), states that:

"Interpretive information should be accurate, stimulating and multi faceted in order to appeal to all visitors (Natural Ecotourism Strategy). Information can be provided through a variety of means including brochures, trackhead signs, signs along tracks information shelters in picnic areas, staffed information centres with displays, videos etc and guided tours.

Involvement of the local Aboriginal communities in interpretation of Aboriginal culture through guided tours and talks is highly desirable and can provide commercial opportunities for communities and individuals. Aboriginal heritage should be presented in terms of landscapes and the whole range of cultural activities, and preferably through Aboriginal eyes."

This site provides significant nature tourism interest and resources for the visitor encompassing the natural environment, Aboriginal culture and maritime heritage. It is also uniquely placed to provide interpretation of each of these facets through the existing involvement on the site of the three key groups. Limited guided walks have already been undertaken by the local Aboriginal Community in conjunction with the Culburra Landcare/Dunecare Group. The Marine Rescue Association which currently occupies the Pilot Cottage also encourages visitors, and this group is well placed to become involved in maritime interpretive activities.

Policies/Strategies

- Encouragement and involvement of the Shoalhaven Marine Rescue Association, the local Aboriginal community through the Jerrinja local Aboriginal Council, and the Culburra Landcare/Dunecare Group is essential to any interpretive program for the site.
- Interpretation of Aboriginal historic and cultural sites shall only be undertaken after agreement and consultation with the local Aboriginal community. The Aboriginal community will also be involved in determining what can be interpreted.
- Interpretation of Aboriginal sites and culture by local Aboriginal people will be encouraged.
- Interpretation of nearby areas will be linked to the site to provide a wider context.
- This approach is relevant for natural history, geology, maritime history and Aboriginal history and culture. For example, the story of the nearby Roseby Park Aboriginal Reserve is fundamental to the understanding of the Aboriginal values of the Headland.
- Interpretive materials on site should utilise consistent display and graphic techniques. There should be limited external interpretive material together with other material located in various structures which would be opened as appropriate.

Actions

- Develop a cultural and natural heritage interpreted walk around the Headland.
- Develop and distribute a brochure in conjunction with key external interpretive signage.
- Mark and interpret the site of the original Pilot's Cottage and the historic Norfolk Island Pines.
- In conjunction with the Aboriginal community, provide appropriate interpretive material within the Aboriginal cultural precinct including information explaining the bush tucker garden (develop the bush tucker garden).
- Other interpretive sites for external signage will be developed at the lighthouse site, the new picnic area west of the Pilot Cottage and in conjunction with the two existing interpretive structures at the entrance to the Reserve and at the Pilot Cottage parking area. (A combination of maritime and natural history themes could be utilised at these sites.)
- Internal interpretive material could be provided at the lighthouse, the Pilot Cottage shed and within the meeting area of the masonry shed structure.

7.10 Administration and Site Management

Outcomes

- Ongoing Reserve management which protects and enhances the special values of the Crookhaven Headland.
- Resolution of the future arrangements for the use of certain facilities of the site by special community interest groups.
- Facilitation of the active involvement of the local community in supporting the Trustee in site management activities and the adoption of a close relationship with the Reserve through special community based projects.

Issues

- The importance of a strong local community involvement in the support of management actions in the Reserve.
- The opportunity to use "placemaking" activities to further community involvement and connection to the Headland.
- The opportunity provided by a continuous "live in" presence on the site to undertake certain interpretation maintenance and security related tasks.
- The need to confirm and establish future lease arrangements with special community interest groups (Shoalhaven Marine Rescue Association, Culburra Beach Landcare/Dunecare Group, the Jerrinja Local Aboriginal Land Council) together with a number of obligations placed on these groups in regard to site management and other issues.
- The need to formalise a licence agreement with the Office of Marine Safety & Ports Strategy for the channel leads and the early warning system.
- Improvement of site security arrangements and prevention of vandalism on the site.
- New user groups should not be precluded from negotiating leases/licences over the facilities on Crookhaven Headland, should the circumstances of existing user groups change.

Strategies

- Encourage and facilitate local community involvement in various projects on Crookhaven Headland.
- Establish clear responsibilities and obligations for groups holding leases for facilities on the Reserve in regard to site and building management and maintenance and interpretation.
- Examine all possible funding options, including special projects funding.
- Allow new user groups to negotiate leases/licences over facilities at Crookhaven Headland, should the circumstances of existing user groups change.

Actions

- Undertake submissions when appropriate for various special project funding arrangements.
- Include prioritised works in Shoalhaven City Council's Parks Construction Strategy over the next 3 to 5 years. Works to include construction, servicing and interpretation.

- Seek community sponsorship of small works projects and interpretive programs.
- Encourage government sponsored unemployment projects with particular respect to the local Aboriginal community.
- Complete formal licence agreement with the Office of Marine Safety & Ports Strategy for the channel leads and early warning system.
- Formalise lease and/or licence arrangements with the Shoalhaven Marine Rescue Association, Culburra Beach Landcare/Dunecare Group and the Jerrinja Local Aboriginal Land Council.

8. CONCEPT PLAN

(Refer Figure 7)

Figure 7 is a concept plan which illustrates the major changes proposed for the site and facilities to be provided under the Crookhaven Headland Plan of Management. Essentially the Concept Plan is a representation of the broad-scale physical strategies and actions of this Plan of Management.

Major physical elements of the Plan include:

- Revegetation of all non essential open areas, and planting of mature stock trees.
- Provision of additional picnic facilities (shade structures, BBQ facility, landscape shelter, playground equipment, better car access).
- Provision of a public toilet facility.
- Rationalisation of existing compounds servicing the Pilot Cottage and the Landcare/Dunecare Compound.
- Establishment of an Aboriginal precinct and associated cultural facility.
- Establishment of a maritime precinct centred on the Pilot Cottage.
- Further development of a cultural heritage walk with associated interpretive signage and facilities.
- Sealing and realignment of part of the access road to link with the new "sea view" parking.
- Improvements to existing parking areas (sealing, landscaping to reduce visual impacts).
- Provision of new parking areas to the Aboriginal precinct picnic area and sea view lookout area.
- Provision of a new shared pedestrian and cycle path to link key elements of the site and to connect to the existing Prince Edward Avenue cycleway.
- Provision of a coach turning loop and set down and parking areas.

Note that the design of all access roads and car parks is to take into account site specific groundwater and stormwater control requirements.

9. PLAN IMPLEMENTATION

Implementation of this Plan of Management will primarily rest with Shoalhaven City Council as Trustee of Crookhaven Park Reserve of which the Crookhaven Headland is a part.

Because the Reserve is small and a number of the issues are very specific the strategies and actions of the Plan are therefore quite detailed and prescriptive. Implementation of the Plan will be staged over a number of years as funds become available. A number of recommended actions require special consideration. These priority actions can be grouped into three categories:

- Actions that are required to be undertaken to address urgent maintenance or environmental issues on the site.
- Major works such as new roadworks and parking areas that need to be put in place before other dependant actions can be undertaken. The timing of these major works, however, will be constrained by funding availability.
- Administrative and management issues which need to be resolved quickly.

Priority Actions

Environmental/Cultural Heritage Issues

- Secure the lighthouse from illegal entry and clean site.
- Undertake urgent basic maintenance of the lighthouse.
- Secure and undertake basic maintenance of the timber shed and former explosives/flammable liquids store.
- Improve setting to the Pilot Cottage including reconfiguration of private open space yard, cleanup area around timber shed etc.
- Redefine and fence boundary to Landcare shed.
- Revegetate open degraded areas.
- The formal incorporation of the Lighthouse Reserve in the Plan of Management.
- Ongoing weed control and removal programs.
- Protection of remnant native vegetation and regeneration of revegetated areas.

Major Capital Works

- Build new access road and new spine road to picnic area and associated carparks.
- Modify existing carparks.
- Construct toilet block.
- Connect sewerage to the Pilot Station.
- Refurbish flat roofed shed.
- Design and construct Aboriginal meeting/craft building.
- Construct new pedestrian/cycle path.

Administrative and Management Issues

- Establish new lease arrangements for the Pilot Cottage and associated buildings and yards.
- Establish new management arrangements for the lighthouse and its reserve.
- Establish works program and budget for the Reserve.
- Examine opportunities for external funding via State and Federal Government grants.
- Actively seek grant funding.

Possible Sources of Special Funding

- Coastal Management Program and Public Reserves Management Fund, both sponsored by the Department of Land & Water Conservation.
- Coastcare.
- Natural Heritage Trust (Commonwealth Government).
- Various State and Federal Government employment programs.

Costing of Action Items

In relation to costing of action items it is difficult to provide meaningful costs due to the unknown time frames for implementation and in many cases the method of implementation adopted (ie whether volunteer labour is used or commercial rates apply). Large cost items would need to be placed into a detailed forward works or action plan and be programmed when funds become available. Other smaller more routine actions may be undertaken and funded as a component of normal maintenance budgets.

10. BIBLIOGRAPHY

A number of background papers, including some included in this bibliography, have been assembled and are available for viewing at the Nowra office of the Department of Land and Water Conservation and at the Nowra Office of Shoalhaven City Council.

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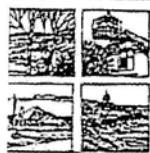
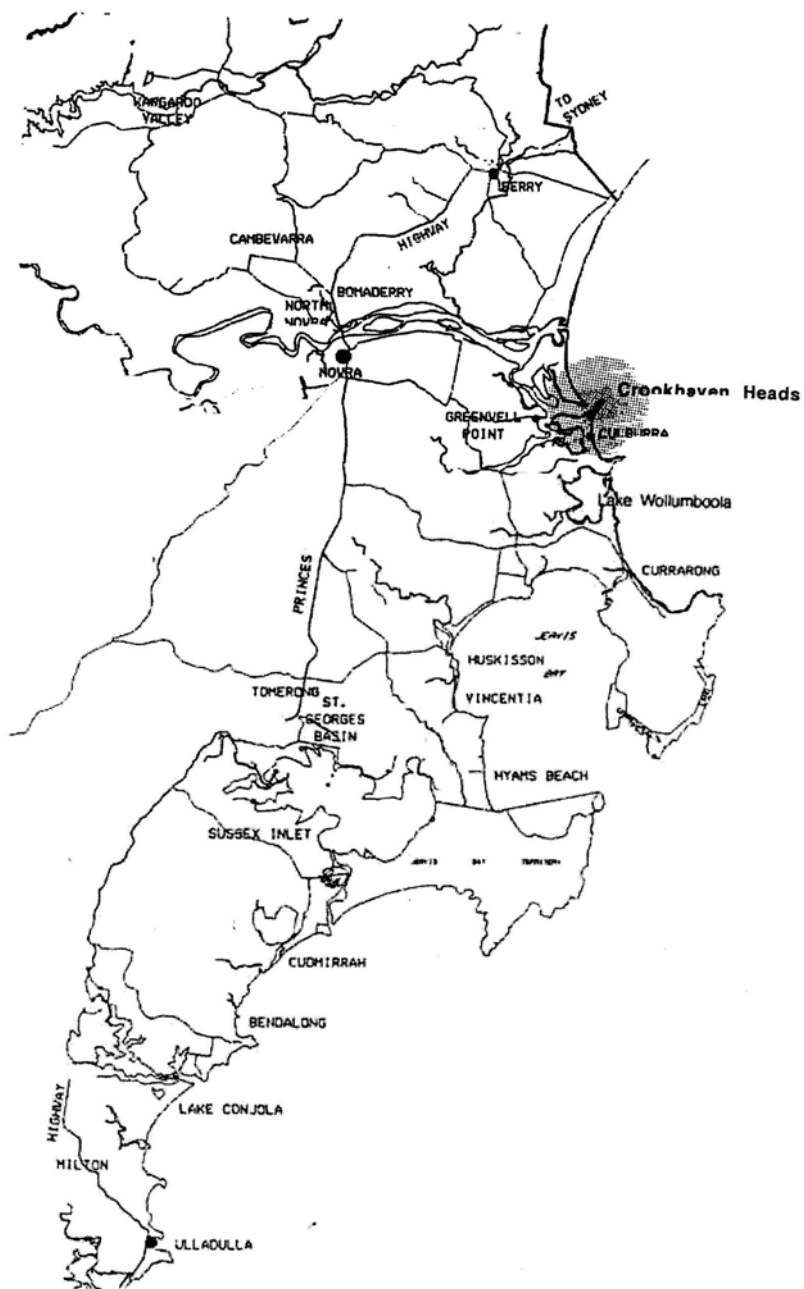
11. FIGURES

FIGURES

1. Location Plan (within Shoalhaven Local Government Area)
2. Planning Area - Local Area Context
3. Tenure and Land Use Zoning
4. Geomorphic Units and Geological Features
5. Vegetation and Weed Distribution
6. Existing Condition - Facilities and Development
7. Concept Plan

LIST OF RELEVANT DATES AND AMENDMENTS

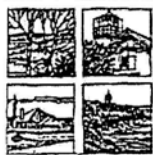
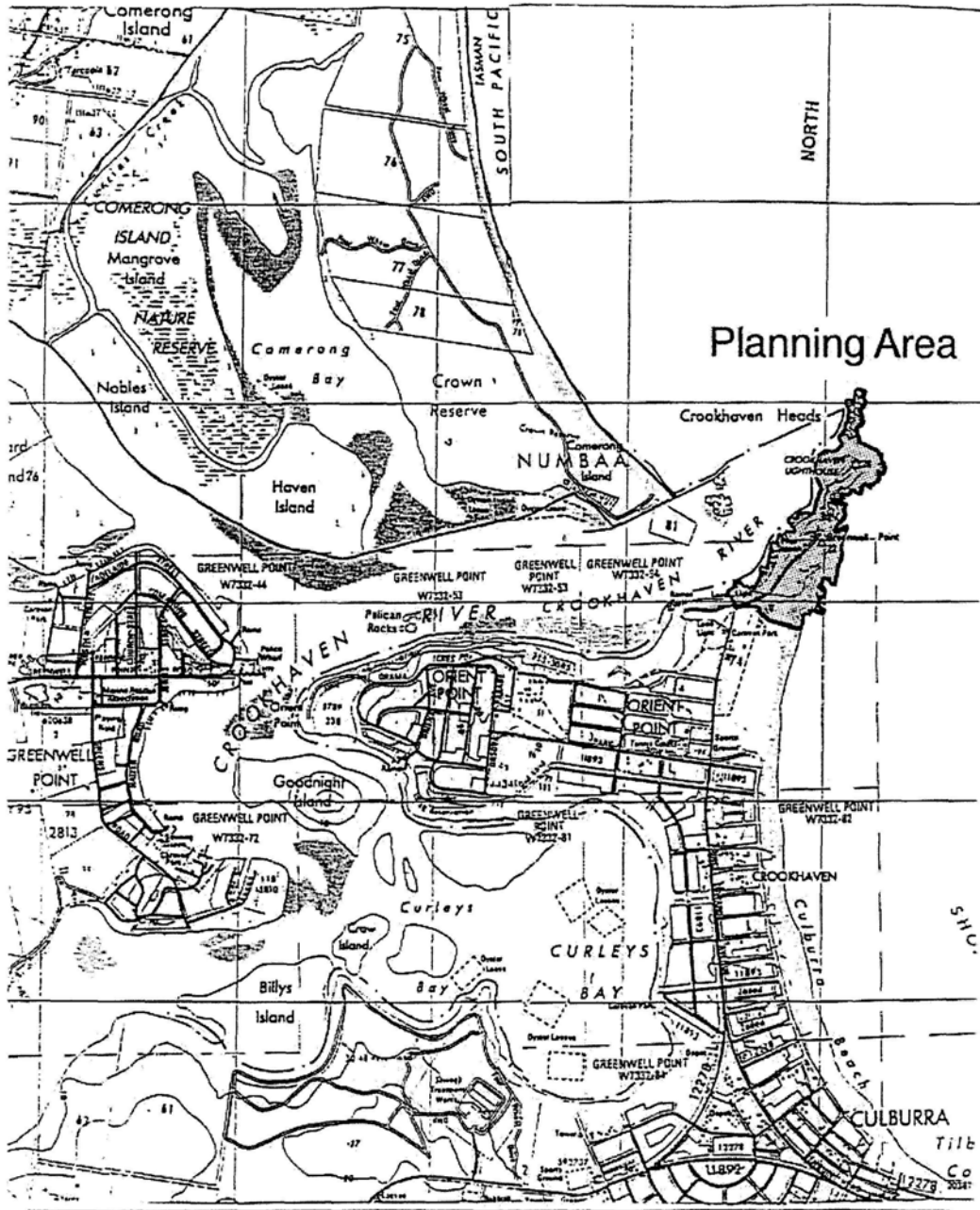
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Adopted Plan				12.01.2000
Amendments to Plan	29.11.05	29.03.2006-16.05.06	27.06.2006	22.09.2006



**CROOKHAVEN HEADLAND
PLAN OF MANAGEMENT**



Figure 1
Location Plan
Within Shoalhaven Local
Government Area.

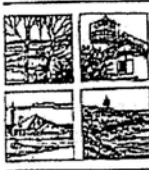
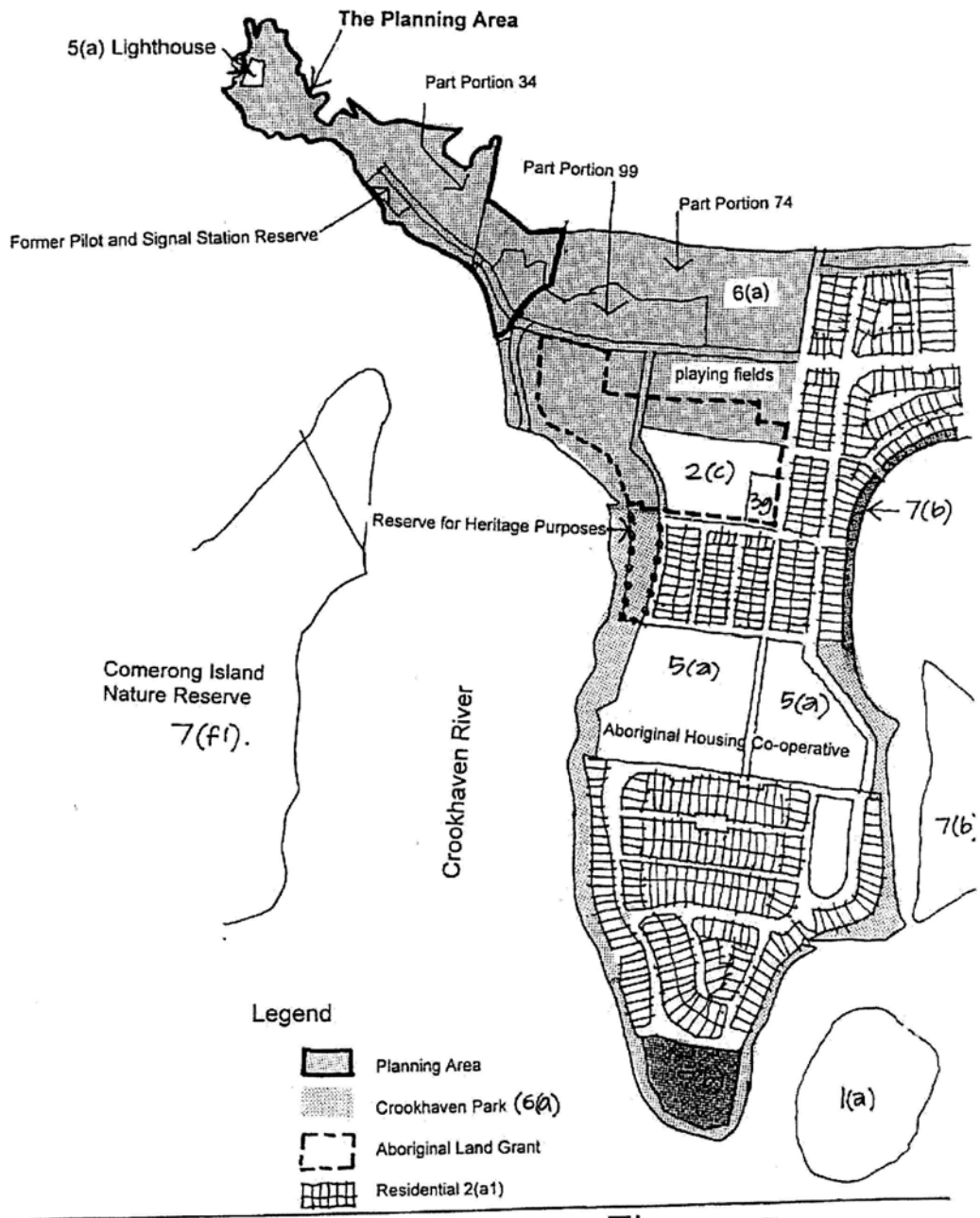


**CROOKHAVEN HEADLAND
PLAN OF MANAGEMENT**



Figure 2

**Planning Area
Local Area Context**

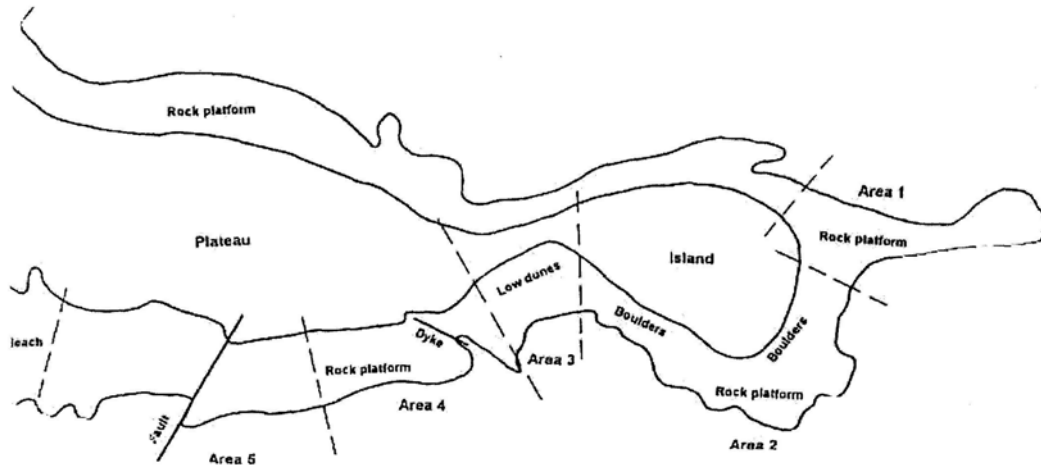


CROOKHAVEN HEADLAND
PLAN OF MANAGEMENT



Figure 3
Tenure and
Land Use Zoning

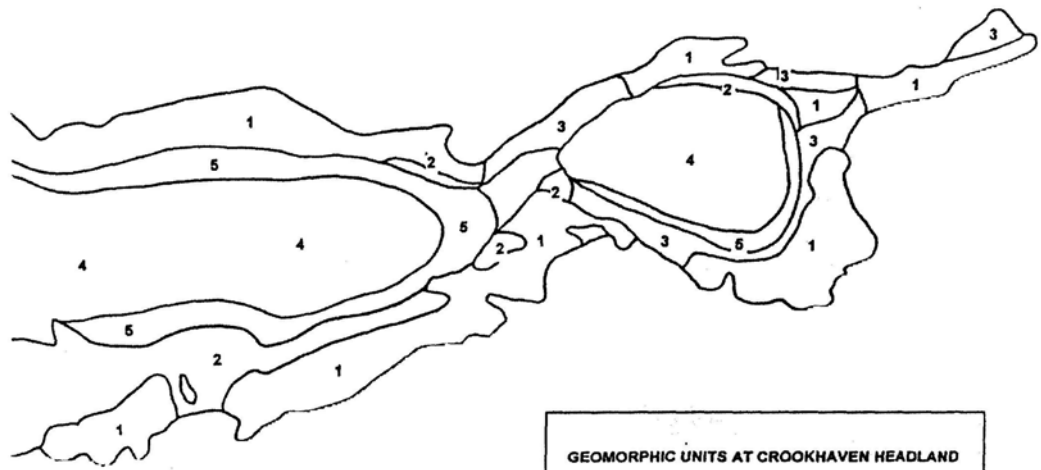




- Area 1: Alternating strata- sandstone & siltstone
Siltstone contains abundant bryozoan fossils.
- Area 2: Large circular structures in the rock platform
also strong rectilinear joint pattern evident.
- Area 3: Sandstone platform, eroded on eastern side
low sand dunes on the western side, waterhole.
- Area 4: Igneous dyke which intrudes sedimentary
strata. Presence of fossils in sandstone
& siltstone
- Area 5: Fault running north south through the
cliffs & rock platform.

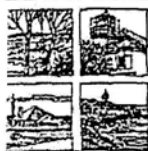
GEOLOGICAL FEATURES

Key	
1 -	Rock Platform
2 -	Sandy Beach
3 -	Boulder Field
4 -	Plateau
5 -	Steep slopes and cliffs



GEOMORPHIC UNITS AT CROOKHAVEN HEADLAND

Source: Mills K. *Report on Flora, Fauna & the Geological Landscape*. 1998.



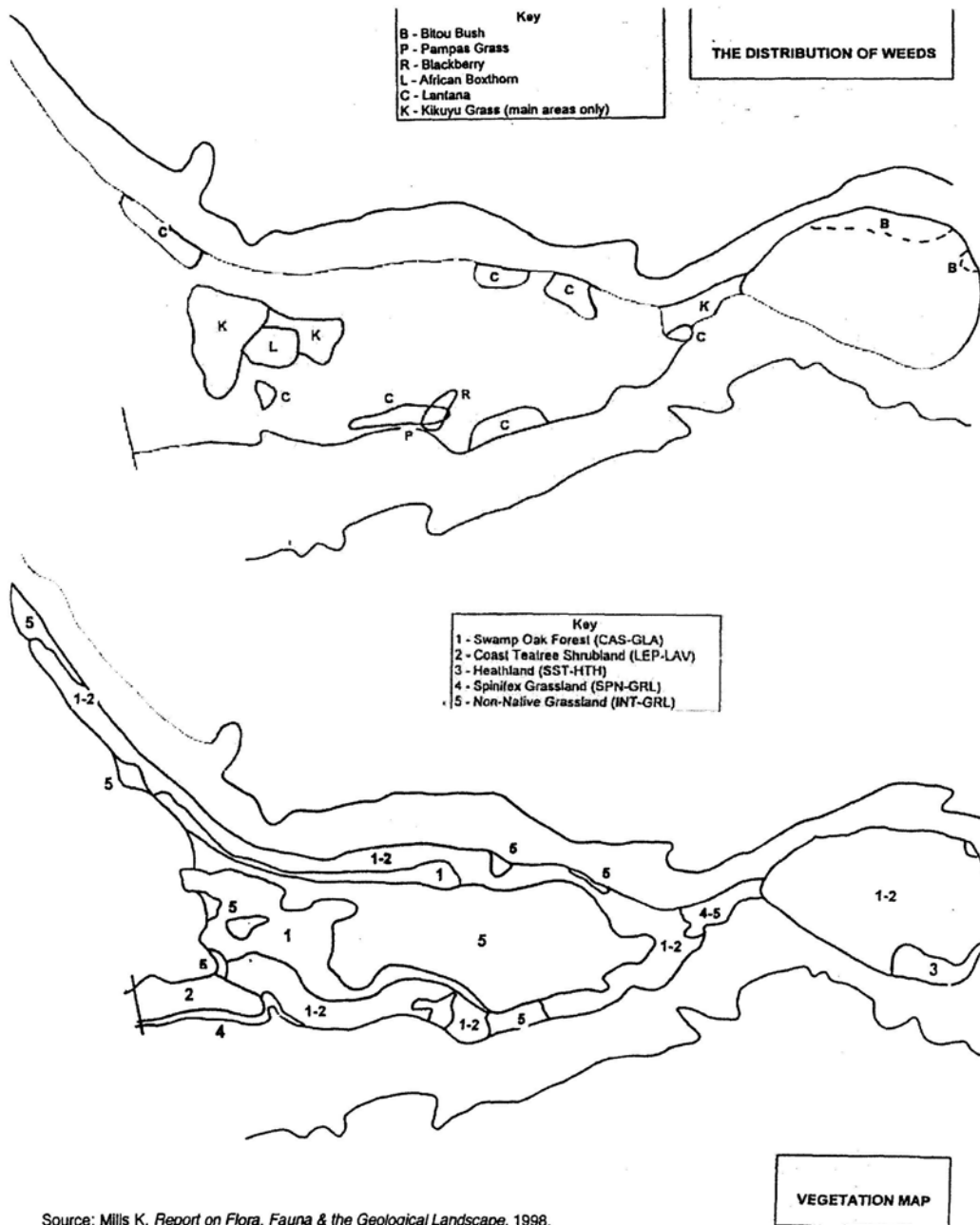
**CROOKHAVEN HEADLAND
PLAN OF MANAGEMENT**



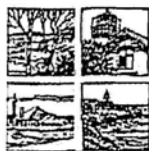
Figure 4

**Geomorphic Units
& Geological Features.**





Source: Mills K. Report on Flora, Fauna & the Geological Landscape. 1998.



**CROOKHAVEN HEADLAND
 PLAN OF MANAGEMENT**



Figure 5
 Vegetation &
 Weed Distribution.

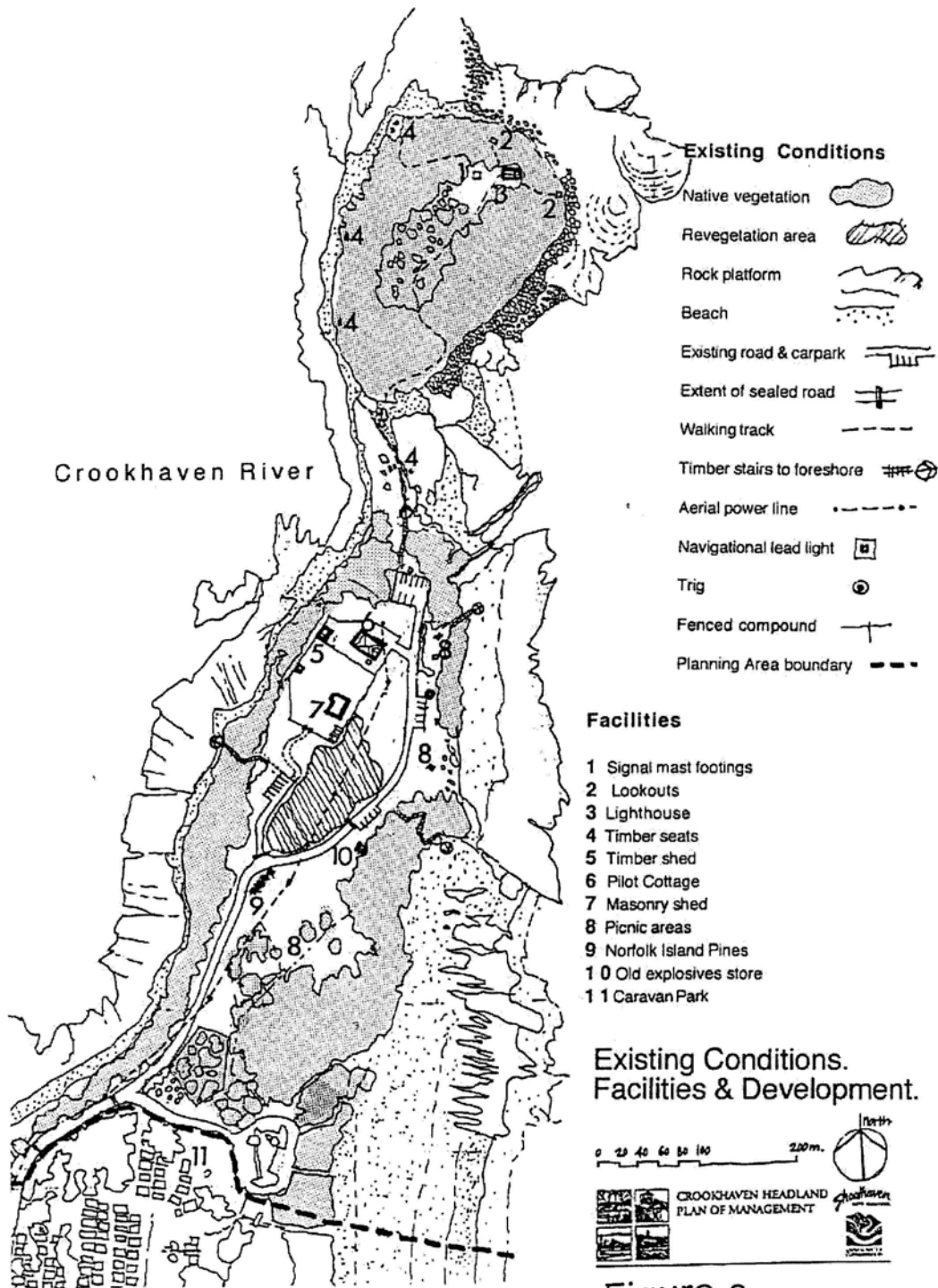


Figure 6

