

BOTANY BAY NATIONAL PARK
PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service
May 2002

This plan of management was adopted by the Minister for the Environment on 27th May 2002.

Cover photograph: View from the southern (Kurnell) headland of Botany Bay National Park looking towards the northern (La Perouse) headland, by Mike Cufer.

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FOREWORD

Botany Bay National Park is highly significant to all Australians because it includes the site of first contact in 1770 between indigenous Australians and the crew of Lieutenant James Cook's *Endeavour* and may be seen as a symbolic meeting place of cultures. It is also the place of last sighting of the French explorer Comte de Laperouse in 1788, the type locality for many of the plant species first collected by Banks and Solander, and contains an important samples of endangered ecological communities.

The park's scenic values have been recognised by the National Trust in classifying it as a landscape conservation area, and it contains a number of historic places of national significance. The remaining Aboriginal sites are important evidence of the long association of Aboriginal people with the area. Inherent in the landscape of Botany Bay National Park is the long history of changing ecosystems and developing cultures.

The role of Botany Bay National Park as a 'meeting place' is a central theme for the park. The park offers a unique opportunity to explore the history of meetings between indigenous and other cultures in Australia.

The plan provides for the protection, and where necessary rehabilitation, of the landscapes, ecosystems, vegetation communities, fauna and faunal habitats of the park. It also provides for the conservation of historic features and significant cultural landscapes.

This plan of management establishes the scheme of operations for Botany Bay National Park. In accordance with the provisions of Section 75 of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

BOB DEBUS
MINISTER FOR THE ENVIRONMENT

CONTENTS

	page
1. INTRODUCTION	1
2. NATIONAL PARKS IN NEW SOUTH WALES	2
2.1 DEFINITION	2
2.2 GENERAL OBJECTIVES FOR NATIONAL PARKS	2
3. BOTANY BAY NATIONAL PARK	3
3.1 LOCATION AND PARK HISTORY	3
3.2 IMPORTANCE OF BOTANY BAY NATIONAL PARK	3
3.3 SPECIFIC OBJECTIVES FOR BOTANY BAY NATIONAL PARK	6
4. POLICIES AND FRAMEWORK FOR MANAGEMENT	7
4.1 NATURAL HERITAGE	8
4.1.1 GEOLOGY, GEOMORPHOLOGY AND HYDROLOGY	8
4.1.2 FLORA AND VEGETATION COMMUNITIES	10
4.1.3 FAUNA	15
4.1.4 FIRE MANAGEMENT	16
4.2 CULTURAL HERITAGE	20
4.2.1 ABORIGINAL HERITAGE	20
4.2.2 EUROPEAN HERITAGE	22
4.2.3 SOCIAL VALUES	25
4.3 ACTIVITIES IN THE AREA	27
4.3.1 INTERPRETATION AND PROMOTION	27
4.3.2 EDUCATION AND RESEARCH	30
4.3.3 RECREATION	32
4.3.4 MANAGEMENT OPERATIONS	37
5. PLAN IMPLEMENTATION	41
5.1 IMPLEMENTATION SCHEDULE	41
5.2 PERFORMANCE MEASUREMENT	43
SELECTED REFERENCES	44
APPENDIX 4.1.2	45
APPENDIX 4.2.2	47
MAP OF BOTANY BAY NATIONAL PARK	Centre pages

1. INTRODUCTION

The National Parks and Wildlife Act 1974 requires that a plan of management be prepared for each national park. A plan of management is a legal document that outlines how the area will be managed in the years ahead.

The procedures for adoption of a plan of management are specified in the Act and involve five stages:

- the Director-General gives notice that a plan of management has been prepared;
- the plan is placed on public exhibition for at least one month and any person may comment on it;
- the plan and copies of all representations are referred to the National Parks and Wildlife Advisory Council for consideration;
- the Director-General submits the plan, together with the recommendations of the Advisory Council, to the Minister for the Environment; and
- the Minister may adopt the plan after considering the recommendations of the Advisory Council or may refer the plan back to the Director-General and Council for further consideration.

Once the Minister has adopted a plan, no operations may be undertaken within the Botany Bay National Park except in accordance with the plan.

This plan of management applies to lands reserved as Botany Bay National Park. In the event of other lands being added to the park, they will be managed in accordance with the objectives, policies and management strategies set out in this plan.

It should be noted that this plan of management replaces the earlier plans of management adopted for Captain Cooks Landing Place Historic Site in 1972 and for Bare Island Historic Site in 1975.

Additional information on Botany Bay National Park is available from the Discovery Centre in the park at Kurnell (phone 02 9668 9111) and the Laperouse Museum in the Cable Station at La Perouse (phone 02 9311 3379).

2. NATIONAL PARKS IN NEW SOUTH WALES

2.1. DEFINITION

The national park concept was introduced into Australia through the establishment of The National Park (later renamed Royal National Park) in 1879.

For the purposes of preparing plans of management, the NSW National Parks and Wildlife Service has adopted the International Union for the Conservation of Nature and Natural Resources – World Conservation Union categories which define a national park as:

“a natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area, and (c) provide a foundation for spiritual, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible” (IUCN, 1994).

2.2 GENERAL OBJECTIVES FOR NATIONAL PARKS

The following general objectives relate to the management of national parks in New South Wales:

- the protection and preservation of scenic and natural features;
- the conservation of wildlife;
- the maintenance of natural processes as far as is possible;
- the preservation of Aboriginal sites and places;
- the preservation of historic places, landscapes, objects and relics;
- the provision of appropriate recreation opportunities; and
- the encouragement of scientific and educational research into environmental features and processes, prehistoric and historic places and landscapes and park use patterns.

3. BOTANY BAY NATIONAL PARK

3.1 LOCATION AND PARK HISTORY

Botany Bay National Park covers approximately 492 hectares of the northern and southern headlands of the entrance to Botany Bay (see map, centre pages). It is located within the Sydney metropolitan area and is surrounded by residential areas, industrial areas and Crown lands. The park is close to a number of other metropolitan parks and reserves managed by the National Parks and Wildlife Service, and conservation reserves managed by local councils and other bodies. These include Royal National Park, Sydney Harbour National Park, Towra Point Nature Reserve, the Botany wetlands, Wolli Creek, and Firmstone Ponds/Barton Park Wetlands.

Botany Bay National Park was gazetted in 1988 but incorporates a number of areas which have been reserved for public use for much longer periods of time, including 100 hectares of land at Captain Cooks Landing Place which was first dedicated for public recreation in 1899.

3.2 IMPORTANCE OF BOTANY BAY NATIONAL PARK

Botany Bay National Park encompasses a diverse landscape containing rocky cliffs, beaches, natural vegetation communities, native fauna and flora, Aboriginal sites, historic places, cultural plantings and clearings, interpretive centres and recreational facilities. However, although Botany Bay National Park has an extraordinarily wide range of conservation values (see below), there is a set of 'core' values which make it a place of international conservation significance.

Core values of Botany Bay National Park

- The association with the European expeditions of exploration and settlement and the history of contact between indigenous Australians and Europeans.
- The symbolism which derives from these initial and later meetings between cultures and the potential to develop on the theme of the 'meeting place' to explore current social issues such as reconciliation.
- The scenic landscapes which define the entrance to Botany Bay.
- The retention of the largest remnants of the original vegetation communities of the Kurnell Peninsula and Eastern Suburbs, and accordingly an important sample of the landscapes, ecosystems and habitats of the Sydney coastline.

The two most prominent associations of the park with the history of European exploration were the landing of the British expedition of James Cook in 1770 at Kurnell and the visit to La Perouse by the French expedition led by Comte de Laperouse in 1788.

Botany Bay National Park was the site of some of the earliest contacts between Aboriginal people and Europeans. The initial contact between Cook's expedition and the local people was not auspicious, with at least one Aboriginal person being wounded by gunfire. The powerful symbolism of the Kurnell site, which derives from these early encounters, invites the use of the park as a venue for exploring recognition of indigenous peoples and culture and for reconciliation between cultures.

Botany Bay was the initial destination of the First Fleet in 1788. Although after inspection of Botany Bay it was decided to shift to Port Jackson, the initial intentions for British settlement were all founded on the premise that Botany Bay would be the settlement site.

Botany Bay National Park includes the two headlands of Botany Bay. The retention of natural vegetation and landform across the headlands of Botany Bay defines the character of the area for residents and international visitors alike. The park also plays a critical role in maintaining a network of conservation areas along the eastern coast of Australia. These coastal conservation areas act as repositories of habitat and as stepping stones for a wide range of native fauna.

The native vegetation protected in Botany Bay National Park is a remnant of the coastal vegetation, which once covered the coastline from Sydney Harbour to Port Hacking. Over 350 different plant species have been recorded in the park, including many rare species or species at the limit of their geographical distribution. It is the location where many Australian plants were first collected and described, including those collected by Banks and Solander in 1770, making it the type locality for these plants. This gives the area a very high scientific value. The continued protection of Botany Bay National Park is important to the maintenance of the natural biodiversity of the Sydney region.

In addition to the 'core' values identified above, there are broader ranges of values, which can be attributed to Botany Bay National Park. These are summarised below. The values are considered in more detail in the next chapter of the Plan of Management.

Social and historic values

- The park continues to provide a place of retreat and for passive commune with nature.
- Aboriginal people have a long association with the area known currently as Botany Bay National Park. Despite initial dispossession a vibrant Aboriginal community has persisted at La Perouse. A number of other Aboriginal communities have also maintained an association with the area. Specific cultural knowledge about the area is retained and safeguarded by members of the local Aboriginal communities.
- The park contains places of national historic significance, including the Cook and Laperouse monuments, Macquarie Watchtower, Cable Station and Bare Island.

- The park contains material evidence of Aboriginal occupation.
- The park contains a range of historical archaeological features such as cobblestone roads, foundations and cemeteries.

Natural heritage values

- Natural landscapes around the bay act as a visual counterpoint for the industrial and urban activity which dominates much of the bay's visual catchment.
- The park comprises a mosaic of cultural and natural landscapes which provide evidence of the influences of natural successional processes, Aboriginal occupation and the European settlement of the area.
- Cape Banks is an important site for examining the geological history of the Sydney Basin and has been listed by the Australian Heritage Commission and Geological Society of Australia as an important area for geological research and education.
- The native vegetation within the park is an important indicator of the species present in the area prior to European impacts.
- The park protects a number of rare or threatened plant species and vegetation communities of high scientific value including the largest remnant of the eastern suburbs Banksia scrub, possibly the most diminished plant community type in the Sydney basin.
- The park is part of the broader nature conservation system of Sydney and coastal NSW. This network of areas plays a key role in the maintenance of the state's biodiversity.
- The park is adjacent to areas dedicated as marine conservation areas and is therefore managed for conservation purposes across the intertidal zone.

Tourist and recreational values

- Kurnell has long been a significant national and international tourist destination as the 'birthplace of modern Australia' and as the historically recognised location of Cook's landing in Australia.
- La Perouse has a long history of recreation and tourist use, attracting people to its mix of Aboriginal culture and displays and long-running activities such as snake talks and more recently for visiting Bare Island and La Perouse Museum.
- The park is an important regional recreation resource for Sydney. It is also an important local recreational area for residents of neighbouring suburbs.

Interpretive, educational and research values

- Botany Bay National Park provides a range of opportunities for culture, celebration, nature and historic interpretation, education and research. There are two NPWS interpretative centres in the park (the Laperouse Museum and the Discovery Centre) and a Department of Education Field Studies Centre.
- Facilities at Kurnell assist in the interpretation and protection of natural and cultural heritage throughout Botany Bay, including the internationally significant Towra Point Nature Reserve.

3.3 SPECIFIC OBJECTIVES FOR BOTANY BAY NATIONAL PARK

The primary management objective for this Plan of Management is to protect, maintain and enhance the values identified in Botany Bay National Park. Special emphasis is given to the core values identified at the beginning of this section of the Plan of Management. This aim is met through adherence to the general objectives for national parks outlined in section 2.2. In addition, the following specific objectives of management for Botany Bay National Park can be identified:

- to make Botany Bay National Park a place of significance to all Australians and to contribute to their sense of identity as Australians;
- to develop the theme and symbolism of 'meeting place' between the land, the Aboriginal people and the people who have arrived in Australia since 1770;
- to provide a lasting venue for recognition and celebration of Australian culture, especially indigenous culture;
- to protect, and where necessary rehabilitate, the landscapes, ecosystems, vegetation communities, fauna and faunal habitats of the park;
- to conserve historic features and significant cultural landscapes;
- to promote an understanding and awareness of the natural and cultural heritage of the park through appropriate events, story telling, gatherings and celebration; and
- to recognise the relationship and dependence of protected areas to their surrounding landscapes and communities by promoting a cohesive and holistic approach to the management of the natural and cultural heritage of Botany Bay.

4. POLICIES AND FRAMEWORK FOR MANAGEMENT

This chapter contains the policies and framework for the management of the Botany Bay National Park together with relevant background information. Policies, management strategies and specific actions (see below) are discussed under the following section headings:

- 4.1 NATURAL HERITAGE
- 4.2 CULTURAL HERITAGE
- 4.3 ACTIVITIES IN THE AREA

It will be noted that some of the core values, specifically those which relate to social values, do not readily fall into the above categories. Nonetheless, the headings are useful as they define the main areas of specific management actions by the NPWS. The social values of Botany Bay National Park are considered under the heading 'Cultural Heritage'.

The policies established in this plan of management will provide the framework for future management and are consistent with anticipated resources available to the Service and anticipated community trends for the next five to ten years. This plan aims to consolidate the long-term objectives for sustainable management outcomes.

Where not specifically provided for in this plan of management, the management of Botany Bay National Park will be in accordance with the *National Parks and Wildlife Act 1974* and with general Service policies (NPWS 1988).

'Policies' are a statement of the overall objective for the management by NPWS of the various conservation values of Botany Bay National Park. The Policies in this document represent a refinement, in response to the specific threats and opportunities which occur at Botany Bay National Park, of the general NPWS policies on protection of natural and cultural heritage.

'Management Strategies' are the strategies that will ensure that the overall management objectives are met. It is recognised that there are many potential ways of meeting the demands of a given policy; the nominated Management Strategies are those which are considered most likely to be successful at Botany Bay National Park.

'Actions' are the practical translation of management strategies into 'on the ground' works.

4.1 NATURAL HERITAGE

4.1.1 GEOLOGY, GEOMORPHOLOGY AND HYDROLOGY

Description of values

The overall landscape value of Botany Bay National Park has been recognised by the National Trust, through its listing of the scenic entrance to Botany Bay as the Botany Bay Entrance Landscape Conservation Area.

The geology of Botany Bay National Park is dominated by Hawkesbury sandstone laid down during the Triassic period. Exposed sandstone cliffs occur on each headland of Botany Bay reaching up to 40 metres above sea level. During the early Tertiary period ten basalt dykes intruded into the sedimentary rocks within the park, but since then the basalt has been eroded leaving narrow gorges in the sandstone cliffs. Four of these gorges are close to the northern boundary of the La Perouse section of the park, and six near Yena and Tabbigai in the Kurnell section.

Cape Banks, the northern headland of Botany Bay, is listed on the Register of the National Estate for its exceptionally fine stratification of the Hawkesbury sandstone. This type of sedimentary structure is considered by the Geological Society of Australia to be crucial to an understanding of the deposition of this formation, and as such an important site for research and educational purposes.

The major feature of the geomorphology of the park is widespread aeolian and alluvial sands. White Pleistocene aeolian sands and alluvial deposits overlay the sandstone in most of the park (although not the La Perouse headland itself or Bare Island), while younger yellow Holocene dunes are found nearer the current coastline. The sands range in depth from a thin veneer in the east to 20 metres on the higher areas of the park.

Large areas of aeolian dune sands and alluvial deposits are also found at the southern end of the Kurnell section of the park near Potter Point. These have been deposited as parabolic dunes with a generally north-south orientation and are part of the Botany sandbeds, which contain a large unconfined aquifer.

The hydrological characteristics of the park include numerous sources of freshwater. The La Perouse section of the park has a number of intermittent streams that flow into the park and into Congwong and Little Congwong Bays. Springs with a permanent flow of water occur at the bottom of the gully lines. The swales between the dunes carry surface water during wetter periods.

Several freshwater springs occur on the margins of the aquifer on the Kurnell side of the park, supporting a number of wetland areas. Many intermittent streams are also present in the Kurnell section of the park. In addition, a small permanent stream rises near the Discovery Centre and flows into Botany Bay adjacent to the Alpha Farmhouse. This stream provided fresh water for indigenous people and the crew of the Endeavour.

Threats

Geological formations in the park appear to be relatively stable. The principal impacts are natural erosion regimes. However, this is not the case for the geomorphology of the park. Soil landscapes have been subject to severe and large-scale erosion in a number of areas. In particular, the sands in the dunefields are extremely susceptible to erosion where the vegetation has been removed. This is partly the result of the low nutrient status of the sand beds, which inhibits re-establishment of vegetation on eroded sections.

In the area behind Congwong Bay, where sand was excavated in the early 1950s for the construction of Sydney Airport, and north east of the cemetery there are severe blowouts in the dunes. Smaller blowouts and gully erosion occurs where tracks cross the dunes.

Botany Cone, which is the largest of the dunes in the park and one of the largest coastal dunes remaining in Sydney, has been severely damaged by four wheel drive, motor bike and horse activity. The largest eroded area in the park is a major blowout in excess of 25 hectares in area that is located immediately east of Potter Point in the Kurnell section. The head of this blowout was been the subject of extensive stabilisation works in the late 1980s. This appears to have halted further expansion into the dune field, although it has not resulted in rehabilitation of the areas already affected.

The main impacts on the hydrology of the park have been associated with the clearance of stream catchments and landscape erosion processes. Wetlands adjacent to an unformed road at Potter Point are subject to sedimentation from road runoff. The stream adjacent to Alpha house has been substantially modified, including the construction of a small dam near it mouth.

Policies

- Maintain the integrity of the geological, geomorphological and hydrological values of Botany Bay National Park by minimising sources of erosion and disruption to hydrological regimes and by undertaking rehabilitation programs where these are necessary to re-establish natural processes and regimes.

Management Strategies

- No developments will be undertaken which are likely to impair the inherent scenic qualities or the natural landscape of the park when viewed from either the land or the water.
- All works carried out in the park will incorporate best practice soil erosion, sediment control and revegetation measures.
- Existing areas of erosion, sedimentation and disruption to natural hydrological regimes will be formally assessed to document appropriate remediation techniques and to establish priorities for works. Existing priority areas include the sand mine sites at Congwong Bay, the blowouts north east of the cemetery,

Botany Cone, the Potter Point access track and the blowouts between Potter Point and Tabbigai.

- Future works will employ high infiltration surface drainage where possible for water management.
- Public vehicle access will be restricted to public roads and carparks. The use of Service vehicles along the management track network will be minimised.
- NPWS will liaise with neighbours, industry, local government, the Roads and Traffic Authority and Department of Land and Water Conservation to seek to ensure that best practice is adopted for water management around the periphery of Botany Bay National Park.

Actions

- Points where illegal access is gained will be identified and mapped.
- Points where illegal access is gained will be barricaded or closed by fencing, earthworks and plantings.
- Tracks that are excess to management requirements will be identified, mapped and revegetated.
- A works program will be established for the sites identified as requiring remediation and rehabilitation. This will include actions to:
 - Restore the hydrology of the stream where freshwater was collected by Cook's expedition by revegetation of the catchment and re-establishment of water flows into the catchment.
 - Improve the quality of water coming off the Potter Point access track by containment of the width of the track, water management and aggressive revegetation.
 - Re- route and stabilise the walking track through the previously mined area behind Congwong Bay.
 - Continue the rehabilitation work at the Congwong Bay sand mine site and close eroded tracks to Browns Rock and Little Congwong.
 - Stabilise and rehabilitate blowouts on the coast north east of the cemetery.

4.1.2 FLORA AND VEGETATION COMMUNITIES

Description of values

The vegetation communities of Botany Bay National Park have not been systematically surveyed and mapped. However, there is sufficient information available to provide an overview of the floristic values of the park.

There are significant differences in the vegetation found on the two headlands that comprise the park as a result of their separate and differences in underlying soils. The vegetation of the La Perouse section of the park is very diverse, with over 350 species recorded. It is representative of the vegetation which was once common throughout the Eastern Suburbs of Sydney but has now largely disappeared (except for Malabar Headland).

Most of the La Perouse section of the park consists of heath communities dominated by heath banksia (*Banksia ericifolia*), prickly tea tree (*Leptospermum juniperinum*), *Kunzea ambigua* and a paperbark *Melaleuca nodosa*. On the higher western sections of this part of the park are dense thickets of coastal tea tree (*Leptospermum laevigatum*) and an open scrub dominated by coast banksia (*Banksia integrifolia*) and bangalay (*Eucalyptus botryoides*). A low closed forest dominated by smooth-barked apple (*Angophora costata*) is found in the sheltered valleys in the sand dunes, particularly behind Little Congwong Bay. The variety of vegetation found in the area is of high educational and scientific value.

The heath around Henry Head, the wet heath between Henry Head and Cape Banks, and the closed forest at the head of Happy Valley are considered to be of most importance due to the rarity of this type of vegetation in the area.

The La Perouse section of Botany Bay National Park includes a number of sites which are classified as Eastern Suburbs Banksia Scrub (ESBS), a community which has been declared an endangered ecological community under the *Threatened Species Conservation Act 1995* and the *Endangered Species Protection Act 1992*. Details on the composition and distribution of ESBS are provided in Appendix 4.1.2.

Land in Jennifer Street has recently been added to the park. This small area contains over 140 species and a large number of rare plants including *Aristida ramosa*, *Gonocarpus salsoloides*, *Darwinia leptantha*, *Rulingia hermanniifolia*, *Asplenium obtusatum* var. *difforme*, *Plinthanthesis paradoxa*, *Platysace lanceolata*, *Eriocaulon scariosum*, *Oxylobium cordifolium*, *Callistemon pinifolius*, *Melaleuca squamea* and two uncommon perennial herbs. It is the most southern occurrence of *Banksia aemula*. This is the only place where the full diversity of Eastern Suburbs Banksia Scrub, which once grew on the deep sand sheet covering much of the Eastern Suburbs of Sydney, can still be seen. The area also includes several small freshwater swamps which are also listed as an endangered community under the Threatened Species Conservation Act (see Sydney Freshwater Wetlands in Appendix 4.1.2).

The vegetation in the Kurnell section of the park has historical importance, as it is here that the botanists Banks and Solander made their first observations and collections during the Cook expedition of 1770. Despite extensive clearing this century of the area visited by Banks and Solander, a few bangalays (*Eucalyptus botryoides*) survive as remnants of the original woodland, and small groves of swamp oak (*Casuarina glauca*), cabbage tree palms (*Livistona australis*) and broad-leaved paperbark (*Melaleuca quinquenervia*) still grow along the creeks.

Most of the southern section of the park consists of extensive areas of low to medium heath dominated by old man banksia (*Banksia serrata*), she oak

(*Allocasuarina distyla*) and a grass tree (*Xanthorrhoea resinosa*). Near Inscription Point are dense thickets of the fine-leaved paperbark (*Melaleuca armillaris*). Swamps occur in small pockets and support wetland associations dominated by *Gahnia sieberana*/*Scirpus littoralis* with lemon-scented bottlebrush (*Callistemon citrinus*), *Banksia robur* and heath banksia (*B. ericifolia*). These are now rare in the Sydney region and consequently listed as an endangered ecological community under the Threatened Species Conservation Act (refer Sydney Coastal Estuary Swamp Forest Complex in Appendix 4.1.2). Where aeolian dunes cover the sandstone there is an endangered community of low scrub including old man banksia, coast banksia (*B. integrifolia*) and coast tea tree (*Leptospermum laevigatum*) (refer Kurnell Dune Community in Appendix 4.1.2), while the endangered Sydney Freshwater Wetlands (refer Appendix 2.1.4) are found in swales and depressions in the sand dunes. In the northern area of the Kurnell section of the park is a sclerophyll woodland characterised by eucalypt, acacia and casuarina species, while small pockets of an endangered remnant wet forest (Sutherland Shire Littoral Rainforest, refer Appendix 4.1.2) are found in the swamps and wet gullies.

The broad-leaved paperbark (*Melaleuca quinquenervia*) is believed to reach its southern-most limit in the Kurnell section of the park. The southern area of the Kurnell section also contains a number of rare and threatened plants, including *Syzygium paniculatum*, *Rulingia hermanniifolia*, and the orchid *Pterostylis* sp. aff. *plumosa*. Other rare orchids may also be present. Most of these plants are located in the section of the park between the Reservoir and Tabbigai.

Threats

The modern use and disturbance of the land which is now Botany Bay National Park for activities such as recreation, military uses, sand mining and rubbish dumping has resulted in the invasion of noxious weeds and other introduced plants into parts of the park, particularly in the La Perouse-Cape Banks area. Bitou bush (*Chrysanthemoides monilifera*) is the largest problem and has established a monoculture in the Cape Banks area. It is also spreading into the southern section of the park near Potter Point from neighbouring lands. The bitou tip moth (*Comostolopsis germania*) and the bitou tortoise beetle (*Cassida* sp.) have been released in the park and appear to be having some success in controlling the spread of bitou bush. Aerial spraying of bitou bush was undertaken in winter 1996 and 1997 and initial results of this technique are promising.

Other plants of concern in the park are pampas grass (*Cortaderia selloana*), asparagus fern (*Asparagus sprengeri*), ludwigia (*Ludwigia peruviana*), blackberry (*Rubus fruticosus*), alligator weed (*Alternanthera philoxeroides*), lantana (*Lantana camara*), prickly pear (*Opuntia stricta*), blackberry (*Rubus fruticosus*), castor oil plant (*Ricinus communis*), pellitory (*Parietaria judaica*), buffalo grass (*Stenotaphrum secundatum*) and coral trees (*Erythrina syksii*). Alligator weed, ludwigia, lantana, blackberry, pellitory, castor oil plant and pampas grass are declared noxious weeds in the Sydney Metropolitan Area and the Service is responsible under the Noxious Weeds Act 1993 to prevent the spread of these weeds to adjoining land. Bitou bush has been declared a noxious weed in the Randwick Local Government Area and has been nominated as a key threatening process under the Threatened Species Conservation Act. Many of the weeds

found on the park have spread from garden cuttings deposited on the park or on adjoining Crown Land. One area of Crown Land uphill of Happy Valley at La Perouse is of particular concern as water run-off from this area continually brings weeds into the park.

A weed control and revegetation plan is required for both sections of the park. Priority will be given in the La Perouse section of the park to restoration of the native heath around Henry Head, the wet heath between Henry Head and Cape Banks, the closed canopy vegetation at the head of Happy Valley, the vegetation along the western side of Anzac Parade, and Jennifer Street. Volunteers and contractors are already involved in weed control and revegetation works in this area. In the Kurnell section of the park priority will be given to protection of the heath south of the Reservoir, restoration of the native vegetation in the Potter Point area, the progressive replacement of road edge fencing by plantings of indigenous native plants, and revegetation to indigenous species in degraded areas and where bitou bush, asparagus fern, lantana and pampas grass are removed. Revegetation programs must be planned and must not compromise the integrity of adjacent vegetation communities.

Pathogens have the potential to severely impact on native species. The most likely vectors for pathogens are from illegal dumping of garden waste. Another potential threat is nutrification. Garden waste is a source of excess nutrients, however the most significant sources are water borne pollutants, including fertilisers.

Landscape instability, erosion, hydrological changes and inappropriate fire regimes all have an impact on vegetation however they are considered elsewhere in this document.

Policies

- Enhance the long-term viability of the indigenous vegetation communities and flora species of Botany Bay National Park by controlling the key threatening process of weed invasion and through revegetation by local genetic stock of degraded areas.
- Improve knowledge of the flora and vegetation communities of the park to provide a baseline measure of biodiversity that allows the effectiveness of management to be assessed and species specific programs to be developed.
- Maintain the genetic integrity of flora species in the park, particularly those species for which the park is the type location.
- Specific management programs that address threatened species, endangered populations or endangered communities will be derived from relevant Recovery Plans to effectively implement species and community recovery plans.
- The Service will seek the addition of lands of high conservation value to the national park.

Management Strategies

- Targets for revegetation and weed control will be set in annual programs.
- Protection of endangered ecological communities will be a priority for weed management in Botany Bay National Park.
- No activities will be approved which significantly impact on any threatened species or endangered ecological communities in the park.
- Revegetation programs will use only native species that naturally occur in the local area. All seed stock will be sourced from the park and taken from sources as close as possible to planting sites.
- Records will be maintained of the species and provenance of all genetic material used in revegetation programs.
- Introduced plants that are not of historic importance will be controlled and where appropriate eliminated. Future ceremonial plantings will be limited to indigenous species.
- The co-operation of neighbouring landowners and Councils will be sought for the implementation of effective weed control programs.
- Existing volunteer weed control and revegetation programs will continue to be supported and the NPWS will facilitate the development of additional programs where the community expresses an interest in active participation.
- Educational programs will be developed to inform neighbours of the ramifications of failure to control weeds and dumping refuse on the park and other public lands.

Actions

- A vegetation community and age class map will be prepared for the park.
- A weed control plan will be prepared for the Kurnell section of the park. Priority for the control of introduced plants will be given to those which:
 - are declared noxious under the Noxious Weeds Act;
 - pose an imminent threat to rare plants;
 - are new or isolated occurrences;
 - have a high capacity for dispersal or spread; and
 - are in areas of high public use.
- A revegetation plan will be prepared for both sections of the park. These plans will provide maps of the distribution of vegetation communities and significant species. They will identify priority areas for revegetation. Existing priorities include Henry Head, between Henry Head and Cape Banks, in Happy Valley,

along Anzac Parade, Jennifer Street, on the edges of roads and grassed areas, the Botany Cone and other eroded dune areas at Kurnell.

- Pending preparation of the weed control plans, priority will be given to the removal of bitou bush, pampas grass and coral trees and additionally to ludwigia and alligator weed in the La Perouse section, and asparagus fern and lantana from the Kurnell section of the park.
- Discussions will be held with the Department of Land and Water Conservation and Randwick City Council with a view to establishing co-operative arrangements to removing weeds, particularly ludwigia and blackberry, from the adjoining Crown Land uphill of Happy Valley and maintaining a weed free environment.
- Discussions will be undertaken with the NSW Golf Club regarding the management of the joint park/golf club boundary to ensure that any development or activities do not adversely affect the national park and the endangered Eastern Suburbs Banksia Scrub.

4.1.3 FAUNA

Description of values

Botany Bay National Park has not been subject to a systematic fauna survey. Consequently, there is potential for a greater range of fauna species than currently known. This applies particularly to herpetofauna (amphibians and reptiles) and microceropteran (insectivorous) bats, two groups that require relatively specialised survey techniques for detection.

Notwithstanding the above, native animals which are known to be present include brush-tailed possums (*Trichosurus vulpecula*), ringtail possums, (*Pseudocheirus peregrinus*), grey-headed flying foxes (*Pteropus poliocephalus*), eastern brown snakes (*Pseudonaja textilis*) and red-bellied black snakes (*Pseudechis porphyriacus*). Bent-wing bats (*Miniopterus schreibersii*) roost in one of the tunnels at Henry Head, and echidnas (*Tachyglossus aculeatus*) have been sighted in the La Perouse section of the park. The eastern long-necked tortoise (*Chelodina longicollis*) and the threatened green and golden bell frog (*Litoria aurea*) have been recorded in the Kurnell section of the park. The threatened tinkling froglet (*Crinia tinnula*), is found at several places in the Kurnell section.

Over 70 native bird species have been recorded in the La Perouse section of the park and 96 species have been recorded in the Kurnell section. They include several species listed under the Japan-Australia Migratory Birds Agreement (JAMBA). Species of state, regional or local significance include Japanese snipe (*Gallinago hardwickii*), whimbrel (*Numenius phaeopus*), artic jaeger (*Stercorarius parasiticus*), red-necked stint (*Calidris ruficollis*), common eastern tern (*Sterna hirusdo*), peregrine falcon (*Falco peregrinus*), the threatened powerful owl (*Ninox strenua*), Australian pipit (*Anthus novaeseelandiae*), superb fairy wren (*Malurus cyaneus*), silvereye (*Zosterops lateralis*), red-browed finch (*Neochmia temporalis*)

and New Holland honeyeater (*Phylidonyris novaehollandiae*). Unusual species for the area are the variegated fairy-wren (*Malurus lamberti*) and golden-headed cisticola (*Cisticola exilis*).

Botany Bay National Park adjoins a number of highly significant intertidal and aquatic habitats. The park adjoins the particularly important marine habitat of Crowea Bay at La Perouse that has been the site of a Sydney University School of Biological Sciences research area for many years. This area supports an unusually high number of species, in particular shellfish and octopus. Signs have been erected by the university on the rocks near the Bay to draw attention to the importance of the area. The intertidal zone from the Cook Monument around Inscription Point and from Potter Point to Merries Reef and the section from Cape Banks to the Endeavour light are classified as Intertidal Protected Areas.

Threats

Introduced animals are a major concern as they cause damage to the native vegetation, disturb and kill wildlife, are a vector for disease transmission to native species, and pose a danger to people in the park. Non-native animals found in the park include rabbits, cats, foxes, pigs and dogs.

Dogs and rabbits are of greatest concern at La Perouse, while cats, domestic dogs and foxes are the major problem in the Kurnell section of the park. The NSW Golf Club that adjoins the northern part of the park undertakes rabbit control on its land. Trapping of cats and baiting of foxes is undertaken periodically in the park.

Policies

- Enhance the long-term viability of the endemic fauna populations of Botany Bay National Park by controlling the key threatening processes of predation and competition by feral fauna species.
- Improve knowledge of the vertebrate and invertebrate fauna of the park to provide a baseline measure of biodiversity, which allows the effectiveness of management to be assessed and species specific programs to be developed.
- Specific management programs that address regionally significant and threatened species, endangered populations or endangered communities will be derived from relevant Recovery Plans.

Management Strategies

- On the basis of the biodiversity assessment key fauna habitats within Botany Bay National Park will be identified. Specific threats will be identified and ameliorative strategies devised.
- A monitoring program will be established to determine annual variation and long term trends in the biodiversity status of the park.
- The NPWS will liaise with NSW Fisheries over the management of the intertidal areas of Botany Bay National Park. The NPWS will seek authorisation of

appropriate staff under the Fisheries Management Act to enforce the regulations relating to the Intertidal Protected Areas.

- Dogs, cats, horses or other introduced animals will not be permitted in the park with the exception of registered guide dogs in areas where public access is provided.
- A vertebrate pest species plan will be produced to identify priorities for control and to nominate control techniques. Priority will be given to the control of dogs, rabbits, cats and foxes.

Actions

- Vertebrate pest control plans will be implemented for each section of the park. The plans will identify annual control targets.
- Co-operative programs will be established with neighbours to control dogs in the La Perouse section.

4.1.4 FIRE

Fire history

Fire has been an important factor influencing the environment of Botany Bay National Park for many thousands of years. It is possible that Aboriginal burning practices were a major factor in producing the open tussock grass and forest landscape which inspired Cook's comments in his journal:

“The woods are free from underwood of every kind, and the trees are at such a distance from another that the whole Country ... might be Cultivated without being obliged to cut down a single tree.”

Banks also regarded the land as arable and that Botany Bay would be a suitable place for a colony.

The National Parks and Wildlife Service regards periodic fire as a natural phenomenon in many Australian landscapes. It is one of the established physical factors of the Australian environment to which many native plant and animal communities have adapted. The proper management of fire is essential to avoid the extinction of native plant and animal species while protecting people and their property and non-fire adapted vegetation communities.

Contemporary ecological research undertaken in Royal National Park, which has areas with similar vegetation, climate and geomorphological conditions to Botany Bay National Park, has established that:

- fire should be excluded from rainforest communities because of the adverse long term impacts on species composition;

- loss of woody plants may occur within open forest or woodland communities where the frequency of fire exceeds 2 fires in quick succession within a period of 5 years, or is less than 1 fire every 30 years;
- loss of woody plants will occur in wet and dry heath if the frequency of fires exceeds 2 fires in quick succession within a period of 8 years; 3 fires in quick succession within a period of 15-30 years; or if there are no fires within 30 years. Similar fire responses occur in swamp and sedgeland communities.

A detailed fire history has not yet been developed for Botany Bay National Park. The park is subject to periodic wildfires, however these have generally been contained in relatively small sections of the park. As a result, the park exhibits a complex mosaic of vegetation age classes. The general trend would appear to be that fires move from the northern sections of the park in a southerly direction (under the influence of north easterly winds) in the summer months, while those fires which have occurred during the winter months have originated on the western border of the park and moved east towards the coast. The compilation of a detailed fire history is part of the process of preparing a fire management for the park and biodiversity management plans. Draft reserve fire management plans have been prepared for each section of the park.

Threats

Arson is the common cause of fire in the park. Fires are often lit along park boundaries, roads, fire trails and walking tracks. Other ignition sources are fires that escape from adjacent lands and barbecues, discarded lit cigarettes and arson of dumped vehicles, as well as natural causes such as lightning strikes.

Botany Bay National Park is highly susceptible to fires because:

- it is about 80% covered by heath communities, which are high in volatile oils and therefore highly flammable;
- heath vegetation re-establishes quickly after a fire and may support wildfire soon after burning;
- the proportion of fuel which is suspended above the ground and therefore susceptible to rapid drying out is high, especially in heath area;
- the fuels and soil in the park tend to dry out quickly because of the low, even arrangement of most of the vegetation and their exposed cliff top/dune location;
- industrial fallout can assist ignition and combustibility of natural fuels; and
- it is subject to high levels of vehicle dumping and burning.

The National Parks and Wildlife Service is a fire control authority under the Rural Fires Act 1997. It is also a member of the Sutherland Shire Fire Protection Committee. This committee is responsible for both the development of co-operative fire fighting and programs for the reduction of bush fire hazards in the Kurnell section of the park. Close liaison is also maintained with the Kurnell Brigade of the Rural Fire Service and with the oil refinery, which both poses a threat and is potentially threatened by fires in the adjacent park. In the La Perouse

section of the park, fire control is under the responsibility of the Board of Fire Commissioners.

Policies

- Fire regimes in Botany Bay National Park will be managed to:
 - Stay within the known fire frequency limits for maintaining the biodiversity of the vegetation communities present the park.
 - Protect key natural assets, including fire sensitive habitats such as rainforest remnants.
 - Protect cultural assets.
- The NPWS will sustain the infrastructure (ie. fire trails, hazard reduced zones, fire suppression capability) required to ensure that the NPWS meets its' commitment to contain wildfires within park boundaries.
- The NPWS will continue to work cooperatively with other fire management authorities and with the community in strategic planning for fire and habitat management.

Management Strategies

- Fire Management Plans for the park will be exhibited and finalised.
- Liaison will be maintained and co-operative strategies developed with the rural Fire Service, local councils and neighbours to ensure co-ordination in fire management in the park and on adjoining lands.
- The Service will participate in the preparation and implementation of District Fire Management Plans under Section 52 of the Rural Fires Act.
- Prescribed burning and other fuel reduction techniques may be employed to reduce fire risk in strategic locations. Prescribed burns may be utilised for weed control and biodiversity maintenance.
- Locations subject to arson will be identified and opportunities for arson minimised.

Actions

- Fire awareness education and interpretive programs will be implemented.
- Wood fire barbecues will be phased out and gas or electric barbecues introduced to reduce the potential fire risk.
- Hazard reduction works will be conducted as specified in reserve fire management plans and annual fire programs.
- Illegal vehicle access to closed locations in the park will be subject to vigorous law enforcement to reduce the potential for arson.

4.2 CULTURAL HERITAGE

4.2.1 ABORIGINAL HERITAGE

Description of values

At the time of the first encounters with Europeans Aboriginal people of the Dharawal nation occupied the park. Many members of the Dharawal nation currently live near the park, notably at La Perouse, as well as others living throughout Sydney, the Illawarra and elsewhere in NSW.

Aboriginal heritage is not restricted to 'sites' and 'relics' as defined in the National Parks and Wildlife Act. There is a growing recognition that Aboriginal heritage is a far broader concept and includes moveable cultural property; literary and artistic works; traditional scientific, technical and ecological knowledge; ancestral remains; immovable cultural property; and documentation of Aboriginal peoples heritage. The Aboriginal heritage of Botany Bay National Park is highly varied and includes most of these elements, especially movable and immovable heritage, traditional ecological knowledge and documentary history. It includes the significance of the site to contemporary Aboriginal communities.

Cook and Banks saw abundant evidence of Aboriginal people around the shores of the bay when they arrived in 1770. This included huts, bark canoes, fishing equipment and scarred trees. The first contact between Cook's party and local Aboriginal groups was not auspicious, with one member of the local community being wounded by gun shot.

Aboriginal occupation of the Botany Bay area was severely disrupted by the early 1800s as a result of disease, attacks by colonists and a colonial policy of removal of Aboriginal people from the area. Documentary material on the language, traditions and everyday life of the Aboriginal people who occupied the area is largely confined to early historic accounts such as the journals of Cook and Banks. However, there are oral traditions amongst Dharawal descendants which record significant information about the area, and archaeological evidence remains as testimony to the vast period of prehistoric occupation.

Although many Aboriginal sites have been destroyed, over 30 sites have been recorded in the national park. These include rock engravings, occupation sites such as rock shelters and middens, burials and axe grinding grooves. It is likely that many more unexposed, and hence unrecorded, sites in the park. A systematic survey of the park would almost certainly reveal additional sites.

On the La Perouse peninsula there are engravings of a whale and its calf, a shark and several unidentified motifs, and two shell middens. The engravings are extremely faint and not easily seen. Middens have been found around Congwong and Little Congwong Bays, on the La Perouse peninsula (although these are much damaged by sand mining) and at Cape Banks.

On the Kurnell section of the park are a number of middens, burials, artefact scatters and at least two engravings of fish and foot prints.

Both sections of the park have the potential to act in a 'keeping place' role. A keeping place is a secure area which can be used for the storage or return of culturally sensitive materials such as ancestral remains or cultural artefacts. This might be through the use of part(s) of the park for reburials and/or through the creation of a secure and culturally appropriate area within one of the existing structures. There have been initial indications of support for this concept from members of the local Aboriginal communities, however implementation would be dependant upon more detailed discussion and the availability of funding.

The NPWS has been made aware by members of the local Aboriginal communities that there is a rich oral tradition in relation to Botany Bay National Park. This includes some of the traditional names of specific places, important locations for hunting and fishing, and a range of culturally sensitive information. It is hoped that the final version of this Plan of Management will include a section written with the local Aboriginal communities which provides some insight into this aspect of the cultural significance of the park. Such information will need to be translated into management protocols and guidelines.

Threats

Aboriginal sites in the park are likely to have been disturbed during construction of the monuments and other developments. For example, it is believed that the Alpha Farm house is sited on a midden.

One difficulty with avoiding sites is that not all sites are obvious on the surface and not all will have been recorded in the NPWS Aboriginal Sites Register. The majority of engravings and middens sites have probably been recorded, however there is a strong possibility that additional sites such as artefact scatters and even burials remain undetected.

Policies

- Aboriginal people are recognised as the primary guardians and interpreters of their cultural heritage.
- Aboriginal sites in the park will be protected and managed in consultation with the local Aboriginal communities.
- The NPWS recognises that the heritage concerns of the local Aboriginal communities are not restricted to areas which can be identified as archaeological sites. The significance of the entire landscape of the park to contemporary Aboriginal peoples will be respected and partnerships developed to ensure sensitive management of significant and sensitive locations.

Management Strategies

- Any works with the potential to impact on Aboriginal sites will be preceded by a cultural heritage assessment and consultation with the local Aboriginal communities.
- Discussions will be initiated with the local Aboriginal communities to establish protocols for investigations into Aboriginal heritage within the park.

- Involvement of and partnership with Aboriginal people in the interpretation and custodianship of the Aboriginal heritage of the park will be encouraged.
- Research into the Aboriginal heritage of the park, including landscapes and areas of cultural significance, will be encouraged.

Actions

- The adequacy of existing survey of the park will be reviewed and if necessary supplementary survey conducted in areas of high risk of landscape change.
- Discussions will be held to explore the potential role of the park as a 'keeping place' for elements of Aboriginal culture, to be developed and managed by the Aboriginal community, and as a place for reburial of ancestral remains.
- Interpretive literature on the Aboriginal heritage and history of the La Perouse area will be developed in consultation with the La Perouse Aboriginal community.
- Educational facilities for cultural purposes will be developed with Aboriginal peoples.

4.2.2 EUROPEAN HERITAGE

Description of values

Botany Bay National Park is regarded as highly significant amongst the Australian community as the site of two of the earliest landings of European maritime explorers on the Australian continent, namely the expeditions of James Cook on the southern side of the bay and Comte de Laperouse on the northern side. From a historical perspective, there were earlier landings in the northwest of Australia, and a greater number of maritime explorers associated with the southeast of Tasmania, however the events at Botany Bay retain a special place in the early history of Australia. In large part this is attributable to the direct link between the reports of Cook and Banks and the subsequent colonisation of Port Jackson.

On 29th April 1770, during the first of his three Pacific expeditions, Cook and his party landed on the southern side of Botany Bay and spent eight days exploring the area. During that time the naturalists Joseph Banks and Daniel Solander made a methodical collection of natural history specimens. The seaman Forby Sutherland died and was buried ashore. Freshwater was taken from the watering place stream near the landing place at several other sites around the bay. Cook also named Bare Island and Banks landed on the island to search for shells.

The expedition's favourable reports on the area influenced the British government to establish a new penal colony at Botany Bay. On 18th January 1788 the First Fleet entered Botany Bay and anchored in the lee of Bare Island before deciding that Botany Bay was unsuitable for a settlement and moving north to Port Jackson (Sydney Harbour).

Before the First Fleet left Botany Bay for Port Jackson, the French expedition under the command of Jean-Francois de Galaup, Comte de Laperouse, arrived in Botany Bay. The French stayed for six weeks and built a stockade, observatory and a garden for fresh produce on the La Perouse peninsula. Laperouse continued his voyage on March 1788 and was not sighted again.

The Cook and Laperouse expeditions were by no means the only significant historic events associated with Botany Bay National Park. The subsequent history of the two sections of the park is complex and resulted in a wide range of physical remains, many of which are still visible. It includes the construction of fortifications, early agriculture, depression camps and recreational activities. A detailed account of the history of the La Perouse and Kurnell sections is provided in Appendix 4.2.2.

The 'meeting place' theme applies just as much to the historic heritage of the park as it does to Aboriginal and social values. The concept of the park as a meeting place provides a powerful theme to guide interpretation of the historic heritage of the park.

In respect to the places and landscapes of historic significance which occur within the park, those which require active management in the La Perouse section of Botany Bay National Park include:

- the camp of the La Perouse expedition (location unknown);
- graves of expedition members and memorials;
- Laperouse Museum;
- the watchtower;
- Bare Island and Henry Head fortifications;
- Cable Station;
- Cape Banks fortifications and defence infrastructure;
- Happy Valley depression camp;
- the wreck of the Minmi; and
- the Coast Hospital cemetery.

Significant historic places in the Kurnell section include:

- Alpha Farm;
- monuments including the Cook's obelisk;
- Captain Cook's landing place;
- the watering place stream;
- a row of Norfolk Island pines along the Monument Walk; and
- the Cape Baily lightstation complex.

Policies

- The historic heritage of the park will be conserved in accordance with the principles of the Burra Charter of Australia ICOMOS.
- Conservation plans will be prepared for precincts that contain historically significant heritage values.
- Elements of high historic significance will be interpreted to visitors to the park.

Management Strategies

- Activities with the potential to impact on sub-surface archaeological evidence will be preceded by an archaeological assessment. Special care will be taken within the Anzac Parade loop, the foreshore and Commemoration Flat areas near Captain Cooks landing place, and in the La Perouse Headland.
- Conservation work will be undertaken as necessary on the monuments in the park. No new monuments will be erected.

Actions

- Signage will be erected interpreting the history and significance of the main sites, buildings, monuments and structures and the cultural value of the park. Where appropriate Aboriginal interpretation will be provided and Aboriginal languages will be employed for dual naming and signage.
- Limited reconstruction of the Bare Island fort will be undertaken in accordance with the conservation plan for the fort and conservation work carried out on the guns, gun carriages and emplacements and other significant elements. Existing safety fencing on Bare Island will be maintained.
- Lighting will be reviewed on Bare Island to improve night time viewing of the fort. This will be glare free for other bay users.
- Sections of the fort may be re-painted in original colours for interpretation purposes and maintenance.
- A conservation plan will be developed and implemented for the Coast Cemetery.
- A conservation plan will be prepared for the Commonwealth Flat area.
- The row of Norfolk Island pines along the foreshore near Captain Cook's landing place will be replaced with plants of the same species when they become senescent or die. Other trees planted by visiting dignitaries and the trusts will not be removed but will be replaced with indigenous species when they die. Future ceremonial plantings will be of native species.
- The banks of the watering place at Kurnell, which provided water for Aboriginal peoples and Cook's expedition, will be returned to its natural course and

revegetated with local plants to better reflect the natural sustainable condition of the site as in 1770. The catchment will be restored to improve water quality and access.

4.2.3 SOCIAL VALUES

Description of values

All of the values discussed in the previous sections, natural heritage, Aboriginal heritage and European heritage, embody some degree of social value. For example, Aboriginal people place a high social value on natural heritage, especially the landscapes, plants and animals which provide sustenance and identity. Similarly, the dedication of areas as national park derives from the social value which is placed on the environment by the Australian community.

Botany Bay National Park has extremely high social value as one of the very first meeting places between Aboriginal and European cultures. The park is rapidly developing a profile as a venue in which to explore the concept and practice of reconciliation. It is expected that this aspect of the social significance of the site will continue to evolve and change.

Aboriginal groups and other stakeholders will be encouraged to use and help develop the 'meeting place' theme at Kurnell. Discussions will be advanced where possible to explore the potential role of the park as a 'keeping place' for special items of the Aboriginal peoples.

The northern section of the park is very close to land owned by the La Perouse Aboriginal Community and the community has had a strong association and interest in the management of this area since an Aboriginal Reserve was established at Frenchmans Bay in 1883 under the Aborigines Protection Board. While the Service currently has the legal responsibility for the protection of Aboriginal sites, it acknowledges the right of Aboriginal people to make decisions about Aboriginal heritage. It is Service policy that Aboriginal communities be consulted about decisions regarding the management of Aboriginal sites and related issues, and how Aboriginal history and culture of an area controlled by the Service will be promoted and presented.

Mechanisms will be investigated to ensure all Australians have a sense of ownership of the area of Botany Bay National Park which relates to the Discovery Centre and Commemoration Flat precinct.

Meeting place. The term 'meeting place' reflects the history of Botany Bay National Park as a key location in which peoples of different cultural backgrounds first encountered each other. However, it also denotes an ongoing role for the park as a meeting place. The historic role of the park as the site of first meetings makes it uniquely appropriate as a place in which to discuss the broader and ongoing nature of cultural meetings in Australia, particularly in relation to the reconciliation process currently underway. The precise nature of the physical structures which constitute a meeting place (ie buildings and/or landscape features) are not critical in this context- the primary issue is the historic and traditional associations of the park.

One demonstrative way of recognising the Aboriginal history and social significance of the park would be to add a dual name as a prefix to the current 'Botany Bay National Park'. After several meetings with local Aboriginal communities, a consensus has emerged that the Dharawal word "Kamay" be adopted as the dual name for the park. Kamay is the Dharawal place name for Botany Bay, while the word "Kamayagal" refers to 'the people (or possibly 'the men') of Botany Bay'.

The potential of the park as a forum for discussion and meeting draws very heavily from the historic associations of the site. Consequently, it would be self defeating for future interpretations of the site to deny the historic associations of the site. Instead, these associations are, and will continue to be acknowledged as a component of its significance.

The Commemorative Flat precinct at Kurnell has a complex history of landuses. Landscape modification began with the fire regimes imposed by Aboriginal people. It continued with the agricultural clearing of the second half of the nineteenth century, the development of the site as a 'pleasure ground' in the first half of the twentieth (University of Sydney 1999) and the commencement of a pattern of ceremonial plantings which has continued to the present. The complexity of this pattern requires a detailed precinct plan which balances the cultural and natural characteristics of the landscape. The precinct plan will focus on the restoration of the natural character of the western side of the precinct, along the catchment of the 'Cooks watering Stream'. On the eastern side, in the cleared grasslands, the emphasis will be upon maintaining the cultural elements of the landscape.

Policies

- Botany Bay National Park will be promoted as a site which presents a unique opportunity for the exploration of themes of meeting and reconciliation.
- A pro-active role will be taken by the NPWS in seeking a genuine partnership with Aboriginal people.

Management Strategies

- The monument walk will continue to be upgraded and interpreted as Cooks Landing place.
- Management of the area between the Discovery Centre and Botany Bay (the 'ceremonial precinct') will focus on providing a suitable open air venue for discussion of themes relating to reconciliation and the meeting of cultures.
- Aboriginal and reconciliation groups and organisations will be encouraged to use the meeting place facilities and venue at Kurnell.
- Aboriginal oral histories, story telling and celebrations will be encouraged at the park in partnership with Aboriginal people.

Actions

- Once the plan is adopted, the park will be known as *Kamay Botany Bay National Park*.
- A precinct plan which specifies landscaping works will be developed for the ceremonial precinct at Kurnell and implemented over next three years.

4.3 ACTIVITIES IN THE AREA

Botany Bay National Park will be managed to ensure that its use, whether by the general public, special interest groups, Service managers or other authorities is appropriate and conforms with the objectives and strategies outlined in this plan of management.

This section of the Plan of Management is divided into three key areas relating to visitor experience, namely:

- promotion and interpretation;
- education and research;
- recreation.

It also includes a section on management activities by the NPWS and other authorities.

4.3.1 INTERPRETATION AND PROMOTION

The core values of Botany Bay National Park were stated in section 3.2 while the broader range of natural and cultural heritage values was considered at length in the previous two sections of this Plan of Management (4.1 and 4.2).

Interpretation objectives

Interpretation of the park will aim to promote all of the core values of the park. It is intended to establish Botany Bay National Park as a place of significance to all Australians, regardless of their background and cultural heritage. It should be a place of importance to the Australian sense of identity and engender a sense of ownership in all Australians.

In this context, the value of the park as a meeting place of cultures clearly has a pre-eminent role in defining its' future character. The meeting place concept will be emphasised in future promotion of Botany Bay National Park. A precondition of this shift in emphasis is that the presentation and interpretation of the park reflects the meeting of cultures rather than the domination of one culture over another.

Naming and associated signage are critical issues in this context. A consensus has emerged during meetings with local Aboriginal communities that the Dharawal word “Kamay” be adopted as the dual name for Botany Bay National Park. Hence it is proposed that once the plan is adopted, the park will be known as *Kamay Botany Bay National Park*.

The use of Aboriginal language will add to the significance of the park. The naming of precincts within the park, such as the precise location of Captain Cooks Landing, should continue to reflect the special significance of these locations.

There is currently a relatively poor level of recognition of the natural heritage assets of the park. The coastal tracks provide a ready opportunity to experience many of these natural assets, and it is proposed to consolidate this network to link existing coastal access points.

The interpretation of the La Perouse and Kurnell sections of Botany Bay National Park is not integrated, reflecting the separation of the two halves of the park by the heads of Botany Bay. Re-establishment of the ferry link across the heads would facilitate coordination of a integrated series of messages to visitors at the same time as adding greatly to the unique experience of visiting the two sections of the park.

In recognition of the aim of elevating the significance of the park to the broader community, promotion of the park should include forums which allow for large scale events with high levels of visitor participation. Open air multicultural events will be initiated and hosted to recognise and celebrate the heritage of Botany Bay National Park and its relevance to all Australians.

Other important mechanisms for promotion include the media, establishment of collaborative associations with tourism authorities and agencies, ongoing contact with neighbours and stakeholders. A related issue will be a consideration of how to improve access to the park by tour groups and, possibly, by ferry service.

Interpretative Centres

In 1988 the Laperouse Museum was established as a joint Australian-French Bicentennial project in the southern wing of the Cable Station, and the Friends of Laperouse Museum continue to maintain an active interest in the museum. The museum interprets the Laperouse expedition and contains a number of valuable historic artefacts which must be kept in an air-conditioned environment. It is proposed to review, revive and refocus the current exhibition and operate the Cable Station as the Laperouse Museum and Visitor Centre. This facility will interpret the key heritage values of the area.

In 1994 guided tours were recommenced to Bare Island following stabilisation of the structure. The Service’s tour operation currently includes the Laperouse Museum and monuments, Macquarie Watchtower as well as Bare Island and occasionally Henry Head. There is potential to expand the tours to include the Cable Station and the broader natural and cultural values of the area. The development of an interpretive walk incorporating the fortifications at Cape Banks will be investigated.

The Discovery Centre at Kurnell contains an exhibition which tells the story of Cook's expedition to Botany Bay and gives an insight into Aboriginal life at that time, and an exhibition on the wetlands of Botany Bay. The display was established in 1988 and is essentially static. It requires curation and review. Areas need to be dedicated to short term displays within the Discovery Centre to provide a more balanced mix of long and short term displays. The interpretative focus of the Discovery Centre precinct will be on education, culture and keeping place.

The Monument Track at Kurnell was constructed to link the monuments along the foreshore and is progressively being upgraded to a pebble surface. The interpretation along the Monument Track will be upgraded. In 1988 the Banks-Solander Walking Track was constructed near the Discovery Centre to interpret some of the plants identified and named by Banks and Solander and the landscape of the area as it was in 1770. This interpretation will be extended within the landscape regeneration works at Kurnell.

There is a clear need for an interpretive gateway for the Kurnell Peninsula and Botany Bay, bringing together the two NPWS reserves (Botany Bay National Park, Towra Point Nature Reserve), other significant natural areas, and the historic and cultural associations of the area. The NPWS will work with other stakeholders at Kurnell with the aim of developing a gateway on the lands known as H1 opposite the Cronulla High School. The gateway could provide natural and cultural heritage interpretation, and possibly education and commercial retail facilities. Rehabilitation of the peninsula would be an important theme, with experiential opportunities relating to wetlands in particular.

Policies

- The NPWS will actively promote the core values of Botany Bay National Park, with a particular emphasis on the role of the park as a 'meeting place' between cultures.
- The dual name *Kamay Botany Bay National Park* will be adopted following gazettal of the Plan of Management for the park.
- The NPWS will work with other stakeholders to promote the conservation values of Botany Bay and surrounding lands.

Management Strategies

- Consultation with Aboriginal peoples will be undertaken to ensure appropriate interpretation.
- Promotional efforts by the NPWS, and in partnership with other tourism interests, will promote Kamay Botany Bay National Park as a place of significance to all Australians.
- The Cable Station and Discovery Centres will act as the formal information and interpretation centres for the park.

- The NPWS will support efforts to establish a ferry service across the heads of Botany Bay.
- The NPWS will continue to promote the concept of an off park interpretation centre at the H1 site at Kurnell.

Actions

- Open air events which be promoted which reconcile cultural differences and celebrate the multicultural heritage of the park will be promoted.
- Interpretation and precinct plans will be prepared and implemented for the historic landscape around Captain Cooks landing place at Kurnell.
- The La Perouse precinct plan and Historic La Perouse Management Plan (as it applies to NPWS land) will be implemented.
- The Cable Station exhibition will be expanded to include interpretation of the full range of park values.
- The Laperouse Museum and Discovery Centre exhibitions will be reviewed in consultation with the local Aboriginal communities and other community interests.
- A business plan, which considers the potential for additional services such as hot drinks and food, will be prepared for the Discovery Centre.
- Heritage tours will be run covering the La Perouse peninsula and Bare Island. The feasibility of interpretative tours at Kurnell will be evaluated.
- An interpretive walk will be developed incorporating the fortifications at Cape Banks.
- The specific precinct of the Monument Track between the Banks and Cook memorials will be defined as Captain Cook's landing place and defined by landscape and interpretation works.
- Development of the Discovery Centre surrounds to be suitable for large celebration and cultural events will be pursued.

4.3.2 EDUCATION AND RESEARCH

The focus of educational programs undertaken in the park should be on the interpretation of natural and cultural heritage issues, with a specific emphasis on issues of relevance to the core values of Botany Bay National Park and adjacent reserves. The existence of educational programs operating out of the park greatly enhances the capacity of the NPWS and its partners to deliver appropriate messages on conservation and park management issues.

Botany Bay National Park lies within reasonable travel time to the schools and universities of Sydney's eastern, southern and western suburbs. This location, together with its diversity of cultural features and vegetation, makes it an ideal location for education, conference, meeting and research in quiet surroundings. All of the interpretive features and facilities at Botany Bay National Park may have application to educational programs.

There are an increasing number of 'ecotourism' operators who have expressed interest in conducting tours in the park. Key issues in relation to these groups include the messages which are provided and ensuring that appropriate partnership is secured with Aboriginal communities in advance.

Education Centres

The Field Studies Centre was established in the Discovery Centre at Kurnell in 1990 and relocated in 1994 to the old kiosk building. The kiosk building is not of historical significance and a suitable space for the Field Studies Centre will be re-established in the Discovery Centre. This will allow closer integration of activities between the Field Studies Centre and the Service, and allow for demolition of the Kiosk and rehabilitation the area it currently occupies.

The Department of School Education employs teachers to staff the Field Study Centre, which is available for booking by public schools. Links between the activities of the Department of Education, the Service and the community will be actively sought at both Kurnell and La Perouse. The Laperouse Museum and Visitor Centre will be the focus of educational opportunities in the La Perouse section of the park. The facility will engage with education outreach programs.

Policies

- The NPWS will continue close liaison with education program providers, including the Department of Education Field Studies Centre, as a mechanism for ensuring that the core values of the park and broader NPWS conservation goals are disseminated to be the broadest possible audience.
- Research with applications to conservation management and interpretation will be encouraged.
- Commercial operators will be required to provide detail on the content of their presentations for approval by both the NPWS and the local Aboriginal communities.

Management Strategies

- The Discovery Centre and Field Studies Centre will continue to provide educational services to schools visiting the Kurnell section of the park.
- Excellence in resource and catchment management, the application of environmental technology and the meeting place concept will be demonstrated through educational programs.

- The Laperouse Museum and Visitor Centre will continue to develop and provide education programs as part of the Visitor Services for the area.

Actions

- Close liaison will be maintained between the NPWS, Field Studies Centres and other providers of educational programs on the content of information courses.
- The Field Studies Centre/Environmental Education Centre will be relocated. The new facility will be located in the Discovery Centre. The existing structure will be demolished to allow for revegetation of the watering hole stream.

4.3.3 RECREATION

Description of value

In the 1830s La Perouse became a major tourist destination, popular because of its picturesque setting, historical places and landscapes, and involvement of the Aboriginal community. The construction of a tram line from Sydney to La Perouse in 1902 brought greatly increased visitation. Boomerang throwing demonstrations and souvenir and boomerang selling continued, and snake handling became an attraction. Vehicles were allowed to drive everywhere over the headland until a loop road was constructed in 1963.

Today the La Perouse section of the park attracts an estimated 400,000 visitors each year. The main visitor use area on the northern part of the park is the La Perouse peninsula and particularly Congwong Beach. On weekends, and especially Sundays, the demand for parking in the area exceeds existing capacity. Randwick Council proposes to make the loop road into a one way road which will increase the amount of parking available.

Comparatively few people use the centre of the La Perouse headland due to its exposed landscape and lack of facilities. Provision of shade trees in selected areas and the installation of interpretive signs may increase its use. Combined tour operations as proposed under section 4.3.1 of this plan will also increase public use of the centre of the headland. Reconnection of the water transport link to Kurnell would also likely increase public use of the headland.

The La Perouse monuments are the site of ceremonies held on Laperouse Day (23rd February), on the anniversary of Pere Receveur's death (17th February), and on Bastille Day (14th July). The Friends of Laperouse Museum hold fundraising activities and other gatherings in the Cable Station, while other community events and displays of Aboriginal arts and crafts are also held on the peninsula.

The NSW Scout Association has a lease over an area of park near Cape Banks. The Scouts have been given permission to camp on this area. Camping elsewhere is not permitted.

Hang-gliders and model aeroplanes are occasionally flown from near Henry Head. These activities interfere with flight operations into and out of Sydney Airport and impact on an important area of heath vegetation.

For the first fifty years following its proclamation in 1902 access to the Kurnell section of the park was difficult. There was only a rough track or a ferry from La Perouse, and there were comparatively few visitors. In 1953 a large oil refinery was built at Kurnell just outside the park and a bitumen road constructed to provide access to the refinery. Visitation to the park immediately increased and picnic areas, parking areas and a kiosk/tearoom were constructed (in 1958). In 1965-66 a scenic drive was constructed to Cape Solander and a large area near the cape cleared for a picnic area. A museum and information area was opened in 1967 and re-developed as the Discovery Centre in 1988.

The wharf near Cook's landing place was destroyed by storms in 1974. Today access to the site is either by road or by foot along the waterfront from Kurnell. The wharf remains at La Perouse are outside the park and not subject to this plan. The wharf near Cook's landing place will be stabilised and may be usefully reconstructed to renew ferry access to the area for recreation, transport and tourism purposes. Re-establishment of a commercially viable bay crossing will be encouraged.

The Kurnell section of the park is used by a similar number of visitors a year as the La Perouse section. In addition to the Monument and Banks-Solander Tracks mentioned in the previous section, there is a walk around Inscription Point, a walking track along the cliff tops from Cape Solander to Potter Point, and the Muru and Yena walking tracks which provide access from the Discovery Track to the coast. Minor upgrading will be undertaken to stabilise the Inscription Point Track and directional signs established. The route of the Coast (Cape Baily) Walk will be reviewed, track head signs and small totem signs will be erected to mark the walking track, and erosion control work undertaken as necessary.

The road system around the Discovery Centre was changed to a one-way system following construction of the Centre and removal of the old workshop from this area but is still confusing to many visitors. The next step in modifying the road system will be to direct all traffic entering the Kurnell section of the park through this loop. This will have the dual effect of calming traffic flows and maximising the number of people passing through the Discovery Centre.

The road within the Kurnell section to Cape Solander is used by cars, push bikes and walkers. For the safety of all park users, a reduction of the maximum speed limit from 60 kph to 40 kph will be enacted, with 10 kph shared zones developed in the key use areas of the walks and set down zone for the Discovery Centre. There will be pedestrian crossings to the Muru and Yena tracks.

The Discovery Centre currently houses a shop, displays, public toilets, a large audio-visual meeting room and staff offices. The layout of the building will be reviewed to provide better interpretive, visitor and retail facilities including an appropriately styled food outlet with both internal and external eating areas. The development of a large upper level space in the Discovery Centre for events and meetings will be investigated.

Fishing, surfing and scuba diving are popular activities within the park. Nude bathing also occurs at Little Congwong Beach, but is not authorised as such under section 633 of the *Local Government Act 1993*. Life rescue equipment has been erected in a number of places along the coast in the Kurnell section of the park but cannot be located at all potential locations. These activities are potentially hazardous and will be highlighted as such in any interpretation relating to the coast.

Cape Solander is a popular whale watching location. A community-based program to count, position and track the annual northern migration of humpback whales (*Megaptera novaeangliae*) is undertaken at Cape Solander from July to August each year.

Threats

There has been a proliferation of informal walking tracks throughout the park, usually to provide access to beaches and fishing spots. They often go straight down the hill sides and are heavily eroded. Informal tracks will be closed and revegetated.

The Sydney Pistol Club operates a firing range in the La Perouse section of the park that was transferred from the Department of Defence in 1981. Under the transfer arrangements the Pistol Club, which operated under an annual licence with the Commonwealth, was to be permitted to “continue in occupation under arrangements with the State”. The pistol firing range includes a fallout area to the coast and beyond and prevents public access to this part of the park. The operation of a pistol range is an inappropriate use under the National Parks and Wildlife Act and is considered to be incompatible with other public uses of the park in the longer term.

Mountain bikes have an unacceptable impact on the tracks in both sections of the park as a result of the highly erodible nature of the soils. Mountain bike usage is only sustainable in the long term on the hardened management trails.

Horses are also occasionally ridden in both sections of the park. Horse riding has never been a permitted activity in the park due to the sandy nature of the soils and the consequent erosion of tracks and gulying of dunes caused by horses.

Rock climbing and abseiling are very occasionally undertaken in the park. Rock anchoring is causing damage, the activity attracts sightseers to come dangerously close to cliff edges and the sandstone cliffs are particularly friable.

Wood fired barbeques and wood for fuel are currently provided in the picnic grounds at Kurnell. The use of such facilities tends to lead to monopolisation of barbecue areas within the picnic grounds and represents a significant danger of ignition during high fire danger periods. Alternative communal cooking facilities, such as electric or gas installations, would provide a safer and more environmentally sustainable alternative.

Policies

- Recreational opportunities will be provided in Botany Bay National Park which provide opportunities to experience some of the core values of the park.
- Recreational activities will not compromise the core conservation values of the park nor public safety.

Management Strategies

- Events will be hosted in the park at Kurnell that are supportive of and appropriate to the theme of 'a meeting place' of cultures and environment.
- The track network will be reviewed and tracks subject to high levels of erosion or excess to requirements for visitor access will be closed and rehabilitated.
- Cycling will be permitted only upon designated management tracks but not on walking tracks or off-track in non-grassed areas.
- Horse riding, recreational off road driving and motor bike riding, hang-gliding, model aeroplane flying, climbing and abseiling will not be permitted in the park.
- Wood barbecues will be progressively replaced by non-wood fired barbecues at Kurnell.
- Removal of rubbish and litter will be emphasised as a visitor responsibility.
- The internal and external layout of the Discovery Centre will be reviewed and works implemented to improve access, functional flexibility and the range of services offered.

Actions

- Parts of the Cable Station, Bare Island and the Discovery Centre will be available for booking by groups for meetings and other activities.
- The partial conversion of the loop road around the La Perouse headland to one-way traffic, and provision of angle parking around all but the northern end of the loop will be supported.
- An ongoing program of planting of shade trees will be undertaken on the La Perouse peninsula and at Kurnell. These will be the same species as currently occur, species identified from historic records or indigenous natives.
- The Service will negotiate with the principals of the Sydney Pistol Club to identify a mutually acceptable reduction of the size of the firing range in order to provide for public walking track access along the entire coastal strip of the park.
- The pistol club will be permitted to remain for a maximum period of 5 years from the adoption of this plan. In the meantime, the club will be permitted to continue under an annual licence with the Service.

- The walking track to Henry Head will be upgraded where necessary with priority to the section to Browns Rock. A new track entry will be formed from Anzac Parade leading to the Henry Head road. In the longer term the walking track will be extended to Cape Banks and may form part of a longer Eastern Suburbs coast walk.
- The sense of arrival to La Perouse will be improved using landscape planning and appropriate signage in consultation with Randwick City Council and the local community.
- The Service will liaise with Randwick City Council regarding the management of nude bathing at Little Congwong Baech.
- A one way loop will be established at Kurnell to ensure all traffic into the park is managed at low speed via the Discovery Centre southern forecourt. Vehicle based visitors will be directed through the Discovery Centre area by reorientation of the road network.
- The maximum speed limit within the Kurnell section of the park will be reduced to 40 kph, with a 10 kph shared pedestrian zone in the Discovery Centre and track head precinct to accommodate walking activity and ensure pedestrian safety.
- Wood barbecues at Kurnell will be replaced by a limited number of gas or electric barbecues in planned social areas near the cricket pitch and to the west and north of the Discovery Centre. Portable gas barbecues will be allowed on grassed areas near Commemoration Flat, the cricket pitch and near the waterfront.
- Rubbish bins will be progressively concentrated in centralised collection areas and reduced in numbers, with the possible removal of all bins in the future. Interpretive material will explain the rationale of carry-in/carry out in national parks.
- Toilets in the park will be progressively connected to the sewage or replaced by composting system facilities.
- The Coast (Cape Baily) Walk will be realigned, signposted and upgraded and as necessary. Only pedestrian access will be allowed. The NPWS will continue to liaise with other Potter Point stakeholders to seek the rehabilitation of this area and to establish it as one of the key access points to the coast walk.
- A walking track will be developed from the Discovery Centre along the watering place stream, linking with the Monument Track.

4.3.4 MANAGEMENT OPERATIONS

There are a number of factors which influence the operational environment in which park management takes place at Botany Bay National Park. Key aspects of the operational environment include:

- Planning processes
- Type and location of 'on park' work areas
- Emergency response capability
- Easements and alien uses of the park
- Access to the park

Planning Processes

The use of an explicit planning process for all new works to be conducted in the park is essential to ensure that developments in the park are consistent with NPWS policy, this draft Plan of Management and the Service's responsibilities under the Environmental Planning and Assessment Act. There are a number of precincts within the park which require a coordinated plan to bring together interpretation and signage, landscape works, an access strategy and environmental assessment. A priority list of areas requiring detailed precinct plans will be prepared for both sections of the park. Current priorities include:

- The corner of Captain Cook Drive and Prince Charles Parade (Kurnell)
- Eastern end of Joseph Banks Drive (Kurnell)
- Existing park entry area south to Polo Street workshop (Kurnell)
- Discovery Centre externals and Commemoration Flat area (Kurnell)
- Ferry wharf sites at Kurnell and Bare Island.

Precinct plans will include a statement of objectives, a detailed landscape design plan, signage design and an REF/EIS. The precinct planning process should be conducted in consultation with local stakeholders such as the local Aboriginal communities, neighbours, land owners and Council.

Work areas

There are currently National Parks and Wildlife Service offices at the Cable Station at La Perouse and in the Discovery Centre at Kurnell. Each services their respective section of Botany Bay National Park and deals with off park issues within the defined area boundaries. There is also a workshop in both sections of the park. In general terms, the park offices provide administrative functions while the workshops provide on-ground management services.

The Alpha Farm house near the Solander Monument and a fibro cottage near the entrance road have been used as staff residences at Kurnell. Staff also reside in the Bare Island Fort, Cable Station and Cape Banks military houses at La Perouse. The role of existing residences in the park will be subject to review to consider the viability of alternative uses such as visitor, meeting or conference facilities, education and short term accommodation. However, at least some of the residences will be required for an ongoing role in the security and emergency response capability of the NPWS. Existing residences which have been identified as essential in this respect include:

- Cottage Three, BBNP (Kurnell). This residence is sited on the main access road into the Kurnell section the park. It serves as the primary contact point for after hours visitor inquiries (such as locked ins), security call-outs and emergency response.
- Alpha Farm annex, BBNP (Kurnell). This residence serves in a caretaker role for the larger Alpha Farm complex, which is routinely used to house short term occupants such as Greening Australia conservation volunteers. It also fulfils a 'backup' security and emergency response role.
- Laperouse Museum flat (La Perouse). This residence is located above the Museum, and serves as the main contact point for after hours security breaches and alarm responses. The caretaker is also responsible for implementing the Museum disaster management plan (eg. should the air conditioning unit fail it would flood some displays).
- Bare Island caretakers residence (La Perouse). This residence is located below the barracks on the fort and is essential for after hours security responses. Although the island is gated and patrolled there have been many breaches of security and vandalism etc is a constant concern.
- Cape Banks residences. Five former defence houses at Cape Banks are used for staff residences. Appropriate uses were reviewed prior to the acquisition of this addition to the park. The cottages are all in poor condition and would require substantial capital investment to adapt them for an alternative use. A sixth building at Cape Banks is being adapted by the Service's Head Office for a storage and lab facility.

Emergency response capability

A range of fire fighting equipment is maintained in both sections of the park, including striker (utility mounted) units. The majority of staff in both locations have specialist skills in fire suppression and this is supplemented by the support of Service Fire Management Officers.

The Kurnell section adjoins the Australian Oil Refinery and there have been a number of cases in the past when oil spills from ships in the bay have caused damage to the shoreline and parts of the park. The Service has been involved in the development of a response plan to minimise any damage to the environment in the event of an oil spill in the bay. A bird rehabilitation centre has been built at Kurnell to clean and care for birds affected by an oil spill. This centre will also function as a marine mammal emergency unit. A whale kit and trailer is kept at Kurnell for such situations.

The bird rehabilitation centre is the only such facility in NSW and it is likely to be used in the event of oil related incidents along any part of the metropolitan coast.

Easements and alien uses

The walking track around Cape Banks crosses part of the area leased to the NSW Golf Club. As part of the renegotiation of the golf club lease it was agreed that walkers would have access to the walking track around the edge of the golf course and across the bridge near the 6th tee except when the championship tee is in use for competitions.

Land use inconsistencies occur along the common boundary of the park and NSW Golf Club at La Perouse. There may be opportunities to rationalise these boundaries for the benefit of both park visitor use and safety and the protection of additional remnant bushland areas (Section 4.1.2 also refers).

There are a number of easements through the southern section of the park. These include two Australian Oil Refining Ltd effluent pipelines which cross the park from west to east to the ocean near Yena and Tabbigai; a pipeline through the south-west tip of the park used by Abbott Laboratories Pharmaceuticals Pty Ltd; an effluent pipeline used by Imperial Chemical Industries and a Sydney Water effluent disposal pipe which empties into the ocean at Potter Point. The discharge from these pipelines causes damage to the marine and intertidal environment, and the smell reduces the recreational amenity of this section of the park. In addition there is an easement to provide access to the Cape Baily Lighthouse but no track aligns with that easement. Sydney Water has a road for access to the outfall at Potter Point which also does not align with an easement. The tracks to the lighthouse and Potter Point are badly eroded. The vents for the ocean outfall are excluded from the park. The lighthouse and immediate area around it were initially excluded from the park but have recently passed to Service ownership with a leaseback arrangement to the Australian Maritime Safety Authority (AMSA). These precincts are to be rehabilitated, providing only agreed access for AMSA and Sydney Water, with access routes constructed and maintained to Service standard.

Access to the park

Access to Botany Bay National Park generally utilises the public road network and provides for both private vehicles and public transport services. There are however, two access points to the park which are problematic, Cape Banks and Potter Point.

Access to the Cape Banks area is difficult as there is only a narrow road which winds between high banks of vegetation which makes visibility around corners very difficult. The road, which is used by members of the NSW Golf Club as well as park visitors, is a Crown reserve road. Dumping of rubbish in the park and car arson after dark are still problems. Negotiations will be instituted with the golf club and Department of Land and Water Conservation regarding maintenance of the road.

Vehicles have for many years used the track which was constructed by Sydney Water to provide access to the outfall at Potter Point to gain access to surfing and fishing spots in the area. Significant damage has been caused to the vegetation and sand dunes in the Potter Point area by driving off the formed track. Littering,

car dumping and arson are common occurrences, with an average of one vehicle per week dumped and set alight. In response, the track has been closed to vehicles at night. The Service will negotiate with Sydney Water regarding rehabilitation and management of the Potter Point Road and precinct.

Policies

- The NPWS will maintain its current operational capacity to respond to incidents in and around Botany Bay National Park.
- The NPWS will liaise with neighbours, industry and local government over the management of access tracks and parking areas adjacent to the park.
- Inappropriate access to the park will be constrained and phased out where possible.
- Pro-active precinct planning will be undertaken in key locations.

Management Strategies

- Key points in the landscape of the park will be identified, precinct plans prepared in consultation with local stakeholders, environmental assessment undertaken and their presentation progressively upgraded.
- The Service will work with neighbours and stakeholders in resolving issues of habitat degradation on park caused by activities, such as access routes, by those stakeholders.

Actions

- Options for the future use of NPWS residences will be investigated. The residences on the park not required for security or emergency response purposes will be investigated for use as visitor meeting or conference facilities, education and short term accommodation for management purposes.
- Negotiations will be undertaken with DLWC and Randwick Council to upgrade the road to Cape Banks.
- The Service will negotiate with the NSW Golf Club for the purposes of rationalising the common boundary at La Perouse.
- Negotiations will be undertaken with the Australian Marine Safety Authority and Sydney Water to formalise their activities to ensure that appropriate access is secured and maintained in a sustainable manner.
- A small formalised parking area will be provided at the end of the Potter Point road.
- Sydney Water will be requested to substantially assist in upgrading and maintaining their access to Potter Point.

5. PLAN IMPLEMENTATION

This plan of management is part of a system of management developed by the NSW National Parks and Wildlife Service. The system includes the National Parks and Wildlife Act, management policies, established conservation and recreation philosophies, and strategic planning at corporate, directorate and regional levels.

The orderly implementation of this plan will be undertaken within the annual programs of the Service. Priorities, determined in the context of directorate and regional strategic planning, will be subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister.

Regional programs are subject to ongoing review, within which works and other activities carried out at Botany Bay National Park are evaluated in relation to the objectives laid out in this plan.

The environmental impact of all development proposals will continue to be assessed at all stages of the development and any necessary investigations undertaken in accordance with established environmental assessment procedures.

Section 81 of the National Parks and Wildlife Act requires that this plan shall be carried out and given effect to, and that no operations shall be undertaken in relation to the national park unless they are in accordance with the plan. However, if after adequate investigations, operations not included in the plan are found to be justified, this plan may be amended in accordance with section 76(6) of the Act.

5.1 IMPLEMENTATION SCHEDULE

As a guide to the orderly implementation of this plan, actions are divided into those whose urgency requires that they be initiated within 2 years of the finalisation of the plan; and those actions which will require a sustained, long term commitment of effort. The categories are based on the urgency of action, not on their relative importance. Completion of all is required during the life of this plan.

FOR ACTION IN THE FIRST 2 YEARS OF THE PLAN	SECTION IN PLAN
Identify, map and close illegal access points	4.1.1
Seek cooperation of neighbours in managing runoff/erosion	4.1.1
Prepare GIS coverage of habitat types, including known locations of threatened species and endangered ecological communities	4.1.2
Prepare and implement weed control plans	4.1.2
Review management implications of relevant threatened species recovery plans	4.1.2, 4.1.3
Arrange removal of weeds from Crown Land near Happy Valley	4.1.2
Discuss with NSW Golf Club management of the joint boundary	4.1.2
Prepare and implement feral animal control plans	4.1.3
Exhibit, finalise and implement fire management plans	4.1.4
Develop cooperative fire strategies with brigades/neighbours	4.1.4
Restrict vehicle usage between Reservoir and Tabbigai	4.1.4, 4.3.4
Promote Kurnell as a venue for advancing the reconciliation process	4.2.1, 4.3.1
Celebrate Aboriginal culture as part of our national identity and support cultural events appropriate to reconciliation	4.2.

Explore use of park as a cultural 'keeping place' to Aboriginal people and possible reburial site for ancestral remains	4.2.1
Encourage Aboriginal involvement in interpretation of park	4.2.1
Promote 'meeting place' theme (reconciliation and multiculturalism)	4.3.1; 4.3.2
Prepare & implement precinct plans (including interpretation plan)	4.3.1
Initiate multicultural events and celebrations	4.3.1, 4.3.3
Define Monument Track precinct west of Bank's monument as Cook's landing place	4.3.1
Prepare a business plan for the Discovery Centre	4.3.1
Review entry precinct and access to Kurnell section	4.3.3
Convert part Cape Solander Road near Discovery Centre to 1 way	4.3.3
Reduce maximum speed limit in Kurnell section to 40 kph	4.3.3
Review/upgrade layout of Discovery Centre.	4.3.3
Progressively concentrate and reduce number of rubbish bins	4.3.3
Issue annual licences & negotiate reduced size of Sydney Pistol Club range	4.3.3
Determine future of pistol club	4.3.3
Investigate ferry service between Kurnell and La Perouse	4.3.3
Review uses of residences	4.3.4
Establish a holistic approach for Kurnell peninsula with other stakeholders	4.3.4
Promote Kurnell gateway concept with other stakeholders on H1 lands	4.3.4
Negotiate boundary rationalisation with the NSW Golf Club	4.3.4

FOR ACTION IN THE FIRST 5 YEARS OF THE PLAN	SECTION IN PLAN
Develop revegetation program for degraded and devegetated areas	4.1.1, 4.1.2
Restore natural hydrology patterns at Kurnell where practical	4.1.1
Fence and stabilise Botany Cone	4.1.1, 4.1.2
Rehabilitate dunes between Botany Cone and Tabbigai	4.1.1, 4.1.2
Restore natural hydrology patterns and swamps	4.1.1
Close informal tracks above Congwong Bay	4.1.1
Encourage continued study of Cape Banks site	4.1.1
Seek cooperation of neighbours in weed programs, including education/information program	4.1.2
Prepare information on Aboriginal heritage of La Perouse	4.2.1
Prepare a conservation plan for the Commonwealth Flat area	4.2.2
Undertake conservation works (guns, carriages) on Bare Island	4.2.2
Develop display to interpret the La Perouse section of the park at Kurnell	4.3.1
Rehabilitate degraded and unnecessary access tracks	4.3.3
Upgrade, signpost Cape Baily and Inscription Pt walks	4.3.3
Develop walking track along watering place stream, Kurnell	4.3.3
Investigate upper level meeting place for Discovery Centre	4.3.3
Review options for on-park accommodation at Kurnell	4.3.3
Liaise with Randwick Council regarding management of nude bathing at Little Congwong Baech	4.3.3
Provide venue and facilities for 'meeting place' role	4.3.4
Formalise easements and their use with AMSA, SW	4.3.4
Provide new parking area at Potter Point and manage access	4.3.4
Negotiate rehabilitation of Potter Point with SW	4.3.4
Investigate options for old camping area and site of former caretakers cottage, Kurnell	4.3.4

FOR ACTION OVER THE LIFE OF THIS PLAN	
Stabilise and re-route track behind Congwong Bay	4.1.1
Undertake rehabilitation work on the Congwong Bay mined area	4.1.1, 4.1.2
Conduct research and surveys on the biodiversity of the park	4.1.3

Prepare and implement fire education program	4.1.4
Remove non-authentic colour schemes used on the fort	4.2.2
Upgrade and interpret Banks-Solander and Monument Tracks	4.3.1
Develop interpretive walk at Cape Banks	4.3.1
Upgrade interpretive material and displays in Discovery Centre	4.3.1
Upgrade walking track to Henry Head	4.3.3
Progressively replace wood BBQs with gas/electric at Kurnell	4.3.3
Identify and progressively remove all pollutant sources to park	4.3.4

5.2 PERFORMANCE MEASUREMENT

One of the key performance measures for this plan of management will be the rate of implementation of the actions listed in the previous tables. In addition, there is a clear need for environmental indicators which can be used to gauge the effectiveness of NPWS management practices in maintaining and improving the environmental values of the park.

Standard environmental indicators are currently being developed by the NPWS for the agencies' 'State of the Parks' reporting. When these measures are available they will be employed at Botany Bay National Park. In the interim, and recognising that the standard measures will not meet all of the specific requirements of Botany Bay National Park, the following attributes will be measured on an annual basis. Some will require the establishment of 'baseline' information on the state of the environment. Where this is the case it has been foreshadowed in the actions implementation section of this chapter.

Attribute or Objective	Baseline data	Desired outcome(s)
Revegetated landscapes	Map of existing turf areas; mowing plan; rehabilitation plan	Replace 50% of turfed areas with indigenous vegetation; rehabilitate excess tracks; stabilise degraded land surfaces
Faunal diversity	Biodiversity study	Maintain faunal diversity in the park; implementation of relevant recovery plans
Vegetation diversity	Biodiversity study	Maintain community and flora species diversity in the park; implementation of relevant recovery plans
Area of exposed sand bodies	Map of sand 'blowouts'	Reduce area of exposed sand blowouts by revegetation
Weeds	Map of areas with infestations of target weeds	Meet annual weed reduction/control targets
Feral Species	Map of pest species concentrations and areas/ habitats vulnerable to predation	Reduction of feral species throughout park, targeting species which have significant impact on native species
Ongoing dialogue and relationship with the local Aboriginal communities	Establish Aboriginal stakeholders group/ forum	Conduct regular meetings with Aboriginal stakeholders
Key historic precincts	Conservation Plans	Adherence to cyclical maintenance specified in plans

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APPENDIX 4.1.2

ENDANGERED ECOLOGICAL COMMUNITIES

Eastern Suburbs Banksia Scrub

Status: listed under the Threatened Species Conservation Act 1995

Eastern Suburbs Banksia Scrub (ESBS) communities occur in the La Perouse section of the park on the Jennifer Street lands, at the head of Happy Valley and in the old Cape Banks military area.

ESBS originally covered 7000 hectares of land between Port Jackson and Botany Bay. Less than 1 percent of its original cover remains. ESBS is found on Pleistocene dunes and consists of several different structural types including: woodland/open forest (*Angophora costata-Corymbia gummifera* association); scrubland (*Leptospermum laevigatum-Kunzea ambigua-Acacia sophorae* association); heath (*Banksia aemula-Xanthorrhoea resinifera* association) and different types of wet heath and wetlands.

Two hundred and four species have been recorded in ESBS remnants. In Sydney species that occur only in ESBS communities include *Astroloma pinifolium*, *Banksia aemula*, *Hibbertia fasciculata*, *Monotoca scoparia*, *Persoonia lanceolata* and *Xanthorrhoea resinifera*.

ESBS was the first endangered ecological community listed under the NSW Threatened Species Conservation Act.

Eastern Suburbs Banksia Scrub of the Sydney Region is also listed as an endangered ecological community under the Commonwealth's *Endangered Species Protection Act 1992*.

Kurnell Dune Community

Status: listed under the Threatened Species Conservation Act 1995

This community bears strong similarities to ESBS, however it appears to be restricted to soil types occurring on the Kurnell headland of Botany Bay. It is a low open sclerophyll forest community with a distinct mesophyll element. It is found on sand, often in association with areas of sclerophyll heath and scrub.

Dominant species include *Angophora costata*, *Banksia serrata* and *Banksia ericifolia*.

The major occurrence of the community is off the park, on dunes adjacent to the Botany cone, although a small area occurs on park. A small area of this community is also present in the park in the upper catchment of Cooks Stream.

Sydney Freshwater Wetlands

Status: listed under the Threatened Species Conservation Act 1995

Sydney Freshwater Wetlands occur in both sections of the park. This community was formally extensive in the Sydney Eastern Suburbs and Kurnell area.

The community is restricted to freshwater swamps located in swales and depressions on the sand dunes of the park. Characteristic species are sedges and aquatics, particularly *Eleocharis sphacelata*, *Baumea juncea*, *Baumea rubiginosa*, *Baumea articulata*, *Gahnia sieberiana*, *Ludwigia peploides* and *Persicaria* species. There are patches of emergent trees, such as *Melaleuca quinquenervia*, and shrubs.

Often found in these hanging wetlands are the vulnerable wallum froglet (*Crinia tinnula*) and the endangered green and golden bell frog (*Litoria aurea*).

Sydney Coastal Estuary Swamp Forest Complex

Status: listed under the Threatened Species Conservation Act 1995

Sydney Coastal Estuary Swamp Forest Complex is a mosaic ranging from forest to scrub to reedland. It includes open forest with *Eucalyptus robusta* and *E. botryoides*, woodland with *Livistona australis*, scrub with *Melaleuca linariifolia*, *M. styphelioides* and *M. ericifolia*, herbland with waterferns, and reedland with *Phragmites australis*. *Casuarina glauca* may occur as a component of this community. Species of conservation significance include *Melaleuca biconvexa* and *Darwinia procera*.

This community occurs on waterlogged estuarine alluvial soils strongly influenced by periodically poor drainage, such as is found in the upper Cooks Stream catchment in the Kurnell section of the park.

Sutherland Shire Littoral Rainforest

Status: listed under the Threatened Species Conservation Act 1995

Littoral rainforest is a closed canopy forest characterised by mesophyll trees, shrubs and vines. Species include *Cupaniopsis anacardioides*, *Acmena smithii*, *Ficus rubiginosa*, *Pittosporum undulatum*, *Syzygium oleosum*, *Syzygium paniculatum* and *Cissus antartica* vines.

Stands of this community are small and isolated from one another. A remnant of Sutherland Shire Littoral Rainforest is located around Cooks Stream in the Kurnell section of the park.

APPENDIX 4.2.2

HISTORICAL SEQUENCE

La Perouse

Before the First Fleet left Botany Bay for Port Jackson a French expedition under the command of Jean-Francois de Galaup, Comte de Laperouse, arrived in Botany Bay. The French stayed for six weeks and built a stockade, observatory and a garden for fresh produce on the La Perouse peninsula. No evidence of these has been found but there may be buried evidence. During their stay Father Receveur, a Franciscan chaplain and naturalist, died and was buried nearby. Laperouse continued his voyage on March 1788 and was not sighted again. In 1825 another French explorer, Bougainville, visited the site and left funds for the establishment of a monument to Laperouse and the marking of Receveur's grave with a more substantial memorial. The French Government contributes annually to the upkeep of these memorials.

Around 1822 a watchtower was constructed on the highest point of the La Perouse headland with views of the entrance to Botany Bay. The watchtower was typical of the style of building constructed under Governor Macquarie. Troops were stationed in the watchtower to control the activities of potential smugglers. In 1833 the watchtower took on the functions of a customs house. It retained this role until around 1903, although by the late 1860s it was also being used as a school house for the area. In 1957 a fire destroyed much of the building and when the tower was reconstructed in the 1960s the windows were sealed and a castellated parapet was added. The watchtower is the oldest structure still standing on the shores of Botany Bay and the oldest surviving customs house in NSW.

In 1869 a road was constructed from the city to La Perouse and in 1871 a battery of guns was installed in temporary fortifications on the headland. In 1881 construction began on fortification of Bare Island. It was one of the first major structures to be built of mass concrete in Australia, and designed to be self-contained with barracks and materials stores to withstand a siege. However the construction of the fort was poorly supervised and the contractor used too much aggregate in his concrete mix which reduced the strength of the concrete. The building of the fort led to the first Royal Commission to be held in Australia, into the Colonial Architect's Office. Despite being virtually useless as a defensive structure Bare Island was not decommissioned until 1911. In 1912 part of the fort was converted into a home for war veterans. The war veterans continued to occupy the fort until 1963, following which it became a local and natural history museum operated by the Randwick Historical Society until 1976 when the museum was closed and the artefacts removed.

Additional fortifications were constructed at Henry Head from 1892-95 and operated until 1910. In the 1930s extensive fortifications, plotting rooms, barracks and a hospital were constructed just north of Cape Banks on land resumed by the military. The brick cottages and administration building still standing were probably built around 1938 to house staff responsible for the upkeep of the guns and related equipment. During World War II both the Henry Head and Cape Banks batteries were brought back into military service and additional buildings and gun emplacements constructed. Bare Island was also re-used briefly as a fort during

World War II. Most of the structures at Cape Banks were removed by the military between 1953 and 1962 however a number of houses, an underground bunker and the Officers Mess remain on land which has recently been added to the park.

In 1876 the underwater telegraph cable between Sydney and New Zealand began operation at La Perouse, and in 1882 a two-storey brick building was constructed on the La Perouse headland to replace the tents and timber buildings previously in use. The Cable Station was decommissioned in 1903 and used as an extension of the Coast Hospital during the 1918-20 Spanish influenza epidemic, then as accommodation for nurses from 1920 to 1933, before becoming a Salvation Army refuge for women and children until 1987. In 1988 part of the building was converted into Laperouse Museum to commemorate the French navigator Laperouse and French expeditions in the Pacific, and part leased as a Aboriginal cultural centre. In 1994 the Instrument Room in the centre of the building was restored to its original form. Displays at the museum will continue to depict French exploration in the Pacific with a focus on Laperouse and the Cable Station as a whole will increasingly reflect other aspects of local history and natural environment.

During the 1930s depression a camp known as “Happy Valley” was established by squatters behind Congwong Bay and they also constructed cliff dwellings north of Cape Banks. Over 300 squatters lived in these shanty settlements but only a few foundations remain.

In 1937 a coal hauler called the “Minmi” was wrecked on Cape Banks. The wrecked iron hull of the Minmi can still be seen on the rocks to the west of the cape.

In the northern area of the park is the Coast Hospital Cemetery, which was the main burial ground in Sydney for those who died of infectious diseases such as the bubonic plague during the first 20 years of the 20th century. This land was added to the park in 1997. The graves will be maintained and research into the cemetery and the correct locations of gravestones will be encouraged.

Kurnell

In 1815, 283 hectares around Cook’s landing place was granted to Captain James Birnie who called it Alpha Farm. The remains of Birnie’s cellar, built in 1819, are beneath the present house which was built in 1902. In 1870, the centenary of Cook’s landing, the then owner of the farm (Thomas Holt) erected an obelisk to Cook on the site. This was the second monument, a plaque having been erected by the newly formed Philosophical Society of Australasia at Inscription Point in 1822.

Following the centenary Captain Cook’s landing place became the ceremonial area for commemoration of Cook’s birthday and the place to take visiting royalty and other distinguished visitors. Over 300 trees were planted by these visitors over the years, some of which are marked by plaques and most of which remain today.

In 1899, 25 hectares of land around the landing place was resumed and, together with another 75 hectares of resumed and Crown land, was dedicated as “Captain Cook’s Landing Place” under the control and management of trustees. The area was formally proclaimed a Public Park in 1902. Over the next fifty years the

trustees established walking tracks, shelter sheds, a cricket pitch, staff residences and a guest house to accommodate visitors to the area. The trustees also planted approximately 9,000 trees, including a row of Norfolk Island pines along the foreshore to the west of the Alpha Farm house which became a major landscape feature of the site. Additional plantings were made in 1954 to the east of Alpha Farm house. While the Norfolk Island pines have become a landscape feature, regeneration and replacement of shade trees needs to be catered for. The replanting of degraded areas of the Kurnell site will in future focus on indigenous native species. To better reflect the condition of the natural landscape of 1770, indigenous species will be reintroduced to unkempt areas, bushland edges and creek systems to provide a more pleasant and natural backdrop to the areas of open lawn and nodal shade plantings. Future ceremonial plantings at Kurnell will use indigenous species of native plants.

A number of monuments were also erected in the park in the first half of this century. In 1918 the Swedish community erected the Solander Monument, in memory of the Swede who was assistant botanist to Banks; in 1933 the Royal Australian Historical Society erected a monument to Forby Sutherland who died while Cook was anchored at Botany Bay and was the first European recorded as buried in Eastern Australia; and in 1947 Sir Edward Hallstrom erected a granite monument in honour of Sir Joseph Banks. More recent monuments include a raised tablet marking "The Landing Rock" where the first European (Midshipman Isaac Smith) stepped ashore, and plaques identifying "The Watering Place" and "Cook's Well" as the location where water was first collected for the HMS Endeavour. The detail of these and adjacent areas will be improved, in particular the catchment and banks of the watering place stream will be returned to a condition better reflecting that likely in 1770.

In the mid nineteenth century the government reserved a large area at Endeavour Heights for military purposes. During World War II concrete bunkers were built here. Following the war the bunkers were removed and the area included in the park.

The cliffs along the coast of the Kurnell section have been popular fishing spots for many years. In 1919 a small number of rough dwellings were constructed at Tabbigai utilising caves in the cliffs, and during the 1930s Depression many more dwellings were constructed. In 1969 the Department of Lands instructed the few remaining squatters to vacate the area, and today only the foundations, water channels and hearths of a couple of dwellings remain.