



NSW NATIONAL PARKS & WILDLIFE SERVICE

Tomaree National Park

Plan of Management



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Cover photo: View of coastline, Tomaree National Park. John Spencer/DPIE

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Amendments in relation to Tomaree Coastal Walk, Birubi Point Aboriginal Place, Worimi Conservation Lands and other minor updates were made to Sections 1, 3.1, 4.1, 4.2, 5.1, 5.4, 5.6, 6.1, 6.2, 6.3, 9, 10, 11 and 12 in September 2020.

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Contents

1.	Introduction	1
2.	Management context	1
2.1	Legislative and policy framework	1
2.2	Management purposes and principles	2
3.	Tomaree National Park	3
3.1	Location, gazettal and regional setting	3
3.2	Landscape context	3
4.	Values and management direction	5
4.1	Key values	5
4.2	Management direction	6
5.	Conservation of natural and cultural heritage	7
5.1	Geology, landforms, hydrology and soils	7
5.2	Native plants	8
5.3	Native animals	10
5.4	Cultural heritage	13
5.5	Introduced plants and animals	15
5.6	Fire management	18
6.	Visitor opportunities and education	20
6.1	Promotion of the park	20
6.2	Recreation opportunities	21
6.3	Commercial recreation, group activities and competitive events	31
7.	Research	32
7.1	Informing park management	32
8.	Other uses	33
8.1	Appropriate and inappropriate uses	33
9.	Management operations	34
9.1	Management trail system	34
9.2	Other facilities	34

10.	Water harvesting and catchment provisions	35
10.1	Nelson Bay Special Area	35
11.	Plan implementation	37
11.1	System of management	37
12.	References	47

List of tables

Table 1	Vegetation communities identified by Bell (1997)	8
Table 2	Threatened fauna species known or likely to occur in Tomaree National Park	12
Table 3	Australian Walking Track Grading System	22
	Implementation table	37

List of figures

Figure 1	Tomaree National Park Plan of Management	v
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Figure 1 Tomaree National Park Plan of Management

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 park will be managed in the years ahead.

A draft plan of management for Tomaree National Park (referred to herein as ‘the park’) was placed on public exhibition in 1995. During the three month exhibition period, 681 written submissions covering 23 issues were received. Adoption of the plan did not occur, however, due to the need to resolve issues associated with new additions, incorporation of Hunter Water Corporation land into the park, changes to relevant legislation and further consideration of four-wheel drive access to Samurai Beach.

A new draft plan of management for Tomaree National Park was placed on public exhibition from 12 November 2004 until 21 February 2005. The exhibition of this draft plan attracted 205 submissions that raised 15 issues. All submissions received were carefully considered in preparing this plan.

An amendment to the plan of management to allow the development of the Tomaree Coastal Walk, to recognise the declaration of Birubi Point Aboriginal Place and to acknowledge Worimi Conservation Lands was placed on public exhibition in 2019. This document includes the changes that were made as a result of that process.

2. Management context

2.1 Legislative and policy framework

The management of national parks in NSW is in the context of a legislative and policy framework, primarily the *National Parks and Wildlife Act 1974* (NPW Act), the *National Parks and Wildlife Regulation 2002*, the *Threatened Species Conservation Act 1995* (TSC Act) and the policies of the National Parks and Wildlife Service (NPWS). The matters to be considered in the preparation of a plan of management are listed in Section 72 of the NPW Act. NPWS policies relate to nature conservation, cultural heritage conservation, recreation, commercial use, research and communication.

Other legislation, international agreements and charters may also apply to management of the park. In particular, the *Environmental Planning and Assessment Act 1979* (EPA Act) requires the assessment and mitigation of the environmental impacts of any works proposed in this plan. The *Heritage Act 1977* also guides the management of significant cultural heritage values within the park.

In addition, a large proportion of the park has been utilised for water extraction since the 1940s, and is a declared Special Area under the *Hunter Water Act 1991*. Provisions of the *Water Management Act 2000*, *Hunter Water Act 1991*, water sharing plans, water management and access licences apply to the Nelson Bay Special Area (refer to Section 10 of this document). Some of these regulatory provisions are prepared, reviewed and monitored by the Department of Infrastructure, Planning and Natural Resources (DIPNR).

A plan of management is a statutory instrument under the NPW Act. Once the Minister has adopted a plan, the plan must be carried out and no operations may be undertaken within Tomaree National Park except in accordance with the plan.

This plan will also apply to any future additions to Tomaree National Park. Where management strategies or works are proposed for the national park or any additions to it that are not consistent with the plan, an amendment to the plan will be required.

2.2 Management purposes and principles

National parks are reserved under the NPW Act to protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features or landscapes or phenomena that provide opportunities for public appreciation and inspiration and sustainable visitor use.

Under the NPW Act, national parks are managed to:

- conserve biodiversity, maintain ecosystem functions, protect geological and geomorphological features and natural phenomena and maintain natural landscapes
- conserve places, objects, features and landscapes of cultural value
- protect the ecological integrity of one or more ecosystems for present and future generations
- promote public appreciation and understanding of the park's natural and cultural values
- provide for sustainable visitor use and enjoyment that is compatible with conservation of natural and cultural values
- provide for sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to conservation of natural and cultural values
- provide for appropriate research and monitoring.

3. Tomaree National Park

3.1 Location, gazettal and regional setting

Tomaree National Park is located in the Port Stephens area of NSW, approximately 45km north of Newcastle. The park stretches along the coastline from the south head of Port Stephens (Tomaree Head) to Birubi Point. The park falls within the Port Stephens local government area and is within the area of the Worimi Aboriginal Nation and the Worimi Local Aboriginal Land Council. The park adjoins the Worimi Conservation Lands which were gazetted in 2007.

Originally reserved in 1984 as a thin coastal strip of 800ha, the park was extended to 2310 hectares in 1996 with the addition of most of the Nelson Bay Special Area, a water reserve declared under the *Hunter Water Act 1991* (refer Section 10). The Port Stephens lighthouse, associated grounds and ruins of the lighthouse keepers' house were formally added to the park in January 2003. In 2005, a small addition (29.5 hectares) was made to the park behind One Mile Beach, and in 2007 three small parcels of Crown land at various locations (45 hectares in total) were added to the park, bringing the area to 2402 hectares.

Tomaree National Park is one of a group of conservation reserves in the Port Stephens area which protect a coastal landscape of regional and state importance. Other areas that are part of this conservation system include the north head of Port Stephens (Yacaaba Head) and Fame Cove, both part of Myall Lakes National Park. There are also a number of Nature Reserves nearby including: John Gould, Boondelbah Island, Worimi, Snapper Island, Corrie Island, Tilligerry, One Tree Island and Bushy Island Nature Reserves.

Along with the adjoining Worimi Conservation Lands, the park is one of the major recreational focuses for visitors and residents of the Nelson Bay area. The walking track to the top of Tomaree Head receives an annual visitation of over 200,000 people. The level of visitation is expected to continue to increase steadily over the next few years as the Nelson Bay area is now one of the most popular holiday destination for Sydney residents. This, along with rapidly growing urban and rural residential areas surrounding the park, places significant and increasing visitor pressure on the values of the park. Also, the proposed new Fingal Bay Tourist Road between Nelson Bay Road and Government Road Shoal Bay could have significant impacts on the natural and cultural values of the park. The NPWS will continue to liaise with Port Stephens Council on these issues.

3.2 Landscape context

Natural and cultural heritage and ongoing use are strongly inter-related and together form the landscape of an area. Much of the Australian environment has been influenced by past Aboriginal and non-Aboriginal land use practices, and the activities of modern-day Australians continue to influence the environment through recreational use, cultural practices, the presence of introduced plants and animals and in some cases air and water pollution.

The geology, landform, climate and plant and animal communities of the reserve, plus its location, have determined its use by humans. Aboriginal occupation and use of the Port Stephens area has been extensive over at least the last 4500 years. The Worimi People continue their association with, and use of the land today. Within the park Aboriginal occupation is evident from the large amounts of midden material on the coastal fringe. It is also likely that changes to vegetation communities occurred over time due to Aboriginal occupation and use of the land, however, further research is needed to clarify the nature of these changes.

The arrival of non-Aboriginal people in the Port Stephens area heralded a dramatic change in land use with rapid and extensive modification of the landscape, in particular clearing of native vegetation. The area within the park, however, was only subject to limited impacts because of the poor nature of the soil for agriculture.

Both Aboriginal and non-Aboriginal people place cultural values on natural areas, including aesthetic, social, spiritual, recreational and other values. Cultural values may be attached to the landscape as a whole or to individual components, for example to places used by Aboriginal and/or non-Aboriginal people. This plan of management aims to conserve both natural and cultural values. For reasons of clarity and document usefulness natural and cultural heritage, non-human threats and ongoing use are dealt with individually, but their inter-relationships are recognised.

4. Values and management direction

4.1 Key values

The key values of Tomaree National Park include:

Landscape conservation values

- Along with a number of other reserves, the park protects the regionally important coastal landscape around the Port Stephens group of villages and towns.
- Tomaree Head is a major scenic attraction of the park and a prominent landscape feature of State significance (Tomaree Head Conservation Management Plan 2002).

Conservation values

- The park demonstrates important geological events associated with the creation of the New England Tableland and evolution of the Port Stephens coast over the past two million years.
- The coastline of the park is the only place on the NSW coastline where the acid volcanic rock rhyodacite outcrops.
- Landform and vegetation in the park provide complete transects from high water mark on the coast over the volcanic peaks and down to sub-coastal swamps on the fluvial and estuarine deposits to the west.
- Heath communities on rhyodacite in the park have a restricted distribution in New South Wales.
- The park is an important part of the broader nature conservation system of the Port Stephens area and complements other programs in the area aimed at the conservation of biodiversity in the region.
- Habitat within the park provides essential wintering habitat for a variety of birds and supports several plants and animals which are threatened and/or of limited distribution.
- The Nelson Bay Special Area is within the park and protects a high quality water aquifer important for water extraction.

Cultural heritage values

- A range of Aboriginal sites and landscapes of Aboriginal importance.
- Point Stephens Lighthouse and associated structures listed on the NSW State Heritage Register and of national significance.
- Tomaree Head military installations listed on the NSW State Heritage Register as examples of World War II fortifications.

Educational and scientific values

- Opportunities for educational and field studies examining cultural and natural heritage.
- The coastal landforms and vegetation communities of the Port Stephens area provide opportunities for scientific investigation.

Recreational and tourism values

- Popular beaches and stretches of secluded coastline provide opportunities for a range of nature-based activities.
- Walking and vehicular access is provided to many of the main features in the park and enhanced through development of the Tomaree Coastal Walk.

4.2 Management direction

The primary emphasis of this plan is the conservation of the natural and cultural heritage values of the planning area. Visitor opportunities that are compatible with and promote the understanding and enjoyment of these values is also a key emphasis. This will be achieved through the following:

- protection, and where necessary restoration, of the locally and regionally significant nature conservation features of the park
- protection and conservation of sites of Aboriginal cultural significance in consultation with the Aboriginal community
- conservation of the coastal defence complex at Tomaree Head as an example of the system of World War II fortifications which extended up and down the east coast of Australia
- management of the park as part of a system of lands which together protect the natural heritage and scenic amenity of the Port Stephens and Tomaree Peninsula areas
- promotion of appropriate land use planning and management amongst neighbours and other land use authorities which will afford the highest practicable protection for the natural condition of the park
- protection of surface waters and underground waters from pollution
- provision for sustainable levels of groundwater extraction for the local urban area
- promotion of the values of the park with emphasis on:
 - the coastal landforms and scenery of the Tomaree Peninsula
 - the importance of the park as part of a regionally significant system of lands which protect features of nature conservation significance in the Port Stephens and Tomaree Peninsula areas
 - the cultural heritage values of the park, particularly the fortifications on Tomaree Headland and the lighthouse
 - the visitor opportunities in the park and appropriate use of the park
- provision of opportunities for low impact nature-based experiences by enhancing visitor facilities and creating a signature 20-kilometre walk, with limited vehicle access along the coastline
- development of community relations programs, particularly involving neighbours of the park, which emphasise the importance and purpose of management programs relating to the protection of natural features and the control of fire, weeds and feral animals.

5. Conservation of natural and cultural heritage

5.1 Geology, landforms, hydrology and soils

The park lies on the Tomaree Peninsula south of the entrance to Port Stephens. The northern section of the park has four moderately high peaks – Tomaree Head being the highest at 162 metres. The southern sections of the park comprise a much lower undulating land surface. The landscape of the park is the residual surface of a peneplain that was uplifted during the Tertiary Period and subsequently eroded leaving only the more resistant volcanic rocks as small hills.

The western sections of the park are sand deposits of fluvial and estuarine origin. Recent coastal sand deposition is a feature of the modern-day coastline.

Soil development within the national park reflects the geology. On the hills the volcanic rhyodacite has weathered to a shallow clayey soil. The sand dunes consist of uniform sands with some partial induration.

The soils in the park are highly susceptible to erosion because of their shallow profile and often sandy base. This is demonstrated by the condition of some walking tracks and vehicle trails that deteriorate rapidly with use.

NPWS monitors erosion throughout the park, particularly on steep management trails and in areas subject to heavy visitor use such as Tomaree Head. Mitigation works are undertaken as required.

There are a number of actively moving dunes in the park. In some areas this is a natural process. In other areas the rate of sand movement is more rapid due to vehicle and pedestrian tracks and trails. A program of dune rehabilitation has been undertaken on the northern end of Zenith Beach. The sand dunes behind Samurai Beach are moving in a northerly direction and are encroaching upon wetland and forest vegetation.

A substantial proportion of the Nelson Bay Special Area, declared under the Hunter Water Act, was added to the park in April 1996. The catchment area protects an underground aquifer 30-35m thick from which the Hunter Water Corporation extracts, by a series of bores in the park, significant quantities of high quality groundwater. The aquifers are recharged entirely by rainfall in the catchment areas and, until recently, were the sole sources of potable water to the Port Stephens area. It is now intended that the groundwater supplies will be supplemented, principally during periods of high water demand, by water piped to the Port Stephens area from Tomago. The groundwater extracted from the park will continue to provide the bulk of the water supplied to the Port Stephens area (refer to section 10).

The park provides an important scenic backdrop and coastal protection zone for the rapidly growing areas of Shoal Bay, Fingal Bay, Anna Bay, Boat Harbour, Nelson Bay and Fishermans Bay.

Guidelines/Actions

- The geology and coastal landforms of the Tomaree Peninsula will be interpreted to visitors.
- All land management and development within the park will incorporate effective soil erosion and sedimentation control measures. All disturbed sites not required for park management or the operation of Hunter Water Corporation's infrastructure will be progressively rehabilitated.

- A memorandum of understanding will be developed and implemented with the Hunter Water Corporation in order to maintain catchment values and water quality in the Nelson Bay Special Area (refer also Section 10 Nelson Bay Special Area).
- The high water quality within the park (including water in aquifers) will be maintained and all practical steps will be taken to prevent contamination of water resources.
- Existing dune restoration works within the park will continue, including the program at Zenith Beach, and new restoration works will progressively be implemented where necessary.
- A study into the historical and current rate of dune encroachment in to the wetlands at Samurai Beach will be undertaken.
- Dune restoration programs will be progressively undertaken at the southern section of One Mile Beach, Box Beach and Ocean Avenue in Anna Bay.
- Roads and trails not required for public access, NPWS management purposes or Hunter Water's operations will be closed and rehabilitated as resources permit (refer also Section 6.2 Recreation Opportunities and nine Management Operations).

5.2 Native plants

Vegetation in the park primarily reflects geology, soils, aspect and water table depth. A detailed vegetation survey of the park was completed in 1997 (Bell). There are obvious floristic differences between vegetation of the quaternary sands and the volcanics.

Over 350 plant species have been recorded in the area. Thirteen vegetation community profiles have been described for the park (Bell 1997, refer to Table 1).

Placed in context with other nearby coastal areas, the park conserves a significantly high number of plant species for its size. Bell (1997) compares the 350 species recorded in his survey of the park with other flora surveys in nearby regions. By comparison, the park is an important centre for biological diversity.

In terms of threats to existing vegetation communities, Bell (1997) considers that inappropriate fire regimes within the park pose the greatest threat.

Table 1 Vegetation communities identified by Bell (1997)

Vegetation community	Approx % of park area	Conservation significance	Threatened species (TSC Act) & ROTAP
Depauperate relic rainforest	0.75 ha (<0.1%)	Local: Poor Regional: Adequate National: Adequate	Eucalyptus paniculata ³
Melaleuca Swamp Forest	4.3 ha (0.2%)	Local: Adequate Regional: Adequate National: Adequate	None recorded
Open Sedgeland	33.6 ha (1.5%)	Local: Poor Regional: Adequate National: Adequate	None recorded
Fringing Swamp Forest	36 ha (1.6%)	Local: Reasonable Regional: Adequate National: Reasonable	None recorded
Lepironia Swampland	37 ha (1.6%)	Local: Reasonable Regional: Reasonable	None recorded

Vegetation community	Approx % of park area	Conservation significance	Threatened species (TSC Act) & ROTAP
		National: Reasonable	
Intermediate Heath on Impeded Sand	55 ha (2.5%)	Local: Adequate Regional: Adequate National: Adequate	None recorded
Baumea Sedgeland	71 ha (3%)	Local: Poor Regional: Adequate National: Adequate	None recorded
Wet Heath on Impeded Sand	85 ha (3.5%)	Local: Adequate Regional: Adequate National: Adequate	None recorded
Nerong Open Forest	109 ha (4%)	Local: Poor Regional: Reasonable National: Reasonable	<i>Prostanthera densa</i> ² <i>Eucalyptus paniculata</i> <i>ssp matutina</i> ³ <i>Rulingia</i> <i>hermanniifolia</i> ³
Nerong Rocky Heath	240 ha (10%)	Local: Poor Regional: Reasonable National: Reasonable	<i>Melaleuca groveana</i> ² <i>Eucalyptus paniculata</i> <i>ssp matutina</i> ³ <i>Rulingia</i> <i>hermanniifolia</i> ³
Exposed Coastal Scrub	320 ha (15%)	Local: Adequate Regional: Adequate National: Adequate	None recorded
Wallum Scrub Heath	377 ha (16%)	Local: Adequate Regional: Reasonable National: Reasonable	<i>Tetratheca juncea</i> ? ²
Blackbutt/Apple Open Forest	1013 ha(41%)	Local: Adequate Regional: Adequate National: Adequate	<i>Diuris arenaria</i> ¹ <i>Diuris praecox</i> ²

1 classified Endangered (Threatened Species Conservation Act)

2 classified Vulnerable (Threatened Species Conservation Act)

3 listed in Rare or Threatened Australian Plants (1996)

NPWS estimates that there is 267 hectares (12%) within the park where a high fire frequency is posing a high risk to biodiversity, including Stephens Peak, Quarry Hill, Shoal Bay Wetlands and a number of areas within the Anna Bay Sandbeds. There is 281 hectares (14%) within the park where it is possible to identify where a low fire frequency is posing a high risk to biodiversity, including the eastern side of Tomaree Head and Fingal Island (NPWS 2003). Strategies to protect vegetation communities such as prescribed burns for ecological purposes are identified in the draft Fire Management Strategy for the park (NPWS 2003), however, the first priority is to complete works for protection of life and property around the park boundary.

The extraction of water from the Nelson Bay Special Area has been identified as potentially having an ecological impact on the native plant and animal communities of the area in the long term. Limits on the volume of water extracted and conditions for detailed monitoring of the water table are described in Schedule 6 of the Water Sharing Plan for the Tomago

Tomaree Stockton Groundwater Sources. These conditions are designed to ensure that the rate of water extraction is environmentally sustainable.

The introduced weed bitou bush (*Chrysanthemoides monilifera*), which is widespread in the park, has the ability to invade and quickly colonise existing coastal plant communities. Strategies to control bitou bush are outlined in section 5.5.

Guidelines/Actions

- Research will be encouraged into the ecology and management requirements of threatened plants and plant communities including the impact of water extraction activities on groundwater dependant ecosystems.
- Species locally indigenous to Tomaree National Park will be used in landscaping and revegetation programs, except for initial stabilisation works when suitable sterile species may be used. As far as practical these locally indigenous plants will be propagated from the site.
- The fire requirements of *Melaleuca groveana* will be investigated. In the interim, communities of *M. groveana* will be protected as far as practical from fire.
- The NPWS will liaise with Hunter Water and the appropriate power line authorities to manage slashing activities to assist with the conservation of threatened plant species, particularly orchids, within the park.
- The NPWS will liaise with Hunter Water Corporation and DLWC in relation to ensure that the rate of water extraction is consistent with the limits identified under the Water Management Licence.
- Research will be encouraged into determining whether the rate of water extraction is sustainable in relation to its impact on native vegetation communities.
- Fire will be excluded from wetland communities in line with Reserve Fire Management Strategy to protect native vegetation communities from inappropriate fire regimes.
- Implementation of the Reserve Fire Management Strategy.

5.3 Native animals

Comprehensive lists of native animals for Tomaree National Park are lacking, with the exception of birds. The lists prepared to date have been compiled from casual sightings of animals in the park, from surveys undertaken as a requirement for environmental impact studies elsewhere on the peninsula, from other environmental studies and the NPWS Wildlife Atlas. Thus the lists include native animals recorded in the Port Stephens area and expected to occur in the park but which are yet to be confirmed.

Fifty mammal species have been recorded, or are expected to occur, in the park. Common mammal species recorded in the park include;

- eastern grey kangaroo (*Macropus giganteus*)
- swamp wallaby (*Wallabia bicolor*)
- red-necked wallaby (*Macropus rufogriseus*)
- yellow-footed antechinus (*Antechinus flavipes*)
- brown antechinus (*Antechinus stuartii*)
- long-nosed bandicoot (*Perameles nasuta*)
- northern brown bandicoot (*Isoodon macrourus*)
- sugar glider (*Petaurus breviceps*)
- ringtail possum (*Pseudocheirus peregrinus*)

- brushtail possum (*Trichosurus vulpecula*)
- short beaked echidna (*Tachyglossus aculeatus*).

The park provides habitat for 12 species of bat and 10 species of native rats and mice.

Koalas *Phascolarctos cinereus* are frequently sighted in the vicinity of the park, notably near Gan Gan Road at One Mile Beach. Swamp mahogany, in particular, is a favoured food tree of the local population. The park itself contains only small areas of preferred Koala habitat, the majority of the park classified as supplementary habitat (Port Stephens Council Comprehensive Koala Management Plan 2002). The park has been used as a release site for rehabilitated sick, injured or orphaned koalas.

Over 200 bird species have been recorded in the area. These include nomadic land birds that move into the park through the winter months to feed on the abundant nectar supplied by the flowers of the coastal heaths. At this time a wide variety of honeyeaters and lorikeets can be seen. They include such species as the friarbirds (*Philemon* spp.), wattlebirds (*Anthochaera* spp.), yellow-winged honeyeaters (*Phylidonyris* spp.) and rainbow and scaly-breasted lorikeets (*Trichoglossus* spp). Coastal heaths, such as those in the park, are essential to the survival of many of these species.

Through the summer months the park supports populations of migratory tropical species including a variety of cuckoos and rainforest pigeons. Species like the noisy pitta (*Pitta versicolor*) are at the limits of their southern distribution in the Port Stephens area.

Migratory shorebirds are found mainly on the beaches and coastal rock platforms. Some examples are the eastern curlew (*Numenius madagascariensis*), bar-tailed godwit (*Limosa lapponica*) and red-necked stint (*Calidris ruficollis*). Non-migratory shorebirds including the pied oystercatcher (*Haematopus longirostris*) and sooty oystercatcher (*Haematopus fuliginosus*) are recorded in the park.

Table 2 Threatened fauna species known or likely to occur in Tomaree National Park

Common name	Scientific name	Occurrence
Endangered birds		
Little tern	<i>Sterna albifrons</i>	Known to occur
Regent honeyeater	<i>Anthochaera phrygia</i>	Not recorded
Vulnerable mammals		
Koala	<i>Phascolarctos cinereus</i>	Known to occur
Tiger quoll	<i>Dasyurus maculatus</i>	Known to occur
Brushtail Phascogale	<i>Phascogale tapoatafa</i>	Known to occur
Squirrel glider	<i>Petaurus norfolcensis</i>	Known to occur
Grey-headed flying fox	<i>Pteropus poliocephalus</i>	
Large-eared pied bat	<i>Chalinolobus dwyeri</i>	Not recorded
Yellow-bellied sheath tailed bat	<i>Saccolaimus flaviventris</i>	Not recorded
Golden tipped bat	<i>Kerivoula papuensis</i>	Not recorded
Little bent-wing bat	<i>Miniopterus australis</i>	Known to occur
Common bent-wing bat	<i>Miniopterus australis</i>	Known to occur
Greater broad nosed bat	<i>Scoteanax rueppellii</i>	Known to occur
Vulnerable birds		
Sooty oystercatcher	<i>Haematopus fuliginosus</i>	Known to occur
Pied oystercatcher	<i>H. longirostris</i>	Known to occur
Sooty tern	<i>S. fuscata</i>	Known to occur
Turquoise parrot	<i>Neophema pulchella</i>	Not recorded
Powerful owl	<i>Ninox strenua</i>	Known to occur
Square-tailed kite	<i>Lophoictinia isura</i>	Known to occur
Osprey	<i>Pandion haliaetus</i>	Known to occur
Glossy black cockatoo	<i>Calyptorhynchus lathami</i>	Not recorded
Masked owl	<i>Tyto novaehollandiae</i>	Known to occur
Vulnerable amphibian		
Wallum froglet	<i>Crinia tinnula</i>	Known to occur
Vulnerable reptile		
Pale-headed snake	<i>Hoplocephalus bitorquatus</i>	Not recorded

Fifteen species of raptors including the white-bellied sea-eagle (*Haliaeetus leucogaster*), whistling kite (*Haliastur sphenurus*), swamp harrier (*Circus approximans*), brown goshawk (*Accipiter fasciatus*) and peregrine falcon (*Falco peregrinus*) are found in the park.

Thirty-eight species of reptiles and amphibians have been recorded or are likely to occur in Tomaree National Park. These include the land mullet (*Egernia major*), 14 other species of lizard, nine frogs and five snakes.

Very little is known about the invertebrate fauna of the park and no systematic surveys have been undertaken. Given the importance of this group as food for the other larger vertebrate groups, more knowledge of their ecology, abundance and distribution is needed.

Predation by foxes and cats is a direct threat to native fauna in the park. Indirect threats to fauna include changes to vegetation communities by inappropriate fire regime and invasion by bitou bush. Strategies to control these threats are discussed in sections 5.5 and 5.6.

Guidelines/Actions

- The importance of the park as part of a regionally significant system of lands that protect habitat essential for the survival of native animals in the Port Stephens and Tomaree Peninsula areas will be promoted to visitors and the local community.
- Research into the distribution of native animals in the park and their ecological requirements will be encouraged.
- Use of the park for the release of rehabilitated native animals will continue in accordance with NPWS Rehabilitation of Fauna Policy. Any release must have the permission of the Area Manager and the park must be close to the site of origin of the animal.
- Pest control strategies will be undertaken to reduce threats from introduced predators and weeds (refer to section 5.5).
- Undertake amphibian survey of wetland communities within the park.

5.4 Cultural heritage

The Aboriginal people living in the Tomaree area prior to European settlement were members of the Worimi tribe. Descendants of these people still live in the local community today. Worimi territory stretches from Myall Lakes in the north to Barrington Tops in the west and the Hunter River in the south. The Worimi associate natural resources with the use and enjoyment of foods and medicines, caring for the land, passing on cultural knowledge and strengthening social bonds. They consider that Aboriginal heritage and nature are inseparable and need to be managed in an integrated manner across the landscape, including within the park.

Birubi Point Aboriginal Place was declared on 20 April 2007 under Section 84 of the National Parks and Wildlife Act. Birubi Point is significant to the Worimi Aboriginal people because its cultural values include, but go beyond, the archaeological material that is the physical representation of their connection and occupation of the land. The area of Birubi Point within the park is part of a larger cultural landscape that has significant elements on various land tenures. The Birubi Point Aboriginal Place Management Plan (Umwelt 2018) sets out how the Aboriginal place will be managed over the next 10 years to protect and respect its value and significance to the Worimi People.

Aboriginal archaeological sites at Samurai Beach are threatened by the high level of recreation activity that occurs within the park at this location, specifically vehicle access. Systematic surveys for Aboriginal cultural and archaeological sites are required at this location and through the whole park to determine the extent of sites and appropriate management actions for their conservation.

The non-Aboriginal community also has long association with the land within the park. The landscape has provided an important economic, defence, transport, water supply, social and recreational role in the history of the region.

The two most significant historic sites in the park are the Point Stephens Lighthouse constructed in 1862 and the World War II gun emplacements and related structures on Tomaree Head.

The Point Stephens Lighthouse and associated buildings were transferred from the Australian Maritime Safety Authority (AMSA) to NPWS in 1997. NSW Waterways is responsible for the light, batteries and solar panels. The eastern end of Point Stephens was gazetted as national park in January 2003. The lighthouse is listed on the State Heritage Register, Register of the National Estate and Port Stephens Council Heritage Register. A detailed description of the history and conservation policies for the lighthouse is contained in the Conservation Management and Cultural Tourism Plan (CMCTP), NPWS Lighthouses, Volume 2 (NPWS 1999). One of the CMCTP policies was for the reconstruction of the lighthouse keepers cottages (gutted by fire in 1991) subject to a feasibility study. This has been completed and found that the reconstruction proposal was not feasible and recommended that the cottages and associated buildings be managed as a ruin. The Conservation Management Plan was recently amended to reflect this change in management focus.

The World War II gun emplacements and related structures on Tomaree Head were established during 1941 as part of a system for the defence of the east coast of Australia. The fortifications and associated structures were constructed for the protection of Port Stephens, including Nelson Head and Tomaree Head. The defence of Port Stephens was important enough to warrant its establishment as a separate fire command. The complex included: heavy gun emplacements; light weapons and machine gun pits; torpedo tubes; search light stations; a radar tower; barbed wire and stake defences; a command post; barracks and other miscellaneous buildings. The only substantial remains are those of the gun emplacements, with only foundations remaining of most other structures. In addition, parts of the headland were cleared, services such as power and water provided, and a network of roads and trails developed for the construction of the site and for the subsequent deployment of artillery and troops.

In 1993, the Royal Australian Air Force removed the collapsed radar tower from the summit of Tomaree Head. In 2001, the turning gear base of the radar tower was replaced in its original position. The remaining sections of the radar tower are currently stored at the Williamstown Air Base.

The Tomaree Head fortifications on Tomaree Head are listed on the State Heritage Register and management of all sites within the listed curtilage must comply with the requirements of the Heritage Act. A Conservation Management Plan has been prepared (NPWS 2002) which documents extant historic structures and provides guidelines for future management of the historic heritage. The age of the structures and weathering over the years has resulted in structural damage and prevents safe visitor access in places. A statement of heritage impact will be prepared to inform structural repairs including stabilisation works for gun emplacement No 2 and other necessary maintenance. These works will also allow for improved visitor access and offer a more interactive experience such as guided tours.

The defence complex at Tomaree Head is an important part of the history of the Port Stephens area. Priority will be given to protecting the complex from vandalism and from unintentional damage from visitors to the park. Appropriate sites considered representative of the military occupation of Tomaree Headland have been interpreted to the public. Further enhancement of visitor experiences, including interpretation and upgrades of visitor facilities are proposed as part of the development of the Tomaree Coastal Walk (see Section 6.2) and will be guided by the Tomaree Head Heritage Interpretation Strategy (LookEar 2018).

Guidelines/Actions

- Places, objects, features and landscapes of cultural value will be protected and conserved.
- The provisions of the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter) will guide management decisions regarding the park's cultural heritage.
- Aboriginal sites will be documented and protected in consultation with the Worimi Local Aboriginal Land Council and the local Aboriginal community.
- The impact on Aboriginal sites of proposed developments within the park and other management programs will be assessed and, where necessary, proposed developments will be relocated and sites protected from human impact.
- All known Aboriginal sites will be recorded on the NPWS Aboriginal Heritage Information Management System.
- All known historic places will be recorded on the NPWS Historic Heritage Information Management System.
- The cultural heritage significance of items or places will be assessed and, if significant, will be appropriately protected.
- NPWS will liaise with the Worimi Local Aboriginal Lands Council and local Aboriginal community members about the assessment of significant sites as a basis for determining their appropriate management.
- Birubi Point Aboriginal Place will be managed in accordance with the site-specific management plan (Umwelt 2018) in consultation with the Worimi Local Aboriginal Lands Council, the Worimi Conservation Lands Board and local Aboriginal community members. This will include working with Port Stephens Council to adequately protect sites on and off the park, including the large midden on Council land in Fitzroy Street, Anna Bay.
- NPWS will conduct a systematic assessment of the Aboriginal cultural landscape of Samurai Beach, One Mile Beach and Birubi Point Aboriginal Place in consultation with the Worimi Aboriginal community.
- Point Stephens Lighthouse precinct will be managed in accordance with the CMCTP. The cottages and associated structures will be managed as ruins and the lighthouse will be managed to allow its continued use as a navigation aid and guided tours. Interpretative signs will be installed explaining the history of the lighthouse.
- The World War II fortifications on Tomaree Head will be managed in accordance with the Tomaree Head Conservation Management Plan (NPWS 2002). Items identified as having state significance in this report i.e. remains of the gun emplacements, observation and command posts and radar foundations will receive minimal maintenance to slow the gradual decay of these structures.
- Selected sites of the World War II fortifications (gun emplacements, command post and radar site) on Tomaree Head will be interpreted for visitors to the park with emphasis on demonstrating the importance of the complex for the defence of the east coast of Australia and of Port Stephens in particular. Interpretation of sites at Tomaree Head may also include information about the area's natural history and Aboriginal heritage and will be guided by the Tomaree Head Heritage Interpretation Strategy.

5.5 Introduced plants and animals

Introduced plants and animals include any plant or animal not indigenous to the park. Introduced plants and animals are of concern because they can have a detrimental effect on the natural and cultural heritage of the park and may also affect neighbouring lands.

The distribution of introduced plants is often associated with past land use practices. The proximity of the park to urban and semi-rural lands increases both the numbers and range of introduced species likely to be found.

A Hunter Region Pest Management Strategy (NPWS 2002) has been developed which identifies the major pest populations within the region and establishes criteria for prioritising control programs.

Bitou bush (*Chrysanthemoides monilifera*) is the weed of most concern in the park. It is a declared noxious weed in New South Wales and its invasive behaviour has been identified as a threatening process under the *Threatened Species Act*. As a weed of national significance it has both national and state strategies prepared for its control. The Hunter Region Bitou Bush Management Strategy 2002-2005 (NPWS 2001) provides a detailed description of the distribution and abundance of bitou bush in the park and control programs that are in progress. The strategy also identifies priorities and coordinates control programs with Port Stephens Council. Bitou has been successfully controlled at several sites in the park, including Zenith Beach, Box Beach, Kingsley Beach and Tomaree Head. Various control techniques such as chemical spray, physical removal and biological control have been utilised. Two biocontrols have established within the park, the bitou tip moth (*Comostolopsis germana*) which destroys developing leaves, buds and flowers and reduces seed production; and the bitou seed fly (*Mesoclanis polana*) which destroys developing seeds. While there are still significant areas of infestation in the park, it is important that the first priority for control programs is for follow-up work on areas already treated before expanding to new areas.

In addition to bitou bush the following weeds also occur in the park, albeit with relatively minor distribution but requiring control programs: lantana (*Lantana camara*), pampas grass (*Cortaderia selloana*), asparagus fern (*Protoasparagus spp*), morning glory (*Ipomoea spp*), polygala (*Polygala myrtifolia*), prickly pear (*Opuntia sp*) and camphor laurel (*Cinnamomum camphora*). These weeds may be treated concurrently where they occur in association with bitou.

A number of non-native plantings exist on Fingal Island associated with the Point Stephens Lighthouse. This includes gardens and an oleander (*Nerium oleander*) grove along the path leading to the lighthouse precinct. The nature and extent of these plantings need to be mapped and their cultural significance assessed. This information will then guide strategies for their appropriate management, particularly pest management and fire management strategies.

The proximity of the park to urban areas also creates opportunities for the community to assist in conservation work such as weed control and bush regeneration. To date, there have only been a small number of community assisted bush regeneration projects in the park. The NPWS will attempt to increase these opportunities.

Introduced animals impact on native species through direct predation, indirectly through progressive destruction of their habitat, and/or through competition for food or habitat. Of particular concern is the predation by domestic animals, such as cats and dogs' from adjacent urban areas. Predation by foxes and feral cats is, however, considered to have greater impact on native animals in the park.

A fox control program was started in the park in 1995. Bait stations were established and the community was encouraged to report any fox sightings. Also, in 1995 the Port Stephens Feral Animal Management Committee was formed to coordinate feral animal programs amongst landholders. As a result, the fox control program in Tomaree National Park is coordinated with baiting on lands managed by Hunter Water Corporation, RAAF, Port Stephens Council, Rural Land Holders, State Forests and DIPNR.

Anecdotal evidence indicates that fox numbers have declined due to the baiting program. Given the limitations of using 1080 baits near urban areas and the rapid reinfestation of the

park from foxes living in the surrounding urban areas, it is likely that foxes will persist but in lesser numbers.

Rabbits are often highly visible at the interface between the park and urban areas. The grassed fire breaks and suburban gardens provide a ready food source. Pindone baiting for rabbits has been undertaken in Tomaree National Park at selected locations on the urban interface in coordination with neighbours.

There are presently no licensed apiary sites within Tomaree National Park and in accordance with NPWS policy no such sites will be licensed in the park

Guidelines/Actions

- Introduced plants and animals will be controlled.
- Priority for the control of introduced plants and animals will be given to those species which:
 - conflict the most with nature conservation objectives
 - threaten cultural heritage values
 - threaten neighbouring lands
 - may be a threat because of disease
 - have a high capacity for dispersal
 - are new isolated occurrences.
- Research into the occurrence and distribution of introduced plants and animals will be encouraged. Priority for research into introduced plants and animals will be given to biological control methods and assessment of the distribution, abundance and impact of introduced species on native plant and animal communities.
- Liaison will be undertaken with neighbours of the park about preventing the introduction of non-native plants and animals into the park.
- Weed control and bush regeneration projects involving the community will be developed and encouraged where appropriate.
- Programs to control the invasion and spread of non-native plants within the park will be developed in cooperation with local authorities and park neighbours.
- Domestic pets, stock and other introduced animals (such as horses) will not be permitted in the park with the exception of authorised companion animals, such as guide dogs.
- European honeybee hives will not be permitted in the park.
- Investigate the conservation needs of heritage plantings and gardens on Fingal Island associated with the Point Stephens Lighthouse, including oleander (*Nerium oleander*) plantings along the path to the lighthouse. Appropriate strategies for their conservation to be included in relevant management strategies, including pest and fire management strategies.
- Continue to implement bitou bush program as described in the Hunter Region Pest Strategy.
- Continue to implement fox control program in coordination with the Port Stephens Feral Animal Management Committee.
- Lantana, morning glory, asparagus fern and polygala will be treated as part of bitou bush control.
- Prickly pear will be monitored, and steps taken to reintroduce *cactoblastis moth* to local prickly pear infestations if required.

- The occurrence, distribution and density of introduced plants and animals causing significant environmental damage will be mapped as part of the NSW Bitou Bush Strategy every five years or as otherwise required.
- Environments currently free of introduced plants and animals will be monitored to ensure their continued pest free status is maintained. Appropriate controls programs may be implemented if pest species are identified.
- Information will be distributed to neighbours regarding the impacts of introduced garden plants and domestic animals on park values.
- Control methods for rabbit populations will be investigated.
- Monitor the establishment and spread of bitou biological control agents.

5.6 Fire management

The NPWS regards fire as a natural phenomenon and one of the continuing physical factors influencing the Australian environment. Inappropriate fire regimes have been identified as a key threatening process affecting the biological diversity of NSW.

A variety of fire regimes are needed to maintain natural diversity. Accordingly the management of fire should aim to provide a pattern of fires of high, moderate and low intensity, frequency and extent.

NPWS fire history records for Tomaree National Park date back to 1982, but these records are not considered complete or accurate. Since 1982 approximately 40% of the park has been burnt twice and 12% has been burnt three or more times.

The highly flammable vegetation, combined with sandy soils that dry quickly and frequent strong winds, means that fires can burn at high intensity throughout the year, even shortly after rain. The park also has a high incidence of arson, which is facilitated by the large number of tracks allowing arsonists to access most areas of the park. The adjoining urban interface and Hunter Water facilities (refer section 10 Nelson Bay Special Area) are potentially vulnerable to wildfire.

A fire management strategy has been prepared for Tomaree National Park and the Tilligerry Nature Reserve which outlines the fire management approach for these reserves. The strategy outlines recent fire history, key assets within and adjoining the parks, fire management zones and fire control advantages such as management trails and water supply points. It also contains fire regime guidelines relevant to the specific vegetation communities, Aboriginal heritage and other values found in the parks. The strategy will be updated on a regular basis.

The fire management objectives for the park are to:

- reduce the occurrence of unauthorised fires in the park
- protect persons and property in or immediately adjacent to the park from fire
- manage fire regimes appropriate for the conservation of native plant and animal communities, and in particular to avoid the extinction of any native plant species known to occur naturally within the park
- protect from damage by bushfires or bushfire related activities, known Aboriginal sites, historic places and culturally significant feature in the park
- educate the public regarding bushfire prevention, protection, hazard reduction including mitigation (fuel reduction), fire behaviour, fires role in the natural environment, protective and ecological fire management.

Guidelines/Action

- The management of fire in the park will be in accordance with the Tomaree National Park and Tilligerry Nature Reserve Fire Management Strategy. The NPWS will undertake responsibility for fire management in the Nelson Bay Special Area unless otherwise stated in the memorandum of understanding between Hunter Water Corporation and the NPWS.
- Liaison will be maintained and cooperative strategies developed with bushfire brigades, local government and neighbours to ensure a coordinated approach to fire management in the park and adjoining lands.
- Priority for fuel reduction will be given to areas of the park adjoining property where there is a potential high fire risk.
- The NPWS will oppose any proposed development on lands adjacent to the park where provision has not been made for adequate asset protection, radiation and fuel reduction zones on those lands, rather than expecting these zones to be established on the park.
- The cooperation of all relevant authorities, neighbours and visitors will be sought in eliminating unplanned fires.
- Research will be encouraged into the effects of fire on plant and animal communities. The application of techniques indicated by the results will be incorporated into fire management of the park where appropriate.
- Fire hazard reduction around built-up areas adjacent to the park will be undertaken by burning or mechanical means determined by an annual hazard/risk assessment and as outlined in the Fire Management Strategy.
- The NPWS will liaise with council, other land use authorities and neighbouring landholders to develop quick response and cooperative fire management arrangements.
- Public education programs on all aspects of bushfire, especially prevention, will be developed and undertaken in consultation with other relevant agencies.
- The system of fire trails within the park will be managed in accordance with the Fire Management Strategy.
- The lighting of fires within the park, except for management purposes, will be prohibited.
- The management trail network, primarily needed for fire management and protection purposes, as shown on Figure 1 will be maintained.
- The system of management trails in the park may be utilised for fire fighting training purposes by the Rural Fire Service with the prior consent of the NPWS.

6. Visitor opportunities and education

6.1 Promotion of the park

The promotion and presentation of the natural and cultural heritage of the park is a core function of NPWS. NPWS is committed to encourage and support community stewardship of natural and cultural heritage across the landscape and to share an appreciation and enjoyment of this heritage. In general, provision of information assists the protection of natural and cultural heritage, promotes support for conservation and increases the enjoyment and satisfaction of visitors.

The park has a number of natural and cultural features of interest to visitors particularly the rocky coastline, beaches, the sand spit (tombolo) at Point Stephens, historic World War II relics and the lighthouse. It also provides opportunities to increase public awareness of values associated with the environment and biodiversity. These features will be promoted and interpreted to visitors in a manner which protects their special values and encourages appropriate use within and beyond the park.

Promotion of the park currently includes boundary and interpretative signs on Tomaree Head, and signage at key visitor destinations. Pre-visit information such as off park displays is also available at NPWS offices and tourist information centres such as the Nelson Bay Tourist Information Centre. The NPWS web site also contains information on the park and other national park estate in the area. A new Tomaree Head Heritage Interpretation Strategy (LookEar 2018) has been prepared to guide further interpretation and visitor experience of Tomaree Head in conjunction with the Tomaree Coastal Walk (see Section 6.2).

An important priority for NPWS, is the development of community education initiatives such as NPWS guided tours. A NPWS Discovery Ranger Program is regularly conducted in Tomaree National Park during school holiday periods.

Community support and good relationships and communication with park neighbours are important in park management. Major issues of concern to the local community include management of fire, introduced pest species and provisions for vehicle access.

Guidelines/Actions

- Interpretation of the park values and appropriate visitor use will be promoted to the local community and visitors.
- The NPWS will support and assist educational use of the park by schools and community groups through the provision of information and programs, such as NPWS Discovery Programs.
- The NPWS will liaise with other organisations that provide information to park visitors to ensure all information is consistent, up to date and promotes appropriate visitor expectations and behaviour.
- The NPWS will provide a guided tour program within the park at peak visitor times.
- NPWS will involve local Aboriginal people in the interpretation of Aboriginal heritage values.
- Interpretative signage will be installed at appropriate locations within the park, including Tomaree Head, Point Stephens, Samurai Beach, Birubi Point and other key sites along the Tomaree Coastal Walk.
- Digital technologies for delivering visitor information will be developed.
- NPWS will provide assistance where appropriate for tourism promotion and interpretation of the park.

6.2 Recreation opportunities

The extensive rocky coastline and many beaches and coves provide for a wide range of recreational opportunities in the park. Settings range from easily accessible vehicle-based picnic areas to more remote and isolated locations.

Tomaree National Park attracts an estimated 300,000 visitors each year. A pedestrian counter on the Tomaree Head Summit track indicates visitation of approximately 200,000 people per year on the summit walking track. It is expected that there will be continued growth in visitor numbers due to the close proximity of the park to Sydney and Newcastle as well as the rapid growth being experienced in the local residential population.

The focus of recreation in the park has historically been for day use activities. The park provides natural, low key recreational settings as an alternative to the highly developed recreation infrastructure on the Tomaree Peninsula (e.g. marinas, surf clubs, accommodation etc).

Guidelines/Actions

- The park will be managed to provide opportunities for nature-based recreation.
- Priority will be given to enhancing existing day use facilities and development of the Tomaree Coastal Walk, adding to the range of walking opportunities away from Tomaree Head.
- The existing remote, natural recreational settings will be maintained.
- Camping will only be permitted in the park at the designated clothing-optional camping site at Samurai Beach's northern end, in association with the legal nude beach at Samurai.
- The lighting of fires by the public within the park will be prohibited.
- Aircraft providing visitor tours may land on Fingal Island with consent. Landing of aircraft elsewhere in the park is permitted for management and emergency purposes.

Public vehicle access

Public vehicle access is a relevant component in many of the recreational activities in the park. Vehicle access to a two-wheel drive standard is provided to most existing recreation sites in the park. Four-wheel drive access to and on Samurai Beach and to a car park close to Rocky Point will continue to be provided.

Guidelines/Actions

- Vehicle trails presently open for vehicle access at Fishermans Bay, Morna Pt and south of Fingal Bay will be closed to vehicles and rehabilitated. Some of these routes will be retained for pedestrian access only.
- Public vehicle access will be permitted in the following areas only as designated on Figure 1:
 - Zenith Beach Loop Road
 - Box Beach Road
 - Big Rocky Road (terminating at proposed new car park)
 - Samurai Beach (on defined access corridor and beach front only)
 - Boat Harbour car park (northern end of Tomaree Street)
 - Kingsley Beach (from Kingsley Drive to car park)
 - Fishermans Bay (from Pacific Street to car park)

- Iris Moore Reserve car park
- Pacific Street car park (Anna Bay).

Bushwalking

While walking is permitted throughout the entire park, the dense heath or understorey throughout most of the park makes walking off cleared tracks difficult. Other features of the park are accessible to walkers along management trails, closed vehicle trails, rocky foreshore and beaches.

In response to the growing popularity of nature-based walks, a 20-kilometre signature walk will be developed in the park, connecting visitors with outstanding natural features, Aboriginal culture, historic sites and scenery from Tomaree Head to Birubi Point. An indicative alignment is shown in Figure 1. Spur tracks to significant coastal features and vistas will also be included. The development of the Tomaree Coastal Walk will involve upgrades to some existing sections of walking tracks, construction of new track sections, and new supporting facilities. These include car parking, public amenities, signage and whale watching lookouts at various points along the walk.

The route of the coastal walk passes through key recreation areas from Tomaree Head at the northernmost end, to Zenith, Wreck and Box beaches, Rocky Point, Samurai and One Mile beaches, Morna Point, Kingsley Beach, Fishermans Bay and finally the Anna Bay Foreshore.

Strategic location of supporting facilities will allow visitors to choose between short walks to viewing platforms for sightseeing, half-day walks or the full distance for experienced walkers. The majority of the Tomaree Coastal Walk will be constructed and maintained to Class 3 or 4 standard under the Australian Walking Track Grading System (see Table 3). Walking tracks on Tomaree Head will be constructed and maintained to a Class 2 or 3 standard.

Table 3 Australian Walking Track Grading System

Grade	Description
Class 1	No bushwalking experience required. Flat even surface with no steps or steep sections. Suitable for wheelchair users who have someone to assist them. Walks no greater than 5km.
Class 2	No bushwalking experience required. The track is hardened or compacted surface and may have a gentle hill section or sections and occasional steps. Walks no greater than 10km.
Class 3	Suitable for most ages and fitness levels. Some bushwalking experience recommended. Tracks may have short steep hill sections, a rough surface and many steps. Walks up to 20km.
Class 4	Bushwalking experience recommended. Tracks may be long, rough and very steep. Directional signage may be limited.
Class 5	Very experienced bushwalkers with specialised skills, including navigation and emergency first aid. Tracks are likely to be very rough, very steep and unmarked. Walks may be more than 20km.

A master plan will be prepared to bring together all aspects of the Tomaree Coastal Walk, with site-specific information about the route, and associated visitor facility improvements, and staging for their delivery. The master plan and environmental impact assessments will be publicly exhibited to allow for further community input and, once finalised, will inform the final alignment and design of the walk and accompanying visitor facilities.

Trails closed to vehicle access may be retained for pedestrian access depending on environmental impact and whether there are existing feasible alternative walking routes in that area. If retained, they will revert to a track of just sufficient width to allow track maintenance and weed control.

There are a number of informal walking tracks that form essentially private or exclusive access routes from adjoining lands into the park. These tracks have potential to cause significant adverse impacts on park values as well as liability issues.

Guidelines/Actions

- Walkers will be permitted to use the management trail system.
- Subject to a master plan and environmental and heritage impact assessment, construct and maintain the Tomaree Coastal Walk from Tomaree Head to Birubi Point. The final track alignment may differ from the indicative route corridor shown in Figure 1 as the result of relevant assessments.
- Walking tracks or routes that are not accessible at the park's boundary to the general public will be closed and rehabilitated.
- Vehicle trails that are retained for pedestrian access will be maintained to a sufficient width to allow track maintenance and weed control.
- Subject to environmental and heritage impact assessment, upgrade existing visitor facilities and/or construct new visitor facilities to support the Tomaree Coastal Walk. These may include car parking, whale watching platforms, signage and public amenities at various points along the walk as determined by the Tomaree Coastal Walk master plan. No new access roads will be constructed in the park.

Camping

Within the Port Stephens area camping has traditionally been focused on areas outside the park. There are camping facilities close to the park at Birubi Point, One Mile Beach, Fingal Bay and Shoal Bay. Other than the Samurai Beach northern end camping area, only a few small areas in the park have been utilised for camping in the past. These sites only had limited capacity, had no facilities and had adverse environmental impacts (refer to the later section on One Mile and Samurai Beach). No camping areas will be developed within the park as many suitable sites are located in the surrounding area and are accessible from the park's walking track network (see Figure 1).

Guidelines/Actions

- Camping will only be permitted in the park at the camping site at the northern end of the clothing-optional Samurai Beach.

Fishing

Fishing from beaches or rocky headlands within the park is a popular activity. Many informal vehicle trails were developed to provide access to fishing spots. Due to the poor siting of these trails they have caused major environmental impacts. Trails currently open to public vehicle access at Morna Point, Fishermans Bay and Fingal Bay will be closed to vehicles and rehabilitated. Some routes will be retained for pedestrian access (refer to previous section on vehicle access).

A number of life rings have been installed at popular rock fishing locations in the park by recreational fishing organisations.

Guidelines/Actions

- NPWS will liaise with fishing organisations to ensure they monitor and maintain life rings located within the park.

Swimming

Swimming is a popular recreational activity from park beaches. There are no patrolled beaches within the park, however, patrolled swimming areas are located at Fingal Bay, the southern end of One Mile Beach and Birubi Point. Strong rips and undercurrents, as well as dangerous surf conditions, may occur along the coast.

Guidelines/Actions

- Install signage where appropriate advising visitors that park beaches are unpatrolled and may be unsafe. The signs may also advise where there are patrolled beaches nearby.

Bicycling

Cycling, in particular the use of mountain bikes, is an increasingly popular recreation activity in the park. Most cycling occurs on the gravelled management trails in the park as the natural sand surface on other trails is generally unsuitable for cycling. One designated cycleway exists in the park at Birubi Point Aboriginal Place which is part of a longer cycleway constructed by Port Stephens Council. Another council cycleway occurs along the perimeter of the park at Shoal Bay.

Guidelines/Actions

- Cycling is permitted on park roads, management trails, public roads and on the Birubi Point Aboriginal Place cycleway. Cycling is not permitted in other areas of the park including off road or on designated walking tracks, such as the Tomaree Coastal Walk.

Rock climbing and abseiling

The cliffs around Tomaree Head and other sites are used for rock climbing and abseiling. Negative environmental impacts associated with rock climbing and abseiling have been seen at a number of new and established sites. These impacts include vegetation disturbance, erosion, creation of new tracks, damage to rock features and installation of rock bolts. The creation of access tracks to cliff tops next to designated walking tracks, climber safety and threats to nesting peregrine falcons are issues of concern at locations on Tomaree Head and may similarly apply at locations along the Tomaree Coastal Walk.

Impacts of rock climbing will be monitored in fragile areas and climbing will be managed via a code of conduct or similar guideline. NPWS may also impose other restrictions, exclusions or closures which may be necessary to manage environmental, visitor experience and safety issues arising. While rock bolts are necessary for the maintenance of a range of climbing opportunities in the park it is not appropriate for the NPWS to install or certify bolts.

Participants in these activities will need to ensure the safety of fixed anchor points prior to use. NPWS will ensure there is not a proliferation of bolts in the park and in consultation with climbing representative groups, may remove those that have an unacceptable impact or which are no longer required.

Guidelines/Actions

- Abseiling and rock climbing activities may be undertaken in accordance with:
 - the provisions of this plan
 - any code of conduct (or similar guideline) promoted by the NPWS, and
 - any other restrictions, exclusions or closures which may be introduced by the NPWS as a result of any environmental, visitor experience and safety issues arising.
- No additional rock bolts or fixed anchor points will be permitted in the park.
- Rock bolts, which are leading to unacceptable environmental impacts may be removed.
- For this activity a group is defined as eight or more people. All group rock climbing and abseiling will require written consent from the Area Manager.

Key recreation areas

The areas listed below are popular outdoor recreation sites within the park which warrant additional consideration.

Tomaree Head

The walking track to the summit of Tomaree Head is the most popular walk in the park. Spectacular views are available from the summit and the remains of the WWII defence installations add to the interest of the site. To enhance the protection of the heritage value of the site and improve visitor safety, walkers are encouraged to stay on designated walking tracks. The start of the summit walk and the section between the gun emplacement and torpedo tubes are within the grounds of the adjoining Tomaree Lodge and require an agreement between the Department of Family and Community Services and NPWS to formalise this access. There is also a walking track along the foreshore through Tomaree Lodge land that connects the Tomaree Head trackhead car park to the torpedo tubes.

As part of the development of the 20-kilometre Tomaree Coastal Walk, further improvements are planned for Tomaree Head to address the quality of track infrastructure and ameliorate the impacts of extensive visitor use. In addition to upgrading existing infrastructure, proposals include formalising the track that links the Summit Walking Track to the Fort Tomaree Walking Track, upgrading the car park at the off park trackhead, constructing a lookout south of the gun emplacements and developing a new section of track to link Tomaree Head and Zenith Beach car park. Work will also be undertaken to alleviate congestion during peak periods around the existing stairs and boardwalk structures. Some viewing platforms will be enlarged, and extra platforms may be added to cater for increases in visitation.

As part of the enhancement to visitor facilities in the Tomaree Head precinct, the informal track from the gun emplacements down to the foreshore near the torpedo tubes will be upgraded in consultation with the Department of Family and Community Services.

Details about the location and design of all improvements and upgrades in the Tomaree Head precinct will be addressed in the Tomaree Coastal Walk master plan.

Guidelines/Actions

- Visitors will be encouraged to remain on designated walking tracks on Tomaree Head.
- Walking tracks and associated infrastructure on Tomaree Head will be upgraded and developed as part of the Tomaree Coastal Walk. This may include viewing platforms, track improvements, car parking, interpretation and public amenities.

- Ocean views will be restored from the gun emplacements on Tomaree Head by selective hand clearing. Interpretation signs will be installed at the gun emplacements.
- A formal agreement between the Department of Family and Community Services and NPWS will be developed to ensure continued public access to the Tomaree Head track and facilitate upgrading of the foreshore loop.

Zenith, Wreck and Box Beaches

As part of the Tomaree Coastal Walk (described in the bushwalking section above), a new track will be constructed linking Tomaree Head to Fingal Beach via Zenith, Wreck and Box beaches (see Figure 1). The route will allow visitors to traverse Stephens Peak, Quarry Hill and Green Hill offering views to Fingal Island and back to Tomaree Head.

Wreck Beach is also accessible to walkers using Wreck Beach Management Trail and walking track. Visitors park at the end of Verona Road or Lionel Avenue, Shoal Bay.

Visitor numbers at Wreck Beach are relatively low because of the walking distance involved (approx 600m), limited car parking capacity and poor track standard. These factors limit access to this part of the coast for many visitors to the Port Stephens area.

Box Beach is accessible by the only sealed public access road in the park. A car park, walking track to the beach and viewing platform are provided. A gate is installed on Box Beach Road at the Ocean Avenue end and is generally closed between the hours of 10pm and 5am.

As part of the Tomaree Coastal Walk (described in the bushwalking section above), a new track will be constructed linking Zenith, Wreck and Box beaches (see Figure 1). The route will allow visitors to walk along the eastern edge of Stephens Peak and Quarry Hill offering views to Fingal Island and back to Tomaree Head. The walk connects the cliff top with the beach route and proceeds around the rock formations at the southern end of Box Beach.

Toilets may also be provided at the northern car park adjoining Zenith Beach and/or at Box Beach, depending on the outcome of environmental impact assessment and other considerations. Car parking upgrades may also be planned and implemented at Zenith Beach and Box Beach.

Guidelines/Actions

- The natural setting of Zenith and Box beaches will be maintained while still providing a high standard of access.
- New walking track connections linking Zenith, Wreck and Box beaches will be developed as part of the Tomaree Coastal Walk.
- Box Beach Carpark may be upgraded in accordance with the outcomes of the Tomaree Coastal Walk master plan.
- NPWS will liaise with Port Stephens Council regarding upgrading the Zenith Beach lower car park as part of the Tomaree Coastal Walk master plan.
- Zenith Beach upper car park may be upgraded in accordance with the outcomes of the Tomaree Coastal Walk master plan.
- The gate on Box Beach Road at the Ocean Avenue end will be closed between the hours of 10pm and 5am, or as otherwise considered appropriate by the Area Manager considering time of year, public safety, demand for access etc.

Point Stephens Lighthouse

Anglers and walkers gain access to the Point Stephens Lighthouse along Fingal Beach, across a sand spit and along a vehicle trail to the lighthouse. Crossing the spit can be dangerous at times and visitors need to watch the tides. Warning signs have recently been installed at the main beach access points. Guided Discovery tours are held during school holiday periods that include entry into the lighthouse. Vandalism to the lighthouse and associated structures has been a regular occurrence. Public vehicle access is not permitted on the beach within the park or to Point Stephens.

Fingal Island can also be accessed by helicopter as part of a licensed visitor activity (see Section 6.3).

Guidelines/Actions

- A gate will be installed across the western end of the vehicle access trail on Point Stephens. This trail shall be maintained to allow vehicle access for management purposes only. The trail to the old jetty area and grit hole will be maintained for pedestrian access.
- Interpretative signs describing the history of the area will be installed on Point Stephens.

Rocky Point

This headland (also known as 'Big Rocky') is located approximately halfway between Boulder Bay and Samurai Beach. The headland has a long history of human occupation and use. Aboriginal use of the area is evident from midden material and stone artefacts. Non-Aboriginal use of the area includes a history of shell grit extraction although there is little evidence of this former use now. The headland continues to be a popular location for recreational fishing, snorkelling, scuba diving and scenery appreciation. Vehicle access is along Big Rocky Road to the car park. Big Rocky Trail provides pedestrian access from the car park to the foreshore. The Big Rocky car park and vehicle access will be upgraded as part of the Tomaree Coastal Walk. A new toilet may also be planned and developed.

Walking tracks from the Big Rocky car park to Little Rocky will also be developed. The route to Little Rocky will follow the existing vehicle track where possible, while the route to Skate Bay is likely to be a combination of new walking track and existing vehicle trail.

Guidelines/Actions

- From the car park, develop and maintain walking tracks to Little Rocky as part of the Tomaree Coastal Walk.

One Mile and Samurai Beaches

Access to One Mile Beach through the park is by two walking tracks originating from two parking areas provided by Port Stephens Council on Gan Gan Road. The walking tracks to the beach from these car parks cross sand dunes, causing dune blowouts. Stabilisation work has commenced at the southern access point.

The southern end of One Mile Beach is outside the park and managed by Port Stephens Council. The surf lifesaving club and professional anglers gain vehicular access to the beach at this point.

Samurai Beach, a popular location for nude bathing, has been declared an official nude bathing beach under the Local Government Act. Samurai Beach conserves the best

transgressive dune field within the park and has extensive evidence of Aboriginal use and occupation.

The Tomaree Coastal Walk (as described in the bushwalking section above) will utilise the existing route along Samurai Beach (see Figure 1) with spur tracks at both ends leading down to the beach from the headlands. The feasibility of an alternative route passing behind the beach via the Samurai Wetlands will also be considered, and may be developed in the future, subject to available funding.

Access to the beach by 4WD vehicles is popular but there has been damage to the dunes and Aboriginal middens from indiscriminate driving off the access corridor and beach. Steel cable fencing was installed each side of the vehicle access corridor in 1998. While this reduced the number of vehicles driving on the dunes, it is not feasible to effectively fence off all potential vehicle access points to the dunes.

Speeding vehicles on the beach may pose a threat to pedestrians, particularly when the beach is busy.

Access to Samurai Beach by 4WD along the designated access corridor will be allowed to continue, but its impact will be monitored. Access may be temporarily restricted or closed if the beach is unsafe or if vehicular use threatens park values (e.g. Aboriginal cultural heritage or nesting shorebirds).

Unlike nearby Stockton Beach which is managed by the Worimi Conservation Lands Board, beach vehicle permits are not currently required for vehicles on Samurai Beach. A permit system may become necessary to protect park values in the future.

A small group of regular campers, primarily nudists, use the northern end of Samurai Beach. This activity commenced in the 1970s and has continued. The scale of camping at this site has been relatively low. No facilities such as toilets are provided, and the area is not publicised in any published promotional material for the park. The establishment of a formal camping area within the dune system at Samurai Beach, being a clothing-optional beach and the only camping area within the reserve, could potentially create a situation of social conflict. This clothing-optional camping use will be permitted to continue, with regulation as to the area to be utilised and conditions of access and use established. The camping use will be monitored.

Guidelines/Actions

- The two designated walking tracks (see Figure 1) to One Mile Beach from Gan Gan Road will be monitored for erosion, and erosion control measures installed where required. Other informal walking tracks will be closed.
- Spur tracks will be constructed at both ends of Samurai Beach to provide access for walkers on the Tomaree Coastal Walk.
- Construct an alternative walking route behind Samurai Beach via the Samurai Wetlands, subject to the outcomes of a feasibility assessment and availability of funding.
- Driving on Samurai Beach will be permitted via the access corridor shown on Figure 1 but driving outside the access corridor or beach front onto the dunes or on vegetated areas is prohibited. Vehicle use of Samurai Beach will be monitored and vehicle access on to Samurai Beach may be temporarily restricted or closed if the beach is unsafe or if vehicle use threatens park values. A beach vehicle permit system may be introduced by NPWS.
- A speed limit will be imposed on Samurai Beach of 40kph for vehicles on the beach, or 15kph when within 50 metres of people on the beach.
- If necessary, introduce a beach vehicle permit system for Samurai Beach.

- A gate will be installed on the access track to Samurai Beach to enforce temporary closures. Vehicle access to the beach will be signposted on Gan Gan Road in consultation with Port Stephens Council.
- Clothing-optional camping use will be permitted to continue at the northern end of Samurai Beach, with regulation as to the area to be utilised and conditions of access and use established. Campers are required to provide their own toilet facilities. The camping site and use will be monitored and may be regulated if its use threatens park values.
- Install signs at the main entry points to Samurai Beach advising that clothing-optional bathing is permitted and about driving, camping and other regulations.

Morna Point

An ad hoc complex of vehicle trails and walking tracks has developed over time on the headland caused by people accessing Morna Point. These trails and tracks are generally poorly sited and constructed and have resulted in significant soil erosion due to damage to the vegetation. To prevent these impacts all vehicle access trails on Morna Point will be closed and rehabilitated. Walking access to the point will continue to be provided by modifying existing vehicle trails and constructing a new walking track to provide access from the southern end of One Mile Beach to Boat Harbour via Morna Point. A car park is provided at Boat Harbour near the southern entrance to Morna Point.

The Tomaree Coastal Walk (as described in the bushwalking section above) passes through Morna Point. Track will be upgraded and new infrastructure provided, including a viewing platform and interpretative display.

Guidelines/Actions

- Vehicle tracks on Morna Point will be closed and rehabilitated, although sections of the trails may be adapted to provide walking access to key fishing sites and to One Mile Beach (see Figure 1). An environmental assessment will be undertaken as part of the track assessment process.

Kingsley Beach, Fishermans Bay and Anna Bay Foreshore

Kingsley Beach is accessible by a set of steps from an unsealed road and car park within the park. These facilities require some reconstruction, including sealing of the road and car park surface to improve their environmental and public use amenity.

Fishermans Bay is a protected bay popular for fishing, snorkelling and swimming, particularly for family groups. A short gravel access road leads to a small car park above the beach. A short steep sealed trail provides access to the beach for both vehicles and pedestrians. Boats are sometimes launched from here, with vehicles and trailers parked on the beach. Due to the small size of the beach, this can create conflict with other beach users. Launching and retrieving of boats will continue to be permitted. To enhance the amenity of the beach for other beach users, trailers and vehicles must be removed from the beach after launching. Alternative trailer parking for five vehicles will be made available in the grassed area opposite the current car parking area. Licensed commercial anglers will still be permitted to undertake commercial fishing activities from the beach.

Another point of visitor access to Fishermans Bay is at the end of Ocean Street. This headland is one of the best sites for land-based whale watching on the Tomaree Peninsula. A short access trail has allowed vehicles to drive onto the headland. This trail will be closed to vehicles but will be modified as a walking track.

A 4WD trail leads east from Fishermans Bay to a small cove known as Little Kingsley. This trail, which is currently badly eroded, will be closed to vehicles but modified as a walking track. Soil conservation and bush regeneration works will be carried out to restore the degraded areas.

The Tomaree Coastal Walk (as described in the bushwalking section above) passes through Kingsley Beach, Little Kingsley, and Fishermans Bay before reaching its southern terminal at Birubi Point. As part of formalising the track for the coastal walk, part of the Fishermans Bay track will be closed and rehabilitated. Works are also proposed at the trackhead, where the car park will be upgraded and interpretation signage provided at the existing Iris Moore day use area. Upgrading of the parking areas at Kingsley Beach and Fishermans Bay may also be planned and implemented.

The rocky foreshore at Anna Bay is easily accessible and popular for fishing, snorkelling, surfing, picnicking, whale watching and sightseeing. Car parking areas in the park that serve this area are located at Iris Moore Reserve and Pacific Street. Port Stephens Council installed most of the existing visitor infrastructure, including the car parks, picnic facilities and the concrete cycleway prior to the land being added to the park. These facilities require some reconstruction, including sealing of the road and car park surface to improve their environmental and public amenity.

The headland at Anna Bay contains important Aboriginal sites, including shell middens and a ceremonial site, although the historic cemetery is not part of the park. The heavy infestation of bitou bush on the headland has the potential to threaten cultural heritage values.

Existing informal pedestrian access on the headland consists of a rough track used by anglers and a grassy open area which allows access to a viewing point on the western side of Birubi Point. These informal tracks will be rationalised with some being upgraded where necessary to provide walking access, while tracks that have no strategic importance will be closed and rehabilitated. Any upgrading of tracks will be subject to an environmental assessment and the concurrence of the local Aboriginal community. Signs may be installed interpreting the natural and cultural heritage values of the area.

The narrow strip of Tomaree National Park between Iris Moore Reserve and Birubi Point Aboriginal Place has been highly modified and experiences high recreational use, particularly by anglers, walkers and surfers. Given the narrow shape, degree of habitat modification and recreational use, it may be appropriate to investigate a change in the protected area classification in this section of the park only; changing it to a regional park which would link to Worimi Regional Park, part of the Worimi Conservation Lands.

Guidelines/Actions

- Reconstruct Kingsley Beach road and car park, including sealing of the road and car park surface and upgrading of the pedestrian access from the car park to the beach.
- Trailer parking for five vehicles will be developed at Fishermans Bay. Regulatory signs will be erected advising that trailers must be removed from the beach after launching at all times. Licensed professional anglers will be provided with access under licence from NPWS.
- Vehicle trails to the east of Fishermans Bay, that are not required for management purposes, will be closed and rehabilitated while still permitting pedestrian access to Little Kingsley Beach.
- The vehicle trail to Fishermans Bay headland at the end of Ocean Street will be closed to vehicle use but modified as a walking track. Where necessary disturbed areas will be rehabilitated.

- The Iris Moore Reserve car park may be upgraded as part of the Tomaree Coastal Walk and day use facilities will be retained and upgraded where necessary as part of the development of the Tomaree Coastal Walk.
- Pedestrian access on Birubi Point headland will be rationalised with key tracks upgraded and remaining redundant tracks rehabilitated. Any upgrading will be subject to an acceptable environmental assessment and the concurrence of the local Aboriginal community. Signs interpreting the natural and cultural heritage values of the area may also be installed.
- Changing of the classification of the section of the park from Birubi Point Aboriginal Place to Iris Moore Reserve to a regional park will be investigated.

6.3 Commercial recreation, group activities and competitive events

Commercial recreation operations carried out in the park at present are only a small component of public use of the park and this is not expected to change significantly. Licensed tours currently on offer include a WWII bus tour and a 4WD tag along tour. Licenses for commercial recreation have been issued for a surfing school at One Mile Beach. Interest has also been expressed for other guided activities such as bushwalks on Tomaree Head and Point Stephens. It is unknown to what extent unlicensed commercial tours operators utilise Tomaree Head. The Tomaree Coastal Walk (as described in the bushwalking section above) offers scope for additional guided tours, for example, Aboriginal cultural heritage and land-based whale watching. Demand for licensed coffee and food vans to provide for visitors at suitable junctures along the walking track will be carefully managed. Permits are also issued for commercial filming and photography within the park.

The helipad on Fingal Island is available for licensed helicopter tours. Potential licences issued for such tours by NPWS will consider environmental factors such as bird breeding and whale migration and factors with potential to affect local residents and park users such as flight frequency, timing and paths. Monitoring and consideration of impacts related to licensed helicopter tours will be ongoing.

Group activities, including the Samurai Beach carnival organised by the Free Beach Association, surfing competitions, running events and wedding ceremonies are regularly granted consent to operate in the park.

Guidelines/Actions

- All commercial recreation and visitor support activities in the park require a licence or other authorisation.
- Monitoring and enforcement of unlicensed commercial operators will be undertaken in the park.
- All licensed commercial recreation operators and activities will be monitored with respect to impacts, safety requirements and compliance with licence conditions.
- All activities involving groups of 20 or more persons will require consent (A smaller limit has been placed on rock climbing, refer to section 6.2, Rock climbing and Abseiling).
- Aircraft providing visitor tours may land on Fingal Island with consent.

7. Research

7.1 Informing park management

The purpose of scientific study in the park is to improve understanding of its natural and cultural heritage. Research will also establish the requirements for the management of particular species of wildlife and cultural sites. Data and findings from research will be utilised in park management.

To encourage scientific research within Tomaree National Park a prospectus of relevant research projects will be prepared. A number of research requirements for the park have been identified elsewhere in this plan of management.

Guidelines/Actions

- NPWS initiated research will aim to provide information on the natural and cultural heritage, and on visitor use to facilitate improved management of the park.
- All research will be subject to NPWS policy and procedures for the granting of permits, conduct of research and the presentation of results.
- A prospectus will be prepared as a guide to preferred research projects in the park. Preferred topics will be those of direct relevance to management, including, but not limited to:
 - the ecology, status and distribution of native and introduced plant and animal species and communities, particularly threatened native plant and animal species
 - Aboriginal association and use of the park
 - the impact of fire on the native plants and animals of the park
 - fire requirements of the vulnerable plant *Melaleuca groveana*
 - effects of water extraction by Hunter Water Corporation, on wetlands and other vegetation of the Anna Bay Sandbeds
 - visitor numbers, trends, needs, impacts and satisfaction with their recreational experience in the park.

8. Other uses

8.1 Appropriate and inappropriate uses

Professional anglers licensed by the Department of Primary Industries carry out beach hauling seasonally on Fingal Bay Beach and One Mile Beach and launching from Fisherman's Bay. Although currently not issued a permit or consents, there will be a requirement for these operators to be issued with permits or consent to access the park under the NPWS Professional Fishing Access Policy.

Hunter Water Corporation has been granted an easement to operate a sewage pipeline over a section of the park so as to access the Boulder Bay Sewage treatment works. This easement lies outside the Nelson Bay Special Area. This activity will continue to be licensed as set out in the Deed of Grant for the easement.

In addition to the powerlines operated by the Hunter Water Corporation, Energy Australia also operates power lines traversing the park to provide electricity to Fingal Bay and Fishermans Bay. Associated with the power lines are corridors cleared of vegetation and maintenance trails for servicing the lines.

Encroachments and inappropriate uses of the park, particularly by some neighbours, occurs along the urban interface, include vegetable gardens, rockeries, retaining walls, garden sheds, compost bins, fixed garden furniture, clothes lines, planting of introduced species etc. Illegal structures also exist on Fingal Island. In many cases these uses have occurred for many years prior to the land becoming national park. It is the objective of the NPWS to remove all such illegal developments, however, where it is not practical to remove the use or structure (e.g. because it is a 'fixed' structure such as a retaining wall), the encroachment will need to be licensed and possibly surveyed. Negotiations with landholders with encroachments will comply with the NPWS Neighbour Relations Policy and Leasing Manual.

Guidelines/Actions

- NPWS will issue appropriate permits or consents to professional anglers licensed by NSW Fisheries in accordance with the NPWS Professional Fishing Access Policy.
- Hunter Water Corporation will be authorised to continue to operate the existing sewage pipeline to the Boulder Bay Sewage treatment works as set out in the Deed of Grant for the easement.
- Investigate the tenure of electricity infrastructure operated by Energy Australia in the park and where necessary provide formal easements and/or other authorisations to allow Energy Australia to continue to operate existing powerlines. As part of this investigation re-routing of the powerlines will be considered, so as to provide conservation and landscape outcomes, and negotiations entered into with Energy Australia for their eventual relocation.
- In consultation with neighbours, develop and implement a strategy for the removal of encroachments into the park. Where removal is not practical, or may present a safety hazard, the encroachment will be licensed. Normal commercial rates will be charged to the landholder for an encroachment licence.

9. Management operations

9.1 Management trail system

Tomaree National Park contains a network of management trails used for fire control and other management operations. The management trail system also provides access to power and water installations constructed and operated by other authorities. The system evolved without adequate planning and consequently some trails are poorly constructed and located. These trails have been degraded by unauthorised vehicle use and in some cases are no longer suitable for their original purpose.

The management trail system required by the NPWS for the management of the park, and those that will be maintained, are shown on Figure 1. Other management trails within the Special Area may be required by the Hunter Water Corporation and will be subject to a MOU to be developed between the Corporation and the NPWS.

The management trail system has been reviewed taking into account the following criteria:

- the requirements of efficient and effective fire management in the park
- the current and potential environmental damage caused by unauthorised vehicle use; in particular increased soil erosion and damage or destruction of cultural heritage sites
- public safety
- the operational requirements of the NPWS and other occupiers of lands within the national park.

9.2 Other facilities

Other facilities utilised for NPWS management purposes include the NPWS works depot at Boat Harbour and two former Hunter Water compounds (western end of Boreline Trail and the old meteorological station).

A Waste Management and Recycling Strategy for the Northern Branch of NPWS has recently been adopted. This document recommends removal of garbage disposal facilities in all but the most highly developed camping and day use areas, and the provision of recycling facilities in areas where collection services are maintained. Under the classification system for visitor sites in the waste strategy, no waste collection facilities will be provided in the park.

Guidelines/Actions

- The management trails required by NPWS for the management of the park are shown on Figure 1. These trails will be maintained in a serviceable and safe condition. Only the management trails shown on Figure 1 will be retained while those trails not identified on Figure 1 will be closed and rehabilitated.
- Only authorised vehicles will be permitted on the management trail system.
- All management trails will be signposted and gated to prevent unauthorised access.
- The existing NPWS Boat Harbour depot and on park storage compounds will continue to operate on their current sites.
- Garbage collection facilities will not be provided in the park. Signage will be installed at key visitor locations requesting visitors to take their garbage out of the park for proper recycling or disposal.

10. Water harvesting and catchment provisions

10.1 Nelson Bay Special Area

The Crown Water Reserves (WR76303 & WR74199) and Hunter Water freehold land contained within the Nelson Bay Special Area declared under the *Hunter Water Act 1991* were added to Tomaree National Park in April 1996. The catchment area protects an underground aquifer from which the Hunter Water Corporation extracts strategically significant quantities of high quality groundwater (refer to section 5.1). The aquifer was the sole source of water to the Tomaree Peninsula from 1949 to 2002. It was supplemented by a pipeline from Tomago in 2002. The western portion of the park occurs within the 'Nelson Bay Special Area' which is declared under the Hunter Water Act and is subject to the protection provisions of s51 of that Act and the Hunter Water (Special Areas) Regulation 2003. The extent of the Special Area is shown on Figure 1.

With the acquisition of infrastructure and trusteeship of the Crown Water Reserves, Hunter Water Corporation has progressively increased its groundwater extraction, water treatment and supply capability over the last 50 years, keeping pace with the demand for water by a growing residential and visitor population as well as local industry needs. Water supply bores, pipes, fittings and power lines serve to supply groundwater to two water treatment plants located within the park. After treatment, potable water is stored and then delivered for use on the Tomaree Peninsula. A comprehensive groundwater monitoring bore network is also in place within and beyond the boundaries of the Tomaree National Park. Radio telemetry is installed to allow for remote monitoring and control. A network of gravel roads and trails has been established to provide access for the operation, maintenance and inspection of this infrastructure.

The NPW Act (s.185) provides for the rights of the Hunter Water Corporation to exercise its functions under the Hunter Water Act including the extraction of groundwater from a Special Area within the park. Under s185, the NPW Act does not affect the status of the Nelson Bay Special Area nor does it affect the provisions of the Hunter Water (Special Areas) Regulation. A lease, licence, easement or right of way shall not be granted under the NPW Act for land within the Tomaree National Park that is also part of the Special Area without the concurrence of the Hunter Water Corporation and the Director-General of the Department of Infrastructure, Planning & Natural Resources (DIPNR).

The section of the Special Area within the park will be managed by the NPWS while allowing the Hunter Water Corporation to exercise its functions under the *Hunter Water Act*, including, but not limited to:

- the operation, maintenance and augmentation of water extraction and supply infrastructure such as bores, pipelines, power supply, water treatment plants, reservoirs, pumps and monitoring equipment
- the operation, maintenance and augmentation of waste-water transportation infrastructure
- survey, investigation and design relating to the above.

The Hunter Water Corporation currently operates under a water management licence from DIPNR to extract water. A water sharing plan for the Tomago Tomaree Stockton Groundwater Sources was gazetted in February 2003, to come into force on 1 July 2004. The water management licence has recently been reviewed and it is expected that ongoing water extraction will be in accordance with the provisions of the water sharing plan. The

water management licence contains conditions to ensure that the extraction is undertaken in a sustainable manner.

A joint memorandum of understanding will be developed and implemented with the Hunter Water Corporation in order to maintain catchment values and water quality in the Nelson Bay Special Area.

Guidelines/Actions

- Within Tomaree National Park, the Hunter Water Corporation may continue to exercise its functions under the Hunter Water Act, as provided for under s185 of the NPW Act.
- Any new infrastructure by the Hunter Water Corporation must be installed, operated and maintained in accordance with their water management licence and other relevant regulatory requirements.
- NPWS will give due regard to the protection of groundwater quality in the planning and implementation of its own activities and any activities within the park requiring the approval of the NPWS, in consultation with the Hunter Water Corporation.
- In order to protect water quality and infrastructure in the Nelson Bay Special Area, only those recreational activities identified in this plan will be permitted through agreement with the Hunter Water Corporation.
- An MOU will be developed between NPWS and Hunter Water Corporation to manage on-ground operations within the Nelson Bay Special Area. This should be completed within 2 years following adoption of this plan.
- The NPWS and Hunter Water Corporation will share the establishment and maintenance of appropriate bush fire protection measures for Hunter Water Corporation assets. Details will be described in the proposed memorandum of understanding.

11. Plan implementation

11.1 System of management

This plan of management is part of a system of management developed by the NPWS. The system includes the NPW Act, management policies, established conservation and recreation philosophies, and strategic planning at corporate, branch and regional levels. The latter may include development of related plans such as regional recreation plans, species recovery plans, fire management plans and conservation plans.

Section 81 of the Act requires that this plan of management shall be carried out and given effect, and that no operations shall be undertaken in relation to the park unless they are in accordance with the plan.

Implementation of this plan will be undertaken within the annual programs of the NPWS Hunter Region. Relative priorities for identified activities are set out in the table below. These priorities are determined in the context of directorate and regional strategic planning, and are subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister.

The environmental impact of proposed activities will be assessed at all stages in accordance with established environmental assessment procedures. Where impacts are found to be unacceptable, activities will be modified in accordance with plan.

This plan of management does not have a specific term and will stay in force until amended or replaced in accordance with section 73 of the NPW Act. The implementation of the plan will be monitored and its success in achieving the identified objectives will be assessed.

Guidelines/Actions

- Undertake an annual review of progress in implementing this plan of management.
- Undertake an assessment after five years of the effectiveness of managing the park in accordance with this plan and of the degree of success in achieving the plan's objectives and desired outcomes. Base the evaluation on the monitoring programs set out in this plan and any others that may be developed.

Implementation table (summary – see plan for details)

Section	Action	Priority
5. Conservation of natural and cultural heritage		
5.1 Geology, landform, hydrology and soils	The geology and coastal landforms of the Tomaree Peninsula will be interpreted to visitors.	Medium
	All land management and development within the park will incorporate effective soil erosion and sedimentation control measures. All disturbed sites not required for park management or operation of Hunter Water Corporation's infrastructure will be progressively rehabilitated.	Medium
	A memorandum of understanding will be developed and implemented with the Hunter Water Corporation in order to maintain catchment values and water quality in the Nelson Bay Special Area.	High
	Existing dune restoration works within the park will continue, including the program at Zenith Beach, and new	Medium

Section	Action	Priority
	restoration works will progressively be implemented where necessary.	
	A study into the historical and current rate of dune encroachment in to the wetlands at Samurai Beach will be undertaken.	Medium
	Dune restoration programs will be progressively undertaken at the southern section of One Mile Beach, Box Beach and Ocean Avenue in Anna Bay.	Medium
	Roads and trails not required for public access, NPWS management purposes or Hunter Water's operations will be closed and rehabilitated as resources permit.	High
5.2 Native plants	Research will be encouraged into the ecology and management requirements of threatened plants and plant communities including the impact of water extraction activities on groundwater dependant ecosystems.	Medium
	Species locally indigenous to Tomaree National Park will be used in landscaping and revegetation programs, except for initial stabilisation works when suitable sterile species may be used. As far as practical these locally indigenous plants will be propagated from the site.	High
	The fire requirements of <i>Melaleuca groveana</i> will be investigated. In the interim, communities of <i>M. groveana</i> will be protected as far as practical from fire.	High
	The NPWS will liaise with Hunter Water and the appropriate power line authorities to manage slashing activities to assist with the conservation of threatened plant species, particularly orchids, within the park.	High
	The NPWS will liaise with Hunter Water Corporation and DLWC in relation to ensure that the rate of water extraction is consistent with the limits identified under the Water Management Licence.	High
	Research will be encouraged into determining whether the rate of water extraction is sustainable in relation to its impact on native vegetation communities.	High
	Fire will be excluded from wetland communities in line with Reserve Fire Management Strategy to protect native vegetation communities from inappropriate fire regimes.	High
	Implementation of the Reserve Fire Management Strategy.	High
5.3 Native animals	The importance of the park as part of a regionally significant system of lands that protect habitat essential for the survival of native animals in the Port Stephens and Tomaree Peninsula areas will be promoted to visitors and the local community.	Low
	Research into the distribution of native animals in the park and their ecological requirements will be encouraged.	Medium
	Use of the park for the release of rehabilitated native animals will continue in accordance with NPWS Rehabilitation of Fauna Policy. Any release must have the permission of the Area Manager and the park must be close to the site of origin of the animal.	Low

Section	Action	Priority
	Pest control strategies will be undertaken to reduce threats from introduced predators and weeds.	High
	Undertake amphibian survey of wetland communities within the park.	Medium
5.4 Cultural heritage	Places, objects, features and landscapes of cultural value will be protected and conserved.	High
	Aboriginal sites will be documented and protected in consultation with the Worimi Local Aboriginal Land Council and the local Aboriginal community. All known Aboriginal sites will be recorded on the NPWS Aboriginal Heritage Information Management System.	High
	All known historic places will be recorded on the NPWS Historic Heritage Information Management System.	Medium
	The cultural heritage significance of items or places will be assessed and, if significant, will be appropriately protected.	Medium
	NPWS will liaise with the Worimi Local Aboriginal Lands Council and local Aboriginal community members about the assessment of significant sites as a basis for determining their appropriate management.	Medium
	Birubi Point Aboriginal Place will be managed in accordance with the site-specific management plan (Umwelt 2018) in consultation with the Worimi Local Aboriginal Lands Council, the Worimi Conservation Lands Board and local Aboriginal community members. This will include working with Port Stephens Council to adequately protect sites on and off the park, including the large midden on Council land in Fitzroy Street, Anna Bay.	High
	NPWS will conduct a systematic assessment of the Aboriginal cultural landscape of Samurai Beach, One Mile Beach and Birubi Point in consultation with the Worimi Aboriginal community.	Medium
	Interpretation signs will be installed explaining the history of the lighthouse.	Medium
	The World War II fortifications on Tomaree Head will be managed in accordance with the Tomaree Head Conservation Management Plan (NPWS 2002). Items identified as having state significance in this report, i.e. remains of the gun emplacements, observation and command posts and radar foundations will receive minimal maintenance to slow the gradual decay of these structures.	Medium
	Selected sites of the World War II fortifications (gun emplacements, command post and radar site) on Tomaree Head will be interpreted for visitors to the park with emphasis on demonstrating the importance of the complex for the defence of the east coast of Australia and of Port Stephens in particular. Interpretation of sites at Tomaree Head may also include information about the area's natural history and Aboriginal heritage and will be guided by the Tomaree Head Heritage Interpretation Strategy.	Medium
5.5 Introduced plants and animals	Research into the occurrence and distribution of introduced plants and animals will be encouraged. Priority for research into introduced plants and animals will be	Medium

Section	Action	Priority
	given to biological control methods and assessment of the distribution, abundance and impact of introduced species on native plant and animal communities.	
	Liaison will be undertaken with neighbours of the park about preventing the introduction of non-native plants and animals into the park.	Medium
	Programs to control the invasion and spread of non-native plants within the park will be developed in cooperation with local authorities and park neighbours.	High
	Weed control and bush regeneration projects involving the community will be developed and encouraged where appropriate.	Medium
	Investigate the conservation needs of heritage plantings and gardens on Fingal Island associated with the Point Stephens Lighthouse, including oleander plantings along the path to the lighthouse. Appropriate strategies for their conservation to be included in relevant management strategies, including pest and fire management strategies.	Low
	Continue to implement bitou bush program as described in the Hunter Region Pest Strategy.	High
	Continue to implement fox control program in coordination with the Port Stephens Feral Animal Management Committee.	Medium
	Lantana, morning glory, asparagus fern and polygala will be treated as part of bitou bush control.	High
	Prickly pear will be monitored, and steps taken to reintroduce cactoblastis moth to local prickly pear infestations if required.	Medium
	The occurrence, distribution and density of introduced plants and animals causing significant environmental damage will be mapped as part of the NSW Bitou Bush Strategy every five years or as otherwise required.	High
	Environments currently free of introduced plants and animals will be monitored to ensure their continued pest free status is maintained. Appropriate controls programs may be implemented if pest species are identified.	High
	Information will be distributed to neighbours regarding the impacts of introduced garden plants and domestic animals on park values.	Medium
	Control methods for rabbit populations will be investigated.	Low
	Monitor the establishment and spread of bitou biological control agents.	High
	The introduced plantings and gardens on Fingal Island associated with the Point Stephens Lighthouse will be assessed to determine their heritage conservation value and potential to spread into the park. Exotic plants, however, that have the potential to become established in the park will be removed, even if the plants are shown to be of historic interest.	Low

Section	Action	Priority
5.6 Fire	The management of fire in the park will be in accordance with the Tomaree National Park and Tilligerry Nature Reserve Fire Management Strategy.	High
	Research will be encouraged into the effects of fire on plant and animal communities. The application of techniques indicated by the results will be incorporated into fire management of the park where appropriate.	Medium
	Fire hazard reduction around built-up areas adjacent to the park will be undertaken by burning or mechanical means determined by an annual hazard/risk assessment and as outlined in the Fire Management Strategy.	High
	The NPWS will liaise with council, other land use authorities and neighbouring landholders to develop quick response and cooperative fire management arrangements.	High
	Public education programs on all aspects of bushfire, especially prevention, will be developed and undertaken in consultation with other relevant agencies.	Medium
	The system of fire trails within the park will be managed in accordance with the Fire Management Strategy.	High
	The management trail network, primarily needed for fire management and protection purposes, as shown on Figure 1 will be maintained.	High
6. Visitor opportunities and education		
6.1. Promotion of the park	Interpretation of the park values and appropriate visitor use will be promoted to the local community and visitors.	Medium
	The NPWS will support and assist educational use of the park by schools and community groups through the provision of information and programs, such as NPWS Discovery Programs.	Medium
	The NPWS will liaise with other organisations that provide information to park visitors to ensure all information is consistent, up to date and promotes appropriate visitor expectations and behaviour.	Medium
	The NPWS will provide a guided tour program within the park at peak visitor times.	Medium
	NPWS will involve local Aboriginal people in the interpretation of Aboriginal heritage values.	Medium
	Interpretative signage will be installed at appropriate locations within the park, including Tomaree Head, Point Stephens, Samurai Beach, Birubi Point and other key sites along the Tomaree Coastal Walk.	Medium
	Digital technologies for delivering visitor information will be developed.	Medium
	NPWS will provide assistance where appropriate for tourism promotion and interpretation of the park.	Medium
6.2 Recreation	Public Vehicle Access	
	Vehicle trails presently open for vehicle access at Fishermans Bay, Morna Pt and south of Fingal Bay will be	High

Section	Action	Priority
	closed to vehicles and rehabilitated. Some of these routes will be retained for pedestrian access only.	
	Public vehicle access will be permitted as designated on Figure 1 in this plan.	High
Bushwalking		
	Subject to a master plan and environmental and heritage impact assessment, construct and maintain the Tomaree Coastal Walk from Tomaree Head to Birubi Point. The final track alignment may differ from the indicative route shown in Figure 1 as the result of relevant assessments.	High
	Subject to environmental and heritage impact assessment, upgrade existing visitor facilities and/or construct new visitor facilities to support the Tomaree Coastal Walk. These may include car parking, whale watching platforms, signage and public amenities at various points along the walk as determined by the Tomaree Coastal Walk master plan. No new access roads will be constructed in the park.	High
	Walking tracks or routes that are not accessible at the parks boundary to the general public will be closed and rehabilitated.	High
	Vehicle trails that are retained for pedestrian access will be maintained to sufficient width to allow track maintenance and weed control.	Medium
Camping		
	Clothing-optional camping use will be permitted to continue at the northern end of Samurai Beach, with regulation as to the area to be utilised and conditions of access and use established. The camping site and use will be monitored.	High
Swimming		
	Install signage where appropriate advising visitors that park beaches are unpatrolled and may be unsafe. The signs may also advise where there are patrolled beaches nearby.	High
Bicycling		
	Cycling is permitted on park roads, management trails, public roads and on the Birubi Point Aboriginal Place cycleway. Cycling is not permitted in other areas of the park including off road or on designated walking tracks, such as the Tomaree Coastal Walk.	Medium
Rock climbing and abseiling		
	Abseiling and rock climbing activities may be undertaken in accordance with: <ul style="list-style-type: none"> the provisions of this plan any code of conduct (or similar guideline) promoted by the NPWS any other restrictions, exclusions or closures which may be introduced by the NPWS as a result of any environmental, visitor experience and safety issues arising. 	Medium

Section	Action	Priority
	No additional rock bolts or fixed anchor points will be permitted in the park.	Medium
Tomaree Head		
	Visitors will be encouraged to remain on designated walking tracks on Tomaree Head.	Medium
	Walking tracks and associated infrastructure on Tomaree Head will be upgraded and developed as part of the Tomaree Coastal Walk. This may include viewing platforms, track improvements, car parking, interpretation and public amenities.	High
	Ocean views will be restored from the gun emplacements on Tomaree Head by selective hand clearing. Interpretation signs will be installed at the gun emplacements.	Medium
	A formal agreement between the Department of Family and Community Services and NPWS will be developed to ensure continued public access to the Tomaree Head track and facilitate upgrading of the foreshore loop.	Medium
Zenith, Wreck and Box Beaches		
	The natural setting of Zenith and Box beaches will be maintained while still providing a high standard of access.	High
	New walking track connections linking Zenith, Wreck and Box beaches will be developed as part of the Tomaree Coastal Walk.	High
	Box Beach Carpark may be upgraded in accordance with the outcomes of the Tomaree Coastal Walk master plan.	High
	NPWS will liaise with Port Stephens Council regarding upgrading the Zenith Beach lower car park as part of the Tomaree Coastal Walk master plan.	Medium
	Zenith Beach upper car park may be upgraded in accordance with the outcomes of the Tomaree Coastal Walk master plan.	Medium
	The gate on Box Beach Road at the Ocean Avenue end will be closed between the hours of 10pm and 5am, or as otherwise considered appropriate by the Area Manager considering time of year, public safety, demand for access etc.	High
Point Stephens Lighthouse		
	A gate will be installed across the western end of the vehicle access trail on Point Stephens. This trail shall be maintained to allow vehicle access for management purposes only. The trail to the old jetty area will be maintained for pedestrian access.	Medium
	Interpretation signs describing the history of the area will be installed on Point Stephens.	Medium
Rocky Point		
	From the car park, develop and maintain walking tracks to Little Rocky as part of the Tomaree Coastal Walk.	High

Section	Action	Priority
	One Mile and Samurai Beaches	
	The two designated walking tracks (see Figure 1) to One Mile Beach from Gan Gan Road will be monitored for erosion, and erosion control measures installed where required. Other informal walking tracks will be closed.	Medium
	Spur tracks will be constructed at both ends of Samurai Beach to provide access for walkers on the Tomaree Coastal Walk.	High
	Construct an alternative walking route behind Samurai Beach via the Samurai Wetlands, subject to the outcomes of a feasibility assessment and availability of funding.	Medium
	Driving on Samurai Beach will be permitted via the access corridor shown on Figure 1 but driving outside the access corridor or beach front onto the dunes or on vegetated areas is prohibited. Vehicle use of Samurai Beach will be monitored and vehicle access on to Samurai Beach may be temporarily restricted or closed if the beach is unsafe or if vehicle use threatens park values. A beach vehicle permit system may be introduced by NPWS.	High
	A speed limit will be imposed on Samurai Beach of 40kph, and 15kph within 50m of people on the beach.	High
	A gate will be installed on the access track to Samurai Beach to enforce temporary closures. Vehicle access to the beach will be signposted on Gan Gan Road in consultation with Port Stephens Council.	High
	Clothing-optional camping use will be permitted to continue at the northern end of Samurai Beach, with regulation as to the area to be utilised and conditions of access and use established. Campers are required to provide their own toilet facilities. The camping site and use will be monitored.	High
	Install signs at the main entry points to Samurai Beach advising that clothing-optional bathing is permitted and about driving, camping and other regulations.	Medium
	Morna Point	
	Vehicle tracks on Morna Point will be closed and rehabilitated, although sections of the trails may be adapted to provide walking access to key fishing sites and to One Mile Beach (see Figure 1). An environmental assessment will be undertaken as part of the track assessment process.	High
	Kingsley Beach, Fishermans Bay and Anna Bay Foreshore	
	Reconstruct Kingsley Beach road and car park, including sealing of the road and car park surface and upgrading of the pedestrian access from the car park to the beach.	High
	Trailer parking for five vehicles will be developed at Fishermans Bay. Regulatory signs will be erected advising that trailers must be removed from the beach after launching at all times. Licensed professional anglers will be provided with access under licence from NPWS.	Low

Section	Action	Priority
	Vehicle trails to the east of Fishermans Bay, that are not required for management purposes, will be closed and rehabilitated while still permitting pedestrian access to Little Kingsley Beach.	Medium
	The vehicle trail to Fishermans Bay headland at the end of Ocean Street will be closed to vehicle use but modified as a walking track. Where necessary disturbed areas will be rehabilitated.	High
	The Iris Moore Reserve car park may be upgraded as part of the Tomaree Coastal Walk and day use facilities will be retained and upgraded where necessary as part of the development of the Tomaree Coastal Walk.	Low
	Pedestrian access on Birubi Point headland will be rationalised with key tracks upgraded and remaining redundant tracks rehabilitated. Any upgrading will be subject to an acceptable environmental assessment and the concurrence of the local Aboriginal community. Signs interpreting the natural and cultural heritage values of the area may also be installed.	Medium
	Changing of the classification of the section of the park from Birubi Point Aboriginal Place to Iris Moore Reserve to a regional park will be investigated.	Low
6.3 Commercial Recreation, Group and Competitive Events	Monitoring and enforcement of unlicensed commercial operators will be undertaken in the park.	Medium
	All licensed commercial recreation operators and activities will be monitored with respect to impacts, safety requirements and compliance with licence conditions.	Medium
7. Research		
	A prospectus will be prepared as a guide to preferred research projects in the park. Preferred topics will be those of direct relevance to management.	Low
8. Other uses		
	Issue appropriate permits or consents to professional anglers licensed by NSW Fisheries in accordance with the NPWS Professional Fishing Access Policy.	Medium
	Investigate the tenure of electricity infrastructure operated by Energy Australia in the park and where necessary provide formal easements and/or other authorisations to allow Energy Australia to continue to operate existing powerlines.	Medium
	In consultation with neighbours, develop and implement a strategy for the removal of encroachments into the park.	Medium
9. Management operations		
	The management trails required by NPWS for the management of the park are shown on Figure 1. These trails will be maintained in a serviceable and safe condition. Only the management trails shown on Figure 1 will be retained while those trails not identified on Figure 1 will be closed and rehabilitated.	High

Section	Action	Priority
	All management trails will be signposted and gated to prevent unauthorised access.	High
	Garbage collection facilities will not be provided in the park. Signage will be installed at key visitor locations requesting visitors to take their garbage out of the park for proper recycling or disposal.	Medium
10. Water harvesting and catchment provisions		
	An MOU will be developed between NPWS and Hunter Water Corporation to manage on-ground operations within the Nelson Bay Special Area. This should be completed within two years following adoption of this plan.	High
	The NPWS and Hunter Water Corporation will share the establishment and maintenance of appropriate bush fire protection measures for Hunter Water Corporation assets. Details will be described in the proposed memorandum of understanding.	High
11. Plan implementation		
	Undertake an annual review of progress in implementing this plan of management.	Medium
	Undertake an assessment after five years of the effectiveness of managing the park in accordance with this plan and of the degree of success in achieving the plan's objectives and desired outcomes. Base the evaluation on the monitoring programs set out in this plan and any others that may be developed.	Medium

High priority activities are those imperative to achievement of the objectives and desired outcomes. They must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.

Medium priority activities are those that are necessary to achieve the objectives and desired outcomes but are not urgent.

Low priority activities are desirable to achieve management objectives and desired outcomes but can wait until resources become available.

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