NSW GOVERNMENT
Office of Environment & Heritage
NSW National Parks & Wildlife Service

Plan of Management

Broadwater National Park

BROADWATER NATIONAL PARK

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

February 2012

This plan of management was adopted by the Minister for the Environment on 14 February 2012

Acknowledgments

The NPWS acknowledges that this park is in the traditional country of the Bundjalung nation.

This plan of management is based on a draft plan prepared by the staff of the Northern Rivers Region of the National Parks and Wildlife Service (NPWS), part of the NSW Office of Environment and Heritage, and Southern Cross University student intern Sarah Wain.

FRONT COVER: Main photo: Salty Creek by Liz Dargin, NPWS.
Smaller photos: Day use area and view from Broadwater Lookout, by Lisa Walker, NPWS.

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FOREWORD

Broadwater National Park has an area of 4,290 hectares and is located approximately 35 kilometres south-east of Lismore on the north coast of New South Wales. The park extends from near the village of Evans Head in the south, northwards towards the village of Broadwater and includes 9 kilometres of coastline.

Broadwater National Park is part of a system of coastal national parks which protect important conservation features typical of the north coast of New South Wales, including plant communities such as wet and dry heathland, eucalypt forest and woodland. The park supports more that 360 species of animals, including 48 threatened species, and is an important area for migratory shorebirds that feed and/or roost on the sandy beaches, estuaries, lagoons and rock platforms during their annual migrations.

Broadwater National Park also includes sites of spiritual significance and of contemporary importance to the local Aboriginal community.

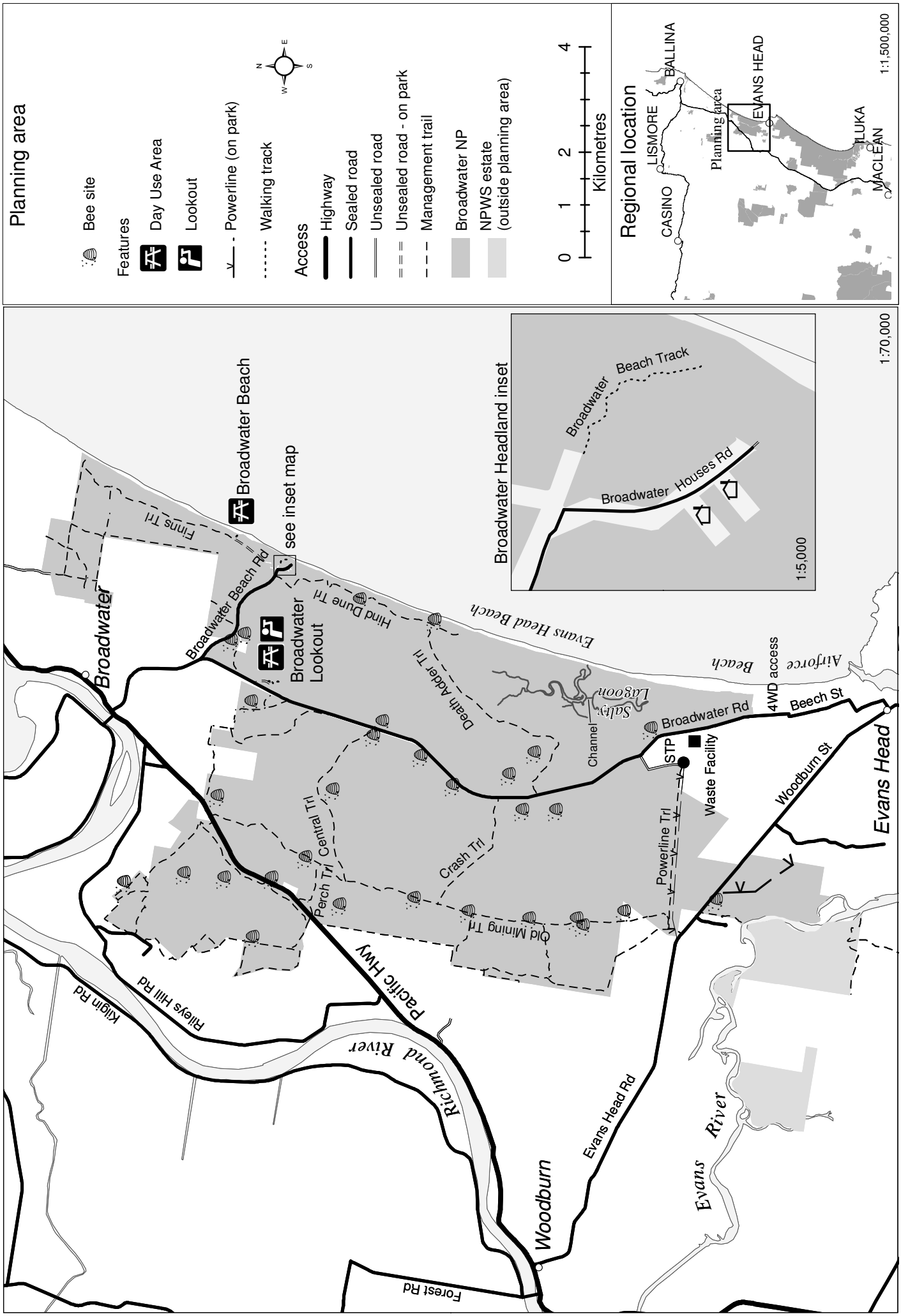
The New South Wales *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each national park. A draft plan of management for Broadwater National Park was placed on public exhibition from 16 April to 19 July 2010. The submissions received were carefully considered before adopting this plan.

The plan contains a number of actions to achieve the NSW 2021 goal to protect our natural environment, such as the implementation of strategies to assist the recovery of threatened species, including for the pied oystercatcher; preparation of a pest management plan for the park; and revision of the fire management strategy for the park. The plan also provides for enhanced recreation opportunities by upgrading pedestrian access from the Broadwater Beach Day Use Area to the beach, and provision of interpretation signage at the Broadwater Lookout.

This plan of management establishes the scheme of operations for Broadwater National Park. In accordance with section 73B of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

Robyn Parker MP
Minister for the Environment

MAP: BROADWATER NATIONAL PARK



1. LOCATION, GAZETTAL AND REGIONAL CONTEXT

Broadwater National Park (herein referred to as “the park”) was reserved in 1974 and is approximately 4,290 hectares in size. The park includes some nine kilometres of coastline, but does not include the intertidal zone below the mean high water mark.

The park extends from near the village of Evans Head in the south, northwards towards the village of Broadwater. The park is adjacent to areas of sugar cane farming and rural residential subdivision.

The park has a close biogeographical relationship with Bundjalung and Yuraygir National Parks and Iluka Nature Reserve. Together these areas make up a large, almost continuous strip of coastal land and an important conservation system, which preserves natural and cultural heritage values.

The southern end of the park is accessible via the Evans Head Road, 11 kilometres from the Pacific Highway at Woodburn. The northern end of the park is accessed from the village of Broadwater, along Broadwater-Evans Head Road.

The park lies within the Richmond Valley Council Local Government Area, the Northern Rivers Catchment Management Authority, and is within the area of the Jali Aboriginal Land Council. There is a registered Native Title Claim over the park: (NC96/16) – Bandjalang People Number 1.

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 NPW Regulation, the *Threatened Species Conservation Act 1995* (TSC Act) and the policies of the National Parks and Wildlife Service (NPWS).

Other legislation, international agreements and charters may also apply to management of the area. In particular, the *Environmental Planning and Assessment Act 1979* (EPA Act) may require the assessment and mitigation of the environmental impacts of works proposed in this plan. The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) also applies in relation to actions that may impact on migratory species and threatened species listed under that Act.

A plan of management is a statutory document under the NPW Act. Once the Minister has adopted a plan, no operations may be undertaken within the national park except in accordance with this plan. Broadwater National Park is currently subject to the Broadwater National Park, Bundjalung National Park and Iluka Nature Reserve Plan of Management (NPWS 1997). When adopted, this plan will replace the 1997 plan in relation to Broadwater National Park. This plan will also apply to any future additions to the park. Should management strategies or works be proposed for the national park or any additions 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 Act (section 30E), 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; and
- provide for appropriate research and monitoring.

2.3 STATEMENT OF SIGNIFICANCE

Broadwater National Park is considered to be of significance due to the following:

Biological Values:

- Migratory shorebirds feed and/or roost on the sandy beaches, estuaries, lagoons and rock platforms during their annual migrations. 23 bird species recorded in the park are included in the Japan and Australia Migratory Bird Agreement (JAMBA), China and Australia Migratory Bird Agreement (CAMBA) and Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA) including: the great egret; white-bellied sea-eagle; ruddy turnstone; whimbrel; eastern curlew; grey plover and little tern.
- The park is part of a sub-regional system of coastal national parks which protect important conservation features typical of the north coast of NSW including plant communities such as wet and dry heathland, eucalypt forest and woodland. It also protects parts of the estuaries of the Evans River.

Aboriginal Heritage:

- Includes sites which are of spiritual significance and of contemporary importance to the local Aboriginal community and demonstrates the pattern of Aboriginal occupation in the area.

Historic Heritage:

- Demonstrates the impact of more than 50 years of mineral sands mining and defence activities. Rehabilitation in the last 30 years has modified extensive areas of the beach ridge system.

Recreation Values:

- It is a destination for visitors to the North Coast of NSW and provides opportunities to experience the region's outstanding natural coastal environment.

2.4 SPECIFIC MANAGEMENT DIRECTIONS

Management of the park will focus on the protection of significant vegetation communities, threatened species and migratory shorebird habitat, improvement of the water quality of Salty Lagoon, protection of Aboriginal heritage, and encouragement of the use of the park for nature based recreation.

Major strategies to achieve these objectives are:

- Implementation of threatened species Priorities Action Statements and recovery plans;
- Fire and pest management to increase the parks ability to cope with future disturbances, including climate change;
- Continued liaison with Richmond Valley Council regarding the Environmental Monitoring Program and Salty Lagoon Rehabilitation Strategy;
- Consultation with Bandjalang Native Title Claimants and Jali Aboriginal Land Council; and
- Maintenance of Broadwater Lookout and Broadwater Beach Day Use Areas as the focus for recreation in the park.

3. VALUES

The location, landforms and plant and animal communities of an area have determined how it has been used and valued. Both Aboriginal and non-Aboriginal people place values on natural areas, including aesthetic, social, spiritual and recreational values. These values may be attached to the landscape as a whole or to individual components, for example to plant and animal species used by Aboriginal people. This plan of management aims to conserve both natural and cultural values. For reasons of clarity and document usefulness, natural heritage, cultural heritage, threats and on-going use are dealt with individually, but their inter-relationships are recognised.

3.1 GEOLOGY, LANDSCAPE AND HYDROLOGY

The park contains a well-preserved example of large sand dunes and swales formed some 60,000 years ago.

The landform features of the park include:

- Rocky headlands;
- Coastal frontal dunes and beaches;
- Coastal hind-dune wetland systems, such as Salty Lagoon; and
- Sand plains made up of a mosaic of dunes backed by parallel barrier sand ridges and swales of marine origin.

Most of the park comprises of coastal sand plain country with low relief, generally less than ten metres in height. The coastal sand plain country is Quaternary material ranging in age from Holocene deposits less than 10,000 years old to 120,000 year old Pleistocene sand beach ridge barriers, which now lie several kilometres inland from the present coastline.

Within the park, rocks of the New England Fold Belt are mantled by sand and rise to a height of 40 metres at the lookout on the Broadwater - Evans Head Road.

Indurated sands (‘coffee rock’) of Pleistocene age form a substrate to the sand plains in the park. Coastal erosion has exposed the coffee rock layer along much of the ocean foreshore and is a feature of the park. Wave erosion has carved the rock into unusual forms.

The Quaternary sands of Pleistocene age make up the dominant sand plain landform of the park, and overly the ‘coffee rock’ and the older geological features. These sand ridges were deposited during earlier periods of high sea level as marine sediments. Subsequent accumulations of wind-blown sands accentuate the well developed parallel barrier sand ridge and swale complex.

A subsequent reworking of the coastal dune systems during a period of shoreline erosion is believed to have concentrated heavy minerals in the sands into a ‘zone of mineralisation’. Mineral sands mining of this zone was once a significant activity in the park and involved the extraction of the heavy minerals including: rutile, zircon, monazite and ilmenite. Gold mining was also carried out intermittently on beaches in the ‘Richmond River area’, including the park, from about 1875 onward until the park’s gazettal. More than 250 hectares of sand dunes were mined in the park.

Wind-blown sands of Holocene age (over 6,000 years ago) comprise the dune sand masses along the coastal fringe. These recent dune systems are highly mobile and

susceptible to blow-outs and appear to be moving westward in some areas, for example, into the Salty Lagoon area.

The frontal dunes are exposed to coastal erosion and are fragile systems. They require protection from damaging or destabilising uses such as 4WD vehicle use, and having vegetation cover removed such as when burnt by fire.

All soils in the park, both of coastal or sedimentary origin, present constraints on use. The soils are sandy, poorly structured and infertile due to low levels of organic matter. They are highly erodible and are unable to sustain regular vehicle traffic or high pedestrian use without damage. In 2008 the lookout platform at Broadwater Headland had to be removed due to increased erosion.

The Salty Creek-Salty Lagoon system is the major hydrological feature in the park and, along with other smaller intermittent watercourses, drains much of the park's heathlands. Salty Lagoon is a shallow brackish coastal lagoon wetland system, with an area of approximately ten hectares when full and a typical water depth less than one metre. The volume and salinity of water in Salty Lagoon fluctuates markedly depending on the amount of freshwater inflow and the presence of a sand bar at the ocean entrance to the system. An artificial channel was excavated between the Salty Creek and Salty Lagoon before the park was reserved. This channel increased drainage within the catchment and has resulted in a much reduced wetland area than what existed previously. Water quality of Salty Lagoon is also a major issue (refer Section 4.3 Water Quality – Salty Lagoon Wetland System).

3.2 NATIVE PLANTS

There are seven major vegetation complexes in the park: forests; shrublands and mallee; heathlands; sedgelands; saltmarsh complex; frontal dune complex; and fernland (S.Griffith, 1988, 1993).

The park is dominated by the coastal heathland and shrubland communities, which occur on mostly undulating sand ridges and plains and are interspersed with swamps. Communities other than heathland occur in relatively small patches. Other vegetation communities include dry and wet sclerophyll, swamp sclerophyll and subtropical (lowland) rainforest which occurs as a single 11 hectare patch of simple tall closed fan palm forest dominated by cabbage tree palm (*Livistonia australis*) and Bangalow palm (*Archontophoenix cunninghamiana*). The latter is classified as an Endangered Ecological Community (EEC – Lowland Rainforest on Floodplain). Other EEC's within the park include: Coastal Cypress Pine Forest and Saltmarsh.

Salty Lagoon and its associated wetland system are recognised as a significant coastal wetland and are protected under the State Environmental Planning Policy 14 – Coastal Wetlands. It supports three Endangered Ecological Communities, namely littoral rainforest, swamp sclerophyll and freshwater wetlands.

Over 400 native plant species have been recorded in the park and ten species are listed as threatened and significant under the *Threatened Species and Conservation Act 1995 (*TSC Act). Of these, eight are listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (see Table 1).

Relevant actions in threatened species Priorities Action Statements (PAS) and recovery plans will be used to guide management of threatened species in the park. These include protection of rainforest habitat from fire in accordance with the

Regional Fire Management Strategy for the park, weed control programs focussing on bitou bush (*Chrysanthemoides monilifera* subsp *rotundata*) and identification of threatened species along roadsides.

Table 1 Threatened and significant plant species recorded in Broadwater National Park

Common name	Scientific name	Legal Status	Recovery Plan/ PAS Status
Bordered Guinea flower	*Hibbertia marginata*	Vulnerable*#	PAS
Brush sophora	*Sophora fraseri*	Vulnerable*#^	PAS
Hairy jointgrass	*Arthraxon hispidus*	Vulnerable*#^	PAS
Heath wrinklewort	*Rutidosis heterogama*	Vulnerable*#^	PAS
Needle-leaf fern	*Belvisia mucronata*	Endangered*	PAS
Red boppel nut	*Hicksbeachia pinnatifolia*	Vulnerable*#^	PAS
Rusty plum	*Niemeyera whitei*	Vulnerable*	PAS
Lesser swamp orchid	*Phaius australis*	Endangered*#^	
Stinking cyptocarya	*Cryptocarya foetida*	Vulnerable*#^	PAS

* Status under TSC Act

# Denotes species also listed as nationally threatened under the EPBC Act.

^ Denotes species listed as a Rare or Threatened Australian Plant according to Briggs and Leigh (1996)

3.3 NATIVE ANIMALS

There are more than 360 species of animals known to occur in the park, reflecting the habitat diversity and extensive ecotone areas of the park.

Many species of migratory shorebirds feed and/or roost on the park's sandy beaches, estuaries, lagoons and rock platforms during their annual migrations. Twenty-six bird species are subject to international conservation agreements such as JAMBA and CAMBA. Nineteen of the 26 bird species occur in both agreements (see Table 2 – Threatened and significant animal species recorded in Broadwater National Park).

The heathlands and associated communities provide important habitat for small mammals, particularly rodents. The open forest and woodlands are the predominant habitat for large macropods, however smaller macropods also occur in wet sclerophyll forest and rainforest.

There are 48 threatened fauna species under the TSC Act and five of these are listed as threatened under the EPBC Act (see Table 2).

The NSW Fox Threat Abatement Plan (TAP) identifies the park as a priority site for the protection of pied oystercatchers where extensive monitoring and baiting for foxes will be undertaken (refer 4.1 Weeds and Pest Animals). In addition, in 2007, the Department of Lands prepared a Threatened species (Pied Oystercatcher) management strategy in consultation with Department of Environment and Climate Change, Richmond Valley Council, Ballina Shire Council, Tweed Lismore Rural Lands Protection Board and other organisations. This strategy identifies relevant actions for stakeholders to protect pied oystercatchers within the project area which includes the park. Many of these actions complement requirements for fox control identified in the Fox TAP (refer to section 4.1 Introduced Plants and Animals).

Table 2. Threatened and significant animal species and populations recorded in Broadwater National Park

Common name	Scientific name	Legal Status	Recovery Plan/ PAS Status
Amphians			
Olongburra frog	*Litoria olongburensis*	Vulnerable*#	PAS
Wallum froglet	*Crinia tinnula*	Vulnerable*	PAS
Reptiles			
Green turtle	*Chelonia mydas*	Vulnerable*#	PAS
Birds			
Australasian bittern	*Botaurus poiciloptilus*	Vulnerable*	PAS
Barred cuckoo-shrike	*Coracina lineata*	Vulnerable*	PAS
Beach stone-curlew	*Esacus neglectus*	Critically Endangered*	PAS
Black-necked stork	*Ephippiorhynchus asiaticus*	Endangered*^	PAS
Brolga	*Grus rubicundus*	Vulnerable*^	PAS
Bushhen	*Amaurornis olivaceus*	Vulnerable*	PAS
Collared kingfisher	*Todiramphus chloris*	Vulnerable*	PAS
Comb crested jacana	*Irediparra gallinacea*	Vulnerable*	PAS
Eastern ground parrot	*Pezoporus wallicus wallicus*	Vulnerable*	PAS
Emu Population in the NSW North Coast Bioregion	*Dromaius novaehollandiae*	Endangered*	PAS
Grey crowned babbler	*Pomatostomus temporalis temporalis*	Vulnerable*	PAS
Glossy black cockatoo	*Calyptorhynchus lathami*	Vulnerable*	PAS
Grass owl	*Tyto capensis*	Vulnerable*	PAS
Magpie goose	*Anseranas semipalmata*	Vulnerable*	PAS
Masked owl	*Tyto novaehollandiae*	Vulnerable*	PAS, Recovery plan
Osprey	*Pandion haliaetus*	Vulnerable*^	PAS
Pied oystercatcher	*Haematopus longirostris*	Endangered*	PAS
Providence petrel	*Pterodroma solandri*	Vulnerable*^	PAS
Red goshawk	*Erythrotriorchis radiatus*	Critically Endangered*#	PAS, Recovery plan
Regent honeyeater	*Anthochaera phrygia*	Critically Endangered*#	PAS
Sooty oystercatcher	*Haematophus fuliginosus*	Vulnerable*	PAS
Square-tailed kite	*Lophoictinia isura*	Vulnerable*	PAS
White-eared monarch	*Monarcha leucotis*	Vulnerable*	PAS
Migratory Birds			
Bar-tailed godwit	*Limosa lapponica*	Protected~≠	
Black-naped tern	*Sterna sumatrana*	Protected~≠	
Black-tailed godwit	*Limosa limosa*	Vulnerable*^~≠>	PAS
Broad-billed sandpiper	*Limicola falcinellus*	Vulnerable*^~≠>	PAS
Cattle egret	*Aredea ibis*	Protected~	
Common greenshank	*Tringa nebularia*	Protected~≠>	
Common noddy	*Anous stodilus*	Protected~≠	
Common tern	*Sterna hirundo*	Protected~≠>	
Curlew sandpiper	*Calidris ferruginea*	Protected~≠>	
Eastern curlew	*Numenius madagascariensis*	Protected~≠>	
Eastern reef egret	*Egretta sacra*	Protected≠	
Flesh-footed shearwater	*Puffinus carneipes*	Vulnerable*^~>	
Fork-tailed swift	*Apus pacificus*	Protected~≠>	
Glossy ibis	*Plegadis falcinellus*	Protected≠	
Greater sand-plover	*Charadrius leschenaultii*	Vulnerable*^~≠>	PAS
Latham's snipe	*Gallinago hardwickii*	Protected~>	
Lesser sand-plover	*Charadrius mongolus*	Vulnerable*^>	PAS

Little tern	*Sterna albifrons*	Endangered*^~≠>	PAS, Recovery plan
Marsh sandpiper	*Tringa stagnatilis*	Protected~≠>	
Pacific golden plover	*Pluvialis fulva*	Protected~≠>	
Red-necked stint	*Calidris ruficollis*	Protected~≠>	
Ruddy turnstone	*Arenaria interpres*	Protected~≠>	
Sharp-tailed sandpiper	*Calidris acuminata*	Protected~≠>	
Wedge-tailed shearwater	*Calonectris pacificus*	Protected~	
Whimbrel	*Numenius phaeopus*	Protected~≠>	
White-bellied sea eagle	*Haliaeetus leucogaster*	Protected≠	
White-throated needletail	*Hirundapus caudacutus*	Protected~≠>	
Mammals			
Black-flying fox	*Pteropus alecto*	Protected	PAS
Brush-tailed phascogale	*Phascogale tapoatafa*	Vulnerable*	PAS
Common blossom bat	*Syconycteris australis*	Vulnerable*	PAS
Common planigale	*Planigale maculata*	Vulnerable*	PAS
Eastern long-eared bat	*Nyctophilus bifax*	Vulnerable*	PAS
Greater broad-nosed bat	*Scoteanax rueppellii*	Vulnerable*	PAS
Grey-headed flying fox	*Pteropus poliocephalus*	Vulnerable*#	PAS
Hoary wattled bat	*Chalinolobus nigrogriseus*	Vulnerable*	PAS
Koala	*Phascolarctos cinereus*	Vulnerable*	PAS, Recovery plan
Little bentwing-bat	*Miniopterus australis*	Vulnerable*	PAS
Red-legged pademelon	*Thylogale stigmatica*	Vulnerable*	PAS
Squirrel glider	*Petaurus norfolcensis*	Vulnerable*	PAS
Spotted-tailed quoll	*Dasyurus maculatus*	Vulnerable*	PAS
Yellow-bellied glider	*Petaurus australis*	Vulnerable*	PAS, Recovery plan
Yellow-bellied sheathtail-bat	*Saccolaimus flaviventris*	Vulnerable*	PAS
Fish			
Oxleyan pygmy perch	*Nannoperca oxleyana*	Endangered#∞	Recovery Plan (NSW DPI)

* Status under TSC Act
\# Denotes species listed as nationally threatened under the EPBC Act.
^ Denotes migratory species listed under EPBC Act.
~ Denotes inclusion under JAMBA international agreement.
≠ Denotes inclusion under CAMBA international agreement
> Denotes inclusion under ROKAMBA international agreement
∞ Denotes species listed under NSW *Fisheries Management Act* 1994. NSW DPI is the NSW Department of Primary Industries.

Relevant actions in Priority Action Statements (PAS) and recovery plans will be used to guide management of threatened species in the park.

3.4 CULTURAL HERITAGE

Aboriginal communities on the lower Richmond River have a strong association and connection to the coastal region. The land and water within a landscape are central to Aboriginal spirituality and contribute to Aboriginal identity. Aboriginal communities associate natural resources with the use and enjoyment of foods and medicines, caring for the land, passing on cultural knowledge, kinship systems and strengthening social bonds. Aboriginal heritage and connection to nature are inseparable from each other and need to be managed in an integrated manner across the landscape.

The park is located within the area of the Bundjalung Nation. The park is currently subject to a registered native title claim (Bandjalang - NC96/16). The southern Boundary Creek area is within the Jali Local Aboriginal Land Council boundary.

The Nyangbul and Bandjalang Aboriginal communities (which represent the Bundjalung Nation) have dialect speakers and people who have traditional knowledge of the park, about its resources and the locations of places of mythological and spiritual significance.

Aboriginal people occupied the area for thousands of years prior to European settlement. The park area was extensively hunted for wallabies, snakes, birds, honey, turtles and their eggs, fresh water mussels, ripe water-lily bulbs, geebungs and the fruit of the 'noocui' or pig's face plant. Fish were widely sought after and pipis and oysters were plentiful. Evidence of Aboriginal occupation includes mythological sites, middens, campsites and ceremonial grounds. These features are part of an extensive system of related sites, which occur both outside and within the park (Bandjalang Elder, 2003 pers.comm).

The history of European settlement and industry along the coast since the mid 19th century is demonstrated less in the built environment and more in the ecological and visual impact of land uses on the vegetation, landforms, and soils. For example, mining for gold in the late 19th century and mineral sands mining has modified extensive areas of the beach ridge system.

Defence activities were undertaken in the area during World War II, included training exercises from Evans Head airport. The Department of Defence continue to undertake activities within a lease area in nearby Bundjalung National Park. At Broadwater Lookout a concrete base remains from an observation tower built during World War II.

The remains of a timber ship of unknown provenance are buried in the dunes in the vicinity of Salty Lagoon. These remains are only exposed during extreme weather and storms.

3.5 RECREATION, EDUCATION AND RESEARCH

The close proximity of the park to a number of Northern Rivers coastal villages and regional towns make it an easily accessible day trip destination. The park provides coastal recreation settings ranging from remote stretches of coastline to areas readily accessible by vehicle.

Two day use areas are provided in the park. The Broadwater Beach Day Use Area is accessed by vehicle via Finns Trail and has pit toilets, gas barbecues, information boards and picnic tables. A walking track provides access to the beach for fishing, beach walking, surfing and other beach activities, and viewing of the interesting coffee rock formations. Because of the actively eroding dune system, stabilisation of the walking track is an ongoing maintenance issue. Several unauthorised beach access walking trails also traverse the dunes to the beach. Another longer pedestrian beach access point is located at the end of Broadwater Beach Road which starts within a Richmond Valley Council road reserve and transverses the park (see Map). No other facilities are provided in this area of the park, however there is a small Council car park at the end of Broadwater Beach Road.

A second day use area is accessed off the Broadwater Road via the unsealed Broadwater Lookout Trail. The Broadwater Lookout Day Use Area incorporates a small car park with a pit toilet, picnic tables and a short walking track of approximately 400 metres which provides access to the Broadwater Lookout. The lookout offers spectacular views over the heathland, providing an impressive contrast between the park and the ocean. The concrete remains of an observation tower built during World War II offer opportunities for interpretation of heritage values.

In 2008 a viewing platform at Broadwater Headland was removed because of visitor safety issues identified in association with the actively eroding dune face. It is not considered feasible to replace or relocate this facility because of the highly erodible coastal dunes in this area (refer 3.1 Geology, Landscape and Hydrology).

The beaches provide ready access for walkers to many of the major features of the park. Most of the extensive network of management trails in the park are also available for bushwalking and cycling and provide access to much of the hinterland of the park. Death Adder Trail, Central Trail and Crash Trail are however not available for public use due to the wet boggy soils and drainage lines dissecting these areas. The northern section of the Old Mining Trail from Perch Trail to the Pacific Highway is also not suitable for public use due to hazardous materials (refer 4.4 Hazardous Materials).

The walking track to Salty Lagoon from Broadwater Road has been closed, following a major fish kill in the lagoon in 2005 (refer 4.3 Water Quality- Salty Lagoon Wetland System). Prior to its closure the walking track received only limited visitor use and because of ongoing health concerns it is not proposed to reopen the track. Visitors are currently still able to access the lagoon from the beach.

Vehicles are permitted on the beaches adjacent to the park by Richmond Valley Council as the area below high water mark is not part of the park. Vehicles are not permitted above the high water mark or on to sand dunes. Vehicle access to the beaches adjacent to the park is from Airforce Beach to the south and from near Boundary Creek to the north of the park.

Camping facilities are not provided in the park. Nearby opportunities for camping are in the villages of Broadwater and Evans Head and at Black Rocks and Woody Head campgrounds within Bundjalung National Park.

Horse riding has not been permitted in the park since its gazettal in 1980. Much of the park is swamp or heathland growing on highly erosive sands and is unsuitable for horse riding. Horse riding is, however, permitted by Richmond Valley Council below the mean high water mark to the north of the Airforce Beach 4WD access point. Horse riding is also permitted in some other parks in the area including Bungawalbin National Park and Bungawalbin State Conservation Area.

Local schools and Southern Cross University (SCU) access the park for educational programs. A number of studies have been undertaken on native animal and plant communities in the park by both undergraduate and post-graduate students. For a number of years SCU have undertaken an annual survey of different heathlands comparing fire histories.

There are also opportunities to establish or undertake monitoring and research into Climate Change (refer 4.5 Climate Change).

4. ISSUES

4.1 WEEDS AND PEST ANIMALS

Introduced plants occur in disturbed areas of the park, in particular along public access roads and neighbour boundaries.

A total of 33 introduced species have been recorded in the park (see Table 3). Dominant or highly invasive species include: bitou bush; groundsel bush; coastal morning glory; and lantana.

The Northern Rivers Region Pest Management Strategy details priorities for pest management in the region, including actions listed in the Priorities Action Plan and Threat Abatement Plans (TAPs) and site based weed control. The Pest Management Strategy also identifies other strategies or plans that provide more detail on controlling certain species. An example is the site specific management plan for bitou bush prepared for the park in accordance with the NSW Bitou Bush TAP (NPWS, 2006).

While the Pest Management Strategy provides management direction at a regional level, a park specific plan is desirable to provide more detailed strategies and work programs.

Table 3. Significant Weeds and Pest Animals in Broadwater National Park

Weeds		**Pest Animals**	
Common Name	**Scientific Name**	**Common Name**	**Scientific Name**
Bitou bush	*Chrysanthemoides monilifera* subsp. *rotundata*[#^~]	Wild dog[+]	*Canis familiaris*
Groundsel bush	*Baccharis halimifolia*[#]	European red fox[^~]	*Vulpes vulpes*
Camphor laurel	*Cinnamomum camphora*[#]	Cane toad[^~]	*Bufo marinus*
Lantana	*Lantana camara*[#~]		
Crofton weed	*Ageratina adenophora*[#]		
Annual ragweed	*Ambrosia artemisiifolia*[#]		

[#] Declared noxious under *Noxious Weed Act 1993*
[+] Declared pest under *Rural Lands Protection Act 1989*
* Declared weed of national significance
~ Key threatening process under *TSC* Act
[>] Key threatening process under Commonwealth *Environment Protection and Biodiversity Act 1999*
^ Threat Abatement Plan endorsed for this species

The Broadwater Community Dune Care Group has made a localised reduction of bitou bush in the Broadwater Beach Day Use Area. This group has a program for on-going control and revegetation with native plants from local seed sources for the park.

North Coast Livestock Health and Pest Authority (formerly Tweed-Lismore Rural Lands Protection Board) implements the Tweed-Lismore Wild Dog Management Plan (2006-11), which includes the park. It identifies priorities for strategic wild dog control in the area. Management of wild dogs is undertaken in accordance with the Pest Management Strategy and the Wild Dog Management Plan.

The NSW Fox TAP identifies the park as a priority site for the protection of pied oystercatchers. The Northern Rivers Region coordinates and administers the annual Pied Oystercatcher Protection Program. The Pied Oystercatcher Management

Committee was formed to oversee the implementation of the program which primarily involves fox control and monitoring/surveying of pied oystercatchers, in accordance with the NSW Fox TAP. Various land tenures including DPI Crown Lands, Department of Defence (Evans Head Air Weapons Range) and NPWS are within the project area. The approved Threatened Species (Pied Oystercatcher) Management Strategy by the Department of Lands (2007) outlines recommended actions for relevant land managers and stakeholders.

A Cane Toad Management Strategy has been prepared for the Northern Rivers Region (DECC 2007) to identify presence/absence and priority areas for control based on achievability/distribution of cane toads. The large areas of freshwater coastal wetlands in the park are ranked a high priority for control.

Feral cats are known to occur in the park, but little is known about their distribution.

Indian or common mynas have been observed in the surrounding farmland and villages around the park. The Northern Rivers Indian Myna Collaborative Committee has developed an Action Plan for the control of Indian mynas across land tenures (DECC 2009).

4.2 FIRE

The primary fire management objectives of the NPWS are to protect life and property and community assets from the adverse impacts of fire, whilst managing fire regimes to maintain and protect biodiversity and cultural heritage.

Fire is a natural feature of many environments and is essential for the survival of some plant communities. However, inappropriate fire regimes can lead to loss of particular plant and animal species and communities, and high frequency fires have been listed as a key threatening process under the TSC Act.

The most recent wildfire in the park occurred in August 2004 and burnt approximately 520 hectares. Adjoining assets that are vulnerable to fire include the villages of Evans Head, Broadwater, Rileys Hill, and Doonbah and properties adjoining the western boundary. Internal assets vulnerable to fire include the visitor facilities at Broadwater Beach Day Use Area and Broadwater Lookout Day Use Area, houses along Seaview Crescent, apiary sites and powerlines.

A separate (map-based) fire management strategy has been prepared for the park (NPWS 2005). The fire management strategy outlines the recent fire history of the park, key assets within and adjoining the park including sites of natural and cultural heritage value, fire management zones which includes asset protection zones, strategic fire advantage zones and fire control advantages such as management trails and water supply points. Hazard reduction programs, ecological burning proposals and fire trail works are submitted annually to the Northern Rivers Bush Fire Management Committee.

4.3 WATER QUALITY – SALTY LAGOON WETLAND SYSTEM

The Salty Lagoon wetland system is the major hydrological feature in the park and, along with other smaller intermittent watercourses, drains much of the heathland (refer section 3.1). An artificial channel excavated between the Salty Creek and Salty Lagoon before the park was reserved significantly reduced the wetland area. The catchment of the system extends outside the park boundary and includes the Evans

Head Sewage Treatment Plant (STP), which discharges secondary treated effluent into the system, and the Evans Head waste facility.

In 2005, more than 25,000 fish as well as eels and many birds died at Salty Lagoon. This occurred when the lagoon system opened up to the ocean and the resulting turbulence stirred sediment causing low oxygen levels which, together with thermal mixing caused by the high temperatures at the time, resulted in the death of the fish and eels, and the consequent botulism killed many birds. In March 2009 another similar but smaller incident occurred resulting in the death of approximately 2,000 fish as well as eels.

Following the 2005 incident a series of studies was undertaken by Richmond Valley Council. It was decided that the long-term release from Evans Head STP into Salty Lagoon is not an option and that the lagoon requires rehabilitation. To determine what rehabilitation is necessary, the Salty Lagoon Ecosystem Recovery Monitoring Program involving Richmond Valley Council, the Department of Environment and Conservation and community stakeholders commenced in 2008. Following the monitoring program, Richmond Valley Council prepared a rehabilitation strategy for Salty Lagoon (Hydrosphere Consulting 2011) in consultation with relevant stakeholders. The Strategy recommends the temporary closure of the Artificial Channel between Salty Lagoon and Salty Creek for a trial period of 5 years. Richmond Valley Council is currently preparing supporting environmental impact assessments. The Environment Protection Agency will be determining authority for the activity.

4.4 HAZARDOUS MATERIALS

There are remains of fibro cement sheeting along the northern section of the Old Mining Trail between Perch Trail and the Pacific Highway. The remains are thought to be from past sand mining activities. It is proposed that these materials remain undisturbed in order to reduce any risk to public health or the environment. Action will only be taken in the future if it is determined there is a health or environmental issue and will be in accordance with the NPWS Contaminated Land Policy Statement.

4.5 CLIMATE CHANGE

Climate change has been listed as a key threatening process under the TSC Act. Projections of future changes in climate for NSW include higher temperatures, increasing sea levels and water temperatures, elevated levels of carbon dioxide (CO_2), more intense but possibly reduced annual average rainfall, increased temperature extremes and higher evaporative demand. These changes are likely to lead to greater intensity and frequency of fires, more severe droughts, reduced river runoff and water availability, regional flooding, increased erosion and ocean acidification.

Climate change may significantly affect biodiversity by changing population size and distribution of species, modifying species composition, and altering the geographical extent of habitats and ecosystems. The potential impact of climate change is difficult to assess since it depends on the compounding effects of other pressures, particularly barriers to migration and pressure from feral animals. Species most at

risk are those unable to migrate or adapt, particularly those with small population sizes or with slow growth rates.

Salty Lagoon is at risk of increased sediment and nutrient levels due to floods associated with more intense rainfall events. This has the potential to significantly impact on the habitat of many fish species (refer 4.3 Water Quality –Salty Lagoon Wetland System).

The highly erodible and fragile frontal dunes in the park are likely to be exposed to increased intensity and frequency of storm surges and increased erosion. The viewing platform at Broadwater Headland has been removed because of the actively eroding dune face and this will continue to be a management issue for the park, particularly in regard to maintaining appropriate visitor access from the Broadwater Beach Day Use Area to the beach (refer 3.5 Recreation, Education and Research).

Programs to reduce the pressures arising from other threats, such as habitat fragmentation, invasive weeds, bushfires and pollution will help reduce the severity of the effects of climate change on natural values of the park.

4.6 UNAUTHORISED ACTIVITIES

Unauthorised motor bike riding (including unregistered trail bikes and quad bikes) and four wheel driving occurs along the network of trails. Unauthorised use of trails which are closed to public vehicles may have significant environmental impacts, including increased soil erosion and run-off as well as impacts on water quality. Unauthorised vehicle access aids the spread of weeds as well as increasing the possibility of introducing soil pathogens and diseases.

NPWS will continue to use an educational approach to inform visitors of permissible vehicle access and to encourage appropriate visitor behaviour.

Several unauthorised walking tracks also traverse the park, particularly from the dunes to the beach. The Map shows the location of all authorised walking tracks in the park; all unauthorised tracks will be closed and rehabilitated.

5. MANAGEMENT OPERATIONS AND OTHER USES

In order to achieve protection of the values of the park, to provide opportunities for visitors and to facilitate management operations it is important to build and maintain appropriate infrastructure. Infrastructure may also be provided on the park by other authorities or for other purposes authorised under the NPW Act.

5.1 APIARY SITES

There are 29 apiary sites within the park. The European honeybee (*Apis mellifera)* can have adverse impacts on some native plants and animals (Paton 1996). The NPWS policy on bee keeping allows existing sites to continue but does not allow any new or additional sites. It may be necessary to relocate existing bee sites where apiary activities result in unacceptable environmental impacts, user conflicts or are inconsistent with park management.

Beekeeping on NPWS estate is required to be licensed under the NPW Regulation.

5.2 POWERLINES

Country Energy has three power lines that traverse the park at various locations (see Map):

- North-east corner – along the Pacific Highway;
- Southern end – Woodburn-Evans Head Road
- Southern end – Powerline Trail within park.

These power lines are not covered by a formal easement. In accordance with the *Electricity Supply Act 1995*, a network operator can operate and use the existing power lines whether or not there is a formal easement in place. No access or maintenance agreement currently exists with Country Energy but the company must comply with the NPW Act and Regulations when carrying out any maintenance or replacement work and will require NPWS consent for certain works. Discussions have commenced with Country Energy to develop a State-wide agreement.

5.3 ROADS

The NSW Roads and Maritime Services (RMS) has examined options for the upgrading of the Pacific Highway to two lanes in each direction from south of Woodburn to the approved Ballina bypass and a concept design was produced in March 2008.

A portion of the park (currently 16 hectares) is impacted by the preferred route which runs parallel to the existing Pacific Highway through the park with a diversion east across part of the northern boundary of the park south of Broadwater village. The preferred route also includes two fauna overpasses for wildlife to cross the highway. A wildlife exclusion fence will also be constructed as a part of the highway upgrade. Compensatory habitat is to be negotiated with the RMS but has not yet been finalised.

6. IMPLEMENTATION

Current Situation	Desired Outcomes	Management Response	Priority
6.1 On-Park Ecological Conservation			
The park is used by migratory shorebirds listed on JAMBA, CAMBA and ROKAMBA international agreements. Recovery plans and PAS have been prepared for several of the threatened species in the park (see Tables 1 and 2). Department of Lands has prepared a Threatened Species (Pied Oystercatcher) Management Strategy which includes the intertidal zone adjacent to the park. This includes strategies to minimise threats from foxes, weeds, coastal processes, natural predation and disturbance from beach users (refer also 6.4. Weed and Pest Animals 6.3 Visitor Use and Services). The highly erodible and fragile frontal dunes in the park are likely to be exposed to increased intensity and frequency of storm surges and increased erosion. Coastal processes, including shoreline fluctuations and dune erosion will be allowed to continue unimpeded. Dune protection and enhancement works will only be undertaken as necessary to maintain the integrity of the dune system at designated beach access points (refer 6.3 Visitor Use and Services). Climate change is recognised as a Key Threatening Process under the TSC Act. Appropriate fire and pest management may improve the ecological resilience of species to climate change and other threats (refer to 6.4 Weeds and Pest Animals, 6.5 Fire Management). The park is regularly used by local schools and universities for study and research about coastal processes and natural values.	Native plant and animal species and communities are conserved. The effects of climate change on natural systems are reduced. Knowledge of plants and animals and their ecological requirements are better understood.	6.1.1 Implement relevant strategies and actions in the PAS and recovery plans for threatened species and in the pied oystercatcher management strategy 6.1.2 Encourage research into appropriate indicators to monitor the effects of climate change and into management requirements for native plants and animals, in particular threatened species consistent with strategies identified in PAS and recovery plans. 6.1.3 Pursue appropriate opportunities with the Department of Primary Industries to obtain funding for habitat rehabilitation.	High Ongoing Medium

Current Situation	Desired Outcomes	Management Response	Priority
6.2 Cultural Heritage The park is located within the Country of the Bundjalung nation. The southern Boundary Creek area is within the area of the Jali Local Aboriginal Land Council. The park is under a registered native title claim (Bandjalang - NC96/16). A large number of Aboriginal cultural sites have been identified within the park although there were extensive losses caused by past sand mining. At Broadwater Lookout a concrete base remains from an observation tower built during World War II. The remains of a timber ship are buried in the dunes but are only exposed during extreme weather.	Aboriginal and historic features and values are identified and protected. Aboriginal people are involved in management of the Aboriginal cultural values of the park. Negative impacts on Aboriginal and historic heritage values are stable or diminishing. Understanding of the cultural values is improved.	6.2.1 Consult with the Bandjalang Native Title Claimants and Jali Aboriginal Land Council on the management of Aboriginal sites, places and values, including interpretation of places and values. 6.2.2 Incorporate information about the history of the WW11 observation tower into interpretation signage at Broadwater Lookout (refer 6.3.1). 6.2.3 Record the location of historic sites, assess for heritage value and retain in situ.	High Low Medium
6.3 Visitor Use and Services Park roads provide access to visitor facilities at Broadwater Beach Day Use Area and Broadwater Lookout Day Use Area (see Map). No other visitor facility areas are proposed in the park. Vehicles are not permitted above high mean water mark but can access the beaches adjoining the park from Airforce Beach and near Boundary Creek outside the park. Some management trails are unsuitable for walking and cycling due to the	Visitor use is appropriate and ecologically sustainable. Negative impacts of visitors on park values are stable or	6.3.1 Maintain Broadwater Lookout Day Use Area and Broadwater Beach Day Use Area. 6.3.2 Provide interpretation signage at the Broadwater Lookout.	High Low

Current Situation	Desired Outcomes	Management Response	Priority
swampy conditions. The northern section of the Old Mining Trail from Perch Trail to the Pacific Highway is also not suitable for public access due to remains of fibro cement material (refer 6.7). Pedestrian access to the beach is provided from Broadwater Beach Day Use Area and at the end of Broadwater Beach Road via a Richmond Valley Council road reserve. The beaches, walking track to Broadwater Lookout and the management trail system provide a range of walking opportunities. The management trail system also provides good bicycle riding opportunities. Because of the dynamic dune system access to the beach from the Broadwater Beach Day Use Area is an ongoing maintenance issue. Several unauthorised walking tracks also access the beach in this area. A walking track from Broadwater Road to Salty Lagoon was closed due to health concerns following a major fish kill event in 2005 and has been allowed to revegetate. While the lagoon can still be accessed via Airforce-Evans Head Beach, the outcomes of the Environmental Monitoring Program and Rehabilitation Strategy for Salty Lagoon may affect future access (refer 6.6 Water Quality – Salty Lagoon). Horse riding and camping are not permitted in the park.	diminishing. Visitor use encourages appreciation of the park's values.	6.3.3 Allow walking and cycling on management trails in the park with the exception of Death Adder Trail, Central Trail, Crash Trail and the northern section of the Old Mining Trail from Perch Trail to the Pacific Highway (refer also 6.7 Infrastructure and Maintenance). 6.3.4 Upgrade pedestrian access from the Broadwater Beach Day Use Area to the beach to Australian standard class 3[1]. 6.3.5 Close unauthorised beach access walking tracks.	Ongoing Medium High
6.4 Weeds and Pest Animals The Regional Pest Management Strategy identifies priorities for pest control programs across the region. Other strategies and plans (such as the site specific management plan for bitou bush) provide a more detailed	Introduced plants and animals are controlled and	6.4.1 Prepare and implement a pest management plan for the	High

[1] The Australian Standard (AS) for walking tracks (Standards Australia, 2001) has been used as the basis for the tracks classification system in this plan. Class 3 is generally a modified surface, kept mostly clear of intrusions and obstacles. Users need no bushwalking experience and a minimum level of specialised skills. Users may encounter natural hazards such as steep slopes and unstable surfaces

Current Situation	Desired Outcomes	Management Response	Priority
approach but the park would also benefit from a specific pest plan. The Fox TAP identifies the park as a priority site for the protection of pied oystercatchers and involves baiting for foxes and survey of pied oystercatchers. The Region is also involved in a coordinated approach to pied oystercatcher protection involving other agencies (refer 4.1 Weeds and Pest Animals). The Northern Rivers Region Cane Toad Management Strategy identifies the large areas of freshwater coastal wetlands in the park as a high priority for control of cane toads. The Tweed-Lismore RLPB Wild Dog Management Plan covers the park and identifies priorities for strategic wild dog control. A Northern Rivers Region Indian Myna Action Plan was prepared in 2009. A community-based Dune Care Group undertakes weed control, revegetation and dune stabilisation works in the Broadwater Day Use Area.	where possible eliminated. Negative impacts of weeds and pest animals on park values are stable or diminishing.	park. Pending preparation of this plan, continue to control pests and weeds in accordance with the Regional Pest Management Strategy and other relevant plans/strategies.	
6.5 Fire Management Fire is a natural feature of many environments but inappropriate fire regimes can lead to loss of particular plant and animal communities. High frequency fires have been listed as a key threatening process under the TSC Act. A Fire Management Strategy was prepared for the park in 2005. The Fire Management Strategy identifies fire regimes/thresholds to protect biodiversity. The location of some strategic fire management (fuel reduction) zones in the Fire Management Strategy require review and adjustment. Assets identified in the Fire Management Strategy include the Broadwater Lookout and Broadwater Beach Day Use Areas, two residences at Seaview	Life, property and natural and cultural values are protected from fire. Fire regimes are appropriate for conservation of native plant and animal communities. Negative impacts of fire on natural and	6.5.1 Revise the Fire Management Strategy for the park. Implement the revised strategy once approved. Pending approval implement the current strategy.	High

Current Situation	Desired Outcomes	Management Response	Priority
Crescent, bee sites and powerlines.	cultural heritage values are stable or diminishing.		
6.6 Water Quality – Salty Lagoon Use of Salty Lagoon for the discharge of treated effluent from the Evans Head STP has impacted on the water quality of Salty Lagoon. A mass fish and bird kill occurred in the lagoon in 2005 following high temperatures and poor water quality. An Environmental Monitoring program for the Salty Lagoon ecosystem involving Richmond Valley Council, OEH and community stakeholders commenced in 2008. NPWS liaises with Richmond Valley Council regarding the Environmental Monitoring Program and Salty Lagoon Rehabilitation Strategy.	Water quality and health of Salty Lagoon and the catchment is improved.	6.6.1 Periodically review restrictions on visitor access to Salty Lagoon from the beach, based on the results of monitoring and the Salty Lagoon Rehabilitation Strategy.	High
6.7 Infrastructure and Maintenance A network of roads and management trails is maintained within the park for fire, pest control and other management purposes (see Map). Public vehicle access is not permitted on management trails. There are 27 licensed bee sites located within the park that predate its gazettal. Existing bee keeping sites are permitted to continue in accordance with NPWS Policy. Some bee sites are accessed by management trails. Honey Trail provides access to a bee keeping site but the trail has no value for NPWS management purposes. Maintenance of Honey Trail will be the responsibility of the bee keeper. The remains of fibro cement sheeting thought to be from past sand mining occurs near the northern section of the Old Mining Trail from Perch Trail to the Pacific Highway. The material is not considered to be a current health or environment issue if left undisturbed. Remediation works will only be undertaken if it is determined there is a health or environmental issue and	Management facilities and operations adequately serve management needs and have minimal impact. Infrastructure and assets are routinely maintained. Existing non-park infrastructure is managed to minimise impacts	6.7.1 Maintain all roads and management trails as shown on Map. 6.7.2 Close Honey Trail if no longer required for bee keeping. 6.7.3 Gate and/or signpost management trails to restrict unauthorised access as necessary. 6.7.4 Continue to liaise with Country Energy regarding maintenance of	High Low Medium Low

Current Situation	Desired Outcomes	Management Response	Priority
in accordance with the NPWS Contaminated Land Policy Statement. Country Energy has 3 power lines that traverse the park (see Map). No access or maintenance agreement currently exists with Country Energy but the company must comply with the NPW Act and Regulations when carrying out any maintenance or replacement work and will require NPWS consent for certain works. In 2008 a concept design was produced for the upgrading of the Pacific Highway between Woodburn and Ballina. A portion of the park is impacted by the preferred route and a Compensatory Habitat package is to be negotiated with Roads and Maritime Services (RMS). Speeding vehicles along Broadwater-Evans Head Road and Woodburn-Evans Head Road are a threat to native wildlife, especially macropods.	on natural and cultural values.	the power lines within the park. 6.7.5 Continue to liaise with RMS about a Compensatory Habitat package for land in the park affected by the upgrading of the Pacific Highway. 6.7.6 Undertake remediation works if it is determined there is a health or environmental issue with the old fibro. 6.7.7 Work with RMS and Richmond Valley Council to minimise risks to wildlife on roads through the park.	 Medium Low 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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