



NSW NATIONAL PARKS & WILDLIFE SERVICE

Coffs Coast Regional Park

Plan of Management



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Cover photo: Looking south from White Bluff over Riecks Beach and Campbells Beach.
Donella Andersen/DPIE

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1. Introduction

1.1 Location, reservation and regional setting

Coffs Coast Regional Park (referred to as ‘the park’ or ‘this park’) is located adjacent to and north of Coffs Harbour on the Mid North Coast of New South Wales (see Figures 1, 2, 3 and 4).

The park encompasses the coastal strip extending north to south from near Corindi, to Arrawarra, Mullaway, Safety Beach, Woolgoolga, Sandy Beach, Emerald Beach, Moonee, Sapphire and Korora, with its southernmost point being Macauleys Headland in Coffs Harbour. The city of Coffs Harbour is a major regional centre and one area of the Mid North Coast likely to experience the greatest population pressure in the future (DoP 2009). The population of the Coffs Harbour Local Government Area (LGA) is expected to grow from 72,825 residents in 2010 to 100,000 by 2031 (CHCC 2010). The Coffs Harbour region is a popular domestic and international tourist destination.

The position of the park adjacent to a major regional city, a number of coastal villages and a wide range of tourism accommodation (including resorts and caravan parks) leads to pressure on the park from high visitation rates and varied land uses next to the park. Given the growing population of the region and popularity of outdoor recreational pursuits, it is envisaged that these pressures will increase in coming years.

Table 1 The parks and their regional setting

Features	Description
Location	The park covers a narrow, disjunct strip of coastal land stretching from near Corindi to the northern end of Park Beach, Coffs Harbour (see Figure 1).
Area	The park covers 661 hectares. The park includes 27 kilometres of coastline, but the park extends only to the mean high water mark, which delineates the boundary of the Solitary Islands Marine Park.
Reservation date	October 2003.
Previous tenure	Most of the park (about 365 hectares) was previously part of a Coastal Reserve for Recreation and Coastal Environmental Protection, which was an amalgamation of numerous coastal Crown reserves. Coffs Harbour City Council was the Corporate Manager of the Coastal Reserve Trust. In 2000, council prepared a plan of management (CHCC 2000a) under the <i>Crown Lands Act 1989</i> for the Coastal Reserve. The lands within the Coastal Reserve were mostly zoned 6A Open Space, but also included areas of State Environmental Planning Policy 14 (Coastal Wetlands) and State Environmental Planning Policy 26 (Littoral Rainforest). In 2003 the care, control and management of the park passed to the Coffs Coast Regional Park Trust Board, under the <i>National Parks and Wildlife Act 1974</i> . In 2015, approximately 39 hectares were added to the park, including council-owned land and various Crown and council road reserves. In January 2019, a 99-hectare parcel was added to the park in the Sugar Mill Creek area (south of Moonee Beach). This land comprises former private property purchased by the NSW Government in 2012 to offset some of the biodiversity impacts associated with upgrading the Pacific Highway.

Features	Description
	A small parcel of unreserved land, vested in the Minister under Part 11 of the National Parks and Wildlife Act, remains west of Mullaway Beach (see Figure 2, NPWS acquired not gazetted). This Part 11 land does not form part of the reserved area of the park, but its management is subject to this plan and to the National Parks and Wildlife Regulation.
Regional Context	
Biogeographic region	The park is within the Coffs Coast and Escarpment subregion of the NSW North Coast Bioregion (DEE 2012).
Surrounding land use	<p>The predominant adjoining land use is low density residential coastal villages. Adjoining the southern section of the park (from Macauleys Headland to Sapphire Beach) are higher density residential areas and a number of large tourist resorts. Other adjoining land uses include a golf course, cemetery, caravan park, industrial estate, undeveloped agricultural land, areas of open space (for public recreation) and environmental protection lands.</p> <p>The Solitary Islands Marine Park adjoins the entire length of the park at the mean high water mark, encompassing both ocean and estuarine waters. Other reserves which neighbour the park are Garby Nature Reserve (at Arrawarra) and Moonee Beach Nature Reserve (between Sandy Beach and Moonee).</p>
Other authorities	The park is located within the areas of the Coffs Harbour and District Local Aboriginal Land Council, North Coast Local Land Services and Coffs Harbour City Council.

1.2 Statement of significance

Landscape

Coffs Coast Regional Park stretches along the coast from northern Coffs Harbour to near Corindi and encompasses headlands, dune systems, coastal creeks and estuaries and other coastal features. The park's headlands are its dominant feature, support a range of important values and offer spectacular views of the coast, hinterland and the Solitary Islands. While not wholly within the park, the beaches are a major feature of the Coffs Harbour coastline.

The park also plays an important role in protecting the environment of the adjoining Solitary Islands Marine Park by protecting remnant native vegetation, enhancing bush regeneration of disturbed areas, and other measures to protect estuarine and marine water quality.

In the 2019-20 bushfires, substantial areas of parks in this region were burnt. The fires did not impact Coffs Coast Regional Park, increasing the significance of the park for protection of plant and animal species and habitat.

Biological significance

The park supports a range of coastal vegetation formations, including heaths and grasslands and littoral rainforest. The vegetation in the park provides habitat for a range of threatened and significant species and populations, including the only population of the endangered low-growing form of the small shrub *Zieria smithii* that is found only in the regional park. More than 40% of the vegetation in the park is one of several threatened ecological communities.

The park provides important resources for a range of native fauna, including nectar and fruit resources, old-growth forests, and shorebird roosting and breeding habitats. Headland grassland in the park provides the northernmost known habitat of the endangered black grass-dart butterfly (*Ocybadistes knightorum*) and Floyd's grass (*Alexfloydia repens*).

Aboriginal culture and heritage

The park is within the traditional Country of the Gumbaynggirr People and has been a place of significance for Aboriginal people for many thousands of years. The Aboriginal culture and heritage values in the park are significant.

There are a number of sites of particular Aboriginal significance in the park, including particular headlands, resource areas, tool-making sites, meeting and ceremonial places, and spiritual and mythological landscapes. Local Aboriginal people still harvest wild resources from the park for use as bush foods and medicines, and hold community and education events in the park.

Shared heritage

The coastline has played a vital role in the history of Coffs Harbour, providing a focus for settlement, industry, transport, recreation and holidaying. There is evidence that areas of the park were used for a variety of agricultural pursuits, such as growing bananas and sugar cane. The park and its adjacent beaches have long been a focus for seaside holidays and recreation for locals and visitors alike, and the Coffs coastline continues to provide these opportunities.

Recreation and tourism

The park provides recreation and leisure opportunities in a natural coastal setting of headlands, dunes, creeks, diverse coastal vegetation, and adjacent sandy beaches. Popular nature-based activities in the park include walking, birdwatching, sightseeing, whale watching and nature appreciation. The Solitary Islands Coastal Walk provides a high-quality nature-based tourism asset for the Coffs Harbour LGA. Day use areas in the park provide visitors with a suite of facilities, including picnic areas and playgrounds. As well as access to adjacent beaches, the park also provides visitors with opportunities for cycling, dog walking, horse riding and adventure activities.

A number of commercial activities occur in the park, including surfing schools and parachute landings. Opportunities for further commercial development of low-impact and ecologically sustainable visitor services in the park need to be investigated.

Research and education

The park is an important educational resource for local and visiting schools, colleges and universities. The National Parks and Wildlife Service (NPWS) Discovery program, the Coffs Ambassador program (Coffs Harbour City Council) and other educational programs are conducted in the park and, in relation to activities in the adjacent Solitary Islands Marine Park, from the park. Research within the park provides data to assist in the management of the park's values.

Coffs Coast Regional Park Plan of Management

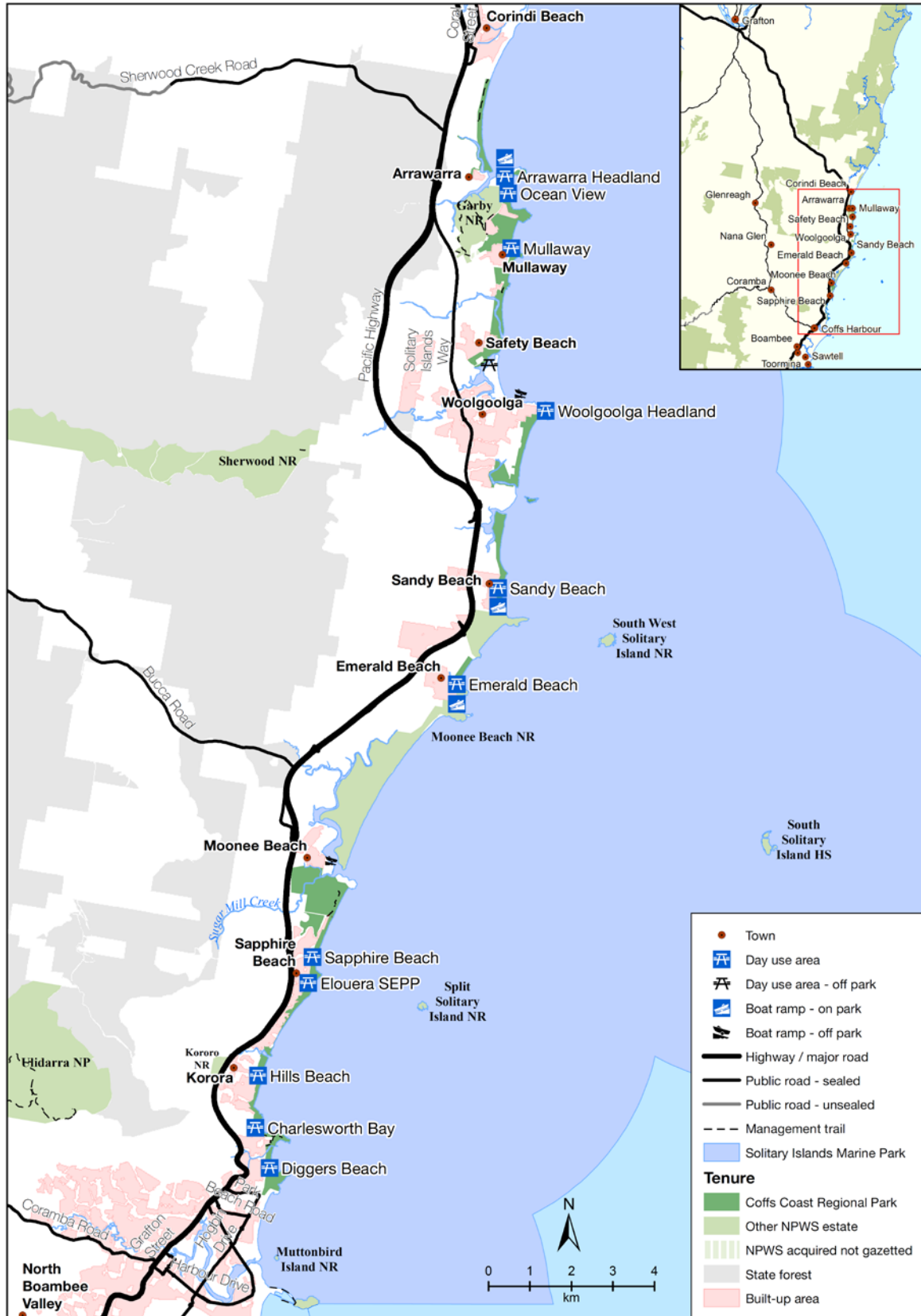


Figure 1 Coffs Coast Regional Park

Coffs Coast Regional Park Plan of Management

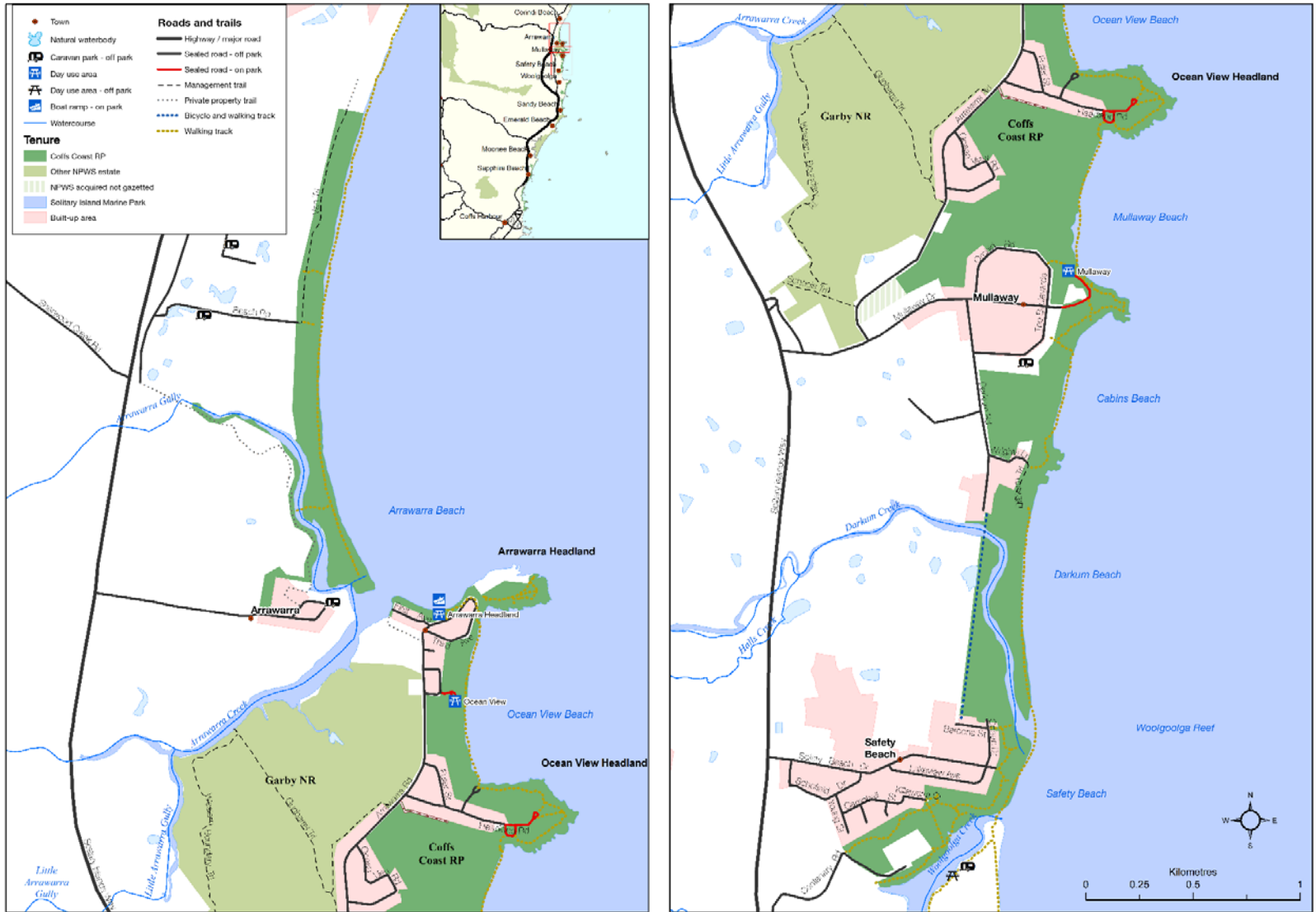


Figure 2 Northern section of Coffs Coast Regional Park

Coffs Coast Regional Park Plan of Management

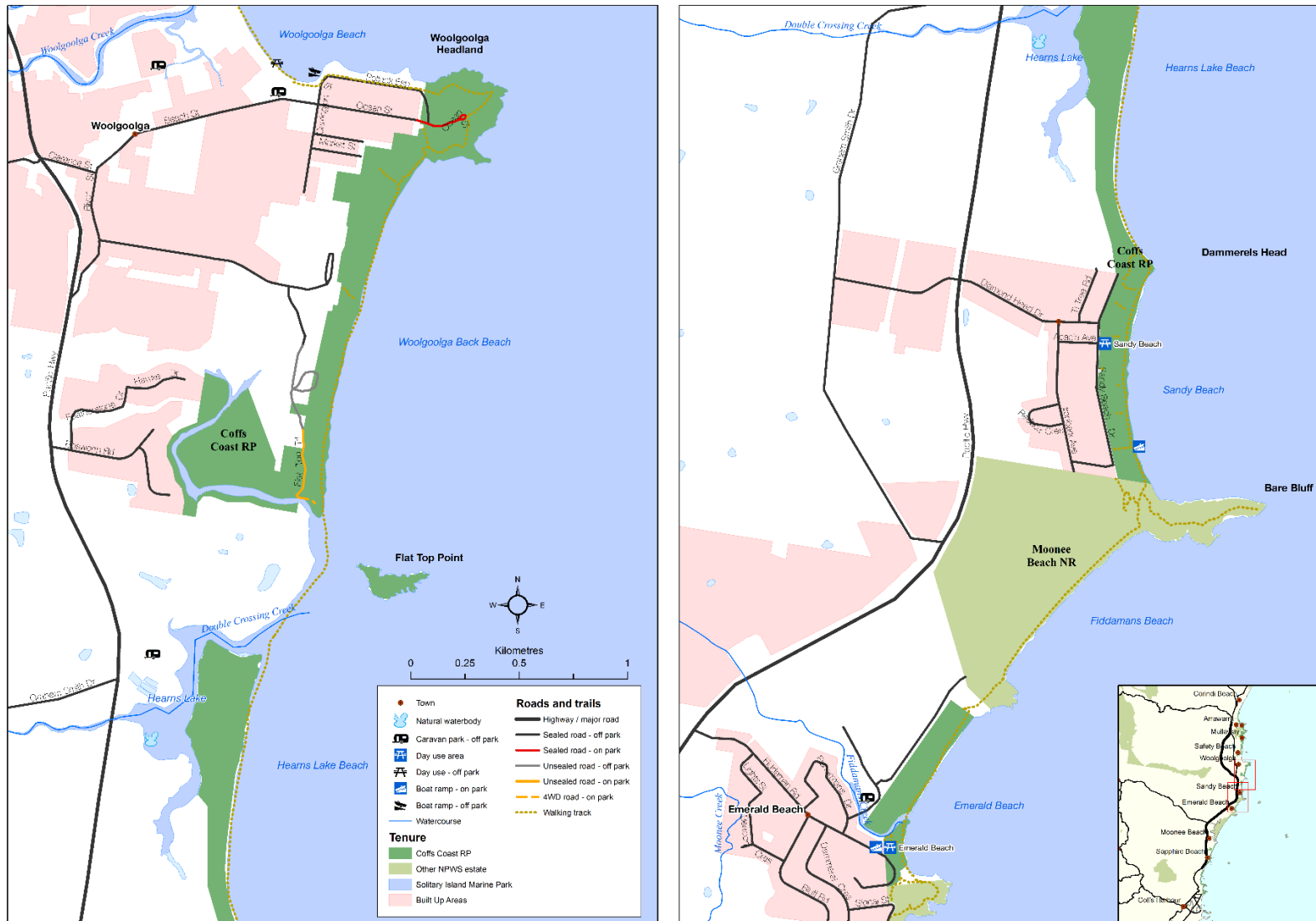


Figure 3 Central section of Coffs Coast Regional Park

Coffs Coast Regional Park Plan of Management

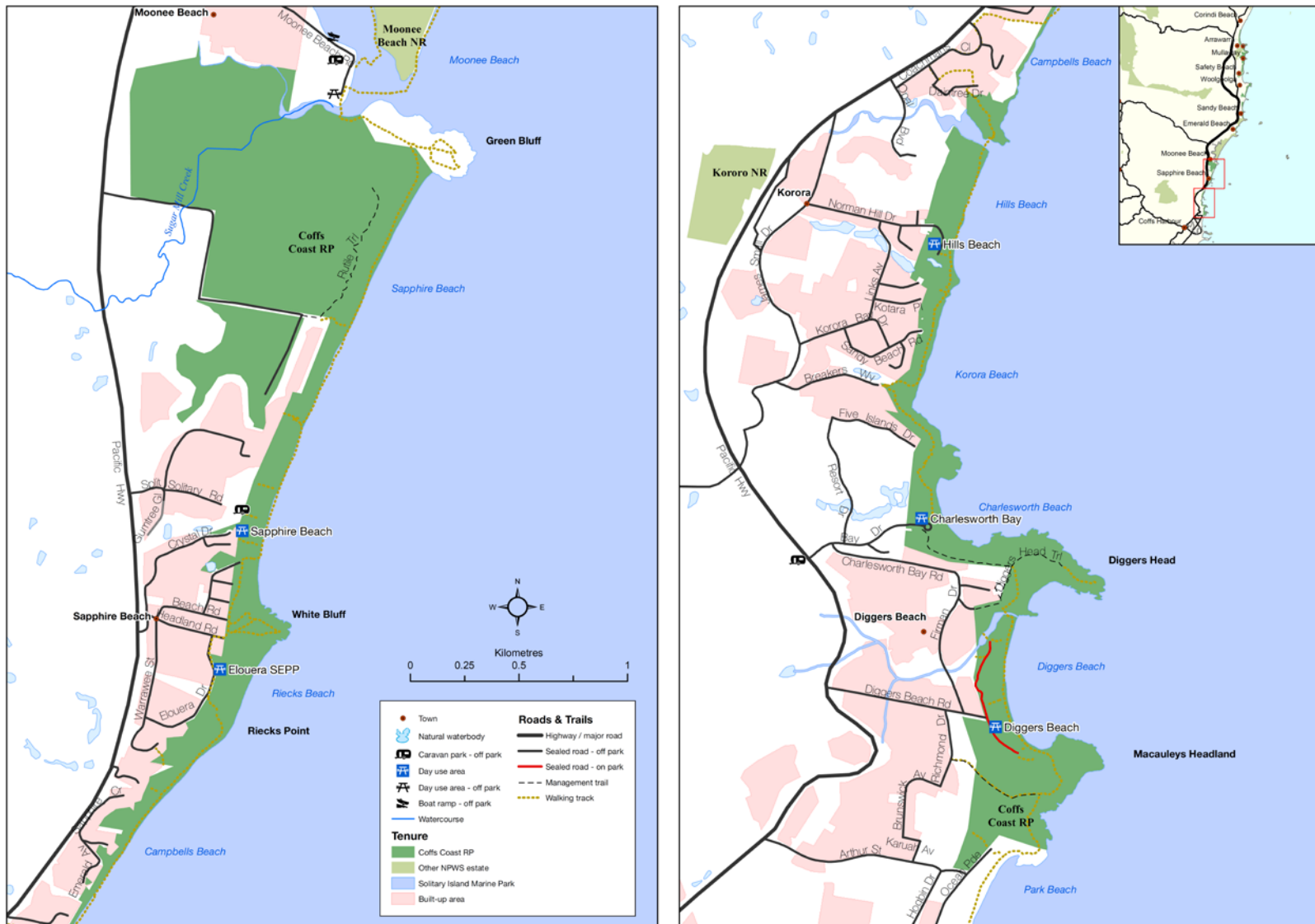


Figure 4 Southern section of Coffs Coast Regional Park

2. Management context

Regional parks are a category of park established by the NSW Government in 1995. They are areas of regional open space and bushland with high conservation, landscape or recreational values. Generally situated on the edge of urban population centres, regional parks serve the dual purpose of providing opportunities for outdoor recreation while serving to protect flora and fauna.

As regional parks are usually situated near population centres, their environments have sometimes been altered by past human activities or land uses in or adjacent to the parks.

A major feature of regional parks is that some activities allowed within them are not permitted in other categories of parks; for example, dog walking may be permitted in regional parks. Facilities common to most regional parks include playgrounds, picnic areas, cycling tracks, walking tracks and lookouts. These visitor facilities provide the local and regional community with access to high-quality recreational experiences within a mostly natural setting.

The proximity to large urban areas means that regional parks have strong social, cultural and historical values.

2.1 Legislative framework

Regional parks in New South Wales are managed within a legislative and policy framework, primarily the National Parks and Wildlife Act, the National Parks and Wildlife Regulation, the *Biodiversity Conservation Act 2016* and relevant policies.

Other legislation, strategies and international agreements may also apply to management of the park. In particular, the *Environmental Planning and Assessment Act 1979* may require assessment of the environmental impact of works proposed in this plan. The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* may also apply in relation to actions that impact matters of national environmental significance, such as migratory and threatened species or ecological communities listed under that Act. The NSW *Heritage Act 1977* may apply to excavation in known archaeological sites or in sites with potential to contain historical archaeological relics.

The *Fisheries Management Act 1994* and the *Marine Estate Management Act 2014* apply to the waters adjoining the park, which are contained in the Solitary Islands Marine Park.

Coffs Coast Regional Park is managed by the Coffs Coast Regional Park Trust Board which is appointed under the National Parks and Wildlife Act for the care, control and management of the park (see Section 2.3).

A plan of management is a statutory document under the National Parks and Wildlife Act. Once the Minister has adopted a plan, the plan must be carried out – in this case by the Coffs Coast Regional Park Trust Board – and no operations may be undertaken in relation to the lands to which the plan relates unless the operations are in accordance with the plan. Should management strategies or works be proposed that are not consistent with this plan, an amendment to the plan will be required. This plan will also apply to any future additions to Coffs Coast Regional Park. Park-use regulations are summarised in Appendix A.

2.2 Management purposes and principles

Regional parks are reserved under the National Parks and Wildlife Act to protect and conserve areas in a natural or modified landscape that are suitable for public recreation and enjoyment. Under section 30H of the Act regional parks are managed to:

- provide opportunities for recreation and enjoyment in natural or modified landscapes
- identify, interpret, manage and conserve the park so as to maintain and enhance significant landscape values
- conserve natural and cultural values
- promote public appreciation and understanding of the park's natural and cultural values
- provide for sustainable visitor or tourist use and enjoyment that are compatible with conservation of natural and cultural values
- provide for sustainable use (including adaptive re-use) of any buildings or structures or modified natural areas having regard to conservation of natural and cultural values.

Regional parks are established to provide recreational opportunities while protecting natural, cultural and landscape values.

2.3 Management arrangements

Unlike most other categories of park, the management of Coffs Coast Regional Park involves a partnership approach involving the Coffs Coast Regional Park Trust Board, Coffs Harbour City Council and NPWS.

The Trust Board is responsible for the care, control and management of the park, in accordance with the National Parks and Wildlife Act and National Parks and Wildlife Regulation, and is subject to the provisions of the Act. The role of the Board is to:

- oversee the implementation of the plan of management
- prepare and oversee an annual works program, consistent with this plan
- provide a forum for community input
- set policy direction for matters not covered in this plan of management.

The implementation of park management is shared between NPWS and Coffs Harbour City Council, which act on behalf of the Trust Board, which facilitates the cooperative management arrangements. Both agencies work to manage the whole park, with each having certain roles and responsibilities as set out in a memorandum of understanding. In summary, NPWS is primarily responsible for the management of:

- native vegetation and wildlife, including threatened species and ecological communities
- Aboriginal culture and heritage
- vertebrate pest species and weeds
- law enforcement
- fire.

Coffs Harbour City Council is primarily responsible for:

- providing and maintaining all facilities, such as picnic areas, playgrounds and public toilets, and infrastructure such as water and sewerage lines
- providing access, walking tracks and roads in accordance with this plan
- maintaining areas of open space (e.g. day use areas) in accordance with this plan
- providing secretariat services to the Board.

The Trust Board has determined that NPWS and Coffs Harbour City Council policies will generally apply to the management of the park. However, the provision and maintenance of facilities, infrastructure and areas of open space must be in accordance with this plan of management, and some associated works would be subject to environmental assessment by NPWS.

2.4 Specific management directions

In addition to the general principles for the management of regional parks (see Section 2.2), the following specific management directions apply to the management of the park:

- protect and enhance the park's natural values, particularly threatened species, populations and ecological communities
- work in partnership with relevant regulatory authorities to protect the interface of the park with Solitary Islands Marine Park and contribute to effective catchment protection measures that will benefit the marine and estuarine environment
- work closely with the Gumbaynggirr Aboriginal community, in particular the Garlambirla Guuyu Girrwa (Coffs Harbour Elders) and Garby Elders, to incorporate traditional knowledge into the management of the park, and to protect and interpret Aboriginal culture and heritage
- work collaboratively with local volunteer groups to manage and enhance park values, for example, through weeding and bush regeneration, and continue to promote membership of local volunteer groups on the visitor website
- ensure the provision of access and facilities at popular visitor areas meets the needs of local communities, visitors and tourists
- work with local tour operators, businesses and tourism organisations to promote the park and develop sustainable visitor services and experiences.

3. Natural heritage values

This plan aims to conserve both the natural and cultural values of the park. The location, landforms and plant and animal communities of an area have determined how it has been used and valued by both Aboriginal and non-Aboriginal people. These values may be attached to the landscape as a whole or to individual components, for example, to specific plant and animal species used by Aboriginal people. To make this plan clear and easy to use, various aspects of natural heritage, cultural heritage, threats and ongoing use are dealt with individually, although these features are interrelated.

3.1 Geology, landscape and hydrology

The park lies along the coast, north from Coffs Harbour, and encompasses headlands, dune systems, estuarine, and riparian areas. The headlands offer spectacular views of the coast, hinterland and Solitary Islands, which are the park's dominant landscape features. The highest point in the park is Woolgoolga Headland (52 metres above sea level).

Some of the landscapes in the park are of significance to local Aboriginal people, in particular Arrawarra Headland and Dreaming tracks that run along the coast and from the coast to the hinterland. There are also important spiritual and cultural connections between land and sea (including offshore islands within the adjacent Solitary Islands Marine Park). Aboriginal culture and heritage values and issues are discussed further in Section 4.

Geologically, the park occurs on the eastern rim of the Coffs Harbour Block and is part of a unit known as the Coramba Beds. There are two landforms represented in the park:

- the park's headlands are predominantly Palaeozoic Coramba Beds dominated by greywacke, which is resistant to erosion
- the rest of the park (including embayments) consists of undifferentiated Quaternary sediments, including alluvial mud, silt, sand and gravel deposits; swamp deposits; coastal sand beaches and dunes; and estuarine deposits.

The Coffs Harbour coast is characterised by fairly steep coastal catchments, which are relatively small in area. There are no major creeks or rivers within the park, although many small coastal creeks and lakes traverse the park and are valuable ecological assets of the Solitary Islands Marine Park. They include Jordans, Pine Brush, Moonee, Sugar Mill, Fiddamans, Willis, Woolgoolga, Darkum and Arrawarra creeks; and Hearn's Lake, Pipe Clay Lake and a number of other un-named intermittently closed and open lakes and lagoons (also referred to as ICOLLs) (see Figures 2 to 4). The tidal sections of these creeks and lakes (i.e. below mean high water mark) lie within the adjacent Solitary Islands Marine Park.

Issues

Given its location on the eastern seaboard of Australia, the park's landscapes are likely to be affected by climate change induced sea level rise, and other coastal hazards. These issues, including shoreline recession, beach erosion, dune instability and coastal inundation, are dealt with in Sections 7.3 and 7.4 of this plan.

Soils on the park's headlands are shallow and stabilising vegetation can take a long time to recover from disturbance (Floyd 1988). Aboriginal sites can also be exposed and impacted by soil erosion. The major areas of soil erosion exist on the headland areas and are associated with visitor use and (mostly informal) natural surface walking tracks. These impacts are dealt with in Section 5.

The land within the park is positioned at the interface of land and sea, where important ecological interactions occur and catchments discharge to the ocean. Much of the land in the

park is therefore the final filter for estuarine and coastal water quality. Coastal wetlands are particularly important for nutrient scrubbing and the removal of waterborne sediment, and creeks and estuaries provide valuable habitat as invertebrate and fish nurseries.

Desired outcomes

Hydrological systems are protected, and rehabilitation and natural regeneration works are supported and encouraged.

Human-induced soil erosion in the park is minimised.

The park provides a buffer for protecting the estuarine and marine environment of Solitary Islands Marine Park.

Management response

- 3.1.1 Manage public access, including walking tracks and pedestrian beach access tracks, pest species, fire, roads and trails and areas of past disturbance to minimise erosion and to maintain or increase protective vegetation cover.
- 3.1.2 Where possible, contribute to the protection of catchment values and improved water quality of creeks and estuaries traversing the park, for example, by enhancing foreshore vegetation integrity.

3.2 Native plants

The park supports a range of coastal vegetation formations, including heath, rainforest, dry sclerophyll forest, wet sclerophyll forest, forested wetlands, freshwater wetlands, saline wetlands, spinifex strandline grassland on dunes and Themeda Grassland on headlands (see Table 2). Almost 80% of the park is covered with native vegetation, and the rest consists of sandy beaches, rocky outcrops or cleared areas of lawn.

Table 2 Vegetation formations in the park

Vegetation formation (class) (from largest area to smallest area)	Area (ha)	% of total native vegetation
Heathlands (including headland grasslands)	154.57	37.37
Forested wetlands (floodplain and swamp forests)	95.29	23.04
Dry sclerophyll forest	72.98	17.65
Rainforest (littoral rainforest)	40.34	9.75
Freshwater wetlands (heath swamps and lagoons)	19.49	4.71
Wet sclerophyll forest	9.76	2.36
Saline wetlands (mangroves and saltmarsh)	9.54	2.31
Strandline grasslands	5.34	1.29

Source: OEH (2012b).

More than 40% of the park's vegetation is one of several threatened ecological communities (see Table 3), including littoral rainforest, which is considered critically endangered at the national level (OEH 2012b).

The vegetation formations within the park provide habitat for a range of threatened and significant species and populations of plants. Diggers Head, in the southern section of the

park, supports the only known habitat of *Zieria smithii* endangered population. (Another endangered species, *Zieria prostrata*, is found within Moonee Beach Nature Reserve.) Nine other plant species known in the park are threatened, seven of which are listed as endangered (see Table 4).

Table 3 Significant ecological communities known or likely to occur in the park

Ecological community (short titles)	Status ¹		Area (ha)
	BC Act	EPBC Act	
Swamp Sclerophyll Forest on Coastal Floodplains	EEC	–	59.47
Littoral Rainforest/Coastal Vine Thicket	EEC	CEEC	40.34
Themeda Grassland on Seacliffs and Coastal Headlands	EEC	–	43.67
Subtropical Coastal Floodplain Forest	EEC	–	13.12
Swamp Oak Floodplain Forest	EEC	–	6.05
Coastal Saltmarsh	EEC	–	6.58
Freshwater Wetlands on Coastal Floodplains	EEC	–	0.66
Mangrove/Grey mangrove low closed forest ²	–	–	2.96

Source: OEH (2012b).

¹ BC Act = Biodiversity Conservation Act; EPBC Act = Environment Protection and Biodiversity Conservation Act; EEC = endangered ecological community; CEEC = critically endangered ecological community.

² Regionally significant community; estimated 70% cleared, protected under *Fisheries Management Act 1994*.

Strategies for the recovery of threatened species, populations and ecological communities have been set out in a statewide Biodiversity Conservation Program (OEH 2017a). These actions are currently prioritised and implemented through the *Saving our Species* program, which aims to maximise the number of threatened species that can be secured in the wild in New South Wales for 100 years (OEH 2013d). Individual recovery plans may also be prepared for threatened species to consider management needs in more detail.

Table 4 Threatened and significant plant species and populations recorded in the park

Common name	Scientific name	Habitat/Location in park	Status ¹	
			BC Act	EPBC Act
Endangered population				
Low-growing form of <i>Zieria smithii</i> , Diggers Head	<i>Zieria smithii</i> endangered population	Themeda Grassland / Diggers Head	EP	–
Threatened species				
Austral toadflax	<i>Thesium australe</i>	Themeda Grassland EEC / Diggers Head; Macauleys, Woolgoolga, Ocean View & Arrawarra headlands	V	V

Common name	Scientific name	Habitat/Location in park	Status ¹	
Coast headland pea	<i>Pultenaea maritima</i>	Themeda Grassland EEC / Arrawarra, Ocean View, Mullaway, Woolgoolga, Macauleys headlands; Darkum Rocks and Diggers Head	V	–
Dwarf heath casuarina	<i>Allocasuarina defungens</i>	Heathland / Mullaway and Arrawarra Headland	E	E
Floyd's grass	<i>Alexfloydia repens</i>	Themeda Grassland EEC / Diggers Head	E	–
Moonee quassia	<i>Quassia</i> sp. Mooney Creek	Wet sclerophyll forest / Sugar Mill Creek	E	E
Rusty plum	<i>Niemeyera whitei</i>	Littoral rainforest / Sugar Mill Creek	V	–
Sand spurge	<i>Chamaesyce psammogeton</i>	Spinifex grasslands / Ocean View Headland	E	–
Scented acronychia	<i>Acronychia littoralis</i>	Littoral rainforest / North Sapphire Beach	E	E
Silverbush	<i>Sophora tomentosa</i>	Spinifex grasslands / Arrawarra, South Mullaway, Safety, Emerald, Sapphire, Campbells and Hills beaches; Woolgoolga Headland	E	–
Significant species			Significance	
Mulloway needle bush	<i>Hakea actites</i>	Heathland / Mullaway and Arrawarra Headland	Woolgoolga is southern range limit	
Cockspur flower	<i>Plectranthus cremnus</i>	Heathland / Flat Top	Poorly known species suspected at risk	
Purple donkey orchid	<i>Diuris punctata</i>	Themeda Grassland / Ocean View Headland	Uncommon across its range	

Source: NSW BioNet Atlas (OEH 2017b) and Owner (2012).

¹ BC Act = Biodiversity Conservation Act; EPBC Act = Environment Protection and Biodiversity Conservation Act;
EP = endangered population; V = vulnerable species; E = endangered species.

Heathland (including heathland, shrubland and native grassland) is the most extensive vegetation formation in the park, occupying 155 hectares or 37% of total vegetation cover. Heathland generally occurs near the ocean on headlands, dunes and swales and on poorly drained clay soils around Arrawarra Headland and Mullaway.

The native grasslands that occur on many of the park's headlands are dominated by kangaroo grass (*Themeda australis*) and are examples of the Themeda Grassland on Seacliffs and Coastal Headlands Endangered Ecological Community (EEC). Themeda Grasslands provide habitat for a range of threatened plant species, including coastal headland pea, Floyd's grass and austral toadflax.

The heathlands and shrublands within the park include:

- Coast Banksia Shrubland/Open Forest dominated by coast banksia (*Banksia integrifolia*) and tuckeroo (*Cupaniopsis anacardioides*)
- Swamp Oak – Broad-leaved Paperbark Low Closed Shrubland dominated by swamp oak (*Casuarina glauca*), broad-leaved paperbark (*Melaleuca quinquenervia*) and coast banksia
- Wattle Shrubland dominated by coastal wattle (*Acacia longifolia* subsp. *sophorae*), and prickly couch (*Zoysia macrantha*, a native grass), with bitou bush (*Chrysanthemoides monilifera* subsp. *rotundata*) forming monocultures in disturbed areas.

The poorly drained clay soils around Arrawarra Headland and Mullaway support a heathland dominated by Mullaway needle bush (a plant at its southern distributional limit) and prickly-leaved paperbark (*Melaleuca nodosa*). These heathlands also provide habitat for the endangered dwarf heath casuarina.

Forested wetlands, including coastal floodplain and swamp forests, make up almost a quarter of the vegetation cover in the park. The larger patches of forested wetlands in the park are generally found behind dunes or in association with alluvial floodplains, alluvial flats and backswamps. Forested wetlands in the park are variously dominated by swamp oak, broad-leaved paperbark, hard corkwood (*Endiandra sieberi*), swamp turpentine (*Lophostemon suaveolens*), swamp mahogany (*Eucalyptus robusta*), willow bottlebrush (*Callistemon salignus*), and various rushes, sedges and gahnia.

Forested wetlands in the park dominated by swamp oak are Swamp Oak Floodplain Forest EEC (6 hectares). In contrast, those dominated by broad-leaved paperbark, willow bottlebrush and swamp mahogany are Swamp Sclerophyll Forest EEC (60 hectares).

Dry sclerophyll forest is the third most extensive vegetation type in the park (73 hectares), with most occurring in the Sugar Mill Creek area south of Moonee. This vegetation type generally occurs along the western fringe of the park, back from the beaches. Dry sclerophyll forest in the park is characterised by various species including tallowwood (*Eucalyptus microcorys*), blackbutt (*E. pilularis*), red mahogany (*E. resinifera* subsp. *hemilampra*), turpentine (*Syncarpia glomulifera*), forest red gum (*E. tereticornis*), pink bloodwood (*Corymbia intermedia*), smooth-barked apple (*Angophora costata*), swamp turpentine, broad-leaved paperbark and willow bottlebrush.

Approximately 13 hectares of the dry sclerophyll forest in the park are Subtropical Coastal Floodplain Forest EEC, which is dominated by forest red gum, grey ironbark (*E. siderophloia*), pink bloodwood and swamp turpentine.

Littoral rainforest is found adjacent to the ocean within dune systems and on headlands. It accounts for nearly 10% of vegetation cover in the park. Littoral rainforests in the park can be classified as Littoral Rainforest EEC (Biodiversity Conservation Act) and Littoral Rainforest and Coastal Vine Thickets of Eastern Australia Critically Endangered Ecological Community (Environment Protection and Biodiversity Conservation Act).

There are approximately 40 hectares of littoral rainforest in the park, with small patches occurring at Macauleys Headland, Diggers Head, Charlesworth Bay, Korora, Hills Beach, Sapphire, Sandy Beach, Hearn Lake, Woolgoolga Back Beach, Darkum Beach, South Mullaway Beach, Mullaway Beach, Arrawarra Headland and Arrawarra Beach.

Littoral rainforest supports a number of threatened plants in the park, including scented acronychia and rusty plum, both of which have been recorded near Sugar Mill Creek.

Dominant species in littoral rainforest include brush box (*Lophostemon confertus*), guioa (*Guioa semiglauca*), tuckeroo, hard corkwood, three-veined laurel (*Cryptocarya triplinervis*), yellow tulipwood (*Drypetes deplanchei*) and beach alectryon (*Alectryon coriaceus*). Riberry (*Syzygium luehmannii*) and native figs (*Ficus* spp.) also occur in littoral rainforest.

Freshwater wetlands cover almost 20 hectares of the park and are mostly coastal heath swamps dominated by tea-tree (*Leptospermum whitei* and *L. liversidgei*) or banksia (fern-leaved banksia *Banksia oblongifolia* and hairpin banksia *B. spinulosa*), or both; or mahoganies (swamp mahogany and red mahogany) and paperbark (*Melaleuca sieberi*). The largest areas of freshwater wetland in the park are at Mullaway Beach and north of Willis Creek. A small freshwater wetland south of Woolgoolga Back Beach car park is Freshwater Wetlands on Coastal Floodplains EEC.

Wet sclerophyll forest occupies a number of small, less than 10-hectare patches in the park. The Sugar Mill Creek area protects the largest example and provides habitat for Moonee quassia, an endangered species. Other smaller patches of wet sclerophyll forest occur in the lee of headland littoral rainforest at Diggers Head and Hills Beach.

Wet sclerophyll in the park is variously dominated by brushbox, turpentine, tallowwood, blackbutt, forest red gum, grey ironbark and jackwood (*Cryptocarya glaucescens*).

Saline wetlands (including mangrove and saltmarsh) occupy almost 10 hectares of the park. Mangrove occurs in the coastal estuaries of Arrawarra Creek, Darkum Creek, Willis Creek, Hearn Lake and Sugar Mill Creek (total 3 hectares). It is dominated by grey mangrove (*Avicennia marina* subsp. *australasica*) and river mangrove (*Aegiceras corniculatum*). The low closed forest dominated by mangroves is a regionally significant vegetation type which is estimated to be 70% cleared across its range.

Coastal saltmarsh is a mostly treeless plant community consisting of a mosaic of succulent herbs, salt-tolerant grasses and sedges. It occurs on tidal flats of estuaries and on the edge of intermittently open coastal lagoons. Saltmarsh occurs in the park along Arrawarra Creek, Willis Creek, Woolgoolga Headland and Sugar Mill Creek (total 6.5 hectares). In the park, there are a number of different saltmarsh communities (some of which are Coastal Saltmarsh EEC): estuarine twig saltmarsh, estuarine samphire – saltwater couch saltmarsh, headland sedgeland soaks, and sea rush saltmarsh.

Strandline grassland is a dynamic vegetation formation that occupies sheltered sections of beaches and creek mouths. It is dominated by coastal spinifex (*Spinifex sericeus*) and occupies approximately 5 hectares of the park.

The community expands during periods of sand accretion, enabling sand-binding plants to colonise, and then contracts in times of storm events. Strandline grassland is often a very simple community in which coastal spinifex is abundant, and other herbs and prostrate shrubs include pigface (*Carpobrotus glaucescens*), goat's foot (*Ipomoea brasiliensis*) and the introduced American pennywort (*Hydrocotyle bonariensis*) and sea rocket (*Cakile* spp.).

Spinifex strandline grasslands on the frontal dunes within the park provide habitat for the endangered sand spurge and silverbush and help mitigate coastal hazards (see Section 7.4).

Issues

The vegetation formations, threatened ecological communities and threatened species within the park have been subject to fragmentation and isolation across their range, and have been adversely affected by sandmining and changes in land use associated with agriculture and urbanisation in the Coffs Harbour area. The remnants protected within the park continue to be threatened by a range of processes, including:

- degradation and disturbance owing to the invasion and infestation of weeds
- inappropriate fire regimes
- concentrated and nutrient-enriched run-off
- damage from storms and other natural coastal processes
- erosion and trampling along unplanned and unmanaged walking tracks

- unauthorised damage to vegetation.

The invasion and infestation of weeds is the most immediate threat to native vegetation formations and native plant species within the park. Weeds compete with native plants for space, water and nutrients and may lead to structural changes or smothering as they proliferate. See Section 7.1 for details on weed control operations in the park.

NPWS relies on the generous efforts of community volunteer groups such as Dunecare, Bushcare and Landcare to monitor the distribution and extent of weed infestations in the park and to provide labour to address weed issues. These groups are often made up of local residents who provide input on bush regeneration priorities and supplement limited budgeted resources by holding regular working bees.

Regeneration of native vegetation in the park will focus on restoration of priority degraded areas and high conservation value areas. Designated lookout points will need to be managed to ensure continued visitor amenity and some areas within day use areas require restoration and rehabilitation.

Desired outcomes

- The habitat and populations of threatened plant species, populations and ecological communities are protected, maintained and enhanced.
- Negative impacts on threatened species, populations and ecological communities are minimised.
- Populations of significant plant species and vegetation communities are conserved.
- Structural diversity and habitat values are restored in degraded areas.
- Our understanding of the distribution and abundance of threatened and significant flora species in the park is improved.
- There is broader community understanding of the threats and impacts of weeds and support for proactive management and monitoring.

Management response

- 3.2.1 Implement relevant strategies in the Biodiversity Conservation Program, threat abatement plans and species-specific recovery plans for the park's threatened plant species, populations and ecological communities.
- 3.2.2. Encourage research into the distribution, ecological requirements and management requirements of significant species known or predicted to occur in the park.
- 3.2.3. Consolidate and enhance the distribution and diversity of littoral rainforest remnants within the park by supplementary plantings, using local provenance material where possible.
- 3.2.4. Support and facilitate opportunities for the participation of community volunteers in weed management programs in the park.

3.3 Native animals

Coffs Coast Regional Park and Moonee Beach Nature Reserve protect most of the remnant near-coastal vegetation between Coffs Harbour and Corindi Beach. These parks are particularly important in that they protect a diversity of remnant coastal habitats in an otherwise highly developed coastal landscape.

The diversity of vegetation communities found in the park provides habitat for a large number of native animal species, including at least 30 threatened species (see Table 5).

Table 5 Threatened animal species recorded in the park

Common name	Scientific name	Status ¹	
		BC Act	EPBA Act
Invertebrates			
Black grass-dart butterfly	<i>Ocybadistes knightorum</i>	E	–
Frogs			
Green-thighed frog	<i>Litoria brevipalmata</i>	V	–
Wallum froglet	<i>Crinia tinnula</i>	V	–
Birds			
Beach stone-curlew	<i>Esacus magnirostris</i>	E	–
Black bittern	<i>Ixobrychus flavicollis</i>	V	–
Black-necked stork	<i>Ephippiorhynchus asiaticus</i>	E	–
Brown treecreeper (eastern subspecies)	<i>Climacteris picumnus victoriae</i>	V	–
Dusky woodswallow	<i>Artamus cyanopterus cyanopterus</i>	V	–
Eastern grass owl	<i>Tyto longimembris</i>	V	–
Eastern osprey	<i>Pandion cristatus</i>	V	–
Glossy black-cockatoo	<i>Calyptorhynchus lathami</i>	V	–
Little lorikeet	<i>Glossopsitta pusilla</i>	V	–
Little tern	<i>Sternula albifrons</i>	E	M
Pied oystercatcher	<i>Haematopus longirostris</i>	E	–
Sooty oystercatcher	<i>Haematopus fuliginosus</i>	V	–
Square-tailed kite	<i>Lophoictinia isura</i>	V	–
Swift parrot	<i>Lathamus discolor</i>	E	E
Rose-crowned fruit-dove	<i>Ptilinopus regina</i>	V	–
Varied sittella	<i>Daphoenositta chrysoptera</i>	V	–

Common name	Scientific name	Status ¹	
		BC Act	EPBA Act
White-bellied sea-eagle	<i>Haliaeetus leucogaster</i>	V	–
Mammals			
Common blossom-bat	<i>Syconycteris australis</i>	V	–
Common planigale	<i>Planigale maculata</i>	V	–
Eastern bentwing-bat	<i>Miniopterus schreibersii oceanensis</i>	V	–
Eastern freetail-bat	<i>Mormopterus norfolkensis</i>	V	–
Grey-headed flying-fox	<i>Pteropus poliocephalus</i>	V	V
Koala	<i>Phascolarctos cinereus</i>	V	V
Little bentwing-bat	<i>Miniopterus australis</i>	V	–
Southern myotis	<i>Myotis macropus</i>	V	–
Squirrel glider	<i>Petaurus norfolcensis</i>	V	–
Yellow-bellied sheath-tail-bat	<i>Saccolaimus flaviventris</i>	V	–

Source: NSW BioNet Atlas (OEH 2017b) and Owner (2012).

¹ BC Act = Biodiversity Conservation Act, EPBC Act = Environment Protection and Biodiversity Conservation Act;
CE = critically endangered, E = endangered, V = vulnerable, M = listed migratory species.

The park is a long, generally narrow strip of land hugging the coastline. There are only two relatively large blocks of forest in the park: one in the Sugar Mill Creek area and the other around Woolgoolga Lake (see Figure 1). Surveys in the Sugar Mill Creek area have identified a number of threatened fauna species that are not known in other parts of the park: green-thighed frog, black bittern, square-tailed kite, common blossom-bat, eastern bentwing-bat, eastern freetail-bat and southern myotis.

Despite its narrowness, the park is a vital north–south coastal wildlife corridor along the eastern seaboard (Scotts 2003). Species use this corridor daily to move up and down the coastal strip, and parts of the park provide core habitat for species that disperse from the corridor to nearby suburbs and adjoining bushland.

Heathland, banksia, paperbark and eucalypt vegetation in the park provide important nectar and pollen resources for a range of threatened fauna species (e.g. grey-headed flying-foxes, squirrel gliders, common blossom-bats and swift parrots) and a suite of common nectar-eating birds, mammals and insects. Plants that produce nectar during late summer, autumn and winter are particularly important food resources. In the park, these include coast banksia, hairpin banksia, broad-leaved paperbark, swamp mahogany, forest red gum, grey ironbark and pink bloodwood. Controlling weeds and fire intensity, and fire frequency are key management actions to enhance the continued supply of nectar from these plant species.

Littoral rainforests in the park provide important fruit resources for a number of threatened fauna species, including rose-crowned fruit-doves and grey-headed flying-foxes and common species like wonga pigeons and brown cuckoo-doves. Rose-crowned fruit-doves eat only fruit and, in north-east NSW, move seasonally to track the availability of food. Numbers of rose-crowned fruit-doves in patches of coastal rainforest are greatest from late autumn through winter to spring. Activities that threaten littoral rainforest habitats in the park may also affect fruit-doves, including fragmentation, burning, and invasion of weeds (see Section 7).

Common blossom-bats rely on a complex of coastal habitats, such as those found within the park, because they roost in littoral rainforest and forage in adjacent heathlands.

Old-growth forests provide a range of resources, including large old trees, hollows, dead standing stags and large fallen logs. These resources are particularly scarce on the coastal floodplain and, as such, their presence in the park is significant. There are small, disjunct patches of mature and old-growth forest in the park at Arrawarra, Mullaway, Sugar Mill Creek and north of Woolgoolga Lake. Old-growth forest resources are critical to squirrel gliders and glossy black-cockatoos and common species in the park, including common brushtail possums (*Trichosurus vulpecula*), insectivorous bats, lorikeets, kingfishers and treecreepers. Raptors, such as whistling kites (*Haliastur sphenurus*) and eastern ospreys, also use large mature trees for nesting.

Further survey work in areas of mature and old-growth forest in the park (e.g. Sugar Mill Creek, Woolgoolga Lake) are required to better understand the park's biodiversity values.

The **glossy black-cockatoo** is a threatened species that has become locally extinct in many parts of its former range. It feeds almost exclusively on the seeds of *Allocasuarina* species. In the park, forest she-oak (*Allocasuarina torulosa*) and black she-oak (*A. littoralis*) are their preferred feed trees. The birds tend to favour particular trees within a stand of she-oaks, so it is important to protect all individual plants from fire to maximise foraging opportunities. Bush regeneration works could also include local she-oak species to enhance habitat.

A patch of Floyd's grass on Diggers Head provides the northernmost known habitat of the **black grass-dart butterfly**, an endangered species. The grass-dart is particularly threatened by climate change and associated sea level rise because much of its habitat is at or near current sea levels. As such, the foraging habitat provided by Floyd's grass on Diggers Head is a very important refuge and should be actively managed to maintain this population of the butterfly (see Section 3.2).

There are two threatened frog species recorded from the park. Sedgeland, creek lines, wet heath and swamp sclerophyll forests are all important frog habitats in the park. Their protection from nutrient run-off and pollution is important to maintain populations.

Several important **shorebirds** inhabit the park, including the pied oystercatcher, sooty oystercatcher and little tern. Many others are known to use estuarine, intertidal and marine areas adjacent to the park. For example, Arrawarra Creek and Moonee Creek both support a number of threatened shorebird species, and the coastline includes rocky shores that are favoured foraging habitat for migratory shorebirds (DECCW 2010b).

Although foraging habitats for these shorebirds lie mainly outside the park, shorebird roosting and breeding areas are typically located just above the high water mark near preferred intertidal foraging habitats. Roosting and breeding habitats present in the park include saltmarsh, sandy beaches, sand bars and spits, and mangroves.

Shorebirds experience a range of threats, including four-wheel drive vehicles, pedestrians and introduced predators (see Section 7.1), encroachment of mangroves, sea level rise and human disturbance. Managing threats, particularly the effects from recreational activities, poses many challenges as a substantial number of roosting and foraging sites occur in areas that are promoted for aquatic or outdoor recreation (DECCW 2010b). In the park, key areas

for management include known shorebird breeding sites, and foraging and roosting areas above the high tide mark.

The endangered little tern has an established breeding site (which shifts from year-to-year) at Woolgoolga Back Beach, near the mouth of Willis Creek. Breeding success varies, and in some years, the site is very important for the overall breeding success of the species in New South Wales. The site is fenced and control programs for red fox (*Vulpes vulpes*) are undertaken during the breeding season. Seasonal restrictions on dogs (*Canis lupus familiaris*) and vehicle access to the beach have also been put in place to protect the nests and fledged young. Nearby Flat Top Point is a known breeding area for sooty oystercatchers.

Eastern grey kangaroos (*Macropus giganteus*) occur throughout the northern beaches of Coffs Harbour LGA; including a population that lives on Woolgoolga Headland, a popular visitor location in the park. Being at the interface between residential and park lands, these kangaroos often come into contact with people. Although they are mostly docile, kangaroos can be unpredictable when they feel threatened. Community education and signage have been used successfully to reduce this risk at Look at Me Now Headland in Moonee Beach Nature Reserve at Emerald Beach.

Issues

The protection and enhancement of remnant coastal habitats found in the park is vital to the long-term viability of populations of many native animals inhabiting the park and surrounding areas (see Section 7.5). It is also important to limit impacts from fire (see Section 7.2), pest animals and weeds (see Section 7.1), and to protect key habitats (e.g. areas used for foraging, nesting and roosting by shorebirds) from disturbance by park visitors.

With increasing human visitation to major day use areas in the park, the risk of conflicts between visitors and native animals, like kangaroos and Australian magpies (*Gymnohina tibicen*) is likely to increase. Active intervention and community education may be required.

Climate change and severe climatic events also affect the native fauna of the park (see Section 7.3). For example, rising land and sea temperatures may result in more frequent nesting of sea turtles along the coast, which will require protection from visitors and dogs. Rising sea levels and increased incidence of storm surges may prompt more active intervention to protect shorebird and turtle nests from inundation.

Desired outcomes

- The habitat and populations of all threatened animals are protected and conserved.
- Negative impacts on threatened species and wildlife corridor values are minimised.
- Structural diversity and habitat values are restored in degraded areas.
- Native animals that act aggressively towards humans are managed in accordance with relevant policies.

Management response

- 3.3.1 Implement relevant strategies in the Biodiversity Conservation Program, threat abatement plans and species-specific recovery plans for the park's threatened fauna species and populations.
- 3.3.2 Encourage or undertake fauna surveys of coastal forests in the park (including mature and old-growth forests in the Arrawarra–Mullaway, Sugar Mill Creek and Woolgoolga Lake areas), and any new additions to the park.

- 3.3.3 Implement appropriate protective measures for shorebird breeding and roosting sites and sea turtle nesting sites (e.g. temporary closures of beach access points, erection of fencing and signage).
- 3.3.4 Encourage community members and interest groups to participate in the monitoring of shorebird nesting sites.
- 3.3.5 Implement community education measures (e.g. signage) or other controls to limit risks to visitors associated with aggressive eastern grey kangaroos.

Other actions to manage habitats of native fauna are included in sections of the plan that deal with weeds, fire and fragmentation (see Section 7).

4. Cultural heritage values

4.1 Aboriginal connections to Country

The park is within the traditional Country of the Gumbaynggirr People and within the Coffs Harbour and District Local Aboriginal Land Council area. Gumbaynggirr Country stretches from Nambucca to the Clarence River.

The Garby Elders and Yarrawarra Aboriginal Corporation represent the Garby People, a recognised clan group of the Gumbaynggirr Nation and the traditional custodians of the Northern Lowlands Gumbaynggirr Country (Yarrawarra Aboriginal Cultural Centre 2017). The Garlambirla Guuyu Girrwa (Coffs Harbour Elders) are the traditional owners of Country in the Coffs Harbour, Sawtell and hinterland areas. Together, these groups and the people they represent are referred to in this plan as the 'local Aboriginal community'.

In relation to Aboriginal cultural heritage, this plan:

- acknowledges the strong and ongoing cultural traditions of the local Aboriginal community
- acknowledges Aboriginal connection to land, its cultural significance and its role in the spiritual, cultural and economic wellbeing of the local Aboriginal community
- recognises that Aboriginal culture is based on Country, and access to and responsibility for Country is a significant factor in the wellbeing of the local Aboriginal community, allowing for the maintenance and renewal of culture.

For Aboriginal people, connection to Country is inseparable from maintaining culture. Aboriginal people have a spiritual and physical connection with Country, which underpins their wellbeing. They therefore have a genuine need for access to Country and, where Country is in the park, a role in park management.

The land, water, plants and animals within a landscape are central to Aboriginal spirituality and contribute to Aboriginal identity. The park provides a place where traditions and knowledge relating to ceremonial places, stories and traditional resource use can be passed on by Aboriginal people and interpreted for non-Aboriginal people. Aboriginal heritage and connection to nature, land and sea are inseparable and the management of Country needs to be managed in an integrated manner across the landscape.

Wild resources

Plants, animals and ecosystems are at the core of Aboriginal people's attachment to the land and the sea. Plants and animals are valued as part of Country and may also act as totems. The continued use of wild foods and medicines allows people to pass on cultural knowledge, to strengthen social and family bonds, to use and maintain places of cultural value, and to improve their physical wellbeing.

English (2002) documented the use of wild resources by Gumbaynggirr People at Corindi Beach, in the north of the park. Today, use of wild resources appears to be focused on coastal plants within the park and surrounds, and use of fish and shellfish from the beaches and rocky shores adjacent to the park.

Some Gumbaynggirr People still seek to use bush foods and medicines on a regular basis. The cultural use of wild resources is subject to NPWS policies and licensing. Some of the medicinal, bush tucker and resource plants that English (2002) notes are still in use today include the following (Arrawarra Sharing Culture 2009):

- cottonwood hibiscus (*Hibiscus tiliceus*) or maluga — edible flowers, medicinal uses, fibre for baskets and fishing nets
- creek sandpaper fig (*Ficus coronata*) or gaagunyga — polishing wood, edible fruit, medicinal and fibre for string
- pigface or barridamam — edible fruit and medicinal uses
- geebung (*Persoonia virgata*) — fruit as thirst quencher and for preserving fishing lines
- brush cherry (*Syzygium australe*) or wunarrga and lilly pilly (e.g. *Acmena smithii* or *A. jijimam*) — edible fruit.

Important sites and places

Aboriginal sites are places with evidence of Aboriginal occupation or places that are related to other aspects of Aboriginal culture.

There are a number of sites of particular Aboriginal significance in the park. They are important as evidence of Aboriginal history and they are also part of the culture of local Aboriginal people.

Landscape features in the park, such as the headlands, islands, estuaries and dune complexes, have particular significance to the local Aboriginal community. These are important resource areas and there are many stories associated with these landscapes. The pathways that Aboriginal people used in the past to travel between different camp sites, ceremonial or resource places are also important. In the Coffs Harbour area, these pathways (Dreaming trails) often ran along the coast, turning inland along ridgelines to skirt around creeks. There are also large tool-making places, stone resource places, camp sites, ceremonial grounds and large middens in the park and surrounding areas.

Headlands and their associated rock platforms and rock pools provide key vantage points and important resources, including stone resources and bush tucker. Certain headlands along the Coffs Harbour coastline are of ceremonial importance to the local Aboriginal community. One of the better-known sites within the park is Arrawarra Headland, which is closely associated with the Arrawarra fish traps in the Solitary Islands Marine Park. Arrawarra Headland (Ya waarra, or the 'meeting place') is an extremely important site. It is registered under the National Parks and Wildlife Act as a men's only site of significance. Men held gatherings on the headland, including rainmaking and initiation ceremonies. Aboriginal women and children are instructed not to venture onto the headland or beyond the fish trap (Arrawarra Sharing Culture 2009).

The Moonee locality is also extremely important to Gumbaynggirr People and contains a rich aggregation of resource and tool-making sites, meeting and ceremonial places, and spiritual and mythological landscapes (Somerville & Perkins 2010). Land south of Moonee, around Sugar Mill Creek, has been used by local Aboriginal people in recent times for camping and the passing on of cultural knowledge. There is a large midden along the southern banks of Sugar Mill and Moonee creeks, and a number of other registered Aboriginal sites in the area. The midden is currently eroding and requires stabilisation works and protection from further compaction by walkers. The local Aboriginal community are very interested in the management, access and use of land around Sugar Mill Creek and the protection of the midden from further disturbance.

Aboriginal involvement and consultation

The Coffs Coast Regional Park Trust Board acknowledges the right of Aboriginal people to make decisions about their own heritage. The local Aboriginal community are 'rights holders', not just stakeholders, in managing the park. As such, the local Aboriginal community will be

supported in the practice, promotion and renewal of their culture; and in increasing their connection to Country and capacity to manage Country.

The Trust Board includes two Aboriginal representatives and, although there is no formal co-management or partnership arrangement in place, there is an informal partnership approach to managing Aboriginal culture and heritage via the Trust Board.

Examples of works in which members of the Aboriginal community are currently involved in managing the park include involvement in the planning and construction of walking tracks and other activities that cause ground disturbance in the park, and in some of the bush regeneration work carried out in the park. The Trust Board will continue to maximise opportunities for the local Aboriginal community to be meaningfully involved in on-ground park management activities and for people to engage with land and sea culture within the park. See Section 6 for interpretation and promotion of Aboriginal culture and heritage in the park.

Issues

Many of the dune systems along the Coffs coastline were mined (for mineral sands) during the 1950s and many Aboriginal sites are likely to have been disturbed and destroyed by the mining. However, there are some areas that have not been mined and these areas are highly likely to contain physical evidence of the occupation of the area by Aboriginal people.

Some sites (e.g. the midden at Moonee) are currently threatened by erosion and compaction associated with authorised and unauthorised walking tracks.

Long-term coastal erosion and recession, storm erosion and inundation also threaten to damage known sites as well as unrecorded sites (see Section 7.4).

Desired outcomes

- The local Aboriginal community are actively involved in protecting, managing and interpreting the Aboriginal culture and heritage values of the park.
- Cultural use of plants in the park is appropriately managed.
- Impacts on Aboriginal culture and heritage values are minimised.
- The local Aboriginal community have the opportunity to practise culture through activities and events in the park.
- Understanding and appreciation of the cultural values of the park are improved.

Management response

- 4.1.1 Continue to consult and involve the local Aboriginal community in managing their Country, including managing and interpreting Aboriginal sites and places, and cultural and natural values; and celebrating culture.
- 4.1.2 If supported by the representative organisations of the local Aboriginal community, permit repatriation of artefacts or other material sourced from the park or surrounding district to a suitable site within the park or other suitable keeping place.
- 4.1.3 Undertake surveys of cultural heritage and resources within the park in consultation with the local Aboriginal community, with particular emphasis on areas not affected by sandmining or areas to be subject to ground disturbance as part of walking track construction or other works.
- 4.1.4 Provide opportunities for the engagement of Aboriginal enterprises in the implementation of management operations in the park (e.g. bush regeneration).

- 4.1.5 Provide opportunities for the practice of culture through events and activities in the park.
- 4.1.6 Facilitate access by local Aboriginal community members to areas of the park for cultural purposes by permitting them to use management trails to transport Aboriginal community members.
- 4.1.7 Prepare a culture and heritage management plan for Arrawarra Beach Day Use Area that details how Aboriginal cultural values will be interpreted, and the rights and opportunities that the Aboriginal community will enjoy in relation to undertaking cultural practices in this place.
- 4.1.8 Undertake site stabilisation and protection works for middens as required. At the Sugar Mill – Moonee creeks midden, works will include linking the existing boardwalks at the footbridge and Green Bluff, subject to environmental approvals.

4.2 Shared heritage

Shared heritage places and landscapes are made up of living stories as well as connections to the past that individuals and communities have inherited and wish to conserve for current and future generations, and can include natural resources, objects, customs and traditions. Cultural heritage comprises places and items that may have historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance. NPWS conserves the significant heritage features of the parks and reserves that it manages.

The Coffs coastline has played a vital role in the history of Coffs Harbour, providing a focus for settlement, industry and agriculture, transport, recreation and holidaying (CHCC 2000a).

Coffs Harbour was ‘discovered’ by Captain John Korff in about 1847. His name was later printed as ‘Coff’s’ in the 1861 gazettal notice, probably by mistake. The first European settlement of Coffs Harbour and Woolgoolga occurred in the 1870s and early 1880s. Early settlers were mostly cedar-getters and farmers from the Bellinger and Clarence areas (Yeates 1993). Areas adjacent to and within the park were some of the first sites settled in the Coffs Harbour area. Early settlers are remembered in local place and street names such as James Small Drive, Riecks Point, Campbells Beach and Macauleys Headland.

Cedar (*Toona ciliata*) and hardwood forestry were major industries in the late 1800s and early 1900s. Between 1907 and 1913 the British Australian Timber Company operated a large hardwood sawmill near Coffs Harbour Jetty. To facilitate the transport of logs to Coffs Jetty, a tramline was constructed up and over Macauleys Headland in the south of the park. While all traces of the logging tramway have disappeared from the sandy coastal flats behind Park Beach, there is still evidence of the tramline cutting (which is almost 2 metres deep) on the inland side of Macauleys Headland.

By the 1880s there were sugar cane and banana farms along the coast, including in Korora and most likely in other areas in and adjacent to the park. The naming of Sugar Mill Creek, just south of Moonee Beach, suggests there was also a mill in this area at some stage. Dairy farming was another important industry in the region in the early 1900s.

The late 1800s and early 1900s also saw marked increases in the prevalence of cattle grazing on the eastern side of the coastal range. Cattle were run from stations on the western side of the coastal range to the east for winter grazing along the coast, a practice that continued well into the 20th century (DECC 2007). Much of the coastal sections of the current day park were historically Crown leases for grazing and other purposes. For example, the 1916 Moonee Parish map shows a travelling stock reserve extending northwards from White Bluff (at the south end of Sapphire Beach) to what is now known as Sandy Beach (NSW Land Registry Services n.d.). At White Bluff, the reserve boundary

includes a waterhole that is likely to have been what is now recognised as an intermittently closed and open lake or lagoon.

There is a concrete structure on Macauleys Headland that could be part of a World War II bunker used to defend the coastline and Coffs Jetty (Yeates 1993). During World War II, the need to defend the Australian coastline saw the use of Coffs Harbour as a strategic base for Royal Australian Navy and Royal Australian Air Force surveillance activities during 1943–1944. Several World War II buildings and interconnected installations survive and demonstrate the role Coffs Harbour played in coastal surveillance during the war, and form part of the larger collection of surviving World War II buildings and sites across New South Wales. The network of World War II gun emplacements and bunkers located in the Coffs Harbour area are of high local significance (Hedditch 2013).

Extensive sand mining occurred on the Coffs Coast throughout the 1950s, 1960s and 1970s along most local beaches. Black mineral sands such as rutile, zircon and ilmenite were in high demand on the international market following World War II and sand mining became a major industry on the economically poor north coast. Permission to mine Coffs Harbour's beaches was granted in 1953 although operations were delayed until 1956 because of caution expressed by the Shire's engineer about the damage that mining would cause to the natural beauty of the area (Yeates 1993). The Rutile Track at Sapphire Beach is but one of a multitude of vehicle access tracks established to access black mineral sand.

Sand mining operations resulted in major environmental impacts, including the clearing of extensive stretches of littoral rainforest, the modification and removal of sand dunes, and permanent alteration of the hydrology of intermittently closed and open lakes and lagoons. An additional impact associated with this historic land use was abandoned infrastructure. Rehabilitation efforts are ongoing in places to reverse these effects (DECC 2007; BMT WBM 2010).

Some areas of the park such as Macauleys Headland were mined for gravel.

Coffs Harbour as a beach-side holiday destination

Coffs Harbour has been a much-loved, beach-side holiday destination since the early 1900s. Visitors, travellers and locals alike have been enjoying the surf and beautiful beaches for over 100 years. By the mid-1950s tourism had become a recognised business in Coffs Harbour, and the boom continued through to the early 1960s. During this time, many motels, self-contained holiday flats and caravan parks were established in Coffs Harbour and in areas adjacent to the park. For example, the northern section of Hills Beach east of the current day Opal Cove Resort was a caravan and camping park from the 1960s to 1980s.

The iconic Big Banana was built in 1964, and the popularity of the Coffs Harbour area as a place to live and visit continues today.

Desired outcomes

- Negative impacts on historic heritage values are minimised.
- Understanding of the cultural heritage values of the park is improved and promoted.
- Cultural heritage values associated with the sea and beach are maintained for locals and visitors.

Management response

- 4.2.1 Record historic sites, assess their significance and manage them accordingly.
- 4.2.2 Promote and interpret historic sites.

- 4.2.3 Investigate the reopening and interpretation of the British Australian Timber Company tramway on Macauleys Headland for use as a multi-use trail linking Diggers Beach and Park Beach.

5. Public use and experience of the park

5.1 Visitor use and experience

Coffs Coast Regional Park serves the dual purpose of providing outdoor recreational experiences (for example, opportunities for exercise, relaxation, social interaction) while also protecting flora, fauna and cultural values (see Sections 3 and 4). Regional parks tend to be more modified and provide more recreational facilities than other types of parks. The park is a significant coastal component of the open space network of Coffs Harbour and provides visitors with picnic areas, children's playgrounds, areas for events and active play or social sport, lookout platforms, access to beaches, and coastal walking tracks. There are 12 day use areas in the park, predominantly in beach-side settings.

The *Coffs Harbour City Council Open Space Strategy 2010* (CHCC 2010) included management principles and a planning framework for the open space network within the Coffs Harbour LGA, including the regional park. The Open Space Strategy informed this plan of management in relation to visitor facilities and requirements.

The park provides opportunities for recreation and leisure in a natural coastal setting. The park provides the only open space opportunities for some coastal residential communities, for example, Korora, Sapphire, Emerald Beach and Arrawarra Beach.

Popular nature-based activities in the park include walking, birdwatching, sightseeing, whale watching and nature appreciation. The park is also a focus for sea and beach activities in the Coffs Harbour area, providing access to adjacent beaches, rock platforms and the Solitary Islands Marine Park for water-based activities, such as swimming, surfing, fishing (commercial and recreational) and kayaking.

Most visitor activity in the park is concentrated at Woolgoolga Headland and Arrawarra, Sandy, Emerald and Diggers beaches. Peak visitation coincides with warmer weather and school holidays, particularly the Christmas – New Year period.

Other areas managed by NPWS, Coffs Harbour City Council and other authorities and private operators in the region provide opportunities for a range of recreational activities, including camel rides, fishing, sea-kayaking, and beach and buggy tours.

Opportunities for commercial development of visitor services in the park will be explored. Any proposals will need to be structured in a manner that supports park management objectives, will need to be based on the principles of ecologically sustainable development, and be underpinned by a broad consideration at the local and regional level of the other opportunities available.

Current impacts and management issues

In addition to park visitors who live locally, approximately 1.5 million domestic and international tourists visit the Coffs Harbour area each year (Destination NSW 2011). Going to the beach and general sightseeing are two of the most popular activities for tourists. The park provides access to the beaches north of Coffs Harbour and includes key sightseeing destinations (e.g. scenic headlands).

Park visitation needs to be carefully managed because visitors can negatively affect the park's natural and cultural values (as discussed in relevant sections of the plan). Current visitor impacts on the park generally stem from high levels of use in sensitive or exposed coastal environments (e.g. unformed walking tracks on scenic headlands).

During peak holiday times, visitor use can exceed capacity, particularly at Arrawarra Beach and Diggers Beach. Future increased visitation will place further demands on park facilities

and natural and cultural values. Overcrowding can affect visitors' overall enjoyment of the park and can limit their capacity to visit the park. The park's ageing infrastructure can also affect visitor use and experience of the park, but renewal or upgrading of facilities is subject to funding and the priorities for future works (see Table 6).

Lack of access, such as wheelchair accessible paths and toilets, can also affect visitors' experience and use of the park. This plan provides for the development over time of equitable opportunities for all to enjoy the park, including people with disabilities or mobility issues.

Conflicts between people using the park and adjacent beaches (e.g. walkers, dog walkers, playing children, cyclists, boaters, fishers, surfboard riders) may also affect visitor use and enjoyment of the park, particularly during peak times. Visitors' experiences may also be affected by people undertaking inappropriate or illegal activities in the park (e.g. consuming alcohol, camping overnight in day use areas, vandalising park facilities). Inadequate signage and interpretation can exacerbate these issues or otherwise detract from visitors' use and enjoyment of the park (see Section 6).

Natural hazards can also affect visitors' use of the park. For example, coastal erosion and severe climatic events (e.g. storms) may damage visitor facilities (e.g. beach access tracks) and may ultimately require the relocation of certain assets (e.g. amenities blocks, picnic tables, barbecues). See Section 7.4 for further details.

Desired outcomes

- Visitor use is appropriate and ecologically sustainable.
- A diversity of environmentally sustainable visitor facilities and activities (including a range of recreational functions, settings and experiences) that encourage appreciation and awareness of the park's values and their conservation are provided.
- Negative visitor impacts on park values are minimised.
- Sustainable access to Solitary Islands Marine Park is maintained.

Management response

- 5.1.1 Provide and promote opportunities for walking, picnicking, playing, casual games, social sport, active recreation, sightseeing, and heritage and nature appreciation in appropriate locations in the park.
- 5.1.2 Ensure that the design, construction and appearance of new visitor facilities has a consistent look and is of a standard that is commensurate with the regional and local significance of the visitor area.
- 5.1.3 Upgrade day use areas (see Section 5.2) and install information, interpretive and regulatory signage as required.
- 5.1.4 Manage visitors who are in breach of the National Parks and Wildlife Act or Regulation in accordance with NPWS policy.

5.2 Day use areas

The 12 day use areas in the park (see Table 6 and Figures 1, 2, 3 and 4) provide picnic and barbecue facilities, playgrounds, lookouts, car parks, walking tracks, access to adjacent beaches, amenities and directional and interpretive signs. These areas are often the main destination for the vast majority of visitors to the park. Day use areas in the park have generally been named after the suburb in which they are located. They have been assigned to categories based on the level of visitor use and the range of facilities. The categories are:

gateway areas, major-use areas, medium-use areas and low-key areas. These are described below, with day use areas listed from north to south in each section.

General management of day use areas

Existing visitor facilities in day use areas may be upgraded or replaced, or removed over time depending on need, funding and management priorities. New facilities may be provided and will be high quality and have a consistent look and feel to create a 'sense of place' and enhance visitors' experience of the park. Accessible paths and facilities will be provided as part of future upgrades wherever possible.

Any upgrading or replacement of existing facilities, or provision of new facilities, is subject to funding and the management priorities shown in Table 6.

Table 6 Day use areas in the park (listed from north to south)

Day use areas	Category	Priority for future works ¹
Ararwarra Headland	Gateway area	High
Ocean View Beach	Medium-use area	Medium
Mullaway	Major-use area	Low
Safety Beach (North)	Low-key area	Low
Woolgoolga Headland Lookout	Gateway area	High
Sandy Beach	Major-use area	Medium
Emerald Beach	Major-use area	Medium
Sapphire Beach	Low-key area	Low
Elouera	Low-key area	Low
Hills Beach	Major-use area	Low
Charlesworth Bay	Medium-use area	Low
Diggers Beach	Gateway area	High

¹ Based on existing facilities, their condition and need for additional facilities.

Upgrades to day use areas will be undertaken in accordance with this plan of management and major upgrades will require a detailed master plan. Master plans are developed through a separate process coordinated by Coffs Harbour City Council and in collaboration with NPWS. The master plans are developed in consultation with the community and will be approved by the Coffs Coast Regional Park Trust Board. Master plans will consider the following, as appropriate:

- category of day use area (i.e. whether a gateway, major-use, medium-use or low-key)
- location and scale of visitor facilities, and structured and unstructured spaces
- opportunities for recreation, events and functions, and commercial opportunities
- protection and rehabilitation of threatened ecological communities (see Section 3.2)
- protection and presentation of Aboriginal cultural and heritage values (see Section 4.1)
- protection and presentation of non-Aboriginal cultural heritage (see Section 4.2)
- potential future impacts of coastal erosion, sea level rise and other hazards (see Section 7.4)
- requirements of the *Companion Animals Act 1998* (see Section 5.4).

This plan does not propose the development of any new day use areas in the current reserved area of the park. Any new day use areas in future additions to the park will be subject to an approved master plan developed with community input and appropriate levels of environmental impact assessment.

Desired outcomes

- A range of developed and less-developed day use areas caters for various community, visitor and tourist needs.
- Day use areas provide a satisfying visitor experience with minimal impacts on park values.
- The community is involved in developing master plans for major improvements to day use areas.

Management response

- 5.2.1 Provide and maintain day use areas in accordance with this plan and, where required, approved master plans.
- 5.2.2 Maintain existing facilities, upgrade facilities, install new facilities and remove facilities in accordance with this plan and master plans (where required), and subject to funding and the management priorities shown in Table 6.
- 5.2.3 Ensure that all facilities in day use areas are sited and designed to minimise their effect on park values. Where necessary, consider the likely impacts of coastal hazards and climate change. Additional protection measures, such as the installation of fencing or rehabilitation works, may be required to protect natural and cultural values and possible retreat from coastal erosion.
- 5.2.4 Restore and rehabilitate important vegetation communities and fauna habitats within day use areas as appropriate. Ensure that the potential for this restoration and rehabilitation is considered in the preparation of precinct plans or master plans as appropriate.
- 5.2.5 Manage vegetation as appropriate at key visitor viewing points and lookouts to maintain visitor amenity and views.

Gateway areas

Gateway areas are major visitor destinations for locals, the broader Coffs Harbour community, visitors and tourists. These areas have high visitation levels and are used by individuals, families and groups, and by event and commercial operators. They include major visitor infrastructure and facilities, such as information panels, lookouts, viewing platforms and public art, as well as general picnic areas and playground facilities.

Gateway areas are the highest priority for future works. Gateway areas present the park's natural and cultural values to visitors and provide information on the recreational opportunities available in the park (e.g. the Solitary Islands Coastal Walk).

Arrawarra Headland Day Use Area provides views along the coast to the north, and provides access to a renowned long-board surf break. Between 10,000 and 20,000 people visit Arrawarra each year. The master plan for Arrawarra Headland Day Use Area sets out stages for significant upgrades to existing facilities and a number of new facilities, including a playground, electric barbecues, interpretation panels, new paths and beach access tracks.

Arrawarra Headland has very significant Aboriginal cultural heritage values, in particular the fish traps and headland, and is used by local Aboriginal people for cultural, ceremonial and educational activities. The revitalised day use area will include an Aboriginal cultural heritage meeting place and education space to be designed in consultation with local Aboriginal people. This area is a popular boat launching site and major upgrades to the western ramp have been undertaken and a new car park provided. The eastern ramp will be closed and the area upgraded for family recreation as per the master plan.

Woolgoolga Headland Lookout offers views north and south along the coast and is an extremely popular lookout, with up to 100,000 visitors each year. The headland is used regularly by Coffs Harbour locals as well as domestic and international tourists. The lookout is promoted as a site for whale watching during the autumn and spring migration periods, and interpretation panels and seating are provided.

As part of the Solitary Islands Coastal Walk development, paved walking tracks, directional signage, and a platform have been installed to improve access, protect Aboriginal heritage values, and mitigate erosion on the headland. No major additional facilities at Woolgoolga Headland are envisaged as part of this plan, although the feasibility of installing coin-operated binoculars will be investigated.

Diggers Beach Day Use Area is a major destination in the park given its closeness to Coffs Harbour residential areas and tourist resorts. Receiving up to 200,000 visitors each year, Diggers provides the southern gateway to the park and popular sections of the Solitary Islands Coastal Walk. An accessible viewing deck is provided at the southern end of the area.

Most of the existing facilities at Diggers Beach Day Use Area will be upgraded and expanded in accordance with the master plan that is currently being developed by Coffs Harbour City Council. It is envisaged that a range of facilities will be provided for this gateway area, including new public amenities, picnic facilities, expanded play areas, accessible paths and facilities, and information panels. There are also opportunities for licensing an approved venue location in the northern section of this day use area to the east of Aanuka Beach Resort (see Section 5.10).

Desired outcomes

- High-quality gateway areas encourage visitors to enjoy and appreciate the park.
- A full range of facilities are provided that focus on the needs of tourists, regional visitors and the local community.
- High-quality signage provides interpretation and information on the park, Solitary Islands Coastal Walk and adjacent Solitary Islands Marine Park.

Major-use areas

Major-use areas are particularly popular with local residents and the broader Coffs Harbour community, and are generally visited by 10,000 to 20,000 people each year. These areas focus on family recreation and include playgrounds, open spaces for play, barbecue and picnic areas, toilets, showers, paths and beach access.

Mullaway Day Use Area is well used by locals and is another popular surfing spot. The car park provides a good vantage point to check on surf conditions, and this view will be maintained. There is a patch of Swamp Sclerophyll Forest on Coastal Floodplain EEC (see Section 3.2) in the day use area that requires protection and rehabilitation. A section of the walking track from The Boulevard through the Swamp Sclerophyll Forest to the main beach access track has been upgraded to a raised boardwalk. Other access tracks off The Boulevard will be closed to reduce impacts on the EEC.

Sandy Beach Day Use Area covers nearly 8 hectares and includes a range of visitor facilities and large expanses of open space for social sports and play.

Coffs Harbour City Council is currently finalising a master plan for the Sandy Beach Day Use Area in consultation with the community. The master planning process canvassed a range of options with the community, including upgrading existing facilities and providing new facilities, expanding recreational opportunities, considering appropriate uses for the area (e.g. dog walking or off-leash zones), and addressing the effects of coastal hazards (e.g. through regenerating vegetation). Please refer to the council's website for further information on the master plan.

Any future works will be subject to the approved master plan, available funding and the other priorities outlined in this plan.

There is a patch of Swamp Sclerophyll Forest EEC (see Section 3.2) in the northern part of the day use area requiring protection and rehabilitation (which would involve cessation of mowing in the area, installation of fencing and enrichment planting). Likewise, there is a sloping area south of the southern car park (at the southern end of Ironbark Avenue) that is not used for active recreation, the regeneration of which would improve environmental and visual amenity at the same time as reducing ongoing maintenance and operating costs. Regeneration works would involve fencing off areas and replanting with species appropriate to the site in a way that minimises impacts on views and improves amenity.

Emerald Beach Day Use Area has a range of facilities and is a focal point for the Emerald Beach community. The day use area provides access to the beach for swimmers, surfers, and walkers; it is used for community events (e.g. markets, fun days and fairs); and includes seats commemorating local residents.

Currently, the day use area is confined to the east of Fiddamans Road, but the regional park encompasses the 1.5-hectare section of mown grass to the west of the road. This provides an opportunity to increase the size and improve the functionality of the day use area. There is a narrow boat ramp suitable for use by small boats, though offshore conditions are sometimes not suitable for boat launching. An alternative public boat ramp is available at Sandy Beach (a 10-minute drive to the north) (see Section 5.8).

Coffs Harbour City Council is currently developing a master plan for the Emerald Beach Day Use Area in consultation with NPWS and the community. The master planning process canvassed a range of options with the community, including providing additional facilities, road access to the area and options to extend the day use area, options for the future use of the boat ramp, rehabilitating vegetation, and addressing the effects of coastal hazards. Please refer to the council's website for further information on the master plan.

Any future works will be subject to the approved master plan, available funding and the other priorities outlined in this plan.

Hills Beach Day Use Area has long been a popular playground and park for local Korora residents and people from the broader Coffs Harbour area. Located at the eastern end of Norman Hill Drive, it covers an area of approximately 1.9 hectares. Consideration should be given to rehabilitating vegetation along creek lines in the area and along the Brush Creek estuary.

Long-term planning options include linking this day use area with lands east of the Opal Cove Resort to the north. This would provide opportunities for additional visitor and recreation facilities, and for licensing the northern area as an approved venue location (see Section 5.10).

Desired outcomes

- A broad range of high-quality facilities are provided, focusing on the needs of local residents, families, and the wider Coffs Harbour community.
- Recreation opportunities are provided for park visitors (e.g. open space, social family recreation, areas for social sports, equal access).
- Major-use day use areas cater for a growing population and increased visitor use.

Other day use areas and beach access points

Day use areas at **Ocean View Beach**, known locally as Mullawarra, (2000 to 5000 visitors per year) and **Charlesworth Bay** (5000 to 10,000 visitors per year) are used predominantly by local residents for picnics and to access the beach. A basic range of facilities are provided, including picnic tables, barbecues, toilets and showers, paths and beach access tracks. New tracks are proposed for Ocean View Beach Day Use Area and Charlesworth Bay Day Use Area (see Table 7).

An informal day use area has been developed by local residents at the northern end of **Safety Beach**. Facilities are minimal as the visitor use is less than 2000 visitors per year.

Sapphire Beach Day Use Area is a low-key (fewer than 2000 visitors per year) park and playground and beach access point used by the local community and guests of the neighbouring caravan park. It covers approximately 3 hectares and includes basic facilities.

Elouera Day Use Area is a local playground in Sapphire Beach that will be maintained as it is.

Although not a formal day use area, there is a beach access track and toilet block at Korora Beach. Coffs Harbour City Council does not generally provide public toilets in local open spaces, so the toilet block at Korora Beach will be removed and will not be replaced once it has reached the end of its design life.

Desired outcomes

- A basic suite of facilities is provided which focuses on the needs of local residents.

5.3 Walking

Walking allows visitors to be in close contact with the environment and increase understanding and enjoyment of parks and the environment. The park provides coastal walking opportunities with varying degrees of social interaction and physical challenge, and a diversity of environmental settings, including headlands and adjacent beaches. Walking tracks in the park are shown on Figures 2, 3 and 4, and range from grade 1 to grade 3 tracks.

The **walking track grades** identify a track's suitability for different user groups as follows (DSE undated):

Grade 1 — assisted disabled walkers (generally sealed tracks)

Grade 2 — walkers with young children (generally formed tracks)

Grade 3 — beginner walkers (generally formed tracks with some steep sections).

Threatened species and ecological communities and cultural heritage sites, particularly those on exposed headlands, have been damaged by trampling, soil erosion and track braiding. Unauthorised tracks through the park to the beach lead to the degradation of sensitive dune vegetation, resulting in dune erosion and pose risks to the public.

Walking tracks in sensitive locations can negatively impact the surrounding environment when they are not appropriately designed or located. Impacts are most obvious on heavily used, natural surface walking tracks (commonly called footpads).

Impacts associated with walking tracks are most pronounced on heavily used tracks on natural surfaces. The provision of hard walking surfaces (e.g. paving or board-and-chain) has ameliorated these impacts in many locations in the park. Future upgrades to designated walking tracks in the park (including those outlined in Table 7) will further address these impacts. Replacement of track infrastructure will occur as part of ongoing track maintenance. These works may involve the replacement of track infrastructure but not necessarily an upgrade in track class. Replacement or repair of board-and-chain access ways to beaches may also be required after storm events.

Table 7 Proposed walking track works in the park (listed north to south)

Location	Track grade ¹		Priority
	Current	Proposed	
Arrawarra Headland	Grade 4 natural surface	Grade 3 paved	Low
Ocean View Headland	Grade 3 bitumen	Grade 2 paved	Medium
Mullaway Beach Day Use Area	Grade 4 natural surface	Grade 2 bitumen	Medium
Safety Beach Track	Grade 3 bitumen	Grade 3 bitumen	Low
Woolgoolga Lake	Grade 4 unsealed	Grade 3 bitumen	Low
Sugar Mill Creek area	To be determined		
Sugar Mill Creek to Green Bluff	Boardwalk	Extend boardwalk	
Lakeside Drive (Sapphire Beach Day Use Area)	Grade 4 natural surface	Grade 2 bitumen; Class 3 boardwalk	High
White Bluff	Grade 4 natural surface	Grade 2 paved	Medium
Daintree Drive	Grade 4 natural surface	Grade 3 boardwalk	High
Charlesworth Bay (Bay Drive to Diggers Head)	Grade 4 gravel	Grade 3 bitumen	High
Diggers Head	Grade 4 natural surface	Grade 3 bitumen	Medium

¹ The Australian Walking Track Grading System has been used as the basis for this track classification system. For further information on these grades and their relationship to the Australian Standard please refer to the Users Guide to the Australian Walking Track Grading System (DSE Undated).

Solitary Islands Coastal Walk

The main focus of walking in the park is the Solitary Islands Coastal Walk, which stretches 60 kilometres from Sawtell to Red Rock. This award-winning walk provides opportunities to appreciate the park's natural, cultural, and scenic values and surroundings.

The walk encompasses the entire length of the park, linking beaches, day use areas, coastal villages, resorts and holiday and caravan parks. Within the park, the walking route includes paved sections of track on headlands and other sensitive locations, boardwalks, natural surface tracks, lookout platforms, steps, pedestrian beach access tracks, directional signage and interpretive signs.

This walk is a high-quality, nature-based tourism asset for Coffs Harbour and provides improved access and opportunities for locals and visitors. The range and quality of accommodation options and other services offered along what is an otherwise natural and scenic route represents a clear point of difference from other long-range walks offered elsewhere. Developing and implementing an interpretation plan for the walk will make a significant contribution towards the interpretation of the park's values (see Section 6).

Other walking tracks

Apart from the Solitary Islands Coastal Walk and numerous beach access tracks (see below), there are only a few other walking tracks in the park: Arrawarra Headland, Woolgoolga Lake to Safety Beach, White Bluff and Diggers Head (see Table 6 and Figures 2, 3 and 4). These tracks will be monitored and works undertaken as appropriate where there are impacts on park values.

The park section around Sugar Mill Creek includes existing trails that offer potential walking and cycling routes between Moonee Beach and Sapphire Beach. Options for the establishment of formal tracks and beach access tracks in this area require further investigation and environmental assessment. Some sections of walking tracks and beach access tracks need to be linked with new or upgraded tracks, for example, in the Sapphire Beach area.

Beach access tracks

There are a number of authorised beach access tracks in the park as indicated by beach name, safety and regulatory signs at the heads of those tracks (see Figure 5). Currently, there is limited wheelchair access to beaches adjacent to the park and opportunities to provide access will be investigated.



Figure 5 Example of an authorised pedestrian beach access sign, Sandy Beach

Unauthorised tracks will not be maintained. If they are damaging the natural or cultural values of the park (e.g. causing soil erosion or disturbance to Aboriginal sites) or are a public safety risk, they will be closed and rehabilitated. Table 8 lists a number of known unauthorised beach access tracks that will be closed, and Figure 6 indicates their location.

Table 8 Priority beach access track closures

Track closures (from north to south)	Suburb	Action
Sapphire Beach beach access (between Poinciana and Hibiscus avenues)	Sapphire Beach	Close
Elouera Drive (east of Hayes Creek)	Sapphire Beach	Close
Footbridge below 56 Warrawee Street	Sapphire Beach	Remove
Steps accessing Safety Beach	Safety Beach	Remove

Desired outcomes

- A range of walking opportunities is provided in the park.
- Walking tracks cause minimal impacts on park cultural and natural values.
- Solitary Islands Coastal Walk provides a high-quality nature-based tourism asset for the Coffs Harbour LGA and improved access and experiences for visitors and locals.
- Short walks in the park provide additional low-use and low-key walking opportunities.
- Designated beach access tracks provide safe beach access for visitors.

Management response

- 5.3.1 Maintain walking tracks and associated infrastructure in accordance with this plan and any master plans developed in accordance with this plan.
- 5.3.2 Monitor walking tracks and take appropriate action as needed (such as track realignment, track hardening or fencing) to protect fragile environments and cultural heritage, address localised erosion, and improve visitor safety and amenity.
- 5.3.3 Upgrade tracks, as funding allows, in accordance with priorities outlined in Table 7.
- 5.3.4 Close and rehabilitate walking tracks that are damaging park values, are unnecessarily replicating access or are a safety risk, including but not limited to unauthorised pedestrian beach access tracks listed in Table 8 and tracks not shown on Figures 2, 3 and 4.
- 5.3.5 Review existing trails in the Sugar Mill Creek area for their suitability as walking, cycling or dual-use tracks, and designate tracks and install signage as appropriate.
- 5.3.6 Assess the feasibility of upgrading beach access tracks to improve wheelchair access to some of the beaches adjacent to the park. Complete upgrade works if feasible and as funding permits.
- 5.3.7 Investigate the provision of an appropriate beach access in the Kotara/Bellevue location at Korora Beach, in consultation with the local community and council, including location, design, funding and construction.
- 5.3.8 Provide pedestrian access to North Sapphire Beach from Rutile Management Trail.



Figure 6 Beach access tracks that are priority to be closed
(Tracks to be closed are shown in red)

5.4 Dog walking

Under NPWS policy and regulations, leashed dog walking can be allowed in regional parks. The *Companion Animals Act 1998* also applies to regional parks. It details control measures to ensure equitable access and ensures the effective and responsible care and management of companion animals.

Dog walking is a popular recreational activity in and around Coffs Coast Regional Park, in particular, the park is used by walkers to access adjacent beaches. Dogs will continue to be allowed on the park's tracks and trails provided they are leashed, as required by the Companion Animals Act. It may be appropriate to investigate the suitability of introducing a leash-free zone within some of the park's larger day use areas, for example, Sandy Beach (see Section 5.2).

Coffs Harbour City Council's *Companion Animals Management Plan* (CHCC 2000b) details management measures in the Coffs Harbour Local Government Area.

Council determines leash-free and dog prohibited zones in the local area, including beaches adjacent to the park, and may review these controls from time to time (contact the council or see their website for the latest controls).

Dogs can disturb and harass other park users and their faeces can harbour serious diseases. Hence, the Companion Animals Act prohibits dogs within 10 metres of barbecues and picnic tables (except where they coincide with a footpath or walking track) and within 10 metres of any children's playground.

Dogs can also disturb, harass, attack and kill native animals if not adequately controlled, and a dog's scent can disrupt breeding and feeding by native animals. As such, dogs must be on a leash and when leashed are allowed in day use areas (subject to conditions in the Companion Animals Act), and on management trails, walking tracks, and beach access tracks and trails that lead to beaches where council allows dogs. Dogs are not allowed in other locations.

The Hearnese Lake little tern breeding site is located on the beach near the mouth of Willis Creek. The site, which shifts from year-to-year, is located near the high tide line on the boundary of the park. Woolgoolga Back Beach and Hearnese Lake Beach are both dog leash-free areas. However, a seasonal on-leash zone is put in place around the little tern site to protect fledglings.

Desired outcomes

- Opportunities for dog walking in the park are maintained where compatible with park values.
- Dogs have minimal impacts on the park's natural and recreational values.
- Park visitors and neighbours practice responsible pet ownership.
- Dog walking in the park complies with the Companion Animals Act and is consistent with council controls on adjacent lands.

Management response

The following management responses relate to dogs that are not assistance animals. Assistance animals are allowed in the park, provided they are kept under effective control at all times with a leash or harness.

5.4.1 Ensure compliance with the following:

- dogs must be leashed (except in designated off-leash zones) and must be kept under control at all times

- dogs are generally allowed in day use areas, but not within 10 metres of barbecues and picnic tables (except where these coincide with a footpath or walking track), and dogs are not allowed within 10 metres of children's playgrounds
 - dogs are allowed on public access roads, park management trails, walking tracks, and those vehicular beach access trails and pedestrian beach access tracks that lead to beaches where the council allows dogs
 - dogs must remain on trails or tracks
 - dogs are prohibited from all other areas of the park
 - dangerous dogs and restricted breed dogs (as defined under the Companion Animals Act) must be muzzled at all times
 - dog owners must clean up and remove their dog's faeces from the park.
- 5.4.2 Investigate opportunities for dog off-leash zones in larger day use areas, such as Sandy Beach Day Use Area. If found to be appropriate, support a change to the council's Companion Animals Management Plan.
- 5.4.3 Monitor dog walking in the park and review current controls if required.
- 5.4.4 Install park signage as required to indicate where dogs are prohibited.

5.5 Cycling

Cycling, including mountain biking, is a popular and healthy recreational activity that can raise awareness, appreciation and understanding of the natural environment.

NPWS and Coffs Harbour City Council, working on behalf of the Coffs Coast Regional Park Trust Board, aim to provide and promote an appropriate range of opportunities for recreational cycling in the park and the broader Coffs Harbour area.

However, all recreational activities, including cycling, can have adverse effects on the environment of the park and must be managed accordingly. Cycling currently occurs at fairly low levels in the park, but participation rates are likely to increase.

The public roads in and adjacent to the park are popular cycling routes, particularly in the Arrawarra–Mullaway area. Public roads link with many vehicular and pedestrian beach access tracks and trails in the park. Other opportunities for cycling in the park include unsealed management trails, and the paved dual-use track (walking and cycling) between Panorama Parade at Safety Beach and Darkum Road at Mullaway.

Given the high levels of visitor use in the park it is important that user conflicts are minimised and that the safety of park visitors is maintained. As such, cycling on the park's walking tracks will not be permitted, except on beach access tracks.

Adventure cycling, triathlons and other competitive cycling may be permitted in the park (see Sections 5.9).

A number of unauthorised bicycle motorcross (BMX) tracks were constructed in the park before its gazettal. These BMX tracks generally include building materials for ramps and jumps and raise public safety and liability issues. At one location (on the corner of Meyer Road and Ocean Parade, Park Beach) a BMX track has existed for over 20 years. Efforts to control camphor laurel (*Cinnamomum camphora*) and other weeds at this location are limited because control works can only be conducted at a safe distance from the bike tracks. Future options for the Park Beach BMX track need to be investigated to determine demand for the track, risks associated with its ongoing use, and options to either close the track or manage it as a formal visitor facility. Any new unauthorised BMX tracks located on the park will be closed and rehabilitated.

Desired outcomes

- Cycling in the park is ecologically sustainable.
- Recreational cycling activities provide a safe, quality experience for park visitors and foster public appreciation, understanding and enjoyment of the natural and cultural heritage values of the park.

Management response

- 5.5.1 Allow cycling on public access roads, management trails, pedestrian beach access tracks, vehicular beach access trails, and the dual-use track between Safety Beach and Darkum Headland. Cycling is only allowed on the track or trail surface. Cycling will not be allowed in any other area of the park, including walking tracks and boardwalks. Roads, management trails, beach access tracks, and trails may be closed to cycling where there is unacceptable environmental impact or risk to cyclists or other users.
- 5.5.2 Undertake an investigation of the BMX track at Park Beach to determine future management options for the site.
- 5.5.3 Support investigation of options to expand recreational cycling opportunities on existing tracks and trails in the park or linking to trails adjoining the park. Where considered appropriate, existing tracks and trails may be widened to allow for cycling, subject to environmental assessment and funding availability.

5.6 Horse riding

Horse riding is a popular recreational activity that has cultural associations for many Australians. Horse riding is not a common activity in the park and is mostly associated with the use of the park to access adjacent beaches. Most horse riding occurs on beaches at Mullaway and Hearn's Lake.

Coffs Harbour City Council determines which beaches horses are allowed on, and may review these controls from time to time (contact council or see their website).

Horse riding will be allowed on public access roads within the park. Horses may be led through the park (via paths in day use areas and beach access tracks and trails) to access adjacent beaches where the council allows riding.

Horse riding that is part of a competition or organised, club-based activity (including non-commercial activities) will require written consent (see Section 5.10). All commercial activities will also require a licence (see Section 5.10).

Desired outcomes

- Horse riding in the park is ecologically sustainable.
- Provision of access through the park complements council's regulations relating to horse riding on beaches adjacent to the park.

Management response

- 5.6.1 Allow horse riding along public access roads and on beach access tracks and trails leading to beaches where the council allows horse riding. Horse riding will not be allowed in any other areas of the park.
- 5.6.2 Require consent for any non-commercial, organised, club-based horse riding activity in the park.

- 5.6.3 Do not provide any other facilities for horse riding, such as holding yards, in the park.
- 5.6.4 Monitor the social and environmental impacts of horse riding. Horse riding routes may be closed for rehabilitation where impacts are identified.

5.7 Recreational four-wheel driving and beach access trails

There are a number of vehicular beach access trails and boat ramps in the park that provide the general public with access to beaches adjacent to the park.

Coffs Harbour City Council determines which beaches vehicles are allowed on, and may review these controls from time to time (contact the council or see their website). Council controls also specify appropriate uses for some beach access trails, for example, some may only be used for launching and retrieving boats.

Vehicular beach access trails can impact dune systems if not maintained or routed correctly, or if alternative 'bypass' tracks can be created. This can cause erosion, track braiding and vegetation damage or destruction.

Existing public vehicular beach access trails are listed in Table 9. These trails are open to public vehicles primarily to facilitate vehicle access to beaches, consistent with council controls. If the council prohibits public vehicles on neighbouring beaches, the relevant access trail will be closed to public vehicles and designated as a management trail. Management of the park's vehicular beach access trails may need to be changed in order to remain consistent with any changes to council controls.

Table 9 Existing vehicular beach access trails open to the public

Location	Trail type
Arrawarra Day Use Area	Boat ramp
Willis Creek, Woolgoolga Back Beach	Vehicle trail
Sandy Beach Day Use Area	Boat ramp
Emerald Beach Day Use Area	Boat ramp

Apart from these beach access trails, there are no real opportunities for recreational four-wheel driving in the park. However, there is an extensive network of four-wheel drive trails in the Coffs Harbour hinterland national parks and state forests, including in Bindarri National Park.

Desired outcomes

- Recreational four-wheel driving in the park is consistent with council controls on adjacent lands.

Management response

- 5.7.1 Maintain and upgrade as necessary the vehicular beach access trails listed in Table 9.
- 5.7.2 Make any necessary changes to management of vehicular beach access trails in line with council regulations on adjacent beaches and approved master plans.

5.8 Recreational fishing

Fishing is a popular pastime adjoining the park, including collecting bait from sand flats and rock platforms, line-fishing off the beach and putting in a boat to head out to the Solitary Islands Marine Park.

All fishing activities in NSW waters are regulated under the Fisheries Management Act. Both commercial and recreational fishing must be in accordance with licence conditions specified by the relevant fisheries authority. The Coffs Coast Regional Park boundary is defined as the mean high water mark and beyond this is Solitary Islands Marine Park, which has its own management rules and zones for fishing.

Boat ramps are available within the park at Arrawarra Headland, Sandy Beach and Emerald Beach. (There are also several boat ramps outside the park boundaries at Woolgoolga Headland and Moonee Creek.) The boat ramp at Emerald Beach is very narrow, suited to small boats only, and in need of repair. A master plan is being prepared for Emerald Beach and includes discussion of the future of the boat ramp including the possibility of closing the ramp. Any decision about the ramp will be made through the master planning process in consultation with the community.

Management response

- 5.8.1 Work cooperatively with the relevant fisheries authority to ensure that activities licensed under the Fisheries Management Act have minimal impact on park values.

5.9 Adventure activities

The park provides opportunities for a number of adventure activities, including abseiling, rock climbing, parachuting, paragliding and hang gliding. Adventure activities (either commercial or non-commercial) are not currently undertaken in the park on a regular basis apart from occasional parachute landings on the beaches adjacent to the park.

Consent is required to undertake any non-commercial adventure activity in the park, irrespective of group size, because of the potential risks to participants and other park visitors and the potential adverse effects on vegetation. The merits of any proposed adventure activity will be assessed on a case-by-case basis before consents are issued. However, due to the Aboriginal cultural values of Arrawarra Headland, adventure activities will not be permitted in this location.

All commercial adventure activities in the park must be licensed (see Section 5.10).

Desired outcomes

- The park provides opportunities for individuals and groups to participate in adventure activities that are ecologically sustainable.

Management response

- 5.9.1 Permit commercial and non-commercial adventure activities via licence or consent, subject to conditions to protect natural and cultural values, to minimise conflicts between user groups, to maintain the quality of visitor experience, and to encourage safety, self-sufficiency and responsibility.
- 5.9.2 Monitor the impacts of adventure activities. If adverse impacts from these activities become evident, the permissibility of adventure activities will be reviewed and may be prohibited.

5.9.3 Do not permit the provision or installation of structures to facilitate adventure activities.

5.10 Events, functions and other group activities

The park's distinct and outstanding values make it a highly desirable visitor and tourist destination, and it is particularly popular for recreational activities. The demand for tourism related to nature, culture and recreation has increased significantly in the past few years and this trend is likely to continue.

Apart from the public uses and experiences discussed above, there are a range of other activities that may be permitted in the park. These activities, some of which will require approval, include:

- holding events or functions
- providing visitor facilities and amenities at particular locations within the park (e.g. cafes, kiosks, venues, accommodation)
- undertaking commercial activities within the park (i.e. providing goods and services for a fee, such as mobile food vendors)
- any other activity that is consistent with this plan of management, the National Parks and Wildlife Act and Regulation, relevant NPWS policies, and the management principles for the park (see Section 2.2).

Events and functions

Events and functions may provide exclusive access to parts of the park for their duration for the purposes of safety, security or operational requirements. The impacts on other park users will be considered before granting approval where exclusive access is required.

A **venue** is a location or facility identified for holding events or functions. Venues can include outdoor areas and buildings, and they may be temporary or permanent.

A **function** is an organised group activity that is not open to the general public (e.g. a wedding ceremony or reception).

An **event** is an organised group activity open to the general public. Types of events include:

- recreational and sporting activities (e.g. surfing competitions)
- educational activities
- cultural activities, including Aboriginal cultural activities
- concerts and community fairs
- public meetings and demonstrations
- conferences.

Currently, there are a number of recreational or educational group activities conducted in the park, including NPWS Discovery activities and Coffs Ambassador Tours. The park also provides an important land-based venue for interpreting the adjacent Solitary Islands Marine Park, including the culturally significant fish traps at Arrawarra Headland (see Sections 4 and 6).

Other events and functions which occur regularly within the park include private functions, such as wedding ceremonies (the most common activity); and public events, such as community fairs (involving entertainers, performers, stalls selling goods), surfing competitions, fun runs, cycling events and cultural activities.

There are many outdoor locations in the park that could be used as venues by individuals, community groups, or neighbouring resorts under consent, licence, or other property interest. These locations include:

- the grassed area east of Aanuka Beach Resort
- the grassed area to the east of Opal Cove Resort.

There are a number of options that could improve the amenity and utility of these venues while reducing current impacts on park values (e.g. damage to vegetation and coastal erosion). Options include:

- constructing paved walking tracks (which could also help to define the venue space)
- revegetating currently cleared or degraded areas
- landscaping works to improve amenity.

At the Opal Cove venue, there is also the potential to construct a covered stage or platform. These works are subject to feasibility assessments, master planning and funding.

The use of recreational hire equipment, such as large marquees, jumping castles, waterslides and the like, may be allowed as part of approved events (such as community fairs) or in association with a licence for an identified venue. However, the use of such equipment for other private functions will not be permitted. Similarly, fireworks associated with a public event may be considered and approved on a case-by-case basis, but fireworks associated with a private function will not be permitted.

Provision of visitor facilities and amenities

A business opportunity analysis will be undertaken to investigate ecologically sustainable, commercial leasing and licensing opportunities to provide additional facilities and services at particular locations within the park. Without pre-empting the findings of this analysis, a licence or other property interest could allow a small-scale restaurant or cafe/kiosk to operate in the park, or could provide low-key accommodation (e.g. 'glamping') at appropriate locations.

A number of existing encroachments at particular locations within the park also have the potential to provide visitor services and there is an opportunity to grant a licence or other property interest for these uses. Examples include seasonally occupied camping sites located within the regional park adjacent to caravan parks, and the volleyball court adjacent to Aanuka Beach Resort. Encroachments unrelated to visitor services are considered in Section 8.2.

Commercial activities

Commercial activities are not by nature fixed to a particular lot or parcel of land within the park.

There are currently more than 10 licensed commercial tourism or recreation businesses that operate on or from various locations within the park. These include surfing schools, fitness classes, parachute landings (see also Section 5.9), helicopter tours (see also Section 8.2), SCUBA diving, and kayak and surfboard hire.

Opportunities for additional recreation and nature- or culture-based commercial activities should be encouraged (e.g. guided nature walks, Aboriginal and non-Aboriginal cultural heritage tours). Local Aboriginal people who aspire to run their own businesses to tell their traditional stories will be supported. Other commercial opportunities include licences for mobile food vendors to operate in the park.

Approval process

All of these on park uses and experiences help to provide additional opportunities for people to experience the park and undertake recreational opportunities in natural settings. They may also promote environmental understanding and support for conservation. However, some uses can adversely affect environmental or cultural heritage values of the park and restrict or affect other park visitors. As such, an appropriate level of assessment and approval (via consent, licence or other property interest) are required depending on the nature, scale and location of the activity.

- Approval is required for all public events and wedding ceremonies irrespective of the size of the group of people likely to participate in the activity.
- Approval is required for all other private functions involving groups of more than 40 people.
- Where a proposal for a new visitor facility or amenity requires the erection of a new building or permanent structure on land in the park (other than those identified in this plan), an amendment to this plan of management will be required to specify the purpose and location of the new building or structure.
- All commercial operators and businesses trading within the park require a licence. Commercial activities must also be consistent with the management principles of the park and compatible with the natural and cultural heritage values of the park.

In accordance with current NPWS policy, as part of their standard licence conditions, some commercial recreation and tour operators may be required to build participants' understanding of cultural heritage conservation and management, and promote respect for Aboriginal culture and sites, depending on the nature of the business. In recognition of these responsibilities, special conditions will be included in all licences for operators that undertake detailed Aboriginal heritage interpretation.

Detailed interpretation is that which goes beyond providing:

- information in the public domain
- the traditional name of a place and its meaning
- the traditional names of local Aboriginal communities.

These special conditions may require operators to work closely with the local Aboriginal community to undertake detailed interpretation or to gain authorisation to deliver approved cultural content.

All applications for approval will be assessed in accordance with relevant NPWS and Coffs Harbour City Council policies and procedures. Cultural activities conducted by the local Aboriginal community are discussed in Section 4.1.

Some activities can affect the park's values. As such, approvals may limit the number of participants allowed at any one time and may specify where certain activities can or cannot be undertaken, for example, avoiding threatened ecological communities, significant flora or fauna habitats and other environmentally sensitive areas (e.g. sand dunes, rehabilitation areas and landscapes prone to erosion). Some areas of the park have particular significance to the local Aboriginal community, and organised group activities in these areas (other than those conducted by the local Aboriginal community) are not culturally appropriate. Informal groups of walkers will still be allowed to traverse these areas using the park's authorised tracks and trails (see Section 5.3).

Apart from regulating group activities in the park, consents, licences and other property interests can provide an income stream to assist with funding park management activities.

Desired outcomes

- Visitor use of the park has minimal impacts on park values.

- Use of park land is sustainable, appropriate for the setting, compatible with other visitors and appropriately authorised and approved (via consents, licences or other property interests).
- Organised group activities and commercial activities facilitate a quality experience for participants, and where relevant should aim to enhance participants' understanding and appreciation of the natural and cultural heritage values of the park.
- Consents, licences and other property interests provide a revenue source to assist in park management.

Management response

- 5.10.1 Issue approvals for events and functions, other non-commercial group activities, and the provision of commercial visitor facilities and amenities in line with this plan of management and relevant Acts, Regulations and policies.
- 5.10.2 Ensure approvals to use or occupy land in the park involve an appropriate level of assessment of impacts on park values and include any particular conditions required to ameliorate adverse effects on park values and visitor use.
- 5.10.3 Monitor activities with respect to cumulative impacts, safety requirements and compliance with approval conditions. Approvals may be cancelled if there is a breach of the conditions.
- 5.10.4 Conduct a business opportunity analysis to determine any new revenue-raising opportunities that could contribute to provision of additional visitor services and facilities in the park. Any grant of a licence or other property interest to construct a new building in the park for this purpose would require an amendment to this plan and an assessment of impacts on park values.
- 5.10.5 Investigate opportunities to enter into licences or other property interests with neighbouring resort operators or other businesses for the commercial use of identified venues.
- 5.10.6 Ensure existing encroachments that provide visitor services in the park have a licence or other property interest as appropriate.
- 5.10.7 Subject to a feasibility assessment and funding, prepare and implement a master plan for outdoor venues in the park (Opal Cove and Aanuka).

6. Promotion, interpretation and education

The park has an important role in promoting an awareness of the natural, cultural and recreational values of the Coffs coastline to visitors and residents. With its beaches, rocky shores, headlands and estuaries, the Coffs coastline is a very popular tourist destination on the NSW Mid North Coast.

6.1 Interpretation, signage and information

Interpretation, signage and information are key components of the visitor experience. Poor quality interpretation and information impacts visitors' experience of a park. Meeting the needs of current and potential visitors requires a range of communication and interpretation strategies.

The Solitary Islands Coastal Walk has won a number of regional tourism awards and is a key marketing asset for the park. The park and adjacent beaches feature prominently in the 'Discover Coffs Coast' promotional material produced by Coffs Harbour City Council. The park and Solitary Islands Coastal Walk are also key marketing attractions for neighbouring and nearby tourism-related businesses.

NPWS and council promote the park through a range of media. This information enhances the appreciation, understanding, enjoyment and satisfaction of park visitors; promotes the recreational opportunities available in the park; and encourages safe and appropriate visitor behaviour. It also fosters custodial attitudes towards the park and supports park management programs among neighbours and the broader community.

Within the park, interpretive displays are located at major lookouts and gateway areas. These signs provide an overview of the Solitary Islands Coastal Walk, precinct maps and insights into the area. Distance and directional signs are located at key intersections along the 60-kilometre Solitary Islands Coastal Walk and at the heads of tracks, with some featuring local stories and historic photos. Park entrance signs are located at major entry points.

Interpretation, promotion and presentation of Aboriginal culture and heritage in the park are done in partnership with the local Aboriginal community. For example, signage along the Solitary Islands Coastal Walk features Aboriginal stories, language and dual naming; and Aboriginal people present NPWS Discovery activities in the park. There are opportunities for expanding Aboriginal involvement in interpretation and promotion (e.g. park brochures and other interpretive and promotional material). The local Aboriginal community uses the park for cultural education programs, and local Aboriginal communities aspire to run their own businesses to tell their traditional stories to visitors.

Interpretation of the park's non-Aboriginal heritage will occur in partnership with local historians and the community.

The park is an important **educational resource** for schools, universities and colleges. Research in the park provides data to assist in the management of the park's values. The park provides a land-based venue for group interpretation and educational activities relating to the adjacent Solitary Islands Marine Park.

A number of free (or by donation) recreational and educational activities are conducted in the park, including the Coffs Ambassador Tours. These tours encompass sections of the Solitary Islands Coastal Walk and other areas within the park. NPWS Discovery tours occur in various locations in the park and there is scope to develop Discovery tours along the Solitary Islands Coastal Walk.

For areas added to the park (e.g. recent additions south of Moonee Beach), it is important to promote these additions to park neighbours and inform them of the major values, issues and

threats to the area. New additions may also require the installation of park identification, boundary, directional or interpretive signage. The NPWS visitor website would also need to be updated to provide an online presence for any additions.

Desired outcomes

- There is widespread community understanding and appreciation of the park's natural, cultural and recreational values.
- Visitors are aware of the park's recreational opportunities and can easily find their way to park facilities.
- The park is a useful educational resource for local schools, universities and community organisations, and is a popular venue for events and functions.
- The local Aboriginal community are actively involved in promoting, interpreting and presenting the Aboriginal culture and heritage values of the park.
- The local community and historians are actively involved in researching and sharing an understanding of the park's heritage values.

Management response

- 6.1.1 Work with Coffs Coast Tourism to promote the Solitary Islands Coastal Walk and the park.
- 6.1.2 Investigate opportunities to use new technology to attract and engage with new visitor groups.
- 6.1.3 For any new additions to the park, liaise with new park neighbours, install park signage as soon as possible, and update the NPWS visitor website.
- 6.1.4 Provide opportunities for local communities to participate in NPWS Discovery activities and Coffs Ambassadors Tours to foster appreciation and understanding of the values and recreational opportunities in the park.
- 6.1.5 Support and assist educational use of the park by schools, universities, community groups and individuals through provision of information, programs such as walks and talks, and opportunities to undertake research relevant to the park's management.
- 6.1.6 Encourage schools and other education providers to involve NPWS Discovery Rangers or council's Ambassadors in educational group activities.
- 6.1.7 Provide opportunities for volunteer groups (e.g. Coffs Ambassadors, Landcare and Coastcare groups) to undertake Aboriginal cultural heritage training.
- 6.1.8 Ensure the park's Aboriginal cultural and heritage values are interpreted and presented appropriately and only with the direct involvement or endorsement of the local Aboriginal community. Seek the views of the local Aboriginal community in relation to dual naming on signage, brochures and interpretive and promotional material and implement as appropriate.
- 6.1.9 Ensure the park's non-Aboriginal cultural heritage values are interpreted and presented where appropriate to enhance understanding and enjoyment of the park.
- 6.1.10 Maximise opportunities for local Aboriginal people and support tourism operators to provide culturally appropriate interpretation of the park's Aboriginal culture and heritage.

7. Threats

7.1 Pests

Pest species are plants, animals and pathogens that have negative environmental, economic and social impacts. They are most commonly introduced species. Pests can have impacts across the range of park values, including impacts on biodiversity, cultural heritage, catchments and scenic values.

The *Biosecurity Act 2015* and its regulations provide specific legal requirements for the response, management and control of biosecurity risks, including weeds and pest animals. These requirements apply equally to public and privately owned land. Under this framework, Local Land Services has prepared regional strategic weed management plans and regional strategic pest animal management plans for each of its 11 regions, including North Coast (North Coast LLS 2017, 2018).

The Local Land Services' plans identify priority weeds and pest animals in each of the regions, plus the appropriate management response for the region (i.e. prevention/alert, eradication, containment or asset protection).

NPWS prepares regional pest management strategies which identify the operations and control actions undertaken by NPWS to meet the priorities from regional strategic pest and weed management plans. This also includes other important programs such as the *Biodiversity Conservation Program* (see Sections 3.2 and 3.3). The overriding objective of the NPWS regional pest management strategies is to minimise adverse impacts of introduced species on biodiversity and other park and community values while complying with legislative responsibilities. These strategies are regularly updated. Reactive programs may also be undertaken in cooperation with neighbouring land managers, in response to emerging issues.

The linear shape of the park (which results in a high edge-to-area ratio) combined with the large urban interface makes the park particularly susceptible to the incursion of weeds, pest animals and pathogens from adjoining lands. A number of pest-related key threatening processes, listed under the Biodiversity Conservation Act or Environment Protection and Biodiversity Conservation Act, affect the park, including:

- invasion and establishment of exotic vines and scramblers
- invasion of native plant communities by bitou bush
- invasion of native plant communities by exotic perennial grasses
- invasion, establishment and spread of lantana (*Lantana camara*)
- loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants
- introduction and establishment of myrtle rust
- predation by European red fox
- predation by feral cats (*Felis catus*)
- invasion and establishment by cane toad (*Rhinella marina*)
- predation and hybridisation by feral dogs.

Other pest-related key threatening processes listed under the Biodiversity Conservation Act or Environment Protection and Biodiversity Conservation Act that are having or are likely to be having lesser impacts on the park include: competition and grazing by rabbits (*Oryctolagus cuniculus*), competition from feral honeybees (*Apis mellifera*), infection of frogs by chytrid pathogen, red fire ants (*Solenopsis invicta*), yellow crazy ants (*Anoplepis gracilipes*), and impact of feral pigs (*Sus scrofa*).

Council's *Companion Animals Management Plan* (CHCC 2000b) relates to dogs, cats and other companion animals. The plan aims to manage companion animals effectively to ensure animal welfare, protection of the environment, and the rights of owners and non-owners alike. Council's plan sets out education and incentives, access and signage, and ways to deal with common offences and problems. Given the interface between the park and urban lands, a coordinated response to straying domestic cats and dogs is required. Dog walking is considered in Section 5.4.

Weeds

Past disturbances, including clearing, sand mining and track braiding, have exacerbated weed establishment within the park. Contemporary disturbances that are exacerbating the impacts of weeds on the park include illegal clearing, invasion by escaped garden plants and dumping of garden waste. Escaped plants and dumped garden waste are major sources of new weed invasions in the park as lawn clippings and other garden waste are a rich source of weed propagules (e.g. seeds and cuttings). These garden weeds can out-compete native plant species, reduce biodiversity, and reduce habitat and scenic values.

Weeds threaten to degrade or destroy a range of park values, including threatened ecological communities, threatened species habitat, highly significant Aboriginal cultural sites and scenic values. As such, areas supporting these values are the priority locations for weed control. Other priority locations include less-disturbed areas, areas where previous weed work has been undertaken, recently burnt areas, and sites where there is an ongoing interest from local volunteer groups to assist in the work.

A local weed strategy, the Coffs Coast Regional Park and Moonee Beach Nature Reserve Coastal Weeds Strategy 2006 (DEC 2006a), describes the major weeds in the park and provides information on control techniques and strategies specific to the park.

The Coastal Weeds Strategy (DEC 2006a) has been implemented since 2006 and control programs involving NPWS and Coffs Harbour City Council staff, contractors and a number of local volunteer groups have been highly successful. Ongoing community participation in weed control is vital to the protection and enhancement of park values.

In some areas of the park, significant bush regeneration effort is required to reduce the negative effects of weeds and improve the condition, viability and resilience of native vegetation communities (see also Section 7.5).

The following weeds are the primary weed species in the park that are being actively controlled.

Bitou bush

Bitou bush (*Chrysanthemoides monilifera* subsp. *rotundata*) is a native of South Africa which is listed as a Weed of National Significance and is identified as a statewide priority weed in the *North Coast Regional Strategic Weed Management Plan* (North Coast LLS 2017). Invasion by bitou bush leads to a decline in the species diversity of affected plant communities, and the fauna that depend on them. Invasion by bitou bush is listed as a key threatening process under the Biodiversity Conservation Act (NSW SC 1999). It readily invades a wide variety of disturbed and undisturbed coastal plant communities, out-competing native vegetation.

Bitou bush occurs as scattered infestations throughout the park. It threatens coastal vegetation as well as a number of threatened ecological communities, including Littoral Rainforest, Themeda Grassland, Swamp Sclerophyll Forest on Coastal Floodplain and Subtropical Coastal Floodplain Forest.

The bitou bush threat abatement plan (DEC 2006b) identifies the following priority sites in the park: Arrawarra Headland, Cabins Beach, Woolgoolga Back – Hearn's Lake – Sandy

beaches, Woolgoolga Headland, north-east of Korora, Macauleys Headland and Diggers Head. Other areas in the park where bitou bush is controlled include: Diggers Beach, Campbells Beach, Sapphire Beach, White Bluff, Bare Bluff, Mullaway Beach, Ocean View Headland and Corindi Beach.

Methods used to control bitou bush in the park include ground and aerial foliar spraying in winter, cut and paint, and hand removal. Many of these programs involve NPWS working with council and volunteer community Landcare groups.

Lantana

Lantana (*Lantana camara*) is a large flowering shrub native to Central and South America. Lantana is a vigorous invader of disturbed areas, often forming dense thickets. It is spread mainly by birds and thrives in warm environments with high rainfall where the weed grows along forest edges, penetrates disturbed rainforest and invades open eucalypt woodlands and pastures. Lantana is a key threatening process (NSW SC 2006b). It is listed as a Weed of National Significance and is identified as a statewide priority weed in the *North Coast Regional Strategic Weed Management Plan* (North Coast LLS 2017).

A national *Plan to Protect Environmental Assets from Lantana* (Biosecurity Queensland 2010) has been developed which establishes national conservation priorities for the control of lantana. It identifies the research, management and other actions needed to ensure the long-term survival of native species and ecological communities affected by the invasion of lantana.

Lantana is the most common weed in the NSW North Coast Region, and is present to varying degrees in all lower-altitude reserves (OEH 2012a). In the park, lantana occurs in scattered infestations and poses a risk to the following threatened ecological communities: Themeda Grassland, Littoral Rainforest, Subtropical Coastal Floodplain Forest, and Swamp Sclerophyll Forest. Lantana also threatens significant Aboriginal sites, and a number of threatened and significant plants (silverbush, coast headland pea, austral toadflax, sand spurge, purple donkey orchid and cocksbur flower; see Table 4).

A range of control techniques are used in combination in the park, including foliar spraying, cut and paint, hand removal and biological control. Priority locations for control of lantana are Campbells Beach North, Sapphire Beach, Sandy Beach, Woolgoolga Headland, Woolgoolga Lake, Safety Beach, Cabins Beach, Ocean View Headland, Arrawarra Headland and Corindi Beach.

Other weeds

Glory lily

Glory lily (*Gloriosa superba*) is a scrambler or climber native to tropical Africa. It occurs in dune areas and headlands, with the highest densities being in disturbed areas or where bitou bush control has been undertaken. Moderate, isolated infestations occur in the park, particularly around Hearn's Lake. Existing infestations are treated biannually (by foliar spraying) and manual control is used for isolated plants.

Glory lily is identified as a regional priority weed for containment in the *North Coast Regional Strategic Weed Management Plan* (North Coast LLS 2017).

Exotic perennial grasses

Invasion of native plant communities by exotic perennial grasses is listed as a key threatening process under the Biodiversity Conservation Act (NSW SC 2003). Exotic grasses are vigorous, persistent and particularly invasive in disturbed areas. Once established, they can displace native plants, reduce germination and provide a seed source for dispersal to

other areas. Infestations of most exotic grasses occur along roads, tracks and trails and other previously disturbed areas. The Themeda Grassland EEC, occurring on the park's headlands and sea cliffs, is particularly threatened by exotic grasses.

Perennial grasses that pose a risk to biodiversity and other park values include kikuyu (*Cenchrus clandestinus*), giant Parramatta grass (*Sporobolus fertilis*), green panic (*Panicum maximum* var. *trichoglume*), broad-leaf paspalum (*Paspalum mandiocanum*), molasses grass (*Melinis minutiflora*), Rhodes grass (*Chloris gayana*) and setaria (*Setaria* spp.). Most infestations of exotic grasses are treated with herbicide or removed by hand, depending on their location. Vehicle and machinery hygiene is essential to reduce the spread of these weeds.

Winter senna

Winter senna (or winter cassia) (*Senna pendula* var. *glabrata*) is a woody weed native to South America. It invades native plant communities and, in some areas, can dominate these communities, restricting natural regeneration and the expansion of rainforest and other communities. Winter senna is controlled by herbicide (cut and paint or stem injection techniques). It is a particular problem at Darkum Rocks, the headland to the north of Pine Brush Creek, the southern areas on Macauleys Headland, Moonee South, Mullawarra South and Sapphire North.

Asparagus spp.

Asparagus weeds (*Asparagus* spp.) are a number of mostly climbing plants native to Africa. These species invade native plant communities, smothering and displacing native plants, forming root mats that impede the growth of native seedlings and occasionally forming a monoculture.

Asparagus weeds are identified as a statewide priority weed and as a regional priority weed for containment in the *North Coast Regional Strategic Weed Management Plan* (North Coast LLS 2017). They are managed under the *Asparagus Weeds Strategic Plan 2012–2017*, a national plan developed under the Australian Weeds Strategy and in line with the *Asparagus Weeds Management Manual* (OEH 2013a). The manual includes guidelines for manual control and disposal, chemical control via herbicides, other control methods (including biological control) and follow-up, restoration and monitoring. Asparagus weeds are a particular problem in the Woolgoolga area of Coffs Coast Regional Park.

Coastal morning glory (also known as mile-a-minute)

Coastal morning glory (*Ipomoea cairica*) is a vigorous perennial climber which has been reported by members of volunteer groups at various locations in the park. This species can rapidly grow and form a dense mat along the ground or climb into the canopy, smothering native vegetation and destroying native animal habitat. Rooted stems of coastal morning glory are best treated with herbicide, while climbing stems can be severed and left in situ to die off.

Pathogens

Phytophthora cinnamomi

The root-rot fungus *Phytophthora cinnamomi* is a soil-borne pathogen that infects a large range of plant species and in some circumstances may contribute to death of plants where there are other stresses present, such as waterlogging, drought and perhaps wildfire (NSW SC 2002). *Phytophthora* may be dispersed in flowing water (such as storm run-off) from infected roots to the roots of healthy plants, and also by vehicles, animals and walkers.

Dieback caused by phytophthora is currently listed as a key threatening process under the Biodiversity Conservation Act (NSW SC 2002) and the Environment Protection and Biodiversity Conservation Act (DoE 2009). It is likely that phytophthora is present in the park.

Myrtle rust

The introduction and establishment of myrtle rust has been listed as a key threatening process in New South Wales (NSW SC 2011). Myrtle rust is a plant disease caused by the exotic fungus *Austropuccinia psidii*. It was first detected in New South Wales on the Central Coast in 2010 and has since established in coastal NSW from the Shoalhaven River north to Queensland. Myrtle rust infects young, actively growing shoots, leaves, flower buds and fruits of plants in the family Myrtaceae. The spores of myrtle rust are spread by wind, animals and human activity. Eradication is not feasible (OEH 2011a).

Myrtle rust is present in the Coffs Harbour LGA and is likely to be widespread (OEH 2011a). Myrtle rust has been identified within the park and poses a significant threat to its biological values. Genera in the family Myrtaceae recorded in the park that are affected by myrtle rust include *Eucalyptus*, *Angophora*, *Callistemon* and *Melaleuca*.

A plan outlining how myrtle rust will be managed on national park estate has been developed (OEH 2011a) and incorporates strategies to limit the spread of myrtle rust and minimise impacts to threatened species and ecological communities.

Pest animals

Pest animals recorded in the park include feral cats, red fox, wild dogs and cane toads. These species are identified as a regional priority pest in the *North Coast Regional Strategic Pest Animal Management Plan* (North Coast LLS 2018).

Introduced carnivores

Feral and uncontrolled domestic cats and dogs, and foxes all occur in and around the park. Opportunistic surveys, anecdotal reports and sand-pad surveys undertaken as part of the implementation of the fox threat abatement plan confirm their presence in the park. Foxes tend to be more abundant around urban and industrial landscapes like those adjacent to the park. Foxes occur in the park and surrounding area in low to medium densities.

Given the park's location, straying domesticated cats and dogs enter the park from adjacent urban areas. McHarg et al. (1995, in CHCC 2000b) estimated that 57% of households own a dog or cat or both. Based on this, they estimated that there are at least 15,000 domestic dogs and cats in the Coffs Harbour LGA (CHCC 2000b) and 750 directly adjacent to the park.

Cats, foxes and dogs have a range of effects on the park's natural values. In particular, predation by these carnivores puts pressure on native fauna in the park, including a number of threatened species: koalas, squirrel gliders, little terns, pied oystercatchers and sooty oystercatchers.

The proximity of the park to urban areas and the use of the park for dog walking limit the range of techniques that can be used in pest control operations. For example, baiting is not used where there is a potential threat to domestic cats, dogs and other animals. In these circumstances, alternative methods such as barrier fencing and strategic trapping are used, and control programs are based on values and changing threat levels at individual sites.

Cats

Cats are solitary, predominantly nocturnal, carnivorous, and can survive with limited access to water. Feral cats and straying domestic cats eat small mammals, birds, reptiles, frogs, fish

and insects, taking prey up to the size of a common brushtail possum. In the park, threatened species at risk from cat predation include the little tern, koala and squirrel glider.

Feral cats have contributed to the extinction of many small to medium-sized mammals and ground-nesting birds. Feral cats also carry infectious diseases such as toxoplasmosis and sarcosporidiosis, which can be transmitted to native animals, domestic livestock and humans.

Predation by feral cats is listed as a key threatening process under the Biodiversity Conservation Act (NSW SC 2000) and Environment Protection and Biodiversity Conservation Act (DoE 2009). A threat abatement plan has been produced under the Environment Protection and Biodiversity Conservation Act. Cats are likely to be present to varying degrees in all parks in the North Coast, particularly near main urban centres (OEH 2012a) and cat activity in some coastal reserves appears to be on the increase.

Foxes

Red foxes suppress native animal populations, particularly those of medium-sized ground-dwelling and semi-arboreal mammals, ground-nesting birds and freshwater turtles. Foxes have also been implicated in the spread of a number of weed species such as bitou bush and blackberry, and are known to prey on domestic stock, including lambs and poultry.

Predation by the European red fox is declared a key threatening process under the Biodiversity Conservation Act (NSW SC 1998) and the Environment Protection and Biodiversity Conservation Act (DoE 2009). Long-term control programs to protect priority threatened fauna species and populations have been established under the NSW fox threat abatement plan (OEH 2011b).

The threat abatement plan currently identifies one fox control site in the park, Hearn's Lake, to protect the little tern from predation. Foxes (and cats) predate on little tern eggs and nestlings, reducing the breeding success of this endangered shorebird. Fox and cat control at this site is targeted in the area surrounding the key nesting site and is conducted during the breeding season. Control methods are limited to soft-jaw trapping, and sand-pad surveys are used to monitor target species.

Control programs elsewhere in the park include occasional den fumigation. Training workshops on fox control methods have also been held with adjoining landholders.

Dogs

Dogs (both feral and domesticated *Canis lupus familiaris*) can exert high levels of predation on native fauna, especially medium to large macropods (Mitchell & Banks 2005). Dogs may prey on smaller native animals, and their scent can disrupt breeding and feeding by native animals.

Domestic dogs can be a serious problem to native fauna if uncontrolled (either unleashed or straying). Some domestic dogs that rely on humans for food nonetheless hunt native fauna in nearby bushland and nature reserves, often harassing and injuring animals. For example, domestic dogs exterminated a colony of little penguins near Eden in a single night (Woodford 2005). In the park, domestic dogs are known to affect little terns and koalas.

Cane toads

In New South Wales, cane toads (*Rhinella marina*) now extend along the coast from the Queensland border to Evans Head and inland to Casino, with isolated populations in the Clarence Valley. The cane toad affects native animals in a number of ways, including predation, competition for food and habitat, and death through toxic ingestion. The effects of cane toads are listed as key threatening processes at national and state levels (NSW SC 2006a; TSSC 2005).

Vagrant cane toads are regularly reported in Coffs Harbour, including locations adjacent to the park. Where possible, these toads are collected and euthanased, and searches are conducted to ensure no breeding populations of cane toads establish. Reports of cane toads from members of the public are essential to stop new cane toad populations establishing, and so public awareness programs are conducted annually by NPWS. The park has potentially suitable habitat for cane toads, particularly around Korora, and in areas adjacent to golf courses and tourist parks. Reports of vagrant toads are typically of single animals, often near tourist parks or landscape and nursery suppliers or along railway and highway corridors.

A plan to manage cane toads in national parks and reserves has been prepared (OEH 2013c).

Desired outcomes

- Pest plants, animals and pathogens are controlled and where possible eliminated.
- The impacts of pest animals, weeds and pathogens on the conservation of native species and ecological communities (both protected and threatened) are minimised.
- Populations of high-priority pests and pathogens do not establish in the park.
- Broader community understanding of the threats that pests pose and greater community involvement in monitoring and controlling pests.

Management response

General

- 7.1.1 Manage pest species in line with pest management strategies relevant to the park, and update the park's weed strategy and fox threat abatement plan as required. Priority will be given to new and emerging pests and the control of pests that threaten areas of high conservation value, including habitats of threatened species, populations and communities.

Weeds

- 7.1.2 Continue to work closely with and provide support to local volunteer groups that undertake weed control and bush regeneration work in the park.
- 7.1.3 Promote awareness of the impact of dumping garden waste, and encourage the planting of non-invasive 'bush friendly' plant species in gardens and new residential areas neighbouring the park.
- 7.1.4 Reduce opportunities for unintentional weed incursions (e.g. spread of weed propagules by equipment used for park management).
- 7.1.5 Establish monitoring sites, particularly in headland areas, to measure the effectiveness of weed control programs on the recovery of threatened species and communities.

Pathogens

- 7.1.6 Monitor for any outbreaks of phytophthora in or near the park.
- 7.1.7 Develop and implement a phytophthora management plan if it is found to be present in the park. This may lead to the closure of walking tracks, roads and management trails to quarantine areas affected or potentially affected by phytophthora.
- 7.1.8 Monitor the spread and impacts of myrtle rust, particularly on swamp turpentine (*Rhodamnia rubescens*).

Pest animals

- 7.1.9 Implement fox control programs and other strategies in accordance with the NSW fox threat abatement plan to help protect nesting shorebirds in the Hearn's Lake area.
- 7.1.10 Implement cooperative fox control programs with neighbours.
- 7.1.11 Implement cooperative domestic dog and cat programs in line with council's Companion Animals Management Plan (including community education programs).
- 7.1.12 Confirm and document any new sighting of cane toads in or near the park and implement broader survey and control strategies when required.
- 7.1.13 Encourage cane toad control efforts by neighbours on surrounding lands.

7.2 Fire

The primary objectives of NPWS fire management are to protect life, property, community assets and cultural heritage from the adverse impacts of fire, while also managing fire regimes in parks to maintain and enhance biodiversity. NPWS also helps develop fire management practices that contribute to conserving biodiversity and cultural heritage across the landscape, and implements cooperative and coordinated fire management arrangements with other fire authorities, neighbours and the community (OEH 2013b).

Fire is a natural feature of many environments and is essential for the survival of some plant communities, such as heath and grasslands. However, inappropriate fire regimes can lead to loss of particular plant and animal species and communities. High frequency fire resulting in the disruption of life-cycle processes in plants and animals, and loss of vegetation structure and composition has been listed as a key threatening process under the Biodiversity Conservation Act.

The fire history of the park has been well documented since 2003. Following dedication of the park, a fire-risk assessment was undertaken and a program established to reinstate appropriate fire regimes where fire-prone vegetation coincided with residential assets. Large fires do not generally occur in the park.

Locations where biodiversity is actively managed using appropriate fire regimes include headland heath and grasslands, heathlands and forests around the villages of Arrawarra Headland and Mullaway, heathlands around Willis Creek, and forests around Sugar Mill Creek.

The fire management strategy defines the fire management approach for the park (see DEC 2005a, 2005b). The fire management strategy, which is updated as required, 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, and fire control advantages such as management trails and water supply points. It also contains fire regime guidelines for conservation of the park's vegetation communities, including ecological fire thresholds.

Asset protection zones identified in the fire management strategy are maintained where the park adjoins urban areas and other major assets (e.g. schools). Risk mitigation arrangements at the south-east corner of Rushton Avenue at Moonee Beach require further analysis.

There are a number of existing management trails in the park that will be maintained in line with the park's fire management strategy (see also Figures 2, 3 and 4). New additions to the park may include trails that are needed as fire control advantages or for wildfire suppression. These trails will be upgraded as necessary to comply with current standards. Other former minor trails may be periodically reopened as temporary fire control lines in association with the implementation of prescribed burns or fire control operations.

Cooperative arrangements with surrounding landowners and the Rural Fire Service are an important component of the park's fire management. NPWS and Coffs Harbour City Council

are actively involved with the Mid North Coast Bush Fire Management Committee. Cooperative arrangements include fire planning, fuel management and information sharing. Hazard reduction programs, ecological burning proposals and management trail works are submitted annually to the bush fire management committee. Much of the park abuts urban areas where Fire and Rescue NSW are responsible for responding to fire. As such, there is a need for ongoing liaison with the urban fire brigades in Coffs Harbour and Woolgoolga regarding fire management in these parts of the park.

Desired outcomes

- Negative impacts of fire on life, property and the environment are minimised.
- The potential for spread of bushfires on, from or into the park is minimised.
- Fire regimes are appropriate for conservation of native plant and animal communities.
- Improved community understanding of the positive role and benefits of appropriate fire management within the park.

Management response

- 7.2.1 Implement the park fire management strategy and update as required. Suppress unplanned fires in the park in accordance with the strategy.
- 7.2.2 Maintain or upgrade management trails in the park (see Figures 2, 3 and 4), and any trails in new additions that are required for management purposes.
- 7.2.3 Continue to be involved in the Mid North Coast Bush Fire Management Committee and maintain cooperative arrangements with local rural fire brigades, town brigades and surrounding landowners in regard to fuel management and fire suppression.
- 7.2.4 Manage the park to protect biodiversity in accordance with the identified fire regimes in the fire management strategy. Where necessary, undertake prescribed burning to reinstate fire regimes that are appropriate to vegetation communities, particularly headland grasslands, heathlands (e.g. around Arrawarra Headland and Mullaway) and eucalypt forests (e.g. in the Sugar Mill Creek area).
- 7.2.5 Rehabilitate areas disturbed by fire suppression operations as soon as practical after the fire.
- 7.2.6 Liaise with consent authorities to ensure all future developments that border the park incorporate the required fire protection measures wholly within private property, except where there is an existing asset protection zone identified in the park's fire management strategy.

7.3 Climate change

Human-induced climate change is listed as a key threatening process under the Biodiversity Conservation Act (NSW SC 2000a), and the associated loss of habitat is listed under the Environment Protection and Biodiversity Conservation Act (TSSC 2001). The latest information on projected changes to climate is from the NSW and ACT Regional Climate Modelling (NARClm) project (OEH 2014). The climate projections for 2020–2039 are described as 'near future'; and projections for 2060–2079 are described as 'far future'. The snapshot shown in Table 10 is for the North Coast Region, which includes Coffs Coast Regional Park (OEH 2014).

The projected increases in temperature, number of hot days and severe fire weather days (OEH 2014) are likely to influence bushfire frequency and intensity across the North Coast region and result in an earlier start to the bushfire season (DECCW 2010a). Higher summer rainfall and rainfall intensity in the region are likely to increase sheet and rill erosion on the steeper slopes of the hinterland. Further, expected declines in run-off in spring and winter are

likely to reduce seepage flows and hence activity of some forms of gully erosion, although this change will be offset where stabilising vegetation declines. Higher summer and autumn rainfalls are likely to increase the risk of mass movement in all currently vulnerable slopes in the hinterlands, but negative water balances may offset this effect through reduced water content in soil profiles (DECCW 2010a).

Table 10 North Coast climate change snapshot

Article I. Projected temperature changes:	
Article II. Maximum temperatures are projected to increase in the near future by 0.4–1.0°C	Article III. Maximum temperatures are projected to increase in the far future by 1.5–2.4°C
Article IV. Minimum temperatures are projected to increase in the near future by 0.5–1.0°C	Article V. Minimum temperatures are projected to increase in the far future by 1.6–2.5°C
Article VI. The number of hot days will increase	Article VII. The number of cold nights will decrease
Article VIII. Projected rainfall changes:	
Article IX. Rainfall is projected to decrease in winter	Article X. Rainfall is projected to increase in spring and autumn
Article XI. Projected Forest Fire Danger Index changes:	
Article XII. Average fire weather is projected to increase during summer and spring	Article XIII. Severe fire weather days are projected to increase in summer and spring

Source: OEH (2014).

Climate change may significantly affect biodiversity by changing the size of populations and the distribution of species, and altering the geographical extent and species composition of habitats and ecosystems. Species most at risk are those unable to migrate or adapt, particularly those with small population sizes or with slow growth rates.

The potential impact of climate change on the park is difficult to assess since it depends on the compounding effects of other pressures, particularly barriers to migration and pressure from introduced animals. If fire extent increases under future conditions of increased fire danger, fire-sensitive ecosystems, such as dry rainforest, could undergo structural and compositional changes. Changes in the fire regime are likely to compound the impacts of other climatic changes; for instance, disturbance by fire together with an increase in summer rainfall is likely to benefit weeds such as lantana.

Highly cleared and fragmented ecosystems, such as lowland and littoral rainforests, are likely to be at greater risk than more intact ecosystems. In these areas in particular, warmer temperatures are likely to worsen weed infestations. Weeds such as lantana can replace native species as a major food source for seed dispersers such as fruit-eating birds, thereby facilitating weed invasion.

Programs to reduce the pressures arising from other threats — such as habitat isolation and fragmentation (see Section 7.5), invasive species (see Section 7.1), inappropriate fires (see Section 7.2) and pollution — will help reduce the severity of the effects of climate change.

For the park, a significant likely impact of climate change is the exacerbation of existing coastal hazards and sea level rise (see Section 7.4).

Desired outcomes

- The effects of climate change on natural systems are reduced.

Management response

- 7.3.1 Continue existing fire, pest and weed management, and vegetation rehabilitation programs to increase the park's ability to cope with future disturbances, including climate change.
- 7.3.2 Encourage research into appropriate indicators to monitor the effects of climate change.

7.4 Coastal hazards

The risks to our coast from coastal hazards are well recognised. The major hazards along the Coffs Harbour LGA coastline are beach erosion, long-term recession and coastal inundation. In the future, shoreline recession is expected to be exacerbated by sea level rise (BMT WBM 2013a, b).

The construction of the Coffs Harbour breakwalls in the first half of the 20th century interrupted the natural northerly transport of sand and sediments, leading to erosion and recession of beaches north of Coffs Harbour. The most substantial recession of beaches adjacent to the park has occurred at Campbells Beach, Korora Beach and, to a lesser degree, Diggers Beach. Both Campbells and Korora beaches are still receding (BMT WBM 2013a, b).

The beaches adjacent to the park are a major focus for recreation and are the basis for much of the tourism in the region. There are a number of houses and tourist developments as well as public infrastructure in close proximity to beaches adjacent to the park, particularly in the Korora and Campbells Beach areas. The dune and beach environments also support important wildlife habitats, threatened species and ecological communities, and cultural heritage sites. As such, there are social, environmental and economic imperatives to preserve sandy beaches and dune environments, both within and adjacent to the park.

The management options in the adopted *Coffs Harbour Coastal Zone Management Plan* (BMT WBM 2013a) have been considered in the preparation of this plan of management and, where appropriate, have been included. The Coastal Zone Management Plan aims to reduce, eliminate or mitigate the likelihood and consequences of the major hazards that threaten land and assets. The plan takes different approaches for managing risks associated with existing and future developments. In relation to existing development (e.g. existing day use area assets), options include:

- protect the existing development using structures such as seawalls or other measures such as re-contouring the beach and rehabilitating the frontal dune
- retreat, which is to relocate or sacrifice the infrastructure, asset or property if and when impacts occur (this option preserves sandy beach amenity)
- accommodate the risk by retrofitting, rebuilding or redesigning the asset.

In terms of future development, the Coastal Zone Management Plan includes options to avoid, accommodate and accept the risks of coastal hazards.

Along the beachfront, the park encompasses a narrow strip of land between the high water mark and adjacent residential areas or vegetation backed by residential areas. At its narrowest point, along Campbells Beach, the park is just 5 metres wide, and there are many

homes along the beachfront, some of which are being affected by coastal recession. Many of the park's visitor assets are also on the beachfront, for example, facilities at Diggers, Emerald, Sandy, Arrawarra and Mullaway day use areas.

Desired outcomes

- The effects of coastal hazards on the park's natural, cultural and visitor values and assets are minimised or accepted as appropriate.
- Park assets are protected, relocated, sacrificed or retrofitted in line with the approved *Coffs Harbour Coastal Zone Management Plan*.

Management response

The details of each action, its location, priority, funding, and timing or trigger are provided in the *Coffs Harbour Coastal Zone Management Plan* (CZMP).

- 7.4.1 If required, relocate the amenities building and associated sewerage infrastructure at Ocean View Beach Day Use Area to the west of its current location to retain the sandy beach by allowing natural retreat (CZMP action A.11).
- 7.4.2 Replace board-and-chain access ways at beaches if damaged during a major storm (CZMP action A.15).
- 7.4.3 Undertake beach scraping and re-contouring to increase sand volumes and the height of frontal dunes at Emerald Beach (southern end), Sandy Beach, Diggers Beach and, if necessary, Arrawarra Beach (southern end) (CZMP action BD.2).
- 7.4.4 Work with existing Dunecare and Landcare groups or establish a formal dune care program to undertake dune rehabilitation in priority locations in combination with beach scraping episodes and incorporating weed and pest management (CZMP action BD.3).
- 7.4.5 Investigate options to manage the existing beach recession at Korora Beach and Campbells Beach. Options include construction of a seawall along the entire beach or planned retreat (CZMP actions FS.7 and FS.8). Implement approved options as appropriate and subject to any relevant environmental impact assessment requirements.
- 7.4.6 Develop a decision framework for managing Aboriginal and non-Aboriginal heritage items and places affected by coastal hazards (CZMP action FS.11).
- 7.4.7 Undertake a study of important plant communities and habitat areas (e.g. threatened ecological communities) within the coastal hazard zones to investigate priorities for managing erosion, recession, permanent inundation and habitat migration resulting from sea level rise (CZMP action FS.12). Implement actions as required within the park.
- 7.4.8 Prepare a checklist, guideline or policy document to facilitate the consideration of coastal hazard zones and timeframes by Coffs Harbour City Council in the preparation and revision of various planning processes, including master plans for day use areas and reviews of environmental factors (CZMP action P.3).

7.5 Isolation and fragmentation

Most of the vegetation in the park exists as reasonably small, discrete patches between urban or disturbed areas on one side and the ocean on the other (see Figure 1). The park itself comprises five disjunct areas (separated by creeks and urban areas) that are fairly small and isolated, and subject to edge effects that make the park more vulnerable to disturbances.

Historically, areas within the park and surrounding lands were used for agriculture (see Section 4.2). Lands within the park were gazetted as Crown reserves between 1900 and 1985. However, throughout most of the 20th century, access to the park's headlands was largely unregulated, resulting in unrestricted vehicular access and unauthorised fires. In the 1980s and 1990s vehicle controls were implemented and since 2000 there has been significant investment in bush regeneration. During the latter half of the 20th century, the land surrounding much of the park was urbanised, resulting in loss of biodiversity and habitat fragmentation.

There are more than 1300 direct neighbours to the park, and a variety of adjacent land uses place pressure on the park along the park interface. Illegal clearing or damage of native vegetation within the park or along the park boundary has significant negative effects on park values, which range from the loss of individual plants to further fragmentation and isolation of the remnant vegetation within the park.

The incursion of pest plants and animals (e.g. exotic garden plants) and predation by domestic pets also place pressures on the park (see Section 7.1). The dumping of garden refuse within the park seriously degrades local vegetation and can also become a fire hazard. Other impacts include stormwater drainage, unauthorised recreational activities, and encroachment of equipment and structures.

The long-term conservation of biodiversity depends on the protection, enhancement and connection of remaining habitat across the landscape, incorporating vegetation remnants on both public and private lands. Together with adjacent Garby and Moonee Beach nature reserves, the park forms an important vegetated wildlife corridor that links to other corridors stretching to the north, south and west. At a local level, the park forms an important component of numerous landscape connections. At a regional scale, the park is part of an extensive coastal corridor for wildlife movement (see Section 3.3).

Cooperative arrangements with neighbours are important for the management of access, fire, weeds, domestic pets and pest animals. A cooperative approach will be initiated to rehabilitate historically cleared precincts (see below).

Desired outcomes

- The negative impacts of isolation and fragmentation are reduced.
- The integrity of the park boundary is maintained.
- Corridor values are enhanced.
- Broader neighbour and nearby landholder understanding of threats and impacts on park values.

Management response

- 7.5.1 Maintain cooperative arrangements with nearby landholders regarding access, fire and management of pest species.
- 7.5.2 Encourage protection and enhancement of native vegetation on public and private lands around the park, particularly in key habitats and wildlife corridors.

Vegetation destruction and damage

Under the National Parks and Wildlife Regulation, it is illegal to pull or dig up, poison, cut, fell, remove, damage or destroy any vegetation in the park without consent. It is also illegal to introduce any vegetation into the park without authorisation.

Illegal damage, vandalism and destruction of vegetation (including trees, shrubs and grasslands) are significant and ongoing problems in the park. There are usually several

major incidents each year that can have a range of negative impacts on the park's natural, cultural and visitor values.

Illegal destruction of native vegetation kills individual plants and damages species' habitat. It can also lead to degradation of the subcanopy and surrounding vegetation, potentially affecting threatened ecological communities such as Littoral Rainforest EEC. This can lead to soil erosion and, where it occurs near beaches, can further exacerbate foredune instability and the impacts of coastal erosion. In some parts of the park, vegetation destruction has disturbed Aboriginal sites and reduced bush tucker and medicinal resources.

Mowing of grasslands, including Themeda Grassland EEC, beyond asset protection zones has generally been undertaken to enlarge a neighbour's apparent 'backyard', halt regeneration of native shrubs and trees (thereby maintaining or improving views), or provide pathways through the park. Mowing outside of asset protection zones can have a negative impact on the native vegetation of the site, changing the floristic composition of an area and impeding natural regeneration. Council maintains areas within asset protection zones on a programmed basis, and some park neighbours mow these zones at more regular intervals.

In determining management responses to the damage and destruction of vegetation in the park, this plan distinguishes between clearing conducted before gazettal of the park (i.e. 'pre-2003 clearing') and 'new' vegetation destruction or damage.

Pre-2003 clearing

Pre-2003 clearing encroachments are areas within the park where native vegetation was cleared or degraded by adjacent landholders before the park was gazetted, and which have been maintained as predominantly cleared areas. Most clearing has been undertaken to improve or maintain ocean and coastline views from private homes and commercial properties. Past destruction in the park has involved poisoning, felling, lopping, mowing of grasslands and other vegetation, and has been maintained by mowing or pruning.

There have been instances where people have purchased a property where unauthorised vegetation damage or encroachment occurred in the park adjacent to their property before 2003. Where previous owners have destroyed trees to improve or create ocean views, new owners may consider it their right to maintain these views.

Precinct planning

Owing to the narrow, linear nature of the park it is essential that areas of vegetation along the park boundary that have been destroyed or damaged in the past are rehabilitated. This will reinstate the integrity of vegetation along the park boundary, reduce edge effects, and maintain corridor and other park values.

Pre-2003 clearing precincts in the park that require rehabilitation are listed in Table 11. Any rehabilitation works will be developed in consultation with relevant neighbours, and works will be prioritised and staged to ensure the successful rehabilitation of degraded areas. Precincts will be prioritised based on a number of factors, including:

- the ecological, recreational and cultural heritage values of the precinct (e.g. presence of threatened ecological communities and existing regeneration priorities)
- the public good value of the precinct (e.g. is the precinct providing public recreation benefits in its present state, or is the clearing only benefiting private neighbours)
- the impact of weeds on native vegetation in the area
- whether rehabilitation may help ameliorate the impacts of coastal hazards and climate change.

The types of rehabilitation treatments that may be used include installing temporary fences to restrict access, installing marker posts to delineate boundaries (e.g. park or asset protection

zones), cessation of mowing, and natural or active regeneration. Where active regeneration is used, plants will be grown from local provenance material.

A comprehensive neighbourhood consultation process will be undertaken regarding any proposed rehabilitation works. This will involve informing park neighbours of the intention to rehabilitate a precinct, the reasons for undertaking the rehabilitation, and the range of appropriate treatment options for the area.

Table 11 Priority pre-2003 clearing precincts (listed from north to south)

Precinct
Corindi Beach foredune areas
Arararra Headland, First Avenue
Ocean View Headland, Fuller Street
Ocean View Headland, Ocean View Headland Road
Mullaway, The Boulevard
Darkum Headland, Darkum Road and Wrights Lane
Safety Beach, Ocean Drive
Sapphire, Elouera Drive
Sapphire, Hibiscus Drive
Sapphire, Sapphire Crescent
Korora, Shellcove Lane
Diggers Head, Charlesworth Bay Road
Diggers Head, Diggers Headland Road

Desired outcomes

- Vegetation, habitat and corridor values are restored in priority pre-2003 clearing precincts.
- Park neighbours are aware of the value of the park's vegetation, why rehabilitation is required, and support rehabilitation works adjacent to their properties.
- The park is managed in the public interest.

Management options

7.5.3 Determine priorities for rehabilitation of pre-2003 clearing precincts.

7.5.4 Develop and implement precinct rehabilitation plans for the priority pre-2003 clearing precincts in line with identified priorities and with the involvement of neighbours.

New vegetation destruction or damage

NPWS and Coffs Harbour City Council will take a joint approach to managing issues associated with new illegal clearing or damage of vegetation in the park. Council has a standing \$5000 reward for any person who provides information that leads to a conviction in relation to illegal clearing or damage to vegetation in coastal parts of the Coffs Harbour LGA, including the park. In accordance with the memorandum of understanding (see Section 2.3), NPWS is the lead agency in responding to illegal vegetation clearing complaints and will undertake law enforcement investigations, liaise with local residents and involve the local media as appropriate.

In certain situations the installation of signs, banners, screens, barrier fencing or shipping containers in strategic locations is appropriate to identify where damage has occurred, to block views that illegal clearing has created, and to aid in regeneration of the site (by protecting the damaged vegetation from salt and wind). Signs may also help to act as a deterrent and may motivate people to help with investigations.

Sites where vegetation has been damaged will be rehabilitated, and consultation and education will aim to increase understanding of the importance of the park's values and how neighbours and the general community can help protect these values (see Section 6).

Desired outcomes

- Vegetation and habitat values are not impacted by illegal vegetation destruction.
- Park neighbours are aware of the value of the park's vegetation.
- Park neighbours are aware of the consequences of illegal vegetation destruction.

Management response

- 7.5.5 Actively investigate new vegetation destruction or damage and prosecute offenders.
- 7.5.6 Identify and rehabilitate areas where illegal vegetation destruction has occurred. This may include active revegetation using fast-growing native species and installing temporary structures such as signs, banners, screens, barrier fencing, or shipping containers.

8. Management operations and other uses

NPWS and Coffs Harbour City Council, under the direction of the Coffs Coast Regional Park Trust Board, carry out the day-to-day management of the park. A memorandum of understanding and operational agreement define the roles of the Trust Board, council and NPWS (see Section 2.3). Each organisation undertakes its responsibilities in accordance with each agency's operational plans or guidelines.

8.1 Park management facilities and operations

Management facilities in the park include management trails, vehicular beach access trails, boundary fences, bollards and gates. **Management trails** are located between Mullaway and Arrawarra Headland, in the Sugar Mill Creek area, and on Diggers Head and Macauleys Headland. These trails are maintained principally for fire management and pest control. Only vehicles on authorised management operations or those covered by a licence or other property interest will be permitted to use management trails.

In addition to the vehicular beach access trails available to the general public, the following beach accesses will be maintained for vehicular use for management (and other authorised) purposes:

- Ocean View Beach (southern end)
- Mullaway Beach
- Darkum Beach
- Sapphire Beach – Split Solitary Road
- Korora Beach
- Charlesworth Bay
- Diggers Beach.

Additional vehicular beach access trails for park management may be required elsewhere as new areas are added to the park.

Authorised users of vehicular beach access trails include other agencies and authorised persons accessing beaches adjacent to the park (including emergency services, lifesavers and horse riders).

Boundary gates and fencing regulate public access to the park. Boundary fencing exists along the park interface in a number of locations. New gates and fencing are required in the Sugar Mill Creek area and may be required elsewhere as new areas are added to the park. Where the park abuts private land, the legal responsibility for erecting and maintaining these fences under the *Dividing Fences Act 1991* lies with the owners of the adjoining land.

Internal park fencing is limited to that required for visitor management, principally to protect key nesting areas and rehabilitation areas, and to ensure visitor safety.

Several **public road reserves** are located within and adjacent to the park. In some locations these road reserves have not been 'made' and do not coincide with constructed roads. It would be desirable for them to be included within the park to consolidate the park and provide logical boundaries. In other areas of the park, like the Sugar Mill Creek area, Crown roads adjacent to the park provide key fire control advantages for suppressing wildfires but no agency has responsibility for the maintenance of the constructed roads. Inclusion of these in the park would improve firefighting capacity and enable vehicle access to be regulated.

Desired outcomes

- Management facilities adequately service management needs and have acceptable environmental impacts.
- Safe and efficient access to the park is provided for emergency and firefighting vehicles.

Management response

- 8.1.1 Maintain management trails to an appropriate standard, consistent with the park's fire management strategy.
- 8.1.2 Prevent unauthorised vehicular use of management trails by installing appropriate signs and locked gates or bollards as required.
- 8.1.3 In consultation with the relevant regulatory authorities and Coffs Harbour City Council, seek to have closed and transferred to the park all public road reserves adjacent to and within the park, including Rutile Management Trail.
- 8.1.4 Install boundary gates, bollards and fencing to regulate public access to the park at Sugar Mill Creek and other areas as required.

8.2 Other uses and operations

A number of other users also utilise and occupy parts of the park for purposes unrelated to park management. These include utilities servicing nearby residential areas, routes that provide access to neighbouring lands, and various structures. Several of these existed before the creation of the park. Where authorised under various Acts or agreements, they may continue under current arrangements as 'existing interests' under the National Parks and Wildlife Act. Where appropriate, NPWS in consultation with the Coffs Coast Regional Park Trust Board may seek to amend the conditions of the existing interest, or replace it with a lease or other property interest granted under the National Parks and Wildlife Act.

Essential Energy has a number of powerlines traversing the park. Essential Energy has the right to maintain its powerline clearings and carry out other maintenance works under the terms of the *Electricity Supply Act 1995*. This right is subject to compliance with the National Parks and Wildlife Act and Regulation, which requires NPWS consent for certain works, such as vegetation clearing and accessing powerlines via management trails.

Coffs Harbour City Council infrastructure that is present in the park but unrelated to visitor facilities includes pipelines and pumping stations associated with water and sewerage utilities and stormwater drainage. While some of this infrastructure is not covered by any formal easement or licence, its existence and use is regularised by the memorandum of understanding between council and NPWS, and is deemed to be an existing use. The sewerage system at Mullaway is covered by a formal easement.

An existing use in the park that is subject to a pre-existing authorisation is the footbridge over Hayes Creek on land adjacent to Aqualuna Beach Resort. This has been licensed under the Crown Lands Act since 1999, with the administration of the licence transferring to the Environment Minister at the time of the park's creation.

The Charlesworth Bay Fishing Club has a permissive occupancy over the boatshed and ramp at Charlesworth Bay, issued in 1989 under the *Crown Lands Consolidation Act 1913*. A new licence is being negotiated with the club which will continue to be administered by the Minister for Energy and Environment.

There are a number of residential properties adjoining the park where access is through the park. None of the current arrangements appear to have been licensed. Under the National Parks and Wildlife Act it is possible to grant a licence or property interest for land within the park for this purpose but only where there are no other practical means of access to the

property. It is not possible to permit ongoing secondary vehicle access to private properties. However, one-off consents for short-term access may be issued on a case-by-case basis.

At Sapphire Beach, while the main public access is at Lakeside Drive, the only available road access to the northern end of the Sapphire Beach Day Use Area is through the Sapphire Beach Holiday Park. Currently, the caravan park owners discourage the general public from using the caravan park to access the regional park.

Memorials (including plaques) are generally not permitted in the park. Requests for memorials will be managed in accordance with NPWS policy. Unauthorised plaques and memorials will be removed where the people responsible for them can be contacted and consulted.

Encroachments

There are a number of locations in the park where existing unauthorised encroachments appear to occur, although their exact location in relation to the park boundary needs to be confirmed. Some of these existing unauthorised occupations may be licensed under the National Parks and Wildlife Act where they are for certain purposes and for uses that are consistent with the management principles of the park (see Section 2.2). Examples include facilities that would enable activities of an educational, cultural or sporting nature, as well as those related to recreation and visitor use (the latter are considered in Sections 5.10).

A number of encroachments onto the park, which are of a predominantly commercial nature, do not fulfil a park purpose. The following are some examples of these types of encroachments, the tenure of which needs confirming:

- a liquid petroleum gas bottle adjacent to Charlesworth Bay Resort
- part of Safety Beach Golf Course
- a shed in the industrial estate west of Willis Creek.

Once confirmed to be encroachments, these structures or improvements may need to be removed.

There are also many non-commercial or domestic infrastructure encroachments along the park boundary where land in the park is being used for a variety of purposes. These encroachments include private gardens, sheds and outdoor furniture; and the storage of boats, cars and other equipment. These structures are illegal, often do not conform to building codes, and can pose a potential liability to the park authority. Of particular concern are structures in asset protection zones that block access for firefighting and emergency vehicles and equipment. These encroachments also affect park values and in some cases restrict visitors' use of the park by blocking or discouraging access.

Woolgoolga Marine Rescue

Marine Rescue Woolgoolga has relocated to the field research station on Arrawarra Headland. The station is on a Crown reserve and Coffs Harbour City Council is the Trust manager for the reserve.

Access to the Crown reserve is through the regional park, and a formal easement or property interest is needed. To ensure safe and practical use of the site by the rescue unit, the access road has been widened and sealed; and part of a car parking space has been located within the regional park (on an area of mown grass).

Aircraft, including helicopters

Private landing of aircraft within the park will generally not be allowed, other than in exceptional circumstances, and only in accordance with NPWS policy. No approval is required where emergency air access by emergency personnel is required.

Commercial helicopter tour operators may be permitted to land in cleared areas within the park for the purpose of picking up participants. Proposals will be considered on a case-by-case basis.

Under the NPWS drones in parks policy (OEH 2018), a drone is defined as a remotely controlled aircraft without a human pilot aboard. Drones should not be flown without the approval of the air traffic control authority within 5.5 kilometres of an airport, airfield or a registered helicopter landing site identified by the Civil Aviation Safety Authority. Therefore, drones may not be launched in Coffs Coast Regional Park within this airspace.

This plan does not regulate drones or model aeroplanes launched from outside the park that may come within the airspace above the park. In these instances, the use of such devices is subject to the relevant civil aviation regulations.

Desired outcomes

- Non-park uses and activities are managed to have minimal impact on the park's natural, cultural and recreational values.
- Safe and efficient access to the park is provided for emergency and firefighting vehicles.
- Valid recreational, educational, cultural or sporting facilities within the park are appropriately licensed.
- Pre-existing unauthorised encroachments are appropriately licensed or removed.

Management response

- 8.2.1 Continue to permit vegetation management under powerlines, and encourage this management to include the control of weeds.
- 8.2.2 Continue to permit vegetation management in association with Coffs Harbour City Council infrastructure such as sewerage and water supply lines.
- 8.2.3 Provide consent for memorials in line with NPWS policy.
- 8.2.4 Work with commercial and residential neighbours to license (where appropriate) or remove private encroachments (e.g. structures, equipment and gardens) from within the park, taking action under the National Parks and Wildlife Act and Regulation to remove encroachments if necessary.
- 8.2.5 Investigate options to formalise visitor use of the Sapphire Beach Caravan Park to access the northern end of Sapphire Beach Day Use Area.
- 8.2.6 Authorise adjoining landholders (via a licence or other property interest) to enable them to legally access their land through the park where this forms the only practical access to their property.
- 8.2.7 Provide approval for aircraft landings in the park in accordance with NPWS policy.
- 8.2.8 Drones are not permitted in the park without consent from NPWS as per NPWS policy.

9. Implementation

This plan of management establishes a scheme of operations for the Coffs Coast Regional Park. Implementation of this plan will be undertaken within the annual program of the Coffs Coast Regional Park Trust Board.

Identified activities for implementation are listed in Table 12. Relative priorities are allocated against each activity as follows:

- **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.
- **Ongoing** is for activities that are undertaken on an annual basis or statements of management intent that will direct the management response if an issue arises.

This plan of management does not have a specific term and will stay in force until amended or replaced in accordance with the National Parks and Wildlife Act.

Table 12 List of management response

Action no.	Management response	Priority*
Natural heritage values		
Geology, landscape and hydrology		
3.1.1	Manage public access, including walking tracks and pedestrian beach access tracks, pest species, fire, roads and trails and areas of past disturbance to minimise erosion and to maintain or increase protective vegetation cover.	Ongoing
3.1.2	Where possible, contribute to the protection of catchment values and improved water quality of creeks and estuaries traversing the park, for example through enhancing the integrity of foreshore vegetation.	Ongoing
Native plants		
3.2.1	Implement relevant strategies in the <i>Biodiversity Conservation Program</i> , threat abatement plans and species-specific recovery plans for the park's threatened plant species, populations and ecological communities.	Ongoing
3.2.2	Encourage research into the distribution, ecological requirements and management requirements of significant species known or predicted to occur in the park.	Medium
3.2.3	Consolidate and enhance the distribution and diversity of littoral rainforest remnants within the park by supplementary plantings, using local provenance material where possible.	Low
3.2.4	Support and facilitate opportunities for the participation of community volunteers in weed management programs in the park.	Ongoing
Native animals		
3.3.1	Implement relevant strategies in the <i>Biodiversity Conservation Program</i> , threat abatement plans and species-specific recovery plans for the park's threatened fauna species and populations.	Ongoing

Action no.	Management response	Priority*
3.3.2	Encourage or undertake fauna surveys of coastal forests in the park (including mature and old-growth forests in the Arrawarra–Mullaway, Sugar Mill Creek and Woolgoolga Lake areas), and of any new additions to the park.	Low
3.3.3	Implement appropriate protective measures for shorebird breeding and roosting sites and sea turtle nesting sites (e.g. temporary closures of beach access points, erection of fencing and signage).	Ongoing
3.3.4	Encourage community members and interest groups to participate in the monitoring of shorebird nesting sites.	Ongoing
3.3.5	Implement community education measures (e.g. signage) or other controls to limit risks to visitors associated with aggressive eastern grey kangaroos.	As required
Cultural heritage values		
Aboriginal connections to Country		
4.1.1	Continue to consult and involve the local Aboriginal community in managing their Country, including managing and interpreting Aboriginal sites and places, and cultural and natural values; and celebrating culture.	Ongoing
4.1.2	If supported by the representative organisations of the local Aboriginal community, permit repatriation of artefacts or other material sourced from the park or surrounding district to a suitable site within the park or other suitable keeping place.	As required
4.1.3	Undertake surveys of cultural heritage and resources within the park in consultation with the local Aboriginal community, with particular emphasis on areas not affected by sand mining or areas to be subject to ground disturbance as part of walking track construction or other works.	Medium
4.1.4	Provide opportunities for the engagement of Aboriginal enterprises in the implementation of management operations in the park (e.g. bush regeneration).	Ongoing
4.1.5	Provide opportunities for the practice of culture through events and activities in the park.	Ongoing
4.1.6	Facilitate access by local Aboriginal community members to areas of the park for cultural purposes by permitting them to use management trails to transport Aboriginal community members.	As required
4.1.7	Prepare a culture and heritage management plan for Arrawarra Beach Day Use Area that details how Aboriginal cultural values will be interpreted, and the rights and opportunities that the Aboriginal community will enjoy in relation to undertaking cultural practices in this place.	Medium
4.1.8	Undertake site stabilisation and protection works for middens as required. At the Sugar Mill – Moonee creeks midden, works will include linking the existing boardwalks at the footbridge and Green Bluff, subject to environmental approvals.	High
Shared heritage		
4.2.1	Record historic sites, assess their significance and manage them accordingly.	Ongoing
4.2.2	Promote and interpret historic sites.	Ongoing

Action no.	Management response	Priority*
4.2.3	Investigate the reopening and interpretation of the British Australian Timber Company tramway on Macauleys Headland for use as a multi-use trail linking Diggers Beach and Park Beach	Low
Public use and experience of the park		
Visitor use and experience		
5.1.1	Provide and promote opportunities for walking, picnicking, playing, casual games, social sport, active recreation, sightseeing, and heritage and nature appreciation in appropriate locations in the park.	Ongoing
5.1.2	Ensure that the design, construction and appearance of new visitor facilities has a consistent look and is of a standard that is commensurate with the regional and local significance of the visitor area.	Ongoing
5.1.3	Upgrade day use areas (see Section 5.2) and install information and interpretive and regulatory signage as required.	Ongoing
5.1.4	Manage visitors who are in breach of the National Parks and Wildlife Act or Regulations in accordance with NPWS policy.	Ongoing
Day use areas		
5.2.1	Provide and maintain day use areas in accordance with this plan and, where required, approved master plans.	Ongoing
5.2.2	Maintain existing facilities, upgrade facilities, install new facilities and remove facilities in accordance with this plan and master plans (where required), and subject to funding and the management priorities shown in Table 6.	Ongoing
5.2.3	Ensure that all facilities in day use areas are sited and designed to minimise their effect on park values. Where necessary, consider the likely impacts of coastal hazards and climate change. Additional protection measures, such as the installation of fencing or rehabilitation works, may be required to ensure protection of natural and cultural values and possible retreat from coastal erosion.	Ongoing
5.2.4	Restore and rehabilitate important vegetation communities and fauna habitats within day use areas as appropriate. Ensure that the potential for this restoration and rehabilitation is considered in the preparation of precinct plans or master plans as appropriate.	Medium
5.2.5	Manage vegetation as appropriate at key visitor viewing points and lookouts to maintain visitor amenity and views.	Ongoing
Walking		
5.3.1	Maintain walking tracks and associated infrastructure in accordance with this plan and any master plans developed in accordance with this plan.	Ongoing
5.3.2	Monitor walking tracks and take appropriate action as needed (such as track realignment, track hardening or fencing) to protect fragile environments and cultural heritage, to address localised erosion, and to improve visitor safety and amenity.	Ongoing
5.3.3	Upgrade tracks, as funding allows, in accordance with priorities outlined in Table 7.	Ongoing
5.3.4	Close and rehabilitate walking tracks that are damaging park values, are unnecessarily replicating access or are a safety risk, including but not limited to unauthorised pedestrian beach access tracks listed in Table 8 and tracks not shown on Figures 2, 3 and 4.	Medium/High

Action no.	Management response	Priority*
5.3.5	Review existing trails in the Sugar Mill Creek area for their suitability as walking, cycling or dual-use tracks, and designate tracks and install signage as appropriate.	Low
5.3.6	Assess the feasibility of upgrading beach access tracks to improve wheelchair access to some of the beaches adjacent to the park. Complete upgrade works if feasible and as funding permits.	Low
5.3.7	Investigate the provision of an appropriate beach access in the Kotara/Bellevue location at Korora Beach, in consultation with the local community and council, including location, design, funding and construction	Medium
5.3.8	Provide pedestrian access to North Sapphire Beach from Rutile Management Trail.	Medium
Dog walking		
5.4.1	Ensure compliance with the following: <ul style="list-style-type: none"> • dogs must be leashed (except in designated off-leash zones) and must be kept under control at all times • dogs are generally allowed in day use areas, but not within 10 metres of barbecues and picnic tables (except where these coincide with a footpath or walking track), and dogs are not allowed within 10 metres of children's playgrounds • dogs are allowed on public access roads, park management trails, walking tracks, and those vehicular beach access trails and pedestrian beach access tracks that lead to beaches where council allows dogs • dogs must remain on trails or tracks • dogs are prohibited from all other areas of the park • dangerous dogs and restricted breed dogs (as defined under the Companion Animals Act) must be muzzled at all times • dog owners must clean up and remove their dogs' faeces from the park. 	Ongoing
5.4.2	Investigate opportunities for dog off-leash zones in larger day use areas, such as Sandy Beach Day Use Area. If found to be appropriate, support a change to council's <i>Companion Animals Management Plan</i> .	Low
5.4.3	Monitor dog walking in the park and review current controls if required.	Ongoing
5.4.4	Install park signage as required to indicate where dogs are prohibited.	High
Cycling		
5.5.1	Allow cycling on public access roads, management trails, pedestrian beach access tracks, vehicular beach access trails, and the dual-use track between Safety Beach and Darkum Headland. Cycling is only allowed on the track or trail surface. Cycling will not be allowed in any other area of the park, including walking tracks and boardwalks. Roads, management trails and beach access tracks and trails may be closed to cycling where there is unacceptable environmental impact or risk to cyclists or other users.	Ongoing
5.5.2	Undertake an investigation of the BMX track at Park Beach to determine future management options for the site.	High
5.5.3	Support investigation of options to expand recreational cycling opportunities on existing trails in the park or linking to trails adjoining the park. Where considered appropriate, existing trails may be	Low

Action no.	Management response	Priority*
	widened to allow for cycling, subject to environmental assessment and the availability of funding.	
	Horse riding	
5.6.1	Allow horse riding along public access roads and on beach access tracks and trails leading to beaches where council allows horse riding. Horse riding will not be allowed in any other areas of the park.	Ongoing
5.6.2	Require consent for any non-commercial, organised, club-based horse riding activity in the park.	As required
5.6.3	Do not provide any other facilities for horse riding, such as holding yards, in the park.	Ongoing
5.6.4	Monitor the social and environmental impacts of horse riding. Horse riding routes may be closed for rehabilitation where impacts are identified.	Ongoing / As required
	Recreational four-wheel driving and beach access trails	
5.7.1	Maintain and upgrade as necessary the vehicular beach access trails listed in Table 9.	Ongoing
5.7.2	Make any necessary changes to management of vehicular beach access trails in line with council regulations on adjacent beaches and approved master plans.	As required
	Recreational fishing	
5.8.1	Work cooperatively with the relevant fisheries authority to ensure that activities licensed under the Fisheries Management Act have minimal impact on park values.	Ongoing
	Adventure activities	
5.9.1	Permit commercial and non-commercial adventure activities via licence or consent, subject to conditions to protect natural and cultural values, to minimise conflicts between user groups, to maintain the quality of visitor experience, and to encourage safety, self-sufficiency and responsibility.	Ongoing
5.9.2	Monitor the impacts of adventure activities. If adverse impacts from these activities become evident, the permissibility of adventure activities will be reviewed and may be prohibited.	Ongoing
5.9.3	Do not permit the provision or installation of structures to facilitate adventure activities.	Ongoing
	Events, functions and other group activities	
5.10.1	Issue approvals for events and functions, other non-commercial group activities, and the provision of commercial visitor facilities and amenities in line with this plan of management and relevant Acts, Regulations and policies.	As required
5.10.2	Ensure approvals to use or occupy land in the park involve an appropriate level of assessment of impacts on park values and include any particular conditions required to ameliorate adverse effects on park values and visitor use.	As required
5.10.3	Monitor activities with respect to cumulative impacts, safety requirements and compliance with approval conditions. Approvals may be cancelled if there is a breach of the conditions.	Ongoing
5.10.4	Conduct a business opportunity analysis to determine any new revenue-raising opportunities that could contribute to provision of additional visitor services and facilities in the park. Any grant of a	As required

Action no.	Management response	Priority*
	licence or other property interest to construct a new building in the park for this purpose would require an amendment to this plan and an assessment of impacts on park values.	
5.10.5	Investigate opportunities to enter into licences or other property interests with neighbouring resort operators or other businesses for the commercial use of identified venues.	High
5.10.6	Ensure existing encroachments that provide visitor services in the park have a licence or other property interest as appropriate.	High
5.10.7	Subject to a feasibility assessment and funding, prepare and implement a master plan for outdoor venues in the park (Opal Cove and Aanuka).	Low / Medium
Promotion, interpretation and education		
6.1.1	Work with Coffs Coast Tourism to promote the Solitary Islands Coastal Walk and the park.	Ongoing
6.1.2	Investigate opportunities to use new technology to attract and engage with new visitor groups.	Ongoing
6.1.3	For any new additions to the park, liaise with new park neighbours, install park signage as soon as possible, and update the NPWS visitor website.	High
6.1.4	Provide opportunities for local communities to participate in NPWS Discovery activities and Coffs Ambassadors Tours to foster appreciation and understanding of the values and recreational opportunities in the park.	Ongoing
6.1.5	Support and assist educational use of the park by schools, universities, community groups and individuals through provision of information, programs such as walks and talks, and opportunities to undertake research relevant to the park's management.	Ongoing
6.1.6	Encourage schools and other education providers to involve NPWS Discovery Rangers or council's Ambassadors in educational group activities.	Ongoing
6.1.7	Provide opportunities for volunteer groups (e.g. Coffs Ambassadors, Landcare and Coastcare groups) to undertake Aboriginal cultural heritage training.	Ongoing
6.1.8	Ensure the park's Aboriginal cultural and heritage values are interpreted and presented appropriately and only with the direct involvement or endorsement of the local Aboriginal community. Seek the views of the local Aboriginal community in relation to dual naming on signage, brochures and interpretive and promotional material and implement as appropriate.	Ongoing
6.1.9	Ensure the park's non-Aboriginal cultural heritage values are interpreted and presented where appropriate to enhance understanding and enjoyment of the park.	As required
6.1.10	Maximise opportunities for local Aboriginal people and support tourism operators to provide culturally appropriate interpretation of the park's Aboriginal culture and heritage.	Ongoing
Threats		
Pests		
General		
7.1.1	Manage pest species in line with pest management strategies relevant to the park, and update the park's weed strategy and fox	Ongoing

Action no.	Management response	Priority*
	threat abatement plan as required. Priority will be given to new and emerging pests and the control of pests that threaten areas of high conservation value, including habitats of threatened species, populations and communities.	
	Weeds	
7.1.2	Continue to work closely with and provide support to local volunteer groups that undertake weed control and bush regeneration work in the park.	Ongoing
7.1.3	Promote awareness of the impact of dumping garden waste, and encourage the planting of non-invasive 'bush friendly' plant species in gardens and new residential areas neighbouring the park.	Ongoing
7.1.4	Reduce opportunities for unintentional weed incursions (e.g. spread of weed propagules by equipment used for park management).	Ongoing
7.1.5	Establish monitoring sites, particularly in headland areas, to measure the effectiveness of weed control programs on the recovery of threatened species and communities.	Medium
	Pathogens	
7.1.6	Monitor for any outbreaks of phytophthora in or near the park.	Ongoing
7.1.7	Develop and implement a phytophthora management plan if it is found to be present in the park. This may lead to the closure of walking tracks, roads and management trails to quarantine areas affected or potentially affected by phytophthora.	Medium
7.1.8	Monitor the spread and impacts of myrtle rust, particularly on swamp turpentine (<i>Rhodamnia rubescens</i>).	Ongoing
	Pest animals	
7.1.9	Implement fox control programs and other strategies in accordance with the NSW fox threat abatement plan to help protect nesting shorebirds in the Hearn Lake area.	Ongoing
7.1.10	Implement cooperative fox control programs with neighbours.	Ongoing
7.1.11	Implement cooperative domestic dog and cat programs in line with council's <i>Companion Animals Management Plan</i> (including community education programs).	Ongoing
7.1.12	Confirm and document any new sighting of cane toads in or near the park and implement broader survey and control strategies when required.	As required
7.1.13	Encourage cane toad control efforts by neighbours on surrounding lands.	Ongoing
	Fire	
7.2.1	Implement the park fire management strategy and update as required. Suppress unplanned fires in the park in accordance with the strategy.	Ongoing
7.2.2	Maintain or upgrade management trails in the park (see Figures 2, 3 and 4), and any trails in new additions that are required for management purposes.	Ongoing
7.2.3	Continue to be involved in the Mid North Coast Bush Fire Management Committee and maintain cooperative arrangements with local rural fire brigades, town brigades and surrounding landowners in regard to fuel management and fire suppression.	Ongoing

Action no.	Management response	Priority*
7.2.4	Manage the park to protect biodiversity in accordance with the identified fire regimes in the fire management strategy. Where necessary, undertake prescribed burning to reinstate fire regimes that are appropriate to vegetation communities, particularly headland grasslands, heathlands (e.g. around Arrawarra Headland and Mullaway) and eucalypt forests (e.g. in the Sugar Mill Creek area).	Ongoing
7.2.5	Rehabilitate areas disturbed by fire suppression operations as soon as practical after the fire.	As required
7.2.6	Liaise with consent authorities to ensure all future developments that border the park incorporate the required fire protection measures wholly within private property, except where there is an existing asset protection zone identified in the park's fire management strategy.	Ongoing
Climate change		
7.3.1	Continue existing fire, pest and weed management, and vegetation rehabilitation programs to increase the park's ability to cope with future disturbances, including climate change.	Ongoing
7.3.2	Encourage research into appropriate indicators to monitor the effects of climate change.	Ongoing
Coastal hazards		
7.4.1	If required, relocate the amenities building and associated sewerage infrastructure at Ocean View Beach Day Use Area to the west of its current location to retain the sandy beach by allowing natural retreat (CZMP action A.11).	See CZMP
7.4.2	Replace board-and-chain access ways at beaches if damaged during a major storm (CZMP action A.15).	See CZMP
7.4.3	Undertake beach scraping and re-contouring to increase sand volumes and the height of frontal dunes at Emerald Beach (southern end), Sandy Beach, Diggers Beach and, if necessary, Arrawarra Beach (southern end) (CZMP action BD.2).	See CZMP
7.4.4	Work with existing Dunecare and Landcare groups or establish a formal dune care program to undertake dune rehabilitation in priority locations in combination with beach scraping episodes and incorporating weed and pest management (CZMP action BD.3).	See CZMP
7.4.5	Investigate options to manage the existing beach recession at Korora Beach and Campbells Beach. Options include construction of a seawall along the entire beach or planned retreat (CZMP actions FS.7 and FS.8). Implement approved options as appropriate and subject to any relevant environmental impact assessment requirements.	See CZMP
7.4.6	Develop a decision framework for managing Aboriginal and non-Aboriginal heritage items and places affected by coastal hazards (CZMP action FS.11).	See CZMP
7.4.7	Undertake a study of important plant communities and habitat areas (e.g. threatened ecological communities) within the coastal hazard zones to investigate priorities for managing erosion, recession, permanent inundation and habitat migration resulting from sea level rise (CZMP action FS.12). Implement actions as required within the park.	See CZMP
7.4.8	Prepare a checklist, guideline or policy document to facilitate the consideration of coastal hazard zones and timeframes by Coffs Harbour City Council in the preparation and revision of various	See CZMP

Action no.	Management response	Priority*
	planning processes, including master plans for day use areas and reviews of environmental factors (CZMP action P.3)	
Isolation and fragmentation		
7.5.1	Maintain cooperative arrangements with nearby landholders regarding access, fire and management of pest species.	Ongoing
7.5.2	Encourage protection and enhancement of native vegetation on public and private lands around the park, particularly in key habitats and wildlife corridors.	Ongoing
Vegetation destruction and damage		
7.5.3	Determine priorities for rehabilitation of pre-2003 clearing precincts.	High
7.5.4	Develop and implement precinct rehabilitation plans for the priority pre-2003 clearing precincts in line with identified priorities and with the involvement of neighbours.	High
7.5.5	Actively investigate new vegetation destruction or damage and prosecute offenders.	Ongoing
7.5.6	Identify and rehabilitate areas where illegal vegetation destruction has occurred. This may include active revegetation using fast-growing native species, and the installation of temporary structures such as signs, banners, screens, barrier fencing or shipping containers.	High
Management operations and other uses		
Park management facilities and operations		
8.1.1	Maintain management trails to an appropriate standard, consistent with the park's fire management strategy.	Ongoing
8.1.2	Prevent unauthorised vehicular use of management trails through the installation of appropriate signs and locked gates or bollards as required.	As required
8.1.3	In consultation with the relevant regulatory authorities and Coffs Harbour City Council, seek to have closed and transferred to the park all public road reserves adjacent to and within the park, including Rutile Management Trail.	Low
8.1.4	Install boundary gates, bollards and fencing to regulate public access to the park at Sugar Mill Creek and other areas as required.	As required
Other uses and operations		
8.2.1	Continue to permit vegetation management under powerlines, and encourage this management to include the control weeds.	Ongoing
8.2.2	Continue to permit vegetation management in association with Coffs Harbour City Council infrastructure such as sewerage and water supply lines.	Ongoing
8.2.3	Provide consent for memorials in line with NPWS policy.	As required
8.2.4	Work with commercial and residential neighbours to license (where appropriate) or remove private encroachments (e.g. structures, equipment and gardens) from within the park, taking action under the National Parks and Wildlife Act and Regulation to remove encroachments if necessary.	Ongoing
8.2.5	Investigate options to formalise visitor use of the Sapphire Beach Caravan Park to access the northern end of Sapphire Beach Day Use Area.	Medium / Low

Action no.	Management response	Priority*
8.2.6	Authorise adjoining landholders (via a licence or other property interest) to enable them to legally access their land through the park where this forms the only practical access to their property.	As required
8.2.7	Provide approval for aircraft landings in the park in accordance with NPWS policy.	As required
8.2.8	Drones are not permitted in the park without consent from NPWS as per NPWS policy.	Ongoing

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Appendix A: Park-use regulations

These tables form part of the scheme of operations for the Coffs Coast Regional Park Plan of Management.

Activity	Location in the park						
	Walking tracks ¹	Dual-use tracks ²	Beach access tracks	Management trails	Vehicular beach access trails	Day use areas (including venues)	Other areas of the park
Walking	Yes						
Dogs ³	On-leash	On-leash	On-leash	On-leash	On-leash	On-leash. Away from food preparation areas except under certain conditions	No
Cycling ⁴ (including mountain bike riding)	No	Yes	Yes	Yes Assess Sugar Mill Creek area	Yes	No	No
Horse riding	No	No	Only to reach beaches where Coffs Harbour City Council permits horses	No	Only to reach beaches where council permits horses	Only on paths to reach beaches where council permits horses	No
Recreational 4WD vehicles	No	No	No	No	Only public access trails	No	No
Adventure activities	Only with consent						

Coffs Coast Regional Park Plan of Management

Events and functions ⁵	Group size	Type of approval required	Recreational equipment ⁶ allowed	Fireworks
Public events	All groups irrespective of size	Consent	Yes	Yes
Wedding ceremonies	All groups irrespective of size	Consent	No	No
All other private functions involving groups of more than 40 people	40+	Consent	No	No
Non-commercial, organised, club-based horse riding activity	All groups irrespective of size	Consent		
Commercial activities ⁷		Licence or lease		

¹ Including designated walking tracks.

² At the time of publication the only dual-use track (for walkers and cyclists) is between Safety Beach and Darkum Headland.

³ In addition, in all areas where dogs are allowed:

- dogs must be leashed (except in any designated off-leash zone) and must be kept under control at all times
- dogs are allowed on vehicular beach access trails and pedestrian beach access tracks that lead to beaches where council allows dogs
- dogs must remain on trails or tracks
- dogs are generally allowed in day use areas but are not allowed within 10 metres of barbecues and picnic tables (except where these coincide with a footpath or walking track), and dogs are not allowed within 10 metres of children's playgrounds
- dogs are prohibited from all other areas of the park
- dangerous dogs and restricted breed dogs (as defined under the Companion Animals Act) must be muzzled at all times
- dog owners must clean up and remove their dogs' faeces from the park.

These regulations relate to dogs that are not assistance animals. Assistance animals are allowed in the park provided they are kept under effective control at all times with a leash or harness.

⁴ Where cycling is allowed, it is only allowed on the track or trail surface.

⁵ Not allowed on Arrawarra Headland.

⁶ Recreational equipment includes waterslides, jumping castles, marquees and similar.

⁷ In accordance with current NPWS policy, as part of their standard licence conditions some commercial recreation and tour operators may be required to build participants' understanding of cultural heritage conservation and management, and promote respect for Aboriginal culture and sites, depending on the nature of the business. In recognition of these responsibilities, special conditions will be included in all licences for operators that undertake detailed Aboriginal heritage interpretation.