



Environment,
Climate Change & Water
National Parks & Wildlife Service



Whian Whian State Conservation Area Plan of Management



WHIAN WHIAN STATE CONSERVATION AREA

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

Part of the Department of Environment, Climate Change and Water

September 2010

This plan of management was adopted by the Minister for Climate Change and the Environment on 16th September 2010.

Acknowledgments

The NPWS acknowledges that the Whian Whian State Conservation Area is in the traditional country of the Widjabal people.

This plan of management is based on a draft plan prepared by the staff of the Northern Rivers Region of the NSW National Parks and Wildlife Service (NPWS), part of the Department of Environment, Climate Change and Water.

Valuable input was provided by the Northern Rivers Region Advisory Committee, key stakeholders, local community members and visitors to the area. In particular the contribution of Rob Kooyman, Anthony Acret, Raylee Delaney and Sharon McGrigor in the preparation of the draft plan is acknowledged.

Cover photographs of Rocky Creek, the galley at Rummery Park camp ground and the footbridge across Boggy Creek at Rummery Park by Brian McLachlan, NPWS.

For additional information or any inquiries about Whian Whian State Conservation Area or this plan of management, contact the NPWS Northern Rivers Region Area Office, Main Street Alstonville or by telephone on 66270200.

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FOREWORD

Whian Whian State Conservation Area is located approximately 35 kilometres north of Lismore on the far north coast of New South Wales and comprises 2,435 hectares.

The SCA supports a diversity of vegetation communities and species with ten broad ecosystem types and 520 plant species recorded. There are 21 threatened species listed under the *Threatened Species Conservation Act 1995* (TSC Act) and 16 species are listed as rare or threatened Australian plants. The SCA also supports a diversity of native animal species including 276 native animal species of which 35 species listed as threatened species under the TSC Act and of these 4 are also listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*.

The NSW *National Parks and Wildlife Act 1974* requires that a plan of management be prepared for each state conservation area. A draft plan of management for Whian Whian State Conservation Area was placed on public exhibition from 20th March 2008 until 23rd June 2008. The submissions received were carefully considered before adopting this plan.

The plan contains a number of actions to achieve the State Plan priority to “Protect native vegetation, biodiversity, land, rivers and coastal waterways”, including control of introduced plants and animals, the marking of sensitive zones and locations of threatened plants along roadsides to prevent road works damaging them, and actions to protect water quality in the Rocky Creek Dam catchment. The plan also contains a number of actions to help achieve “More people using parks”, including continued camping and development of an educational shelter at Rummery Park.

This plan of management establishes the scheme of operations for Whian Whian State Conservation Area. In accordance with Section 73B of the *National Parks and Wildlife Act 1974*, this plan of management is hereby adopted.

A handwritten signature in black ink, appearing to read 'Frank Sartor', written in a cursive style.

Frank Sartor MP
Minister for Climate Change and the Environment

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1. WHIAN WHIAN STATE CONSERVATION AREA

Whian Whian State Conservation Area (the SCA) is located approximately 35 kilometres north of Lismore on the far north coast of New South Wales (NSW) and comprises 2,435 hectares (see Map 1, centre pages). In 1999 parts of the former Whian Whian State Forest were added to the adjacent Nightcap National Park (NP) as part of the Regional Forest Agreement process. The balance of Whian Whian State Forest was gazetted as state conservation area in 2003 as part of the State Government's ICON parks initiative.

Then reservation of the SCA completes the reservation of the important biogeographical area of the Nightcap and Kooynum Ranges. The SCA and Nightcap NP together encompass approximately 10,500 hectares of the Nightcap Range located on the southern rim of the caldera of the Mount Warning shield volcano. The subtropical and warm temperate rainforest species assemblages in the SCA have links to the ancient supercontinent of Gondwana. The SCA has similar natural heritage values to the World Heritage Gondwana Rainforest of Australia (formerly known as World Heritage Central Eastern Rainforest Reserves Australia) found in the adjoining Nightcap NP.

The SCA also forms the majority of the Rocky Creek Dam Catchment Area and has a diverse history of land use associated with plantation establishment and silviculture.

Surrounding land uses in the area include grazing, fruit and nut plantations, private forestry and rural villages. The area is also a popular tourist destination for local, interstate, national and international visitors.

The SCA is within the Tweed - Byron Local Aboriginal Land Council (LALC), Ngulingah LALC and Lismore and Byron Local Government Areas.

2. MANAGEMENT CONTEXT

2.1. Legislative and Policy Framework

The management of State Conservation Areas in NSW is in the context of a legislative and policy framework, primarily the *National Parks and Wildlife Act 1974* (NPW Act), the NPW Regulation, the *Threatened Species Conservation Act 1995* (TSC Act) and the policies of the National Parks and Wildlife Service (NPWS). The policies are based on the legislative background and internationally accepted principles of park management. They relate to nature conservation, Aboriginal and historic heritage conservation, recreation, commercial use, research and communication.

Other legislation, international agreements and charters may also apply to management of the area. In particular, the *Environmental Planning and*

Assessment Act 1979 (EPA Act) requires the assessment and mitigation of the environmental impacts of any works proposed in this plan. The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) also applies in relation to actions that may impact on threatened species listed under that Act.

A plan of management is a statutory document under the NPW Act. Once the Minister has adopted a plan, no operations may be undertaken within Whian Whian SCA except in accordance with and consistent with the intent of this plan and relevant legislative responsibilities. This plan will also apply to any future additions to Whian Whian SCA. Should management strategies or works be proposed for the SCA which are not consistent with the intent of this plan and or the NPW Act 1974, an amendment to the plan will be required.

Management of the SCA is integrally related to the adjacent Nightcap NP. A plan of management for the Tweed Caldera Parks and Reserves, including Nightcap NP, was adopted in 2004. It is the intent that the plans of management for the SCA and Tweed Caldera Parks and Reserves are complementary.

2.2. Management Purposes and Principles

State conservation areas are reserved under the NPW Act to protect and conserve areas that contain significant or representative ecosystems, landforms or natural phenomena or places of cultural significance; that are capable of providing opportunities for sustainable visitor use and enjoyment, the sustainable use of buildings and structures, or research; and that are capable of providing opportunities for uses permitted under other provisions of the Act.

Under the Act (section 30G), state conservation areas are managed to:

- conserve biodiversity, maintain ecosystem functions, protect natural phenomena and maintain natural landscapes;
- conserve places, objects and features of cultural value;
- provide for the undertaking of uses permitted under other provisions of the NPW Act (including uses permitted under section 47J such as mineral exploration and mining), having regard to the conservation of the natural and cultural values of the state conservation area;
- provide for sustainable visitor use and enjoyment that is compatible with conservation of the area's natural and cultural values and with uses permitted in the area;
- provide for sustainable use (including adaptive reuse) of any buildings or structures or modified natural areas having regard to conservation of the area's natural and cultural values and with other uses permitted in the area; and
- provide for appropriate research and monitoring.

The NPW Act requires a review of the classification of state conservation areas every 5 years in consultation with the Minister administering the *Mining Act 1992*. The first review occurred in 2008 with no change in classification for Whian Whian State Conservation Area. In the long term it is intended for Whian Whian SCA to become a national park and so management will also be guided by the management principles for national parks where possible.

2.3. Management Objectives

The primary emphasis of this plan is the conservation of the natural and cultural values of the SCA. The plan also provides for sustainable recreational activities such as bushwalking, camping, mountain biking, horse riding and car touring. The key specific management objectives for Whian Whian SCA are to:

- conserve and protect natural values in the reserve, with emphasis on rainforest, and rare and threatened plants and animals;
- protect the water catchment of Rocky Creek Dam;
- protect traditional and contemporary Aboriginal cultural heritage in partnership with the local Aboriginal community;
- rehabilitate disturbed areas and minimise the impact of pest species;
- manage fire to protect life, property and biodiversity;
- manage roads and trails to provide sustainable public vehicle access and for management purposes and emergency access;
- ensure that recreation and commercial tourism activities are undertaken in a sustainable and complementary way, that integrates with the management of the adjacent Nightcap NP;
- provide interpretive and educational information that assists in visitor understanding and enjoyment of the SCA and promotes appropriate visitor behaviour; and
- encourage appropriate research into the values of the SCA, and in particular, rare and threatened species.

3. VALUES OF THE RESERVE

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

3. 1 Landform, Geology and Soils

The SCA together with Nightcap NP encompasses the Nightcap Range and forms the south eastern rim of the Mount Warning Caldera. The SCA forms the majority of the Rocky Creek catchment comprising the northern reaches of Rocky, Boggy, Gibbergunyah and Boomerang Creeks (refer section 5.3 Catchment Management and Water Supply - Rous Water, and Map 2, page 18).

The topography is mostly low undulating hills with an elevation of 400 metres above sea level. The highest point in the SCA is Peates Mountain at 640 metres and the lowest point is 200 metres in the south.

The Nightcap Range comprises the largest area of the acid volcanic or rhyolitic soil derivations of the Mount Warning Caldera, often described as the Nimbin Rhyolites. Soil development from this parent material forms siliceous, red, yellow and brown podsol variants which are generally poorly to moderately drained and of low fertility. Basic volcanic capping influences from the Lismore and Blue Knob Basaltic formations (Lamington Volcanics) form kraznozem soil intergrades of relatively high fertility (Morand, 1994).

3.2 Native Plants

The SCA supports a diversity of vegetation communities and species. Ten broad ecosystem types with suballiances of subtropical and warm temperate rainforests and various types of wet sclerophyll forest type on acid and basic volcanic geotypes have been identified (Kooyman, 2002).

A total of 520 plant species are recorded in the SCA which represents nearly 10% of the vascular species known to occur in NSW (Kooyman, 2002). There are 21 threatened species listed under the TSC Act and 16 species listed as a rare or threatened Australian plants (ROTAP) (refer Table 1).

Table 1. Threatened and significant plant species recorded in Whian Whian SCA.

| Common name | Scientific name | Status |
|--------------------------|--|-----------------|
| Nightcap wattle | <i>Acacia orites</i> | ROTAP |
| Byron Bay acronychia | <i>Acronychia baeuerlenii</i> | ROTAP |
| Rusty plum | <i>Niemeyera whitei</i> | Vulnerable* |
| Veiny lace flower | <i>Archidendron muellerianum</i> | ROTAP |
| Silver leaf | <i>Argophyllum nullumense</i> | ROTAP |
| Pink cherry | <i>Austrobuxus swainii</i> | ROTAP |
| Northern clematis | <i>Clematis fawcettii</i> | Vulnerable* |
| Corokia | <i>Corokia whiteana</i> | Vulnerable* # |
| Fern-leaf tuckeroo | <i>Cupaniopsis newmanii</i> | ROTAP |
| Giant spear lily | <i>Doryanthes palmeri</i> | Vulnerable* |
| Nightcap oak | <i>Eidothea hardeniana</i> | Endangered * |
| Minyon quandong | <i>Sedentarius sedentarius</i> | Endangered* # |
| Rusty rose walnut | <i>Endiandra hayesii</i> | Vulnerable* |
| Dorrigo Plum | <i>Endiandra introrsa</i> | ROTAP |
| Green-leaved rose walnut | <i>Endiandra muelleri subsp. bracteata</i> | Endangered * |
| Ball nut | <i>Floydia praealta</i> | Vulnerable* |
| Saw Sedge | <i>Gahnia insignis</i> | ROTAP |
| Narrow-leaf finger-fern | <i>Grammitis stenophylla</i> | Endangered * |
| Stream lily | <i>Helmholtzia glaberrima</i> | ROTAP |
| Tree Guinea flower | <i>Hibbertia hexandra</i> | Endangered* |
| Red boppel nut | <i>Hicksbeachia pinnatifolia</i> | Vulnerable* |
| Short-footed screw fern | <i>Lindsaea brachypoda</i> | Endangered * |
| Rough-shelled bush nut | <i>Macadamia tetraphylla</i> | Vulnerable* |
| Large-flowered milk vine | <i>Marsdenia liisae</i> | ROTAP |
| Southern ochrosia | <i>Ochrosia moorei</i> | Endangered* # |
| Nightcap daisy | <i>Oleria heterocarpa</i> | ROTAP |
| Onion cedar | <i>Owenia cepiodora</i> | Vulnerable* + |
| Daisy bush | <i>Ozothamnus whitei</i> | ROTAP |
| Mountain aristolochia | <i>Pararistolochia laheyana</i> | ROTAP |
| Southern swamp orchid | <i>Phaius australis</i> | Endangered* # + |
| Quassia | <i>Quassia sp. A</i> | ROTAP |
| Small-leaved hazelwood | <i>Symplocos baeuerlenii</i> | Vulnerable* |
| Red lilly pilly | <i>Syzygium hodgkinsoniae</i> | Vulnerable* |
| Arrow-head vine | <i>Tinospora tinosporoides</i> | Vulnerable* |
| Silky cucumber | <i>Trichosanthes subvelutina</i> | ROTAP |
| Peach myrtle | <i>Uromyrtus australis</i> | Endangered* # |
| Westringia | <i>Westringia blakeana</i> | ROTAP |

* Status under TSC Act

Denotes species nationally threatened under the EPBC Act

+ Denotes a species planted in the SCA

ROTAP = species listed as Rare or Threatened Australian Plants (Briggs & Leigh, 1995)

Under the TSC Act recovery plans may be prepared to identify actions and priorities for threatened species, populations or ecological communities. Additionally, a threatened species Priorities Action Statement (PAS) must be prepared which outlines the broad strategies and detailed priority action in NSW to promote the recovery of threatened species, populations and endangered ecological communities and to manage key threatening processes. The PAS and recovery plans will be used to guide management of threatened species in the SCA.

Recovery planning has commenced for selected threatened species that have been recorded in the reserve. Recovery plans have been finalised for Nightcap oak (DEC 2004a) and Minyon quandong (NPWS 2004). Draft recovery plans have been prepared for peach myrtle (NPWS 2003b), and green-leaved rose walnut and rusty rose walnut (DEC 2004b). Recovery actions are included in the PAS for the following: small-leaved tamarind; Nightcap oak; Minyon quandong; square-stemmed spike-rush; rusty rose walnut; and red boppel nut.

NPWS has also implemented a “Sensitive Area Management System” which identifies spot locations for threatened, endangered and ROTAP listed plant species along roads and trails throughout the SCA. Numbered green guideposts mark each end of zones and the detail of plant species and operational constraints within a particular zone are specified in data sheets. The application of this system ensures any significant road or trail work has minimal impact on the threatened species.

3.3 Native Animals

The SCA supports a diversity of native animal species. A total of 276 native animal species have been recorded. A special significance of the SCA is the number of threatened species. There are 35 species listed as threatened species under the TSC Act and of these 4 are also listed as threatened under the EPBC Act (see Table 2).

Table 2. Threatened and significant animal species recorded in Whian Whian SCA

| Common name | Scientific name | Legal Status |
|------------------------------|--|----------------|
| Bush-hen | <i>Amaurornis olivaceus</i> | Vulnerable * |
| Pouched Frog | <i>Assa darlingtoni</i> | Vulnerable * |
| Glossy Black-Cockatoo | <i>Calyptorhynchus lathami</i> | Vulnerable * |
| Large-eared Pied Bat | <i>Chalinolobus dwyeri</i> | Vulnerable * # |
| Three-toed Snake-tooth Skink | <i>Coeranoscincus reticulatus</i> | Vulnerable *# |
| Spotted-tailed Quoll | <i>Dasyurus maculatus</i> | Vulnerable * |
| Eastern False Pipistrelle | <i>Falsistrellus tasmaniensis</i> | Vulnerable * |
| Stephen’s Banded Snake | <i>Hoplocephalus stephensii</i> | Vulnerable * |
| Black Bittern | <i>Ixobrychus flavicollis</i> | Vulnerable * |
| Golden-tipped Bat | <i>Kerivoula papuensis</i> | Vulnerable * |
| Parma Wallaby | <i>Macropus parma</i> | Vulnerable * |
| Albert’s Lyrebird | <i>Menura alberti</i> | Vulnerable * |
| Little Bentwing-bat | <i>Miniopterus australis</i> | Vulnerable * |
| Eastern Bentwing-bat | <i>Miniopterus schreibersii oceanensis</i> | Vulnerable * |

| | | |
|--------------------------------|---------------------------------|----------------|
| Giant Barred Frog | <i>Mixophyes iteratus</i> | Endangered * # |
| White-eared Monarch | <i>Monarcha leucotis</i> | Vulnerable * |
| Eastern Freetail-bat | <i>Mormopterus norfolkensis</i> | Vulnerable * |
| Large-footed Myotis | <i>Myotis adversus</i> | Vulnerable * |
| Powerful Owl | <i>Ninox strenua</i> | Vulnerable * |
| Eastern Long-eared Bat | <i>Nyctophilus bifax</i> | Vulnerable * |
| Koala | <i>Phascolarctos cinereus</i> | Vulnerable * |
| Loveridge's Frog | <i>Philoria loveridgei</i> | Endangered * |
| Marbled Frogmouth | <i>Podargus ocellatus</i> | Vulnerable * |
| Long-nosed Potoroo | <i>Potorus tridactylus</i> | Vulnerable * |
| Black Flying-fox | <i>Pteropus alecto</i> | Vulnerable * |
| Grey-headed Flying-fox | <i>Pteropus poliocephalus</i> | Vulnerable * # |
| Wompoo Fruit-Dove | <i>Ptilinopus magnificus</i> | Vulnerable * |
| Rose-crowned Fruit-Dove | <i>Ptilinopus regina</i> | Vulnerable * |
| Superb Fruit-Dove | <i>Ptilinopus superbus</i> | Vulnerable * |
| Yellow-bellied Sheath-tail-bat | <i>Saccolaimus flaviventris</i> | Vulnerable * |
| Greater Broad-nosed Bat | <i>Scoteanax rueppellii</i> | Vulnerable * |
| Common Blossom-bat | <i>Syconycteris australis</i> | Vulnerable * |
| Red-legged Pademelon | <i>Thylogale stigmatica</i> | Vulnerable * |
| Masked Owl | <i>Tyto novaehollandiae</i> | Vulnerable * |
| Sooty Owl | <i>Tyto tenebricosa</i> | Vulnerable * |

* Status under TSC Act

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

A recovery plan has been prepared for the koala (NPWS 2003). Recovery actions are included in the PAS for many of the threatened species recorded within the reserve including: the three-toed skink; Stephen's banded snake; bush-hen; wompoo fruit-dove; rose-crowned fruit-dove; superb fruit-dove; glossy black cockatoo; double eyed fig parrot; powerful owl; Albert's lyrebird; spotted-tailed quoll; koala; rufous bettong; black flying fox; and grey-headed flying fox.

3.4 World Heritage

The SCA has similar vegetation communities and other natural heritage values as found in the adjoining Nightcap NP, one of the 50 reserves in north-east NSW and south-east Queensland which make up World Heritage Gondwana Rainforests of Australia.

The Gondwana Rainforests World Heritage property represents major stages in the earth's evolutionary history. Rainforest is the oldest type of vegetation in Australia and Gondwana Rainforests contains many plants and animals in widely separated populations which has led to genetic divergence and evolution of new species. Gondwana Rainforests also includes "hot spots of biodiversity" with more than 200 rare or threatened plant species and more than 80 rare or threatened animal species. Many of these species are represented in the SCA (refer Tables 1 and 2).

At the time of World Heritage listing in 1986 and 1994 the SCA was state forest and not nominated. The SCA should be considered under any future re-nomination of the World Heritage Gondwana Rainforests property.

3.5 Aboriginal Heritage

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

The SCA is located within the traditional lands of the Widjabal clan of the Bundjalung Nation. Evidence from recorded sites suggests Aboriginal use of the Nightcap Range for at least the last 4000 years. Whilst there are only two recorded sites within the SCA, the area has intrinsic cultural values to Widjabal people and landscape connectivity with other recorded sites in the adjacent Nightcap NP are significant.

The importance of the cultural landscape, and its layers of meaning and spiritual ties, is common knowledge among the Widjabal people. To protect and assure the cultural heritage of the SCA, the Widjabal clan would like to keep the cultural information of the landscape as sacred traditional knowledge.

The “Sensitive Area Management System” is used to identify road/trail zone locations for recorded Aboriginal sites as well as threatened plant species in the SCA (refer 3.2 Native Plants). The application of this system ensures any significant road or trail work has minimal impact on the identified values.

3.6 Historic Heritage

Lured by the chance for employment in difficult times, timber getters began logging in the Whian Whian area in the 1830s for red cedar, a particularly sought after timber. In 1871 surveyors identified a track over Nightcap Range to link Lismore with Murwillumbah that allowed cedar getters access to previously isolated forest.

The Rummery Park camp ground was originally a forestry camp and its use dates back to the 1930s. The inter-war period was the most active period for forestry use of the camp ground. The Peates Mountain Road (now part of the Nightcap Track) was built or improved during the depression of the 1920s and 1930s. Sleeper cutters who claimed timber unsuitable for milling camped nearby on the other side of Boggy Creek at Rummery Park (Allom Lovell, 2004).

The Whian Whian State Forest area was notified as part of the Nightcap National Forest No. 2 in 1936 and represents early recognition of the significance of the forest for both forestry and recreation.

Rummery Park has been used by the public for camping and picnicking since 1968. An assessment of heritage significance of Rummery Park was prepared for NPWS prior to

redevelopment of the area in 2004 (Allom Lovell, 2004). At the time of assessment the site included a cooking galley, nursery/picnic shed, utility shed, showers and a foresters hut. The assessment concluded that Rummery Park has some cultural significance as the site of an early logging camp with its broad significance extending to aesthetic qualities reflected in the arrangement of the place, the surviving specimen trees and in association with the early buildings of the site.

The assessment also concluded that the condition of the buildings was such that their adaptation and re-use was not warranted by the level of cultural significance. It was determined that the works needed to meet building and safety standards would result in the loss of the qualities that contribute to their significance. A key outcome of the assessment in terms of re-developing the site was to retain a similar arrangement of buildings and open space to preserve the aesthetic quality of the site.

The redevelopment of the site by NPWS in 2004 included removal of most buildings and construction of a new cooking galley designed to preserve a similar feel to the original galley. The general layout of the camp ground and spatial characteristics has also been preserved.

The only remaining building at Rummery Park is the forester's hut which was built relatively late in the use of the site as a forestry camp. This building has been assessed as being of a standard design and of relatively minor significance (Allom Lovell, 2004). However, the hut which is currently in poor condition, is valued by the local community who would like to see it used as an educational and/or accommodation facility (refer 3.8 Education, Group and Commercial Activities). Further assessment by NPWS has determined that the most appropriate future use of the hut or site is as an open shelter primarily for educational purposes but not for accommodation. The existing hut will be adapted for this use or alternatively a new structure will be built on the site. The redevelopment or new construction will aim to be of a similar aesthetic character and profile as the existing hut. The decision to redevelop or construct a new shelter will be determined based on an assessment by a building architect and consideration of the comparative costs and available resources.

Various specimen trees of kauri pine (*Agathis robusta*), bunya pine (*Araucaria bidwilli*) and other species were also planted at Rummery Park when the area was managed for forestry purposes. The assessment of the heritage significance of Rummery Park (Allom Lovell, 2004) identified some of these trees as being a part of the site's historical aesthetics and recommended they be retained if possible. The retention of these trees needs to be tempered with the need to control invasive species and minimise risks to public safety.

The SCA also has a history of conservation interest and was part of landmark campaign to protect the area from logging. Due to the actions of the Terania Native Forest Action Group between 1976 and 1979, national attention was focused on the extent of logging in the Nightcap area. The adjacent Nightcap NP was declared in 1983, with significant additions in 1999.

3.7 Recreation

Public vehicle access to the SCA is via “Whian Whian Forest Drive”, a popular scenic drive for day visitors from Lismore, Mullumbimby and surrounding areas. The Whian Whian Forest Drive is approximately 30 km and comprises a circuit of unsealed roads (refer 5.1 Roads and Trails).

The SCA is also popular destination for camping. The Rummery Park camp ground was redeveloped by NPWS in 2004 and provides a range of facilities in a forest setting. Facilities include: wheel chair accessible toilets; picnic tables; gas and wood BBQs; communal cooking galley; walk-in tent camp sites; and camps suitable for small caravans/camper trailers. Camping fees were introduced following re-development of Rummery Park and are used to resource the supply of gas, firewood and rubbish removal as well as general maintenance of facilities. Vehicle based camping will only be permitted at the Rummery Park camp ground.

The redevelopment and expansion of the Rummery Park camp ground has enabled the removal of toilet facilities at a site adjacent to the Nightcap Range Road and the southern end of Telephone Road Management Trail. Some rehabilitation works are required in this area.

Further expansion of the Rummery Park camping area for additional vehicle and walk in based camping opportunities will be considered subject to future demands.

Camping is not considered appropriate within the Rocky Creek Dam catchment within the SCA because of potential impacts on catchment values (see Map 2 and refer 5.3 Catchment Management and Water Supply). Opportunities for remote overnight camping are available in the adjoining Nightcap NP.

Although primarily re-developed as a camp ground, Rummery Park is also popular with day visitors especially outside the peak holiday periods when camping use is low. Alternate day use facilities are also provided 2km away in Nightcap NP where there are picnic areas, BBQs, lookouts and toilet facilities at Minyon Falls and Minyon Grass Day use areas. Nearby Rocky Creek Dam also has a range of day use facilities and is managed by Rous Water.

Opportunities for walking are currently available along the Boggy Creek Walk and on management trails in the SCA (see Map 1). The Boggy Creek Walk is 2km (one way) starting at Rummery Park and leads to Minyon Falls. The track starts in blackbutt forest and includes a series of small waterfalls and pools along the creek. The Boggy Creek Walk also links up to the Minyon Loop walking track in Nightcap NP. The only other walking track in the SCA is the Peates Mountain Trail which has been temporarily closed to walkers since 2003 due to safety concerns. The feasibility of re-opening the Peates Mountain Trail will be investigated as part of general walking track assessments and subject to resource allocation. If the safety and related resourcing issues can be resolved, the Peates Mountain Walking Trail may be reopened. There is also an opportunity to redevelop the former Peates Mountain Lookout and cater for walking access to the lookout structure. Bushwalkers wishing to link up with the historic Nightcap Track in Nightcap National Park from the Rummery Park Camping Area will also be able to use the Peates Mountain Road as an option in addition to the walking trail if re-opened.

Roads and management trails in the SCA are also suitable for cycling, in particular mountain biking. There is currently one licensed commercial tour operator who undertakes mountain biking in the SCA. Cycling is permissible on all public access roads and on management trails in the SCA. These management trails have recently been signposted as suitable for cycling.

A low level of horse riding use occurs in some parts of the SCA and the adjacent Nightcap NP. Horse riding is characterised by small groups of up to 10 riders (mostly 3 or 4) and for a moderate duration (2 hours to a full day). The SCA is not suitable for overnight camping with horses due to a lack of holding areas and potential conflict with other users and values. This plan seeks to designate roads and management trails for horse riding that are safe, sustainable and strategically linked with adjoining opportunities in Nightcap NP. Horse riding is not permitted along walking tracks in the SCA or on management trails within the Rocky Creek Dam catchment (refer 5.3 Catchment Management and Water Supply and Map 2).

Fishing for freshwater crayfish (*Euastacus valentulus*) occurs at Boggy Creek within the Rummery Park camping area. This activity is regulated under the *Fisheries Management Act 1994* and is permitted subject to a person holding a current fishing licence and using approved catching methods/equipment.

3.8 Education, Group and Commercial Activities

The SCA is popular for group activities including local school groups, Rural Fire Service and Defence Force training (orienteering) activities, community programs, weddings and by bushwalking clubs. The majority of these activities are focused on the Rummery Park camp ground.

NPWS regularly conducts Discovery Ranger activities during school holiday periods and by request within the SCA and adjoining Nightcap NP.

NPWS has received requests to use the former state forest hut at Rummery Park as an accommodation base for education and other activities, however it is considered that the most appropriate use is primarily as an open shelter for educational purposes but not for accommodation (refer 3.6 Historic Heritage).

It may be appropriate to develop a purpose built open shelter for use by groups, Discovery activities and other education/environmental programs. Such a development would not provide accommodation and would be subject to further assessment to determine the exact location at Rummery Park.

There are currently nine commercial tour operators licensed to operate in the SCA. Commercial tour operator's activities in the SCA are normally undertaken in conjunction with activities in the adjacent Nightcap NP. Activities include mountain biking, bushwalking, vehicle based touring and nature appreciation. Much of the focus of vehicle based tours is Rummery Park and Minyon Falls in Nightcap NP.

3.9 Research and Monitoring

The SCA is an important area for scientific research because of its biodiversity and easy access. In particular, the rainforest vegetation provides an important resource for scientific study. The areas links to Gondwana, high biodiversity and the number of threatened species are of high scientific interest.

Since the early 1980s the Nightcap Range, including the SCA, has been the focus of research in the area. Many of these are continuing studies and provide understanding of complex natural processes. Research can enhance knowledge of ecological requirements, threatening processes and management of particular species and their habitat.

Many of the recovery plans developed for threatened species that occur in the SCA identify the need for more specific research to increase the understanding of species.

Rous Water conducts water quality monitoring within the SCA as part of the Rocky Creek Dam catchment. This plan of management and the NPWS Fire Management Strategy have considered the need for vehicle access for water quality monitoring purposes in the designation of management trails in the SCA. It is expected that water quality monitoring will continue and this (and other related activities undertaken by Rous Water in the SCA) will be managed through the Memorandum of Understanding between Rous Water and NPWS (refer 5.3 Catchment Management and Water Supply).

4. THREATS TO RESERVE VALUES

4.1 Introduced Plants

A Pest Management Plan (PMP) has been prepared for Nightcap NP as well as key sites within the SCA (NPWS, 2002). The PMP was prepared when the area was state forest but sites were included in the NPWS PMP as it was considered to be integral to a strategic and integrated approach to pest management in the area. Since gazettal of the SCA additional weed mapping has been undertaken and has identified many other priority species for weed control. These species have primarily been found adjacent to road and trails and the SCA boundary and have been incorporated into routine control programs in conjunction with works in Nightcap NP.

The PMP records 39 weed species in Nightcap NP and the SCA. The main weed species include lantana (*Lantana camara*), mistflower (*Ageratina riparia*) and camphor laurel (*Cinnamomum camphora*). Lantana is listed as Key Threatening Process under the TSC Act. Future management of lantana will be in accordance with the PAS. It is also listed as noxious weed within various areas of the region. Species of concern recorded at Rummery Park camp ground and the former Telephone Road overflow campsite include montbretia (*Crocasmia x crocosmiiflora*) and honeysuckle (*Lonicera japonica*).

The SCA is also one of only two known locations where *Phytophthora cinnamomi* (a soil borne pathogen) has been reported within the Northern Rivers Region. It is listed as key

threatening process under State and Federal legislation. This fungus is known to attack nearly 1000 plant species throughout the world and spores of the fungus spread rapidly through water and moist soil. Human activity causes the most rapid and large scale spread. The record of *Phytophthora* is as a result of surveys and assessment funded within the Gondwana World Heritage Area. The Regional Pest Management Strategy identifies management objectives, control priorities and monitoring needs for *Phytophthora*.

Past disturbance from logging and plantations have impacted on the integrity of vegetation in some areas of the SCA, however, there is evidence of natural regeneration. A strategy for management of plantations is also in preparation for the NPWS Northern Branch.

Various specimen trees of kauri pine (*Agathis robusta*), bunya pine (*Araucaria bidwilli*) and other pines were planted at Rummery Park when the area was managed for forestry purposes (refer 3.6 Historic Heritage). Retention of trees with historic values needs to be assessed and evaluated with the need to control invasive species and minimise risks to public safety from falling limbs and bunyah nuts.

4.2 Introduced Animals

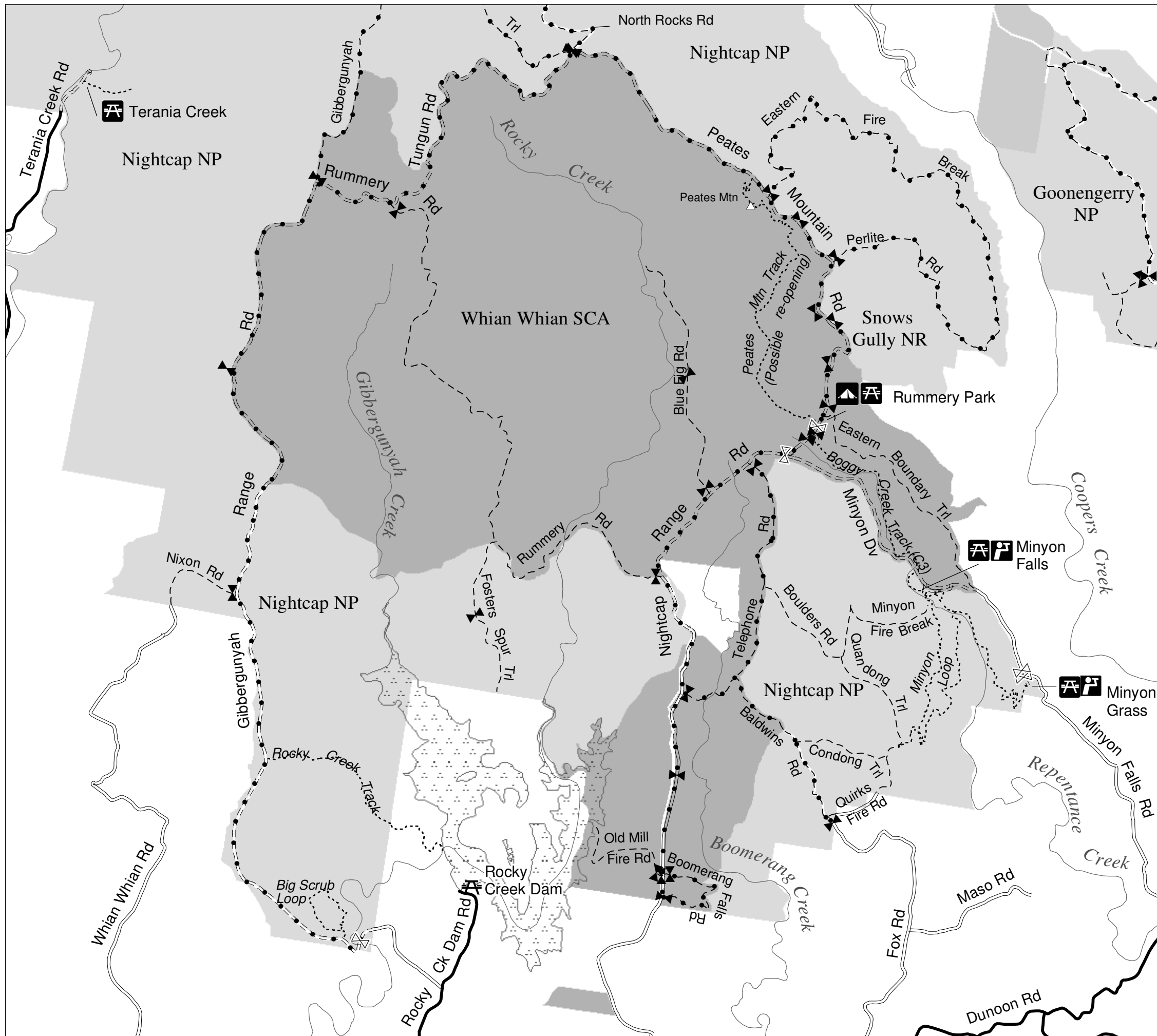
Introduced pest animals known to occur in the SCA include the fox (*Vulpes vulpes*), wild dog (*Canis spp.*), feral cat (*Felis catis*), black rat (*Rattus rattus*) and house mouse (*Mus musculus*).

A Regional Pest Management Strategy was prepared for the Northern Rivers Region NPWS in 2003 (NPWS 2003a). This strategy identifies priorities, guidelines and actions to address the control of introduced animal species.

Dingoes or their hybrids are also known to occur in the SCA. Wild dogs, including dingoes, have been declared as pest animals under the *Rural Lands Protection Act 1998* (RLP Act) throughout NSW. Hence, the NPWS has a statutory obligation to control wild dogs on its estate. Under the RLP Act, however, public lands which are identified as significant habitat for dingoes in Schedule 2 of the Wild Dog Control Order will be managed with the dual objectives of managing wild dogs while at the same time conserving dingoes. The SCA is listed as a Schedule 2 area and as such NPWS has assisted in the preparation of A Wild Dog Management Plan for the Tweed-Lismore RLPB (2006-2011). This plan has identified priorities and methods for the control of wild dogs and the conservation of dingoes.

In accordance with the Tweed Lismore RLPB Wild Dog Management Plan, surveys for wild dogs have been undertaken within Nightcap NP and the SCA. Any control activity will be determined in response to a justifiable need from survey results. It is intended that these surveys will be ongoing in these areas as part of the regional wild dog control program in association with the RLPB. A dingo genetic sampling program is also proposed for the SCA to improve understanding of their genetic composition and the level of interbreeding with wild dogs.

Predation by the red fox is listed as a Key Threatening Process under the TSC Act. A fox threat abatement plan (TAP) has been prepared and identifies priority sites for fox control for the protection of key threatened species. The SCA and adjacent Nightcap



Planning area

Reserves

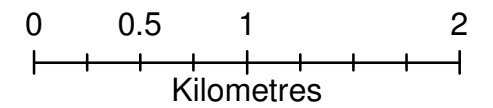
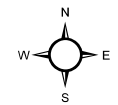
- Whian Whian SCA
- Other NPWS reserves

Access

- Sealed Road - Off Park
- Unsealed Road - Off Park
- Unsealed Road - On Park
- Management Trail
- Road or trail designated for horse riding
- Walking track: Class 3 (C3)
- River or creek

Features

- Camping Area
- Day Use Area
- Day Use Area - off park
- Viewing Platform
- Gate (locked)
- Gate (not locked)



Regional location



NP were identified as priority sites for the protection of Albert's lyrebird and this involved extensive survey and monitoring of fox presence (and lyrebirds) in these reserves. The predation by feral cats is also listed as a key threatening process and a feral cat TAP is currently in preparation. These TAPs identify priorities and best practices for control of these animals throughout NSW.

Cane toads (*Bufo marinus*) are listed as a Key Threatening Process under the TSC Act. While cane toads are abundant in adjoining lowland areas, their current distribution in Northern Rivers Region is yet to be fully determined. A road-based survey was undertaken in 2007 to determine presence or absence of cane toads in the SCA and other conservation areas in the region. This survey indicated that currently cane toad numbers are low in the SCA. Priorities for control are currently being developed for the region.

On occasion straying stock from neighbouring properties may enter the SCA. Where possible, fencing is maintained on a cooperative basis with neighbours, however where fencing is not possible or practical, other cooperative arrangement with neighbours will be implemented to limit grazing in the SCA.

4.3 Fire Management

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

The primary fire management objectives of the NPWS are to protect life, property and community assets from the adverse impacts of fire, whilst managing fire regimes to maintain and protect biodiversity and cultural heritage (NPWS, 2006).

The NPWS Strategy for Fire Management (NPWS, 2006) uses a zoning system for bushfire management in NPWS reserves. This zoning system is consistent with that used by the Bush Fire Coordinating Committee and the Northern Rivers Bush Fire Management Committee (NRBFMC) in bushfire risk management plans.

The NPWS approach to fire management planning is based on the level of complexity and risk to the SCA. In regard to Whian Whian SCA, a separate fire management strategy was approved in 2005 and involved extensive consultation with stakeholders and was placed on public exhibition (NPWS, 2005).

The majority of the SCA and adjoining Nightcap NP is comprised of rainforest and moist vegetation types. The main risk of fire is from arson and other ignitions from areas outside and downhill of the SCA. There is no record of major wildfire events in the SCA and previous burning practices of State Forests were for silvicultural reasons rather than for specific hazard reduction burning to protect property or other assets.

NPWS maintains cooperative arrangements with surrounding landowners and the Rural Fire Service (RFS) brigades and is actively involved with the NRBFMC. Cooperative arrangements include fire planning and reporting, operational protocols and information sharing.

4.4 Unauthorised Vehicle Access

Since gazettal of the SCA there has been a history of unauthorised motor bike riding (including unregistered trail bikes and quad bikes) and four wheel driving along the network of old logging tracks and trails.

The continued unauthorised use of trails which are closed to public vehicles has significant environmental impacts on the SCA, including increased soil erosion and run-off as well as impacts on water quality particularly by increasing sediment loads and turbidity down stream. Unauthorised vehicle access on these trails also aids the spread of weeds as well increasing the possibility of introducing soil pathogens and disease.

Since gazettal of the SCA, NPWS has undertaken an educational approach to inform visitors of permissible vehicle access and to encourage appropriate visitor behaviour.

4.5 Climate change

Climate change may significantly affect biodiversity by changing population size and distribution of species, modifying species composition, and altering the geographical extent of habitats and ecosystems. The potential impact of climate change is difficult to assess since it depends on the compounding effects of other pressures (Department of Environment and Conservation, 2006).

The relatively modest warming experienced so far has already had measurable impacts on range of species across the globe. For example, the distributions of some species of birds, mammals and insects have apparently moved toward the poles or upwards in altitude, in response to shifting climatic zones. There is also increasing evidence of earlier flowering and fruiting in plants, and earlier reproduction in amphibian and birds in response to warmer temperatures (Department of Environment and Heritage, 2007).

Anthropogenic Climate Change is listed as a key threatening process under the TSC Act. Loss of climatic habitat caused by anthropogenic emissions of greenhouse gases is listed as a key threatening process under the *Environmental Protection and Biodiversity Conservation Act 1999*. Recovery plans for threatened plant species that occur in the SCA have also identified climate change as an issue for these species.

There is evidence suggesting that the rate of climate change will be faster than the rate at which most species can adapt, either by migration or by changing their behaviour, physiology or form. Hence, one short term goal for management is to ensure the survival of species in spite of additional threats from climate change. Some existing programs designed to manage threatening processes may also enhance species adaptability or resilience to impacts from climate change, examples include management programs for pest animals and weeds (Department of Environment and Heritage, 2007).

5. MANAGEMENT OPERATIONS AND OTHER USES

5.1 Roads and Management Trails

Public vehicle access to the SCA is via the “Whian Whian Forest Drive”, a popular scenic drive for day visitors. The Drive is comprised of Gibbergunyah Range Road, Tungun Road, Peates Mountain Road, Nightcap Range Road and Minyon Drive (see Map 1). All roads are unsealed and the Peates Mountain Road – Tungun – Gibbergunyah Range Road section is not suitable for buses, caravans or trailers.

Entrance gates are located on all park roads to enable the SCA and adjoining Nightcap NP to be closed in an emergency or when public safety is threatened (eg. during flash flooding of causeways, severe winds and increased risk of falling trees). These roads may also be closed when road works or road conditions are such that public safety may be compromised.

A network of management trails in the SCA is maintained for management operations such as pest, fire and catchment management. They may also be used for research and emergency purposes. These trails are for use by NPWS and other authorised vehicles only, including by Rous Water for catchment management purposes, by the Rural Fire Service for any initial fire response, and by emergency services as required. Management trails in the SCA are closed to public vehicle use. Management trails in the SCA include: Rummery Road Management Trail; Blue Fig Road Management Trail; Telephone Road Management Trail; Old Mill Road Management Trail; Boomerang Falls Management Trail; Eastern Boundary Trail and part of Baldwins Road Management Trail (see Map 1).

There are also a number of trails associated with past plantation activities which are not required for management purposes and are currently gated. It is proposed that they remain closed and be allowed to regenerate. These trails are located in the north-eastern section of the SCA and include: Tea Tree Trail; No.1 Break; No.2 Break; Lowes Track; Duffs Track; Barras Track; Francis Track; McIver’s Track and Old Fire Road. All other roads and trails not identified as park roads or management trails, including old snigging trails, are also proposed to be closed and allowed to regenerate.

5.2 Access to Inholdings

The southern section of the Nightcap Range Road is excluded from the SCA and provides access to a private property inholding. This section of road is approximately 4km in length and is maintained by Lismore City Council (LCC) (see Map 1). The Nightcap Range Road then becomes a park road north from this point and provides access to another residence within the same inholding approximately 800 metres to the north. NPWS considers that it would be more efficient and practicable for LCC to maintain this section of road concurrent with maintenance of the southern section, however this would be subject to negotiation and agreement with LCC.

5.3 Catchment Management and Water Supply (Rous Water)

Most of the SCA is within the catchment of Rocky Creek Dam (see Map 2). Rocky Creek Dam is managed by Rous County Council (Rous Water) and supplies Lismore, Ballina, Byron and Richmond Valley local government areas. Rocky Creek Dam

encroaches on the south-western part of the SCA and is subject to a former SFNSW occupation permit.

NPWS management of the SCA for conservation contributes to the protection of rainforest and other ecosystems which is important for maintaining a healthy water catchment. Public access, recreation, weeds and fires within water supply catchments have the potential to affect the quality of potable water. Rous Water has a statutory interest in the protection of the catchment and has regulatory powers under the Local Government Act to enforce restrictions on public use in the catchment.

Prior to gazettal of the SCA, Rous Water installed gates on several roads within the former State Forest to protect catchment values. Rous Water and NPWS have agreed to maintain these restrictions to public vehicular access within the catchment area. Roads that are closed to normal public vehicular traffic to protect catchment values include: Rummery Road; Fosters Spur Trail; Old Mill Road; and Blue Fig Road (refer 5.1 Roads and Management Trails).

A Memorandum of Understanding (MoU) between NPWS and Rous Water has been developed for management and maintenance of roads and visitor use within the water catchment area of Rocky Creek Dam. In order to maintain water quality flowing into Rocky Creek Dam and to protect public health, certain activities are prohibited in the water catchment area of Rocky Creek Dam. These include, but are not limited to: swimming, fishing, camping, horse riding (other than on roads open to public vehicles), boating and rave or doof parties.

A Catchment Working Group with representatives of Rous Water and NPWS meet as required to oversee the implementation of the MoU, including Rous Water contributions to funding maintenance of roads in the SCA and adjoining Nightcap NP.

5.4 Mining and Exploration

An existing Petroleum Exploration Licence PEL 445 occurs in the SCA and expires in April 2010 if not renewed. Industry and Investment NSW is the lead authority for mining, mineral exploration and mine site rehabilitation. Industry and Investment NSW is required under the EPA Act to undertake environmental assessments for mining and exploration activities in all SCAs. The Memorandum of Understanding (MOU) between NPWS and the then Department of Mineral Resources (now part of Industry and Investment NSW) describes the management and consultative arrangements associated with exploration and mining in SCAs (refer also section 2.2).

Exploration licences and assessment leases may be granted within SCAs without the concurrence of the Minister administering the NPW Act but approval must be obtained before any rights under that lease or licence can be exercised. Likewise, the concurrence of the Minister administering the NPW Act must be obtained before any mining lease is issued. In the case of exploration licences and other prospecting titles, an access agreement under the *Mining Act 1992* will also be required between the titleholder and the NPWS in order for the titleholder to conduct prospecting operations within a state conservation area.

6. MANAGEMENT STRATEGIES AND ACTIONS

| Current Situation | Desired Outcomes | Management Strategies/Actions | Priority |
|---|---|---|---------------------------|
| <p>6.1 Catchment management and soil conservation</p> <p>Soils in the reserve are erodible if disturbed, particularly on the steep slopes, and along roads and trails. Roads and trails will be appropriately maintained to protect catchment values (refer 6.9 Vehicle access).</p> <p>Most of the SCA is within the catchment of Rocky Creek Dam managed by Rous Water. A small part of Rocky Creek Dam encroaches onto the SCA under a former SFNSW occupation permit.</p> <p>Public access, weeds and fire have the potential to affect the water quality in the catchment. To maintain water quality flowing into Rocky Creek Dam, certain recreation activities are prohibited in the catchment.</p> <p>An MoU between Rous Water and DECCW (NPWS) addresses management of roads and recreation activities within the Rocky Creek Dam water catchment. The MoU also covers Rous Water contributions towards road and trail maintenance in the SCA.</p> | <ul style="list-style-type: none"> • Soil profiles are undisturbed and soil erosion is minimised. • Catchment values, water quality and health of waterways are maintained or improved. • NPWS and Rous Water work cooperatively for the protection of the SCA and catchment values. | <p>6.1.1 Review existing interests related to the Rocky Creek Dam encroachment into the SCA with Rous Water and formalise licensing requirements under the NPW Act.</p> <p>6.1.2 Implement, and update as required, the MoU between NPWS and Rous Water regarding management of roads and visitor use in the Rocky Creek Dam catchment.</p> | <p>Medium</p> <p>High</p> |

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| <p>6.2 Native plants and animals The SCA supports a diversity of plant and animal species, including 21 threatened plant species and 35 threatened animal species under the TSC Act. Ten species are also listed under the EPBC Act (refer Tables 1, 2).</p> <p>Major impacts on native plant and animals include introduced species, fire and visitor use (refer 6.4 Introduced plants and animals, 6.5 Fire, 6.6 Recreation & 6.7 Education, group and commercial activities).</p> <p>Recovery plans have been prepared for the Nightcap oak, <i>Elaeocarpus sedentarius</i>, and double-eyed fig-parrot. Draft plans have been prepared for peach myrtle, green-leaved rose walnut, rusty rose walnut and the koala.</p> <p>Recovery actions are included in the PAS for many of the threatened plant and animal species that occur in the SCA (refer 3.2 and 3.3). The PAS identifies strategies and actions to promote the recovery of threatened species, populations and ecological communities and manage key threatening processes.</p> <p>A Sensitive Area Data System (“green guide post” system) identifies spot locations for threatened and endangered plants species along roadsides/trails in the SCA.</p> <p>The SCA adjoins World Heritage Gondwana Rainforests and has similar natural heritage values which need to be considered under any future nomination of the Gondwana Rainforests World Heritage Area.</p> | <ul style="list-style-type: none"> • Diversity of native plant and animal species is maintained, and there is no further decline in local populations of threatened species. • Impacts of road and management, trail maintenance, fire, introduced species and visitor use on threatened plant species is minimised. • Improved knowledge of the SCAs plants and animals and their ecological requirements. • World Heritage values are identified and included in any subsequent nomination of potential additions to Gondwana Rainforests. | <p>6.2.1 Implement relevant strategies in Priorities Action Statement and recovery plans for threatened species.</p> <p>6.2.2 Complete and maintain installation of the “green guide post” system identifying sensitive zones and spot locations for threatened plants along roadsides.</p> <p>6.2.3 Assess the World Heritage values of the SCA as a potential addition to the World Heritage Gondwana Rainforests property. This should be undertaken as part of a review and nomination of all potential additions to Gondwana Rainforests.</p> <p>6.2.4 Manage waste in the SCA to minimise its attraction to wildlife.</p> | <p>High</p> <p>High</p> <p>Medium</p> <p>Medium</p> |
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| <p>6.3 Cultural Heritage The SCA is within the Widjabal tribal area of the Bundjalung Nation and the Tweed-Byron and Ngulingah Local Aboriginal Land Council areas.</p> <p>There are two recorded Aboriginal sites within the SCA. The “Sensitive Area Management System” (green guidepost system) identifies spot locations for cultural sites along roads and trails in the SCA. A Native Title Claim includes the SCA and the adjoining Nightcap NP.</p> <p>A heritage assessment of Rummy Park camp ground was undertaken in 2004 identifying strategies for the protection of cultural heritage values associated with its past use as a forestry camp. The former forestry hut has been assessed as being of relatively minor importance.</p> <p>NPWS assessment has determined that the most appropriate use of the hut or site is as an open shelter primarily for education purposes but not for accommodation. Redevelopment of the existing hut or construction of a new structure will aim to be of a similar aesthetic character and profile as the existing hut. The decision to redevelop the existing hut as a shelter or build a new shelter will be determined based on an architect’s assessment and consideration of comparative costs and available resources.</p> <p>Various specimen trees were planted at Rummy Park when the area was managed</p> | <ul style="list-style-type: none"> Aboriginal features and values are identified and protected in partnership with the Aboriginal community. Historic heritage values are identified and protected in accordance with their significance. | <p>6.3.1 Consult and involve relevant Aboriginal sites, places and values, including interpretation of places or values.</p> <p>6.3.2 Redevelop the existing hut at Rummy Park as an open shelter or construct a new open shelter at the site suitable for use by education groups. The shelter will not be developed for overnight accommodation. Retain the existing hut until resources are available to undertake replacement works.</p> <p>6.3.3 Retain existing introduced trees at Rummy Park identified as having heritage value where possible.</p> | <p>High</p> <p>Medium</p> <p>High</p> |
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| <p>for forestry. An assessment of the heritage significance of Rummery Park identifies that some of these trees should be retained if possible.</p> | | | |
| <p>6.4 Introduced Plants and Animals A Regional Pest Management Strategy has been prepared for the Northern Rivers Region. In addition a Pest Management Plan (PMP) has been prepared for Nightcap NP and the SCA which identifies key sites for weed control. Thirty-nine weed species have been recorded mainly along roads, trails and boundary edges.</p> <p>The main weed species in the SCA are lantana, mistflower and camphor laurel. Montbretia and honeysuckle occur in the Rummery Park area. The SCA is also one of only two known locations where <i>Phytophthora cinnamomi</i> (a soil borne pathogen) has been reported within the Northern Rivers Region. It is listed as key threatening process under State and Federal legislation. The Regional Pest Management Strategy identifies management objectives, control priorities and monitoring needs.</p> <p>Hardwood and softwood timber plantations were planted while the area was managed as State Forest prior to the declaration of the SCA over the area. A strategy for the management of plantations is currently in preparation for the Northern Branch, NPWS.</p> <p>Introduced animals known to occur in the SCA include foxes, wild dogs, feral cats, house mouse, cane toads and black rats. The Regional Pest Management Strategy identifies</p> | <ul style="list-style-type: none"> • Introduced plants and animals are controlled and their impacts on the SCA are minimised. • Pest control programs are undertaken in consultation with neighbours. • Native vegetation is restored in disturbed areas. | <p>6.4.1 Manage introduced species in accordance with the Northern Rivers Region Pest Management Plan.</p> <p>6.4.2 Update the PMP for the SCA as necessary to include any additional treatment sites or noxious or significant environmental weed locations.</p> <p>6.4.3 Close roads and trails not required for public access or management purposes and allow to naturally regenerate or undertake active revegetation and weed control works if necessary (refer 6.9 Vehicle access).</p> <p>6.4.4 Manage plantation areas in accordance with the Northern Branch Plantation Strategy.</p> <p>6.4.5 In conjunction with neighbours, maintain boundary fences and determine strategies to exclude stock where boundary fencing is not practicable.</p> | <p>High</p> <p>High/on-going</p> <p>High/on-going</p> <p>Medium/ongoing</p> <p>Low/on-going</p> |

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| <p>priorities, guidelines and actions for control of introduced animals.</p> <p>Dingoes or their hybrids are also known to occur in the SCA. The Tweed –Lismore RLPB Wild Dog Management Plan addresses control of wild dogs and the conservation of dingoes.</p> <p>Livestock are known to enter the SCA on occasion.</p> | | | |
| <p>6.5 Fire Management</p> <p>A Fire Management Strategy for the SCA and adjoining Nightcap NP was approved in December 2005. The most recent fire in the SCA occurred in 2005 and was of a minor nature, burning less than a hectare.</p> <p>The majority of the SCA and adjoining Nightcap NP is comprised of rainforest and moist vegetation types. The main risk of fire is from arson and other ignitions from areas outside and downhill of the SCA.</p> <p>There is no record of major wildfire events in the SCA and previous burning practices of state forests were for silvicultural reasons rather than property or other asset protection.</p> <p>NPWS participates in the in Northern Rivers Bush Fire Management Committee (NRBFMC). Cooperative arrangements are maintained with RFS and neighbours in regard to fuel management and fire suppression.</p> | <ul style="list-style-type: none"> • Life and property are protected from fire. • Fire is managed cooperatively. • Fire frequencies are appropriate for conservation of native plant and animal communities as specified in the FMS. • Cultural features are protected from damage by fire. | <p>6.5.1 Implement the Fire Management Strategy for the SCA and update as necessary.</p> | High |

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| <p>6.6 Recreation The Whian Whian Forest Drive is unsealed and in some sections may be unsuitable for buses, caravans or trailers.</p> <p>The Rummery Park camp ground provides a range of facilities for campers and day visitors. Redevelopment works were undertaken in 2004.</p> <p>Following redevelopment of the Rummery Park camp ground toilet facilities have been removed from a site adjacent to Nightcap Range Road and vehicle access has been prohibited. Camping is not permitted within the Rocky Creek Dam catchment.</p> <p>Further expansion of the Rummery Park camping area for additional vehicle and walk-in based camping.</p> <p>The Boggy Creek walking track and management trails provide opportunities for bushwalking.</p> <p>The Peates Mountain walking trail has been closed since 2003 due to safety concerns. However, it may be feasible to re-open the trail subject to an assessment of safety and resource requirements. There is also an opportunity to redevelop a lookout at the former Peates Mountain Lookout using a small section of the walking trail.</p> <p>Cycling, including mountain biking, occurs on public access roads and on management trails.</p> | <ul style="list-style-type: none"> • Visitor use does not impact on the values of the SCA and Rocky Creek Dam catchment. • Camping and day use activities are sustainable and have minimal environmental impact. • Walking tracks are clearly identified and maintained to an appropriate standard. | <p>6.6.1 Maintain the Whian Whian Forest Drive to a two-wheel drive dry weather standard.</p> <p>6.6.2 Investigate with the RTA, the need for any limits on large vehicles using the Whian Whian Forest Drive.</p> <p>6.6.3 Vehicle based camping will only be permitted at the Rummery Park camp ground. Expansion of the camping area for vehicle and walk in camping may be considered subject to future demands.</p> <p>6.6.4 Prohibit camping in the Rocky Creek Dam catchment in the SCA.</p> <p>6.6.5 Monitor use of Rummery Park camp ground to determine the need for additional toilets.</p> <p>6.6.6 Maintain the Boggy Creek Walk to Class 3 Australian Standard. Investigate the feasibility of re-opening the Peates Mountain Walking Trail. Allow bushwalking along management trails.</p> <p>6.6.7 Develop a lookout at Peates Mountain to be accessed via a short section of the existing Peates Mountain walking track.</p> <p>6.6.8 Allow cycling on park roads and management trails only.</p> <p>6.6.9 Allow horse riding on the following roads and trails only: Nightcap Range Road, Peates Mountain Road, Gibbergunyah Range Road, Telephone Road Management Trail, Baldwins Road Management Trail and Boomerang Falls Management Trail (loop).</p> <p>6.6.10 Limit horse riding to a group size of ten or less (consistent with the adopted plan of management for</p> | <p>High/on-going</p> <p>Medium</p> <p>High/on-going</p> <p>High</p> <p>Medium</p> <p>High</p> <p>Medium</p> <p>High</p> <p>Medium</p> <p>On-going</p> |
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| <p>Horse riding is designated on certain roads and trails where this use is safe and sustainable and provides a link to horse riding opportunities in the adjoining Nightcap NP. Horse riding is not permitted within the Rocky Creek Dam catchment (see map 2).</p> <p>Fishing for freshwater crayfish is regulated under the <i>Fisheries Management Act 1994</i>. On occasion unauthorised fishing for crayfish has occurred at Rummery Park camping ground.</p> | | <p>the Tweed Caldera parks and reserves). Overnight camping with horses will not be permitted.</p> <p>6.6.11 Liaise with recreation users (eg horse riding and mountain bike groups/individuals) to promote safe, low impact recreation. Seek opportunities for cooperative monitoring of use and adoption of codes of practice (e.g. National Parks Horse Riding Code 1994) to minimise impacts.</p> <p>6.6.12 Liaise with NSW Fisheries officers about regulatory and enforcement requirements relevant to cray fishing in the SCA.</p> | <p>Medium</p> <p>Medium</p> |
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| <p>6.7 Education, group and commercial activities NPWS regularly conducts <i>Discovery</i> activities in the SCA and adjoining Nightcap NP.</p> <p>The SCA is also a popular destination for school groups, bushwalking clubs, community groups and special events such as weddings. It is also used for training programs by emergency services, Defence Force and other agencies. The majority of these activities are focused on the Rummery Park camp ground.</p> <p>NPWS has received requests to use the former forestry hut at Rummery Park for education and camping activities. The former forestry hut is currently closed to public use due to its condition. NPWS assessment has determined that it would be appropriate to redevelop the hut or site primarily for education purposes (refer 6.3.5).</p> <p>Nine licensed tour operators currently operate tours in the area. Much of the focus of the vehicle-based activities in the SCA is at Rummery Park and the Minyon Falls area in the adjoining Nightcap NP.</p> | <ul style="list-style-type: none"> • The public continues to have the opportunity to learn about and enjoy the natural features of the area. • Commercial, education and group activities are nature based, low impact and do not compromise the experience of other visitors. | <p>6.7.1 Consents for Defence Force activities will be considered in accordance with the NPWS Military Training Activities Policy.</p> <p>6.7.2 Consent will be required for any group activity involving more than 20 people.</p> <p>6.7.3 Events that are principally of a sporting and/or entertainment nature will not be encouraged. Requests for such activities will be assessed on a case by case basis and will be subject to NPWS consent.</p> <p>6.7.4 Redevelop the forestry hut or hut site at Rummery Park as an open shelter for use primarily by education groups but not for accommodation (refer 6.3.5 Cultural heritage).</p> <p>6.7.5 Commercial horse riding activities will not be permitted. Any other proposed commercial tourism activity will be considered in accordance with NPWS licensing and policy.</p> | <p>Ongoing</p> <p>On-going</p> <p>Medium /on-going</p> <p>Medium</p> <p>High</p> |
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| <p>6.8 Information and signage Since gazettal of the SCA, NPWS have installed signs identifying the SCA boundary and management trails. Rous Water also has identification and regulatory signs relating to the water catchment.</p> <p>Visitor orientation and educational signage on natural and cultural values is required at Rummery Park camp ground.</p> <p>Track head signage is also required at each end of the Boggy Creek walking track which links the Rummery Park camp ground to the Minyon Falls area in Nightcap NP.</p> <p>An NPWS visitor guide has been prepared which covers Nightcap NP and the SCA.</p> <p>Rous Water has produced a comprehensive publication "<i>The Water Walk</i>" (Rous Water 2005) related to protection of the catchment values, cultural significance and recreational opportunities in the Rocky Creek Dam catchment. This publication includes references to the SCA and Nightcap NP.</p> | <ul style="list-style-type: none"> Information and signage contributes to visitor understanding and enjoyment of the area and promotes appropriate visitor behaviour. | <p>6.8.1 Maintain existing boundary and management trail signage.</p> <p>6.8.2 Provide visitor information and regulatory signage at strategic locations.</p> <p>6.8.3 Install track head signage at either end of the Boggy Creek walking track.</p> <p>6.8.4 Investigate providing plant identification and other interpretative signs along the walking track.</p> <p>6.8.5 Provide an information display at Rummery Park camping area.</p> <p>6.8.6 Investigate the strategic provision of wildlife road warning signs to reduce wildlife road kill.</p> | <p>High/on-going</p> <p>High</p> <p>High</p> <p>Low</p> <p>High</p> <p>Medium</p> |
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| <p>6.9 Vehicle access Public vehicle access to the reserve is via the Whian Whian Forest Drive, a circuit of unsealed park roads.</p> <p>Entrance gates are located on all public vehicle access roads in the SCA.</p> <p>A network of management trails in the reserve provides access for fire management and other NPWS management purposes, access by Rous Water and by emergency services.</p> <p>There are numerous old logging tracks which can impact on SCA values through erosion, runoff, weed invasion and illegal vehicle use. These trails are not required for management purposes and require closure.</p> <p>A section of the Nightcap Range Road in the SCA provides access to a private property inholding.</p> | <ul style="list-style-type: none"> Roads and trails are appropriately maintained to minimise impact on catchment and other values and are gated where necessary. Roads and trails not required for public access or management purposes are closed. Unauthorised vehicle use of management trails and closed trails is excluded from the SCA. Roads and trails are maintained to a safe standard. | <p>6.9.1 Maintain park roads and management trails as shown on Map 1. Close all other roads and trails and allow to naturally regenerate or undertake active revegetation works if necessary.</p> <p>6.9.2 Retain existing gates on entrances to the SCA and on management trails.</p> <p>6.9.3 Close park roads where necessary for emergency purposes or when public safety may be threatened. Provide keys to private property inholders for the southern gate on Nightcap Range Road to ensure their continued access at these times.</p> <p>6.9.4 Allow vehicle access on management trails for NPWS, Rous Water, RFS, police and emergency services purposes. Vehicle access consents may be provided to licensed researchers and contractors undertaking activities consistent with management of the SCA.</p> <p>6.9.5 Public requests for vehicle access to management trails (for park management related activities) will be determined consistent with the NPWS Vehicle Access Policy and Volunteers Policy.</p> <p>6.9.6 Liaise with Rouse Water about implementation of the MoU for management and maintenance of roads and trails within the water catchment area of Rocky Creek Dam (refer 6.1 Catchment management and soil conservation).</p> | <p>High/on-going</p> <p>On-going</p> <p>High/on-going</p> <p>High/on-going</p> <p>Ongoing</p> <p>High/on-going</p> |
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| <p>6.10 Research and Monitoring The SCA is an important resource for scientific research because of its high biodiversity values. Various and long term studies have been undertaken in the SCA and surrounding area.</p> <p>Further research will improve understanding of the SCA's natural and cultural heritage, the processes that affect them, and the requirements for management of particular species and or issue.</p> | <ul style="list-style-type: none"> • Research contributes to the understanding of the SCAs natural and cultural values. • Research programs are conducted in a coordinated and sustainable manner. | <p>6.10.1 Encourage research that improves knowledge and management of natural and cultural heritage values in the SCA. This may include research into:</p> <ul style="list-style-type: none"> • Threatened plant and animals species (consistent with actions for research identified in recovery plans); • The status of chlamydia in Koala populations in the SCA. • Forest rehabilitation; • Recreation impacts; • Aboriginal cultural landscapes and site protection; • Historic heritage – landuse since settlement and more recently relating to the community action for conserving rainforest in the area. | High/on-going |
| <p>6.11 Mining and Exploration An existing Petroleum Exploration Licence PEL 445 occurs in the SCA and expires in April 2010 if not renewed.</p> | <ul style="list-style-type: none"> • Mining and exploration activities have minimal impact on natural and cultural values. | <p>6.11.1 Applications for mining or exploration in the SCA will be subject to environmental assessment in accordance with the Memorandum of Understanding between NPWS and the Department of Mineral Resources.</p> | Ongoing |

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

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

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

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