



NSW NATIONAL PARKS & WILDLIFE SERVICE

Somerton National Park

Plan of Management



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Cover photo: View of Mount Erangaroo, Somerton National Park. Photo: R Cass/DPIE.

This plan of management was adopted by the Minister for Energy and Environment on 22 August 2019.

Somerton National Park is in the traditional Country of the Gamilaraay (Gomerioi) Aboriginal people.

This plan of management was prepared by staff of the Northern Inlands Branch of the NSW National Parks and Wildlife Service (NPWS). For additional information or any enquiries about this plan of management or Somerton National Park, contact the NPWS Coonabarabran Area Office, 30 Timor Street (PO Box 39), Coonabarabran NSW 2357 or by telephone on (02) 6842 1311.

Published by:

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ISBN 978-1-922317-15-5
EES2019/0535
September 2019

Find out more about your environment at:

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Somerton National Park Plan of Management

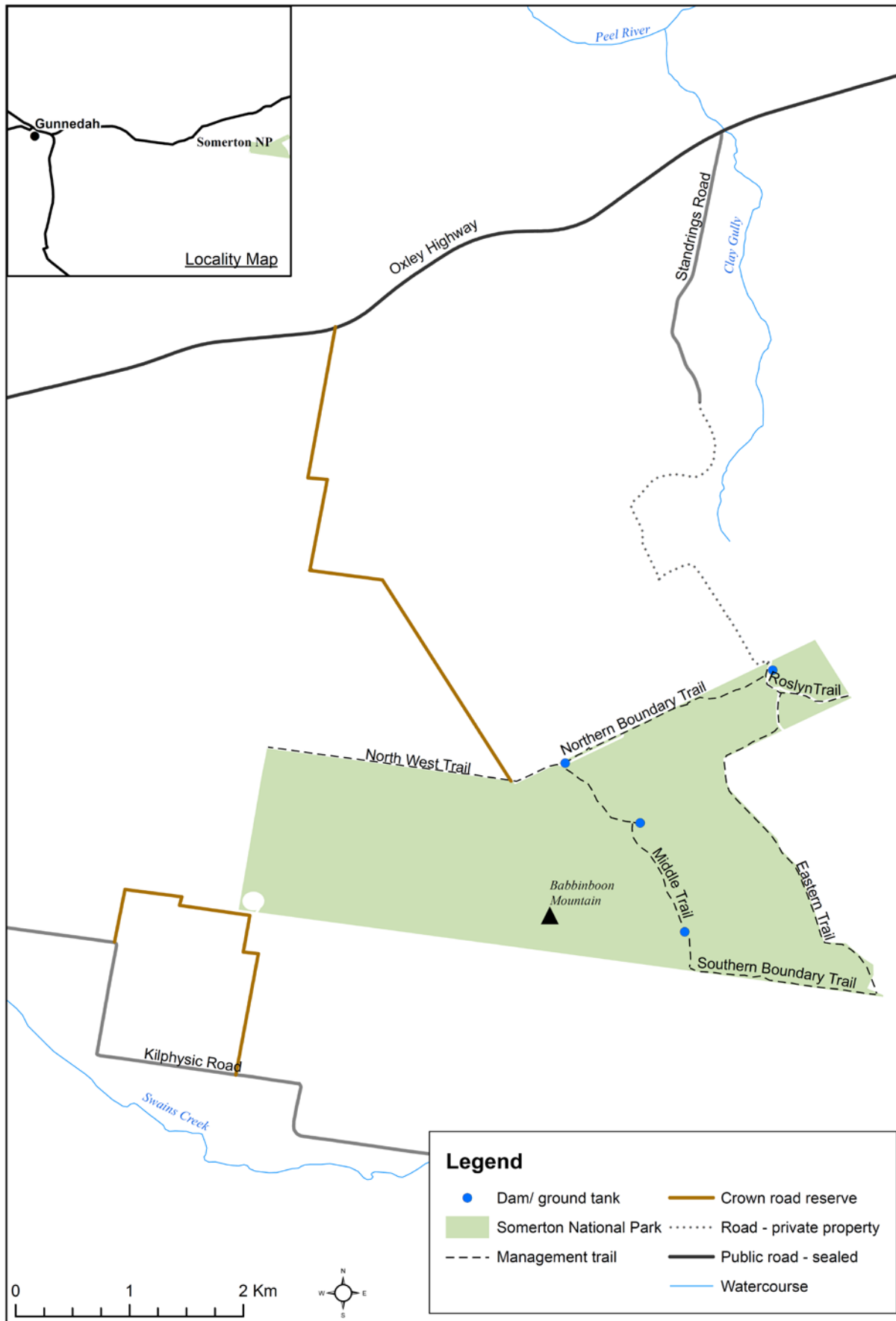


Figure 1 Map of Somerton National Park

1. Introduction

1.1 Location, reservation and regional setting

Somerton National Park is located approximately 40 kilometres east of Gunnedah and 14 kilometres south–west of the township of Somerton. The park is 760 hectares, with a boundary 15.2 kilometres long.

The park includes several roads that are vested in the Minister under Part 11 of the *National Parks and Wildlife Act 1974* (NPW Act). These ‘Ministerial roads’ ensure continued access to neighbouring land. These roads do not form part of the reserved area of the park but their management is subject to this plan, the NPW Act and Regulation and the requirements of the *Environmental Planning and Assessment Act 1979* (EPA Act).

Somerton National Park lies in the Nandewar Bioregion (Thackway & Creswell 1995) and within the Werris Creek and Lower Peel subcatchments of the Namoi River catchment. Prior to being reserved as a national park in December 2005, the land was managed as a commercial cypress pine forest by Forests NSW (now the Forestry Corporation of NSW) and included grazing leases.

The park lies partly within Gunnedah Shire and Tamworth Region local government areas. The park is also partly within Red Chief and Tamworth local Aboriginal land councils and within the traditional lands of the Gamilaraay (Gomeroi) Aboriginal people. The park is part of the Gomeroi People’s Native Title Claim. The park is also within the area administered by North West Local Land Services. The park is surrounded by private properties used for grazing and cropping.

Somerton National Park is one of several parks established under the *Brigalow and Nandewar Community Conservation Area Act 2005* (BNCCA Act) and as such forms part of a chain of reserves stretching the length of the Brigalow Belt South and Nandewar bioregions. Access to Somerton National Park is via Standrings Road from the Oxley Highway through private property to the north of the park. Access to the park requires NSW National Parks and Wildlife Service (NPWS) permission.

1.2 Statement of significance

Somerton National Park is significant because of the following values:

Native plants

Somerton National Park contains a total of 170 vascular plant species occurring within 53 families and 123 genera (Hunter 2008). Four plant communities are recognised within the park. Two of these, the White Box – Red Ash Woodland and the Tumbledown Red Gum – Motherumbah Woodland, are only found in Somerton National Park within the Coonabarabran group of parks.

Native animals

Eighty-five native animal species have been recorded within Somerton National Park including 56 bird species, 14 reptiles, 11 mammals and four amphibians. Of these species, three birds and one mammal are threatened and listed as vulnerable under the *Biodiversity Conservation Act 2016* (BC Act).

Aboriginal heritage

The park protects five known Aboriginal sites, with a likelihood that more sites are present. The park provides an important connection to Country for the local Aboriginal community.

2. Management context

2.1 Legislative and policy framework

The management of the community conservation area is in the context of the legislative and policy framework of NPWS, primarily the NPW Act and Regulation, the Community Conservation Area Agreement developed under the BNCCA Act, the BC Act and NPWS policies.

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

A plan of management is a statutory document under the NPW Act. Once the Minister has adopted a plan, the plan must be carried out and no operations may be undertaken within the park except in accordance with the plan. This plan will also apply to any future additions to Somerton National Park. Should management strategies or works be proposed in future that are not consistent with this plan, an amendment to the plan will be required.

2.2 Management purposes and principles

Community conservation areas

The BNCCA Act identifies Somerton National Park as a zone 1 community conservation area. Community conservation areas are established under the BNCCA Act. This Act provides four dedicated management zones of which zones 1, 2 and 3 relate to land reserved under the NPW Act as a national park, Aboriginal area or a state conservation area respectively. Land in zones 1, 2 and 3 are managed consistent with the management principles set out in the NPW Act.

Zone 1 national parks

Zone 1 community conservation areas are reserved as national parks under the NPW Act to protect and conserve areas containing outstanding or representative ecosystems, natural or cultural features or landscapes or phenomena that provide opportunities for public appreciation, inspiration and sustainable visitor use or tourist use and enjoyment.

Under the NPW Act (section 30E), Zone 1 community conservation areas are managed to:

- conserve biodiversity, maintain ecosystem functions, protect geological and geomorphological features and natural phenomena and maintain natural landscapes
- conserve places, objects, features and landscapes of cultural value
- protect the ecological integrity of one or more ecosystems for present and future generations
- promote public appreciation and understanding of the park's natural and cultural values
- provide for sustainable visitor or tourist use and enjoyment that is 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
- provide for appropriate research and monitoring.

The primary purpose of Zone 1 community conservation areas is to conserve nature and cultural heritage. In doing so, opportunities are provided for appropriate and sustainable recreation.

2.3 Specific management directions

In addition to the general principles for the management of national parks (see Section 2.2), the following specific management directions apply to the management of Somerton National Park.

Management will focus on the protection of native vegetation communities, threatened native animal species and the protection of Aboriginal heritage.

Major strategies to achieve these objectives are:

- ongoing fire management so that people and property are protected from wildfire, and park values are maintained
- ongoing control of pest species to minimise their impact on park values
- protection of cultural heritage places with community involvement, in particular with members of the local Aboriginal community
- establishment of secure legal access to the park through adjoining private property
- shared use of a bore within the park for management and operational activities.

3. Values

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

Somerton National Park is a significant park within the region as it protects a representative sample of the plants and animals of a region that is now mainly cleared of its original woodlands and forests. Due to the park being in a highly fragmented landscape it is particularly important for woodland birds and other native animals as it provides refuge and habitat for these species.

3.1 Geology, landscape and hydrology

Located in the Peel subregion of the Nandewar Bioregion, Somerton National Park consists of country that rises steadily from approximately 360 metres above sea level in the north–west towards the south until it reaches the peak of Babbinboon Mountain at approximately 650 metres above sea level.

A series of tributaries drain from the northern watershed of the higher areas of the park and enter an unnamed drainage line that flows to the north. Another series of tributaries flow south into Swains Creek.

The geology of Somerton National Park is complex as the park is situated between numerous faults and folds in the landscape, such as the Kelvin Fault, the Hunter-Mooki Fault System, and the Rocky Creek Syncline, which together delineate the boundary between the Gunnedah Basin and the Tamworth Belt of the New England Fold Belt.

The geology of the western section of the park is co-dominated by the fine- to coarse-grained wacke, conglomerates, limestones and volcanic breccia, basaltic lavas and tuffs of the Mostyn Vale Formation and the coarser pebbly to boulder conglomerates and sandstones of the Keepit Conglomerates. Sandstones, mudstones and volcanic tuffs of the Currabubula Formation also occur. The eastern portion of the park is composed of the mudstones and siltstones of the Early Carboniferous Namoi Formation with minor intrusions of Cenozoic volcanic basalts. The entire park is bisected by outcroppings of Tulcumba Sandstone and the Rangari Limestone Member (University of New England and Geological Survey of New South Wales 1973).

Soils are generally moist and shallow. Soil colour and soil texture are highly variable and include soils ranging from cracking clays to loamy sand (Hunter 2008).

Issues

- There are potential soil erosion issues where the Roslyn, Eastern and Middle trails traverse the park. Without remedial action this could make the road inaccessible to larger vehicles required for firefighting operations.

Desired outcomes

- Soil erosion is minimised.
- Management trails are accessible.

Management response

3.1.1 Undertake all works in a manner that minimises erosion and water pollution. Assess the Roslyn, Eastern and Middle trails and take action to mitigate any erosion.

3.2 Native plants

A total of 170 vascular plant species within 53 families and 123 genera have been recorded in Somerton National Park during native plant surveys (Hunter 2008). Exotic species make up 12% of species.

Four vegetation communities have been identified as occurring within Somerton National Park (Hunter 2008):

- White Box – Red Ash Woodland
- Tumbledown Red Gum – Motherumbah Woodland
- White Cypress Pine – White Box Woodland
- Slender Bamboo Grass – Red Grass Derived Grassland.

White Box – Red Ash Woodland

This open, low woodland community occurs over a small area on the mid to higher slopes of the park on shallow, well-drained soils. Tree species typically include the two main tree species white box (*Eucalyptus albens*) and red ash (*Alphitonia excelsa*) along with quinine tree (*Alstonia constricta*), tumbledown red gum (*E. dealbata*), rusty fig (*Ficus rubiginosa*), and kurrajong (*Brachychiton populneus*). The shrubby understorey is dominated by native olive (*Notelaea microcarpa*), wilga (*Geijera parviflora*) and sticky hop-bush (*Dodonaea viscosa* var. *angustifolia*).

Tumbledown Red Gum – Motherumbah Woodland

This is an open, low woodland with an occasional shrubby understorey layer on the mid to higher slopes and crests on well-drained soils. Much of this community occurs on the drier western aspects of the park and covers approximately 13% of the park. Tree species include the two community dominants tumbledown red gum and motherumbah (*Acacia cheelii*) along with white cypress pine (*Callitris glaucophylla*), silver wattle (*Acacia neriifolia*) and kurrajong. The occasional shrub layer is dominated by sticky wallaby bush (*Beyeria viscosa*), bead bush (*Spartothamnella juncea*), native olive, poison rice flower (*Pimelea neo-anglica*) and wilga.

White Cypress Pine – White Box Woodland

This low, open layered woodland community is found primarily on lower slopes rather than the more cleared or higher rocky areas, and covers over three quarters of the park's area. Trees include the two main dominant tree species, white cypress pine and white box, along with tumbledown red gum, kurrajong and quinine tree. The often dense shrub layer consists of those shrub species noted in the previous communities with native olive being the most dominant. Much of this community has been significantly affected by past clearing activities and high levels of grazing. In the worst affected areas, particularly those that surround the Slender Bamboo Grass – Red Grass Derived Community, there is a high level of weed infestation.

Slender Bamboo Grass – Red Grass Derived Grassland

This community covers approximately 54 hectares of the park and is restricted to deep red soils on the lower slopes of the north–east parts of the park where heavy clearing has occurred. Isolated mature and regenerating white box trees occur along with galvanised burr (*Sclerolaena birchii*), native olive, sticky hop-bush and wild orange (*Capparis mitchellii*). The ground cover is

composed primarily of the two main grass species, slender bamboo grass (*Austrostipa verticillata*) and red grass (*Bothriochloa macra*), along with climbing saltbush (*Einadia nutans*) and black crumbweed (*Chenopodium melanocarpum*) in addition to other grass, herb and forb species. In this community, 26% of species are exotic as a result of past clearing and grazing practices. These cleared areas are in two patches along the Northern Boundary Trail.

No threatened plant species have been recorded in the park to date (OEH 2016). In the event that threatened plant species are recorded, the statewide *Biodiversity Conservation Program* (formerly known as the *Threatened Species Priorities Action Statement* [DECC 2007]), which sets out strategies for threatened species, populations and ecological communities will apply. Actions identified will be 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 2013b).

Issues

- A long history of forestry and silvicultural practices has resulted in significant changes to the structure, diversity and distribution of native vegetation communities. Since those practices ceased with the creation of the park, thickets of dense cypress pine regrowth have developed.

Desired outcomes

- All native plant species and communities are conserved.
- The impact of key threatening processes is minimised.

Management response

3.2.1 Undertake systematic plant surveys to improve knowledge of plant values in the park.

3.2.2 Monitor the regrowth of cypress pine and other species formerly harvested in the park.

3.3 Native animals

Eighty-five species of native animals have been recorded in Somerton National Park including 56 birds, 14 reptiles, 11 mammals and four frogs (OEH 2016). Four species are listed as threatened species under the BC Act (see Table 1).

Table 1: Threatened animals recorded in Somerton National Park

Common name	Scientific name	BC Act
Brown treecreeper (eastern subspecies)	<i>Climacteris picumnus victoriae</i>	Vulnerable
Speckled warbler	<i>Chthonicola sagittata</i>	Vulnerable
Turquoise parrot	<i>Neophema pulchella</i>	Vulnerable
Yellow-bellied sheath-tail-bat	<i>Saccolaimus flaviventris</i>	Vulnerable

Source: OEH 2016.

As for native plants, strategies for the recovery of threatened animal species and populations have been set out in the statewide *Biodiversity Conservation Program* (formerly known as the *Threatened Species Priorities Action Statement* [DECC 2007]). 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 2013b).

Issues

- Eighty-five native animal species have been recorded, many of which are one-off sightings. There is potential to gain a fuller understanding of the native animal values.
- The Northern Plains Region Biodiversity Monitoring Strategy (DECC 2009) provides a framework for monitoring.

Desired outcomes

- All native animal species are conserved.
- The impact of key threatening processes is minimised.

Management response

3.3.1 Implement the relevant actions from the *Biodiversity Conservation Program* for threatened animals occurring in the park.

3.3.2 Undertake systematic animal surveys to improve knowledge of animal values in the park.

3.4 Aboriginal heritage

Somerton National Park falls within the Red Chief and Tamworth local Aboriginal land council areas and is part of the Country traditionally used by the Gamilaraay (Gomeri) People. The park is also within the Gomeri People's Native Title Claim, which was registered with the National Native Title Tribunal in 2012 (NC2011/006). Gamilaraay and Gomeri are variations in nomenclature that refer to the same group.

Aboriginal communities have an association and connection to the land. The land, water, plants and animals 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 and need to be managed in an integrated manner across the landscape.

Aboriginal sites are places with evidence of Aboriginal occupation or that are related to other aspects of Aboriginal culture. They are important as evidence of Aboriginal history and as part of the culture of local Aboriginal people. Five Aboriginal sites have been recorded in Somerton National Park. Cultural heritage site surveys were conducted in March 2008 by members of the Red Chief Local Aboriginal Land Council, Min Min Aboriginal Corporation, Gunida Gunyah Aboriginal Corporation and NPWS staff (RCLALC 2008). Sites that have been recorded include artefact scatters, modified trees and a grinding groove site.

Many plant species growing in the park, for example wild orange, were used as food resources, with other species used for medicines or tool and utensil construction (Hunter 2008). Cultural use of wild resources, such as medicinal plants and bush tucker, are subject to NPWS policies and licensing.

While the NSW Government has legal responsibility for the protection of Aboriginal sites and places, NPWS acknowledges the right of Aboriginal people to make decisions about their own heritage. Aboriginal communities are consulted and involved in the management of Aboriginal sites, places and related issues, and the promotion and presentation of Aboriginal culture and history.

Issues

- The park is likely to contain many Aboriginal sites, which have not been recorded.
- Little is known about contemporary Aboriginal use of the area. There is potential for greater involvement in park management by Aboriginal people.

Desired outcomes

- Aboriginal cultural features and values are identified and protected.
- Aboriginal people are involved in managing the Aboriginal cultural values in the park.

Management response

3.4.1 Undertake an assessment for cultural sites and features prior to any ground disturbance work in the park.

3.4.2 Consult and involve the Red Chief and Tamworth local Aboriginal land councils and other relevant Aboriginal community organisations in protecting and managing Aboriginal sites, places and values, and interpreting places or values.

3.4.3 Work cooperatively with Aboriginal people to provide for access to Country for cultural purposes such as culture camps and the sharing of traditional knowledge.

3.5 Historic heritage

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

Historical maps of the Parish of Babbinsboon, dating from the 1880s to the early 1900s, show that the lands surrounding and within the area now occupied by Somerton National Park were reserved as a timber reserve (TR 5038). This meant this parcel of land was 'reserved for the preservation of timber'. On 13 July 1917 the majority of the land now within the park was gazetted as Somerton State Forest No. 515 (LPMA 2010).

Evidence of former forestry practices can be found throughout the park in the form of snigging tracks and the many cypress and ironbark tree stumps. The cleared areas, particularly on the lower slopes, have been used in the past for livestock grazing (G & P Swain [park neighbours], pers. comm.).

Three blazed trees (a pine and box tree on the southern boundary and a pine in the centre of the park) are noted on old Babbinsboon Parish maps (LPMA 2010).

Issues

- Several blazed survey trees are indicated on the 1900 Babbinsboon Parish map. These trees, if they still exist, have not been rediscovered or recorded.

Desired outcome

- Historic heritage features and values are identified and protected.

Management response

3.5.1 Record any blazed survey trees and protect them as far as possible from fire and other hazards.

3.6 Visitor use, education and research

Somerton National Park is currently only able to be accessed via Standrings Road and then a track through private property to the north of the park (see Figure 1). There is no secure, legal public access to the park (see Section 5.1). Access may be granted by NPWS, with the agreement of private property owners, for cultural or natural heritage field studies. Somerton National Park has been used in the recent past for educational purposes, particularly for training members of the local Aboriginal community in undertaking cultural surveys (RCLALC 2008).

Apart from limited signage, there are no visitor facilities within the park.

Issues

- There is little evidence of past use of the park for recreation.
- The location and isolation of Somerton National Park, and access through private property, restricts public recreational opportunities.

Desired outcome

- Visitor use is ecologically sustainable and does not reduce park values.

Management response

3.6.1 Allow visitor access only with prior approval from NPWS.

3.6.2 Access for natural and cultural heritage field studies may be approved by NPWS. Vehicle access within the park for these purposes may be permitted on management trails, and limits on numbers and other conditions may be implemented to minimise impacts.

4. Threats

4.1 Weeds and pest animals

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

NPWS prepares pest management strategies, which identify pest species and priorities for control, including actions listed in the *Biodiversity Conservation Program* (see Sections 3.2. and 3.3), threat abatement plans, and other strategies such as the NSW *Biodiversity Priorities for Widespread Weeds* (NSW DPI & OEH 2011) and the *NSW Biosecurity Strategy 2013–2021* (DPI 2013).

The NPWS pest management strategy (OEH 2012) identifies pest species and priority programs for Somerton National Park. The overriding objective of the pest management strategy is to minimise adverse impacts of introduced species on biodiversity and other park and community values while complying with legislative responsibilities. The strategy also identifies where other site- or pest-specific plans or strategies need to be developed to provide a more detailed approach.

Rabbits (*Oryctolagus cuniculus*), cats (*Felis catus*), fallow deer (*Dama dama*) and red deer (*Cervus elaphus*) occur in isolated populations restricted to small areas within the park, while foxes (*Vulpes vulpes*) are widespread throughout the park. Feral rabbits, feral cats and European red foxes are each listed as key threatening processes under the BC Act (NSW SC 2002, 2000c & 1998 respectively) and under the EPBC Act (DoE 2009). Feral deer are listed as a key threatening process under the BC Act (NSW SC 2004a).

A fox baiting program is conducted during the winter months as needed, and other pest species are controlled opportunistically. Overall pest animal density is generally low and the potential exists to maintain low populations.

Feral pigs (*Sus scrofa*), also listed as a key threatening process under the BC Act and the EPBC Act (NSW SC 2004b; TSSC 2001b) occur in isolated populations, commonly on the lower slopes and previously cleared country bordering neighbouring properties where they have access to water and food resources. From time to time illegal access and hunting of pigs cause problems in the park. NPWS will continue to work cooperatively with Local Land Services and adjoining landholders to ensure a more sustained reduction in feral pig populations.

Deer are known to occur as a transient population within the park but are restricted to small areas and low population densities. Control of deer is difficult due to a lack of effective and efficient control techniques.

The *Biosecurity Act 2015* and regulations provide specific legal requirements for the prevention, eradication or containment of state level priority weeds. These requirements apply equally to both public and privately owned land. A regional strategic weed management plan prepared under the Biosecurity Act identifies those pest plants that are being prioritised for management action, investment and compliance effort within the North West Local Land Services region (North West LLS 2017). These priorities will be implemented via the relevant NPWS pest management strategy.

The common prickly pear (*Opuntia stricta*) and other weed species are found as isolated infestations through the park. Bathurst burr (*Xanthium spinosum*) and Noogoora burr (*X.*

occidentale) occur around dams and along creeklines. These weeds are sprayed at appropriate times to suppress their populations.

Desired outcomes

- The impact of introduced species on native species and neighbouring lands is minimised.
- Small and isolated pest populations are controlled.

Management response

4.1.1 Continue weed control and pest animal control programs as outlined in pest management strategies relevant to the park.

4.1.2 Monitor for state level and regional level priority weeds and significant environmental weeds and treat any new outbreaks.

4.1.3 Work cooperatively with North West Local Land Services, Gunnedah Shire and Tamworth Regional councils and neighbours in implementing coordinated weed and pest animal control programs.

4.2 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 assists in developing 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 2013a).

Fire is a natural feature of many environments and is essential for the survival of some plant communities. However, inappropriate fire regimes can lead to the loss of particular plant and animal species and communities, and high frequency fires have been listed as a key threatening process under the BC Act (NSW SC 2000b).

There have been no recorded wildfires within the park. There is little evidence of fire scars or past wildfire events. This is consistent with the overall fire hazard for the majority of the park, which has been assessed as low or moderate. The vegetation in the park is long unburnt and the interval between fires is longer than the suggested interval for all vegetation communities. Attempts at prescribed burning since the park was reserved have failed due to the low fuel loads in many areas. Effective prescribed burning is only likely to be achieved once ground fuel levels have increased to a high level, for example after a season with good summer rainfall.

A fire management strategy that defines the fire management approach for the park has been prepared (OEH 2013c). The fire management strategy outlines the key assets within and adjoining Somerton National Park, including sites of natural and cultural heritage value and fire control advantages, such as management trails and water supply points. Almost the entire park is zoned as a land management zone in which the key objective is to conserve biodiversity and protect cultural heritage by applying biodiversity thresholds. Three small areas of strategic fire advantage zone are also identified along sections of the park's boundary. Hazard reduction programs will be conducted in accordance with fuel levels in the park and as outlined in the Somerton Fire Management Strategy.

NPWS maintains cooperative arrangements with surrounding landowners and the Rural Fire Service and is actively involved with Liverpool Range Bush Fire Management Committee. Cooperative arrangements include fire planning, fuel management and information sharing.

Hazard reduction programs, ecological burning proposals and fire trail works are submitted annually to the bush fire management committee.

Desired outcomes

- Life, property and natural and cultural values are protected from bushfire.
- Fire regimes are appropriate for conservation of plant and animal communities.
- Stakeholders participate in fire management planning and operations.

Management response

- 4.2.1 Manage fire in accordance with the fire management strategy for the park, and update this strategy to incorporate information from vegetation, native animal or cultural heritage surveys.
- 4.2.2 Conduct prescribed burns according to the fire management strategy for the park and monitor the response by native vegetation communities.
- 4.2.3 Continue to participate in Liverpool Range Bush Fire Management Committee. Maintain coordination and cooperation with the Rural Fire Service zone team, brigades and neighbours with regard to fuel management and fire suppression.

4.3 Isolation and fragmentation

The area surrounding Somerton National Park has been extensively cleared in the past, which has resulted in a high loss of biodiversity and fragmentation of habitat in the region. The park itself is somewhat isolated and less than 50% of the park boundary has a native vegetation buffer, the remainder being cleared agricultural land. It is important that any native vegetation buffers be preserved.

Long-term conservation of biodiversity depends upon the protection, enhancement and connection of remaining habitat across the landscape, incorporating vegetation remnants on both public and private lands. Nearby vegetated areas contribute to the habitat values of the park and provide ecological corridors to other vegetated areas. Maintaining the integrity of the remaining habitat within the park and, where possible, linking this to adjacent areas of vegetation to facilitate wildlife corridors is important in ensuring long-term viability of the park's biological values.

Desired outcomes

- Connectivity of the park with local woodland remnants is enhanced to allow native animal movement.
- A buffer of native vegetation is conserved where it exists.

Management response

- 4.3.1 Work with neighbours and North West Local Land Services to encourage conservation of remnant native vegetation in the vicinity of the park.

4.4 Climate change

Human-induced climate change is listed as a key threatening process under the BC Act (NSW SC 2000a) and habitat loss caused by human-induced greenhouse gas emissions is listed under the EPBC Act (TSSC 2001a).

The latest information on projected changes to climate are from the NSW and ACT Regional Climate Modelling (NARClIM) Project (OEH 2014). The climate projections for 2020–39 are described as ‘near future’ (or as 2030) and projections for 2060–79 are described as ‘far future’ (or as 2070). The snapshot shown in Table 2 is for the New England north–west region, which includes Somerton National Park.

Table 2: New England north–west region climate change snapshot

Projected temperature changes	
Maximum temperatures are projected to increase in the near future by 0.4–1.0°C	Maximum temperatures are projected to increase in the far future by 1.9–2.7°C
Minimum temperatures are projected to increase in the near future by 0.5–1.0°C	Minimum temperatures are projected to increase in the far future by 1.6–2.7°C
The number of hot days (i.e. > 35°C) will increase	The number of cold nights (i.e. < 2°C) will decrease
Projected rainfall changes	
Rainfall is projected to decrease over most of the region in winter	Rainfall is projected to increase in autumn
Projected Forest Fire Danger Index changes	
Average fire weather is projected to increase in summer, spring and winter	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 of habitats and ecosystems. The likelihood of these changes occurring is difficult to assess since it depends on the compounding effects of other pressures, particularly barriers to migration and pressure from feral animals. Species most at risk are those unable to migrate or adapt, particularly those with small population sizes or with slow growth rates.

Heavily cleared and fragmented ecosystems in the New England north–west region are likely to be at greater risk than more intact ecosystems. Climate change may add yet another pressure on these already highly stressed ecosystems. Warmer conditions are likely to favour weed species, which could increase in abundance and continue to alter the mix of species in understorey vegetation. More frequent fire is also possible with increasing temperatures, hastening the death of large, mature trees that many native animals depend for nesting and roosting (OEH 2011a).

In Somerton National Park the type of vegetation, namely dry sclerophyll woodland, is able to tolerate a wide range of climatic conditions and is, therefore, likely to be more resilient than other ecosystems. Programs to reduce the pressures arising from other threats, such as habitat fragmentation, invasive species and bushfires, will help reduce the severity of the effects of climate change.

Desired outcomes

- The impacts of climate change on natural systems are minimised.

Management response

4.4.1 Continue existing fire, pest and weed management programs and adapt them where required to minimise climate change–induced threats.

5. Management operations and other uses

5.1 Management facilities and operations

Somerton National Park has no secure, practical legal access. The park is accessed via neighbouring private property (Keatabri) to the north of the park under an agreement with the landowners.

In order to secure legal practical access for public and management purposes, NPWS may need to construct a road within existing Crown road reserves to the north–west or south–west of the park (see Figure 1), work with neighbouring landholders to secure an easement, or gain access through additions to the park.

The management trail network in the park is used for firefighting and pest operations. These trails are maintained to a four-wheel drive standard. A section of Northern Boundary Trail, and three sections of management trail in the north–east of the park, are vested in the Minister as Part 11 lands for the purpose of enabling neighbouring landholders to access their properties. These are known as Ministerial roads.

An existing bore and dam on the North West Trail provide water for firefighting by NPWS and for watering of stock by the neighbouring landowner (see below Section 5.2). There are also four dams in the park, which provide water for fire management.

The majority of the park boundary is fenced to a stock-proof standard, with the exception of a section on the eastern boundary. This section could allow stock to wander into the park.

5.2 Other non-NPWS uses

Three licensed apiary sites are located within the park. These sites are recognised as existing interests under the NPW Act as they pre-date the park's reservation. NPWS policy on beekeeping allows existing sites to continue but does not allow any new or additional sites. The European honeybee (*Apis mellifera*) can have adverse impacts on some native plants and animals (Paton 1996) including poor flower pollination and competition with native nectar feeders. Competition from feral honeybees has been listed as a key threatening process under the BC Act (NSW SC 2006). While managed honeybees were not the subject of this determination, it may be necessary to relocate existing bee sites where apiary activities result in unacceptable environmental impacts, user conflicts or are inconsistent with the park's management.

An existing bore on the North West Trail provides water for off-park stock watering. Ongoing use of the bore for this purpose needs to be licensed.

A former gravel quarry exists on Part 11 land in the south–west corner of the park but there is no vehicle access to this site from within the park. Rehabilitation of this site will occur by natural regeneration.

Desired outcomes

- Secure legal access is available to the park for management.
- Management facilities adequately serve management needs and have acceptable impact.
- Non-park uses are appropriately authorised.
- Ministerial roads are maintained where neighbours' primary access is through park.
- Domestic stock are excluded from the park.

- Apiary activities have minimal impacts.

Management response

- 5.1.1 Secure legal, practical access to the park for management purposes, over Crown land or via an easement.
- 5.1.2 Continue to maintain Ministerial roads in the park to facilitate access to neighbouring properties.
- 5.1.3 Maintain management trails shown on Figure 1.
- 5.1.4 Retain the dams and bore for firefighting water supply and maintain them as required. Use of the bore for non-NPWS purposes requires licensing under the NPW Act.
- 5.1.5 In conjunction with neighbours, maintain boundary fences to exclude domestic stock from the park. As required, enter into fencing agreements with neighbouring landowners in accordance with NPWS policy.
- 5.1.6 Continue to licence and manage the authorised apiary sites in the park in accordance with the NPWS policy. If a site compromises the environmental values of the area, it will be relocated in consultation with the licensee.

6. Implementation

This plan of management establishes a scheme of operations for Somerton National Park.

Identified activities for implementation are listed in Table 3. Relative priorities are allocated against each activity as follows:

- **High priority** activities are imperative to achieve the plan's objectives and desired outcomes and must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.
- **Medium priority** activities are necessary to achieve the objectives and desired outcomes but are not urgent.
- **Low priority** activities are desirable to achieve the objectives and desired outcomes but can wait until resources become available.
- **Ongoing** activities are undertaken on an annual basis or in response to an issue that arises.

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

Table 3: List of management responses

Management response		Priority
3.1 Geology, landscape and hydrology		
3.1.1	Undertake all works in a manner that minimises erosion and water pollution. Assess the Roslyn, Eastern and Middle trails and take action to mitigate any erosion.	High
3.2 Native plants		
3.2.1	Undertake systematic plant surveys to improve knowledge of plant values in the park.	Medium
3.2.2	Monitor the regrowth of cypress pine and other species formerly harvested in the park.	Low
3.3 Native animals		
3.3.1	Implement the relevant actions from the <i>Biodiversity Conservation Program</i> for threatened animals occurring in the park.	Medium
3.3.2	Undertake systematic animal surveys to improve knowledge of animal values in the park.	Medium
3.4 Aboriginal heritage		
3.4.1	Undertake an assessment for cultural sites and features prior to any ground disturbance work in the park.	Ongoing
3.4.2	Consult and involve the Red Chief and Tamworth local Aboriginal land councils and other relevant Aboriginal community organisations in protecting and managing Aboriginal sites, places and values, and interpreting places or values.	Medium
3.4.3	Work cooperatively with Aboriginal people to provide for access to Country for cultural purposes such as culture camps and the sharing of traditional knowledge.	Medium

Management response		Priority
3.5 Historic heritage		
3.5.1	Record any blazed survey trees and protect them as far as possible from fire and other hazards.	Medium
3.6 Visitor use, education and research		
3.6.1	Allow visitor access only with prior approval from NPWS.	High
3.6.2	Access for natural and cultural heritage field studies may be approved by NPWS. Vehicle access within the park for these purposes may be permitted on management trails, and limits on numbers and other conditions may be implemented to minimise impacts.	Low
4.1 Weeds and pest animals		
4.1.1	Continue weed control and pest animal control programs as outlined in pest management strategies relevant to the park.	High
4.1.2	Monitor for state level and regional level priority weeds and significant environmental weeds and treat any new outbreaks.	Medium
4.1.3	Work cooperatively with North West Local Land Services, Gunnedah Shire and Tamworth Regional councils and neighbours in implementing coordinated weed and pest animal control programs.	Medium
4.2 Fire		
4.2.1	Manage fire in accordance with the fire management strategy for the park, and update this strategy to incorporate information from vegetation, native animal or cultural heritage surveys.	High
4.2.2	Conduct prescribed burns according to the fire management strategy for the park and monitor the response by native vegetation communities.	High
4.2.3	Continue to participate in Liverpool Range Bush Fire Management Committee. Maintain coordination and cooperation with the Rural Fire Service zone team, brigades and neighbours with regard to fuel management and fire suppression.	Medium
4.3 Isolation and fragmentation		
4.3.1	Work with neighbours and North West Local Land Services to encourage conservation of remnant native vegetation in the vicinity of the park.	Low
4.4 Climate change		
4.4.1	Continue existing fire, pest and weed management programs and adapt them where required to minimise climate change-induced threats.	Ongoing
5.1 Management facilities and operations		
5.1.1	Secure legal, practical access to the park for management purposes, over Crown land or via an easement.	High
5.1.2	Continue to maintain Ministerial roads in the park to facilitate access to neighbouring properties.	High
5.1.3	Maintain management trails shown on Figure 1.	High

Management response		Priority
5.1.4	Retain the dams and bore for firefighting water supply and maintained them as required. Use of the bore for non-NPWS purposes will require licensing under the NPW Act.	Medium
5.1.5	In conjunction with neighbours, maintain boundary fences to exclude domestic stock from the park. As required, enter into fencing agreements with neighbouring landowners in accordance with NPWS policy.	Medium
5.1.6	Continue to licence and manage the authorised apiary site in the park in accordance with the NPWS policy. If a site compromises the environmental values of the area, it will be relocated in consultation with the licensee.	Medium

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