NSW NATIONAL PARKS & WILDLIFE SERVICE

Yurammie State Conservation Area

Plan of Management

Cover photo: Mines Trail entrance, Yurammie State Conservation Area. Photo: S. Dovey, NPWS.

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

Yurammie State Conservation Area is in the traditional Country of the Yuin People.

This plan of management was prepared by staff of the South Coast Branch of the NSW National Parks and Wildlife Service (NPWS).

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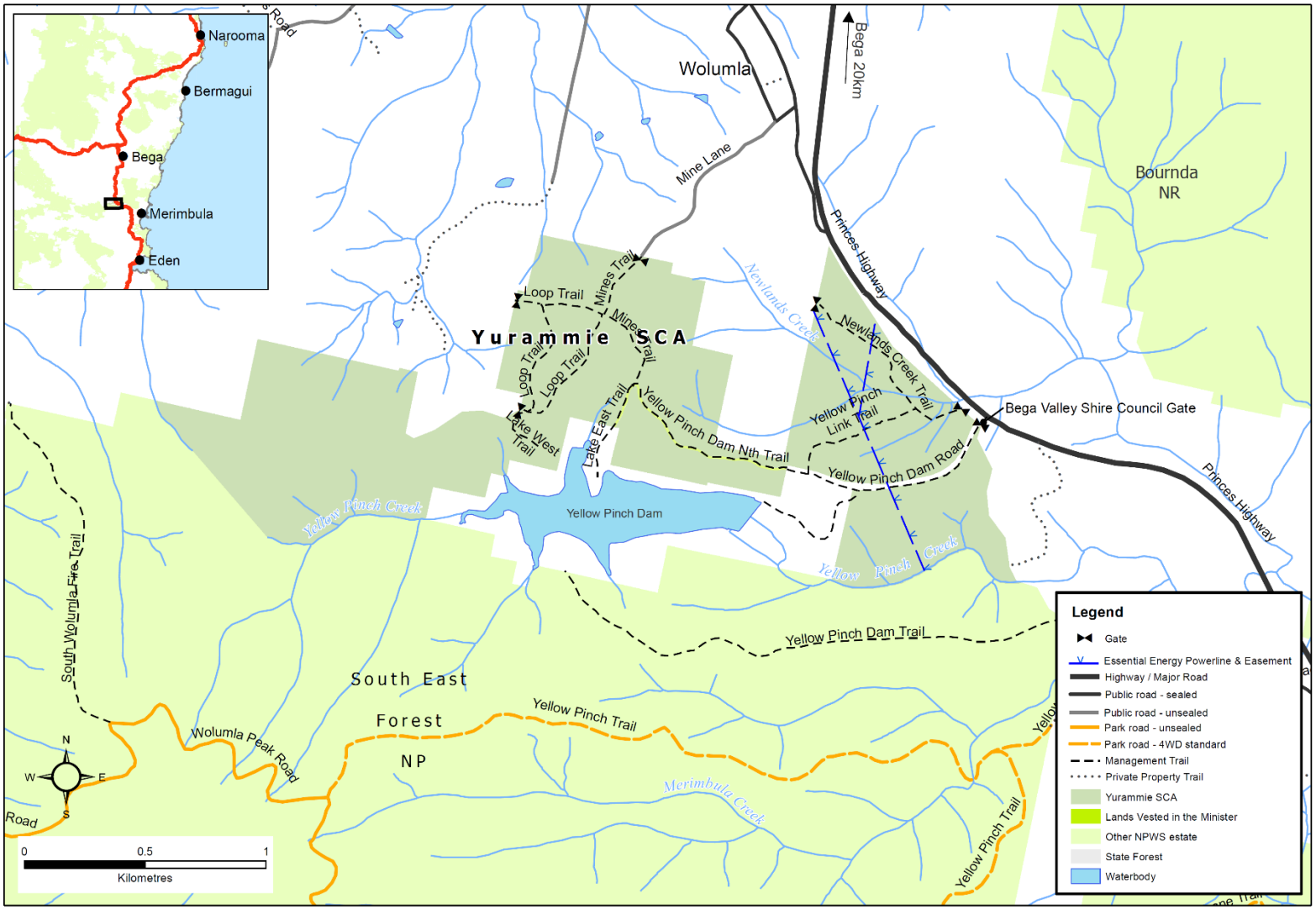

Figure 1 Yurammie State Conservation Area

1. Introduction

1.1 Location, reservation and regional setting

Features	Description
Location	Yurammie State Conservation Area ('the park') is located on the NSW South Coast, approximately nine kilometres west of Merimbula and approximately one kilometre south of the village of Wolumla.
Area	Yurammie State Conservation Area is 221 hectares in size. The park has a convoluted boundary that is approximately 13 kilometres in length. See Figure 1. The park also encompasses two roads vested in the Minister administering the *National Parks and Wildlife Act 1974* for the purposes of Part 11 of that Act to ensure continued access to a neighbouring water supply dam. These 'Ministerial roads' do not form part of the gazetted area of the park but their management is subject to this plan and relevant legislation (see Section 5.2).
Reservation date	Yurammie State Conservation Area was reserved in January 2003.
Previous tenure	Yurammie State Conservation Area (formerly Yurammie State Forest) was dedicated as Crown reserve under the provisions of the *National Park Estate (Land Transfers) Act 1998* (formerly known as the *Forestry and National Parks Estate Act 1998*) on 1 January 1999. In January 2003, following the Eden Comprehensive Regional Assessment process and regional forest agreement, the area was reserved as a state conservation area under the provisions of the *National Park Estate (Reservations) Act 2002*.
Regional Context	
Biogeographic region and catchment	Yurammie State Conservation Area lies within the South East Coastal Ranges subregion of the South East Corner Region and is part of a network of parks in the area, including South East Forest National Park and Bournda Nature Reserve. The park crosses two river catchments: the Bega River catchment to the north and the Towamba River catchment to the south.
Surrounding land use	Yurammie State Conservation Area is bordered by cleared freehold land to the north and forested freehold land to the east. The north–east tip of the park borders the Princes Highway. To the south, Yurammie State Conservation Area is bordered by Crown land including South East Forest National Park and Yellow Pinch Dam. The majority of the southern section of the park serves as a catchment area for Yellow Pinch Dam, managed by Bega Valley Shire Council and used to supply water to the town of Merimbula.
Other authorities	Yurammie State Conservation Area is located within the areas of the Bega Valley Shire Council, Bega and Eden local Aboriginal land councils and South East Local Land Services.

1.2 Statement of significance

Yurammie State Conservation Area is considered to be of significance for:

Biological values

- Habitat for known populations of the threatened eastern bentwing-bat
- Part of a corridor between the escarpment and coastal forests.

Heritage values

- The historic Wolumla Gold Field is a relatively rare example of a reef goldfield.

2. Management context

2.1 Legislative and policy framework

The management of state conservation areas in New South Wales is in the context of a legislative and policy framework, primarily the National Parks and Wildlife Act and Regulation, the *Biodiversity Conservation Act 2016* and the policies of the National Parks and Wildlife Service (NPWS).

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

A plan of management is a statutory document under the National Parks and Wildlife Act. Once the Minister has adopted a plan, the plan must be carried out and no operations may be undertaken in relation to the lands to which the plan relates unless they are in accordance with the plan. This plan will also apply to any future additions to Yurammie State Conservation Area. 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

State conservation areas are reserved under the National Parks and Wildlife Act to protect and conserve areas that:

- contain significant or representative ecosystems, landforms or natural phenomena or places of cultural significance
- are capable of providing opportunities for sustainable visitor or tourist use and enjoyment, the sustainable use of buildings and structures, or research
- are capable of providing opportunities for uses permitted under other provisions of the National Parks and Wildlife Act.

Under section 30G of the National Parks and Wildlife Act, 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 National Parks and Wildlife 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 or tourist 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
- provide for appropriate research and monitoring.

Land is reserved as a state conservation area primarily where mineral values preclude reservation as another category. The National Parks and Wildlife Act requires a review of the classification of state conservation areas every five years in consultation with the Minister administering the *Mining Act 1992*. Reviews were undertaken in 2008 and 2013 in which the status of Yurammie State Conservation Area remained unchanged.

2.3 Specific management directions

In addition to the general principles for the management of state conservation areas (see Section 2.2), the following specific management directions apply to the management of Yurammie State Conservation Area:

- Protect and manage the Aboriginal cultural values through consultation with Aboriginal communities.
- Protect and manage the historic values associated with early European settlement and use of the area by recording sites and assessing their significance.
- Manage fire regimes in accordance with the park's fire management strategy.
- Protect other natural values, especially areas of old-growth forest and habitat for threatened species, by limiting disturbance and implementing control programs for pest species.

3. Values

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

From 1995 to 2000, comprehensive regional assessments of the values and attributes of NSW's eastern forests were conducted. Information arising from these assessments formed the basis of a series of regional forest agreements. The vegetation protected in Yurammie State Conservation Area contributes to the conservation targets identified through this process.

Historical evidence of the mine workings of Wolumla Gold Field dating back to 1896 occurs in Yurammie State Conservation Area. The workings have significance in terms of their European cultural heritage. The site is a relatively rare local example of a predominantly reef goldfield. A preliminary mining heritage survey has indicated that, at a local level, Wolumla Gold Field has significance in terms of historical, scientific, social and aesthetic criteria.

3.1 Geology, landscape and hydrology

Yurammie State Conservation Area is located at the south–east end of the Lachlan Fold Belt that runs through eastern Australia as a complex series of metamorphosed Ordovician to Devonian sandstones, shales and volcanic rocks intruded by numerous granite bodies and deformed by four episodes of folding, faulting and uplift. The general structural trend in this region is north–south and the topography strongly reflects this (Sahukar et al. 2003). The eastern Lachlan Fold Belt has been called the Eden-Yalwal-Comerong rift zone (McIlveen 1975) and is associated with mineralisation. This structure is discontinuous, between five and 20 kilometres wide and extends for 320 kilometres from Cape Howe in the south to the Shoalhaven River west of Nowra in the north. It dates from the Devonian period, around 370 million years ago.

Yurammie State Conservation Area lies across the Eden-Yalwal-Comerong rift. The Yurammie and Kameruka Granodiorites of the Kameruka Supersuite underlie areas in the north of the park. However, the dominant geology in the park is the late Devonian silicic (rich in silica) sandstones of the Merimbula Group. The Merimbula Group sediments were deposited in shallow marine to terrestrial conditions and have been associated with significant deposits of fish and plant fossils (Osborne, Docker & Salem 1998). The area is prospective for silver and gold (DECC 2008).

Topography in the park is controlled by differential erosion of minerals rather than by structural geology.

The park encompasses three ridges in the Black Range. The ridge to the west runs east to west and is the highest point in the park peaking at approximately 360 metres above sea level. The second highest ridge, in the central section of the park, runs in a north–east to south–west direction and peaks at Policemans Cap Hill (approximately 330 metres above sea level). Several gravel roads meet on the saddle between the two peaks in an area locally known as 'Five Ways'. A lower ridge, rising to 250 metres above sea level, runs in a north–east to south–west direction in the eastern portion of the park. The eastern portion features low undulating rises and drops to the lowest point of the park at 130 metres above sea level.

The central ridge in the park forms the divide between the Bega River catchment and the Towamba River catchment. North and west of the central ridge, the park drains into Frogs

Hollow Creek, which flows into the Bega River. South and east of the central ridge, the park drains into Newlands and Yellow Pinch creeks in the Towamba River catchment; both travel south–east and in turn drain into Merimbula Creek. The southern boundary of the western section of the park borders Yellow Pinch Creek upstream of Yellow Pinch Dam.

The Yellow Pinch soil landscape occurs across the majority of the park. Soils associated with this soil landscape are thin lithosols (poorly developed, shallow soil) on resistant rocks. Deeper, coarser grained soil profiles occur on areas of colluvium (sediment deposited at the base of slopes). The soils in the park are susceptible to mass movement and sheet erosion (Tulau 1997).

3.2 Native plants and animals

The **vegetation** of Yurammie State Conservation Area is a diverse mixture of vegetation formations and associated plant communities: dry sclerophyll forests (shrubby and shrub/grass subformations), wet sclerophyll forests (shrubby subformation), rainforests and forested wetlands. Plant community types known in the park, as listed on the *NSW Vegetation Information System* (OEH 2014a), are shown in Table 1. The Vegetation Information System (VIS) is an integrated information system on the vegetation of New South Wales.

Table 1: Vegetation Information System plant community types in Yurammie SCA

VIS ID No.	Vegetation Information System plant community types
1338	Yellow Stringybark – Mountain Grey Gum Shrubby Open Forest on Slopes of the Hinterland Ranges, Southern South East Corner
1337	Yellow Stringybark – Mountain Grey Gum Moist Shrubby Open Forest on Coastal Ranges, Southern South East Corner Bioregion
913	Maiden's Gum – White Stringybark Shrubby Open Forest on Granitic Foothills, Southern South East Corner
948	Mountain Grey Gum Ferny Tall Moist Forest on Coastal Ranges, Southern South East Corner Bioregion
1153	Silvertop Ash – Messmate – Mountain Grey Gum Shrubby Open Forest of the Hinterland Ranges, Southern South East Corner Bioregion
1228	Swamp Gum – Ribbon Gum Open Forest on Flats of the Coastal and Hinterland Lowlands, Southern South East Corner
875	Grey Myrtle – Lilly Pilly Dry Rainforest in Dry Gullies, Sydney Basin and South East Corner
908	Lilly Pilly – Sweet Pittosporum – Rough Tree Fern Warm Temperate Rainforest in Steep Sheltered Gullies, Southern South East Corner
1109	River Peppermint – Rough-Barked Apple Moist Open Forest on Sheltered Sites, Southern South East Corner
828	Floodplain Wetlands of the Coastal Lowlands, Southern South East Corner
891	Ironbark – Woollybutt – White Stringybark Open Forest on Coastal Hills, South East Corner
834	Forest Red Gum – Rough-Barked Apple – White Stringybark Grassy Woodlands on Hills in Dry Valleys, Southern South East Corner Bioregion

See Appendix 1 for plant community type scientific names.

The vegetation community names used in the following detail come from Tozer et. al (2010), and the equivalent VIS numbers are provided in parentheses.

Small fragments of vegetation communities that correspond to two **threatened ecological communities** occur in the park:

- Southeast Lowland Grassy Woodland (VIS no. 834) corresponds to the Lowland Grassy Woodland in the South East Corner Bioregion Endangered Ecological Community listed under the Biodiversity Conservation Act. This community is poorly represented in the reserve system regionally (NPWS 2000) and is listed as critically endangered under the Environment Protection and Biodiversity Conservation Act.
- Southeast Floodplains Wetlands (VIS no. 828) corresponds to the Freshwater Wetlands on Coastal Floodplains Endangered Ecological Community listed under the Biodiversity Conservation Act. A very small area of this community occurs in the park adjacent to Yellow Pinch Dam.

Southeast Coastal Range Dry Shrub Forest (VIS no. 1338) dominates much of the park, occupying higher, dry slopes. This plant community type is dominated by a tall eucalypt canopy frequently exceeding 28 metres in height (Tozer et al. 2010). In Yurammie State Conservation Area this community includes secondary grasslands.

In the south and north–east of the park this dry shrub forest grades into disturbed stands of old-growth Southeast Hinterland Wet Shrub Forest (VIS no. 1337). This plant community occurs on moist sheltered slopes and gullies and usually comprises a diverse assemblage dominated by eucalypt species over 30 metres tall. One or two open strata of shrubs may be present and the dense ground cover is dominated by ferns. A variety of herbs and vines are also commonly found growing amongst the large clumps of ferns.

In the north of the western section of the park, Southeast Coastal Range Dry Shrub Forest grades into Southeast Escarpment Dry Grass Forest (VIS no. 913), interspersed with Southeast Hinterland Wet Fern Forest (VIS no. 948) in more sheltered, moist sites. The dry grass forest occurs at elevations between 150 and 700 metres above sea level on steep to moderate slopes, and is characterised by a tall eucalypt canopy with an open shrub layer and a ground cover dominated by grasses. The wet fern forest is also dominated by tall eucalypt species and a dense ground cover dominated by ferns (an open shrub layer may be present).

A small pocket of Southeast Inland Intermediate Shrub Forest (VIS no. 1153) occurs atop the Black Range at the very western edge of the park. It is characterised by eucalypt species frequently exceeding 28 metres tall and a relatively dense shrub layer around 10 metres tall. Bracken fern is usually present.

In the north–west of the eastern section of the park, Southeast Coastal Range Dry Shrub Forest and an area of Southeast Flats Swamp Forest (VIS no. 1228) occurs on drier slopes. The Southeast Flats Swamp Forest is a tall eucalypt forest with scattered small trees or shrubs over a continuous and diverse groundcover of forbs, ferns and grasses.

Occurrences of Temperate Dry Rainforest (VIS no. 875) are found on the lower slopes of the south of the park. In the lower slopes of the western section of the park, this community is found adjacent to Southeast Warm Temperate Rainforest (VIS no. 908). Warm temperate rainforest is characterised by a dense canopy with emergent eucalypts, numerous lianas and sporadic epiphytes. Shrub and tree fern species make up a prominent substratum, while the ground cover is variable and dominated by ferns.

Another of the grassy plant community types, Bega Wet Shrub Forest (VIS no. 1109), occupies sheltered slopes in the central portion of the park. This is a species-rich assemblage dominated by eucalypts but also includes small tree and shrub layers, a diverse ground cover and several vine species.

In the far eastern section of the park, Far South Coastal Foothills Dry Shrub Forest (VIS no. 891) occupies lower slopes of the park. It is characteristically dominated by eucalypts and *Corymbia* species, approximately 25 metres in height. Black she-oak (*Allocasuarina littoralis*) may form an open subcanopy, and an open shrub layer is usually present with a variety of species occurring with low frequency. The ground cover is characteristically dominated by tussock grasses.

Temperate Dry Rainforest and Southeast Warm Temperate Rainforest, which both occur in the park, are extremely sensitive to fire. Other plant communities in the park suffer reduced diversity when exposed to too-frequent burning which is exacerbated by disturbance and subsequent soil erosion (Tozer et al. 2010).

Several of the plant communities occurring in the park are significant either because they are not well reserved, have a restricted distribution and/or are subject to degradation by weed invasion, pest animals, and grazing outside of the park system. Southeast Warm Temperate Rainforest has a restricted distribution which is attributed to its susceptibility to fire (Keith & Saunders 1990). Remnants of Temperate Dry Rainforest are similarly highly sensitive to fire and, outside of the park system, they are likely to be subject to weed invasion. Southeast Escarpment Forest and Bega Wet Shrub Forest have both been extensively cleared and are not well represented in the park system (Tozer et al. 2010).

Vegetation communities in the east of the park, including Southeast Hinterland Wet Shrub Forest and Coastal Dry Shrub, have been cleared as a result of transmission lines and an adjacent oval. Other causes of degradation to these communities include: the cutting of tracks, the dumping of rubbish, weeds and firewood removal. The removal of deadwood and dead trees is a key threatening process which includes collecting fallen timber for firewood, and the removal of standing dead trees.

A more detailed native plant survey of Yurammie State Conservation Area has been undertaken in the Wolumla Gold Field area (Unwelt 2003). Potential habitat for the following threatened plants was identified: matted bush-pea bush (*Pultenaea pedunculata*), chef's cap correa (*Correa baeuerlenii*), Australian toadflax (*Thesium australe*) and Ralsto's leionema (*Leionema ralstonii*).

The Wolumla Gold Field survey also identified potential habitat and occurrences of threatened animals in and around the park. The vulnerable eastern bentwing-bat (*Miniopterus schreibersii oceanensis*) was recorded in Yurammie State Conservation Area roosting in disused underground mine workings. As part of this survey, two other threatened native animal species were considered likely to occur in Yurammie State Conservation Area: barking owl (*Ninox connivens*) and yellow-bellied glider (*Petaurus australis*). A tentative recording of a spotted-tailed quoll (*Dasyurus maculatus*) was also made. Nine other threatened native animal species were considered likely to occur in the study area, including powerful owl (*Ninox strenua*), sooty owl (*Tyto tenebricosa*), long-nosed potoroo (*Potorous tridactylus*), grey-headed flying-fox (*Pteropus poliocephalus*), square-tailed kite (*Lophoictinia isura*), glossy black-cockatoo (*Calyptorhynchus lathami*), brush-tailed phascogale (*Phascogale tapoatafa*), southern brown bandicoot eastern subspecies (*Isoodon obesulus obesulus*) and koala (*Phascolarctos cinereus*).

Twenty threatened animals have been recorded within a five kilometre radius of the park. These species are listed in Table 2. Yurammie State Conservation Area forms part of a network of wildlife corridors linking the tablelands to southern coastal regions.

Strategies for the recovery of threatened species, populations and ecological communities have been set out in a 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 2013c).

For threatened species likely to occur in Yurammie State Conservation Area, strategies include:

- liaison with agencies and utility providers regarding the potential impacts of habitat isolation through linear clearing for infrastructural works such as roads and powerlines
- planning to enhance connectivity and appropriate management of fire regimes.

Individual recovery plans may also be prepared for threatened species to consider management needs in more detail.

Table 2: Threatened animals recorded in and within a 5 kilometre radius of Yurammie SCA

Common name	Scientific name	BC Act status	EPBC Act status
Birds			
Brown treecreeper (eastern subspecies)	*Climacteris picumnus victoriae*	Vulnerable	-
* Dusky woodswallow	*Artamus cyanopterus cyanopterus*	Vulnerable	-
Flame robin	*Petroica phoenicea*	Vulnerable	-
Gang-gang cockatoo	*Callocephalon fimbriatum*	Vulnerable	-
Glossy black-cockatoo	*Calyptorhynchus lathami*	Vulnerable	-
Powerful owl	*Ninox strenua*	Vulnerable	-
Scarlet robin	*Petroica boodang*	Vulnerable	-
Sooty owl	*Tyto tenebricosa*	Vulnerable	-
Spotted harrier	*Circus assimilis*	Vulnerable	-
Varied sittella	*Daphoenositta chrysoptera*	Vulnerable	-
* White-bellied sea-eagle	*Haliaeetus leucogaster*	Vulnerable	-
Mammals			
Brush-tailed phascogale	*Phascogale tapoatafa*	Vulnerable	-
* Eastern bentwing-bat	*Miniopterus schreibersii oceanensis*	Vulnerable	-
Eastern false pipistrelle	*Falsistrellus tasmaniensis*	Vulnerable	-
Eastern freetail-bat	*Mormopterus norfolkensis*	Vulnerable	-
Greater broad-nosed bat	*Scoteanax rueppellii*	Vulnerable	-
Grey-headed flying-fox	*Pteropus poliocephalus*	Vulnerable	Vulnerable
Koala	*Phascolarctos cinereus*	Vulnerable	Vulnerable
Spotted-tailed quoll	*Dasyurus maculatus*	Vulnerable	Endangered
Yellow-bellied glider	*Petaurus australis*	Vulnerable	-

* Recorded within Yurammie SCA.
BC Act = Biodiversity Conservation Act.
EPBC Act = Environment Protection and Biodiversity Conservation Act.

Issues

- The long park boundary provides an increased threat of invasion of introduced plant and animal species with the potential to adversely affect native communities (see Section 4.1)
- The transmission lines/easements fragment habitat in the park
- There have been limited native plant and animal surveys undertaken in the park
- Fire sensitive or restricted communities are sensitive to wildfire
- Degradation has occurred in areas of the park from the cutting of tracks, rubbish dumping, weeds and firewood removal (see Section 3.5).

Desired outcomes

- The habitat and populations of native plants and animals including populations of threatened and other significant plant and animal species and ecological communities are conserved
- Negative impacts on native plants and animals, and in particular threatened species, are minimised
- The habitat and populations of all threatened plant and animals are protected and maintained
- The structural diversity and habitat values of the park are restored in degraded areas.

Management response

3.2.1 Implement relevant strategies in the *Biodiversity Conservation Program* for threatened species, populations and ecological communities present in the park.

3.2.2 Undertake habitat restoration in degraded areas.

3.2.3 Liaise with Bega Valley Shire Council to manage public access to sensitive areas of Yurammie State Conservation Area.

3.3 Aboriginal heritage

Yurammie State Conservation Area lies within the traditional Country of the Yuin People.

The land, water, plants and animals in 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.

Ethnohistoric and archaeological information for the region indicates that Aboriginal people utilised all parts of the landscape. Yurammie State Conservation Area is connected to the surrounding country and important Aboriginal sites by travelling routes that exist along the length of the coastline and extend inland to the escarpment and beyond to the tablelands and high country. Ridge lines were commonly used as pathways through rugged mountainous areas and river valleys provided access to coastal areas. Movement across the landscape took place for a variety of reasons including for food gathering, acquisition of raw materials, ceremonial meetings, religious occasions, trade and exchange, warfare and fighting, marriage and communications. The Black Range, which traverses Yurammie State Conservation Area, was part of a route used by Aboriginal people travelling between the Bega District and the hinterland (Goulding & Griffiths 2004).

Surveys of the area have found plentiful resources available in Yurammie State Conservation Area for Aboriginal use. Useful native animals present on the site include wallaby, echidna (*Tachyglossus aculeatus*), snakes and possums. Useful plants for food and technology include stringy bark (canoe), *Acacia* spp. (gum eaten), native cherry (*Exocarpos cupressiformis*) (edible fruits), false bracken fern (*Pteridium aquilinum*) (roasted rhizomes provide starch), tree fern (white starch from upper core of tree roasted or eaten raw, uncurled fronds edible), grass tree (*Xanthorrhoea* spp.), kangaroo grass (*Themeda* sp.), dianella (*Dianella* sp.), rushes and sedges (*Juncus, Carex* and *Cyperus* spp.), wombat berry vine (*Eustrephus latifolius*) (edible berries and roots swell to make edible yam), *Lomandra* spp. (weaving) and native geranium (*Geranium* sp.) (taproots cooked and eaten) (Unwelt 2003).

Aboriginal sites are places with evidence of Aboriginal occupation or 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.

Archaeological surveys conducted in various terrain around Policemans Cap Hill found four sites with small assemblages (most commonly isolated artefacts) of flaked stone artefacts. These were located on or near spur crests or in saddles. Flakes, broken flakes, retouched flakes, and cores were recorded, with raw materials including quartzite, chert, indurated siltstone and quartz. These raw materials are all potentially available in the local area.

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 will be consulted and involved in managing Aboriginal sites, places and related issues; and promoting and presenting Aboriginal culture and history.

Issues

- Surveys conducted to identify Aboriginal sites in Yurammie State Conservation Area have been limited in number and geographic range. Studies involving the local Aboriginal community members need to be conducted to identify and conserve other culturally significant areas in the park.

Desired outcomes

- Significant Aboriginal places and values are identified and protected
- Aboriginal people are involved in managing the Aboriginal cultural values of Yurammie State Conservation Area
- Impacts on Aboriginal heritage values are minimised
- Understanding of the Aboriginal heritage values of the park is improved.

Management response

3.3.1 Continue to consult and involve the Bega and Eden local Aboriginal land councils, other relevant Aboriginal community organisations and custodial families in the management of their Country, including the management of Aboriginal sites and places, and cultural and natural values.

3.3.2 Undertake an archaeological survey and cultural assessment prior to all new capital works which have the potential to impact Aboriginal sites or values.

3.3.3 Encourage further research into the Aboriginal cultural heritage values of the park with the Bega and Eden local Aboriginal land councils and other relevant Aboriginal community organisations.

3.4 Shared cultural 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 from the past and wish to conserve for current and future generations. Cultural heritage comprises places and items that may have historical, scientific, social, archaeological, architectural, natural or aesthetic significance. NPWS conserves the significant heritage features within the NSW park system.

Sawn timber production occurred in lowland areas of the Bega Valley between 1865 and 1898, coinciding with the period of maximum vegetation clearance in the catchment. The forests of the bioregion were logged to supply timber for the construction of houses, wharves and the railway system. Wattle species quickly established as secondary growth in the landscape following the removal of the tree canopy (Lunney & Leary 1988). This instigated the wattle bark industry for tanning purposes. Although beef cattle and sheep were the original focus of many landholders in the region, dairy farming surpassed these ventures as the principal agricultural industry of the area (Wolumla Centenary Committee 1982).

Mining played a large part in the history of the area. Yurammie State Conservation Area contains the remaining material evidence of the Wolumla Gold Field workings and associated settlement dating back more than 100 years. Gold was first discovered on the western side of Policemans Cap Hill by local residents, C Momsen and his son, in June 1896. The discovery resulted in a small-scale gold rush in Wolumla, and by 1897 gold was being mined from seven leases at Wolumla Gold Field. Miners excavated shafts and adits (horizontal entrances to mines) as they followed mineralised zones deep into the hillsides, piling mullock or waste rock on the surface adjacent to their excavations (Unwelt 2003).

The adits were mostly constructed into Mount Momsen, where most of the mines are located. The main gold producing mine, however, was the Pacific (or Eureka) Mine located just to the south of the mountain which produced 345 kilograms of gold. Rock was crushed on site in stamper batteries and processed with cyanide to extract the fine particles of gold (Department of Urban Affairs and Planning 1998).

Activity continued at the field until 1899. Total recorded production is 668 kilograms of gold and 102 kilograms of silver. Most of the gold won from Wolumla Gold Field was obtained between 1896 and 1909, during the first 14 years of activity on the site. Activity declined in subsequent years and the last gold lease was cancelled in 1963. However, the area continues to be of interest with exploration leases granted in the 1980s, 1990s and as recently as 2017.

The Wolumla Gold Field and its associated mining community is a relatively rare historical example of a predominantly reef goldfield, as opposed to the many recorded examples of alluvial goldfields. Mine workings at Wolumla Gold Field are of two main types: shafts and adits. No mining equipment remains on site, although the mine workings alone have significance in terms of their European cultural heritage.

A survey of the Wolumla Gold Field shows that the site contains the remnants of a range of mining, processing and living areas. Twenty-one adits and 43 shafts remain: some of these have collapsed while others still contain timber props, timber rails and timber sleepers. A number of building platforms also remain. Some are easily identified as dwelling areas and others contain features such as dams and dry stone walls that indicate processing areas. The presence of exotic plants associated with a building platform at Five Ways (where Mines Trail meets Yellow Pinch Dam North Trail) indicates a garden associated with this dwelling area. The scope of the mine workings suggests that many more dwelling sites would have been present along with associated processing areas. Several stone retaining walls have been identified and are thought to have been used in a number of ways, such as for dams, as foundations and/or retaining walls associated with dwellings.

A structure resembling an oven, possibly a baker's oven which may have been operated by Chinese miners, is also found in the area. Its significance is unknown, although similar structures at comparative goldfield sites were used for cooking, ore burning and forging. Other ruins scattered throughout the site include timber and corrugated iron ruins, glass bottle remnants, an oven door, mullock heaps, flumes, sluices and races.

An environmental site assessment of Wolumla Gold Field has recommended further research to assess the site's historical, scientific, social and aesthetic significance. Three recommendations have been made to allow for further protection of the site and to guide the future management of the area, including:

- developing an archaeological conservation management plan
- including the site in the *Bega Valley Shire Local Environment Plan*
- applying to register the site as a heritage item with the NSW State Heritage Inventory.

More specifically, further research is also required to assess the significance of the oven and to protect it if required.

Issues

- The historical, scientific, social and aesthetic significance of Wolumla Gold Field is not fully recognised.
- An archaeological conservation management plan is required to guide the future management of the area.
- The significance of the remains of an oven at Wolumla Gold Field Site is unknown and the need to protect it is thereby undetermined.

Desired outcomes

- Negative impacts on shared cultural heritage values are minimised.

- Understanding of the shared cultural heritage values of Yurammie State Conservation Area and particularly the Wolumla Gold Field is improved.
- The management of the area is guided by an archaeological conservation management plan.
- The significance of the oven at Wolumla Gold Field is recognised and protected if required.

Management response

3.4.1 Subject to expert advice, develop and implement an archaeological conservation management plan to guide the management of the Wolumla Gold Field.

3.5 Visitor use

NPWS parks and reserves provide a range of visitor opportunities. NPWS aims to ensure that visitors enjoy, experience and appreciate parks, at the same time as conserving and protecting park values.

Yurammie State Conservation Area generally experiences low levels of visitation. A high proportion of visitors to the park are as a result of its proximity to Wolumla village. Current visitation is centred on exploring the remains of the Wolumla Gold Field, bushwalking and cycling.

A significant proportion of visitors to Yurammie State Conservation Area come to explore the remains of Wolumla Gold Field, as the workings have significance in terms of their European cultural heritage dating back to 1896. Collapsed and open adits and shafts and other infrastructure from the mine are scattered throughout the middle portion of Yurammie State Conservation Area. Management measures, such as fencing around shafts, have been undertaken to restrict access into unsafe areas associated with the remains of Wolumla Gold Field to decrease the likelihood of visitor accidents. This is the only visitor infrastructure provided in the park.

Bushwalking allows visitors to be in close contact with the environment and can increase understanding and enjoyment of parks and the environment generally. There are no formal bushwalking tracks in Yurammie State Conservation Area, although visitors use management trails in the central section of the park for bushwalking. Given safety concerns related to the goldfield, bushwalkers will be encouraged to stay on management trails.

In line with NPWS policy and the *Sustainable Mountain Biking Strategy* (OEH 2011b) cycling is permitted on management trails in the park.

Much of the central portion of the park is within the catchment of Yellow Pinch Dam, a water supply dam managed by Bega Valley Shire Council. To protect water quality, the council does not allow certain recreational activities within the catchment of the dam. As such, no day use facilities (e.g. picnic areas) or camping areas will be provided, and horse riding will not be permitted in the park. The NPWS *Strategic Directions for Horse Riding in NSW National Parks* (OEH 2012b) provides a process for providing riding opportunities in eight priority regions in New South Wales, including the Far South Coast Region. Horse riding opportunities exist in numerous other national parks in the region.

A number of inappropriate activities occur in the park, for example, cutting of tracks, rubbish dumping, disposal of garden waste and firewood removal. To address these issues, reduce management costs, improve the amenity of the park and to protect water quality, vehicle access into the park will be prevented (see Section 5.1). Visitors can walk and cycle along the park's management trails.

Issues

- Former workings associated with the Wolumla Gold Field pose a safety risk to visitors.
- Inappropriate use of the park is having negative environmental impacts, including introduction of weeds (see Section 4.1).

Desired outcomes

- Risks to visitor safety are minimised.
- Visitor impacts on the remains of the Wolumla Gold Field are minimised.
- Visitor use of Yurammie State Conservation Area is appropriate and ecologically sustainable.
- Negative impacts of visitors on Yurammie State Conservation Area's environmental and cultural heritage values are minimised.

Management response

3.5.1 Monitor and maintain safety infrastructure associated with Wolumla Gold Field in Yurammie State Conservation Area.

3.5.2 Install signs to warn visitors of the potential dangers associated with former mine workings and to encourage visitors to remain on management trails.

3.5.3 Permit cycling on management trails in the park.

4. Threats

4.1 Pests

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

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

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

NPWS prepares pest management strategies which identify the operations and control actions undertaken by NPWS to meet the priorities from regional strategic pest and weed management plans. This also includes other important programs such as the *Biodiversity Conservation Program* (see Section 3.2).

The overriding objective of the NPWS pest management strategies is to minimise adverse impacts of introduced species on biodiversity and other park and community values while complying with legislative responsibilities. These strategies are regularly updated. Reactive programs may also be undertaken in cooperation with neighbouring land managers, in response to emerging issues.

European red fox (*Vulpes vulpes*) are known to occur near Yurammie State Conservation Area and are likely to also occur in the park. They are a threat to a number of threatened species known to occur in the area, including southern brown bandicoot, yellow-bellied glider and koala. Foxes suppress native animal populations, particularly medium-sized mammals, ground-nesting birds and freshwater turtles. Foxes have also been implicated in the spread of several weed species such as bitou bush (*Chrysanthemoides monilifera*) and blackberry (*Rubus fruticosus* agg.) and are known to prey on domestic stock, including lambs and poultry. They are declared priority pests throughout New South Wales.

Predation by the European red fox is a key threatening process under the Biodiversity Conservation Act (NSW SC 1998) and Environment Protection and Biodiversity Conservation Act (DoE 2009). The NSW fox threat abatement plan was initiated in 2001 and revised in 2010 (see OEH 2011a). The primary objective of the plan is to establish long-term control programs to protect priority threatened native animal species and populations. Foxes are being controlled at priority sites across New South Wales to protect biodiversity.

Feral cats (*Felis catus*) have been identified as an emerging threat in the park due to the proximity of the park to Wolumla, however, their abundance is not known.

A priority identified in the pest management strategy for Yurammie State Conservation Area (OEH 2012a) is the control of the regional priority weed African love grass (*Eragrostis curvula*) and the state priority weed fireweed (*Senecio madagascariensis*). These weeds occur in the

eastern section of Yurammie State Conservation Area along the powerline easement where they are impacting rainforest and have the potential to spread through the park.

Weeds are being introduced and spread in the park by illegal track cutting, dumping of garden waste and disposal of general domestic garbage. Dumped garden waste is a major source of new weed invasions in the park because lawn clippings and other garden waste are a rich source of weed propagules (e.g. seeds and cuttings). These garden weeds have the potential to out-compete native plant species, reduce biodiversity, and reduce habitat and scenic values. A range of weeds have been introduced to the park, including *Agapanthus* spp., tree of heaven (*Ailanthus altissima*) and periwinkle (*Vinca major*). There are heavy, localised infestations of these species in the central section of the park.

Tree of heaven was introduced to Australia by Chinese miners as an ornamental and shade plant. It is now generally regarded as a weed because of its suckering ability (DPI 2014).

Periwinkle, also known as blue periwinkle, is a creeping plant that is native to Europe and northern Africa and has been introduced to other continents as an ornamental plant or medicinal herb. In the higher rainfall regions of southern Australia it has escaped from cultivation and is invading native vegetation where its broad-leaved runners form a dense mat over other plants (CRC 2008).

Desired outcomes

- Pest plants and animals are controlled and where possible eliminated.
- Negative impacts of pest plants and animals on park values are minimised.

Management response

4.1.1 Manage pest species as outlined in pest management strategies relevant to the park.

4.1.2 Seek the cooperation of neighbours in implementing weed and pest control programs. Undertake control in cooperation with the Wolumla Landcare group, Bega Valley Shire Council and South East Local Land Services.

4.1.3 Monitor state and regional priority weeds and significant environmental weeds (including garden escapees) and their impacts. Treat any new outbreaks where possible.

4.1.4 Cooperate with neighbours and relevant authorities to implement fox control programs in accordance with the NSW threat abatement plan for predation by the red fox to limit fox predation on southern brown bandicoot, yellow-bellied glider and koala populations in the vicinity of Yurammie State Conservation Area.

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 loss of plant and animal species and communities, and high frequency fires have been listed as a key threatening process under the Biodiversity Conservation Act (NSW SC 2000b). Dry rainforest and warm temperate

rainforest communities in the park are highly sensitive to fire, while other plant communities such as Bega Wet Shrub Forest may suffer reduced diversity if fire is too frequent.

The fire history in Yurammie State Conservation Area is only partially known. The only recorded fire is a 33 hectare wildfire that burnt on and off park around the eastern end of Yellow Pinch Dam North Trail, in 1981–82.

A fire management strategy which defines the fire management approach for the park has been prepared (DECCW 2010b) and is updated periodically. The fire management strategy outlines the recent fire history of the park, key assets in and adjoining the park including sites of natural and cultural heritage value, fire management zones and fire control advantages such as management trails and water supply points. It also contains fire regime guidelines for conservation of the park's vegetation communities.

Fire frequencies consistent with the maintenance of existing species within vegetation communities can be defined by fire interval guidelines. These guidelines only address fire frequency. Variability in all aspects of the fire regime (frequency, intensity, season and extent) is important for maintaining greatest species diversity.

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

Desired outcomes

- Life, property and natural and cultural values are protected from fire.
- Fire regimes are appropriate for conservation of native plant and animal communities.
- Negative impacts of fire on natural and cultural heritage values are minimised.
- The potential for spread of bushfires on, from, or into the park is minimised.

Management response

4.2.1 Implement the fire management strategy for Yurammie State Conservation Area.

4.2.2 Continue to participate in the Bega Valley Bush Fire Management Committee and maintain cooperative arrangements with local Rural Fire Service brigades and surrounding landowners in regard to fuel management and fire suppression.

4.2.3 Suppress unplanned fires in Yurammie State Conservation Area in accordance with the fire management strategy.

4.2.4 Manage the park to protect biodiversity in accordance with the identified fire regimes in the fire management strategy.

4.2.5 Monitor the ability of native plants to recover between fires and review regimes where relevant.

4.2.6 Rehabilitate areas disturbed by fire suppression operations as soon as practicable after fire.

4.2.7 Submit annual hazard reduction programs to Bega Valley Bush Fire Management Committee.

4.3 Climate change

Human-induced climate change is listed as a key threatening process under the Biodiversity Conservation Act (NSW SC 2000a) and the associated loss of habitat is listed under the Environment Protection and Biodiversity Conservation Act (TSSC 2001).

The latest information on projected changes to climate are from the NSW and ACT Regional Climate Modelling (NARCliM) project (OEH 2014b). The climate projections for 2020–39 are described as 'near future', and projections for 2060–79 are described as 'far future'. The snapshot shown in Table 3 is for the NARCliM South East and Tablelands Region which includes Yurammie State Conservation Area (OEH 2014b).

The projected increases in temperature, number of hot days and severe fire weather days (OEH 2014b) are likely to influence bushfire frequency and intensity across the South East and Tablelands Region and result in an earlier start to the bushfire season (DECCW 2010a). Water stress, particularly during drought years, is likely to kill many trees in woodlands and forests. Stressed trees may also be more susceptible to additional pressure from insect attack and disease. While warmer and wetter summers may, in some years, compensate for winter and spring drying, substantial impacts such as tree deaths are likely to occur in drought years that are hotter than at present (DECCW 2010a).

Table 3: South East and Tablelands Region climate change snapshot

Projected temperature changes	
Maximum temperatures are projected to **increase** in the near future by 0.5–1.0°C	Maximum temperatures are projected to **increase** in the far future by 1.8–2.5°C
Minimum temperatures are projected to **increase** in the near future by 0.4–0.7°C	Minimum temperatures are projected to **increase** in the far future by 1.4–2.3°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** in spring and winter	Rainfall is projected to **increase** in summer and autumn
Projected Forest Fire Danger Index changes	
Average fire weather is projected to **increase** in summer and spring	Number of days with severe fire weather is projected to **increase** in summer and spring

Source: OEH 2014b.

Higher rainfall in summer and autumn may accelerate all forms of soil erosion across the region.

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

The potential impact of climate change on the park is difficult to assess since it depends on the compounding effects of other pressures, particularly barriers to migration and pressure from introduced animals. Low-lying coastal ecosystems and fragmented ecosystems are at highest risk.

NPWS will continue to manage threats from climate change to park values in a collaborative way with other land managers and park neighbours. Programs to reduce the pressures arising

from other threats, such as habitat fragmentation, invasive species, bushfires and pollution, will help reduce the severity of the effects of climate change.

Desired outcomes

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

Management response

4.3.1 Continue existing fire, pest and weed management programs to increase the park's ability to cope with future disturbances, including climate change, and encourage research into appropriate indicators to monitor the effects of climate change.

4.4 Isolation and fragmentation

An area in the north–west of Yurammie State Conservation Area has been cleared, which has resulted in a loss of biodiversity and fragmentation of habitat. Yurammie State Conservation Area is relatively small and subject to edge effects making it more vulnerable to disturbances. Ongoing fragmentation of habitat has occurred through the construction of trails in the north–east of the park and clearing for powerlines. The impacts of these activities need to be minimised wherever possible. Adjacent land uses place pressures on parks through the incursion of non-native plant and animal species.

Cooperative arrangements with neighbours are important for the management of access, fire, weeds and pest animals. Additionally, long-term conservation of biodiversity depends on the protection, enhancement and connection of remaining habitat across the landscape, incorporating vegetation remnants on both public and private lands.

Desired outcomes

- The negative impacts of isolation and fragmentation are reduced.

Management response

4.4.1 Maintain cooperative arrangements with nearby landholders regarding access, fire and pest species management.

4.4.2 Liaise with neighbours, Bega Valley Shire Council, Roads and Maritime Services and local landholders to encourage protection and enhancement of native vegetation on surrounding lands.

5. Management operations and other uses

5.1 Management facilities

In order to protect park values, to provide opportunities for visitors and to facilitate management operations, it is important to build and maintain appropriate infrastructure.

Management trails

The primary management facility in the park is the network of management trails, as shown on Figure 1. Trails not shown on Figure 1 are not required for park management purposes such as fire or pest management. These will be closed and allowed to revegetate.

Public vehicle access to the park will be prevented by gating the access routes. This is required to reduce the incidence of unauthorised activities in the park. The Bega Valley Shire Council gate at the intersection of Yellow Pinch Dam Road and the Princes Highway limits public vehicle access to Yellow Pinch Dam North Trail.

Desired outcomes

- Management facilities adequately serve management needs and have minimal impact.

Management response

5.1.1 Maintain management trails shown on Figure 1.

5.1.2 Close any other trail or road not shown on Figure 1 and allow to revegetate.

5.1.3 Gate and/or signpost management trails to restrict unauthorised access.

5.2 Non-NPWS uses/operations

Yellow Pinch Dam access

Yellow Pinch Dam North Trail and Lake East Trail are both ‘Ministerial roads’. The corridor of these roads is vested in the Minister administering the National Parks and Wildlife Act for the purposes of Part 11 of that Act. The roads were retained as Crown land and not included in the gazetted area of the park to ensure the continuation of access arrangements that existed immediately prior to reservation of the park. These arrangements allow Bega Valley Shire Council to access Yellow Pinch Dam. Use of these roads is subject to the provisions of this plan and the NPW Regulation.

Transmission lines

Essential Energy has three electricity transmission lines traversing the eastern portion of the park, as shown on Figure 1. These are accessed via Yellow Pinch Dam Road (or from roads within South East Forest National Park). These powerlines are not covered by a formal easement, however, in accordance with the *Electricity Supply Act 1995* a network operator can operate and use the existing powerlines whether or not there is a formal easement in place.

Clearings and vehicle trails along the powerlines have significant environmental and visual impacts. No access or maintenance agreement currently exists with Essential Energy but the company must comply with the National Parks and Wildlife Act and Regulation when carrying out any maintenance or replacement work, and will require NPWS consent for certain works.

Apiary sites

An apiarist maintains honeybee hives at one site in Yurammie State Conservation Area on a seasonal basis. 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.

Access to the apiary site is via Yellow Pinch Dam Road. Apiary sites that significantly compromise the environmental values of the park or pose a risk to visitor safety will be relocated in consultation with the licensee.

Mining and exploration

Exploration for minerals and petroleum, as well as mining and petroleum production, are permissible uses in state conservation areas. Currently, there is one exploration licence over Yurammie State Conservation Area.

The Department of Planning, Industry and Environment (Resources and Energy) will ensure that exploration and production proposals in state conservation areas comply with all statutory requirements, including any necessary environmental and heritage impact assessments and approvals.

Desired outcomes

- Yellow Pinch Dam North Trail and Lake East Trail provide for ongoing access to Yellow Pinch Dam by Bega Valley Shire Council.
- Transmission lines and their access trails are managed to minimise impacts on park values.
- The impact of apiary activities are minimised.
- Commercial and other non-NPWS uses and activities have minimal impact on park values and infrastructure.

Management response

5.2.1 'Ministerial roads' Yellow Pinch Dam North Trail and Lake East Trail (see Figure 1) are subject to the provisions of this plan and NPW Regulation.

5.2.2 Investigate, in consultation with Bega Valley Shire Council, the transfer of Ministerial roads to Bega Valley Shire Council.

5.2.3 Continue to license and manage the existing apiary site in Yurammie State Conservation Area in accordance with NPWS policy and licence conditions. If the site significantly compromises the environmental values of the area or leads to user conflicts, it may be relocated in consultation with the licensee.

5.2.4 Monitor use of the existing apiary site and if feasible remove any feral beehives that may establish in Yurammie State Conservation Area.

5.2.5 Ensure that applications for mining or mineral exploration in the park are subject to environmental impact assessment and approvals.

6. Implementation

This plan of management establishes a scheme of operations for Yurammie State Conservation Area. Implementation of this plan will be undertaken in the annual program of the NPWS.

Identified activities for implementation are listed in Table 4. Relative priorities are allocated against each activity as follows:

- **High priority** activities are those imperative to achievement of the objectives and desired outcomes. They must be undertaken in the near future to avoid significant deterioration in natural, cultural or management resources.
- **Medium priority** activities are those that are necessary to achieve the objectives and desired outcomes but are not urgent.
- **Low priority** activities are desirable to achieve management objectives and desired outcomes but can wait until resources become available.
- **Ongoing** is for activities that are undertaken on an annual basis or statements of management intent that will direct the management response if an issue arises.

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

Table 4: List of management responses

Action no.	Management response	Priority
3.2	**Native plants and animals**	
3.2.1	Implement relevant strategies in the *Biodiversity Conservation Program* for threatened species, populations and ecological communities present in the park.	Ongoing
3.2.2	Undertake habitat restoration in degraded areas.	Medium
3.2.3	Liaise with Bega Valley Shire Council to manage public access to sensitive areas of Yurammie State Conservation Area.	Medium
3.3	**Aboriginal heritage**	
3.3.1	Continue to consult and involve the Bega and Eden local Aboriginal land councils, other relevant Aboriginal community organisations and custodial families in the management of their Country, including the management of Aboriginal sites and places, and cultural and natural values.	Ongoing
3.3.2	Undertake an archaeological survey and cultural assessment prior to all new capital works which have the potential to impact Aboriginal sites or values.	Ongoing
3.3.3	Encourage further research into the Aboriginal cultural heritage values of the park with the Bega and Eden local Aboriginal land councils and other relevant Aboriginal community organisations.	Ongoing
3.4	**Shared cultural heritage**	
3.4.1	Subject to expert advice, develop and implement an archaeological conservation management plan to guide the management of the Wolumla Gold Field.	Low
3.5	**Visitor use**	
3.5.1	Monitor and maintain safety infrastructure associated with Wolumla Gold Field in Yurammie State Conservation Area.	High

Action no.	Management response	Priority
3.5.2	Install signs to warn visitors of the potential dangers associated with former mine workings and to encourage visitors to remain on management trails.	High
3.5.3	Permit cycling on management trails in the park.	Ongoing
4.1	**Pests**	
4.1.1	Manage pest species as outlined in pest management strategies relevant to the park.	High
4.1.2	Seek the cooperation of neighbours in implementing weed and pest control programs. Undertake control in cooperation with the Wolumla Landcare group, Bega Valley Shire Council and South East Local Land Services.	Ongoing
4.1.3	Monitor state and regional priority weeds and significant environmental weeds (including garden escapees) and their impacts. Treat any new outbreaks where possible.	Ongoing
4.1.4	Cooperate with neighbours and relevant authorities to implement fox control programs in accordance with the NSW threat abatement plan for predation by the red fox to limit fox predation on southern brown bandicoot, yellow-bellied glider and koala populations in the vicinity of Yurammie State Conservation Area.	Ongoing
4.2	**Fire**	
4.2.1	Implement the fire management strategy for Yurammie State Conservation Area.	Ongoing
4.2.2	Continue to participate in the Bega Valley Bush Fire Management Committee and maintain cooperative arrangements with local Rural Fire Service brigades and surrounding landowners in regard to fuel management and fire suppression.	Ongoing
4.2.3	Suppress unplanned fires in Yurammie State Conservation Area in accordance with the fire management strategy.	Ongoing
4.2.4	Manage the park to protect biodiversity in accordance with the identified fire regimes in the fire management strategy.	Ongoing
4.2.5	Monitor the ability of native plants to recover between fires and review regimes where relevant.	Ongoing
4.2.6	Rehabilitate areas disturbed by fire suppression operations as soon as practicable after fire.	Ongoing
4.2.7	Submit annual hazard reduction programs to Bega Valley Bush Fire Management Committee.	Ongoing
4.3	**Climate change**	
4.3.1	Continue existing fire, pest and weed management programs to increase the park's ability to cope with future disturbances, including climate change, and encourage research into appropriate indicators to monitor the effects of climate change.	Ongoing
4.4	**Isolation and fragmentation**	
4.4.1	Maintain cooperative arrangements with nearby landholders regarding access, fire and pest species management.	Ongoing
4.4.2	Liaise with neighbours, Bega Valley Shire Council, Roads and Maritime Services and local landholders to encourage protection and enhancement of native vegetation on surrounding lands.	Ongoing

Action no.	Management response	Priority
5.1	**Management operations**	
5.1.1	Maintain management trails shown on Figure 1.	Ongoing
5.1.2	Close any other trail or road not shown on Figure 1 and allow to revegetate.	Ongoing
5.1.3	Gate and/or signpost management trails to restrict unauthorised access.	Medium
5.2	**Non-NPWS uses/operations**	
5.2.1	'Ministerial roads' Yellow Pinch Dam North Trail and Lake East Trail (see Figure 1) are subject to the provisions of this plan and NPW Regulation.	Ongoing
5.2.2	Investigate, in consultation with Bega Valley Shire Council, the transfer of Ministerial roads to Bega Valley Shire Council.	Low
5.2.3	Continue to license and manage the existing apiary site in Yurammie State Conservation Area in accordance with NPWS policy and licence conditions. If the site significantly compromises the environmental values of the area or leads to user conflicts, it will be relocated in consultation with licensee.	Ongoing
5.2.4	Monitor use of the existing apiary site and if feasible remove any feral beehives that may establish in Yurammie State Conservation Area.	Ongoing
5.2.5	Ensure that applications for mining or mineral exploration in the park are subject to environmental impact assessment and approvals.	Ongoing

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Appendix 1 Plant community types

Plant community ID	Common name (community)	Scientific name (taxon)	Tozer et al. 2010
1338	Yellow Stringybark – Mountain Grey Gum Shrubby Open Forest on Slopes of the Hinterland Ranges, Southern South East Corner Bioregion	*Eucalyptus cypellocarpa, Eucalyptus muelleriana / Acacia falciformis, Cassinia aculeata, Cassinia longifolia, Leucopogon lanceolatus / Desmodium varians, Dianella caerulea, Dichelachne rara, Gonocarpus teucrioides*	Southeast Coastal Range Dry Shrub Forest (DSF e33)
1337	Yellow Stringybark – Mountain Grey Gum Moist Shrubby Open Forest on Coastal Ranges, Southern South East Corner Bioregion	*Eucalyptus cypellocarpa, Eucalyptus obliqua, Eucalyptus elata, Eucalyptus sieberi / Acacia cognata, Clematis aristata, Elaeocarpus reticulatus, Eustrephus latifolius / Dianella caerulea, Gonocarpus teucrioides, Goodenia ovata, Hierochloe rariflora*	Southeast Hinterland Wet Shrub Forest (WSF e14)
913	Maiden's Gum – White Stringybark Shrubby Open Forest on Granitic Foothills, Southern South East Corner Bioregion	*Eucalyptus bosistoana, Eucalyptus elata, Eucalyptus muelleriana, Eucalyptus baueriana / Acacia falciformis, Acacia mearnsii, Cassinia longifolia, Clematis aristata / Desmodium varians, Dichondra repens, Echinopogon ovatus, Hydrocotyle laxiflora*	Southeast Escarpment Dry Grass Forest (DSF e35)
948	Mountain Grey Gum Ferny Tall Moist Forest on Coastal Ranges, Southern South East Corner Bioregion	*Eucalyptus cypellocarpa, Eucalyptus muelleriana, Eucalyptus elata / Acacia falciformis, Coprosma quadrifida, Eustrephus latifolius, Indigofera australis / Blechnum cartilagineum, Calochlaena dubia, Doodia aspera, Echinopogon ovatus*	Southeast Hinterland Wet Fern Forest (WSF e13)
1153	Silvertop Ash – Messmate – Mountain Grey Gum Shrubby Open Forest of the Hinterland Ranges, Southern South East Corner Bioregion	*Eucalyptus obliqua, Eucalyptus cypellocarpa, Eucalyptus muelleriana, Eucalyptus agglomerata / Acacia obtusifolia, Billardiera scandens, Epacris impressa, Leucopogon lanceolatus / Dianella caerulea, Entolasia stricta, Gonocarpus teucrioides, Hierochloe rariflora*	Southeast Hinterland Intermediate Shrub Forest (WSF e 42)
1228	Swamp Gum – Ribbon Gum Open Forest on Flats of the Coastal and Hinterland Lowlands, Southern South East Corner Bioregion	*Eucalyptus ovata, Eucalyptus viminalis, Eucalyptus radiata subsp. radiata, Acacia melanoxylon / Leptospermum continentale / Blechnum nudum, Geranium potentilloides, Gonocarpus tetragynus, Hydrocotyle laxiflora*	Southeast Flats Swamp Forest (FoW e17)

Plant community ID	Common name (community)	Scientific name (taxon)	Tozer et al. 2010
875	Grey Myrtle – Lilly Pilly Dry Rainforest in Dry Gullies of the Sydney Basin Bioregion and South East Corner Bioregion	*Backhousia myrtifolia, Syzygium smithii / Ficus coronata, Pittosporum undulatum, Breynia oblongifolia, Cissus hypoglauca / Doodia aspera, Oplismenus imbecillis, Pseuderanthemum variabile*	Temperate Dry Rainforest (RF p40)
908	Lilly Pilly – Sweet Pittosporum – Rough Tree Fern Warm Temperate Rainforest in Steep Sheltered Gullies, Southern South East Corner Bioregion	*Syzygium smithii, Pittosporum undulatum, Doryphora sassafras, Polyscias murrayi / Acronychia oblongifolia, Aphanopetalum resinosum, Cissus hypoglauca, Coprosma quadrifida / Asplenium flabellifolium, Blechnum cartilagineum, Doodia aspera, Fieldia australis*	Southeast Warm Temperate Rainforest (RF e6e7)
1109	River Peppermint – Rough-barked Apple Moist Open Forest on Sheltered Sites, Southern South East Corner Bioregion	*Eucalyptus angophoroides, Eucalyptus baueriana, Eucalyptus globoidea, Eucalyptus viminalis / Acacia mearnsii, Cassinia trinerva, Clematis glycinoides var. glycinoides, Eustrephus latifolius / Carex longebrachiata, Desmodium varians, Dichondra repens, Echinopogon ovatus*	Bega West Shrub Forest (DSF e19)
828	Floodplain Wetlands of the Coastal Lowlands, Southern South East Corner Bioregion	*Eucalyptus ovata / Melaleuca ericifolia, Phragmites australis, Hymenanthera dentata / Acaena novae-zelandiae, Carex appressa, Centella asiatica, Eleocharis sphacelata*	Southeast Floodplain Wetlands (FoW e60)
891	Ironbark – Woollybutt – White Stringybark Open Forest on Coastal Hills, South East Corner Bioregion	*Eucalyptus tricarpa, Eucalyptus longifolia, Eucalyptus globoidea, Eucalyptus muelleriana / Acacia falciformis, Allocasuarina littoralis, Daviesia mimosoides, Hibbertia aspera / Dianella caerulea, Entolasia stricta, Hardenbergia violacea, Joycea pallida*	Far South Coastal Foothills Dry Shrub Forest (DSF e32B)
834	Forest Red Gum – Rough-barked Apple – White Stringybark Grassy Woodlands on Hills in Dry Valleys, Southern South East Corner Bioregion	*Eucalyptus baueriana, Eucalyptus bosistoana Angophora floribunda, Eucalyptus melliodora / Acacia mearnsii, Bursaria spinosa subsp. spinosa, Ozothamnus diosmifolius / Desmodium varians, Dichanthium sericeum, Dichelachne micrantha, Dichondra repens*	Southeast Lowland Grassy Woodland (GW e20p229)