TENNYSON CREEK FLORA RESERVE NO. 14

SITE SPECIFIC WORKING PLAN

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This site-specific working describes the important values of an individual flora reserve and identifies site-specific priorities for management. The plan is to be read in conjunction with the Flora Reserve Plan: Background and General Management document, which identifies Forestry Corporation's broad objectives and strategies for managing flora reserves. These two documents together form the flora reserve working plan in line with the requirements of section 25 of the *Forestry Act 2012*.

1. DETAILS OF THE RESERVE

1.1 LOCATION

Tennyson Creek Flora Reserve is located adjacent to the Victorian State Border in Bondi State Forest, approximately 37 kilometres south of Bombala. See Locality Map in Appendix 1.

1.2 KEY ATTRIBUTES OF THE RESERVE

Under the *Forestry Act 2012*, flora reserves are set apart for the preservation of native flora.

The reserve possesses the following identified attributes that are to be protected:

- stands of Indigenous forest types which occur on Bondi State Forest
- reference stands to allow enumeration of the effects of conversion of adjacent areas to *Pinus radiata* plantation
- areas of warm temperate rainforest.

1.3 GENERAL DESCRIPTION

Area

The reserve has an area of approximately 380 hectares.

Topography

Much of the reserve lies in the steep or very steep topography classes. Some eighty percent of the reserve consist of very steep western and eastern aspects in the Tennyson Creek Gorge, which drains southwards into Victoria. The remaining area, situated in the south-eastern corner of the reserve, consists of a steep eastern aspect which drains northwards into Jacksons Bog Creek.

The range in altitude of the reserve is from 670 metres to 1030 metres above sea level.

Geology and Soils

The whole area of the reserve lies on sedimentary phyllite, mudstone and siltstone rocks of the Upper Ordovician period.

Soils vary with topographic locations but are generally podsolised, having a very clayey "B" horizon, mostly red in colour. Soils on the ridges are very shallow, depth increasing down slope to exceed one metre on the lower slopes.

Climate

Being situated on the southeastern edge of the Monaro Tableland, the overall climate is very cool and moist.

Frosts have been known to occur on every date of the year except during the last week in December, and moderate snowfalls are not uncommon. The easterly stream of moist air from the sea brings long periods of damp conditions to the area and average rainfall is about 1100 mm a year.

Periods of high temperature exceeding 38° occur nearly every summer but rarely last for more than two consecutive days and are usually followed by cool misty conditions.

Vegetation / flora and fauna

Almost pure stands of Shining Gum (*Eucalyptus nitens*) dominate the upper part of the Jacksons Bog Creek catchment in the southeast area of the reserve. Large veteran trees dominate the lower slopes whilst the upper slopes support a very aesthetic pole-sized stand. The Shining Gum type supports an understorey of mainly tree ferns which form dense stands to a height of 4.5 metres.

On the exposed wide ridges and steep western slopes of the Tennyson Creek catchment Silvertop Ash (*E.* sieberi) dominates dry sclerophyll forest. Associate species include Narrowleaved Peppermint (*E. radiata*) and White Stringybark (*E. globoidea*). Messmate (*E. obliqua*) occurs as an occasional associate on the lower slopes and Mountain Grey Gum (*Eucalyptus cypellocarpa*) is associated in some of the moister sites. The understorey is generally of Hickory Wattle (*Acacia implexa*), with Silver Wattle (*A. dealbata*) and Tree Hakea also present in some of the moister sites. Austral Bracken (*Pteridium esculentum*) is often the dominant ground cover.

Brown Barrel (*E. fastigata*) dominates the wet sclerophyll forests growing on the more protected eastern and southern slopes of the Tennyson Creek Catchment. On the more elevated, less moist slopes, its main associate is Messmate with a Hazel Pomaderris understorey and ground cover of Austral Bracken and Fishbone Water Fern (*Blechnum nudum*). At times Silvertop Ash occurs with Hickory Wattle and Silver Wattle forming the understorey and Austral Bracken is again the major ground cover. On the moister sites Brown Barrel often occurs in pure stands over an understorey of Silver Wattle, Hazel Pomaderris, Musky Daisy Bush (*Olearia argophylla*) and Red-fruited Saw Sedge (*Gahnia sieberiana*) and very little ground cover. Where it is not in pure stands Brown Barrel is associated with Mountain Grey Gum, generally as a sub-dominant, where the understorey is comprised of Hickory Wattle, Blackwood (*Acacia melanoxylon*) and Blanket Leaf (*Bedfordia arborescens*) and a ground cover of various ferns and Fireweed Groundsel.

Appendices 2 and 3 outline a list of flora and fauna species known to occur within the reserve.

1.4 HISTORY

Aboriginal History and Cultural Values

Tennyson Creek Flora Reserve is situated within the traditional lands of the Yuin people and there are a number of Aboriginal cultural heritage sites located within or within the surrounding area. The area is part of a cultural landscape, used for everyday and ceremonial activities including seasonal food and resource gathering and also as a travel route from the mountains to the coast. Tangible aspects of these activities are evident as walking tracks and scar trees, the remains of camp sites with stone tools (isolated stone artefact and artefact scatters) as well as sacred features and places created at the beginning of time.

Post European Settlement

Harvesting

The most northern part of the reserve has been subject to a small amount of selective logging in past years, but the remainder of the reserve is in an unlogged condition.

Fire

Fire has been part of the Australian landscape for at least the last 60,000 years and most forests have experienced fire multiple times over many centuries. Controlled burning has been carried out at infrequent intervals along the ridge top forming the northern and eastern boundary of Tennyson Creek Gorge. The

reserve was impacted by wildfire during the 2019-20 summer season, with high to extreme fire intensity recorded, resulting in complete consumption of the canopy in some areas.

Establishment of Flora Reserve

Flora Reserve No. 79968, known as Tennyson Creek Flora Reserve, was set apart within Bondi State Forest No. 128 on the 3rd of November 1971 and notified in the Government Gazette on 26th November 1971. In a general renumbering of Flora Reserves in the Government Gazette of 24 July 1987, the reserve became Tennyson Creek Flora Reserve No. 14.

An area of approximately 84 hectares to the west of the flora reserve was officially gazetted as Tennyson Creek Flora Reserve No. 1 Extension on the 9th of November 1984.

1.5 CURRENT USAGE

The reserve receives limited recreational usage, primarily by visitors driving through the southeastern corner of the reserve on fire trails or around the boundary of the reserve on Tennyson Road. No recreational facilities are provided at the reserve and there is no intention to develop any facilities.

2. SYSTEM OF MANAGEMENT

2.1 OBJECTIVES OF MANAGEMENT

The objects of management will be to:

- preserve stands of the Indigenous forest types which occur on Bondi State Forest for educational, scientific, and aesthetic purposes
- maintain reference stands to allow enumeration of the effects of conversion of adjacent areas to *Pinus radiata* plantation
- protect existing flora and fauna
- protect areas of warm temperate rainforest
- protect Aboriginal cultural heritage sites and cultural values
- provide for the continued protection of the reserve and neighboring areas from damaging wildfire and other agents.

2.2 MANAGEMENT STRATEGIES

The broad management strategies and related actions to preserve native flora and improve the value and extent of habitat in State forest flora reserves are detailed in the Flora Reserve Management Plan: Background and General Management document, which is to be read in conjunction with this plan. Specific additional management strategies applied in this flora reserve may include:

- Property maintenance, through:
    - establishment and maintenance of appropriate fences, gates and signs
    - removal of unnecessary fencing
    - maintenance of roads and trails
    - restricting visitor use to walking trails for educational activities.
- Conservation and improvement of habitat, through:

- maintenance of native vegetation, which may include manipulation by mechanical means for habitat improvement
- regeneration of any cleared or degraded land, through plantings and natural recruitment
- removal of rubbish
- weed control
- management of human disturbance, including harvesting and other forest product operations
- retention of dead timber and other habitat resources
- management of fire, including prescribed or hazard reduction burning.

» Pest animal control.

Cultural Values

Explore opportunities for Aboriginal community involvement in managing the flora reserve.

Heritage items identified as of local or State significance, so appearing in Forestry Corporation's Heritage and Conservation Register (S.170 register) or State Heritage Register, will be maintained with due diligence in accordance with State Owned Heritage Management Principles (S.170A of the *Heritage Act 1977*).

Weeds

The vegetation within the flora reserve is in very healthy state with no obvious weeds present. As far as reasonably practicable, exotic species will be controlled, as detailed in section 2.4.

Trail maintenance

Maintenance of roads and trails is important to enable access to the forest for forest management, firefighting, tourism and recreation. Poorly maintained roads can also transport significant levels of sediment, increasing the turbidity of water within creeks. This consequently reduces habitat quality and aquatic biodiversity and can take significant periods of time to recover.

Permitted activities

Under the Forest Management Zoning (FMZ) system, Tennyson Creek Flora Reserve №. 14 is a dedicated reserve zoned FMZ 1 and therefore contributes to the dedicated reserve system in the Southern Region. Management will be consistent with the requirements of JANIS dedicated reserves.

The State Forests of NSW, Operational Circular 99/10 (1999) *Managing our Forests sustainably: Forest Management Zoning in NSW State Forests* describes the activities not permitted in FMZ 1.

The following activities may be permitted subject to standard conditions approved by the delegated Manager and consistent with the management objective for the reserve, relevant codes of practice, forest practices / operational circulars, protocols, licenses, and management / recovery plans:

» scientific studies (e.g., fauna surveys including trapping)

» maintenance of existing roads and fire trails

» maintenance of existing recreation facilities and upgrading where necessary to keep pace with demand while protecting the attributes of the reserve

» limited tree and or limb removal for safety, viewing or construction of facilities in areas used for recreation

» pest animal and weed control

» general access for activities such as bush walking, photography, and nature study

- beekeeping (existing set-down sites may be used)
- Aboriginal use of forest products consistent with the maintenance of the conservation attributes to be protected in the reserve
- fire management will be undertaken in a manner consistent with maintaining the health of forest ecosystems.

The following activities may only be permitted with special conditions:

- Construction of new roads. Construction will only be permitted in exceptional instances and consistent with the following principles:
    - no practical alternative is available
    - the attributes of the reserve will not be significantly affected by the road or fire trail
    - opportunity is provided for public comment on the proposal, obtained through advertising in the local newspaper
    - Ministerial approval is given for the proposal.

Mining

The reserve was exempted from the provisions of the *Mining Act 1992* by notice in the Government Gazette of 8th February 1980.

2.3 MANAGEMENT RESPONSIBILITY

The reserve will be administered by Forestry Corporation of NSW's Hardwood Forests Division, with the authority for decision making delegated to the Senior Manager Forest Stewardship or equivalent level manager.

2.4 MONITORING, REPORTING AND REVIEW

The region will monitor changes to the key attributes of the reserve and will review the effectiveness of the management strategies designed to protect those attributes and to achieve the management objectives.

The results of this monitoring, review and management response will be included in annual reporting processes.

The provisions of this working plan will be amended, if necessary, in light of the results of the monitoring program and / or legislative change and with the approval of the Minister administering the *Forestry Act 2012*.

3. LIST OF APPENDICES

- Appendix 1 – Locality Map
- Appendix 2 – Flora Species List
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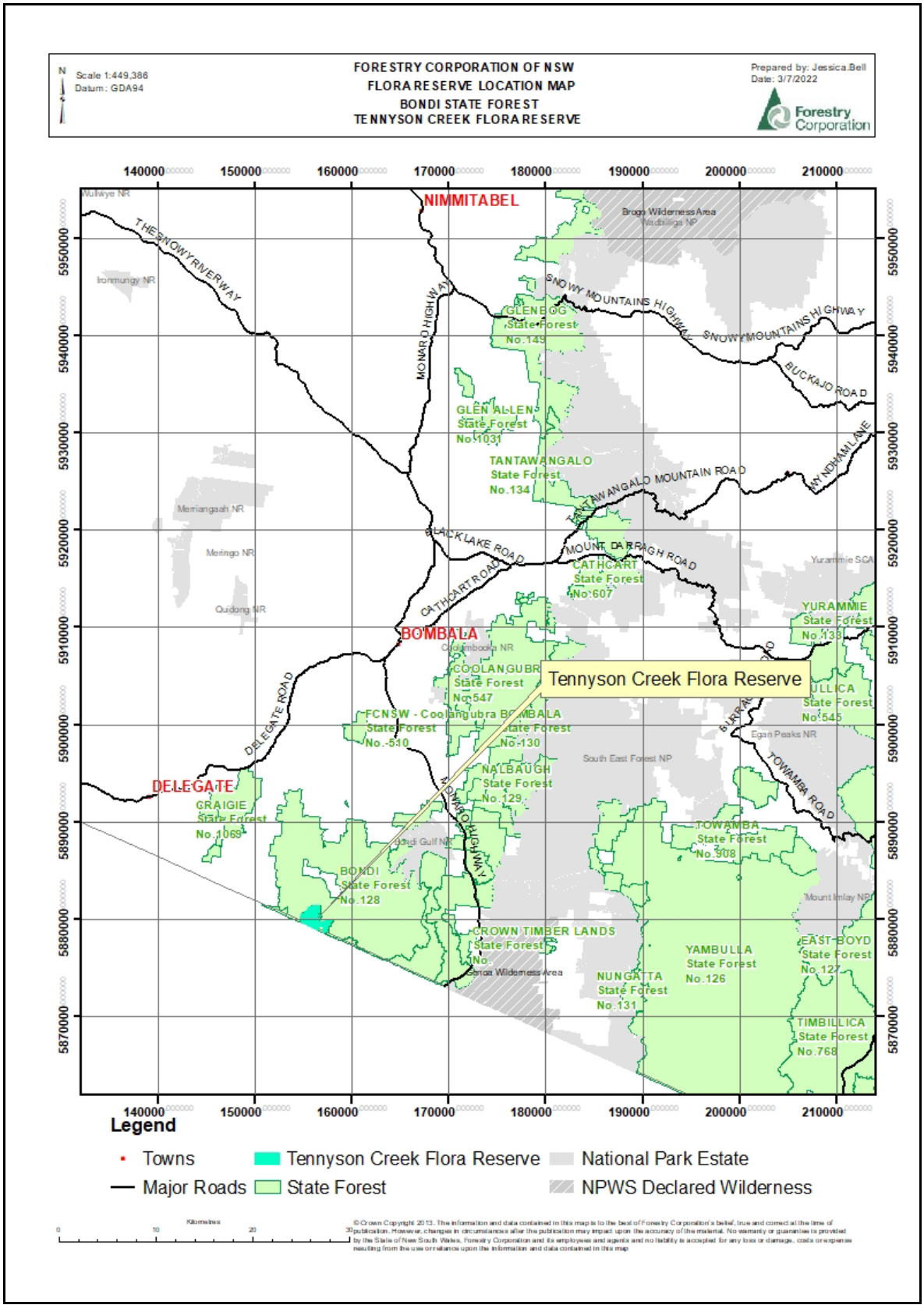
- Appendix 4 – Approval and Amendments from previous version

APPENDIX 1 – LOCALITY MAP



APPENDIX 2 – FLORA SPECIES LIST

Flora found within 5000m of Flora Reserve, desktop search undertaken March 2022

Scientific name
Acacia dealbata
Acacia falciformis
Acacia mucronata subsp. longifolia
Acaena novae-zelandiae
Agrostis spp.
Anthoxanthum odoratum
Asperula conferta
Asperula gunnii
Asperula scoparia
Baeckea utilis
Brachyscome graminea
Carex fascicularis
Carex gaudichaudiana
Carex inversa
Centaurium spp.
Cerastium spp.
Cirsium vulgare
Clematis aristata
Craspedia paludicola
Cyperus sphaeroideus
Deyeuxia accedens
Deyeuxia gunniana
Dianella tasmanica
Eleocharis gracilis
Epacris breviflora
Epilobium billardierianum subsp. hydrophilum
Epilobium gunnianum
Epilobium hirtigerum
Epilobium pallidiflorum
Eucalyptus cypellocarpa
Eucalyptus denticulata
Eucalyptus fastigata
Eucalyptus nitens
Eucalyptus obliqua
Eucalyptus radiata subsp. radiata

Scientific name
Eucalyptus sp. aff. radiata
Euchiton japonicus
Euchiton limosus
Euchiton spp.
Euphrasia scabra
Gahnia melanocarpa
Geranium neglectum
Gonocarpus micranthus
Gonocarpus micranthus subsp. micranthus
Gratiola peruviana
Hakea eriantha
Helichrysum rutidolepis
Hemarthria uncinata
Holcus lanatus
Hydrocotyle algida
Hydrocotyle pterocarpa
Hydrocotyle sibthorpioides
Hydrocotyle spp.
Hypericum japonicum
Hypochaeris radicata
Hypoxis hygrometrica
Juncus falcatus
Juncus spp.
Juncus usitatus
Leptospermum myrtifolium
Lilaeopsis polyantha
Lomandra longifolia
Lomatia fraseri
Lotus corniculatus
Lotus spp.
Lotus subbiflorus
Lotus uliginosus
Luzula spp.
Lythrum salicaria
Mimulus moschatus
Neopaxia australasica

Scientific name
Olearia argophylla
Olearia glandulosa
Olearia lirata
Olearia stellulata
Oreomyrrhis ciliata
Oreomyrrhis eriopoda
Plantago lanceolata
Platysace lanceolata
Poa ensiformis
Poa spp.
Polyscias sambucifolia
Polyscias sambucifolia subsp. sambucifolia
Pomaderris aspera
Prunella vulgaris
Pteridium esculentum
Ranunculus amphitrichus
Ranunculus pimpinellifolius
Rubus fruticosus sp. agg.
Rubus ulmifolius
Schoenus apogon
Scirpus polystachyus
Senecio glomeratus
Senecio pinnatifolius var. pinnatifolius
Spiranthes australis
Stellaria angustifolia
Stellaria pungens
Taraxacum officinale
Telopea oreades
Trifolium repens
Urtica incisa
Veronica subtilis
Xerochrysum bracteatum
Xerochrysum palustre

APPENDIX 3 – FAUNA SPECIES LIST

Fauna found within 5000m of Flora Reserve, desktop search undertaken March 2022

Amphibians and reptiles	
Scientific name	**Common name**
Pseudophryne bibronii	Bibron's Toadlet
Litoria ewingii	Brown Tree Frog
Limnodynastes peronii	Brown-striped Frog
Crinia signifera	Common Eastern Froglet
Limnodynastes dumerilii	Eastern Banjo Frog
Geocrinia victoriana	Eastern Smooth Frog
Litoria phyllochroa	Leaf-green Tree Frog
Litoria raniformis	Southern Bell Frog
Limnodynastes tasmaniensis	Spotted Grass Frog

Amphibians and reptiles	
Scientific name	**Common name**
Litoria verreauxii	Verreaux's Frog
Egernia saxatilis	Black Rock Skink
Tiliqua nigrolutea	Blotched Blue-tongue
Lampropholis delicata	Dark-flecked Garden Sunskink
Austrelaps ramsayi	Highland Copperhead
Anepischetosia maccoyi	Highlands Forest-skink
Austrelaps superbus	Lowland Copperhead
Lampropholis guichenoti	Pale-flecked Garden Sunskink
Carinascincus	Southern

Amphibians and reptiles	
Scientific name	**Common name**
coventryi	Forest Cool-skink
Eulamprus tympanum	Southern Water-skink
Notechis scutatus	Tiger Snake
Pseudemoia spenceri	Trunk-climbing Cool-skink
Pseudemoia entrecasteauxii	Tussock Cool-skink
Pseudemoia pagenstecheri	Tussock Skink
Saproscincus mustelinus	Weasel Skink
Drysdalia coronoides	White-lipped Snake

Birds	
Scientific name	**Common name**
Tachybaptus novaehollandiae	Australasian Grebe
Falco longipennis	Australian Hobby
Alisterus scapularis	Australian King-Parrot
Gymnorhina tibicen	Australian Magpie
Aegotheles cristatus	Australian Owlet-nightjar
Corvus coronoides	Australian Raven
Chenonetta jubata	Australian Wood Duck
Zoothera lunulata	Bassian Thrush
Elseyornis melanops	Black-fronted Dotterel
Falco berigora	Brown Falcon
Accipiter fasciatus	Brown Goshawk
Acanthiza pusilla	Brown Thornbill
Melithreptus	Brown-

Birds	
Scientific name	**Common name**
brevirostris	headed Honeyeater
Sturnus vulgaris	Common Starling
Phylidonyris pyrrhopterus	Crescent Honeyeater
Platycercus elegans	Crimson Rosella
Artamus cyanopterus cyanopterus	Dusky Woodswallow
Platycercus eximius	Eastern Rosella
Falcunculus frontatus frontatus	Eastern Shrike-tit
Acanthorhynchus tenuirostris	Eastern Spinebill
Psophodes olivaceus	Eastern Whipbird
Eopsaltria australis	Eastern Yellow Robin
Turdus merula	Eurasian Blackbird

Birds	
Scientific name	**Common name**
Carduelis carduelis	European Goldfinch
Cacomantis flabelliformis	Fan-tailed Cuckoo
Petroica phoenicea	Flame Robin
Callocephalon fimbriatum	Gang-gang Cockatoo
Pachycephala pectoralis	Golden Whistler
Cracticus torquatus	Grey Butcherbird
Strepera versicolor	Grey Currawong
Rhipidura albiscapa	Grey Fantail
Colluricincla harmonica	Grey Shrike-thrush
Passer domesticus	House Sparrow
Microeca fascinans	Jacky Winter
Sericornis magnirostra	Large-billed Scrubwren

Birds	
Scientific name	**Common name**
Dacelo novaeguineae	Laughing Kookaburra
Microcarbo melanoleucos	Little Pied Cormorant
Corvus mellori	Little Raven
Vanellus miles	Masked Lapwing
Falco cenchroides cenchroides	Nankeen Kestrel
Pachycephala olivacea	Olive Whistler
Anas superciliosa	Pacific Black Duck
Phalacrocorax varius	Pied Cormorant
Strepera graculina	Pied Currawong
Pycnoptilus floccosus	Pilotbird
Petroica rodinogaster	Pink Robin
Ninox strenua	Powerful Owl
Anthochaera carunculata	Red Wattlebird
Neochmia temporalis	Red-browed Finch
Climacteris erythrops	Red-browed Treecreeper
Myiagra inquieta	Restless Flycatcher

Birds	
Scientific name	**Common name**
Petroica rosea	Rose Robin
Rhipidura rufifrons	Rufous Fantail
Pachycephala rufiventris	Rufous Whistler
Todiramphus sanctus	Sacred Kingfisher
Ptilonorhynchus violaceus	Satin Bowerbird
Petroica boodang	Scarlet Robin
Zosterops lateralis	Silvereye
Tyto tenebricosa	Sooty Owl
Ninox novaeseelandiae	Southern Boobook
Pardalotus punctatus	Spotted Pardalote
Spilopelia chinensis	Spotted Turtle-Dove
Lophoictinia isura	Square-tailed Kite
Acanthiza lineata	Striated Thornbill
Cacatua galerita	Sulphur-crested Cockatoo
Malurus cyaneus	Superb Fairy-wren
Menura novaehollandiae	Superb Lyrebird

Birds	
Scientific name	**Common name**
Podargus strigoides	Tawny Frogmouth
Petrochelidon nigricans	Tree Martin
Aquila audax	Wedge-tailed Eagle
Hirundo neoxena	Welcome Swallow
Sericornis frontalis	White-browed Scrubwren
Nesoptilotis leucotis	White-eared Honeyeater
Melithreptus lunatus	White-naped Honeyeater
Cormobates leucophaea	White-throated Treecreeper
Corcorax melanorhamphos	White-winged Chough
Rhipidura leucophrys	Willie Wagtail
Caligavis chrysops	Yellow-faced Honeyeater
Acanthiza chrysorrhoa	Yellow-rumped Thornbill
Zanda funereus	Yellow-tailed Black-Cockatoo

Mammals	
Scientific name	**Common name**
Antechinus agilis	Agile Antechinus
Felis catus	Cat
Canis lupus	Dingo, domestic dog
Vulpes vulpes	Fox

Mammals	
Scientific name	**Common name**
Mus musculus	House Mouse
Oryctolagus cuniculus	Rabbit
Tachyglossus aculeatus	Short-beaked Echidna
Antechinus sp.	Unidentified

Mammals	
Scientific name	**Common name**
	Antechinus
Cervus sp.	Unidentified Deer

APPENDIX 4 – APPROVAL AND AMENDMENTS FROM PREVIOUS VERSION

In line with section 25 of the *Forestry Act 2012*, flora reserve working plans and any amendments must be approved by the Minister. This plan forms part of the working plans for each of the individual flora reserves listed in section 6.

This plan was approved by The Hon. Tara Moriarty MLC, Minister for Agriculture, Minister for Regional New South Wales and Minister for Western New South Wales

Date of approval: 6/9/23

Version	Changes	Approval details
2.0	» Reference to the *Flora Reserve Plan: Background and General Management* » Formatting updated » Change	» The Hon. Tara Moriarty MLC, Minister for Agriculture, Minister for Regional New South Wales and Minister for Western New South Wales, 6/9/23