



THE HUNTER LAKES FLORA RESERVE NO. 185

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 Management 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

The Hunter Lakes Flora Reserve is located along the northern escarpment of the Watagan mountain range approximately 30 kilometres west of Newcastle, within the northeast portion of the Sydney basin bioregion. Refer to Appendix 1 for a locality map.

1.2 KEY ATTRIBUTES OF THE RESERVE

The Hunter Lakes Flora Reserve possesses the following identified attributes that are to be protected:

- » Outstanding examples of mature forest types
- » Steep slope and rocky outcrops
- » Sandstone rock overhangs
- » Representative examples of forest ecosystems in the area.

1.3 GENERAL DESCRIPTION

Area

The reserve is 930 hectares in size and focused predominantly on protecting the rocky escarpment and steep slopes, adjacent to and complementing the Watagans National Park. Surrounding land uses include private land and a major road, Freemans Drive feeding onto a four-lane dual carriageway motorway. The site also partly contains the established Awaba Mountain Bike Park and associated cycle trails, portions of the Great North Walk and historic hang-gliding launch sites.

Topography

The reserve is dominated by the escarpment and steeply sloped hills ranging from 492 to 100 metres above sea level in Heaton, Awaba and Olney State Forests. Refer to Appendix 2 for a topographic map.

Geology and Soils

The geology of the area is sandstone, shale and conglomerate of the Narrabeen Group. The Ogilvie Soil landscape, found at the site, consists of shallow loams and sands with brown solodic soils, siliceous sands and sandy earths found on lower slopes and drainage lines. The landscape covers steep hills with the sandstone and conglomerate forming cliffs.

Climate

Warm-temperate.

Vegetation/Flora and Fauna

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A range of forest types occur within The Hunter Lakes Flora Reserve, including dry and wet sclerophyll types and rainforest. This includes:

- Grey Gum-Grey Ironbark-White Mahogany-Red Mahogany (RN 17 Type 60/62)
- Sydney Blue Gum (RN17 Type 46)
- Moist / Dry Blackbutt (RN17 Type 36/37)
- Myrtle (RN 17 Type 23)
- Smooth-barked Apple (RN17 Type 105)
- Spotted Gum-Ironbark/Grey Gum (RN17 Type 74)
- Blackbutt-Spotted Gum (RN 17 Type 39)
- Blue-leaved Stringybark (RN 17 Type 121)
- Round leaved Gum-Turpentine (RN 17 Type 52)
- Grey Gum-Stringybark (RN 17 64)

The area is known to contain habitat and potential habitat for a range of threatened species with features such as large hollow bearing trees common throughout the forest. In addition, significant patches of outcropping rock, escarpment, cliffs and overhangs exist offering habitat for Brush-tailed Rock Wallabies, microbat species, reptiles and frogs. Refer to Appendix 2 for Forest Type map and Appendix 3 and 4 for a list of flora and fauna species known to occur within the reserve.

1.4 HISTORY

The Hunter Lakes Flora Reserve was formally gazetted in 2007 with 211 hectares of Awaba State Forest, 536 hectares of Heaton State Forest and 187 hectares of Olney State Forest being included in the reserve.

Aboriginal History and Cultural Values

There is evidence of long use of the general area by Aboriginal people including the Awabakal, Wannangini and Darkinjung. The area is part of a cultural landscape, used for everyday and ceremonial activities including seasonal food and resource gathering, and as a travel route from the mountains to the coast. Tangible aspects of these activities are evident as walking tracks, habitation shelters within the many rock overhangs, rock art within shelters and on rock platforms, axe grinding grooves where water collects and scar trees as well as sacred features and places created at the being of time.

Discovery of coal in the early 1800s saw the arrival of European people to the general area. This led to the use of timber resources for the construction of railway lines, bridges, wharves, in the coalfields and as fuel for steam engines. The opening of the Watagan Road in 1945 saw an increased access to the timber resources.

Post European Settlement

Harvesting

The flora reserve area has been harvested for timber and regrown multiple times over many years. There is evidence of more than 80 years of timber harvesting in this location.

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. Recent fires in this location are summarised below:

- » 1997 – western portion – wildfire
- » 2001 – central / western portion – wildfire
- » 2017 – central / eastern-northern portion – wildfire
- » 2018 – southern portion – wildfire

1.5 CURRENT USAGE

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Public usage of this area is moderate to high, with existing established mountain bike trails, walking trails picnic areas and lookouts. The area is utilised by various members of the local Aboriginal community for cultural practice and for connection to country. Low levels of unauthorised activities such as motor bike trail riding have also been observed.

2. SYSTEM OF MANAGEMENT

2.1 OBJECTIVES OF MANAGEMENT

Under the *Forestry Act 2012*, flora reserves are set apart for the preservation of native flora. The objectives of Mines Road Flora Reserve are to:

- protect existing flora and fauna and significant amount of habitat trees and sensitive areas for fauna including habitat for the Brush-tailed Rock Wallaby
- maintain reference stands and provide for limited scientific study consistent with the protection of the area
- protect Aboriginal cultural heritage sites and cultural values.
- promote local communities' engagement in managing and protecting the flora reserve.

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 tracks.
- » Conservation and improvement of habitat, through:
 - maintenance of native vegetation
 - regeneration of any cleared or degraded land, through plantings and natural recruitment
 - weed control
 - removal of rubbish
 - exclusion of domestic grazing and management of human disturbance
 - retention of dead timber and other habitat resources
 - fire management including cultural burning in a manner consistent with maintaining the health of forest ecosystems and in consultation with local Aboriginal communities.
- » Pest animal control.

The full suite of management measures outlined are expected to provide benefits for all threatened species of flora and fauna in this reserve.

Cultural Values

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

Rubbish

The access to the viewing areas and picnic areas have led to significant amounts of rubbish being dumped in the forest over time and vandalism of infrastructure at times.

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Weeds

Low to moderate infestations of Lantana (*Lantana camara*), Fireweed (*Senecio madagascariensis*) and Crofton Weed (*Ageratina adenophora*) have been recorded within the flora reserve. Lantana growth can inhibit native understorey species and prevent regeneration of native species.

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, fire fighting, 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.

Trails will be maintained as detailed in section 2.4.

Other

There are low levels of unauthorised motor bike riding within the flora reserve, including adjacent to significant rock overhangs.

Permitted activities

Under the Forest Management Zoning (FMZ) system, The Hunter Lakes Flora Reserve No. 185, is a dedicated reserve zoned FMZ 1 and therefore contributes to the dedicated reserve system in the Lower North East Region. Management will be consistent with the requirements of JANIS dedicated reserves.

The latest operational guide detailing information not permitted in FMZ1 is published on the Forestry Corporation website.

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

- » scientific studies (eg, 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
- » ongoing operation of the tourism establishments, within the established boundary, will be managed by Forestry Corporation of NSW under a permit.

The following activities may only be permitted with special conditions:

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- » 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, either print or online, or by publication on a website considered reasonably likely to come to the attention of members of the local community
 - Ministerial approval is given for the proposal.

Mining

- There are no gazetted exemptions from provisions of the Mining Act for this this flora reserve.

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

Forestry Corporation 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 provisions of this working plan will be amended, if necessary, in light of the results of the monitoring program and or legislative change.

Visitor infrastructure and mountain bike park tracks will be monitored annually to ensure integrity of the structures and bike trails are being managed in accordance with permit conditions. This will also include monitoring of weed infestation and pest animal presence.

The results of this monitoring will be reported, made available for review and used for future improvement of management programs.

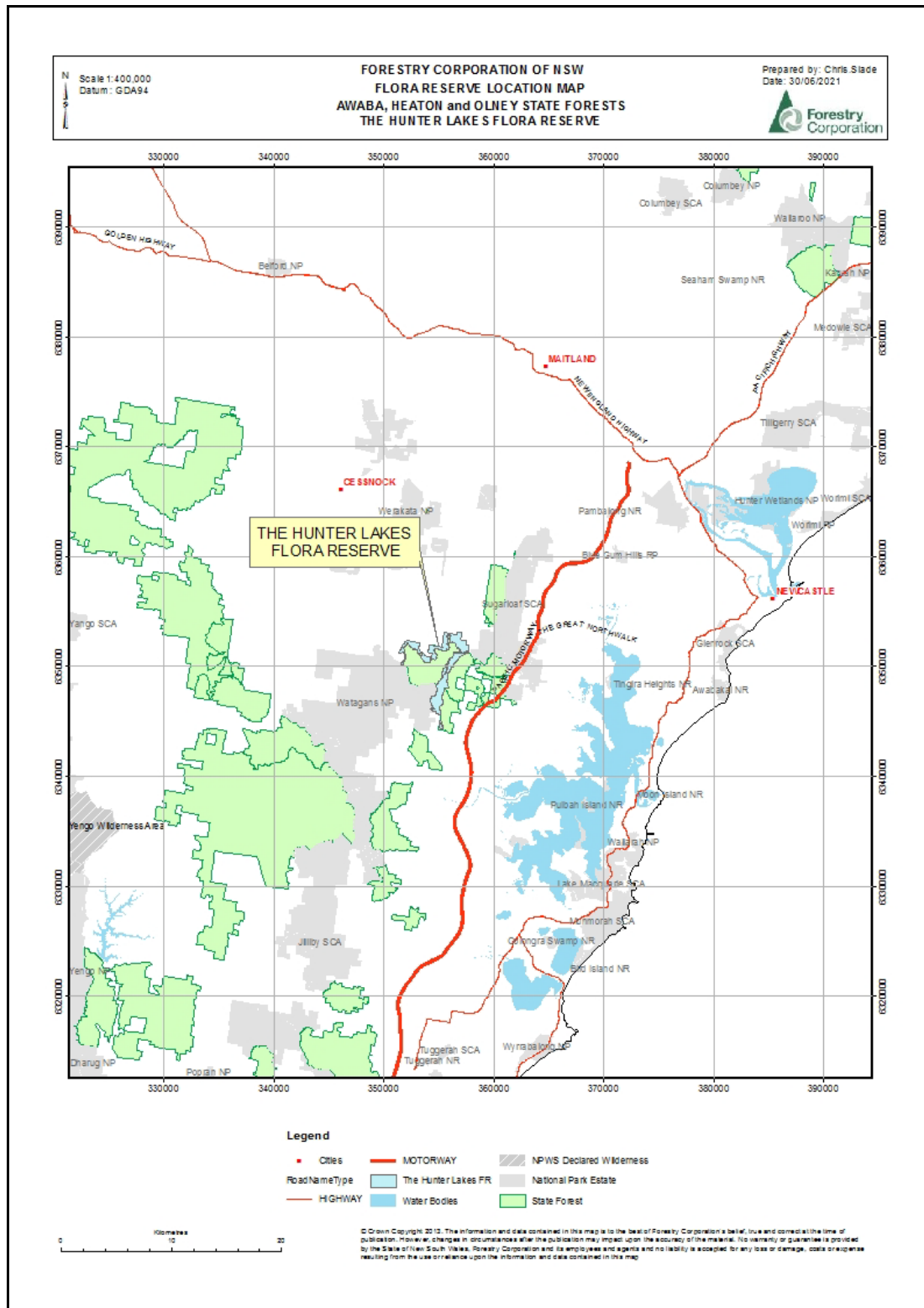
3. LIST OF APPENDICES

- » Appendix 1 – Locality Map
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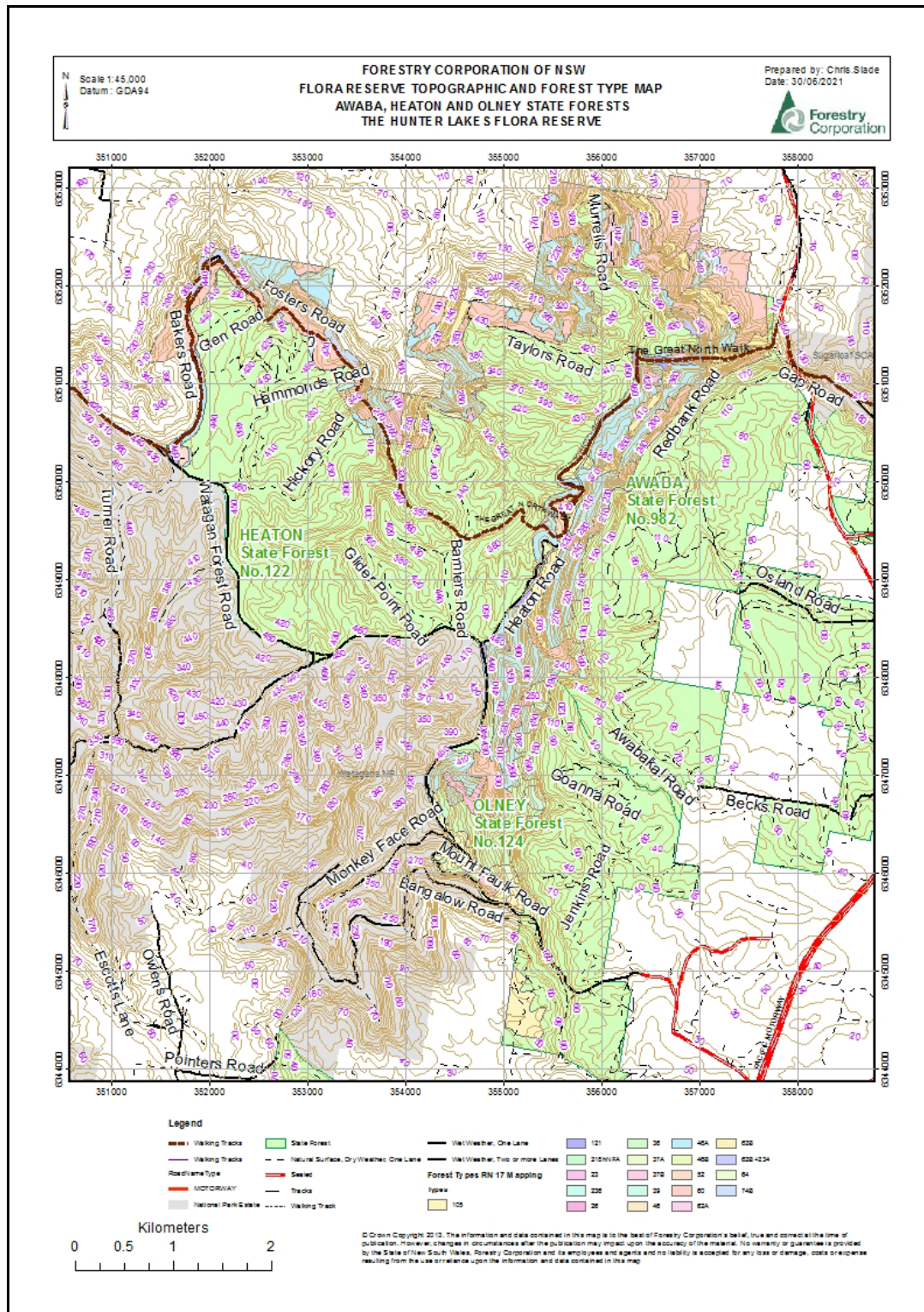
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APPENDIX 1 – LOCALITY MAP



APPENDIX 2 – TOPOGRAPHIC AND FOREST TYPE MAP



APPENDIX 3 – FLORA SPECIES LIST

Flora species		
<i>Brunoniella australis</i>	<i>Elaeodendron australe</i>	<i>Drypetes australasica</i>
<i>Pseudernathenthemum variabile</i>	<i>Maytenus silvestris</i>	<i>Glochidion ferdinandia</i> var <i>ferdinandi</i>
<i>Adiantum aethiopicum</i>	<i>Pollia crispate</i>	<i>Omalanthis populifolius</i>
<i>Adiantum formosum</i>	<i>Dichondra repens</i>	<i>Phyllanthus virgatus</i>
<i>Adiantum silvaticum</i>	<i>Aphanopetalum resinosum</i>	<i>Eupomatia laurina</i>
<i>Cheilanthes sieberi</i>	<i>Caldcluvia paniculosa</i>	<i>Senna acclinis</i>
<i>Pellaea falcata</i>	<i>Callicoma serratifolia</i>	<i>Austrosteensia blackii</i>
<i>Arthropodium milleflorum</i>	<i>Ceratopetlum apetulum</i>	<i>Daviesia squarrosa</i>
<i>Centella asiatica</i>	<i>Schizomeria ovata</i>	<i>Daviesia ulicifolia</i> subsp <i>ulicifolia</i>
<i>Hydrocotyle laxiflora</i>	<i>Cyathea australis</i>	<i>Desmodium rhytidophyllum</i>
<i>Platysace lanceolata</i>	<i>Cares spp</i>	<i>Desmodium varians</i>
<i>Parsonsia straminia</i>	<i>Gahnia aspera</i>	<i>Dillwynia retorta</i>
<i>Gymnostachys anceps</i>	<i>Gahnia clarkei</i>	<i>Glycine clandestina</i>
<i>Astrotricha latifolia</i>	<i>Lepidosperma laterale</i>	<i>Gompholobium latifolium</i>
<i>Astrotricha longifolia</i>	<i>Dennstaedtia davalliodes</i>	<i>Hardenbergia violacea</i> <i>Indopgophra australis</i>
<i>Polyscias elegans</i>	<i>Hypolepis meulleri</i>	<i>Kennedia rubicunda</i>
<i>Polyscias sambucifolia</i>	<i>Pteridium esculentum</i>	<i>Podolobium ilicifolium</i>
<i>Archontophoenix cunninghamiana</i>	<i>Calochloena dubia</i>	<i>Pultenaea euchila</i>
<i>Livistona australis</i>	<i>Discksonia antarctica</i>	<i>Pultenaea palaecea</i>
<i>Asplenium attenuatum</i>	<i>Hibbertia aspera</i>	<i>Pultenaea spinosa</i>
<i>Asplenium flabellifolium</i>	<i>Hibbertia dentata</i>	<i>Pultenaea villosa</i>
<i>Brachycome graminea</i>	<i>Hibbertia pedunculata</i>	<i>Acacia elata</i>
<i>Cassinia arcuate</i>	<i>Hibbertia scandens</i>	<i>Acacia falcata</i>
<i>Ozothamnus diosmifolius</i>	<i>Discorea transversa</i>	<i>Acacia implexa</i>
<i>Sigesbeckia orientalis</i> subsp. <i>Orientalis</i>	<i>Doryanthes exclesia</i>	<i>Acacia irroata</i> subsp <i>irrorate</i>
<i>Cyanthillium cinereum</i>	<i>Lastreopsis decomposita</i>	<i>Acacia longifolia</i>
<i>Youngia japonica</i>	<i>Lastreopsis microsora</i>	<i>Acacia maidenii</i>
<i>Doryphora sassafras</i>	<i>Polystichum australiense</i>	<i>Acacia matthewii</i>
<i>Diplazium austral</i>	<i>Polystichum formosum</i>	<i>Acacia mytifolia</i>
<i>Pandorea pandorana</i> subsp. <i>Pandorana</i>	<i>Diosporus australis</i>	<i>Acacia parvipinnula</i>
<i>Blechnum ambiguum</i>	<i>Elaeocarpus obovatus</i>	<i>Acacia prominens</i>
<i>Blechnum cartilagineum</i>	<i>Lecupogon biflorus</i>	<i>Acacia schinoides</i>
<i>Blechnum indicum</i>	<i>Leucopogon lanceolatus</i>	<i>Acacia stricta</i>
<i>Belchnum pattersonii</i> subsp <i>pateronii</i>	<i>Leucopogon spp</i>	<i>Acacia ulicifolia</i>
<i>Doodia aspera</i>	<i>Trochocarpa laurina</i>	<i>Sticherus flabellatus</i>
<i>Capparis arborea</i>	<i>Breynia oblongifolia</i>	<i>Sticherus lobatus</i>
<i>Allocasuarina torulosa</i>	<i>Cloaxylon australe</i>	<i>Geranium homeanum</i>

Flora species		
<i>Goodenia heterophylla</i>	<i>Acmena smithii</i>	<i>Ligustrum sinense</i>
<i>Goodenia ovata</i>	<i>Angophora costata</i>	<i>Notelaea longifolia</i>
<i>Goodenia spp</i>	<i>Angophora floribunda</i>	<i>Ranunculus spp</i>
<i>Gonocarpus teucriodes</i>	<i>Austromyrtus acmeniodes</i>	<i>Acianthus formicatus</i>
<i>Hymenophyllum austral</i>	<i>Backhousia myrtifolia</i>	<i>Bulbophyllum shepherdii</i>
<i>Patersonia sericea</i>	<i>Callistemon linearis</i>	<i>Caladenia catenata</i>
<i>Juncus spp</i>	<i>Corymbia gummifera</i>	<i>Calanthe triplicata</i>
<i>Plectranthus parviflorus</i>	<i>Corymbia maculata</i>	<i>Corybas pruinosis</i>
<i>Teucrium corymbosum</i>	<i>Eucalyptus acmenoides</i>	<i>Cymbidium suave</i>
<i>Cassytha glabella</i>	<i>Eucalyptus agglomerata</i>	<i>Dendrobium tetragonum</i>
<i>Cassytha pubescens</i>	<i>Eucalyptus amplifolia</i>	<i>Plectorrhiza tridentata</i>
<i>Cryptocarya glaucescens</i>	<i>Eucalyptus botryoides</i>	<i>Pterostylis longifolia</i>
<i>Cryptocarya microneural</i>	<i>Eucalyptus capitellata</i>	<i>Pterostylis nutans</i>
<i>Endiandra sieberi</i>	<i>Eucalyptus crebra</i>	<i>Pterostylis reflexa</i>
<i>Neolitsia dealbata</i>	<i>Eucalyptus deanei</i>	<i>Todea barbara</i>
<i>Lindsaea linearis</i>	<i>Eucalyptus eugenoides</i>	<i>Dianella caerulea var caerulea</i>
<i>Lindsaea microphylla</i>	<i>Eucalyptus fibrosa</i>	<i>Billardiera scandens var scandens</i>
<i>Lobelia dentata</i>	<i>Eucalyptus globoidea</i>	<i>Bursaria spinosa</i>
<i>Pratia purpurascens</i>	<i>Eucalyptus grandis</i>	<i>Citriobatus pauciflorus</i>
<i>Lomandra confertifolia</i>	<i>Eucalyptus microcorys</i>	<i>Pittosporum revolutum</i>
<i>Lomandra filiformis</i>	<i>Eucalyptus paniculata subsp paniculata</i>	<i>Pittosporum revolutum</i>
<i>Lomandra glauca</i>	<i>Eucalyptus pilularis</i>	<i>Pittosporum undulatum</i>
<i>Lomandra longifolia</i>	<i>Eucalyptus piperita</i>	<i>Aristida spp</i>
<i>Lomandra multiflora</i>	<i>Eucalyptus propinqua</i>	<i>Echinopogon caespitosus</i>
<i>Lomandra obliqua</i>	<i>Eucalyptus punctata</i>	<i>Entolasia marginate</i>
<i>Lomandra spicata</i>	<i>Eucalyptus resinifera subsp resinifera</i>	<i>Entolasia stricta</i>
<i>Amyema pendulum</i>	<i>Eucalyptus robusta</i>	<i>Hierochloe rariflora</i>
<i>Eustrephus latifolius</i>	<i>Eucalyptus saligna</i>	<i>Microlaena stipoides var stipoides</i>
<i>Geitonoplesium cymosum</i>	<i>Eucalyptus scias</i>	<i>Oplismenus aemulus var aemulus</i>
<i>Hybiscus heterophylla</i>	<i>Eucalyptus siderophloia</i>	<i>Oplismenus imbecillis</i>
<i>Sida rhombifolia</i>	<i>Eucalyptus umbra</i>	<i>Phragmites australis</i>
<i>Dysoxylum fraserianum</i>	<i>Leptospermum juniperinum</i>	<i>Poa affinis</i>
<i>Synoum glandulosum</i>	<i>Leptospermum polygalifolium</i>	<i>Poa labillardieri</i>
<i>Toona australis</i>	<i>Leptospermum trinervium</i>	<i>Themeda australis</i>
<i>Legenephora moorei</i>	<i>Melaleuca linarifolia</i>	<i>Persicaria decipiens</i>
<i>Sarcopetalum harveyanum</i>	<i>Melaleuca nodosa</i>	<i>Microsorium scandens</i>
<i>Stephania japonica var discolor</i>	<i>Melaleuca styphelioides var styphelioides</i>	<i>Grevillea parviflora subsp parviflora</i>
<i>Ficus coronata</i>	<i>Rhodamnia rubescens</i>	<i>Lomatia siliaifolia</i>
<i>Ficus rubiginosa</i>	<i>Syncarpia glomulifera subsp glomulifera</i>	<i>Persoonia levis</i>
<i>Maclura cochinchinensis</i>	<i>Tristaniopsis laurina</i>	<i>Persoonia linearis</i>
<i>Strebius brunonianus</i>	<i>Pisonia umbellifera</i>	<i>Stenocarpus salignus</i>

Flora species		
<i>Rapanea howittiana</i>	<i>Ligustrum lucidum</i>	<i>Timesipteris parva</i>
<i>Rapanea variabilis</i>	<i>Guioa semiglauca</i>	<i>Viola hederaceae</i>
<i>Clematis aristate</i>	<i>Mischocarpus australis</i>	<i>Nothothixos subaureas</i>
<i>Glamatis glycinoides</i> var <i>glycinoides</i>	<i>Planchonella australis</i>	<i>Cayratia clematidea</i>
<i>Ranunculus sp</i>	<i>Schizea ruprestris</i>	<i>Cissus hypoglauca</i>
<i>Alphitonia excelsa</i>	<i>Smilax australis</i>	<i>Tasmania insipida</i>
<i>Ripogonum fawcettianum</i>	<i>Smilax glyciphylla</i>	<i>Xanthorrhoea glauca</i>
<i>Rubus hillii</i>	<i>Duboisia myoporoides</i>	<i>Xanthorrhoea spp</i>
<i>Rubus parvifolius</i>	<i>Solanum prinophyllum</i>	<i>Macrozamia communis</i>
<i>Morinda jasmanoides</i>	<i>Sparganium subglobosum</i>	
<i>Pomax umbellate</i>	<i>Stylidium gaminifolium</i>	
<i>Psychotria loniceroides</i>	<i>Symplocos stawellii</i>	
<i>Melicope micrococca</i>	<i>Symplocos thwaitesii</i>	
<i>Philotheca trachyphyllaa</i>	<i>Tetratheca juncea</i>	
<i>Sarcomelicope simplicifolia</i> subsp <i>simplicifolia</i>	<i>Typha orientalis</i>	
<i>Zieria smithii</i>	<i>Trema tormentosa</i>	
<i>Exocarpus curpessiformis</i>	<i>Dendrocnide excelsa</i>	
<i>Exocarpus strictus</i>	<i>Urtica incisa</i>	
<i>Alectryon subcinereus</i>	<i>Clerodendrum tomentosum</i>	
<i>Diploglottis australis</i>	<i>Lantana camara</i>	
<i>Dodonaea triquetra</i>	<i>Verbena bonariensis</i>	

APPENDIX 4 – FAUNA SPECIES LIST

Fauna within 5000m of flora reserve

Amphibians and reptiles	
<i>Adelotus brevis</i>	Tusked Frog
<i>Crinia signifera</i>	Common Eastern Froglet
<i>Lechriodus fletcheri</i>	Fletcher's Frog
<i>Limnodynastes peronii</i>	Brown-striped Frog
<i>Litoria brevipalmata</i>	Green-thighed Frog
<i>Litoria caerulea</i>	Green Tree Frog
<i>Litoria chloris</i>	Red-eyed Tree Frog
<i>Litoria dentata</i>	Bleating Tree Frog
<i>Litoria fallax</i>	Eastern Dwarf Tree Frog
<i>Litoria jervisiensis</i>	Jervis Bay Tree Frog
<i>Litoria latopalmata</i>	Broad-palmed Frog
<i>Litoria pearsoniana</i>	Pearson's Green Tree Frog
<i>Litoria peronii</i>	Peron's Tree Frog
<i>Litoria phyllochroa</i>	Leaf-green Tree Frog
<i>Litoria revelata</i>	Revealed Frog
<i>Litoria tyleri</i>	Tyler's Tree Frog
<i>Litoria verreauxii</i>	Verreaux's Frog
<i>Mixophyes balbus</i>	Stuttering Frog
<i>Mixophyes fasciolatus</i>	Great Barred Frog
<i>Mixophyes iteratus</i>	Giant Barred Frog
<i>Paracrinia haswelli</i>	Haswell's Froglet
<i>Pseudophryne bibronii</i>	Bibron's Toadlet
<i>Pseudophryne coriacea</i>	Red-backed Toadlet

Amphibians and reptiles	
<i>Uperoleia fusca</i>	Dusky Toadlet
<i>Uperoleia laevigata</i>	Smooth Toadlet
<i>Amphibolurus muricatus</i>	Jacky Lizard
<i>Bellatorias major</i>	Land Mullet
<i>Carlia vivax</i>	Tussock Rainbow-skink
<i>Cryptophis nigrescens</i>	Eastern Small-eyed Snake
<i>Ctenotus taeniolatus</i>	Copper-tailed Skink
<i>Cyclodomorphus gerrardii</i>	Pink-tongued Lizard
<i>Egernia cunninghami</i>	Cunningham's Skink
<i>Hemiaspis signata</i>	Black-bellied Swamp Snake
<i>Hoplocephalus stephensii</i>	Stephens' Banded Snake
<i>Lampropholis delicata</i>	Dark-flecked Garden Sunskink
<i>Lampropholis guichenoti</i>	Pale-flecked Garden Sunskink
<i>Phyllurus platurus</i>	Broad-tailed Gecko
<i>Saiphos equalis</i>	Three-toed Skink
<i>Saproscincus mustelinus</i>	Weasel Skink
<i>Tiliqua scincoides</i>	Eastern Blue-tongue
<i>Varanus varius</i>	Lace Monitor
<i>Chelodina longicollis</i>	Eastern Snake-necked Turtle

Flying Mammals	
<i>Austronomus australis</i>	White-striped Freetail-bat
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat
<i>Chalinolobus gouldii</i>	Gould's Wattled Bat
<i>Chalinolobus morio</i>	Chocolate Wattled Bat
<i>Micronomus norfolkensis</i>	Eastern Coastal Free-tailed Bat
<i>Miniopterus australis</i>	Little Bent-winged Bat
<i>Miniopterus orianae oceanensis</i>	Large Bent-winged Bat
<i>Myotis macropus</i>	Southern Myotis
<i>Nyctophilus gouldi</i>	Gould's Long-eared Bat
<i>Ozimops ridei</i>	Eastern Free-tailed Bat
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox
<i>Pteropus sp.</i>	Flying-fox
<i>Vespadelus darlingtoni</i>	Large Forest Bat
<i>Vespadelus pumilus</i>	Eastern Forest Bat
<i>Vespadelus vulturnus</i>	Little Forest Bat

Birds	
<i>Anas superciliosa</i>	Pacific Black Duck
<i>Chenonetta jubata</i>	Australian Wood Duck
<i>Aegotheles cristatus</i>	Australian Owlet-nightjar
<i>Podargus strigoides</i>	Tawny Frogmouth
<i>Nycticorax caledonicus</i>	Nankeen Night Heron
<i>Chalcophaps indica</i>	Emerald Dove
<i>Geopelia humeralis</i>	Bar-shouldered Dove
<i>Leucosarcia melanoleuca</i>	Wonga Pigeon
<i>Macropygia phasianella</i>	Brown Cuckoo-Dove
<i>Ceyx azureus</i>	Azure Kingfisher
<i>Dacelo novaeguineae</i>	Laughing Kookaburra
<i>Eurystomus orientalis</i>	Dollarbird
<i>Todiramphus sanctus</i>	Sacred Kingfisher
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo
<i>Cacomantis variolosus</i>	Brush Cuckoo
<i>Chalcites lucidus</i>	Shining Bronze-Cuckoo
<i>Eudynamys orientalis</i>	Eastern Koel
<i>Scythrops novaehollandiae</i>	Channel-billed Cuckoo
<i>Aquila audax</i>	Wedge-tailed Eagle
<i>Aviceda subcristata</i>	Pacific Baza
<i>Erythrotriorchis radiatus</i>	Red Goshawk
<i>Falco berigora</i>	Brown Falcon
<i>Haliastur sphenurus</i>	Whistling Kite
<i>Hieraaetus morphnoides</i>	Little Eagle
<i>Alectura lathami</i>	Australian Brush-turkey
<i>Porphyrio porphyrio</i>	Purple Swamphen
<i>Acanthiza lineata</i>	Striated Thornbill
<i>Acanthiza pusilla</i>	Brown Thornbill
<i>Acanthiza reguloides</i>	Buff-rumped Thornbill
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill
<i>Ailuroedus crassirostris</i>	Green Catbird
<i>Anthochaera carunculata</i>	Red Wattlebird
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow

Birds	
<i>Caligavis chrysops</i>	Yellow-faced Honeyeater
<i>Cinclosoma punctatum</i>	Spotted Quail-thrush
<i>Climacteris sp.</i>	unidentified treecreeper
<i>Colluricincla harmonica</i>	Grey Shrike-thrush
<i>Coracina novaehollandiae</i>	Black-faced Cuckoo-shrike
<i>Corcorax melanorhamphos</i>	White-winged Chough
<i>Cormobates leucophaea</i>	White-throated Treecreeper
<i>Corvus coronoides</i>	Australian Raven
<i>Cracticus nigrogularis</i>	Pied Butcherbird
<i>Cracticus torquatus</i>	Grey Butcherbird
<i>Dicaeum hirundinaceum</i>	Mistletoebird
<i>Edolisoma tenuirostris</i>	Cicadabird
<i>Eopsaltria australis</i>	Eastern Yellow Robin
<i>Eopsaltria australis</i>	Eastern Yellow Robin
<i>Falcunculus frontatus frontatus</i>	Eastern Shrike-tit
<i>Gerygone mouki</i>	Brown Gerygone
<i>Grallina cyanoleuca</i>	Magpie-lark
<i>Gymnorhina tibicen</i>	Australian Magpie
<i>Malurus cyaneus</i>	Superb Fairy-wren
<i>Malurus lamberti</i>	Variegated Fairy-wren
<i>Manorina melanocephala</i>	Noisy Miner
<i>Manorina melanophrys</i>	Bell Miner
<i>Meliphaga lewinii</i>	Lewin's Honeyeater
<i>Melithreptus lunatus</i>	White-naped Honeyeater
<i>Menura novaehollandiae</i>	Superb Lyrebird
<i>Microeca fascians</i>	Jacky Winter
<i>Monarcha melanopsis</i>	Black-faced Monarch
<i>Myiagra rubecula</i>	Leaden Flycatcher
<i>Myzomela sanguinolenta</i>	Scarlet Honeyeater
<i>Neochmia temporalis</i>	Red-browed Finch
<i>Neosericornis citreogularis</i>	Yellow-throated Scrubwren
<i>Origma solitaria</i>	Rockwarbler

Birds	
<i>Oriolus sagittatus</i>	Olive-backed Oriole
<i>Orthonyx temminckii</i>	Logrunner
<i>Pachycephala pectoralis</i>	Golden Whistler
<i>Pachycephala rufiventris</i>	Rufous Whistler
<i>Pardalotus punctatus</i>	Spotted Pardalote
<i>Petroica rosea</i>	Rose Robin
<i>Philemon corniculatus</i>	Noisy Friarbird
<i>Phylidonyris niger</i>	White-cheeked Honeyeater
<i>Pitta versicolor</i>	Noisy Pitta
<i>Psophodes olivaceus</i>	Eastern Whipbird
<i>Ptilonorhynchus violaceus</i>	Satin Bowerbird
<i>Rhipidura albiscapa</i>	Grey Fantail
<i>Rhipidura rufifrons</i>	Rufous Fantail
<i>Sericornis frontalis</i>	White-browed Scrubwren
<i>Sericornis magnirostra</i>	Large-billed Scrubwren
<i>Strepera graculina</i>	Pied Currawong
<i>Strepera versicolor</i>	Grey Currawong
<i>Zoothera lunulata</i>	Bassian Thrush
<i>Zoothera sp.</i>	unidentified ground thrush
<i>Zosterops lateralis</i>	Silvereye
<i>Alisterus scapularis</i>	Australian King-Parrot
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo
<i>Eolophus roseicapilla</i>	Galah
<i>Glossopsitta pusilla</i>	Little Lorikeet
<i>Platycercus elegans</i>	Crimson Rosella
<i>Platycercus eximius</i>	Eastern Rosella
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet
<i>Zanda funereus</i>	Yellow-tailed Black-Cockatoo
<i>Ninox novaeseelandiae</i>	Southern Boobook
<i>Ninox strenua</i>	Powerful Owl
<i>Tyto novaehollandiae</i>	Masked Owl
<i>Tyto tenebricosa</i>	Sooty Owl

Mammals	
<i>Acrobates pygmaeus</i>	Feathertail Glider
<i>Canis lupus</i>	Dingo, domestic dog
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll
<i>Isoodon/Perameles sp.</i>	unidentified Bandicoot
<i>Macropus giganteus</i>	Eastern Grey Kangaroo
<i>Macropus sp.</i>	kangaroo / wallaby
<i>Notamacropus rufogriseus</i>	Red-necked Wallaby
<i>Ornithorhynchus anatinus</i>	Platypus
<i>Osphranter robustus</i>	Common Wallaroo
<i>Perameles nasuta</i>	Long-nosed Bandicoot
<i>Petauroides volans</i>	Greater Glider
<i>Petaurus australis</i>	Yellow-bellied Glider
<i>Petaurus breviceps</i>	Sugar Glider
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby
<i>Phascolarctos cinereus</i>	Koala
<i>Pseudocheirus peregrinus</i>	Common Ringtail Possum
<i>Rattus sp.</i>	rat
<i>Tachyglossus aculeatus</i>	Short-beaked Echidna
<i>Thylogale thetis</i>	Red-necked Pademelon
<i>Trichosurus sp.</i>	brushtail possum
<i>Trichosurus vulpecula</i>	Common Brushtail Possum
<i>Vombatus ursinus</i>	Bare-nosed Wombat
<i>Wallabia bicolor</i>	Swamp Wallaby

Introduced Mammals	
<i>Bos taurus</i>	European cattle
<i>Capra hircus</i>	Goat
<i>Cervus sp.</i>	Unidentified Deer
<i>Equus caballus</i>	Horse
<i>Oryctolagus cuniculus</i>	Rabbit
<i>Rattus rattus</i>	Black Rat
<i>Vulpes vulpes</i>	Fox



Heaton Lookout, picnic and viewing area



Great North Walk Signage, Heaton Lookout



Mountain Bike Park signage, Awaba State Forest



Mature forest stand, The Hunter Lakes Flora Reserve

APPENDIX 6 – 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 was approved by The Hon. Dugald Saunders MP, Minister for Agriculture and Western NSW.

Date of approval: 20 June 2022.

Version	Changes	Approval details
1.0	» First version of the Paperbark Flora Reserve Working Plan	» The Hon. Dugald Saunders MP, Minister for Agriculture and Western NSW 20/6/22.