

MARES HILL FLORA RESERVE NO. 184

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*.

DETAILS OF THE RESERVE

1.1 LOCATION

Mares Hill Flora Reserve is situated in Yadboro State Forest and lies about 25 kilometres west of the town of Lake Tabourie and 21 kilometres southwest from Ulladulla. Western Distributor Road forms the western ridgetop boundary of the reserve from approximately 1.7 kilometres north of the Mares Hill Road intersection. 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:

- » areas of lowland rainforest, a threatened ecological community
- » uncommon orchid species occurring within the reserve
- » representative examples of forest ecosystems in the area.

1.3 GENERAL DESCRIPTION

Area

Mares Hill Flora Reserve has an area of approximately 18 hectares. Bordering the reserve's western and southern boundaries is an area of Forest Management Zone 2 (FMZ 2). Beyond FMZ 2 on the western boundary is the Budawang National Park.

Topography

The topography is hilly to mountainous with the reserve having a south-easterly aspect. It is bounded by defined gullies to the south and northeast. These gullies meet at a common easterly point on a tributary of Crooked Gully Creek giving the reserve a triangular shape.

Geology and Soils

Soils consist of low grade metamorphic including gravelling brown soil derived from Ordovician sediments being mostly shale with some quartzite and chert.

Climate

The reserve is sheltered from drying northwest winds, and to some extent severe wildfires, humidity is relatively high, and the reserve is host to moisture demanding species. Broadly described as mesothermal with long mild summers; however, the sheltered southeast aspect of the reserve and its position beneath a high hill effectively moderate the local climatic conditions.

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Vegetation / flora and fauna

The reserve consists of mostly Brown Barrel (forest type 154), Brown Barrel/Messmate – Silvertop Ash (forest type 156), and Coachwood – Sassafras (forest type 12). The Brown Barrel type is representative of the less common high quality eucalypt forest type occurring on some of the eastern aspects of Yadboro State Forest. The ridgetop forest shows the effect of aspect and lack of protection from western fires and is much poorer with Silvertop Ash predominating.

The crowns of many of the large Soapy Box trees have clusters of rock lilies (*Dedrobium speciosum*) in them and are an unusual occurrence. These orchids are more commonly found at ground level in similar protected gullies.

Approximately 4 ha of the reserve was heavily cut over in about 1974. Today this area exhibits vigorous spar sized Brown Barrel, Yellow Stringybark and Silvertop Ash regrowth, emergent over a dense understorey of pioneer species such as Acacias.

A Gang Gang Cockatoo (*Callocephalon fimbriatum*) and Golden-tipped Bat (*Kerivoula papuensis*) record exists within 2km of the reserve. 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

Mares Hill 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

A 100m section along the road in the southwestern corner of the reserve was logged in 1972/73.

Approximately 4 ha of the reserve was heavily cut over in about 1974. Today this area exhibits vigorous spar sized Brown Barrel, Yellow Stringybark and Silvertop Ash regrowth.

The Western Distributor Road was constructed in 1974/75, which forms the western boundary of the reserve.

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. The reserve escaped many of the large wildfires particularly the 1967/68 and 1953/54 wildfires. However, the reserve was burnt during wildfires in 2001, 2002, and most recently during the 2019-20 summer season. Medium to high fire intensity was recorded during the 2019-20 wildfire, resulting in the canopy being partially burnt in discrete areas.

Hazard Reduction burns were carried out in 1973, 1976, 1980 and 2001 burning most of the reserve, except the 1980 burn which was an aerial ignition burn and did not burn much of the reserve.

Establishment of Flora Reserve

The area was first proposed as a Flora Preserve on 14th June 1985. The reserve was formerly known as Native Orchid Flora Preserve before it was changed to Mares Hill Flora Preserve on the 29th December 1986.

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The area was officially gazetted as Mares Hill Flora Reserve No. 184 on 1st January 2001.

1.5 CURRENT USAGE

The reserve receives limited recreational usage, primarily by visitors driving through the reserve on Western Distributor 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:

- » protect existing flora and fauna
- » enhance the ecological quality of areas of lowland rainforest, a threatened ecological community
- » preserve the unusual occurrence of rock lilies (Dedrobium speciosum)
- » protect representative examples of forest ecosystems in the area
- » protect Aboriginal cultural heritage sties and cultural values
- » maintain reference stands and provide for limited scientific study consistent with the protection of the area, including the development of an understanding of successional growth processes after disturbance and as a reference for assessing the effects of alternative land use in surrounding areas
- » 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

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- management of human disturbance, including harvesting and other forest product operations
- retention of dead timber and other habitat resources
- management of fire, including
 - o prescribed or hazard reduction burning
 - fire-fighting activities where required to protect community assets outside of lands managed by Forestry Corporation.
- » 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, Mares Hill Flora Reserve №. 184 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 and the area cannot be revoked except by an act of Parliament.

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 objectives 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
- y general access for activities such as bush walking, photography, and nature study
- » beekeeping (existing set-down sites may be used)

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- » 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

There are no gazetted exemptions from provisions of the *Mining Act 1992* for this this flora reserve.

2.3 MANAGEMENT RESPONSIBILITY

The reserve will be administered by Forestry Corporation of NSW's Hardwoods Division, with the authority for decision making delegated to the Senior Manager Forest Stewardship 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.

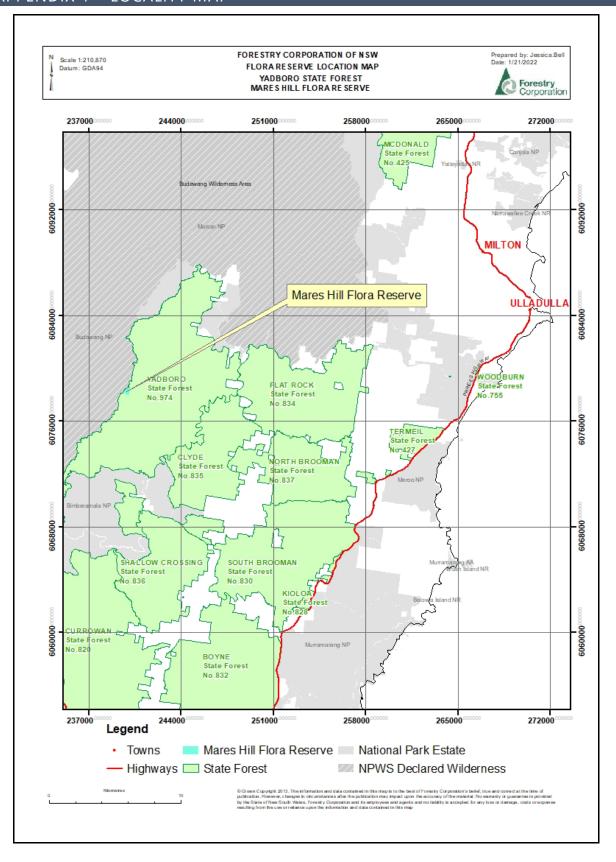
The results of this monitoring, review and management response will be included in annual reporting processes.

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.

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- » Appendix 2 Flora Species List
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- » Appendix 4 Approval and Amendments from previous version

APPENDIX 1 – LOCALITY MAP



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APPENDIX 2 – FLORA SPECIES LIST

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

Scientific name
Acacia falciformis
Acacia filicifolia
Acacia mabellae
Acacia melanoxylon
Acacia obtusifolia
Acacia spp.
Acacia terminalis
Acacia terminalis subsp.
angustifolia
Acacia trachyphloia
Acmena smithii
Adiantum aethiopicum
Adiantum formosum
Alectryon subcinereus
Amperea xiphoclada var.
xiphoclada
Angophora floribunda
Aphanopetalum resinosum
Arthropodium spp.
Arthropteris tenella
Asplenium australasicum
Asplenium flabellifolium
Asplenium polyodon
Astrotricha latifolia
Astrotricha sp. B
Austrostipa rudis subsp.
nervosa
Backhousia myrtifolia
Baloghia inophylla
Banksia spinulosa var.
spinulosa
Beyeria lasiocarpa
Billardiera scandens
Blechnum cartilagineum
Blechnum neohollandicum
Blechnum patersonii subsp.
patersonii
Boronia microphylla
Brachychiton populneus

subsp. populneus

Sci	entific name		
Bre	eynia oblongifolia		
Bursaria spinosa subsp.			
lasiophylla			
Callicoma serratifolia			
Ca	llitriche muelleri		
Ca	lochlaena dubia		
Ca.	ssytha glabella f. glabella		
Ca.	ssytha pubescens		
Са	ustis flexuosa		
Ce	lastrus australis		
Ce	phalomanes caudatum		
Ce	ratopetalum apetalum		
Ch	oretrum candollei		
Cis	sus antarctica		
Cis	sus hypoglauca		
Cit	ronella moorei		
Cla	noxylon australe		
Cle	ematis aristata		
Cle	ematis glycinoides var.		
gly	rcinoides		
Cle	erodendrum tomentosum		
Co	mesperma ericinum		
Co	mmersonia fraseri		
Co	ronidium elatum		
Co	rymbia gummifera		
Co	rymbia maculata		
Cre	epidomanes venosum		
Cry	ptocarya glaucescens		
Cry	ptocarya microneura		
Су	athea australis		
Су	athea leichhardtiana		
Су	athochaeta diandra		
Су	mbidium suave		
Da	viesia ulicifolia		
Da	viesia wyattiana		
De	ndrobium pugioniforme		
	ndrobium speciosum		
	ndrocnide excelsa		
	smodium varians		

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Scientific name	Scientific name	Scientific name
Eucalyptus sieberi	Leptospermum trinervium	Phyllota phylicoides
Eucalyptus tricarpa	Leucopogon lanceolatus	Pimelea ligustrina subsp.
Eupomatia laurina	Leucopogon lanceolatus var.	ligustrina
Eustrephus latifolius	lanceolatus	Pimelea linifolia subsp.
Exocarpos strictus	Libertia paniculata	linifolia
Ficus coronata	Lindsaea microphylla	Piper hederaceum var.
Fieldia australis	Livistona australis	hederaceum
Gahnia clarkei	Lomandra confertifolia subsp.	Pittosporum revolutum
Gahnia melanocarpa	similis	Pittosporum undulatum
Galium propinquum	Lomandra cylindrica	Platylobium formosum
Geitonoplesium cymosum	Lomandra glauca	Platylobium formosum subsp.
Genoplesium vernale	Lomandra longifolia	formosum
Geranium homeanum	Lomandra multiflora subsp.	Platylobium parviflorum
Gleichenia dicarpa	multiflora	Platysace lanceolata
Glycine clandestina	Lomandra obliqua	Plectranthus parviflorus
Glycine spp.	Lomatia ilicifolia	Poa meionectes
, , ,	Macrozamia communis	Poa sieberiana var. sieberiana
Glycine tabacina	Marsdenia flavescens	Poa spp.
Gompholobium latifolium	Marsdenia rostrata	Podolobium ilicifolium
Gonocarpus tetragynus	Marsdenia suaveolens	Polyosma cunninghamii
Gonocarpus teucrioides	Microlaena stipoides var.	Polyscias murrayi
Goodenia heterophylla subsp.	stipoides	Polyscias sambucifolia subsp.
heterophylla Goodenia ovata	Microsorum scandens	decomposita
Gynochthodes jasminoides	Monotoca scoparia	Polyscias sambucifolia subsp.
Hakea decurrens	Muellerina eucalyptoides	sambucifolia
	Myrsine howittiana	Polystichum australiense
Hardenbergia violacea Hedycarya angustifolia	Notelaea venosa	Polystichum proliferum
, , , , , , , , , , , , , , , , , , , ,	Olearia stellulata	Pomaderris aspera
Hibbertia aspera	Olearia tomentosa	Pomaderris ferruginea
Hibbertia dentata	Opercularia aspera	Pomax umbellata
Hibbertia empetrifolia subsp. empetrifolia	Oplismenus imbecillis	Poranthera corymbosa
Hibbertia scandens	Oxalis chnoodes	Poranthera ericifolia
Howittia trilocularis	Oxalis corniculata	Poranthera microphylla
Hypolepis glandulifera	Oxalis spp.	Pseuderanthemum variabile
Hypolepis muelleri	Ozothamnus diosmifolius	Psychotria loniceroides
Isopogon anemonifolius	Palmeria scandens	Pteridium esculentum
Kennedia rubicunda	Pandorea pandorana	Pteris umbrosa
	Panicum simile	Pultenaea flexilis
Lastreopsis acuminata	Parsonsia straminea	Pultenaea scabra
Lastreopsis decomposita	Patersonia glabrata	Pultenaea spinosa
Lastreopsis microsora subsp. microsora	Pellaea falcata	Pyrrosia rupestris
Lepidosperma laterale	Pennantia cunninghamii	Quintinia sieberi
Lepidosperma urophorum	Persoonia levis	Rubus moluccanus var.
Leptomeria acida	Persoonia linearis	trilobus
Leptospermum polygalifolium	Persoonia spp.	Rubus nebulosus
subsp. polygalifolium	Petrophile pedunculata	Rubus rosifolius
Sassp. polyganjonam	. St. ope pessionata	Rytidosperma longifolium

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Scientific name
Rytidosperma spp.
Sambucus australasica
Santalum obtusifolium
Sarcochilus hillii
Sarcopetalum harveyanum
Scaevola ramosissima
Schelhammera undulata
Schizomeria ovata
Senecio linearifolius
Senna barronfieldii
Sigesbeckia orientalis subsp.
orientalis
Smilax australis
Smilax glyciphylla
Solanum pungetium

Scientific name
Stellaria flaccida
Stephania japonica
Stephania japonica var. discolor
Sticherus lobatus
Stylidium armeria
Stylidium graminifolium
Syncarpia glomulifera
Synoum glandulosum subsp. glandulosum
Tasmannia insipida
Tetrarrhena juncea
Tetratheca pilosa
Tetratheca thymifolia
Tristaniopsis collina

Scientific name
Tristaniopsis laurina
Trophis scandens
Trophis scandens subsp.
scandens
Tylophora barbata
Urtica incisa
Veronica calycina
Veronica plebeia
Viola hederacea
Viola silicestris
Xanthorrhoea australis
Xanthorrhoea concava
Xanthosia pilosa
Zieria smithii

APPENDIX 3 – FAUNA SPECIES LIST

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

Birds		
Scientific	Common	
name	name	
Monarcha	Black-faced	
melanopsis	Monarch	
Gerygone	Brown	
mouki	Gerygone	
Phaps elegans	Brush	
	Bronzewing	
Psophodes	Eastern	
olivaceus	Whipbird	

Birds		
Scientific	Common	
name	name	
Eopsaltria	Eastern	
australis	Yellow	
	Robin	
Cacomantis	Fan-tailed	
flabelliformis	Cuckoo	
Colluricincla	Grey	
harmonica	Shrike-	
	thrush	
Sericornis	White-	

Birds		
Scientific	Common	
name	name	
frontalis	browed	
	Scrubwren	
Neosericornis	Yellow-	
citreogularis	throated	
	Scrubwren	

Amphibians		
Scientific	Common	
name	name	
Litoria	Littlejohn's	
littlejohni	Tree Frog	

Mammals		
Scientific	Common	
name	name	
Cercartetus	Eastern	
nanus	Pygmy-	
	possum	

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