

Winburndale Nature Reserve Fire Management Strategy 2014 Mapsheet 1 of 1



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ISBN 978 1 74359 642 5	OEH 2014/0381	Date: November 2014	Version No: 1
Map Details		Related Documents	
Datum: Geocentric Datum of Australia (GDA) 1994		OEH Fire Management Manual 2014 - 2015.	
Projection: Map Grid of Australia (MGA) Zone 55		1:25k Topographic Map: Capertee 8831-1-S, Portland 8831-2-N, Meadow Flat 8831-2-S, Tarana 8830-1-N	
Data: Spot Satellite Imagery, 2005.		Scale: Note scales are true when printed on A1 size paper	

Vegetation Map Legend

Broad Vegetation Class	Vegetation Type	Biodiversity Thresholds	Fire Behaviour
Dry Sclerophyll Forest (Shrub formation)	Southern Tableland Dry Sclerophyll Forests	This vegetation type dominates a large part of the reserve and is generally characterised by the presence of Red Stringybark <i>Eucalyptus macrorhyncha</i> in association with Mountain Gum <i>E. dalympleana</i> , Brittle Gum <i>E. mannifera</i> , Inland (Western) Scribbly Gum <i>E. rossii</i> , Broad-leaved Peppermint <i>E. dives</i> and Yellow Box <i>E. melliodora</i> . Other prominent and common shrub and ground cover species that occur include Small leaved White Beard <i>Leucopogon microphyllus</i> , Spreading Bush Pea <i>Puteranea microphylla</i> , Narrow-leaved Geebung <i>Persoonia linearis</i> , Slender Bitter Pea <i>Daviesia leptophylla</i> , Eggs and Bacon (Parrot Pea) <i>Dillwynia phyllicodes</i> , Red Anthelme <i>Wallaby Grass Joycea pallida</i> , Snow Grass <i>Poa sieberiana</i> , Wire Grass <i>Aristida vagans</i> , Spreading Flax Lily <i>Dianella revoluta</i> and Wattle Mat Rush <i>Lomandra filiformis</i> . This community has a low density shrub layer and a medium density ground layer.	In long unburnt areas, very high to extreme potential for spotting due to bark fuels. Isolated areas with heavy ground fuel may have the potential for very high fire behaviour.
Dry Sclerophyll Forest (Shrub/grass formation)	Upper Riverina Dry Sclerophyll Forests	This vegetation type has been described as Red Stringybark Forest, Red Stringybark-Scribbly Gum Woodland, Ridgeway Woodland and Western Foothills (Slopes) Woodland.	The presence of a high concentration of continuous ground cover species will often create erratic fire behaviour which can impact on the success of suppression activities and potentially lead to spotting and the rapid spread of fire under suitable weather conditions. On the more exposed ridges and aspects fuel loads are often lower and surface and ground fuels tend to be discontinuous.
Grassy Woodlands	Sub-Alpine Grassy Woodlands (Mount Horrible area) Southern Tableland Grassy Woodlands	This vegetation community is characterised by the presence of Snow Gum <i>E. pauciflora</i> in association with Mountain Gum <i>E. dalympleana</i> , Broad leaved Peppermint <i>E. dives</i> with occasional (but sparse) Black Wattle <i>Acacia melanoxylon</i> . This community little or no shrub layer and the ground layer in places is dominated by Bracken Fern <i>Pteridium esculentum</i> , Red anther Wallaby Grass and Snow Grass.	This community has a low to medium density shrub layer and a low density ground layer.
Wet Sclerophyll Forests (Grassy sub-formation)	Southern Tableland Wet Sclerophyll Forests	This vegetation community is characterised by the presence of Ribbon Gum <i>E. viminalis</i> , Broad leaved Peppermint <i>E. dives</i> and Apple Box <i>E. bridgesiana</i> with occasional Black Wattle <i>A. melanoxylon</i> . This community has a low to medium density shrub layer consisting of Dolly Bush <i>Cassinia aculeata</i> , <i>C. longifolia</i> , Tree Violet and River Lomatia and a low density ground layer.	Under normal conditions these vegetation communities are generally moist and not subject to impact from fire and generally are expected to have a low fire intensity. However, during periods of drought these areas may be prone to fire and where fuel loads have built up over time (extreme bark loads) may lead to a dramatic increase in fire intensity and erratic fire behaviour.
Wet Sclerophyll Forests (Shrub sub-formation)	Southern Escarpment Wet Sclerophyll Forests	This vegetation community is characterised by the presence of Brown Barrel <i>E. fastigata</i> and Ribbon Gum <i>E. viminalis</i> often in association with Mountain Gum <i>E. dalympleana</i> . This community has a medium to high density shrub layer and a low to medium density ground layer. (best guess)	Under normal conditions these vegetation communities are generally moist and not subject to impact from fire and generally are expected to have a low fire intensity. However, during periods of drought these areas may be prone to fire and where fuel loads have built up over time (extreme bark loads) may lead to a dramatic increase in fire intensity and erratic fire behaviour.
Heathland	Southern Montane Heath	This vegetation type has been described as Mountain Gum - Broad leaved Peppermint Forest and Ribbon Gum Forest. An interval between fire events of less than 30 years and greater than 60 years should be avoided.	Long flame height in heath shrubs expected. Heightened fire activity likely to be short-lived in heath as they are generally small areas.
Forested Wetlands	River Oak Forests	This vegetation community is characterised by the presence of River Oak <i>Casuarina cunninghamiana</i> which often occurs in association with Ribbon Gum <i>E. viminalis</i> . This community is confined to the alluvial flats that adjoin prominent water courses including the Winburndale Rivulet and Clear Creek and is estimated to be only 2ha in total area. This vegetation type has been described as River Oak Forests. An interval between fire events of less than 10 years and greater than 35 years should be avoided.	These vegetation communities will generally not carry fire unless there are high ephemeral fuel loads, which generally occur after flooding events. In periods of high ephemeral fuel loads the wetlands pose a risk of extreme fire intensities, hot-fast moving fires and rapid change in direction associated with wind.
Water	Winburndale Dam		

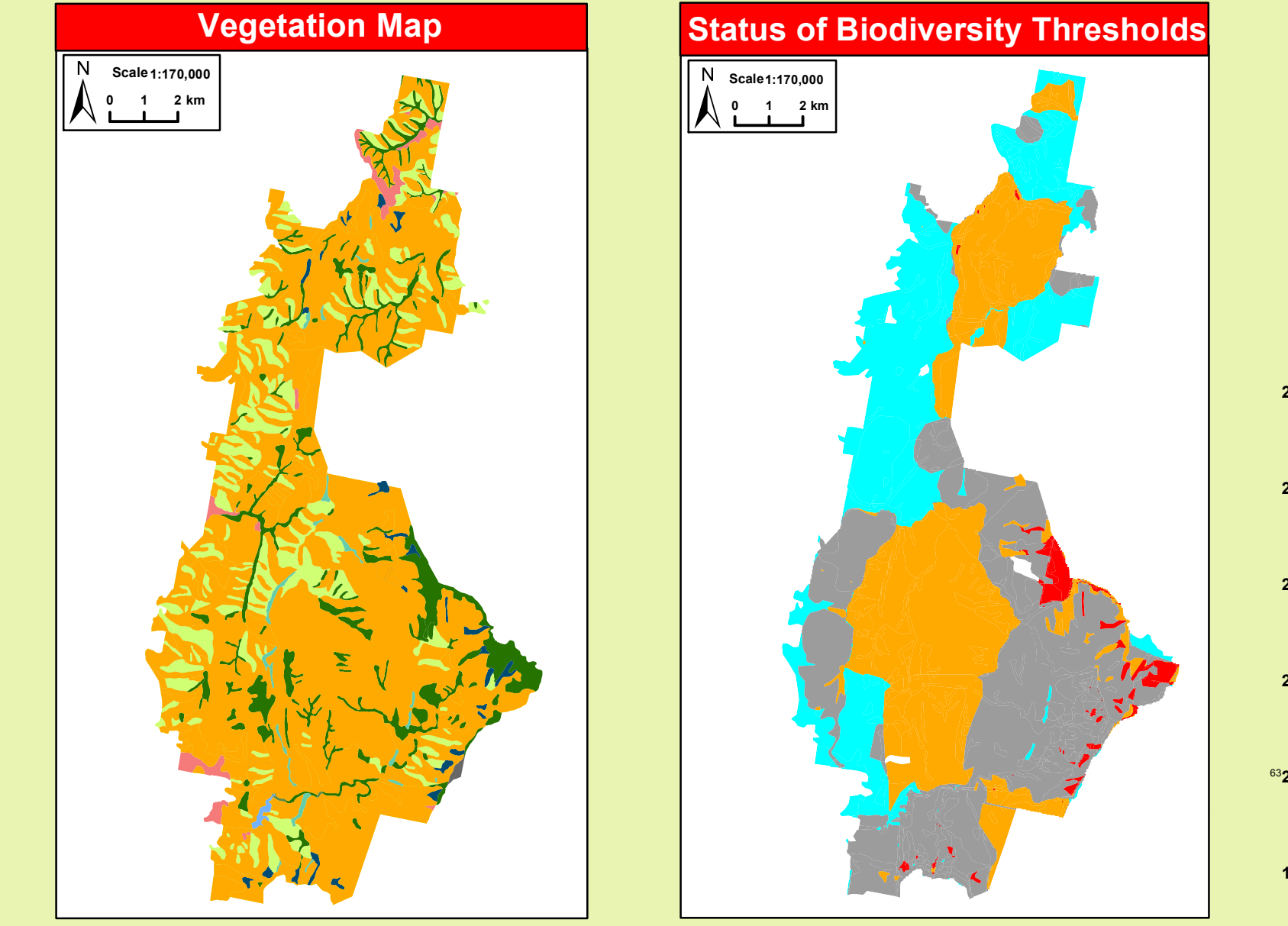
Threatened Species and Cultural Heritage Operational Guidelines

Site	Guidelines
Aboriginal Cultural Heritage Site Management	
IS1	<ul style="list-style-type: none"> Do not cut down trees As far as possible protect the site from fire Use of foams, wetting agents & retardant is acceptable.
IS2	<ul style="list-style-type: none"> Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites Sites may be burnt by bushfire, backburn or prescribed burn without damage.
IS3	<ul style="list-style-type: none"> Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites. Avoid water bombing which may cause ground disturbance. Permission required from Aboriginal Heritage Environment Officer and Aboriginal community.
Historic Heritage Site Management	
H1	<ul style="list-style-type: none"> These symbols indicate that there are sites in the general vicinity that need to be considered when planning fire operations, seek further advice and detail from the NSW National Parks and Wildlife Service. Many of these sites are old mining sites and these can pose a great danger to staff working in the area especially at night. Ensure all relevant information is conveyed to staff working in the area through IAP's. As far as possible protect the site from fire Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites Avoid water bombing which may cause ground disturbance Use of foams, wetting agents & retardant is acceptable.
Threatened Fauna Management	
It should be noted that although not indicated in the Incident Map of the Fire Management Strategy there are approximately 25 mobile threatened and endangered species that have been recorded as having been on the reserve and that further consultation may be required with the Central West Area NPWS Office.	
Threatened Flora Management	
FL3	Exclude fire from habitat and avoid the use of machinery and chemicals. Flora includes Robertson's Peppermint, Spreading Guinea Flower, Capertee Stringybark and <i>Derwentia blakelyi</i> .

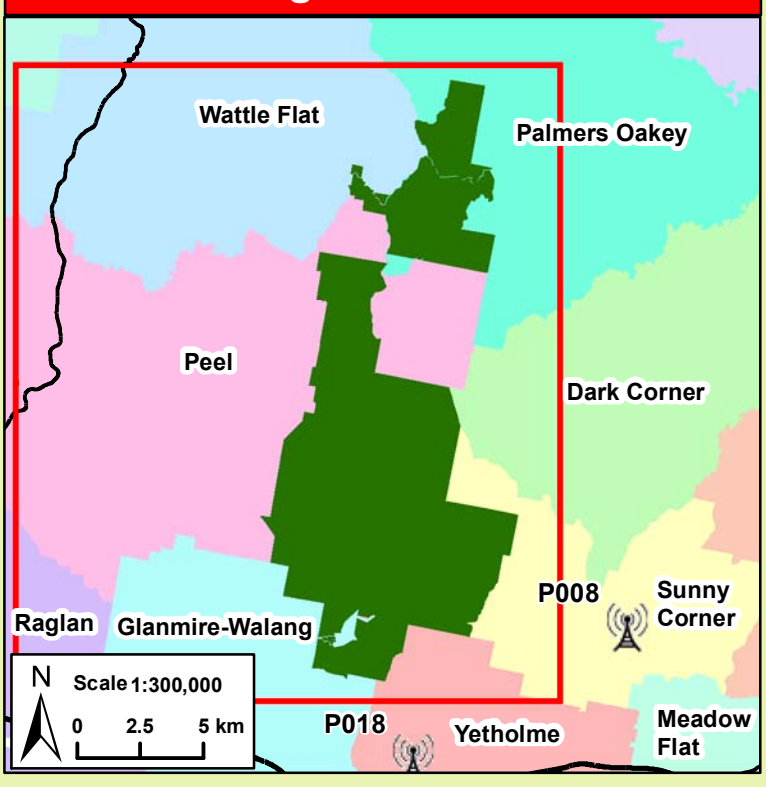
Fire Season Information

Wildfires	<ul style="list-style-type: none"> The critical wildfire season generally occurs between December and February. Dry lightning storms (characterised by numerous lightning strikes associated with little or no rainfall) frequently occur during this period. The potential for severe fire weather conditions occur when strong winds from the NW are aligned with high day time temperatures and low relative humidity. Particular care is required during periods of negative Southern Oscillation Indices when drier than normal conditions can be experienced as early as October/November and as late as March/April.
Prescribed Burning	<ul style="list-style-type: none"> Prescribed burning should generally be undertaken during Autumn. Prescribed burns may also take place during Winter and/or early Spring if suitable weather conditions prevail. A low to moderate intensity burn is generally prescribed over most of the reserve.

Evaluation of Biodiversity Thresholds	
Too Frequently Burnt	Fire thresholds have been exceeded. Species may become extinct due to insufficient time to mature and reproduce. • Protect from fire as far as possible.
Vulnerable to Frequent Fire	The area will be too frequently burnt if it burns this year • Protect from fire as far as possible.
Within Threshold	Within the threshold for vegetation in this area. Species have had sufficient time to mature and reproduce, and for habitats to develop. • A fire event is neither required nor should one necessarily be avoided.
Long Unburnt	Underburnt, excessive time since last fire, species may become extinct. • A fire event may be ecologically advantageous. Consider allowing unplanned fires to burn NB. Fire thresholds are defined for vegetation communities to conserve biodiversity.



RFS Fire Brigade Areas & Towers



Bushfire Risk Management Strategies & Fire History

Fire Management Zones

The objective of LMZs is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.

Land Management Zones

- Prescribed Burn Area
- Wildfire Area

FIRE HISTORY

The reserve is prone to summer lightning events and a large proportion (85%) of all wildfires are a result of dry lightning activity, often with no associated rainfall. Over the past 30 years (1985 - 2014) fifteen wildfires have been recorded in Winburndale NR ranging in size from <1ha to 331ha. During the same period a total of twenty prescribed burns have been conducted on the reserve ranging in size from <1ha to 1142ha. Approximately 70% of the reserve has been burnt from either wildfires or prescribed burns during the past 30 years.

Suppression Strategies

Strategy	Guidelines
Direct Attack	For this strategy to be successful the following parameters need to be considered: FDI <100 and a FDR of High or below Flame Height <1.5m OFH - Low to Mod Sufficient resources need to be available
(This strategy should be the first consideration in order to minimise the area burnt)	The use of suitable heavy plant is permissible provided that close containment of the fire can be achieved.
Indirect Attack	Fire behaviour can be erratic due to concentration and continuity of grass fuels. This option is generally implemented as part of a much broader containment strategy that utilises a combination of ground crews, water bombing aircraft, heavy plant, control lines (existing fire trails) and other fire control advantages such as low or discontinuous fuel areas.
(If direct attack is not possible then this strategy is the preferred option).	This strategy is generally considered when the following parameters apply: FDI >100+ and FDR is Very High or above Flame Height > 1.5m OFH - High to Extreme

Incident Map

Communications Information

Service	Channel	Location and Comments
NPWS VHF Repeater (160MHz)	290	WRR Vote Group - searches for towers
	294	Sunny Corner (duplex) - reception variable
	594	Sunny Corner (simplex) - car to car
	111	Mount Tomah
	112	Narrowneck
	113	Shooters Hills
NPWS VHF Portable Repeater	21 - 26	Available from Central West Area office (Bathurst)
	P003, P008, P018	Monkey Hill/Sally's Flat, Sunny Corner, Mount Homer
Forestry Corporation - VHF		Local arrangements to be made - they are still running VHF 80Mhz systems
UHF - CB	10 or 16	Local brigade channel
Mobile Phone	Next G	Reception: Ridges - Good to Fair Reception: Gullies - Fair to Poor

Contact Information

Agency	Position / Location	Phone
National Parks & Wildlife Service	Duty Officer	02 6332 6350
	Central West Area Office - Bathurst	02 6332 7640
NSW Rural Fire Service - Chifley Zone	Western Rivers Regional Office - Griffith	02 6966 8100
	Duty Officer	0428 650 470
Forestry Corporation	Bathurst FCC - 7 Lee Street KELSO	02 6333 1333
	Duty Officer - Fire Reporting	02 6332 4812
Emergency Services	Northern Softwoods Region - Bathurst	02 6331 2044
	Sunny Corner State Forest Fire Tower (only manned during Bush Fire Danger Period)	02 6332 4812
SES	Statewide	13 2500
NSW Police Service	Duty Officer - Central West - Bathurst	02 6334 8555
	Bathurst	02 6332 8699
Hospitals	Bathurst	02 6330 5311
	Lithgow	02 6350 2300
Council	Bathurst Regional Council	02 6333 6111
	Lithgow City Council	02 6354 9999
Local Aboriginal Land Council	Bathurst	02 6332 6835

The Incident Map shows the Winburndale Nature Reserve with various features: NPWS Estate (green), watercourses (blue), sealed roads (black), and unsealed roads (grey). Fire trails are categorized by importance: Cat 1 - Essential (red), Cat 7 - Essential (orange), Cat 1 - Important (yellow), Cat 7 - Important (green), Cat 9 - Important (blue), and Dormant (grey). The map also shows water points (blue circles), power lines (black lines with 'v' symbols), and water point vehicle/helicopter sites (black circles with 'v' symbols). Various sites are marked with codes: IS1, IS2, IS3 (Indigenous Sites); H1 (Historic Heritage Site); and FL3 (Threatened Flora). The map includes a scale of 1:60,000 and a north arrow.