

# Girralang Nature Reserve & Mullion Range SCA

## Fire Management Strategy 2014

### Mapsheet 1 of 1

This strategy should be used in conjunction with aerial photography and field reconnaissance during incidents and the development of incident action plans. These data are not guaranteed to be free from error or omission. The NSW National Parks and Wildlife and its employees disclaim liability for any act done on the information in the data and any consequences of such acts or omissions. This document is copyright. Apart from any fair dealing for the purpose of study, research criticism or review, as permitted under the copyright Act, no part may be reproduced by any process without written permission. This strategy is a relevant Plan under Section 39 (4) and Section 44 (3) of Rural Fires Act 1997. The NSW National Parks and Wildlife is part of the Office of Environment and Heritage. Published by the Office of Environment and Heritage (NSW). Contact: OEH PWG Regional Office: 200 Yambill St, Griffith NSW 2680 P.O. Box 1049 Griffith NSW 2680 ph: 02 6966 8100

ISBN 978 1 74293 994 0 OEH: 2013/0048 Date: June 2014 Version 1

Map Details		Related Documents
Datum: Geocentric Datum of Australia (GDA) 1994 Projection: Map Grid of Australia (MGA) Zone 55 Data: Spot Satellite Imagery: 2005. Scale: Noted scales are true when printed on A1 size paper	1:25k Topographic Map: Gowan 8731-1-S, Ophir 8731-4-S, Kerrs Ck 8731-4-N 1:50k Topographic Map: Hill End 8731-N 1:100 Topographic Map: Orange 8731	OEH Fire Management Manual 2013 - 2014.

### Operational Guidelines

Brief all personnel involved in suppression operations on the following issues using the SMEACS format:

General	Guidelines
<b>Aerial Water Bombing</b>	<ul style="list-style-type: none"> <li>The use of bombing aircraft should support containment operations by aggressively attacking hotspots and spot-overs.</li> <li>The use of bombing aircraft without the support of ground based suppression crews should be limited to very specific circumstances.</li> <li>Where practicable foam should be used to increase the effectiveness of the water.</li> <li>Ground crews must be alerted to water bombing operations.</li> </ul>
<b>Aerial Ignition</b>	<ul style="list-style-type: none"> <li>Aerial ignition may be used during back-burning or fuel reduction operations where practicable, but only with the prior consent of NPWS Senior Officer, Section 44 delegate or as prescribed in an operational burn plan.</li> <li>The use of aerial ignition as a fire suppression tool should be specified in the IAP or within the prescribed burn plan.</li> <li>Aerial ignition will only be undertaken by qualified and competent navigators and bombardiers.</li> <li>Utilise aerial ignition to rapidly burn out large areas and/or reduce spotting potential by preventing longer uphill fire runs.</li> <li>Aerial ignition can be utilised to rapidly progress back-burns down-slope where required.</li> </ul>
<b>Back-burning</b>	<ul style="list-style-type: none"> <li>Temperature and humidity trends must be monitored carefully to determine the safest times to implement back-burns. Generally, when the FDI is Very High or greater, back-burning should commence when the humidity begins to rise in the late afternoon or early evening, with a lower FDI back-burning may be safely undertaken during the day. Note: there is a lag time of when RH increases and when fuels re-absorb moisture. Usually about 2 hrs</li> <li>Where practicable, clear a 1m radius around dead and hollow bearing trees adjacent to containment lines prior to back-burning, or wet down these trees as part of the back-burn ignition.</li> <li>Use parallel containment lines when applicable.</li> <li>All personnel must be fully briefed before back-burning operations begin.</li> </ul>
<b>Command &amp; Control</b>	<ul style="list-style-type: none"> <li>Standard Incident Management Systems are to be applied.</li> <li>The first combatant agency on site may assume control of the fire, but then must ensure the relevant land management agency is notified promptly.</li> <li>On the arrival of other combatant agencies, the Incident Controller will consult with regard to the ongoing command, control and incident management team requirements as per the relevant BFMC Plan of Operations.</li> </ul>
<b>Containment Lines</b>	<ul style="list-style-type: none"> <li>Construction of new containment lines should be avoided, where practicable, except when they can be constructed with minimal environmental impact.</li> <li>New containment lines require the prior consent of a senior NPWS officer.</li> <li>When constructing containment lines, steep and rocky areas and locations adjacent to riparian (creeks or streams) or significant drainage lines should be avoided.</li> <li>All personnel involved in containment line construction should be briefed on the protection of the reserve's natural and cultural assets.</li> <li>Containment line construction using earthmoving equipment must be conducted in accordance with this RFMS, the OEH FMM and sedimentation and erosion control measures must be implemented in accordance with both OEH and DLWC fire trail construction guidelines and standards and the PWG Roads Policy (Manual).</li> <li>Containment lines not used for other purposes should be closed immediately at the cessation of the incident.</li> </ul>
<b>Earthmoving Equipment</b>	<ul style="list-style-type: none"> <li>Earthmoving equipment may only be used with the prior consent of a senior NPWS officer, and then only if the probability of its success is high.</li> <li>Earthmoving equipment must always be guided and supervised by an appropriately experienced person, who can assist with survey (route selection) and the identification and protection of threatened species and/or historic and Aboriginal sites (known nor unknown) along the proposed containment line.</li> <li>To assist with the protection of natural and cultural assets and drainage features earth moving operators need to be briefed and observe the Threatened Sites Guidelines contained in this RFMS.</li> <li>Earthmoving equipment must always be accompanied by a support vehicle and when engaged in direct or parallel attack this vehicle must be a fire fighting vehicle.</li> <li>Earthmoving equipment must be washed down (where practicable) prior to entering NPWS estate and again on exiting NPWS estate.</li> <li>Where multiple items of earthmoving equipment are being used, the IMT should consider the appointment of a Plant Operations Manager.</li> </ul>
<b>Fire Advantage Recording</b>	<ul style="list-style-type: none"> <li>All fire advantages used during wildfire suppression operations must be mapped and where relevant added to the database.</li> </ul>
<b>Fire Suppression Chemicals</b>	<ul style="list-style-type: none"> <li>The use of foams and gels (surfactants) is permitted on the reserve.</li> <li>The use of fire retardants are only permitted with the prior consent of the senior NPWS officer and should be avoided where reasonable alternatives are available.</li> <li>Exclude the use of surfactants and retardants within 50m of watercourses, dams and swamps.</li> <li>The aerial application use foam, gels and retardants requires the approval of a NPWS Senior Officer.</li> <li>Areas where fire suppression chemicals are used must be mapped and the used product's name recorded.</li> <li>The Threatened Sites Guidelines contained within this RFMS are to be observed.</li> </ul>
<b>Rehabilitation</b>	<ul style="list-style-type: none"> <li>Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.</li> <li>The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations.</li> </ul>
<b>Smoke Management</b>	<ul style="list-style-type: none"> <li>If smoke becomes a hazard on local roads or highways, the police and relevant media must be notified.</li> <li>Smoke management must be in accordance with relevant RTA traffic management guidelines.</li> </ul>
<b>Structural Fire Fighting</b>	<ul style="list-style-type: none"> <li>OEH personnel are not trained in structural fire fighting and must not enter a structure in order to undertake structural fire fighting.</li> <li>Fire suppression activities may be undertaken from outside a structure in accordance with the policies in the NPWS FMM, in order to protect a built asset.</li> </ul>
<b>Visitor Management</b>	<ul style="list-style-type: none"> <li>The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.</li> <li>Areas of the reserve may be closed for prescribed burning operations.</li> </ul>
<b>WARNINGS</b>	<ul style="list-style-type: none"> <li>Beware of overhead powerlines.</li> </ul>
<b>Watering points</b>	<ul style="list-style-type: none"> <li>Bring water cart from Orange (17km SSW).</li> </ul>

### Status of Biodiversity Thresholds

Threshold	Evaluation of Biodiversity Thresholds
<b>Too Frequently Burnt</b>	Fire thresholds have been exceeded. Species may become extinct due to insufficient time to mature and reproduce. <ul style="list-style-type: none"> <li>Protect from fire as far as possible.</li> </ul>
<b>Vulnerable to Frequent Fire</b>	The area will be too frequently burnt if it burns this year <ul style="list-style-type: none"> <li>Protect from fire as far as possible.</li> </ul>
<b>Within Threshold</b>	Within the threshold for vegetation in this area. Species have had sufficient time to mature and reproduce, and for habitats to develop. <ul style="list-style-type: none"> <li>A fire event is neither required nor should one necessarily be avoided.</li> </ul>
<b>Long Unburnt</b>	Underburnt, excessive time since last fire, species may become extinct. <ul style="list-style-type: none"> <li>A fire event may be ecologically advantageous. Consider allowing unplanned fires to burn.</li> </ul>

NB. Fire thresholds are defined for vegetation communities to conserve biodiversity.

### Vegetation

### Threatened Sites Guidelines

Site	Guidelines
<b>Aboriginal Cultural Heritage Site Management</b>	
IS1	<ul style="list-style-type: none"> <li>Do not cut down trees</li> <li>As far as possible protect the site from fire</li> <li>Use of foams, wetting agents &amp; retardant is acceptable.</li> </ul>
IS2	<ul style="list-style-type: none"> <li>Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites</li> <li>Sites may be burnt by bushfire, backburn or prescribed burn without damage.</li> </ul>
<b>Threatened Fauna Management</b>	
FA1	<ul style="list-style-type: none"> <li>Utilise mosaic burning and avoid disturbance at known sightings, roostings or refuges and avoid frequent fire (&lt;6 years).</li> </ul>
FA3	<ul style="list-style-type: none"> <li>Utilise mosaic burning and protect hollow bearing trees.</li> </ul>
FA5	<ul style="list-style-type: none"> <li>Utilise mosaic burning.</li> </ul>

### Bushfire Risk Management Strategies

Zone	Objective
<b>Strategic Fire Advantage Zones</b>	The objective of SFAZs is to reduce fire intensity across larger areas. Maintain Overall Fuel Hazard at High or below, however adherence to guidelines for biodiversity will take precedence where practical.
<b>Land Management Zones</b>	The objective of LMZs is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.

Prescribed burn

### Suppression Strategies

Typical Conditions	Indicative Suppression Strategies
<ul style="list-style-type: none"> <li>Current Fire Danger Rating (FDR) of Very High or Greater.</li> <li>Short and medium range forecasts suggest conditions typical to a FDR of Very High or Greater.</li> <li>A risk to life and/or property exists in the short - medium term.</li> <li>A broad area risk to biodiversity exists.</li> </ul>	<p><b>Direct</b></p> <p>Initial attacks should be to try to extinguish or to contain to the smallest possible area.</p> <p><b>Indirect</b></p> <p>Develop a suppression plan using existing and/or potential containment lines. If possible take into account biodiversity requirements but not to the detriment of life and property.</p>
<ul style="list-style-type: none"> <li>FDR of High or below.</li> <li>Short - medium term forecast indicate a continuing FDR of High or below</li> <li>No risk to life or property exists in the short - medium term.</li> <li>Only small area risk to biodiversity exists.</li> </ul>	<p><b>Direct</b></p> <p>Evaluate the biodiversity thresholds and use direct attack methods to extinguish if required.</p> <p><b>Indirect</b></p> <p>Develop a fire suppression plan to the maximum allowable perimeter based on Biodiversity thresholds.</p>

### Vegetation Map Legend

Broad Vegetation Class	Vegetation Type	Biodiversity Thresholds	Fire Behaviour
Forested Wetlands	River Oak Riparian Community	An interval between fire events less than 10 years and greater than 35 years should be avoided.	Generally low intensity slow moving fires, intensity increasing with ephemeral fuel loads.
Dry Sclerophyll Forest (Shrub formation)	Red Box & Red Stringybark	An interval between fire events less than 10 years and above 30 years should be avoided.	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. There are numerous gullies which accumulate leaf and bark litter further increasing ground fuels which have the potential to promote extreme fire behaviour.
Dry Sclerophyll Forest (Shrub formation)	Scribble Gum, Red Stringybark & Bundy	An interval between fire events less than 10 years and above 30 years should be avoided.	
Non-native vegetation	Pine Plantation	No fire regime.	Extremely high fire danger, risk of spotting and crown fires.
Other	Cleared Land	No fire regime.	High intensity fast moving fire once grasses have cured. Fire behaviour is dominated by winds, both speed and direction.

**Fire History**  
Mullion Range: 2 Small wildfires have been recorded, the 1<sup>st</sup> being approx 9 Ha in Central portion of the reserve and the 2<sup>nd</sup> being approx 6Ha in the Northern portion of the reserve. 12 prescribed burns have been conducted in the reserve since 2006 which equates to a total of 1076 Ha and covers approx 88% of the reserve area. The only portion that has not seen fire is the North Eastern portion of the Northern Block. Approximately 90% of the reserve has been treated by fire since 2006.

**Girralang:** No wildfires recorded, 2 prescribed burns recorded, 122Ha in 2004 and 141Ha in 2009. Approximately 40% of the reserve has seen fire since 2004. The region surrounding this reserve is prone to summer lightning events and a large proportion of fires are historically related to dry lightning events with no associated rainfall.

**Ephemeral Conditions**  
Ephemeral fuel conditions occur after consecutive years of effective rainfall and significant flooding events. This in turn leads to the growth and build up of fine surface fuels such as grasses and herbs, which can create a continuous fuel load across all of the above vegetation communities. As a result expect higher fire intensity.

**Drought Conditions**  
During drought conditions and when vegetation communities are visibly stressed or experiencing dieback no prescribed burning will be permitted and wildfire areas will be minimised. Wildfires are likely to be difficult to control due to extreme conditions during the day and areas of low fuel that are difficult to back-burn in under night-conditions.

### Fire Season Information

<b>Wildfires</b>	<ul style="list-style-type: none"> <li>The critical wildfire season generally occurs from October/November to March/April.</li> <li>Dry lightning storms frequently occur and typical fire weather conditions are winds from the west to the north, high day time temperatures and low humidity</li> <li>Particular care is required following periods of Winter rain and after periods of negative Southern Oscillation Indices.</li> </ul>
<b>Prescribed Burning</b>	<ul style="list-style-type: none"> <li>Prescribed burning should generally be undertaken during Autumn, Winter or early Spring following a moister winter.</li> <li>Care should be taken to ensure a low intensity burn over most of the area treated.</li> </ul>

### Communications Information

Service	Channel	Location and Comments
NPWS VHF	292	<ul style="list-style-type: none"> <li>Mt Canobolas</li> <li>WRR Vote Group</li> </ul>
RFS Brigades UHF	11	<ul style="list-style-type: none"> <li>All brigades on fireground</li> </ul>
RFS PMR	P041	<ul style="list-style-type: none"> <li>Mount Ragan (Lewis Ponds)</li> <li>Mt Canobolas</li> </ul>
Forestry Corporation VHF Repeater	3 or 144	<ul style="list-style-type: none"> <li>Mt Canobolas</li> </ul>

### RFS Fire Brigade Areas & Towers

### Locality

### Incident Map

Contact Information		
Agency	Position / Location	Phone
<b>National Parks &amp; Wildlife Service</b>	Duty Officer	02 6332 6350
	Level 2 202-209 Russel St Bathurst 2795	02 6332 7640
	Regional Office - 200 Yambill St Griffith	02 6966 8100
<b>NSW Rural Fire Service Canobolas Zone</b>	Fire Control Centre (Orange)	02 6363 6666
	Duty Officer	02 6361 8288
<b>Fire and Rescue NSW</b>	Orange Fire Station	02 6361 2205
<b>Forestry Corporation</b>	Bathurst - Fireline Macquarie Regional Office	02 6332 4812
		02 6331 2044
<b>Emergency Services SES</b>		000
		13 2500
<b>Police - Local Area Command</b>	Orange	02 6363 6399
<b>Hospital</b>	Orange	02 6369 3000
<b>Council</b>	Cabonne Shire Council	02 6392 3200
<b>Local Aboriginal Land Council</b>	Orange	02 6361 4742

Legend	Legend
NPWS Estate	Wildfire Area
Creeks	Sealed Road - Two Lanes
Powerlines	Unsealed Road - Two Lanes
Gate	Unsealed Road - One Lane
Contour-100m	<b>Site Management (see guidelines)</b>
<b>Fire Trails</b> BFCC Policy No. 2/2007	IS Indigenous Site - IS1
Cat 1 - Essential	IS Indigenous Site - IS2
Cat 1 - Important	FA Threatened Fauna
Cat 7 - Important	TA Threatened Asset
Cat 9 - Essential	