Nangar National Park
Fire Management Strategy 2014
Mapsheet 1 of 1

Office of Environment & Heritage
NSW National Parks & Wildlife Service

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Map Details

Datum: Geocentric Datum of Australia (GDA) 1994
Projection: Map Grid of Australia (MGA) Zone 55
Data: ADS40: 2007-2008 satellite imagery.

1:50k Topographic Map: Cudal 8631-S, Forbes 8531-S
1:100 Topographic Map: Parkes 8531, Molong 8631
Scale: Noted scales are true when printed on A1 size paper

Related Documents

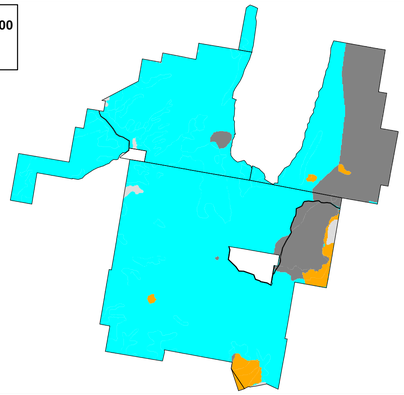
OEH Fire Management Manual 2013 - 2014.

Operational Guidelines

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

General	Guidelines
Aerial Water Bombing	▪ The use of bombing aircraft is designed to support suppression and containment operations and where necessary slow the progress of an advancing fire until ground crews arrive. ▪ Aircraft assist in aggressively attacking hotspots and spot-overs and their use without the support of ground based suppression crews generally has limited effectiveness. ▪ Where practicable foam should be used to increase the effectiveness of the water. ▪ Ground crews must be alerted to water bombing operations.
Aerial Ignition	▪ 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, ▪ The use of aerial ignition as a fire suppression tool should be specified in the IAP or within the prescribed burn plan. ▪ Aerial ignition will only be undertaken by qualified and competent navigators and bombardiers, ▪ Utilise aerial ignition to rapidly burn out large areas and or reduce spotting potential by preventing longer uphill fire runs. ▪ Aerial ignition can be utilised to rapidly progress back-burns down-slope where required.
Back-burning	▪ 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, ▪ 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, ▪ Use parallel containment lines when applicable, ▪ All personnel must be fully briefed before back-burning operations begin. ▪ Caution: In areas dominated by *Callitris* sp. back burning may be difficult or ineffective.
Command & Control	▪ Standard Incident Management Systems are to be applied, ▪ The first combatant agency on site may assume control of the fire, but then must ensure the relevant land management agency is notified promptly. ▪ 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.
Containment Lines	▪ Construction of new containment lines should be avoided, where practicable, except when they can be constructed with minimal environmental impact, ▪ New containment lines require the prior consent of a senior NPWS officer, ▪ When constructing containment lines, steep and rocky areas and locations adjacent to riparian (creeks or streams) or significant drainage lines should be avoided. ▪ All personnel involved in containment line construction should be briefed on the protection of the reserve's natural and cultural assets. ▪ 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 constructions guidelines and standards and the PWG Roads Policy (Manual). ▪ Containment lines not required for other purposes should be closed immediately at the cessation of the incident.
Earthmoving Equipment	▪ 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. ▪ 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 or historic and Aboriginal sites (known nor unknown) along the proposed containment line. ▪ 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. ▪ 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. ▪ Earthmoving equipment must be washed down (where practicable) prior to it entering NPWS estate and again on exiting NPWS estate. ▪ Where multiple items of earthmoving equipment are being used, the IMT should consider the appointment of a Plant Operations Manager.
Fire Advantage Recording	▪ All fire advantages used during wildfire suppression operations must be mapped and where relevant added to the database.
Fire Suppression Chemicals	▪ The use of foams and gels (surfactants) is permitted on the reserve. ▪ 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. ▪ Exclude the use of surfactants and retardants within 50m of watercourses, dams and swamps. ▪ The aerial application use foam, gels and retardants requires the approval of a NPWS Senior Officer. ▪ Areas where fire suppression chemicals are used must be mapped and the used product's name recorded. ▪ The Threatened Sites Guidelines contained within this RFMS are to be observed.
Rehabilitation	▪ Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Smoke Management	▪ The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations, ▪ If smoke becomes a hazard on local roads or highways, the police and relevant media must be notified, ▪ Smoke management must be in accordance with relevant RTA traffic management guidelines.
Structural Fire Fighting	▪ OEH personnel are not trained in structural fire fighting and must not enter a structure in order to undertake structural fire fighting, ▪ 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.
Visitor Management	▪ The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations. ▪ Areas of the reserve may be closed for prescribed burning operations.
WARNINGS	▪ Beware of overhead powerlines
Water	▪ Creeks in reserve are non-permanent water sources. ▪ There are several dams on the reserve, as marked on the Incident Map.

Status of Biodiversity Thresholds

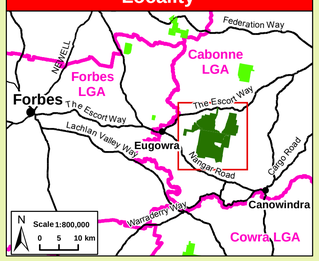


Evaluation of Biodiversity Thresholds	
Vulnerable to Frequent Fire	The area will be too frequently burnt if it burns this year ▪ *Protect from fire as far as possible.*
Within Threshold	Within the threshold for vegetation in this area. Species have had suffic ient time to mature and reproduce, and for 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*
Unknown	Insufficient data to determine fire threshold.
NB. Fire thresholds are defined for vegetation communities to conserve biodiversity	

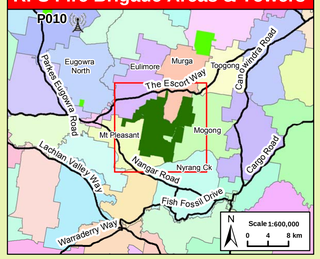
Contact Information

Agency	Position / Location	Phone
National Parks & Wildlife Service	Duty Officer	**02** 6332 6350
	Forbes Office – 1 Camp St Forbes	**02** 6851 4429
	Regional Office – 200 Yambil St Griffith	**02** 6966 8100
NSW Rural Fire Service Canobolas Zone	Fire Control Centre	**02** 6363 6666
	Duty Officer	**02** 6361 8288
Fire and Rescue NSW	Forbes Fire Station	**02** 6851 1843
Forestry Corporation	Steve Campbell - District Manager	0428 696 678
Emergency Services		000
SES		13 2500
Police - Local Area Command	Parkes	**02** 6862 9905
Hospital	Forbes	**02** 6850 2000
	Orange	**02** 6393 3000
Council	Cabonne Shire Council	**02** 6392 3200
Local Aboriginal Land Council	Cowra	**02** 6342 3259

Locality



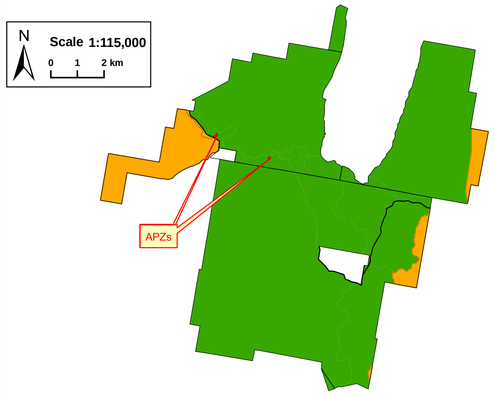
RFS Fire Brigade Areas & Towers



Communications Information

Service	Channel	Location and Comments
NPWS VHF	292 290	▪ Canobolas ▪ WRR Vote Group
RFS Brigades UHF	11	▪ All brigades on fireground
RFS PMR	P010	▪ Mount Coonambro
Forestry Corporation VHF Repeater	3 or 144	▪ Mt Canobolas

Bushfire Risk Management Strategies



Fire Management Zones	
Asset Protection Zones	The objective of **APZ**s is the protection of human life and property. This will have precedence over guidelines for the management of biodiversity. Maintain Overall Fuel Hazard at Moderate or below.
Strategic Fire Advantage Zones	The objective of **SFAZ**s 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.
Land Management Zones	The objective of **LMZ**s is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.

Suppression Strategies

Typical Conditions	Indicative Suppression Strategies
▪ Current Fire Danger Rating (FDR) of **Very High or Greater,** ▪ Short and medium range forecasts suggest conditions typical to a FDR of **Very High** or **Greater,** ▪ A risk to life and/or property exists in the short – medium term, ▪ A broad area risk to biodiversity exists.	**Direct** Initial attacks should be to try to extinguish or to contain to the smallest possible area. **Indirect** Develop a suppression plan using existing and/or potential containment lines. If possible take into account biodiversity requirements but never to the detriment of life and property.
▪ FDR of **High or below,** ▪ Short – medium term forecast indicate a continuing FDR of **High or below** ▪ No risk to life or property exists in the short-medium term, ▪ Only small area risk to biodiversity exists.	**Direct** Evaluate the biodiversity thresholds and use direct attack methods to extinguish if required. **Indirect** Develop a fire suppression plan to the maximum allowable perimeter based on Biodiversity thresholds.

Vegetation Map Legend

Broad Vegetation Class	Vegetation Type	Biodiversity Thresholds	Fire Behaviour
Dry Sclerophyll Forest (Shrub/grass formation)	Tumbledown Red Gum - Black Cypress Pine - Red Box low woodland on hills White Box - White Cypress Pine woodland Stringybark - Box - Gum Woodland	An interval between fire events less than 10 years and above 30 years should be avoided.	Generally low-intensity fires, intensity increasing with amount of ephemeral fuels.
Dry Sclerophyll Forest (Shrub formation)	Scribbly Gum woodland Mugga Ironbark - Box - White Cypress Pine woodland Dry open-forest on ranges of the lower slopes (Hervey Ranges)	An interval between fire events less than 10 years and above 30 years should be avoided.	Generally low-intensity fires, intensity increasing with amount of ephemeral fuels. 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.
Grassy Woodlands	Red Stringybark - Blakely's Red Gum - Yellow Box woodland White Box - Kurrajong woodland	An interval between fire events less than 8 years and greater than 40 years should be avoided.	High intensity fast moving fire once grasses have cured. Fire behaviour is dominated by winds, both speed and direction. Even in very low fuel, grass fires can be erratic and fast moving. In ephemeral years fire intensity will be higher and in drought years minimal growth will result in moderate fire behaviour but potentially still fast moving depending on weather conditions at the time. Potential spotting from trees.
Grassland	Grasslands (various communities)	An interval between fire events less than 3 years and greater than 10 years should be avoided. Where there is a high percentage of native grasses, the area should be managed for the likely previous formation, for example Grassy Woodlands (8 – 40 years).	
Heathland	Nangar Mountain Heathland	An interval between fire events less than 10 years and above 30 years should be avoided.	Unless recently burnt expect very high to extreme fire potential in these areas due to the elevated fuel hazard.
Fire History	Since 2005 13% of the park has seen prescribed burn activity with 3 burns being conducted, 232 Ha (2 separate HR's) in 2010 and 1684 Ha (Approx 1000Ha of this on park) in 2005. 4 wildfires have been recorded for this reserve, 1987 - 431 Ha, 1984 – 42Ha and 2 smaller fires in 2009 totalling < 10Ha. 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 it will be very difficult to undertake prescribed burning across many communities as the surface fuels will be very low. 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.		
Mosaic Burning	Apply fire in a pattern across the reserve that allows gaps in both time and space, small verses large areas, scattered and variable times between fires in any location. If possible leave some areas of each vegetation community unburnt, as an end stage and reference site.		

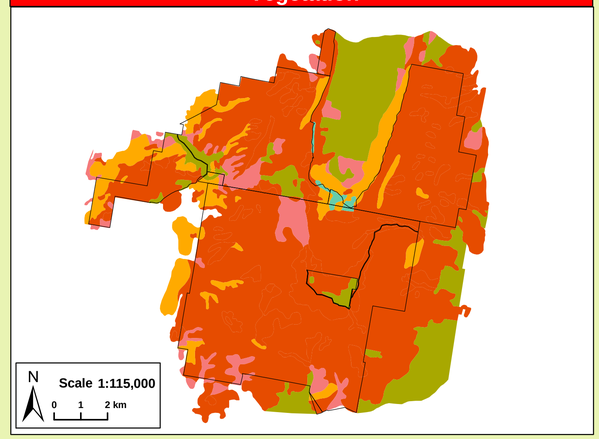
Threatened Sites Guidelines

Threatened Fauna Management

Although not indicated on the Incident Map, several bird species listed as Vulnerable have been recorded within this reserve. Undertake appropriate environmental assessment activities prior to scheduled HR burns.

Utilise mosaic burning, protect hollow bearing trees, avoid disturbance at known sightings, roostings or refuges, avoid frequent fire (< 6—10 years) and exclude chemical use.

Vegetation



Fire Season Information

Wildfires	▪ The critical wildfire season generally occurs from October/November to March/April. ▪ 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. ▪ Particular care is required following periods of Winter rain and after periods of negative Southern Oscillation Indices.	**Prescribed Burning**	▪ Prescribed burning should generally be undertaken during Autumn, Winter or early Spring. ▪ Care should be taken to ensure a low intensity burn over most of the area treated.

Incident Map