Big Bush Nature Reserve
Fire Management Strategy 2014
Mapsheet 1 of 1

Office of Environment & Heritage
NSW National Parks & Wildlife Service

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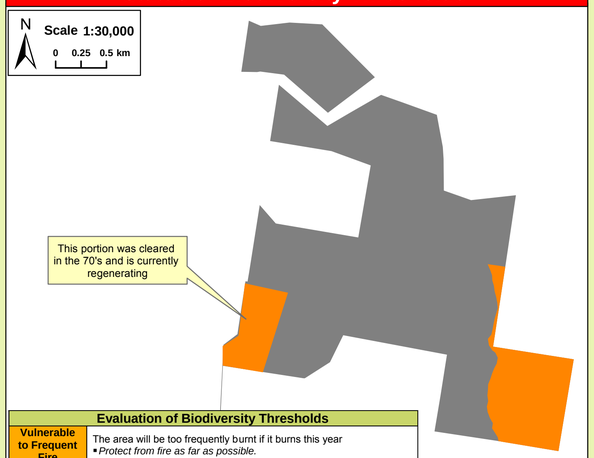
Map Details		Related Documents
Datum: Geocentric Datum of Australia (GDA) 1994 **Projection:** Map Grid of Australia (MGA) Zone 55 **Data:** Spot Satellite Imagery: 2005.	**1:50k Topographic Map:** Ariah Park 8329-S **Scale:** Noted scales are true when printed on A1 size paper	OEH Fire Management Manual 2013 - 2014.

Operational Guidelines

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

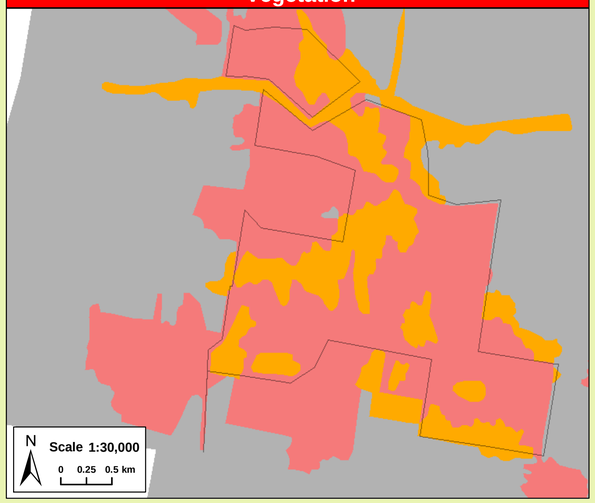
General	Guidelines
Aerial Water Bombing	▪ The use of bombing aircraft should support containment operations by aggressively attacking hotspots and spot-overs, ▪ The use of bombing aircraft without the support of ground based suppression crews should be limited to very specific circumstances, ▪ Where 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, ▪ Aerial ignition will only be undertaken by accredited navigators & bombardiers, ▪ The pattern for aerial ignition will be specified in the IAP during fire suppression, ▪ Utilise aerial ignition to rapidly burn out large areas 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.
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 where they can be constructed with minimal environmental impact, ▪ For new containment lines IMT to receive consent from a Senior NPWS officer prior to construction, ▪ Use parallel containment lines when applicable, ▪ All containment lines not required for other purposes should be closed at the cessation of the incident, ▪ All personal involved in containment line construction should be briefed on both natural and cultural heritage sites in the location, ▪ Containment line construction using earthmoving equipment must be in accordance with the earthmoving guidelines contained within the RFMS.
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, and accompanied by a support vehicle. When engaged in direct or parallel attack this vehicle must be a fire fighting vehicle, ▪ Containment lines constructed by earthmoving equipment should consider the protection of drainage features, observe the Threatened Species and Cultural Heritage Operational Guidelines, and be surveyed, where possible, to identify unknown cultural heritage sites, ▪ Earthmoving equipment must not leave tracks or create new tracks in Machinery Exclusion areas as marked on the Incident Map of a RFMS, ▪ 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 establishment 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	▪ Use of wetting and foaming agents (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, ▪ Areas where fire suppression chemicals are used must be mapped and the used product's name recorded, ▪ The Threatened Species Operational Guidelines 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 prescribed burning or wildfire suppression operations.
Water	▪ There is a large dam in the middle of the reserve on private property ▪ It would be recommended to get a water cart from Temora
WARNINGS	▪ Beware of overhead powerlines.

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 sufficient time to mature and reproduce, and for habitats to develop. ▪ *A fire event is neither required nor should one necessarily be avoided.*
NB. Fire thresholds are defined for vegetation communities to conserve biodiversity	

Vegetation



Vegetation Map Legend

Broad Vegetation Class	Vegetation Type	Biodiversity Thresholds	Fire Behaviour
Dry Sclerophyll Forest (Shrub/ grass subformation)	Scattered Mugga Ironbark /Western Grey Box Woodland/ Dry Heathland/ Low Open Woodland	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. High to extreme elevated fuel hazard due to heathy understorey.
Dry Sclerophyll Forest (Shrub/ grass subformation)	Mugga Ironbark/ Western Grey Box/Black Cypress Pine/Open Shrubby Understorey	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.
Cleared/ Cropland	Cleared/ Cropland	**No fire regime**, where there is a high percentage of native grasses, the area should be managed for the likely previous formation, for example Grassy Woodlands (10 – 30 years).	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.
Fire History	Fires in this reserve are rare; there have been two fires in Big Bush Nature Reserve in the last forty years. Other ignitions of individual trees by lightning have occurred, but have been extinguished before developing into a fire.		
Ephemeral Conditions	Ephemeral fuel conditions occur after consecutive years of effective rainfall. 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 such expect a 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	A mosaic approach to fire management with post fire recovery and response assessments should be undertaken. 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.		

Contact Information

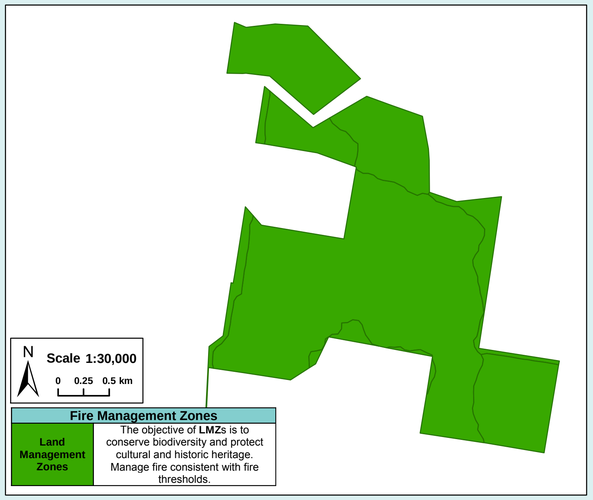
Agency	Position / Location	Phone
National Parks & Wildlife Service	Duty Officer	**02** 6332 6350
	Mid West Area & Regional Office – 200 Yambil St Griffith	**02** 6966 8100
NSW Rural Fire Service Bland/Temora Zone	Fire Control Centre (Temora)	**02** 6977 4737
	Fire Control Centre (Bland)	**02** 6970 1100
	Duty Officer	**02** 6972 0038
Fire and Rescue NSW	Temora Fire Station	**02** 6978 0544
Emergency Services		000
SES		13 2500
Police Station (not open 24 hrs)	Temora	**02** 6977 2044
Police - Local Area Command	Wagga	**02** 6922 2599
Hospital	Temora	**02** 6977 1066
Council	Temora Shire Council	**02** 6980 1100
	Junee Shire Council	**02** 6924 8100
Local Aboriginal Land Councils	Young	**02** 6382 5669
	Narrandera	**02** 6959 1823

Threatened Sites Guidelines

Site	Guidelines
Aboriginal Cultural Heritage Site Management	
Note	An aboriginal sites survey is yet to be conducted for this reserve (as of April 2014). Therefore aboriginal sites may be present and consideration in engaging a Senior NPWS Officer or Aboriginal Sites Officer prior to hazard reduction and wildfire suppression activities is required.
Threatened Fauna Management	

Although not shown on this map there are a range of **vulnerable** species that have been sighted on the reserve.
Little Eagle, Superb Parrot, Barking Owl, Brown Treecreeper, Grey-crowned Babbler, Varied Sitella, Flame robin and the Diamond firetail.
Also the **endangered** species the Swift Parrot has been seen.
Consideration of these when planning prescribed burn activities is essentiall and for more detailed information contact NPWS.

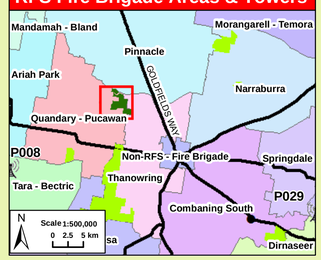
Bushfire Risk Management Strategies



Fire Management Zones	
Land Management Zones	The objective of **LMZ**s is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.

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.

RFS Fire Brigade Areas & Towers



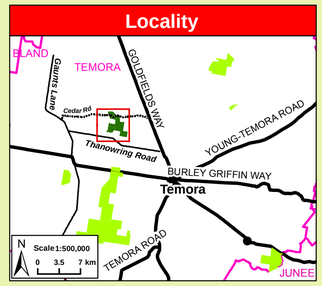
Communications Information

Service	Channel	Location and Comments
NPWS	11	▪VHF Fire Ground 1
	10	▪UHF
RFS PMR	P008	▪Ariah Park
RFS PMR	P029	▪Gogobilly Hill
Mobile phone coverage is unreliable.		

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 from autumn to early Spring ▪ Care should be taken to ensure sufficient fuel is available to allow a low to moderate burn over most of the area identified.

Locality



Incident Map