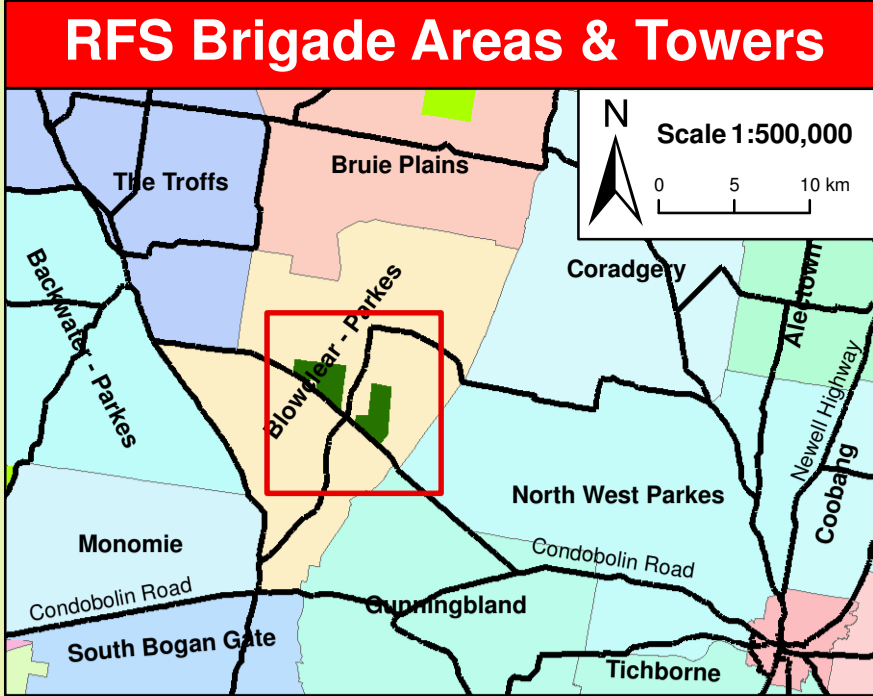
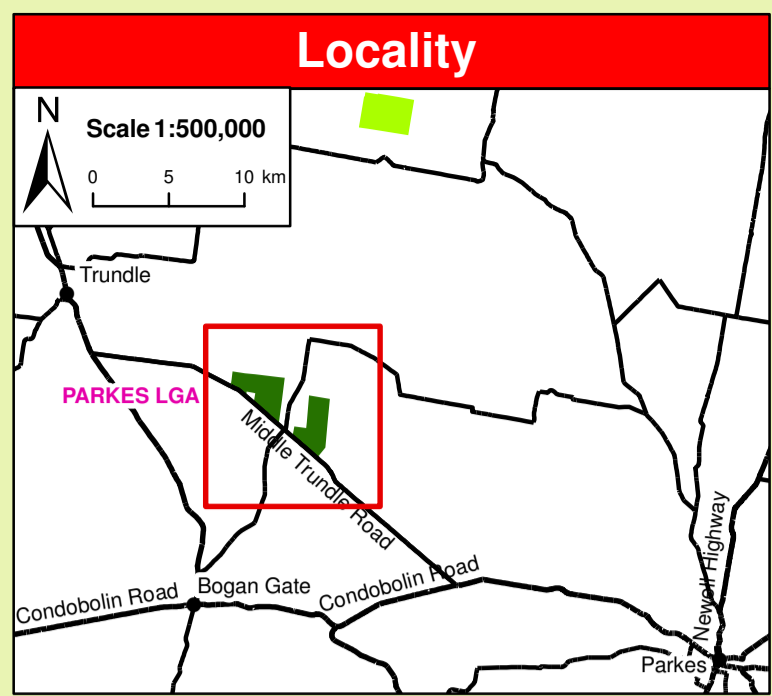


**South West Woodlands Nature Reserve**  
**Blow Clear West Precinct**  
**Fire Management Strategy 2012**  
 Mapsheet 1 of 1

Office of Environment & Heritage  
 NSW National Parks & Wildlife Service

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 38 (4) and Section 44 (3) of Rural Fires Act 1997. The NSW National Parks and Wildlife Service is part of the Office of Environment and Heritage. Published by the Office of Environment and Heritage (NSW), August 2012.  
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**Operational Guidelines**

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

General	Guidelines
<b>Aerial Water Bombing</b>	<ul style="list-style-type: none"> <li>Very effective first attack where fire is still small and crews are some distance away.</li> <li>Should support containment operations by aggressively attacking hotspots and spot-overs.</li> <li>Without the support of ground based suppression crews should be limited to very specific circumstances.</li> <li>Where practicable foams or gels should be considered to increase the effectiveness of 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 where practicable, with the prior consent of NPWS Regional Manager, OEH Section 44 delegate or as prescribed in an operational burn plan.</li> <li>Aerial ignition will only be undertaken by accredited bombardiers.</li> <li>The pattern for aerial ignition will be specified in the IAP during fire suppression.</li> <li>Utilise incendiaries to rapidly burn out large areas 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.</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><b>CAUTION:</b> in areas dominated by Cypress back-burning may be very difficult or ineffective under normal back-burning conditions.</li> </ul>
<b>Command &amp; Control</b>	<ul style="list-style-type: none"> <li>Standard Incident Management Systems are to be applied.</li> <li>On the arrival of other combatant agencies, the initial 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> <li>Where OEH is not the first responding fire authority to arrive at a fire on OEH-managed lands, a competent officer of the first arriving fire authority will direct fire management activities until a competent OEH officer assumes control (unless prior agreements have been made).</li> </ul>
<b>Containment Lines</b>	<ul style="list-style-type: none"> <li>Construction of new containment lines should be avoided, where practicable, except where they can be constructed with minimal environmental impact.</li> <li>New containment lines require the prior consent of a OEH Section 44 delegate or NPWS Area Manager or Regional Manager.</li> <li>Use parallel containment lines when applicable.</li> <li>All containment lines not required for other purposes should be closed at the cessation of the incident.</li> <li>All personnel involved in containment line construction should be briefed on both natural and cultural heritage sites in the location refer to incident map.</li> <li>Containment line construction using earthmoving equipment must be in accordance with the earthmoving guidelines contained within the RFMS.</li> </ul>
<b>Earthmoving Equipment</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Earthmoving equipment must not leave tracks or create new tracks in Machinery Exclusion areas as marked on the Incident Map of a RFMS.</li> <li>Earthmoving equipment must be washed down, where practicable, prior to it 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 establishment of a Plant Operations Manager.</li> </ul>
<b>Fire Advantage Recording</b>	<ul style="list-style-type: none"> <li>All fire advantages used or created 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>Use of gels and foaming agents (surfactants) is permitted on the reserve.</li> <li>The use of fire retardants are only permitted with the prior consent of the OEH Section 44 delegate or NPWS Area Manager or Regional Manager 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>Areas where fire suppression chemicals are used must be mapped and the used product's name recorded.</li> <li>The Threatened Species Operational Guidelines are to be observed. Refer to incident map for locations.</li> </ul>
<b>Rehabilitation and Stabilisation</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> </ul>
<b>Smoke Management</b>	<ul style="list-style-type: none"> <li>The potential impacts of smoke and possible mitigation tactics must be considered when planning for prescribed burning operations.</li> <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 a reserve may be closed for prescribed burning operations.</li> </ul>
<b>WARNINGS</b>	<ul style="list-style-type: none"> <li>Beware of overhead powerlines, and fences crossed by powerlines.</li> <li>Some sections of Mercadool Fire Trail (northern boundary) are sandy.</li> </ul>

**Bushfire Risk Management Strategies**

Season	Typical Conditions	Indicative Suppression Strategies
Just prior to or during the critical fire season	<ul style="list-style-type: none"> <li>Current Fire Danger Rating (FDR) of <b>Very High or Greater</b>.</li> <li>Short and medium range forecasts suggest conditions typical to a FDR of <b>Very High or Greater</b>.</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> <ul style="list-style-type: none"> <li>Initial attacks should be to try to extinguish or to contain to the smallest possible area.</li> </ul> <p><b>Indirect</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>
Outside of the critical fire season	<ul style="list-style-type: none"> <li>FDR of <b>High or below</b>.</li> <li>Short - medium term forecast indicate a continuing FDR of <b>High or below</b>.</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> <ul style="list-style-type: none"> <li>Evaluate the biodiversity thresholds and use direct attack methods to extinguish if required.</li> </ul> <p><b>Indirect</b></p> <ul style="list-style-type: none"> <li>Develop a fire suppression plan to the maximum allowable perimeter based on Biodiversity thresholds.</li> </ul>

**Threatened Sites Guidelines**

Site	Guidelines
<b>Aboriginal Cultural Heritage Site Management</b>	
No known sites, before commencing works contact Senior NPWS or Cultural Heritage Officer.	
<b>Threatened Fauna Management</b>	
FA1	Utilise mosaic burning and avoid disturbance at known sites, roosts or refuges and avoid frequent fire (<6 years).
FA3	Utilise mosaic burning and protect hollow bearing trees.
FA4	Utilise mosaic burning, protect hollow bearing trees and avoid frequent fire (< 6-10 years).
<b>Threatened Flora Management</b>	
FL1	Avoid fire in known locations

**Communications Information**

Service	Channel	Location and Comments
NPWS Forbes	23	VHF Kadina
RFS Forbes	P032	PMR Mt Gillenbine
Blowclear Brigade	17	UHF Simplex
Forests NSW	28	VHF Boona Mountain

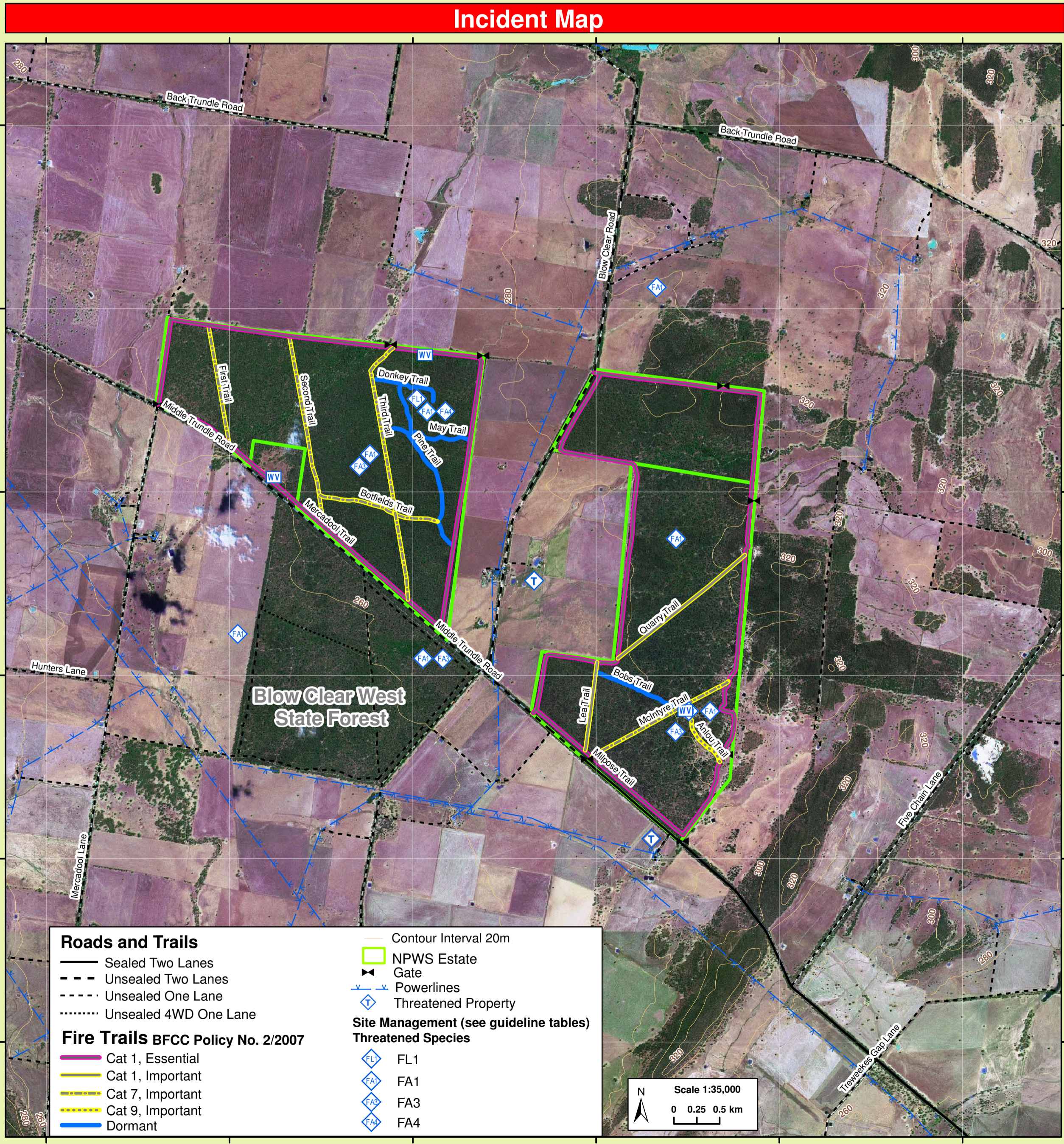
NPWS VHF coverage patchy, use mobile repeater for fire-ground, VHF 13, 14 or 15  
 Mobile phone coverage likely to be unreliable

**Contact Information**

Agency	Position / Location	Phone
National Parks & Wildlife Service	Duty Officer (8am-10pm)	02 6332 6350
	Forbes Area Office 1 Camp St	02 6851 4429
NSW Rural Fire Service Mid Lachlan Valley Team	Fire Control Centre 26 Union St Forbes	02 6851 1541
Forests NSW	Forbes Office	02 6850 2927
Emergency		000
Fire and Rescue NSW	Forbes Fire Station	02 6863 5951
Police - Local Area Command	Forbes	02 6862 9977
SES	State	13 2500
	Lachlan	02 6863 8100
Hospital	Forbes District	02 6862 1611
Council	Forbes Shire Council After Hours	02 6861 2333 1800 648 585

**Fire Season Information**

<b>Wildfires</b>	<ul style="list-style-type: none"> <li>The critical wildfire season generally occurs from November through to February.</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</li> <li>Care should be taken to ensure sufficient fuel is available to allow a low to moderate burn over most of the area identified.</li> </ul>



**Vegetation Map Legend**

Broad Vegetation Class	Vegetation Type	Biodiversity Thresholds	Fire Behaviour
Dry sclerophyll forests (Shrub sub-formation)	Mugga Ironbark and Grey Box tall woodlands of hillslopes on rises and low hills. Grey Box, Belah and White Cypress Pine tall woodlands of flats and gravelly rises on plains, low rises	An interval between fire events <b>less than 10 years</b> (7 years in SFAZ) and <b>greater than 30 years</b> should be avoided. These communities typically consist of many obligate seeders.	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.
Forested Wetlands	River Red Gum tall Woodlands on floodplains and alluvial plains	River Red Gum tall woodlands on floodplains and alluvial plains. An interval between fire events <b>less than 10 years</b> and <b>greater than 35 years</b> should be avoided. River Red Gums will only tolerate lower intensity fires. Individual trees may survive canopy scorch if they are not under stress and are in older age classes. Younger trees will not survive moderate to high intensity fires. Two fires occurring in the same area in a period of less than 20 years apart may reduce the extent of River Red Gum Forests.	This vegetation community will generally not carry fire under Prescribed burning conditions unless there are high ephemeral fuel loads, which generally occur after flooding events. In favourable years the River Red Gum forests can be scattered with 2m high reed beds, which can result in areas of very high to extreme fire behaviour. The community is characterised by spotting from River Red Gums, which commonly form candles.
Grassy Woodlands	Poplar Box, White Cypress Pine and Grey Box tall woodlands on gentle hillslopes on plains, peneplain and low rises	An interval between fire events <b>less than 8 years</b> and <b>greater than 40 years</b> should be avoided.	Fire behaviour is dominated by winds, both speed and direction. Even in very low fuel grass fires can be erratic and fast moving.
Grassland	Mid-high closed Tussock Grassland on plains, peneplain rises and low hills previously cropped	An interval between fire events <b>less than 3 years</b> and <b>greater than 10 years</b> should be avoided. Caution should be used in extended periods of drought, as this will mimic the type of disturbance provide by fires. Occurs along boundaries.	In ephemeral years intensity will be higher while in years affected by drought minimal growth will result in moderate fire behaviour but potentially still fast moving depending on weather conditions at the time. In wooded areas higher potential for spotting.
Other Cleared Lands	Non-native Vegetation	<b>No fire regime</b> , where there is a high percentage of native grasses, the area should be managed for the likely previous formation, for example Grassy Woodlands (6-40 years). Occurs along boundaries.	
<b>Fire History</b>	No recorded fire history exists for this location.		
<b>Ephemeral Conditions</b>	Occur after consecutive years of effective rainfall events. This in turn leads to the growth and build up of fine surface fuels such as grasses and herbs, which can create continuous fuel loads in communities that would not usually have much ground fuel. As a result expect higher fire intensity.		
<b>Drought Conditions</b>	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.		
<b>Mosaic Burning</b>	As this reserve has not experienced fire over an extended timeframe, a mosaic approach with post fire recovery and response assessments should be taken. Mosaic burning has two parts, spatial and temporal. Apply fire in a pattern across the reserve that allows gaps in time and space, small areas, scattered, variable times between fires in any location. If possible leave some areas of each vegetation community unburnt, as an end stage and reference site.		

**Fire Management Zones**

<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.

