

Jenolan Karst Conservation Reserve Fire Management Strategy 2009

This strategy should be used in conjunction with aerial photography and field reconnaissance during incidents and the development of incident action plans.

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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 Department of Environment and Climate Change. Published by the Department of Environment and Climate Change (NSW) May 2009.

Contact: NPWS Kanangra Area Office - 38 Ross St - Oberon NSW 2787.

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Executive Director, Park Management Division

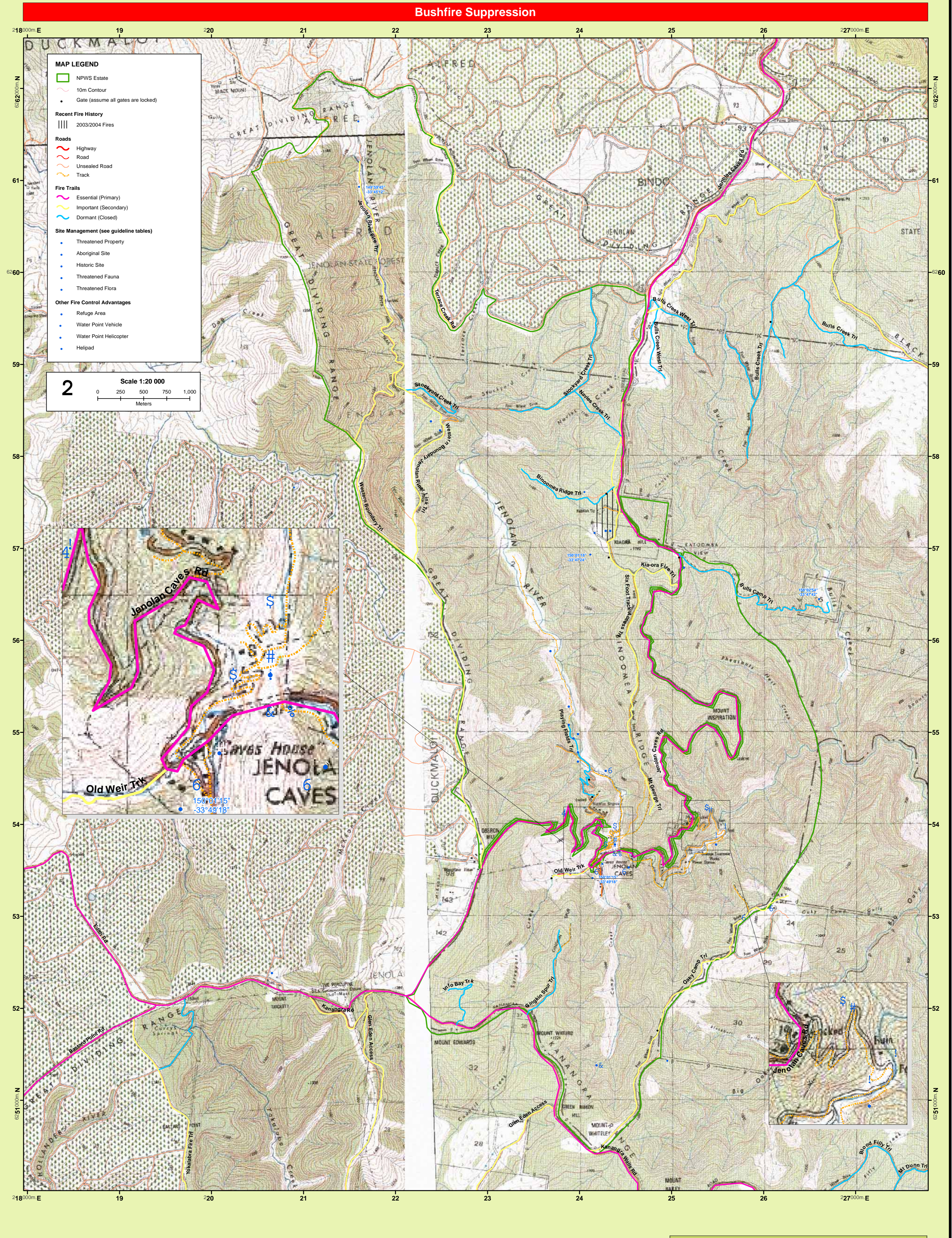
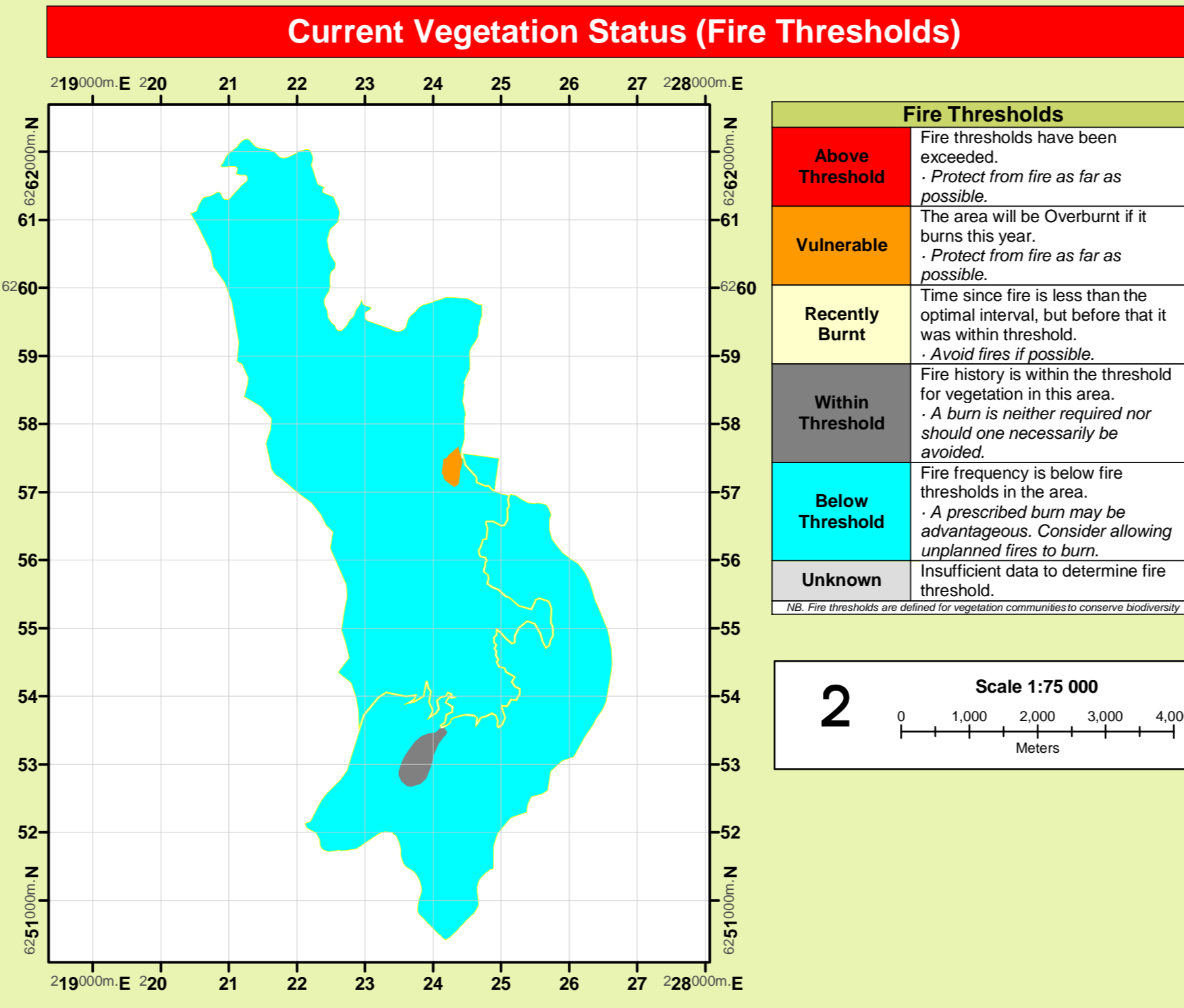
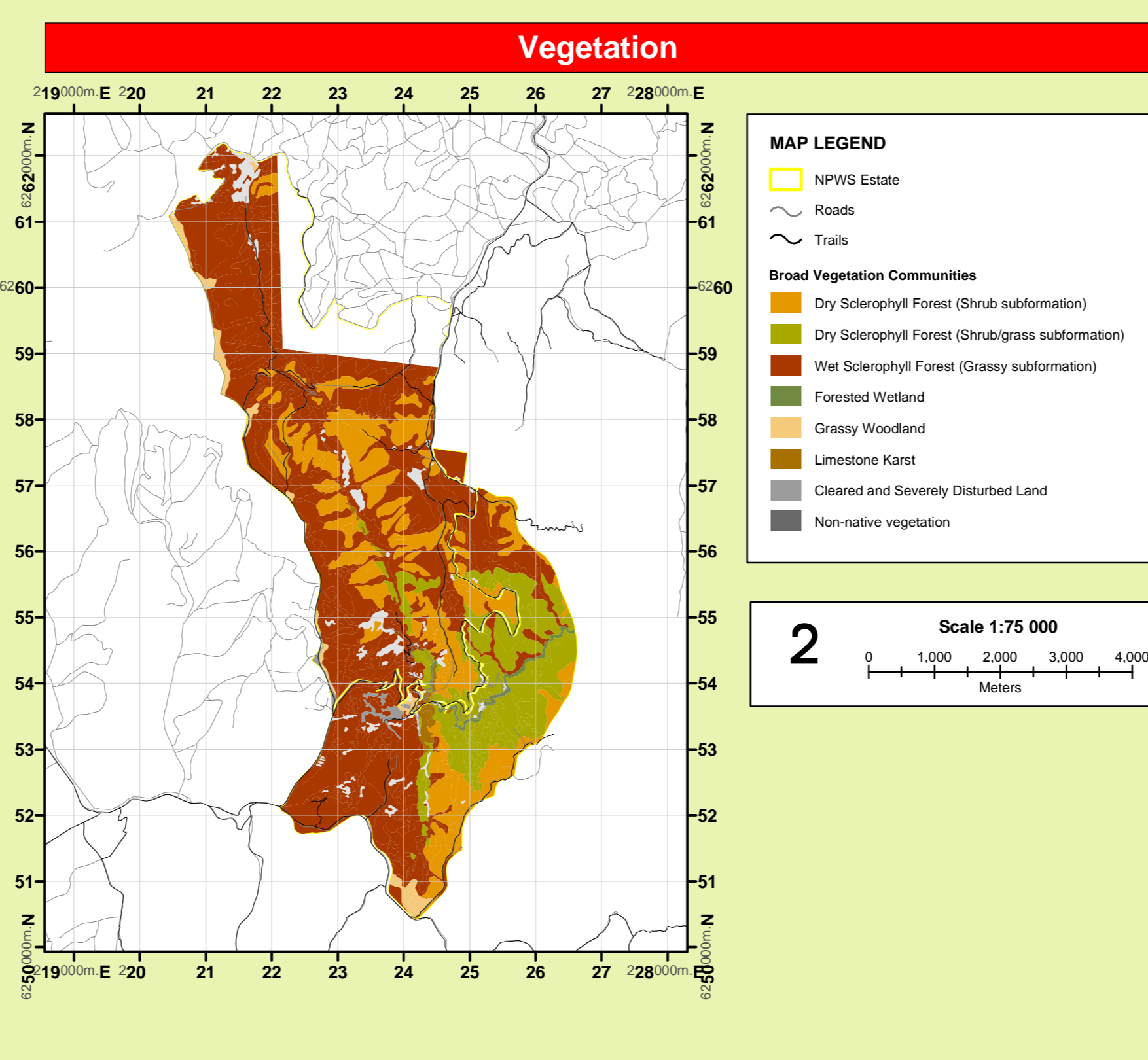
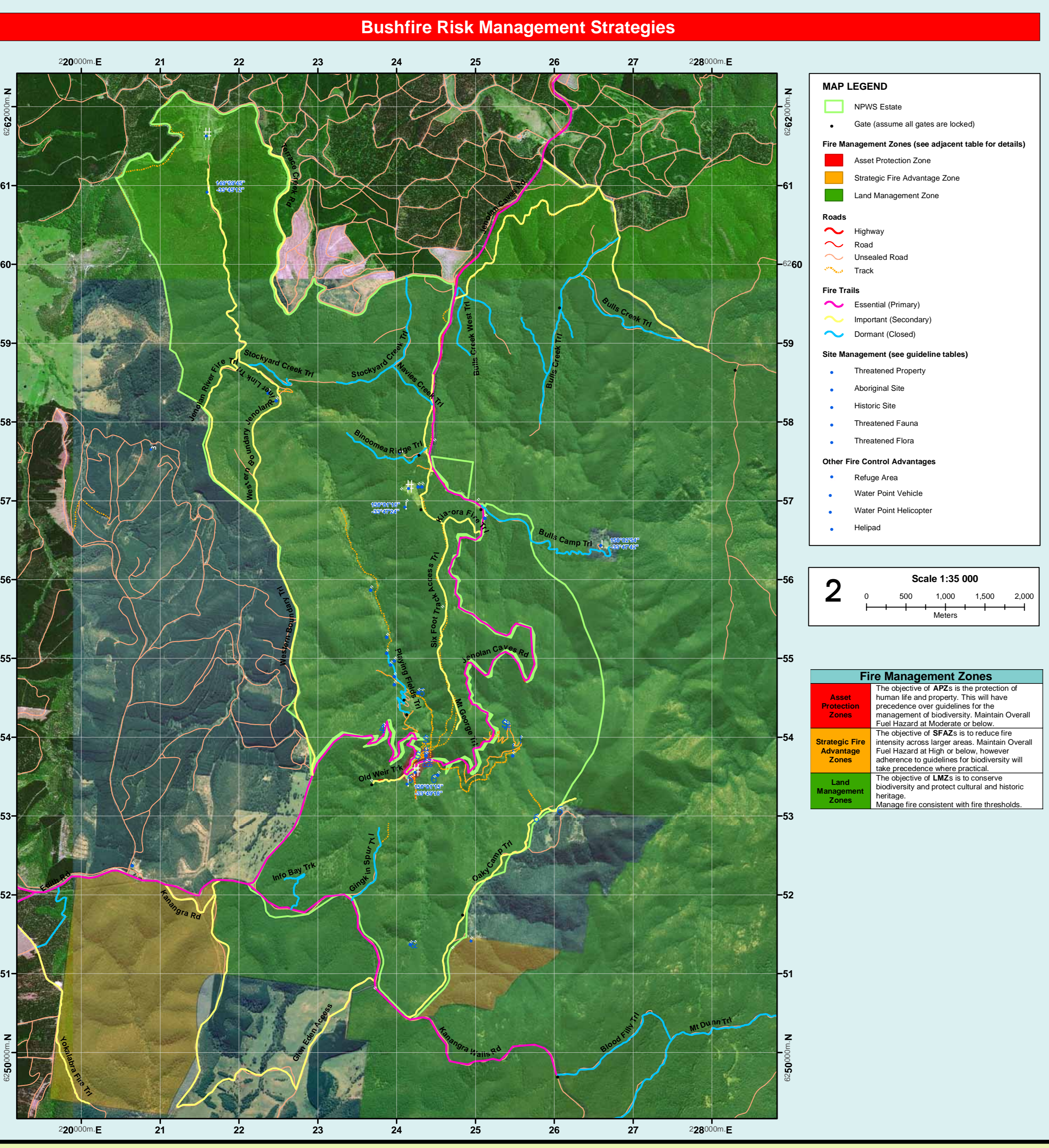
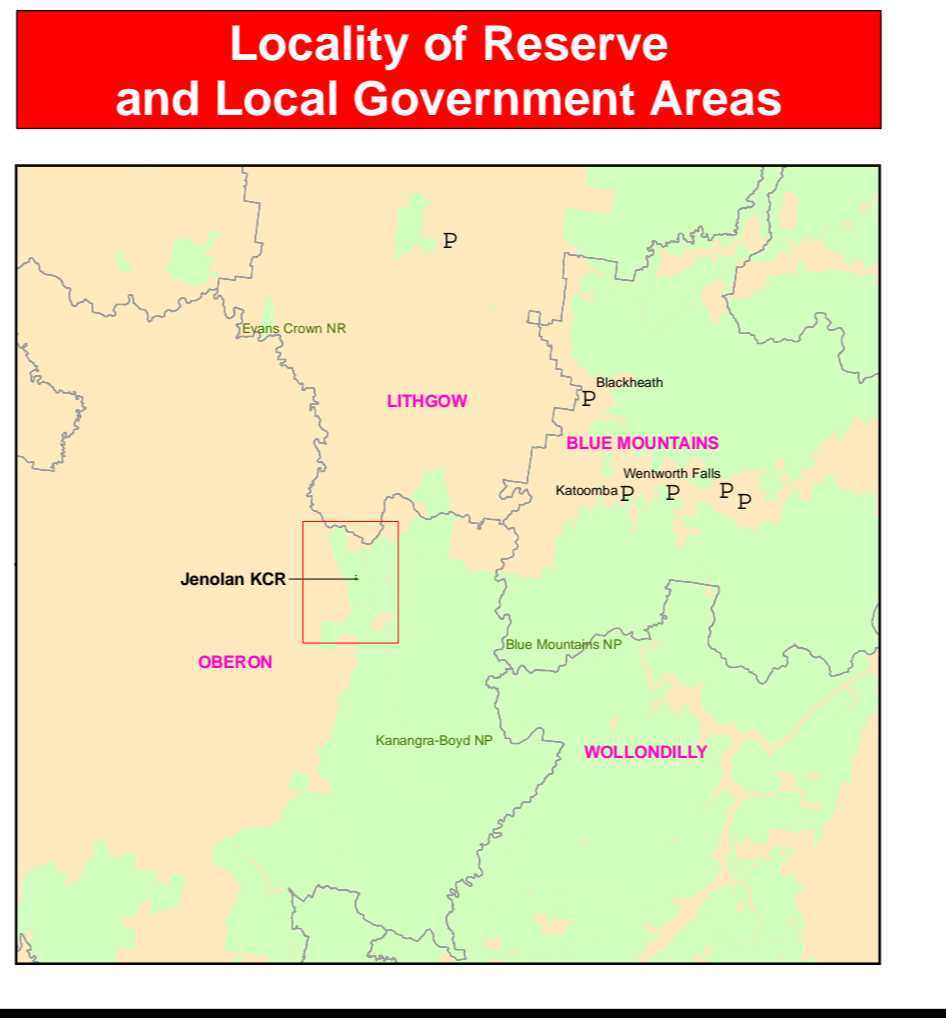
Map Details
Data: Australian Services: Dept of Justice, AGPS, 1996
Aerial Photography: Aerovision, 2008
Satellite Imagery: Google Earth, 2008
Topographic Maps: Geoscience Australia, 2008
Historical Maps: Geoscience Australia, 2008

Communications Information		
Service	Channel	Location and Comments
NPWS - VHF	Ch 6	Good coverage
Aircraft - VHF	Ch 6	Will be allocated by the State Air Desk
Mobile Phone - Next G	Good coverage	
Satellite Phone		Services to be available in areas that are not covered by heavy canopy or open areas such as gorges, land, quarries or road intersections (limited)

Fire Season Information	
Wildfires	The statutory wildfire season occurs between 1 st October and 31 st March. This may be extended if weather conditions lead to increased fire danger outside of this period.
Prescribed Burning	Prescribed burning in this area is normally undertaken in Spring through to Autumn.

Related Documents	
National Parks and Wildlife Service Fire Management Manual, September 200 8.	

Contact Information		
Agency	Position / Location	Phone
National Parks & Wildlife Service (NPWS)	Blue Mountains Regional Duty Officer / After Hours Page	Call pager 016 301 161 and request the 'Blue Mountains Regional Duty Officer'. Leave brief message and a reply contact number. Fire from 4787 3116 - 4787 3118. Fire exclusion line 4787 6084 - 4787 6114 (fax)
	Kanangra Area Office, 38 Ross St Oberon 2787	6336 1972 - 6336 2122 (fax) (Area Manager)
		4784 7300
		4784 7300 (Operations Coordinator)
Blue Mountains Region	Blue Mountains Region	4784 7306 (Senior Ranger, Fire) (Regional Manager)
		4785 2189 (fax)
		4782 6100 (fax)
Flight Services (Park Air)		9752 1717 (202 fax)
		9752 1717 (202 fax)
Oberon District Office		6336 0463 - 6336 4972 (fax)
		6336 1982 - 6336 3077 (fax)
Blue Mountains Fire Control Centre		6336 3900
		6336 3903
NSW Fire Brigades (RFS)		Emergency (see contacts list)
		132 500 (Emergency Line)
State Emergency Service (SES)		Emergency (see contacts list)
		6336 1700 (Oberon)
NSW Police Service		Emergency (see contacts list)
		000
Tourism Centres	Heritage Centre Blackheath	4787 8877 ext 1
	Oberon Tourism	6336 1805
State Forests	Office Bathurst	6336 3859 - 6381 4259 (fax)
	Blue Mountains	6336 2044 - 6331 5238 (fax)
RTA	Duty Chief traffic control	131 700 (public number)
	Chiefs Control	6336 1161 - 6336 1296 (fax)
Local Councils	Linggro Council	6354 9999 - 6351 4259 (fax)
	Blue Mountains - Bathurst	6336 1161 - 6336 2061 (fax)



Operational Guidelines

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

Resource	Guidelines
Aboriginal Cultural Heritage Site Management	Where possible, existing fire trails and control lines will be used during prescribed burning operations and wildfire suppression. Should construction works be required, the NPWS Aboriginal Sites Register will be used to identify site locations to avoid damage. Where sites should be impacted, consultation will be undertaken with the Gundagurra Local Aboriginal Land Council prior to the activity. Doused and overgrown logging tracks will be utilised where possible in preference to the construction of new control lines. Where no scarred or ceremonial trees have been identified within the Park, where possible, all standing trees will be inspected prior to being cut down or doused.
Historic Heritage Management	There are no recorded Historic Heritage items within the Reserve.
Threatened Property	Where possible property owners with assets at risk from a wildfire event should be kept informed regarding the progress of the fire. The current level of protection of these assets will be determined. The use of water bombing aircraft should support containment operations by aggressively attacking hotspots and spot-overs. Ground crews must be alerted to water bombing operations.
Aerial Water Bombing	Aerial ignition may be used during back burning or fuel reduction operations where practicable, but only with the prior consent of a senior NPWS officer. Useless incendiaries to rapidly progress back-burns eg down slope, where required.
Aerial Ignition	As far as possible, exclude fire from all karst areas in the vicinity of the Grand Arch, the Devil's Coach House and the lower McKoon's Valley. 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, backburning should commence when the humidity begins to rise in the late afternoon or early evening. With a lower FDI backburning may be safely undertaken during the day. Where practicable, clear an area around dead, hollow-bearing or fibrous barked trees adjacent to containment lines prior to backburning, or wet down these trees as part of the backburn ignition. Avoid ignition of backburns at the bottom of slopes where a long and intense up slope burn is likely. Cut away competing backburn by using spot ignition instead of the ignition to reduce rate of spread and area of head fire.
Command & Control	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 initial incident controller will consult with regard to the ongoing command, control and incident management team requirements as per the relevant RFS Plan of Control.
Containment Lines	Construction of new containment lines will be avoided, where practicable, except where construction can occur with minimal environmental impact. New containment lines require the prior consent of a senior NPWS officer. Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation. All containment lines not required for other purposes will be closed and rehabilitated at the cessation of the incident. All personnel involved in containment line construction should be briefed on the natural and cultural heritage sites in the location.

General	Guidelines
Earthmoving Equipment	Earthmoving equipment on karst reserve 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 be always guided and supervised by an experienced officer, and accompanied by a support vehicle. When engaged in direct or parallel attack this vehicle must be a firefighting vehicle. Earthmoving equipment should not be operated on top of karst features due to unknown ground stability. Containment lines constructed by earthmoving equipment should consider the protection of karst features drainage features, observe the Threatened Species and Cultural Heritage Operational Guidelines, and be surveyed, where possible, to identify unknown cultural heritage sites. Earthmoving equipment should be washed down, where practicable, prior to it entering NPWS estate. All earthmoving equipment engaged in fire management operations must wear appropriate safety equipment.
Fire Advantage Recording	All fire advantages used during wildfire suppression operations should be mapped and where relevant added to the database.
Fire Suppression Chemicals	Writing and foaming agents (surfactants) are not permitted for use in wildfire suppression on karst features. The use of fire retardant is 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 and karst features. Areas where fire suppression chemicals are used should be mapped and the brand of chemical recorded. The Threatened Flora Management Guidelines are to be observed.
Rehabilitation	Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation in consideration of karst features. All containment lines not required for other purposes will be closed and rehabilitated at the cessation of the incident.
Smoke Management	The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations. Close roads if smoke or fire fighting operations are likely to become a hazard. Display signs at entry to the Park. Notify neighbours of potential smoke hazard. The Park may be closed to the public during periods of extreme fire danger, during wildfire suppression operations or during fuel management burns. Notify media and all relevant authorities of any closures. Check and evacuate day use areas and walking tracks within and adjacent to the fire area. Close roads if smoke or fire fighting operations are likely to become a hazard. Display signs at entry to the Park. To inform public contact Duty Chief traffic control centre and request message be placed on variable message sign (VMS) at Hampton and Hartley.
Visitor Management	

Threatened Fauna Fire Ecology

Label	Name	Fire Ecology
FA1	Gang-gang Cockatoo	Fire unlikely to impact on adults. Avoid high intensity fire within potential habitat to prevent damage to nesting sites (tree hollows). Avoid high intensity fire within potential habitat to prevent damage to nesting sites (tree hollows). Maintain diversity of age structure over wide area. Potential for inappropriate fire regimes to reduce habitat and prey diversity. Avoid impacting hollow bearing trees during activity.
FA2	Sooty owl	Potential for moderate to high intensity fires to impact on reproduction during breeding season. Maintain diversity of age structure over wide area. Protect known nest sites.
FA3	Spotted-tailed Quoll	Potential for inappropriate fire regimes to reduce habitat and prey diversity. Low to moderate intensity fires only likely to impact on species when female defending young in den during spring. Low to moderate intensity burns may encourage the growth of dense understorey which may favour this species. Frequent fires near sites for all burning. Avoid high intensity fires over 800ha. Monitor population demographic in relation to fire.
FA4	Yellow-bellied glider	Avoid high intensity fires over large areas. Maintain mosaic burning patterns. Avoid impacting hollow bearing trees by protecting prior to activity and removing/felling during mop-up. Potential for moderate to high intensity fires to impact on reproduction during breeding season of May-Sep. Protect known nest (hollow branches of smooth bark Eucalyptus) sites. Fire may reduce cover, increase predation. Protect refuge areas from high intensity burns. Avoid fire during breeding season. Maintain variety of age classes in understorey vegetation by mosaic burning. Monitor population demographic in relation to fire.
FA5	Brush-tailed Rock Wallaby	Avoid high intensity fire within known roost locations. Avoid fire during breeding season of Spring to Nov. Maintain mosaic low intensity burning patterns.
FA6	Large-eared Pied Bat	Frequent fires near nursery caves may impact upon breeding. Maintain mosaic burning patterns. Avoid burning during breeding season of May-June, birth period of Nov-Dec, weaning period during Feb.
FA7	Eastern Bent-wing Bat	Frequent fires near nursery caves may impact upon breeding success.

Threatened Flora Fire Ecology

Label	Name	Fire Ecology
FL1	Trachymene sancticollis	The fire response for this species is unknown

Suppression Strategies

Current FDR	Forecast FDR	Strategy
Low - Mod	Low - Mod	As far as possible, undertake indirect, parallel or direct attack along existing control lines. As far as possible, maximise area burnt without threatening assets, including backburns. Identify and survey backup control lines.
High	All	Undertake indirect, parallel or direct attack to minimise the time taken to contain the fire. Construct new control lines if necessary to minimise the time taken to contain the fire. Identify and survey backup control lines. Undertake indirect attack along existing or newly constructed control lines. Secure and survey control lines along the next predicted downwind side of the fire. Identify and survey backup control lines.
All	All	Ensure there is sufficient time to secure control lines before the fire gets to them. If there is insufficient time to secure control lines, fall back to the next potential control line. As far as possible, implement threatened species and cultural heritage management guidelines.

Vegetation Communities and Biodiversity Thresholds

Vegetation Community	Biodiversity Thresholds	Fire Behaviour	Year Burnt	Area (ha)
Dry Sclerophyll Forest (Shrub subformation)	Avoid successive fires at intervals of < 7 years. Avoid fire exclusion for a period of > 30 years.	Low to moderate	2004	3.5
Dry Sclerophyll Forest (Shrub / Grass subformation)	Avoid successive fires at intervals of < 7 years. Avoid fire exclusion for a period of > 50 years.	Low to moderate	-	-
Wet Sclerophyll Forest (Grassy subformation)	Avoid successive fires at intervals of < 7 years. Avoid fire exclusion for a period of > 10 years.	High	2004	6.5
Forest Wetlands	Avoid successive fires at intervals of < 5 years. Avoid fire exclusion for a period of > 40 years.	Moderate	-	-
Grassy Woodland	Avoid successive fires at intervals of < 5 years. Avoid fire exclusion for a period of > 40 years.	Moderate	-	-
Limestone Karst Cleared and severely disturbed	Not applicable.	Low	-	-
Non native vegetation				