

Communications Information Kangaroo River Nature Reserve					
Services	Channel	Location & Comment			
Radio					
NPWS - VHS	31	Red Rocks Repeater 100% Coverage			
NPWS - VHS (Fireground Comms)	43 & 56	17 -18 5 Watt Channels			
NPWS – VHS (Portable Repeater)	4 & 13	Stored at NPWS Bungonia - transportable			
NPWS /RFS (X Band Repeater)	14	Stored at NPWS Nowra Workshop - transportable Full range of both simplex & duplex NPWS VHF & RFS PMR channels			
RFS PMR - UHF Shoalhaven	84 & 29				
RFS - VHF Shoalhaven	5 & 1				
Aircraft – VHF	119.1	Or as advised by State Ops			
Phone		950 70			
Public Phones		Kangaroo Valley			
Mobile Phone - CDMA		Telstra – Good Coverage			
Mobile Phone - GSM		Good coverage all carriers			
Satellite Phone		Available for deployment from NPW Highlands Area Office			

Emergency Calls - Fire, Ambulance, Police				
Call "000" stating service required	30 30			
National Parks & Wildlife Service NSW (Dept.of Environment & Conservation)				
Emergency Contact				
Business Hours - 0830-1630 MonFri.	4423 2170			
South Coast Region	4421 0013			
After Hours / All areas	2011 March 2 (2002) 1132			
Local NPWS Area Office Fitzroy Falls	4887 7244			
Nowra Rd Fitzroy Falls 2577				
South Coast Regional Office	4423 2170			
55 Graham St. Nowra NSW 2541	Ĭ			
Rural Fire Service				
Shoalhaven Fire Control Centre				
Emergency calls	000			
Business Calls	4424 4424			
RFS Brigades located at :	For Brigade contact			
(Group Area 1)	telephone numbers cor			
Kangaroo Valley	Fire Control 4424 4424			
Beaumont				
Cambewarra				
Avoca (Wingecarribee Fire Control)	4871 2666			
NSW Fire Brigades	*			
Nowra	4421 4754			
Moss Vale	4868 1288			
Forests NSW	3			
Hardwood Forest	Î			
Batemans Bay Office	4472 6211			
Supervisor (Northern)	0428 433 667			
Police				
Kangaroo Valley Police Station	4465 1144			
Nowra Local Area Command	4421 9699			
State Emergency Service (SES)	4421 3033			
Emergency Assistance	132 500			
Nowra Headquarters	4423 0081			
Local Government	1120 0001			
Shoalhaven City Council	4420.2444			
(After Hours)	4429 3111 4421 3100			
COMMUNITY CONTACTS	44213100			
47 TO 41 CO 40 TO 40 TO 47 TO 50 TO 47 TO 50 TO				
Nearest Hospital/s	4404 0444			
Shoalhaven Hospital, Nowra	4421 3111			
WILDLIFE RESCUE				
WIRES	4862 1788			
NANA	0418 427 214			

Operational Guidelines – Kangaroo River Nature Reserve

These guidelines are provided to assist fire management activities within the reserve.

They are framed by current cooperative arrangements with other fire authorities, NPWS strategies for fire management, reserve management plans, neighbours and other site-specific issues that need to be considered. Feedback on these matters is always appreciated and should be directed to NPWS Highlands Area Office, Nowra Rd, Fitzroy Falls NSW 2577.

Command and Control: The NPWS is responsible for fire management within the reserve. Any fire authority may initiate size-up and attack with advice to the NPWS upon initial fire sighting or report. See Contacts section to advise fire reports in or within 8km of the reserve. Class 1 fire suppression operations may remain under command of the initial attack agency following assessment and advice by NPWS.

Visitor Safety: Consider public safety within initial response operations. ie clearing likely visitor use areas and sites, warnings and information, on-site protection, closures or

evacuation where instructed by Police.

Locked Gates: Any NPWS locked gates within the reserve are fitted with standard key kept in fire tankers and available from Fire Control. Report any missing or damaged locks via Fire Control or NPWS. For public safety during fire operations – some gates may need to left in closed position - but not locked. Close/Lock NPWS gates after operations. Where safe, leave farm gates as you find them.

Fire Suppression: Firefighter safety is paramount. Containment options should consider using existing roads, trails, walking tracks and recently burnt areas. Where possible to limit unnecessary damage, earthmoving equipment should be limited to brushing up existing tracks. If extreme fire conditions prevail, fall back to property

Earthmoving Equipment: Except for immediate initial attack, the use of earthmoving equipment for fire suppression within the reserve requires NPWS consent. There are significant natural and cultural values at unnecessary risk from unplanned use of earthmoving equipment. Contact NPWS if earthworks are required. ALL use of earthmoving equipment will be consistent with NPWS safety, operational and

environmental guidelines.

Foam and Retardant Use: Avoid foam and retardant use within the reserve unless there is a significant necessary operational advantage. DO NOT use on or near watercourses or rainforest areas. This reserve is within an urban water supply catchment. DO NOT use foams or retardants near water storages or supply infrastructure. Unless under emergency conditions always obtain permission before using rural water supplies / sources. Take care when tanker filling not to contaminate water sources.

water sources.

Aerial operations: Aerial operators should be briefed on location of transmission lines in the area. Consider safety implications where aircraft will operate over adjacent urban areas, dwellings or operate from publicly accessible fireground sites. Aerial operations should be postponed or abandoned if there is a high risk of a storm moving through the area, or there is a significant wind change anticipated. This area is within a controlled airspace, advise Nowra Military (HMAS Albatross) of likely scope of operations required. (02 4424 1257)

Smoke Management: This reserve is near built-up areas and busy roads. Consider prompt advice to communities downwind and consider traffic management during fire suppression operations. Consider safety and health implications during Prescribed Burning operations. Cold air drainage patterns in this area may also carry smoke some distance from the fireground and may adversely affect transport operations. Notify nearby road and airspace management agencies if a smoke hazard to traffic is likely.

Rehabilitation: Earthmoving equipment and other resources should be allocated to soil erosion control works and remedial restoration before standing down from fire operations

Arson: Report ALL fires of unknown cause or suspected arson to Police via Fire Control. Protect likely ignition point/s or evidence. Report any suspicious activity on or near the fireground.

Map Grid: Datum for map grid shown is AGD 66. This will remain in use until the majority of map sheets covering the area are revised to the newer GDA datum. To approximately locate a map reference given in GDA to this map (AGD 66) move approximately 200 metres to the southwest from the given grid reference. Conversely, to relay a grid reference from this map (AGD 66) to someone with a GDA map, give the

Wildlife: Where possible, protect hollow trees adjacent to control lines during fire suppression operations. Prepare control lines to avoid introducing fire to these "habitat" trees during prescribed burning activities (also saves considerable "mop-up" effort). Report all injured wildlife to NPWS or wildlife carer organisations.

Rare or threatened plant species - known sites: Fireground control personnel should seek relevant information and brief all personnel involved in control line construction and suppression activities on the location of threatened species sites or habitats and appropriate actions to protect these sites – refer to relevant strategies table

reference of a point approximately 200m to the northeast of the position shown on this

fire reg (above	ime constraints a	s well as those ger es and requiremen	erally require	the reserve and require specific d to maintain biodiversity ined, these will be added to
Map ID	Species	Common Name	Status	Guidelines
F 1	Calyptorhynchus lathami	Glossy Black- Cockatoo	Vulnerable	No burning, slashing or grading of Allocasuarina thickets.
F 2	Petaurus australis	Yellow-bellied Glider	Vulnerable	Undetermined *
F 3	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Undetermined *
F 4	Petrogale penicillata	Brush-tailed Rock- wallaby	Endangered	Undetermined *

Kangaroo River Nature Reserve Fire Management Strategy January 2007



This Map should be used in conjunction with topographic maps and ground reconnaissance during incidents and the development of incident action plans.

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any consequences of such acts or omissions.

Grid Interval 1000m Australian Map Grid Zone 56 Scale 1:5,500

Please forward comments on this strategy to: sc.fireplans@environment.nsw.gov.au or NPWS Highlands Area Office, Nowra Rd Fitzroy Falls NSW 2577

Fire Management Strategy Information

Fire management planning the reserve is divided into three main types of fire management zones each with strategies to address fire management in the particular area. Other strategies apply to the whole reserve (eg fire access network) or address fire management for particular values found in the reserve (eg, threatened species, cultural sites). These strategies guide the fire management and related works within this reserve. Guidelines are also provided to assist with operational matters – see table.

Fire Management Zones – Kangaroo River Nature Reserve

SFAZ Strategic Fire Advantage Zones: These zones are strategically placed and

SFAZ Strategic Fire Advantage Zones: These zones are strategically placed and managed to provide an advantage for fire fighters in containing and suppressing wildfires. Here, fire frequency may occur towards the lower thresholds necessary to conserve biodiversity, ie more often.

HMZ Heritage Management Zones: Within these zones fire is managed towards a range of intensities and frequencies required in order to conserve natural processes (biodiversity) and cultural assets. Fire authorities continue to aim at

containing wildfires in these areas.

For more information on the strategies and purposes of these zones refer to the NSW NPWS Strategy for Fire Management. www.nationalparks.nsw.gov.au

NB: Some zones may extend beyond the boundaries of the Reserve to a logical fire break or boundary for the zone. Where these are outside the Reserve the owners / managers need to be contacted for details of fire management options for these areas.

These zones will form part of the overall Bush Fire Risk Management Plan for the Shoalhaven. Strategies to be used for Fire Management and Bushfire Suppression Strategic Fire Advantage Zone Strategies - SFAZs

Map ID Zone Name SFAZ Nelson Creek SFAZ

Review fire management works program for the zone annually, post fire season.

This assessment includes bushfire fuel, fire history, biodiversity maintenance and the condition of fire control facilities within the zone such as fire access tracks, slashed areas, gates, information signs, identified water points etc. Fire related works for reserve declared and reported to District Bush Fire

related works for reserve declared and reported to District Bush Fire
Management Committee. Annually – pre-season.

Undertake burning under prescribed conditions where indicated by above fire fuel assessments and biodiversity maintenance requirements – as required.

Maintain cooperative management and communication with adjoining landholders so that effective fire risk management is maintained across the zone and adjoining bushlands.

Seek cooperation of local RFS brigades in the monitoring of SFAZ fuel and access conditions. ge Management Zones – HMZs

Iap ID Zone Name IMZ 1 Escarpment HMZ IMZ 2 Ecological Managem

HMZ 2 Ecological Management HMZ
Strategies

Review fire management works program for the zone annually, post fire season.

This assessment includes fire history, biodiversity maintenance and the condition of fire control facilities within the zone such as fire access tracks, slashed areas, gates, information signs, identified water points etc.

Undertake burning under prescribed conditions where indicated by above

assessment for biodiversity maintenance requirements - as required.

Fire Exclusion Area – FEA Map ID Area Name

Strategies

Fire should not be introduced and where possible excluded. These are areas such as rainforest and wetland though at times during drought and adverse fire conditions these areas may burn.

Overall Fire Response and Management Strategies

Fire Detection: The NPWS maintains and contributes to cooperative fire detection and response arrangements across the Shoalhaven Fire District. This includes lookouts, surveillance flights, lightning detection and communications systems. During periods of higher fire danger this reserve may be patrolled and restrictions placed on visitor access and use of fire. These will be notified via signs at the entrance to the reserve and the

Fire Response: Apart from any specific conditions indicated in the Operational Guidelines, the NPWS as a NSW fire authority prepares and maintains personnel and equipment to undertake fire management and response within the reserve. These resources are also provided under cooperative contact, callout and incident management arrangements within the Shoalhaven Fire District and across NSW.

Fire Suppression: As this reserve is relatively small, isolated from other natural sites and near built-up areas, most unplanned fire will require a prompt response aimed at limiting the size of the area affected. Fire suppression tactics in all areas will primarily consider immediate visitor and firefighter safety, minimising unnecessary disturbance and will have regard to constraints defined within reserve Plans of Management.

Prescribed Fire: May be introduced to maintain biodiversity or meet protection obligations as identified within the fire management zones as mapped. The NPWS maintains a record of known fire history and will annually review the need to undertake prescribed burning. Each proposal is subject to environmental assessment and operational safety planning. All burning proposals for the coming season (July-June) are listed with the Shoalhaven Bush Fire Management Committee. For details or enquiries contact the NPWS Area (see Contacts) or Shoalhaven Fire Control.

Community Information: The NPWS will participate in cooperative community information programs in the Shoalhaven Fire District. For this reserve these will focus on fire management works and biodiversity maintenance, property preparation and protection near the reserve and NPWS role in cooperative fire management and response in the

Fire Works Program The works program arising from the above strategies is prepared and reviewed annually. This program is prepared from the post fire season assessment of each of the zones as

above. Also considered are seasonal weather trends, available resources and cooperative arrangements with neighbours, other fire authorities and land management agencies.

Fire related works for the reserve are summarised and presented to the local District Bush Fire Management Committee annually usually before the bushfire danger period. Some works indicated may not be completed due to prevailing weather patterns, or the

Information on the works to be undertaken are available from local NPWS offices and the Shoalhaven District Bush Fire Management Committee at the district RFS

necessary redirection of effort and resources to other priority fire tasks such as wildfire control and rehabilitation. In most cases, such deferred works are carried forward into

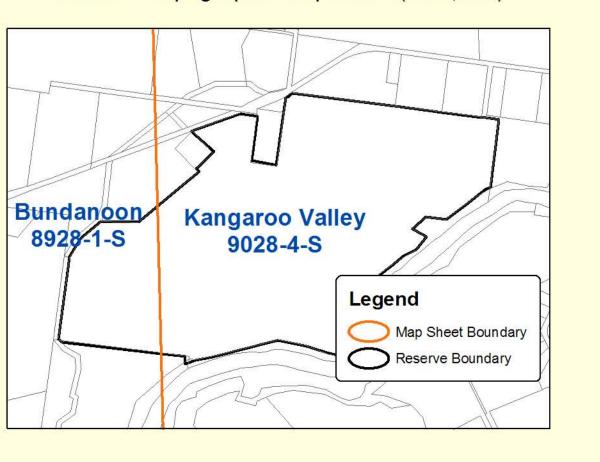
headquarters. Other Fire Management Information and Strategies for specific Natural and Cultural values in Kangaroo River Nature Reserve Fire Season information and weather patterns:

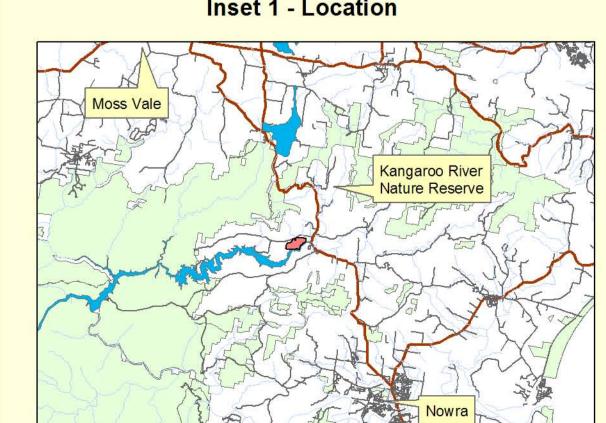
Wildfires: Fire history indicates fires of greater intensity and control difficulty during late spring, summer and early autumn, though periods of drought may extend this period from late August to June. Strong, drier westerly winds are noted from late August to mid October. During summer, moister north-east sea-breezes may push inland against predicted patterns though this effect diminishes further from the coast and may cause highly changeable conditions on the fireground. Likewise, the effects of southerly maritime changes is later and lesser than along coastal areas. Thunderstorm activity in the summer months may produce sudden changes in wind speed and direction with possible lightning ignitions and highly variable rainfall.

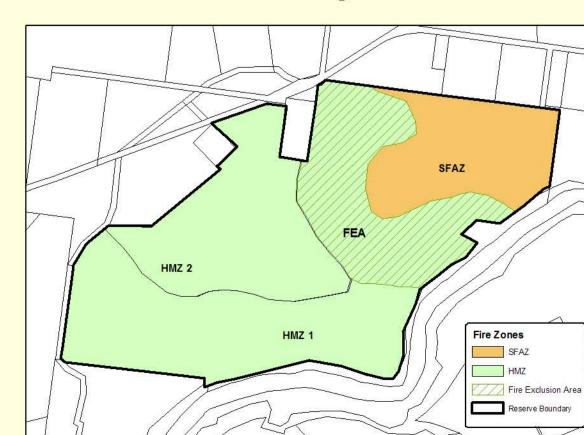
Prescribed Burning: Late summer / autumn / and winter are the preferred seasons for prescribed burning where desirable stable conditions and trends are more likely. Areas at higher altitudes may commence earlier in the season. Burning may take place outside

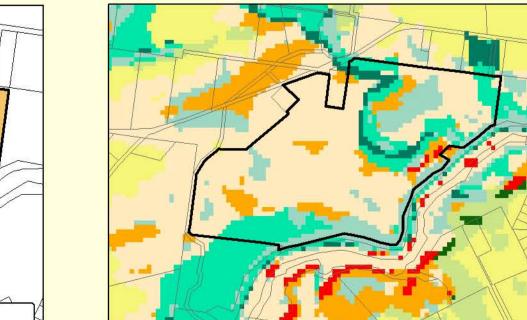
these periods for specific operational and biodiversity management objectives.

Inset 6 - Topographic Map Index (1:25,000)



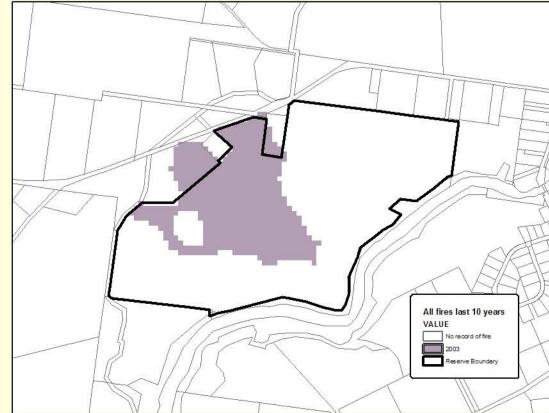


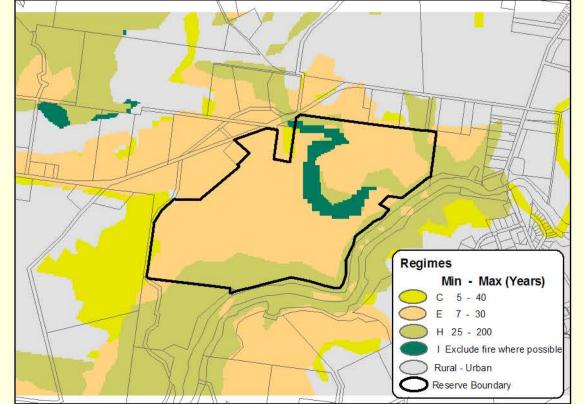




Bush Fire Fuel Types and comparative fire behaviour

This map shows modelling of comparative fire behaviour that may be expected in the various vegetation types across the reserve and surrounding areas. It is intended as an operational guide to assist fire suppression and prescribed burning operations but does not replace constant surveillance of on-site fire behaviour, weather trends and local terrain effects.





Fire Regimes - Vegetation In order to maintain biodiversity within the reserve the following fire regimes are indicated for vegetation types that may be present. The aim is for a range of areas with differing times since fire within these intervals. Fire frequency in SFAZs may trend toward lower thresholds in order to provide a strategic advantage in containing wildfire. The below intervals are broad guidelines only and fire requirements for specific species may need to The vegetation types listed below are not all necessarily present within the area covered by this Fire Management Strategy. Minimum fire Maximum fire Map ID Vegetation type interval (yr) interval (yr) Open Forest, Dry Forest, Heathland. Moist Forest, Gorge/Gully Forest. Exclude fire Exclude fire Rainforest. where possible where possible N/A