



Communications Information

Kangaroo River Nature Reserve

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

CONTACT INFORMATION

Emergency Calls - Fire, Ambulance, Police
Call "000" stating service required

National Parks & Wildlife Service NSW (Dept of Environment & Conservation)

Emergency Contact
Business Hours - 0830-1630 Mon-Fri
South Coast Region
After Hours - All areas
Local NPWS Area Office Fitzroy Falls
Nowra Rd Fitzroy Falls 2577
South Coast Region Office
25 Sagarah St, Nowra NSW 2541

Rural Fire Service
Shoalhaven Fire Control Centre
Emergency calls
Business Calls
RFS Engines located at:
(Group Area 1)
Kangaroo Valley
Batemant
Catherineville
Avoca (Wingcaribea Fire Control)
4871 2666

NSW Fire Brigades
Nowra
Moss Vale
4421 4754
4686 1288

Police
Kangaroo Valley Police Station
Nowra Local Area Command
4465 1144
4421 9699

State Emergency Service (SES)
Emergency Assistance
132 000
4423 0081

Local Government
Shoalhaven City Council
4428 3111
4421 3100

COMMUNITY CONTACTS
Nearest Hospitals
Shoalhaven Hospital, Nowra
4421 3111

WILDLIFE RESCUE
WIRDC
4862 1788
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 fighting 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. Is clearing likely visitor use areas and site, signage 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 level in the bar 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 be left in closed position - just not locked. Check lock NPWS gates after operations. Where safe, leave farm gates as you find them.

Fire Suppression - Firefighter safety is paramount. Containment operations 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 protection of adjacent urban areas.

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

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 riparian areas. This reserve is within an urban water supply catchment. DO NOT use foams or retardants near water storages or supply infrastructure. Unless unsuitable conditions always obtain permission before using aerial water supply devices. Take care when tanker filling to contaminate water sources.

Aerial operations: Aerial operations 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 airfields 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) if 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 airway management agencies if a smoke hazard 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.

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

Map Grid: Datum for map grid shown is AGD 84. 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 84) move approximately 200 metres to the southwest from the given grid reference. Conversely, to refer a grid reference from this map (AGD 84) to someone with a GDA map, give the reference of a point approximately 200m to the northeast of the position shown on this map.

Special site considerations

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 take considerable "top-up" effort). Report all injured wildlife to NPWS or wildlife car 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 or habitats and appropriate actions to protect these sites - refer to relevant strategies table.

Threatened Species

The following species are recorded within or adjacent to the reserve and require specific fire regime constraints as well as those generally required to maintain biodiversity (above). As other species and requirements are determined, these will be added to revisions of this strategy.

Map ID	Species	Common Name	Status	Guidelines
F 1	<i>Calyptornis chrysops</i>	Glossy Black-Cooked	Vulnerable	No burning, slashing or grading of adjacent habitats.
F 2	<i>Petrochelidon lunifrons</i>	Yellow-bellied Miner	Vulnerable	Undetermined *
F 3	<i>Pteropus melanopus</i>	Grey-headed Flying-fox	Vulnerable	Undetermined *
F 4	<i>Pteropus melanopus</i>	Brown-headed Rock-wallaby	Endangered	Undetermined *

* Specific requirements undetermined - No species fire requirements known at present. However the potential impact of firefighting chemicals and heavy machinery use should be considered and minimised where possible.

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.

Copyright Department of Environment and Conservation. These data are not guaranteed to be free from error or omission. The Department of Environment and Conservation and its employees disclaim liability for any act done on the information in the data and 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

For 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 managed to provide an advantage for fire fighters in containing and suppressing fires. Here, fire frequency may occur towards the lower thresholds necessary to conserve biodiversity - see table.

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

FEA Fire Exclusion Area - This area is managed to prevent fires from occurring within the zone. For more information on the strategies and purposes of these zones refer to the NSW NPWS Strategy for Fire Management and related documents on the NPWS website.

Strategic Fire Advantage Zone Strategies - SFAZs

Map ID	Zone Name
SFAZ 1	Nelson Creek SFAZ

Strategies
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, shaded areas, gates, information signs, identified water points etc. 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.

Heritage Management Zones - HMZs

Map ID	Zone Name
HMZ 1	Escarpment HMZ
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, shaded areas, gates, information signs, identified water points etc. 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 assessment for biodiversity maintenance requirements - as required.

Fire Exclusion Area - FEA

Map ID	Area Name
FEA 1	Batemant Protection

Strategies
Fire should not be introduced and where possible excluded. These are areas such as batemant and wetland though at times during drought and access 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 lookout surveillance flights, lightning detection and communications systems. During periods of higher fire danger this network may be expanded and restrictions placed on access and use of fire. This will be notified via calls at the entrance to the reserve and the local media.

Fire Response: Apart from any specific conditions indicated in the Operational and Response Management Plans, the NPWS maintains and contributes to cooperative fire detection and response arrangements across the Shoalhaven Fire District. This includes lookout surveillance flights, lightning detection and communications systems. During periods of higher fire danger this network may be expanded and restrictions placed on access and use of fire. This will be notified via calls at the entrance to the reserve and the local media.

Fire Suppression: As this reserve is relatively small, isolated from other natural sites and near built-up areas, well equipped fire will require a prompt response aimed at limiting the size of the area affected. Fire suppression tactics in all areas will primarily consist of immediate visitor and firefighter safety, minimising property damage 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 assessed. The NPWS maintains a record of fire history and annually reviews the need to undertake prescribed burning. Each proposal is subject to environmental assessment and prescribed 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 Line Contact or Shoalhaven Fire Control.

Community Information: The NPWS will continue its cooperative community information program in the Shoalhaven Fire District. For this reserve this will focus on the reserve and NPWS sites in cooperative fire management and response in the reserve.

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

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 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 into 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 changes is lower and lesser than along coastal areas. Thunderstorm activity in the summer months may produce sudden changes in wind speed and direction with possible lightning strikes 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.

