













Bushfire 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.

CONTACT INFORMATION		Fire M	lanagement St
ergency Calls - Fire, Ambulance, Polic Call "000" stating service required	;e	- For fire	management plan
onal Parks & Wildlife Service NSW	(Dank of Engineers 4.9.0 - 11 - 11 - 11 - 11	- manage	ement zones each
	(Dept.of Environment & Conservation)	area. (Other strategies ap
Emergency Contact Business Hours - 0830-1630 Mon.	·Fri. (02) 4423 2170	fire mar	nagement for parti
After Hours / All areas	1800 629 104	cultural	sites). These stra
Local NPWS Area Office	1800 829 104	reserve	e. Guidelines are a
Nowra Office	(02) 4428 6300	Fire Ma	anagement Zones
South Coast Regional Office		APZ	Asset Protection
55 Graham St. Nowra NSW 2541	(02) 4423 2170		and adjoining hi
al Fire Service		-	levels using tecl
Shoalhaven Fire Control Centre	46 kg	-	and fire may be
	000	SFAZ	Strategic Fire
Emergency calls Business Calls	4424 4424	5.7.2	managed to pro
For Brigade Contact No.s - Contact Fire	ALT DIATE		suppressing wild
V Fire Brigades	Control	-	thresholds nece
Nowra Fire Station	4421 4754	-	management wi
ests NSW	4421 4734	_	the zone. The a
Hardwood Forests		-	patchiness and
	4472 6211	HMZ	Heritage Manag
Batemans Bay office	4472 6211	-	range of intensit
Nowra Police Station	4421 9699	-	processes (biod
	4421 9699	-	containing wildfi
te Emergency Service (SES)	120 500	• For	more information on th
Emergency Assistance No.	132 500 4423 0081	1.7	Management. www.na
Shoalhaven Headquarters	4423 0061	• NB:	Some zones may exte
al Government	4400 2444		zone. Where these are
Shoalhaven City Council	4429 3111		re management options
Shoalhaven City Council (After Hours)	4421 3100		se zones will form part trict
MMUNITY CONTACTS	0440 407 044		anagement Zones
NANA	0418 427 214		ies to be used for
Nearest Hospital/s	4404 2444		Protection Zones
Shoalhaven Hospital (Nowra)	4421 3111	Map ID	Zone Name
		IIIap ID	Pangaloo AP7

Tapitallee Nature Reserve					
Service	Channel	Location and Comments			
RADIO					
NPWS - VHF	31	Red Rocks repeater			
NPWS - VHF (Fireground Comms)	43-44	17-18 - 5 Watt Channels			
NPWS - VHF (Portable Repeater)	14	Stored at Nowra Area depot / transportable.			
NPWS / RFS (X-band Repeater)	14	Stored at Nowra / transportable. Full range of both simplex & duplex NPWS VHF & RFS PMR channels.			
RFS – PMR - UHF	CH 84	Red Rocks			
	CH 59	Nowra			
	CH 29	Kangaroo Valley			
CB - UHF	28	Forestry use			
Aircraft - VHF		As advised by State Ops			
PHONE					
Mobile Phone - CDMA		Fair Coverage available -Telstra.			
Mobile Phone - GSM		Fair coverage			
Satellite Phone		Available for deployment ex Ulladulla and Nowra Area offices			

PHONE				
Mobile Ph	ione - CDMA	Fair Coverage a	available -Telstra.	
Mobile Ph	ione - GSM	Fair coverage		
Satellite F	Phone	Available for deployment ex Ulladulla and Nowra Area offices		
n order to may be pr hese thre ower thre	pimes - Vegetation maintain biodiversity within the reserve the follower. The aim is for a range of areas with difficient is sholds may be exceeded where necessary for sholds in order to provide a strategic advantage only and fire requirements for specific species	ering times since fi asset protection. Fe in containing wild	ire within these intervals. Within APZs Fire frequency in SFAZs may trend toward Ifire. The below intervals are broad	
The veget Strategy.	ation types listed below are not all necessarily	present within the	area covered by this Fire Management	
Map ID Regime	Vegetation type	Minimum fire interval	Maximum fire interval	
A	Coastal complex, Woodland, Grassy dry forest	5	30	
В	Wetlands	6	35	
С	Open forest, Woodland	5	40	
D	Grass forest, Riparian forest, Coast/Plateau complex, Dry forest	5	50	
E	Coastal Dune Scrub, Coastal Sands Forest, Open Forest, Dry Forest, Heathland	7	30	
F	Riparian Forest, Dry Forest, Swamp Forest, Moist Forest	7	35	
G	Acacia Scrub, Shrubland, Grassland	8	30	
Н	Moist Forest, Gorge/Gully Forest	25	200	
1	Rainforest, Exotic Forest, Mangrove, Marsh	Exclude fire where possible	Exclude fire where possible	
No Regime	Rural, Urban, Waterbodies	N/A	N/A	

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 (e.g., fire access network) or address are management for particular values found in the reserve (e.g., threatened species, cultural sites). These strategies guide the fire management and related works within this deserve. Guidelines are also provided to assist with operational matters – see table.

s – Tapitallee Nature Reserve

Asset Protection Zones: Within these areas the focus is on protection of life and adjoining higher risk assets. Bushfire fuels are managed towards lower levels using techniques that include slashing, trittering, clearing and burning and fire may be more frequent than desirable to conserve biodiversity.

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. Fuel management within the SFAZ may be implemented within the whole or part of the zone. The aim will be to provide strategic fire advantage while allowing for patchiness and variability of fire intensity.

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.

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 Bushfire Risk Management Plan for the Shoalhaven Fire District

Fire Management Zones and strategies

Asset Protection Zones & Strategies - APZs

Map ID Zone Name

Bangalee APZ, North Boundary APZ, West Boundary APZ

Strategies

Assess APZ for bush fire fuel management and maintenance works annually, post fire season.

Maintain slashed breaks where marked – as required.

Enable clear access for firefighters and limit available fire fuels by keeping zone clear of rubbish, gardening debris and property – as required.

Identify limited and isolated areas within APZ to allow regeneration in order to sustain tree canopy and windbreak – where required.

Thin trees to separate canopy – where required.

Continue direct and cooperative contact with neighbours and communities to enable a better mutual understanding of bush fire management, asset

protection, fire season preparedness and personal safety – ongoing.

Strategic Fire Advantage Zone Strategies - SFAZs

Map ID Zone Name

Southern SFAZ, Eastern SFAZ Strategies Review fire management works program for the zone annually, post fire 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 Management Committee. Annually - pre-season. Undertake burning under prescribed conditions where indicated by above fire fuel assessments and biodiversity maintenance requirements - as required. Maintain identified fire access tracks to indicated standard – as required. Assess and report condition of fire access tracks to emergency services - pre fire season. Maintain cooperative management and communication with adjoining landholders so that effective fire risk management is maintained across the zone and adjoining bushlands. Where threatened fauna strategies indicate 'No Fire' - ensure that where fire needs to be introduced for asset/strategic advantage or vegetation diversity conservation that intermittent strip or mosaic burn patches of limited size are prescribed e.g. less than 50 metres and less than 33%.

Heritage Management Zones – HMZs
Map ID Zone Name
Northern HMZ, Western 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.

They are framed by current cooperative arrangements with other fire authorities, NPWS strategies for fire management, reserve management plans, neighbours and other sitespecific issues that need to be considered. Feedback on these matters is always appreciated and should be directed to NPWS Nowra Area, PO Box 707 Nowra NSW 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 (i.e., clearing likely visitor use areas and sites, warnings and information, on-site protection, closures or evacuation where instructed by Police). 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 protection of adjacent urban areas. Earthmoving Equipment: Except for immediate initial attack, the use of earthmoving equipment for fire suppression within the reserve requires NPWS consent. Contact the NPWS if earthworks are required. ALL use of earthmoving equipment will be consistent with NPWS safety, operational and environmental guidelines. Foam and Retardant Use: DO NOT use on or near watercourses, wetlands, rainforests or swampy areas. 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 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 or 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 to built-up areas and busy roads. Consider

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.

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 to 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.

Map Grid: (zone 56) Datum for map grid shown is AGD 66. This will remain in use until the majority of man sheets covering the area are revised to the newer GDA datum

prompt advice to communities downwind and consider traffic management during fire

suppression operations. Consider safety and health implications during Prescribed

Burning operations. Notify nearby highway and airspace management agencies if a

smoke hazard to traffic is likely.

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.

Map Grid: (zone 56) 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 reference of a point approximately 200m to the northeast of the position shown on this map.

Wildfires: Fire Seaso Wildfires: Fire Seaso August to J

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 the use of fire. **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 close to built-up areas, unplanned fire will require a prompt response aimed at assessing fire size, access and options for containment/limit to spread of fire. 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 the reserve Plan 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. Fire Management Access: At a minimum these will be reviewed prior to the fire season and when the annual fire management works program is prepared. Other management tracks will be maintained as required for reserve management operations or to limit environmental effects and should always be assessed before being used for fire operations. Any firefighting access problems should be immediately notified to the NPWS Area office (see Contacts). Also refer to operational guidelines. 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, personal safety and the safe use of fire, property preparation and protection near the reserve and the NPWS role in

NPWS Nowra Area or Shoalhaven Fire Control.

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 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 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.

Slashing / other bush fire fuel management works: The NPWS will maintain slashed

in the reserve. For information on other slashed areas or fire management works contact

areas as indicated within the reserve. Slashed areas are also maintained within the APZ's

cooperative fire management and response in the 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 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 cover the area in a daily pattern, diminishing after sunset. Blustery southerly changes may also progress up the coast over this period causing sudden changes in wind speed and direction. Thunderstorm activity in the summer months may produce unstable fireground weather with possible lightning ignitions.

Prescribed Burning: Late summer / autumn / and winter are the preferred seasons for prescribed burning where desirable stable conditions and trends are more likely. Burning may take place outside these periods for specific operational and biodiversity management objectives.

MapID	Threatened Flora and Fauna Fire Management Strategies	Species	Common Name	Species status
Fauna				
FA 1	Specific Requirements undetermined*	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable
FA 2	Mechanical hazard reduction ok, avoid allocasuarina thickets. No burning of Allocasuarina thickets.	Calyptorhynchus lathami	Glossy Black- Cockatoo	Vulnerable
FA 3	No burning around nesting sites at any time. No slashing, trittering or tree removal around known nesting sites.	Ninox strenua	Powerful Owl	Vulnerable

No slashing, trittering or tree removal around known nesting own sites.

* Specific Requirements undetermined – No species specific fire requirements known at present, however the potential impact of firefighting chemicals and heavy machinery use should be considered and minimised where possible.