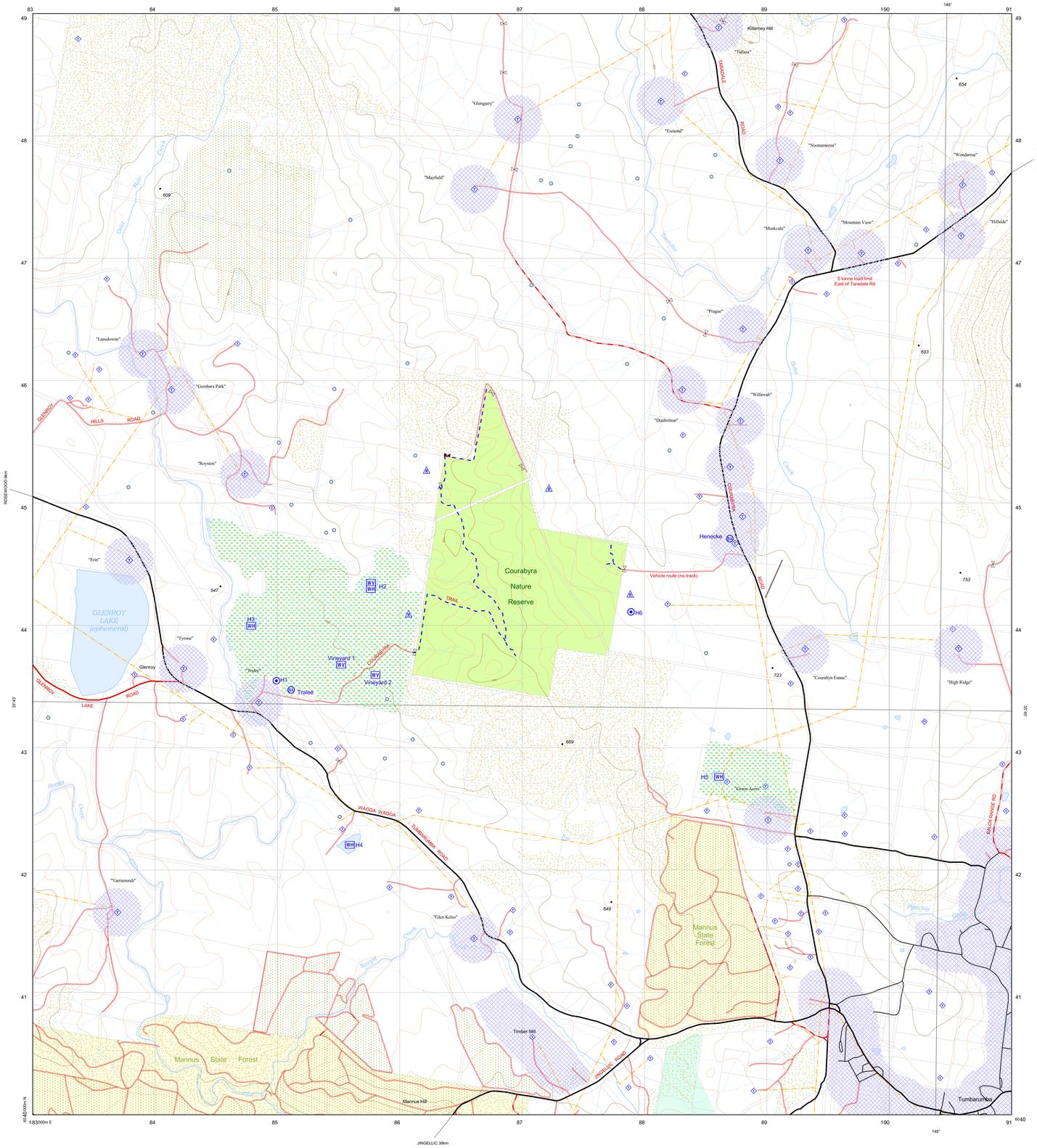


OPERATIONAL GUIDELINES

ACTIVITY	OPERATIONAL GUIDELINES
Command, control and firefighting arrangements Fire Response (FMM 4.1 & 4.2)	- First fire personnel of any agency on site may assume control of the fire, but must ensure the relevant land management agency is promptly notified. - On arrival of other fire agencies, the initial incident controller will consult with the other agencies on the ongoing command, control and incident management team requirements as per the relevant BFMC Plan of Operations. - The use of earth-moving equipment and aerial suppression must be approved by a senior NPWS officer.
Aircraft Operations (NPWS FMM 4.4 & 4.8)	- Pilots must be briefed on the location and type of powerlines within incident operation area. - Aerial water bombing and aerial ignitions are permissible in this reserve, however can only be used and commenced on the instruction of the incident controller or senior NPWS officer. - Water bombing operations should support containment operations by aggressively attacking flanks, hotspots, spot-overs and head fires where required. - Where possible, foams should be used to increase the effectiveness of water, however limit use within 50m of watercourses and dams. - The use of water bombing aircraft without the support of ground based suppression crews should be limited to specific circumstances as determined by the senior NPWS officer. - Ground crews must be briefed and alerted to aerial ignition and water bombing operations
Back burning (NPWS FMM 4.8)	- All backburning operations must be planned and approved by a senior NPWS officer. - Backburning operations should minimise the potential run of introduced fire. - All crews must be briefed on the sequence and safety precautions of the operation. - Generally, burning should commence when the humidity rises in late afternoon or early evening and spotting is minimal. With a low FDI, burning may be safely undertaken during the day. - Where practicable, clear 1m radius around dead and fibrous barked trees adjacent to containment lines prior to burning, or wet down these trees as part of the backburn ignition preparation.
Control lines (NPWS FMM 3.9)	- Existing constructed or natural fire control advantages should be used, wherever possible, to contain bushfires. - Trails that comply with the Bush Fire Coordinating Committee Policy 1/03 "Fire Trails" are identified on this operations map. - As a minimum, management trails identified on the operations map are maintained to a standard to provide access to Category 9, unless otherwise indicated.
Earth moving machinery (NPWS FMM 4.3)	- Strategies involving earth-moving equipment must be approved by the senior NPWS officer before implementation. - Earth-moving equipment must be supervised and guided by an experienced NPWS officer or a person recognised to be appropriately experienced. - All earthmoving equipment employed in fire operations must be accompanied by a support vehicle that has equipment available to contact support personnel in an emergency. Plant involved in direct or parallel attack must be accompanied by either a slip-on or a fire tanker for safety purposes. - At the commencement of shifts, all operators and guides must be briefed on safety consideration and actions to prevent damage to sensitive natural and cultural heritage. - Where possible, control lines running along valley areas should be constructed 50m from gullies to avoid severe erosion.
Fire suppression chemicals (NPWS FMM 4.9)	- Wetting and foaming agents (surfactants) are permitted for use in wildfire suppression. - Use of chemicals must be authorised by the senior NPWS officer. - As far as possible, exclude the use of surfactants within 50m of watercourses and dams. - Use surfactants where natural advantages provide the most effective applications of the chemicals.
Post fire rehabilitation (NPWS FMM 5.1)	- The rehabilitation process should be addressed during the incident, in the Incident Action Plan.
Smoke management (NPWS FMM 3.4)	- The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations. - Where smoke has the potential to be a hazard on local roads or highways the police, RTA, local shire council and relevant media must be notified. - Monitor local roads and access for smoke hazards and install road safety/warning signs where necessary. Traffic control must comply with RTA Traffic Control at Worksites Manual requirements.
Transmission lines (Powerlines)	- May cause danger to ground personnel through smoke conduction of electricity through the air - Contact the relevant authority to turn the power off prior to back burning operations under lines
Water supplies	- Access to water supplies on private property will be negotiated prior to use, except according to S44 provisions - Arrangements may be made to replace water used after the fire, as required.

SUPPRESSION STRATEGIES

FFDI	OPERATIONAL GUIDELINES
Current Low - Mod & Forecast Low - Mod	- Undertake direct, parallel or indirect attack along existing containment lines. - Where practicable, consider maximising the fire area in accordance with the requirements of any proposed prescribed burns in the fire planning strategy and Bushfire Management Committee agreements.
Current Low - Mod & Forecast High or >	- In order to minimise the fire area and secure the flanks as soon as possible, undertake direct, parallel or indirect attack along the closest containment lines. - Pay particular attention to the flank on the next predicted down wind side. - Consider fall back containment strategies
Current High or > & Forecast High or >	- Undertake indirect attack along existing or newly constructed containment lines. - Secure and deepen containment lines along the next predicted downwind side of the fire. - Allow sufficient time to secure containment lines to avoid wasted effort and potential failure. - Prepare and implement fall back containment strategies.
Fire Advantages	- Streams in the reserve are intermittent and should not be regarded as passive control lines under normal conditions - Reserve trails may function as fire advantages

Note: Always ensure there is sufficient time to secure containment lines prior to the fire impacting upon them.

FIRE SEASON INFORMATION

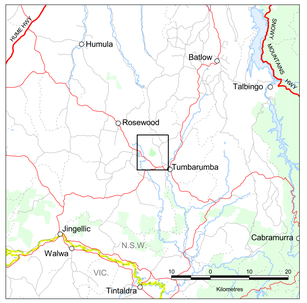
The critical fire season for this area is between January and February. During this time, rainfall is minimal and temperatures, KBDI and FFDI are generally at the highest. During prolonged drought periods, the season may extend from November to March. Weather must be monitored during the lead up to the official fire season, particularly when strong negative Southern Oscillation Indices precede the fire season, and when low pressure systems dominate central and southern Australia during and leading up to the fire season. These conditions provide drier vegetation and fuel conditions and any fire may exhibit high intensity behaviour in windy conditions and exceed current rate of spread indices. Periods of extended drought, may give rise to higher bushfire behaviour potential throughout the year. Any proposed prescribed burning should be undertaken before late autumn precipitation occurs.

If prescribed fire is planned, the least likely period to disrupt TSC fauna is during the end of March and April, depending on weather conditions (past, present and forecast). Any fire during in spring should be avoided and prescribed fire should be done in consultation with neighbours, especially vineyard properties, as grape quality have the potential to be reduced .

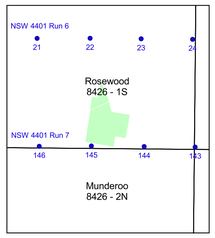
During the fire season prevailing winds during the day are from the west and northwest. All ignitions under a SW influence should be managed with the potential for flanks to become heads when W to NW wind trends return.

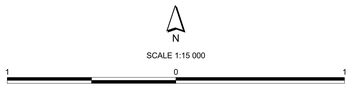
Radio Coverage

Location



Air Photo and Map Index





Projection: AMG 66 - Zone 55
Grid Numbers are given in full at the South West corner of the map.

NOTE: THIS MAP IS NOT GDA COMPLIANT

- Assembly Area (AA)
- Base Camp (BC)
- Control Centre (CC)
- Staging Area (SA)
- Airbase (AIR)
- Water Point - Helicopter (WH)
- Water Point - Vehicle (WV)
- Helipad
- Refuge Area
- Escape Route
- Farm Dam
- Spotheight
- Survey Landmark
- Gate
- Locked Gate
- Homestead Complex
- Asset
- Threatened Fauna
- Threatened Flora
- Asset Buffer Zone

BFCC Standard Trail
- Primary
- Secondary
- Dormant

Management Trail
- Cat 1
- Cat 2
- Cat 7
- Cat 9

Other Roads
- Sealed Road
- Main Unsealed Road
- Minor Unsealed Road
- Trail
- Dormant Trail
- Walking Track
- Railway
- Landing Ground
- Gas Pipe Line
- Major Power Line (With Voltage) (66KV)
- Minor Power Line
- State Border
- 100m Contour
- 20m Contour
- Cadastre
- River
- Creek
- Drainage Line
- Waterbody
- DEC Estate - HMZ1
- DEC Estate - HMZ2
- Other DEC Estate
- Crown Land
- State Forest
- Timber Plantation
- Wooded Area
- Vineyard
- Recently Burnt Area

South West Slopes Region
Courabyra Nature Reserve
Fire Operations Map
2006

Version: June 2006, ISBN: 1 74137 275 5, DEC: 2005/101

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

This map is based on Land and Property Information Standard 1:25000 Topographic Map Series.

LIFE & PROPERTY GUIDELINES

Visitor safety (NPWS FMM 3.6)	As a Nature Reserve, the NPWS does not encourage recreational use and or maintain facilities or infastructure. The reserve is land locked and access is via private property. Where there is a potential for visitors and where possible; - Visitors in or adjacent to the fire ground will not be permitted unless authorised by the Incident Controller. The presence of visitors should be reported to the incident controller immediately, who will arrange for an evacuation if necessary. - 'Park closed' or 'smoke hazard' signs must be placed in areas potentially used by visitors prior to undertaking prescribed burning or during wildfire events. - Notify media that wildfire or prescribed fire exists within the reserve/area.
Asset Protection (FMM 4.10)	There are no recorded assets within the reserve. Where possible; - work with neighbours to protect property assets adjacent to the park boundary. - including vineyards and other assets. - Vineyard and orchard neighoburs should be consulted when developing prescribed burns to ensure commercial crops are not damaged by smoke.

HERITAGE MANAGEMENT ZONE GUIDELINES

ZONE	GUIDELINES (WITHIN THE ZONE)
HMZ 1 (High Priority)	Where possible; - Contain fires to small areas and lower potential intensity and manage to produce mosaic burn patterns. - Avoid the use of earth moving machines. - Avoid the use of suffactants/retardants. - Protect mature trees and avoid felling large and hollow bearing trees during 'mop up' activities. - Prescribed fire should be avoided, unless deemed necessary for ecological purposes.
HMZ 2	Where possible; - Minimise the potential for fire to spread and or contain to existing control lines. - Where wildfires occur in untreated areas programed for prescribed burning (ie. SFMZ). - Prescribed fire or other fuel manipulation program may be applied to the area to reduce potential risks. - Manage fire to produce mosaic (patchy) burn patterns (where weather conditions permit). - Earthmoving equipment may be used to contain fire within DEC policy guidelines. - Retardants and foams may be used to suppress fire, however minimise use within 50m of water courses and dams.

CULTURAL HERITAGE GUIDELINES

THEME	GUIDELINES
Aboriginal & Historic Heritage (FMM 4.11)	- Brief personnel involved in control line construction and vehicle based fire suppression operations on site locations and the required management strategies for site protection. Include in Incident Action Plans. - Liaise with the relevant heritage officer and or representative where considered necessary.
Scarred trees A 1	- Clear fuels, with hand tools, from tree base and/or foam base to 3m up tree trunk. - Do not clear or fell trees. - Where possible, avoid new trail construction within 20m of trees and construct trails on the advancing fire side of the tree. - Prescribed burn or back burning operations should minimise the potential threat of radiant heat on the tree.
Rock arrangements, rock engravings, bora rings, etc A 2	- Avoid new trail construction or ground disturbance within close proximity of site. Where possible, ensure site is protected by constructing trails or hand tool lines on the advancing fires side. - Clear, by hand, excess fuels from the site. - Avoid direct attack methods (including aerial water bombing) at known sites. Surfactants and retardants in aerial line drops may be used adjacent to, but not directly on sites. - Prescribed burn or back burning operations should protect sites from the potential threat of radiant heat and smoke on sites.
Art sites and over-hangs A 3	- Avoid new trail construction or ground disturbance within close proximity of site. Where practicable, ensure site is protected by constructing trails or hand tool lines on the advancing fire side. - Clear, by hand (whipper snippers, brush cutters, mowers), excess fuels from the site. - Avoid direct attack methods on sites. - Avoid aerial water bombing, use of foams and or retardants at known sites. Use of foam or aerial line drops may be used adjacent to, but not directly on sites. - Prescribed burn or back burning operations should protect sites from the potential threat of radiant heat and smoke (carbon deposition) on sites.
Open camp sites A	- Avoid ground disturbance at or within close proximity of the site (30m). Earthmoving blades should be raised in these locations to avoid damage to sites on trails, unless a "Consent to Destroy" has been attained. - Avoid direct attack methods (including aerial water bombing) at known sites. - Use of foam or aerial line drops may be used adjacent to, but not directly on sites.
Historic Heritage	None recorded.

FMM - contains extracts from NSW National Parks and Wildlife Service Fire Management Manual (December 2004).
For the purposes of public exhibition, some information will not be displayed due to obligations under the Freedom of Information Act 1989, Privacy and Personal Information Protection Act 1998, regulations and amendments, and Memorandum of Understanding between the Department of Environment and Conservation and Aboriginal Communities.

RADIO COMMUNICATIONS

AGENCY/RESOURCE	CHANNEL	MRX FREQ.	MTX FREQ.	NOTES
NPWS (VHF)	**2**	MRX 77.6375	MTX 80.1375	Jingelic - covers most of the reserve area.
	3	MRX 78.7875	MTX 81.2875	Selwyn - can be used as an alternative communications channel.
NPWS (VHF) FIRE GROUND	**17**	82.3875	82.3875	Channel to be determined by ground crews, crew leaders, Division commanders etc. Any changes will be noted in IAP.
	18	79.8375	79.8375	
	19	79.9625	79.9625	
RFS (PMR)	**48**	MRX 413.2875	MTX 403.8375	Adams - RFS managed.
RFS (UHF) CB	**10**			
	20			
AIRCRAFT COMMUNICATIONS (Fire Communication Traffic Advisory Frequencies F-CTAF)		119.10 Mhz	State wide	***Unauthorised and inappropriate use of Aviation Channels is a criminal offence***
		120.80 Mhz	State wide	
		122.80 Mhz	State wide	
		123.45 Mhz	Pilots (chit chat) "The Numbers" channel	
		128.70 Mhz	State wide	
		132.75 Mhz	State wide	

Mobile Phone Coverage- generally, poor coverage across the reserve area. Better on ridge tops and eastern side.

CONTACT PHONE NUMBERS

NATIONAL PARKS AND WILDLIFE SERVICE

SWS Tumut Office (B/H)	6947 7000
SWS Tumut Office Fax	6947 4170
SWS Blowering Workshop	6949 5262
Incident Answering Service (A/H)	1800 629 104

RURAL FIRE SERVICE

Tumbarumba Fire Control Centre (Ph)	6948 3399
(Fax)	6948 2741
Duty Officer	6947 0549
State Operations (24 hrs)	8741 5400

FORESTS NEW SOUTH WALES

Tumut Office	6947 3911
Tumbarumba Office	6948 2400
24 Hour Duty Officer	0428 643 115
Fire Room (Tumut)	6947 4811

COUNCILS

Brungle Aboriginal Land Council	6947 4518
Tumbarumba LGA	6948 9100

NEIGHBOUR INFORMATION

Consult SWS Region databases

EMERGENCY SERVICES 0 0 0

POLICE - Tumbarumba (Ph)	6948 2044
(Fax)	6948 3182
AMBULANCE	13 1233
SES Tumbarumba/Tooma Unit	6948 4010
Rescue Squad Tumut	6947 1679
Fire Brigade - Tumbarumba	6948 2164

OTHER ORGANISATIONS

WIRES (24 Hr)	6949 5999

Courabyra Nature Reserve - Waypoints

Name	Description	Easting	Northing	Longitude	Latitude
H1	Remote Helipad	584990	6043550	147°56' 24"	35°44' 54"
H2	Waterpoint - Helicopter	585760	6044300	147°56' 54"	35°44' 29"
H3	Waterpoint - Helicopter	584780	6044000	147°56' 16"	35°44' 39"
H4	Waterpoint - Helicopter	585590	6042210	147°56' 48"	35°45' 37"
H5	Waterpoint - Helicopter	588610	6042760	147°58' 48"	35°45' 18"
H6	Remote Helipad	587890	6044110	147°58' 19"	35°44' 35"
Henecke	Staging Area	588700	6044710	147°58' 51"	35°44' 15"
Tralee	Staging Area	585110	6043470	147°56' 29"	35°44' 56"
Vineyard 1	Waterpoint - Vehicle	585520	6043680	147°56' 45"	35°44' 49"
Vineyard 2	Waterpoint - Vehicle	585800	6043590	147°56' 56"	35°44' 52"