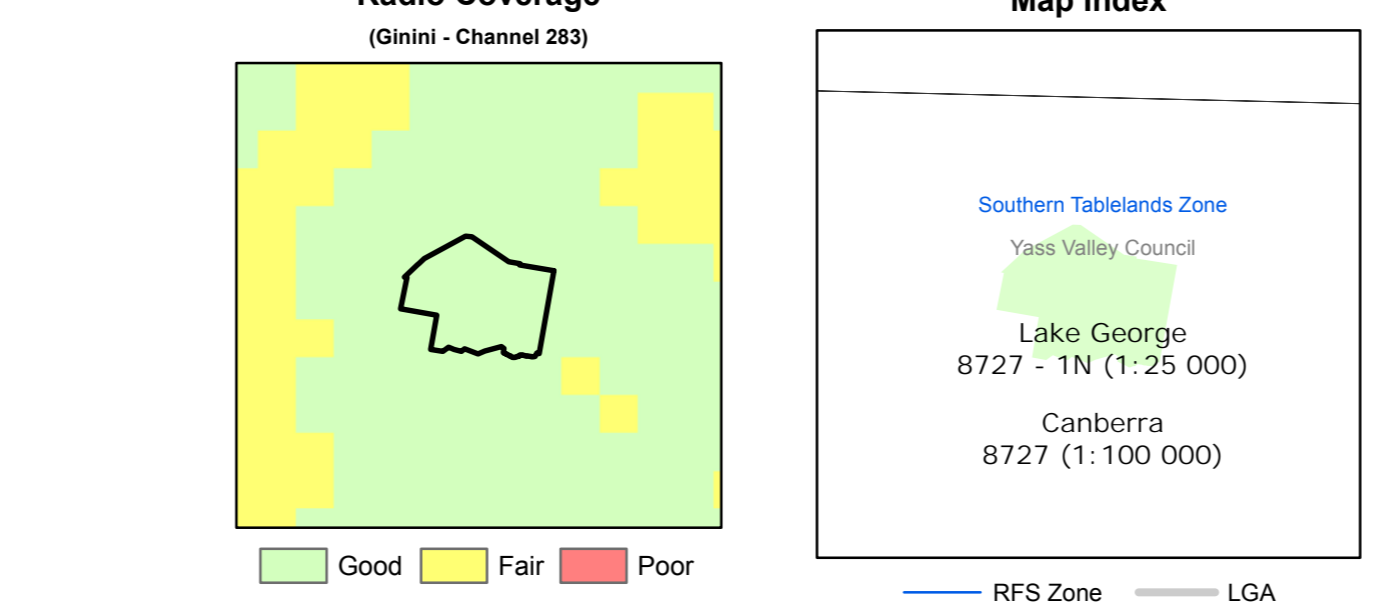
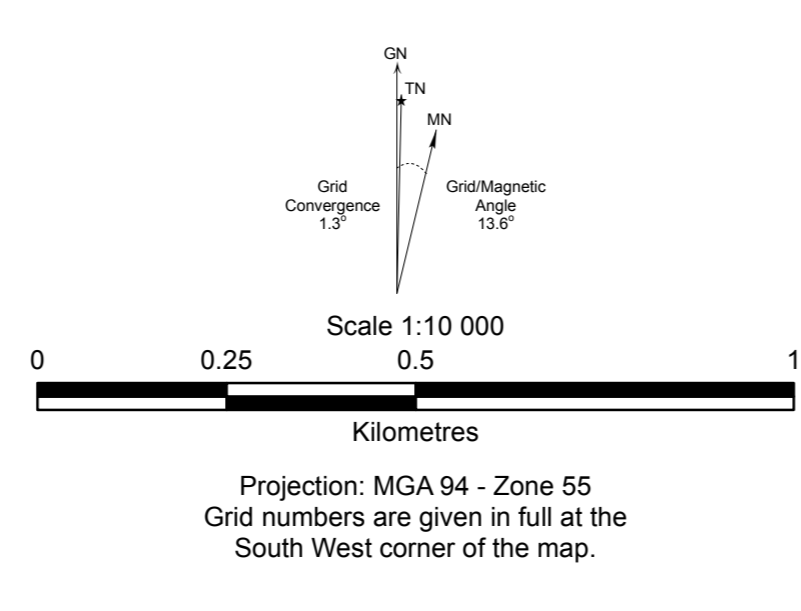


- Airbase Confirmed/Unconfirmed
- Helipad Confirmed/Unconfirmed
- Refuge Area Confirmed/Unconfirmed
- Escape Route Confirmed/Unconfirmed
- Staging Area Confirmed/Unconfirmed
- Water Point
- Water Point Helicopter
- Water Point Vehicle
- Indigenous Site
- Historic Site
- Threatened Fauna
- Threatened Flora
- Homestead Buffer/Urban Area
- Asset
- Water Point
- Water Point Helicopter
- Water Point Vehicle
- Essential Fire Trail
- Important Fire Trail
- Dormant Trail
- Fire Trail Carrying Capacity
- Cat 1
- Cat 7
- Cat 9
- Other Roads
- Sealed Road
- Unsealed Road
- Dormant Track
- Spot Height
- Trip Station
- Landing Ground
- Powerline > 66 kv
- Powerline < 66 kv
- 20m Contour
- 100m Contour
- Cadastral
- State Border
- River
- Creek
- Drainage Line
- Waterbody
- Land Management Zone
- Natural Temperate Grassland
- Restoration Area
- Other OEH Estate
- State Forest
- Pine Plantation
- Timbered Area (off park)
- Vineyard/Orchard



OPERATIONAL GUIDELINES	
Command, control and Fire fighting arrangements Fire Response	<ul style="list-style-type: none"> Where NPWS is not the first responding authority to arrive at a fire on NPWS lands, a competent officer of the first fire authority will direct fire management activities until a competent NPWS Officer assumes control (unless agreements have been made). In the interim, the OEH Area Manager or Regional Duty Officer will establish and maintain contact with the first fire authority to confirm fire management objectives and strategies. The use of earthmoving equipment, retardant and aerial burning techniques will only be permitted subject to the approval of the OEH Liaison Officer at the incident, or in accordance with the objectives stated in the EPBC plans of operations.
Aircraft Operations	<ul style="list-style-type: none"> Aerial water bombing and aerial ignition are permissible in this Reserve. While aircraft can assist in 'knocking down' fire and reducing rate of spread, ground crews are critical to ensure containment. All air operations must be fully integrated with ground operations and incident management to ensure safety and maximise effectiveness.
Burning Operations	<ul style="list-style-type: none"> The control and command of the burn operation will be in accordance with the Incident Management Strategy, with overall supervision by the Incident Controller. Operational briefings and safety checks will be conducted before the ignition of the burn to ensure personnel safety, public safety and operational success. Control lines must be sufficient to contain the burn under the conditions anticipated. Adequate resources must be committed to ensure the safety of personnel and containment of the burn in the time specified for the operation. The light-up methods and sequences will ensure containment of the burn and safety of firefighters. Adequate means of communication must be available to all personnel involved in burning operations. A back-burn should be conducted only when both fuel and weather conditions are suitable for the containment of the burn. This may be at night when it is cooler and more humid, after a wind shift or fall, or after a cool change.
Fire Control Lines	<ul style="list-style-type: none"> Existing constructed trails should be used for containing bushfires wherever possible. Temporary fire control lines may be constructed or established to contain bushfires and prescribed burns within predetermined boundaries. Where necessary, rehabilitation or restoration of temporarily constructed control lines will be undertaken. All trails will be constructed and maintained to the standards prescribed in <i>Guidelines for the Planning, Construction and Maintenance of Tracks</i> (Department of Land and Water Conservation, 1994). Earth moving equipment must be supervised and guided by an experienced NPWS officer or a person recognised to be appropriately experienced. As far as possible, control lines are not to be improved or constructed in the areas identified on the operations map. Dormant trails may be used as a strategic control line during an incident, however they may need some mechanical work to clear regenerating vegetation and fallen timber. Rake fuel away from the base of fibrous-barked trees, and from around logs close to the edge of the control lines.
Earthmoving equipment	<ul style="list-style-type: none"> Earthmoving equipment may be used for fire operations, based on predicted success of fire suppression and anticipated impacts to sensitive environments. However, as far as possible, control lines are not to be improved or constructed in the areas identified on the operations map. When the incident controller is not an OEH officer, approval must be gained from the Regional Manager or other senior officer before earthmoving equipment is deployed for use on OEH managed land. 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. Earth moving equipment involved in direct or parallel attack must be accompanied by either a Cat 9 fire unit or a fire tanker for safety purposes. At the start of a shift, all operators and guides must be briefed on safety considerations and actions to prevent damage to sensitive natural and cultural heritage. All earthmoving equipment should be washed down before entering OEH managed lands in order to prevent the potential relocation of weeds or pathogens.
Fire suppression chemicals	<ul style="list-style-type: none"> The use of fire suppression chemicals is permitted within the Reserve. However, as far as possible, exclude the use of fire suppression chemicals within 100m of watercourses and dams, in the Natural Temperate Grassland EEC, and areas identified on the operations map. Retardants should only be applied where there is a high probability that their use will be successful. Whenever retardants are to be used, preference should be given to using retardants based on ammonium sulphate. For Class 1 and 2 fires, the use of retardants must first be approved by the Regional manager or delegated officer. For Class 3 fires, the Incident Controller or OEH Liaison officer must notify the Regional Manager of the intention to lay retardant. When intensive application of fire chemicals has occurred, consider mapping and recording as part of the fire history and fire management of the Reserve. This information should be stored in a GIS, and used for possible future monitoring. The rehabilitation process should be addressed in incident action planning.
Post fire rehabilitation	<ul style="list-style-type: none"> A post-fire rehabilitation plan must be prepared if the fire management strategies and tactics have produced, or have the potential to produce, long lasting impacts. Where there is potential for smoke or activities from wildfires and prescribed burning to impact on public road traffic or public transport, advise in advance (where possible) with the relevant authority, e.g. RMA3. A traffic management plan, incorporating the use of safety signs, will be developed as part of the Incident Action Plan.
Smoke management	<ul style="list-style-type: none"> The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations. Where there is potential for smoke or activities from wildfires and prescribed burning to impact on public road traffic or public transport, advise in advance (where possible) with the relevant authority, e.g. RMA3. A traffic management plan, incorporating the use of safety signs, will be developed as part of the Incident Action Plan.
Water supplies	<ul style="list-style-type: none"> 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.

NATURAL HERITAGE GUIDELINES	
Where possible:	<ul style="list-style-type: none"> Minimise size and intensity of wildfires. Except for asset protection, fire should only be applied in response to a demonstrated loss of biodiversity. Fire will be introduced in accordance with the biodiversity fire regime thresholds. Prescribed burns, and where possible, should exclude areas of restoration or new planting, unless introduced for ecological purposes. Avoid implementation of prescribed burns during Spring, and during times of prolonged drought. Minimise introduction of high intensity fires during prescribed burning operations. Avoid the use of earth moving equipment and fire suppression chemicals in the natural temperate grassland community, and the threatened plant transactions. Minimise the use of earthmoving equipment and fire suppression chemicals in areas of restoration or new planting. If biomass control measures are required, apply to no more than 10% of the site at any one event. Monitor impacts of control on groundlayer vigour, structure, species diversity and abundance. Avoid damaging/felling hollow-bearing and nest/roost trees when establishing control lines, mopping up and during prescribed burning. During mop up activities try to restrain fire rather than felling trees. If habitat trees are located on control lines remove fuel from base of tree, prior to prescribed burning or backburning.

FIRE SEASON INFORMATION

The critical fire season occurs between mid November and February, when seasonal conditions have the highest potential to sustain fire. Periods of prolonged drought may extend the fire season.

Any proposed prescribed burning should be avoided during Spring, and during times of prolonged drought.

During the fire season prevailing winds during the day are from the north west.

FIRE SUPPRESSION STRATEGIES	
FFDI General	<ul style="list-style-type: none"> Response to fire will be determined by incident assessment and situation analysis and will consider warnings and safety messages contained in standard operating procedures. Suppression strategies should be based on the current and predicted direction of the fire. Safety and the protection of human life is the first priority in fire management operations and the primary consideration at all times, followed by protection of community and environmental assets. Drainage lines within the reserve have deep erosion gullies which may impede vehicle access. Also a safety hazard for ground crews when visibility is limited. If possible fire should be excluded from areas of restoration or new planting.
Current Low-Mod & Forecast Low - Mod	<ul style="list-style-type: none"> Undertake reconnaissance and monitoring. 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 identified in Bushfire Management Committee agreements. Strategies for response include water bucketing, the use of existing trails as containment lines, and where necessary, the use of earthmoving equipment for the establishment of containment lines.
Current Low-Mod & Forecast High or >	<ul style="list-style-type: none"> In order to minimise the fire area and secure the flanks as soon as possible, undertake direct, parallel or indirect attack along the predicted down wind side. Pay particular attention to the flank on the predicted down wind side. Consider fallback containment strategies. Strategies for response include water bucketing, the use of existing trails as containment lines, and where necessary, the use of earthmoving equipment for the establishment of containment lines.
Current High or > & Forecast high or >	<ul style="list-style-type: none"> Initial attack strategies and tactics should be implemented to contain fires to the smallest area possible. Undertake indirect attack along existing or newly constructed containment lines. Secure and deepen containment lines along the predicted downwind side of the fire. Allow sufficient time to secure containment lines prior to the fire impacting on them, to avoid wasted effort and potential failure. Prepare and implement fall back containment strategies.
Fire Advantages	<ul style="list-style-type: none"> Streams in the Reserve are intermittent and should not be regarded as passive control lines under normal conditions.

MANAGEMENT ZONE GUIDELINES	
ZONE	GUIDELINES (WITHIN THE ZONE)
Land Management Zone	<ul style="list-style-type: none"> Minimise size and intensity of wildfires, and manage to produce a mosaic burn pattern, where weather conditions permit. Prescribed fire will be used where deemed necessary for asset protection or ecological purposes. Avoid use of fire suppression chemicals within 100m of drainage lines. Protect mature trees and minimise felling large and hollow bearing trees during mop up activities.
Natural Temperate Grassland	<ul style="list-style-type: none"> Avoid the use of earth moving equipment and fire suppression chemicals in the natural temperate grassland community, and the threatened plant transactions. If possible fire should be excluded from areas of restoration or new planting.
Restoration Area	<ul style="list-style-type: none"> Minimise the use of earthmoving equipment and fire suppression chemicals in areas of restoration or new planting.

Southern Ranges Region

Mcleods Creek

Nature Reserve

Fire Operations Map 2016

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

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LIFE & PROPERTY GUIDELINES	
Visitor Safety (FMM)	<ul style="list-style-type: none"> Where possible: Visitors in or adjacent to the fire ground will not be permitted unless authorised by the Incident Controller. If a fire breaks out check for visitors (preferably by air) and give directions if required. The presence of visitors should be reported to the incident controller immediately, who will arrange for an evacuation if necessary. Park closure or smoke hazard signs must be placed in areas used by visitors prior to undertaking prescribed burning. Notify media that wildlife or prescribed fire exists within the Reserve. Access trails will be closed to the public during fire operations, where appropriate. Rescue closure may be implemented during periods of very high fire danger, when the park is threatened by fire, or when a fire is actually burning in reserve.
Asset Protection (FMM)	<ul style="list-style-type: none"> Refer to Cultural Heritage Guidelines for cultural assets. Whenever possible fires should be suppressed prior to entering or leaving the reserve.

CULTURAL HERITAGE GUIDELINES	
THEME	GUIDELINES
Protection of Cultural Heritage (FMM)	<ul style="list-style-type: none"> During Fire operations, Incident Management Teams should obtain information about Aboriginal and historic heritage. Aboriginal site information from AIIMS is sensitive and subject to a Memorandum of Understanding. Site data must be used appropriately. 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. Cultural Heritage Division staff released for the purpose of fire suppression activities should operate in a specialist planning capacity, as part of an Incident Management team, to ensure adequate protection of cultural heritage assets during fire suppression activities.
Scared or carved trees	<ul style="list-style-type: none"> All fuel should be cleared from around identified trees when carrying out prescribed burning. Fuel will be cleared around identified trees, where possible, as part of fire fighting. Identified trees should be marked clearly before any control lines are constructed.
Stone arrangements, ceremonial rings, rock engravings, rock art, grinding grooves	<ul style="list-style-type: none"> 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 fire's 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. Hazard reduction or back burning operations should minimise the potential for sites of heat and smoke carbon deposition on sites.
Burials, artefact scatters, middens	<ul style="list-style-type: none"> Sites must be clearly defined and marked wherever possible, and control lines must avoid (and attempt to protect) all Aboriginal sites wherever possible.

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	VOTE GROUP	CHANNEL	NOTES
NPWS (VHF)	280	282	Black Trig - may be marginal in sections of the reserve.
		283	MI Glinini - may be marginal in sections of reserve.
NPWS (VHF) Ground	n/a	11 - 17	NPWS simplex fire ground channels
		41 - 60	RFS fire ground channels 1 - 20
RFS (PMR)	-	S015	Consult with RFS to determine primary communications during an incident.
RHS (UHF) CB	-	-	Determine as required.
AIRCRAFT COMMUNICATIONS (Fire Communication Traffic Advisory Frequencies F-CTAF)		119.10 MHz 120.80 MHz 122.80 MHz 123.45 MHz 123.70 MHz 132.75 MHz	State wide State wide State wide Pilot's (chit chat) "The Numbers" channel State wide State wide
Mobile Phone Coverage	generally, the coverage is good, however may be marginal in gully areas.		

CONTACT PHONE NUMBERS			
PARKS AND WILDLIFE GROUP	SUBAL FIRE SERVICE	EMERGENCY SERVICES - 000	
Queanbeyan Area Office (R4)	6229 7165	Yass Fire Control Centre	6228 3100
Queanbeyan Area Office (F4)	6229 7004	POLICE - Queanbeyan	6298 0599
Queanbeyan Area Workshop	6297 8601	Gunning	4545 1344
Incident Awareness Service (AH)	1800 620 120	Brigade - Gundaroo	
Turnoff Office (B1)	6847 7000	State Operations (24 hr)	8741 5400
Jindabyne Office (B4)	6450 5555	SE2 Queanbeyan	6128 3400
OTHER ORGANISATIONS		Fire & Rescue GEN	6297 2332
Willsons (24 hr)	6299 1966	Ngunnall LAC	6207 4192
		NEIGHBOUR INFORMATION	Consult SR Region databases

