Langidoon-Metford State Conservation Area
Fire Management Strategy 2023

This strategy should be used in conjunction with aerial photography and field reconnaissance during incidents and the development of incident action plans.

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This strategy is a relevant Plan under Section 38 (4) and Section 44 (3) of Rural Fires Act 1997.
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Related Documents: NPWS Fire Management Manual

Map Details

Datum: Geocentric Datum of Australia (GDA) 1994	**Topographic Maps**:
Projection: Map Grid of Australia (MGA) Zone 54	1:100,000 Tatlingan 7234
Scale 1:150,000 **Data:** NSW Base Map XMS	1:100,000 Topar 7334

Fire Season Information

Wildfires	The critical wildfire season occurs November to February. This period may extend into the first half of March. Particular care is required during periods of consecutive ephemeral growth. The end of the critical fire season is often marked by a decline in temperature and rising humidity.
Prescribed Burning	Typically, prescribed burning would take place in Autumn to Spring. Following consecutive years of above average rainfall prescribed burning may be used to reduce ephemeral fuel growth. Any burning will comply with the prescriptions outlined in the associated Prescribed Burn Plans .

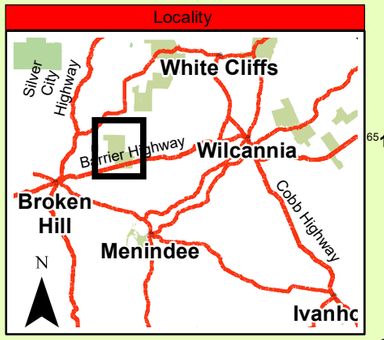
Contact Information

Agency	Position / Location	Phone
National Parks & Wildlife Service	West Branch Duty Officer	02 8275 1740
	West Darling Area Office (business hrs)	08 8084 2880
Area Western Command NSW Rural Fire Service	RFS Headquarters Sydney	02 8741 5555
	Far West District	02 6836 1226
Bushfire Information Line	1800 NSW RFS	**1800 679 737**
Emergency Services	Police, Fire & Ambulance	**000**
SES	In an emergency call	132 500
Police	Broken Hill Station	08 8087 0299
Council	Unincorporated NSW	02 6883 5400
Local Aboriginal Land Council	Wilcannia	08 8091 5828
Neighbours	Call the NPWS Broken Hill office for more information	08 8084 2880

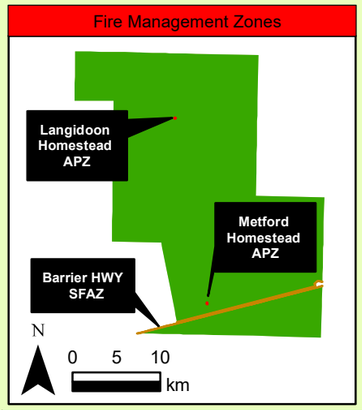
Communications Information

Service	Channel	Location and Comments
NPWS VHF Radio	35	NPWS has a portable VHF repeater stored at Broken Hill. When deployed, reasonable coverage across the park.
Aircraft		Contact the State Air Desk for frequency allocation
Mobile ph coverage		Patchy coverage, good with Cell-fi booster
Satellite Phone		Good reception
UHF Radio channel	35	Limited, but good between vehicles if within short range

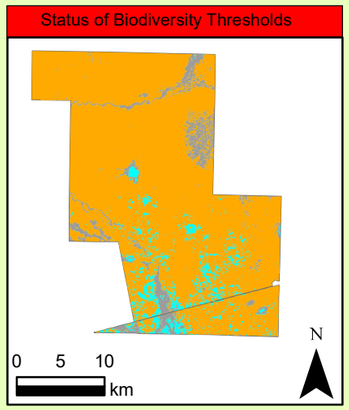
Locality



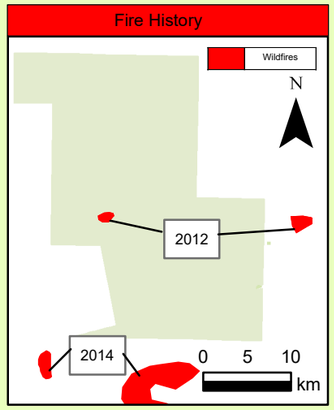
Fire Management Zones



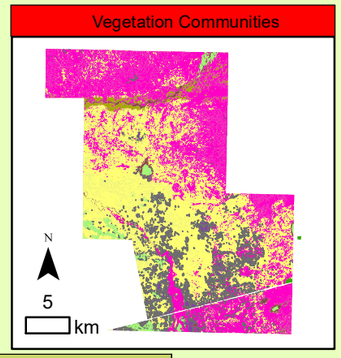
Status of Biodiversity Thresholds



Fire History



Vegetation Communities



Fire Management Zones

Asset Protection Zones	The objective of **APZs** is the protection of human life and property. This will have preceedence over guidelines for the management of biodiversity. Maintain Overall Fuel Hazard at Moderate or below.
Strategic Fire Advantage Zones	The objective of **SFAZs** is to reduce fire intensity across larger areas. Maintain Overall Fuel Hazard at High or below, however adherence to guidelines for biodiversity will take preceedence where practical. *Note: Due to changes in the RFS Bushfire Code, SFAZ will be treated by definition as Linear Fire Breaks- a strategic fuel reduced feature in the landscape*
Land Management Zones	The objective of **LMZs** is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.

Evaluation of Biodiversity Thresholds

Vulnerable to frequent fire	The area will be too frequently burnt if it burns in the next few seasons > *Protect from fire as far as possible*
Long unburnt	Underburnt, excessive time since last fire, species may become extinct > *A fire event is neither required nor should one necessarily be avoided*
Within Threshold	Within the threshold for vegetation in this area. Species have had sufficient time to mature and reproduce, and for habitats to develop. > A fire event is neither required nor should one necessarily be avoided

NB: Fire thresholds are defined for vegetation communities to conserve biodiversity
Threshold analysis map needs to be considered with Prescribed burning. Activity map to be considered when determining wildfire and prescribed burning outcomes

Vegetation management

Note: Vegetation mapping is still being defined. Below is a list of vegetation formations that occur on Langidoon-Metford State Conservation Area

Vegetation Formation	Vegetation Community	Vegetation management guidelines	Fire Behaviour
Semi-arid Woodland (Grassy sub-formation)	Floodplain woodlands/River red gum, Black box, Black Oak & Western Rosewood, Coolabah	• Coolabah is sensitive to high intensity fire (which can inhibit the recruitment of seedlings) and/or too frequent fire, both can kill young plants and some mature trees. • An interval between fire events less than 5-10 years should be avoided	Coolabah woodlands do not sustain enough fuel loads (generally Low – Moderate OFH in dry years) to carry large scale fires. Typically, there is not enough fuel load to carry fire in Arid shrublands, both acacia and chenopod sub-formations (OFH Low in dry years).
Arid shrubland (chenopod sub-formation)	Gibber, Aeolian & Riverine chenopod shrublands	• Fire should be avoided in chenopod communities. • Chenopod species are sensitive to fire and may be severely impacted if burnt.	Only following consecutive large-scale rain events when ephemeral fuel loads have significantly increased (OFH High or above) will these communities carry fire. See description below for Grasslands for further detail about fire behaviour.
Arid shrubland (acacia sub-formation)	Sand plain & Stony desert Mulga shrublands	• An interval between fire events less than 5-6 years should be avoided. • Fire plays no role in the germination of Mulga. • Mulga & Acacia Loderi(Nelia) are susceptible to frequent and/or intense fire.	
Grasslands	Mitchell Grass grassland	• An interval between fire events less than 6 years should be avoided. • Fire frequency should primarily be determined through on-ground assessment of vegetation health, fuel accumulation and previous fire patchiness and adjusted for wildfire risk and drought cycles.	Highly variable fire behaviour depending on the presence and growth of ephemeral fuel loads. High intensity fast moving fire once grasses have cured. Fire behaviour is dominated by winds, both speed and direction. Even in very low fuel, grass fires can be erratic and fast moving. In ephemeral years fire intensity will be higher than in drought years where minimal grass growth will result in moderate fire behaviour but potentially still fast moving depending on weather conditions at the time.
Saline Wetland	Inland saline lakes. Saltbush forbland on clay plains.	• Fire should be avoided.	
Freshwater wetlands	Inland floodplain. Nitre Goosefoot shrubland & Canegrass swamp with some lignum.	• An interval between fire events less than 6 years should be avoided in surrounding habitat.	These vegetation communities will generally not carry fire unless there are high ephemeral fuel loads. Moderate to high intensity fires may occur when fuel loads are high or above.

OFH – Overall fuel hazard – A rating system that uses measurements of leaf litter, grasses, shrubs, bark type and bark condition in a given area to determine the hazard.
Ephemeral conditions – generally occur after consecutive years of much higher than average rainfall which leads to a build up of fine fuels such as grasses and herbs. This has the potential to create a continuous fuel loading (grasses – perennial and annual) across all vegetation communities listed above.

Operational Guidelines

Aerial operations	• Aerial operations will be managed by trained and competent personnel. This includes directing aerial bombing and aerial ignition operations. • The use of bombing aircraft without the support of ground-based suppression crews should be limited to very specific circumstances. • All aerial ignition operations require the consent of NPWS West Branch Director, Section 44 delegate or as stated in an operational burn plan.
Backburning	• All personnel must be fully briefed before back-burning operations begin. • Backburning is a valid and useful firefighting tool but should only be undertaken when temperature and humidity allow (late afternoon and evening), by experienced personnel and after careful consideration by the Incident Management Team. • Where practicable to mop up efforts, clear a 1m radius around dead and loose barked trees adjacent to containment lines prior to backburning, or wet down these trees during ignition
Command & Control	• The first combatant agency on site may assume control of the fire but then must ensure the relevant land management agency is notified promptly. • On the arrival of other combatant agencies, the initial Incident Controller will consult with regard to the ongoing command, control and incident management team requirements as per the relevant BFMC Plan of Operations. • The Metford and Langidoon Homestead precincts have power, bore water, tanks and a Helipad site Nth of Langidoon homestead (see map)
Containment Lines	• New containment lines require the prior consent of a senior NPWS Officer. • All personnel involved in containment line construction should be briefed and must consider both natural and cultural heritage sites in the location. • Containment line construction using earthmoving equipment must be in accordance with the earthmoving guidelines outlined below. • All containment lines not required for other purposes will be closed at the cessation of the incident. • All containment line construction must be mapped (for future reference and assistance with rehabilitation works) • Construction of new containment lines should be avoided on Langidoon-Metford SCA, except where they can be constructed with minimal environmental & cultural impact. • The biodiversity objectives and locations of significant species (Acacia Loderi) will be considered when locating control lines.
Earthmoving Equipment	• The use of Earthmoving equipment must only be used with the prior consent of a senior NPWS Officer with local knowledge. Particular care must be taken in; ○ Significant cultural heritage landform areas ○ Creek and waterway areas • Earthmoving equipment must always be supervised by an experienced officer and accompanied by a support vehicle. When engaged in direct or parallel attack this vehicle must be a fire fighting vehicle. • Earthmoving equipment must be washed down, where practical, prior to it entering NPWS estate and again on exiting NPWS estate.
Fire Suppression Chemicals	• The use of foam, wetting agents and retardants will be permitted on the reserve • The use of retardant requires the approval of the Area Manager or delegate • Fire suppression chemicals are not to be applied within 50m of water courses and ground tanks(dams), including the Acacia Creek, Treloar Creek and Lake Eckerboon.
Rehabilitation	• Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Watering points	• Water points for vehicles are dispersed across the park, see Incident map for Water(W) point locations • All ground tanks (dams) will be subject to seasonal changes – consult with local NPWS staff for current ground tanks (dams) water status
Smoke Management	• Potential smoke impacts and mitigation tactics will be assessed during the planning of fire operations. • If smoke becomes a hazard on local roads, the police and relevant media must be notified. • The Barrier Hwy may be impacted by smoke if a fire starts on Langidoon-Metford SCA. • Immediately request closure of the Barrier Hwy when fire is running towards the highway, and is within 2 kilometres
Visitor Management	• This reserve may be closed to visitors during fire danger periods rated Extreme or above and during Fire Operations(Wildfire or Hazard Reduction) • This reserve may be closed following large rain events if roads become impassable
WARNINGS	• **ROADS MAY BECOME BOGGY AND UNTRAFFICABLE AFTER RAIN.** • **BEWARE OF OVERHEAD POWERLINES (REFER TO INCIDENT MAP) AND MAKE SURE TO 'LOOK UP AND LIVE'** • **BEWARE OF ANY GAS BOTTLES, DANGEROUS GOODS STORAGE AREAS AND HAZARDOUS MATERIALS NEAR HOMESTEAD SITES** • **FIREFIGHTERS BEWARE OF VEHICLAR TRAFFIC WORKING ALONGSIDE THE BARRIER HWY**

Black text- general guidelines **Blue Text**- reserve specific guidelines **Red text**- Important warnings

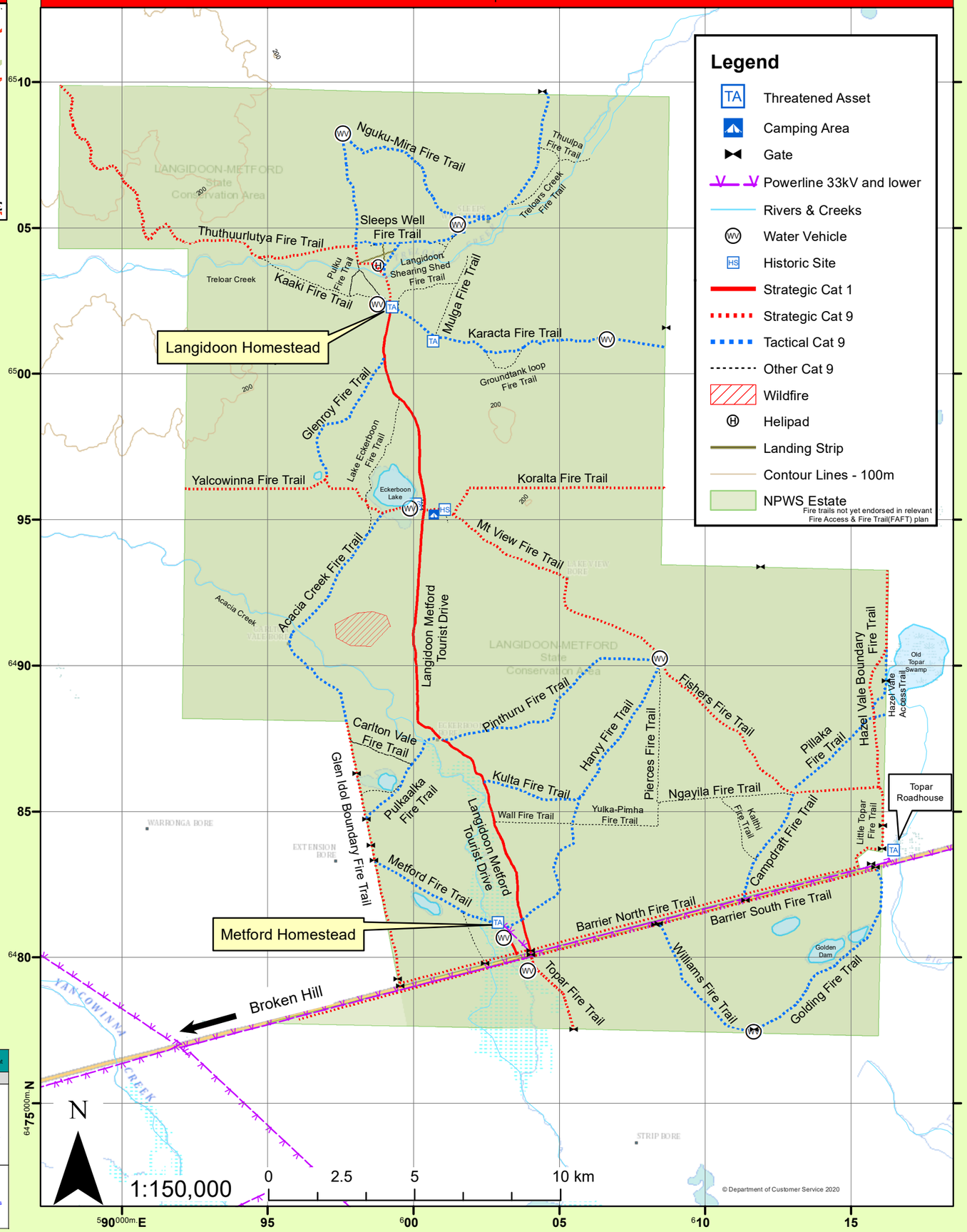
Operational Guidelines - Heritage

The preliminary cultural heritage assessment has revealed evidence that Langidoon-Metford SCA has a rich history of Aboriginal occupation

Aboriginal Cultural Heritage Site Management	Modified trees, including scarred trees • Protect the site from catching fire, clear around base of litter and shrubs • Foam may be used to protect the tree, or to extinguish fire • Do not cut trees *Ground based sites, including artefacts, middens, hearths & stone arrangements* • Protect site from any ground disturbance, including the use of earth-moving equipment and vehicles • Apply a machinery exclusion area where there is a high concentration of known sites • Area may be burnt *Burial sites* • Protect sites from any disturbance by excluding operations by at least 25 metres • Area may be burnt
Historic Heritage Site Management	*Identified structures and historic precincts, including buildings (Langidoon & Metford Homesteads, Woodsheds & outbuildings)* • As far as possible, protect the sites from fire • Prepare sites by slashing in years of high ephemeral fuel growth • New containment lines- if unavoidable utilise least destructive method as possible around the perimeter and in accordance with the Operational Guidelines of this strategy • Foam may be used to protect the site, or to extinguish fire *Wooden stock yards, old ruins, survey trees, old signs or trails* • Protect the site from fire • Foam may be used to protect the sites, or to extinguish fire
Threatened Fauna & Flora Management	*Endangered fauna species* • *Flock Bronzewing & Australian Bustard* *Endangered flora species* • *Convolvulus tedmoorei (Bindweed) & Swainsona flavicarinata (Yellow-keeled Swainsona)* *Endangered Ecological Community (EEC)* • *Nelia Shrublands (Acacia Loderi Shrublands)* *Management actions* • *The use of earthmoving equipment must only be used with prior consent of a NPWS Officer with local area knowledge of critical habitat zones* • *Monitoring to record fire response must be initiated after a fire event* • *Where possible, efforts should be made to exclude fire from the Acacia Loderi (Nelia) dominant shrublands* • *The gathering of species data is still ongoing, consult with local NPWS staff for latest site specific information*

Suppression Strategies

WARNING: where high ephemeral fuel growth exists fire can burn with very high intensity and fire runs should be anticipated with winds from any direction. Entrapment risk is very high.

Typical Conditions	Guidelines
• Current or forecasted Fire Danger Rating (FDR) of **High or above** • FDR of **Extreme** or above- fire behaviour likely becoming erratic, and plume driven • Extreme rapid-fire growth, crown impact and spotting • Risk to life and/or property escalates with an FBI >50	• Direct attack unlikely in these conditions, generally extremely windy and fires quickly becoming large in areas of fine fuel • Develop a suppression plan using existing and/or potential containment lines • Parallel attack may be applied with earthmoving machinery and fire units • Backburning must be carefully timed to avoid fire runs, generally in the early evening when humidity rises, and wind drops • Any wildfire in EEC Acacia Loderi shrubland should be kept to the smallest extent possible-if able, engage the use of aircraft as soon as possible when fire is within inaccessible terrain • Firefighter safety is the highest priority during deployment. Fire behaviour possibly erratic and plume driven above an FBI of 50
• Current or forecasted FDR of **Moderate** • Minimal risk to life or property • Only small area risk to biodiversity exists	• Consider a strategy using direct and indirect attack to contain the fire to the smallest area practicable, using a combination of ground crews, fire units, machinery, and aircraft • Any wildfire in EEC Acacia Loderi shrubland should be kept to the smallest extent possible-observe forecast weather conditions and consider engaging the use of aircraft when fire is in inaccessible terrain

Incident Map