

Far West Region

Paroo-Darling National Park Peery / Arrowbar / Mandalay Section

Fire Management Strategy 2014

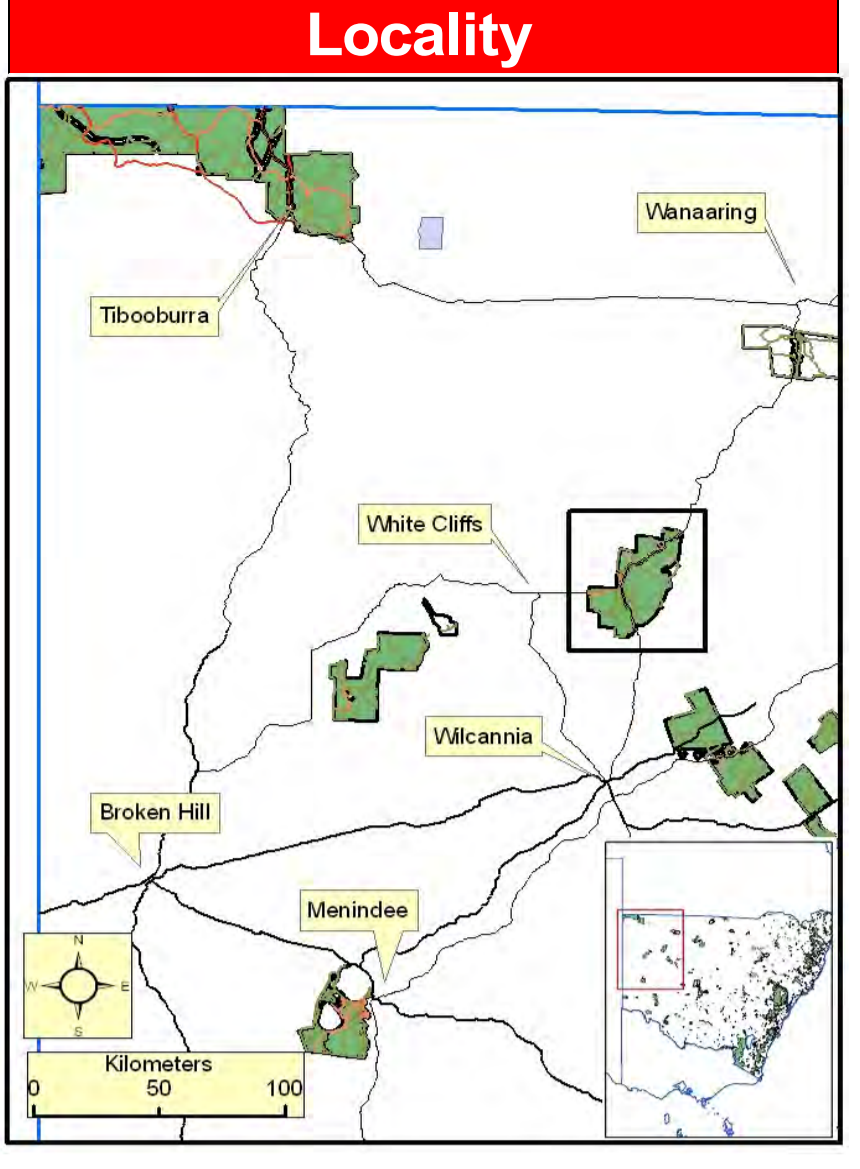


This strategy should be used in conjunction with aerial photography and field reconnaissance during incidents and the development of incident action plans.
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This strategy is a relevant Plan under Section 39 (4) and Section 44 (3) of Rural Fires Act 1997.
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Map Details
Datum: Australian Geocentric Datum of Australia (GDA) 1984
Projection: Australian Map Grid (AMG) Zone 54
Data: Spot Satellite Imagery, 2005, 1:100k Topographic Map: Far West Region - Paroo-Darling National Park, Peery / Arrowbar / Mandalay Section FMS 2014
Scale: Noted scales are true when printed on A3 size paper

Communications Information		
Service	Channel	Location and Comments
PDNP UHF	35	Peery / Arrowbar / Mandalay, Wilga Mt Murchison, Coonavitra, Tilpilly and Wilcannia Workshop.
RFS	20	
SES Wilcannia	3	
SES White Cliffs	32	

Contact Information		
Agency	Position / Location	Phone
National Parks & Wildlife Service	Far West Region Duty Officer (24 hours)	08 8080 3222
	Paroo-Darling National Park Office (bus. hours)	08 8083 7900
	West Darling Area Office (bus. hours)	08 8080 3200
Far West Zone NSW Rural Fire Service	Manager - Chris Favelle (bus. hours) (mobile)	02 6836 1226 0419 691 815
	Operations - Robyn Favelle	0407 904 940
	Wilcannia Fire Control (24 hours)	08 8091 5963
Emergency Services		000
SES	Wilcannia	132 500 08 8091 5880 08 8091 6606
	White Cliffs	000
Police	Wilcannia	000 08 8083 8091
Council	Central Darling Shire - Wilcannia	08 8083 8910



Operational Guidelines – Managed Sites

Resource	Guidelines
IS Indigenous Sites	<ul style="list-style-type: none"> Some Aboriginal cultural sites are identified in this plan on the Incident Map. For further information concerning Aboriginal sites search AHIMS. Brief all personnel involved in containment line construction &/or vehicle based fire suppression operations regarding site locations. No ground disturbance including the use of earth moving machinery to construct new trails, hand line construction, vehicles, back burning or water bombing in the vicinity of Aboriginal sites. Maintain vigilance for identifying unknown sites during operations. As far as possible protect site from fire. Do not cut down modified trees. Protect modified trees where possible. Use of foams, wetting agents & retardant is acceptable.
HS Historic Heritage Site Management	<ul style="list-style-type: none"> Brief all personnel involved in containment line construction &/or vehicle based fire suppression operations regarding site locations (see main map). Appropriate fire season preparation will be undertaken around heritage assets, particularly the homestead complexes.
Threatened Fauna Management	<ul style="list-style-type: none"> A large number of fauna species listed as threatened are recorded and these utilise a wide range of habitats in the Park. Bushfire control operations should aim to: <ol style="list-style-type: none"> minimise area affected by wildfire; utilise the identified trails for containment; avoid the construction of new control lines; and minimise impact of control operations on key habitat Where practicable, avoid damaging or removing existing and future hollow bearing trees and protect them from fire. Peery and Mandalay stations are Ramsar listed as they contain sensitive wetlands of international significance. Minimise impacts of control operations in all wetlands and watercourses, including Ramsar listings. NO earth moving machinery, NO new control lines, NO foaming agents within 50m of wetlands, watercourses or dams wherever possible.
Threatened Flora Management	<ul style="list-style-type: none"> Mulga woodland communities (see vegetation map) are very sensitive and should be protected from fire and back burn operations, particularly where there is high annual fuel load or risk of canopy fire. Fire should be avoided in arid / semi-arid shrublands (see vegetation map).
FL Threatened Flora Sites	<ul style="list-style-type: none"> Artesian Springs Ecological Community is an Endangered Ecological Community. Known sites are identified in this plan on the incident map attached. Avoid fire & no vehicles or earth moving equipment in the vicinity of this vegetation community. Frequent fire has been identified as a key threat to the Slender Desert Pea (<i>Swainsona murrayana</i>) which is known to occur on Park (see main map). Known sites should be protected from fire.
Machinery Exclusion Zone	<ul style="list-style-type: none"> Within 50m of wetlands, watercourses or dams wherever possible.

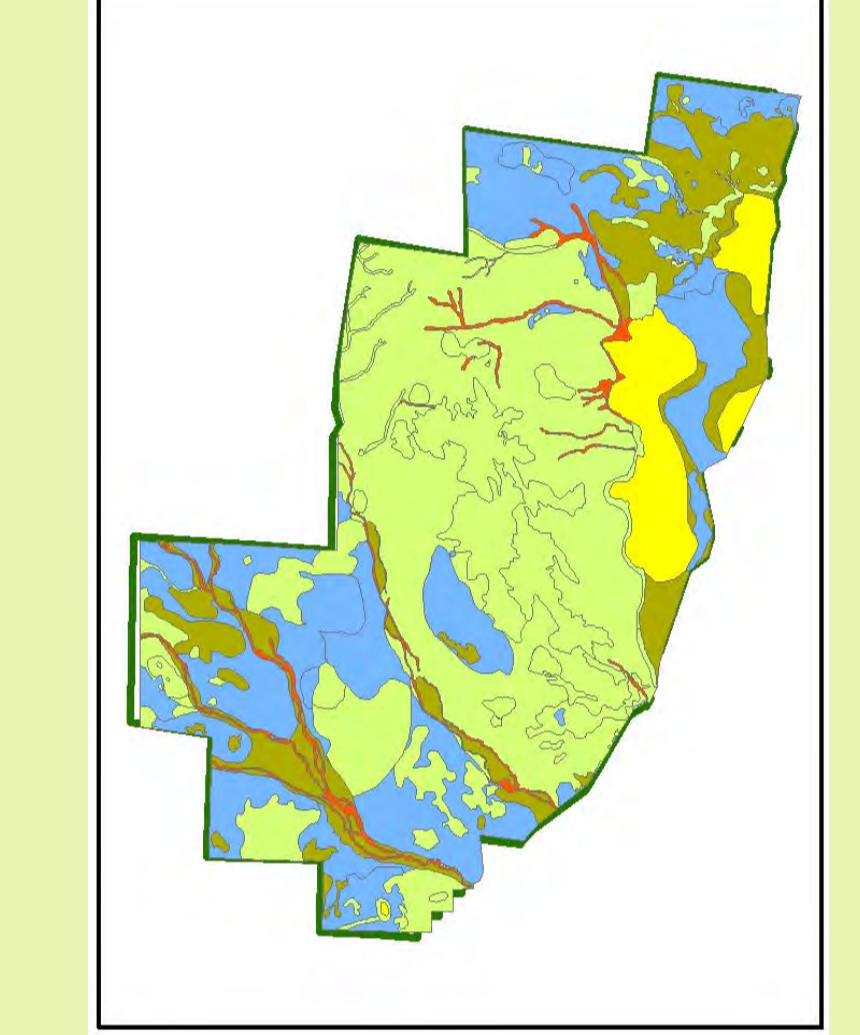
Operational Guidelines – General Operations

General	Guidelines
Aerial operations	<ul style="list-style-type: none"> 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 the NPWS Regional Manager or the Section 44 Appointee.
Backburning	<ul style="list-style-type: none"> All personnel must be fully briefed before back burning operations begin. Backburning in areas of Low – Moderate OFH will require the use of slope, or wind, or low humidity to maximise effectiveness. Where practicable, clear a 1m radius around dead and fibrous barked trees adjacent to containment lines prior to backburning, or wet down these trees as part of the backburn ignition. This will reduce mop-up efforts.
Command & Control	<ul style="list-style-type: none"> The primary objectives of fire suppression activities on NPWS managed lands are to ensure the safety of incident personnel and the public, protect life and property, conserve natural and cultural heritage and maintain cost effectiveness. NPWS should be notified immediately of any fire within or near a NPWS reserve. Where NPWS is not the first responding fire authority to arrive at a fire on NPWS-managed lands, a competent officer of the first arriving fire authority will direct fire management activities until a competent NPWS officer assumes control. 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. Standard Incident Management Systems are to be applied.
Containment Lines	<ul style="list-style-type: none"> Construction of new containment lines should be avoided, where practicable, except where they can be constructed with minimal environmental impact. New containment lines require the prior consent of a senior NPWS officer. Hand tool lines may be used to contain wildfires to smaller areas where possible. Where practicable, containment lines should consider the protection of drainage features. All personal involved in containment line construction should be briefed on, and must consider both natural and cultural heritage sites in the location. Where possible under benign weather conditions, consider allowing fires to be contained by previously burnt areas and natural low fuel areas in preference to the construction of new control lines. If containment lines are required, where possible they should link up with fire trails, recently burnt areas and natural low fuel areas and utilise identified primary and secondary trails and existing cleared areas as containment lines. Dozers will operate with scrub-rakes in preference to blades to limit soil disturbance and graders will be preferred in speargrass fuel conditions in open vegetation communities
Earthmoving Equipment	<ul style="list-style-type: none"> Equipment Location: <ul style="list-style-type: none"> Cat 9 slip-on units are based at Wilcannia, Peery and Tilpilly Caterpillar 140H grader (within West Darling Area) Caterpillar 908 loader with scrub-rake (within West Darling Area) Cat 9 appliances are the preferred vehicle on Paroo-Darling NP. Earth moving equipment may only be used with the prior consent of the Senior NPWS Officer, and then only if the probability of its success is high. Earthmoving equipment must always be guided and 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 practicable, prior to it entering NPWS estate and again on exiting NPWS estate. Observe the threatened species and cultural heritage operational guidelines.
Fire Suppression Chemicals	<ul style="list-style-type: none"> The use of foam, wetting agents and retardants will be permitted on the reserve The use of fire suppression chemicals are not to be applied within 50m of water courses, dams and swamps. The use of retardants requires the approval of the Regional Manager or delegate
Rehabilitation	<ul style="list-style-type: none"> Where practical, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Smoke Management	<ul style="list-style-type: none"> Potential smoke impacts and mitigation tactics will be assessed during the planning of fire operations. If smoke becomes a hazard on roads / highways, management must be in accordance with relevant RTA traffic management guidelines.
Visitor Management	<ul style="list-style-type: none"> The reserve may be closed to the public during periods of extreme fire danger or during fire operations.
WARNINGS	<ul style="list-style-type: none"> Beware overhead powerlines Beware of Moomba to Sydney high pressure gas pipeline in the Northern and Tilpilly sections of PDNP.

Vegetation and Biodiversity Thresholds

Vegetation Communities, Biodiversity Thresholds Fire Behaviour and Availability for Prescribed Burns

Vegetation Community	Biodiversity Thresholds	Fire Behaviour / Availability for Prescribe Burns
Arid / Semi-arid shrubland	<ul style="list-style-type: none"> An interval between fire events less than 15 years should be avoided A high intensity fire may be permitted after a fire free period >30 years Two consecutive low intensity fires should be avoided Avoid two large area high intensity wildfires in a period less than 30 years 	<ul style="list-style-type: none"> Moderate fire spread with winds and low humidities Backburning difficult without wind, if fuel level low or humidity is >40% Fire should be avoided in Chenopod shrubland. Shrubland species include Hoppbush, Eremophila, Acacia and Chenopod / Saltbush species.
Mulga woodland	<ul style="list-style-type: none"> Fires should be avoided Mulga vegetation communities have a number of attributes that suggest they are adapted to very occasional fires. Trees are usually killed if the canopy is burnt and estimates of the time taken to produce seed after fire suggest that frequent fires could cause the contraction or loss of mulga. If a second fire occurs before it has time to set seed or the post-fire conditions are not suitable for regeneration, then it can potentially be eliminated from an area 	<ul style="list-style-type: none"> In normal years, Mulga woodland does not carry sufficient fuel load to enable a large scale fire to develop. It is in the years following above average rainfalls, where there can be a significant increase in the biomass of annual grasses such as spear grass, that there is the potential for wildfire to carry into the mulga woodlands Other woodland species on park include Leopardwood, Belah and Eucalyptus species such as Blackbox and Coolibah
Grassland	<ul style="list-style-type: none"> The interval between fire events should be greater than 2 years and less than 10 years The natural fire regime for spear grass is unknown The historic record of fire frequency in the area shows intervals from 10 to 23 years 	<ul style="list-style-type: none"> Highly variable behaviour depending both on the presence of spear grass and a source of ignition (predominantly lightning strike) Available for prescription burns under ephemeral conditions



Legend

- NATIONAL PARK
- Mulga Woodland
- Arid / Semi-Arid Shrubland
- Red Gums along ephemeral creeks
- Lakebed Herbland
- Grassland

Reference Documents

- <National Parks and Wildlife Service Fire Management Manual, 2013-14.>
- Reference 1 - Williams J., Fire Regimes & their impacts in the Mulga landscapes of central Australia,

Recent Fire History

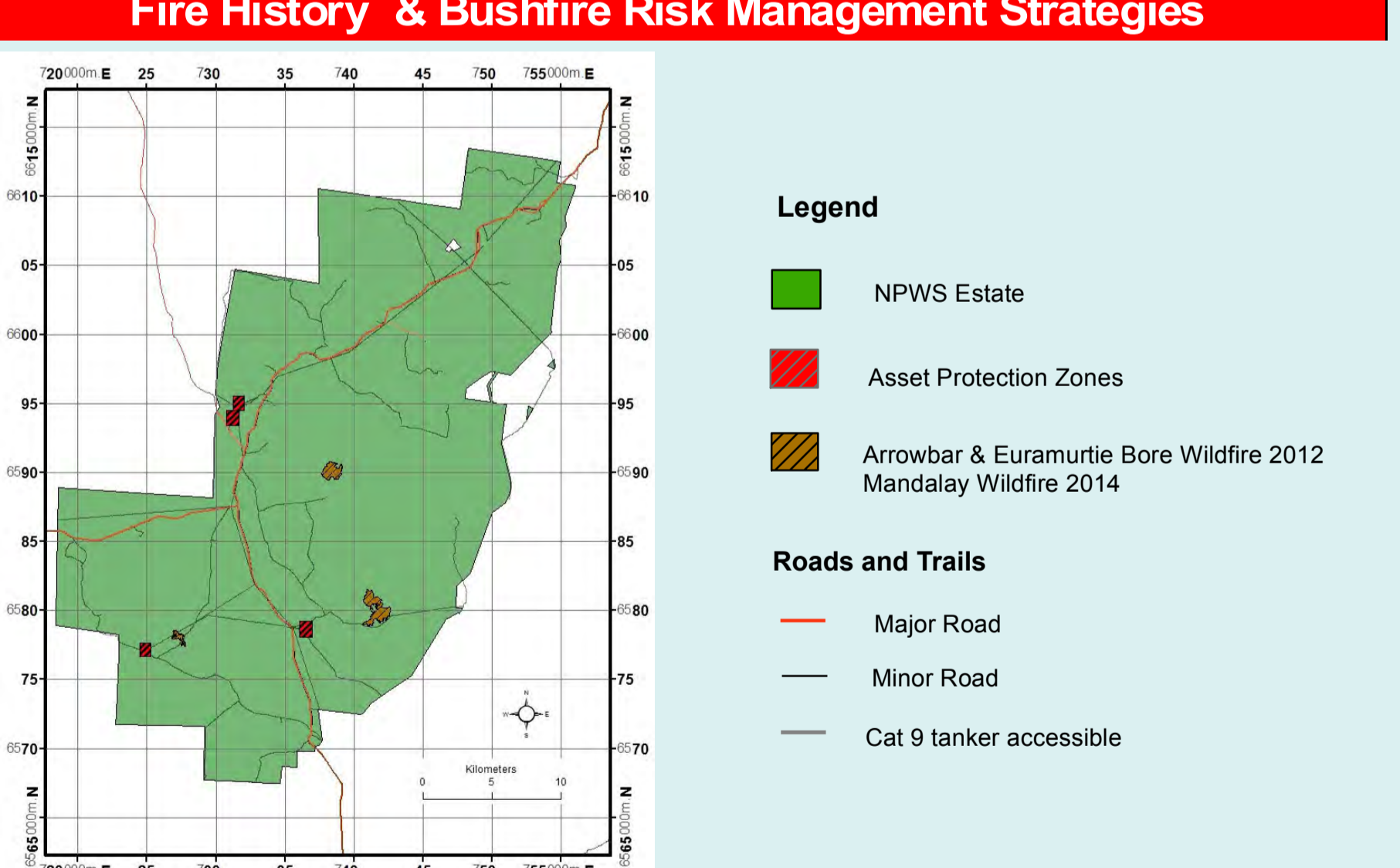
Vegetation communities on the Park do not generally carry sufficient fuel load for large scale fires to develop. This is a result of low fuel levels in the understorey and the lack of spatial continuity caused by intermittent areas of bare earth or rocky ground. However ephemeral growth of spear grass and other annual grasses can create a continuous fuel load capable of carrying fire.

The frequency of fire in the Paroo-Darling National Park area is low. In recent times large scale fires have occurred in the region following consecutive years of above average winter/spring rainfall.

The last fires to occur on park were in early 2012 & 2014 in the Mandalay and the Arrowbar areas of the Northern Section under these conditions (see Fire History Map).

Lightning strike is the most common source of ignition. Prevailing winds tend to be from the north during fire events with a southerly swing in the afternoon.

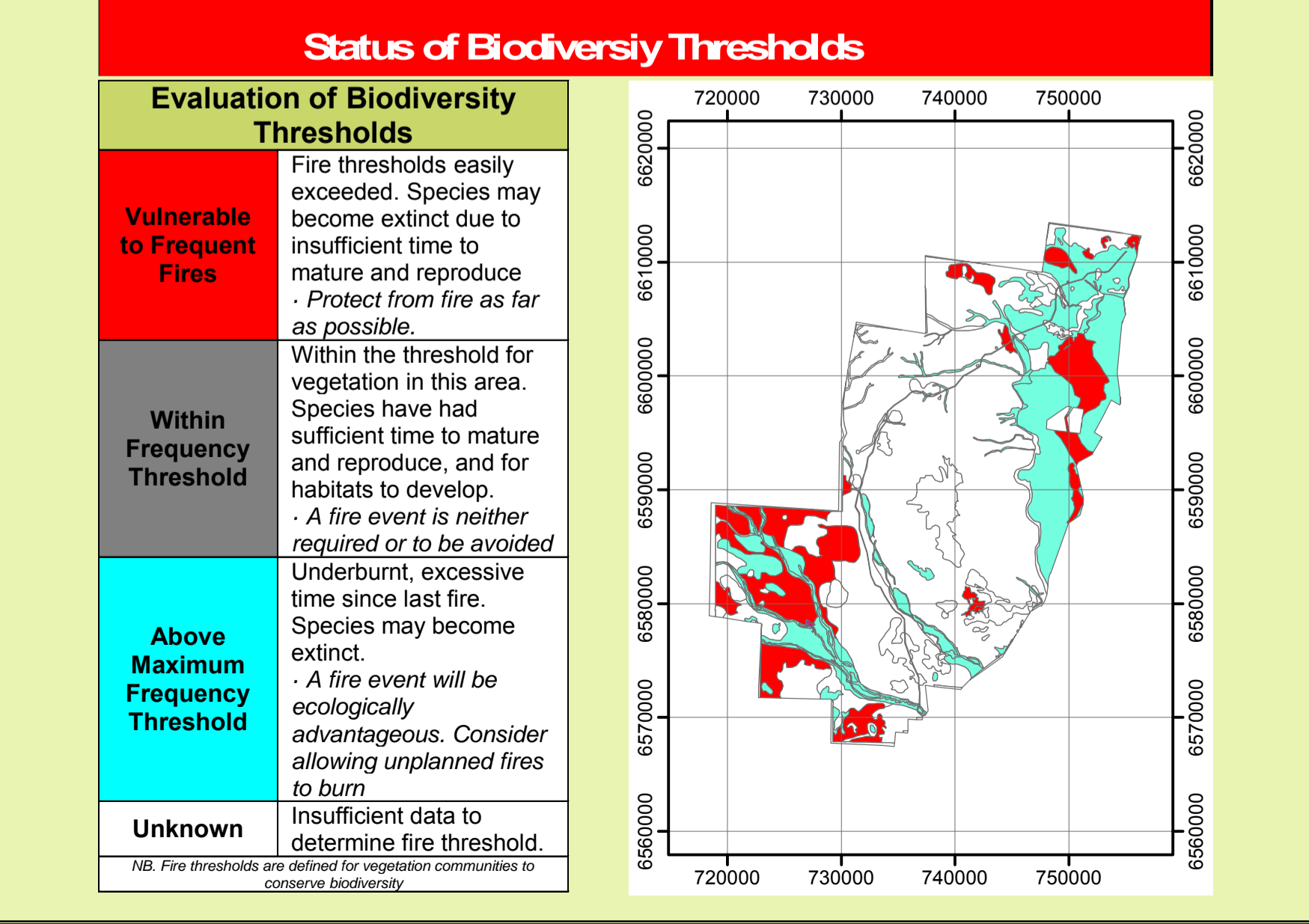
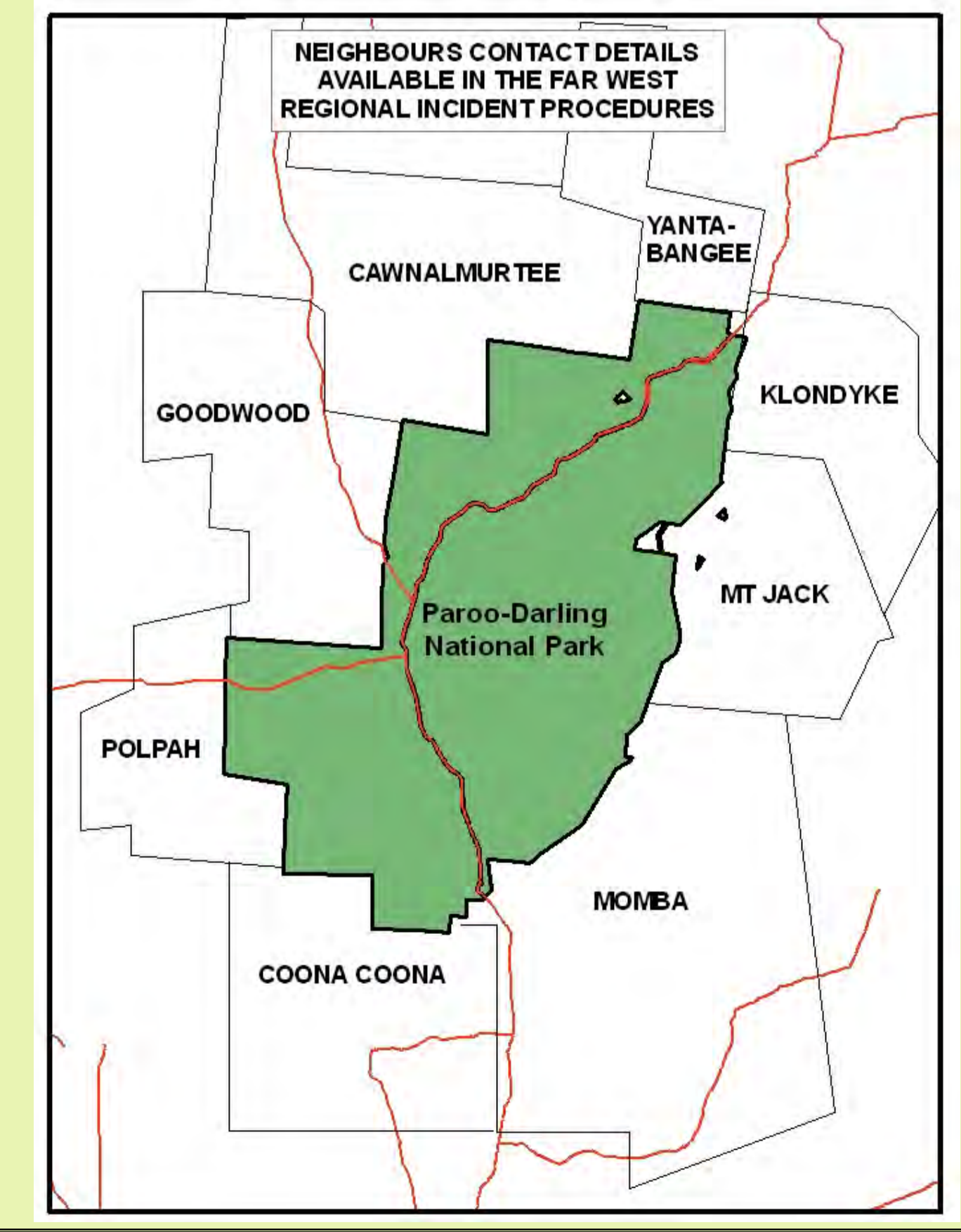
Fire History & Bushfire Risk Management Strategies



Asset Protection Zones		
Asset	Location	AMS Equipment Number
Arrowbar Homestead / Woolshed Complex	Off White Cliffs, Mandalay Rd - Arrowbar Section Map: White Cliffs (7536) - 1:100,000 Grid Reference - 0724900, 6577100	1297731
Peery Shearers Quarter / Woolshed	Off Glendara Rd - Peery Section Map: White Cliffs (7536) - 1:100,000 Grid Reference - 0731800, 6595000	1297732
Peery Homestead / Workshop	Off Glendara Rd - Peery Section Map: White Cliffs (7536) - 1:100,000 Grid Reference - 0731200, 6593800	1297733
Mandalay Shearers Quarters / Woolshed	Off Wanaaring, Wilcannia Rd - Mandalay Section Map: White Cliffs (7536) - 1:100,000 Grid Reference - 0736000, 6578800	1297734

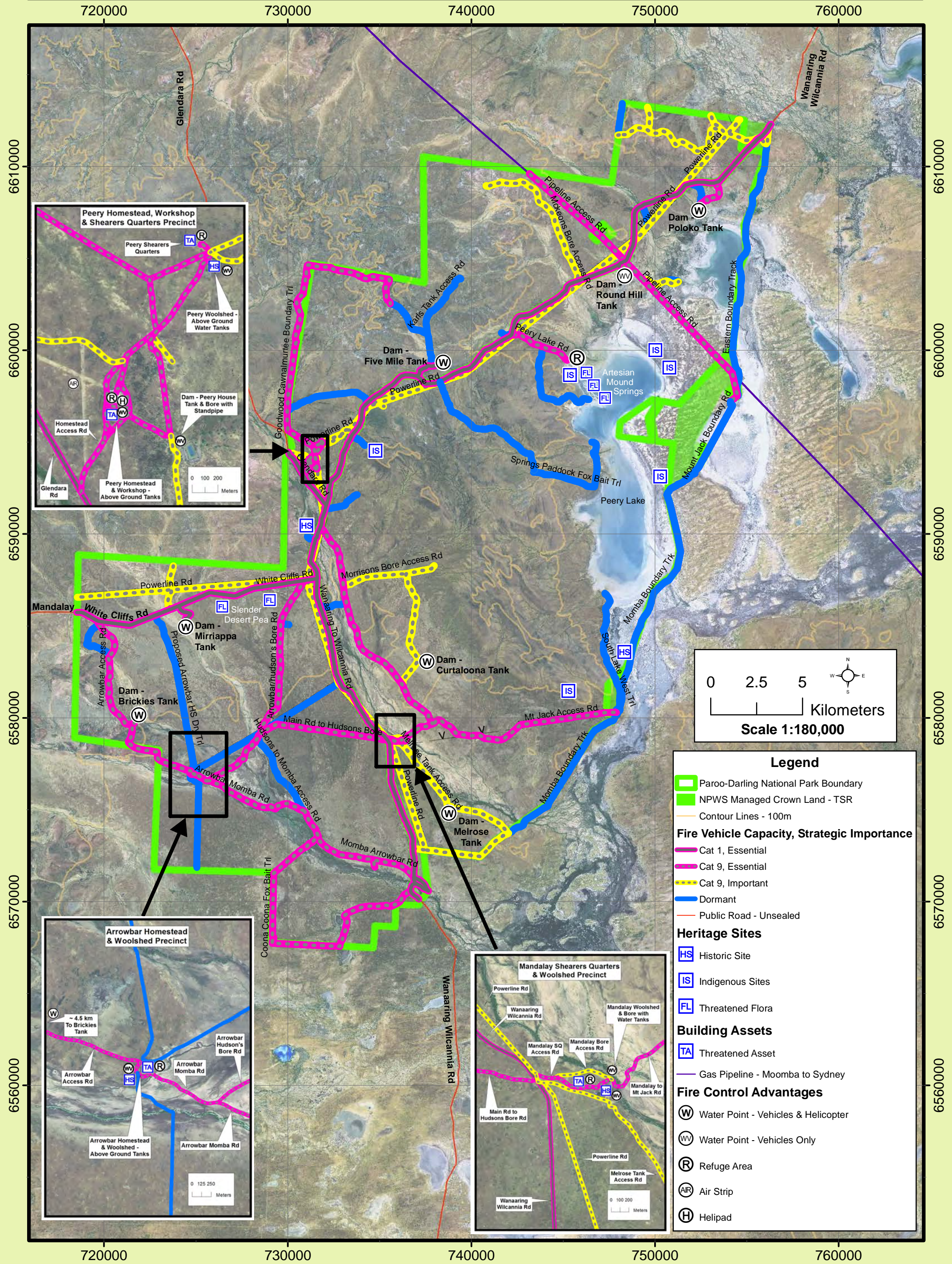
Fire season preparation activities are to be carried out annually within and surrounding asset protection zones prior to the beginning of fire season. Where ephemeral growth creates elevated fuel loads further treatment of the APZ should be completed as required.

The perimeter of all building assets (including homestead yard fences), heritage stockyards, park signage, entry bays and other assets are to have vegetation pruned away and ground cover slashed to two widths of the slasher (5-6m) away from asset



Incident Map

PDNP Peery / Arrowbar / Mandalay



Peery Homestead, Workshop & Shearers Quarters Precinct

- Peery Shearers Quarters
- Peery Woolshed - Above Ground Water Tanks
- Dam - Peery House Tank & Bore with Standpipe
- Peery Homestead & Workshop - Above Ground Tanks
- Homestead Access Rd
- Glendara Rd

0 100 200 Meters

Arrowbar Homestead & Woolshed Precinct

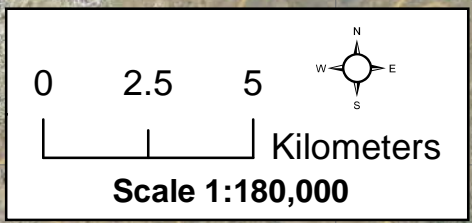
- ~ 4.5 km To Brickies Tank
- Arrowbar Hudson's Bore Rd
- Arrowbar Momba Rd
- Arrowbar Access Rd
- Arrowbar Homestead & Woolshed - Above Ground Tanks

0 125 250 Meters

Mandalay Shearers Quarters & Woolshed Precinct

- Powerline Rd
- Wanaaring Wilcannia Rd
- Mandalay Woolshed & Bore with Water Tanks
- Mandalay SQ Access Rd
- Mandalay Bore Access Rd
- Mandalay to Mt Jack Rd
- Main Rd to Hudsons Bore Rd
- Wanaaring Wilcannia Rd
- Melrose Tank Access Rd

0 100 200 Meters



- Legend**
- Paroo-Darling National Park Boundary
 - NPWS Managed Crown Land - TSR
 - Contour Lines - 100m
- Fire Vehicle Capacity, Strategic Importance**
- Cat 1, Essential
 - Cat 9, Essential
 - Cat 9, Important
 - Dormant
 - Public Road - Unsealed
- Heritage Sites**
- HS Historic Site
 - IS Indigenous Sites
 - FL Threatened Flora
- Building Assets**
- TA Threatened Asset
 - Gas Pipeline - Moomba to Sydney
- Fire Control Advantages**
- W Water Point - Vehicles & Helicopter
 - WV Water Point - Vehicles Only
 - R Refuge Area
 - AR Air Strip
 - H Helipad