Cathedral Rock National Park

Fire Management Strategy (Type 2)

2022 - 2027

This strategy should be used in conjunction with aerial photography and field reconnaissance .

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Contact: NSW National Parks and Wildlife Service. Northern Inland Branch

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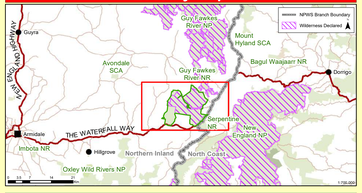
This strategy is a relevant Plan under Section 38 (4) and Section 44 (3) of the Rural Fires Act 1997.

Locality Map



Map details

Datum: GDA_1994_MGA_Zone_56 **Geographic Coordinate System** - GCS_GDA_1994 **Noted scales:** True when printed on A0 size paper

Local Government Area: Armidale Regional (B). **Topographic Map** 1:25,000 Maiden Creek 9337-3S, Ebor 9337-2S

Contact Information

Agency	Position / Location	Phone
National Parks & Wildlife Service	Area Manager - Darren Pitt	0427 212 255
	Duty Officer (24 hour)	8275 1742
	Northern Tablelands Area Office (bus. hours)	6739 0700
NSW Rural Fire Service New England	NE Zone Manager – Paul Metcalf	0437 678 116
	NE Duty Officer	6739 6911
	NE Zone Office	6771 2400
Forest Corporation of NSW	Coffs Harbour	6652 0111
	Grafton	6640 2222
	State Duty Officer	9965 4375
Fire & Rescue NSW		000
Emergency Services	Police, Fire, Ambulance	000
SES		132 500
Police	Armidale	6771 0699
Council	Armidale Regional	1300 136 833
Local Aboriginal Land Council	Armidale LALC	6772 2447
	Dorrigo LALC	6757 2606
Local Land Services	Glen Innes	6732 8800
	Armidale	6770 2000
Air Services Australia (Communications Facility)	Jesse Van Miltenburg	02 9556 6845
UNE Research	Guy Ballard	0427 201 415

Communications

Service	Channel	Location and Comments
NPWS Repeaters to Northern Inland Branch	341 340 Ch + 300 Ch + 600	• Point Lookout. • South Vole Group. • Fireground. • Tower Isolation.
FC NSW	194 (NP77) 80mhz radios)	• Frog Hollow • NPWS holds 80MHz hand helds at Tenterfield and vehicle mounted at Armidale.
RFS	N009	• New England Digital Voting.
UHF - CB		• Small fires channel 10, large fires determined by IMT.
Aviation - CTAF	134.70	• NIB frequency unless another frequency is allocated on an incident.
Mobile		• Good reception at the intersection of Round Mountain Road and The Waterfall Way. Patchy elsewhere.
Satellite Phone	0147 165 975 0147 154 198	• Stored at Glen Innes.

Fire Season Information

Wildfires	The critical wildfire season occurs during October to December. but wildfires can occur as early as August. The fire season may extend into the first half of January in dryer than normal years. Particular care is required during periods of negative Southern Oscillation Indices. Summer rainfall is normally reliable. The end of the critical fire season is often marked by wet storm activity.
Prescribed Burning	Effective prescribed burning normally occurs in late winter and early spring when surface and near surface fuels have high levels of curing, but daytime temperatures are still cool and night time temperatures are cold. By late spring hazard reduction burns may burn too hot. Autumn burns can be considered if conditions are suitable. Prescribed burning attempted after autumn rain is unlikely to be effective.

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 a senior NPWS officer or the Section 44 Appointee.
Backburning	• All personnel must be fully briefed before back burning operations begin. • Backburning in areas of Low – Moderate OFH will require the use of wind, or low humidity to maximise effectiveness. • Where possible clear around dead and fibrous barked trees adjacent to control lines prior to backburning.
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. • The initial Incident Controller will liaise with the RFS to ensure that the agency in command is determined and an Incident Controller is appointed.
Containment Lines	• New containment lines require the prior consent of a senior NPWS officer. • Construction of new containment lines should be avoided, where practicable, except where they can be constructed with minimal environmental impact. • All personal involved in containment line construction should be briefed on, and must consider both natural and cultural heritage sites in the location. • All containment lines not required for other purposes should be closed immediately at the cessation of the incident. • Due to rock and terrain, Cathedral Rock NP has limited internal fire trails. Perimeter trails meander through both Reserve and private property. Neighbours should be consulted prior to any maintenance works occurring.
Earthmoving Equipment	• Plant may only be used with the prior consent of a senior NPWS Officer. • Plant must always be guided and supervised by an experienced officer and accompanied by a support vehicle (NPWS). When engaged in direct or parallel attack, this vehicle must be a fire fighting vehicle. • Plant must be washed down, where practicable, prior to it entering NPWS estate and again on exiting NPWS estate.
Hazard Reduction Burning	• Landscape scale fires have occurred across this reserve. Hazard reduction activities in Land Management Zones should be limited to hazard reduction burning which aims to create a mosaic of age classes since the last major fire event. • Limited fire trails in Cathedral Rock National Park means many hazard reduction burns are only possible as cooperative burns with private property neighbours. NPWS will engage with neighbours when hazard reduction burns are proposed. • Neighbours who propose burning on private property, where due to terrain and trails the burn is likely to enter NPWS estate will be engaged cooperatively. Private property burns are controlled by the Rural Fire Service who should coordinate such requests in consultation with NPVS.
Wild Dog Fence	• The wild dog fence was extensively damaged in the 2019/20 wildfires. Many sections have been rebuilt and the fence is an asset of some significance. Fire management operations should consider protection of this asset.
Fire Suppression Chemicals	• The use of foam, wetting agents and retardants will NOT be permitted within 50 metres of dams and watercourses holding water. • The aerial use of gels and retardants should be approved by a senior NPWS officer. • The use of retardants requires the approval of a senior NPWS officer.
Rehabilitation	• Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Water Points	• Water points are extremely limited and not always reliable. Consider deployment of a bulk water carrier to support fire operations.
Smoke Management	• Potential smoke impacts and mitigation tactics will be assessed during the planning of fire operations. • The Waterfall Way and The Guyra Ebor Road both carry significant traffic which should be considered in fire operations.
Visitor Management	• In Extreme + Fire Danger at the Branch Directors discretion, reserves or sections of the reserve may be closed or evacuated. • Ensure the closure is advertised on the NPWS visitor website.
(WARNINGS	• High voltage powerlines cross the Nature Reserve in the north in the vicinity of Ebor. They cross the gorges at an elevation which may pose risks to aerial fire fighting. • Fires can move very rapidly in Cathedral Rock National Park and trail access is limited. Entrapment of fire fighters is an issue that be considered in deployments.

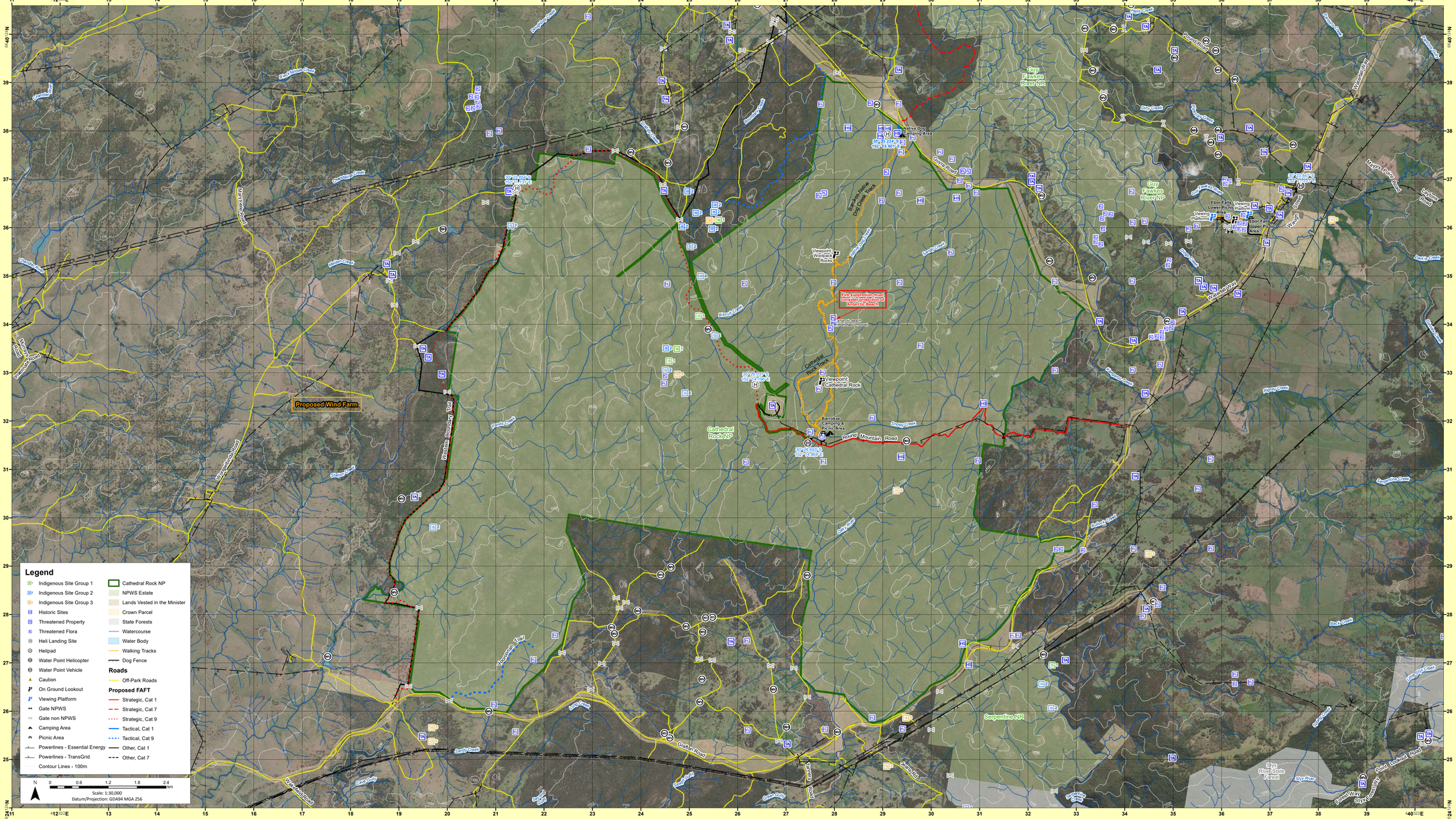
Heritage Guidelines

Aboriginal Cultural Heritage	**Modified trees** • As far as possible, protect the site from fire, and do not cut trees • Use of foams & retardant is acceptable. **Habitation sites** • Exclude control line construction from sites. Consider a buffer zone of about 50 metres from the sites. • AIIMS databases must be checked as part of planning for fire operations
Historic Sites	Dog fence on private property and reserve near the western boundary. • As far as possible, protect both old and new sections of dog fence from fire. • Use of foams & retardant is acceptable. The historic sites displayed on the map are those considered vulnerable to fire or suppression activities. They include the Yoconomah Tank Barrier, a cutting and tunnel and native dog camping area.
Threatened Fauna & Flora	• The protective actions for threatened fauna have been incorporated into the Operational Guidelines • A significant Gondwana rainforest remnant of less than 40 individual Antarctic Beech trees exist within Cathedral Rock NP. They are potentially the highest examples of this species in the world and are up to 300 years old. Hazard reduction burning and wildfire suppression should aim to limit the intensity of fire in the vicinity of these trees.
Soil Erosion Management	• Terrain and rock mean there are few options for internal fire line construction in this reserve. Any trails used for fire suppression should be drained as soon as possible after use.

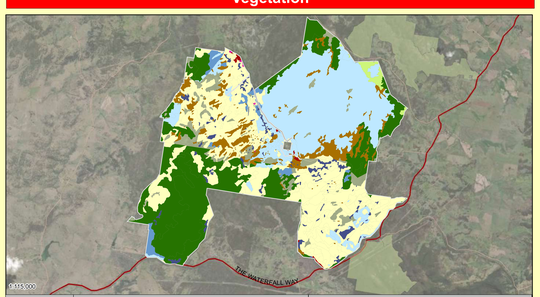
Suppression Strategies

Conditions	Guidelines
Intent: Due to the remoteness and scale of the reserve and minimal internal fire trails, access is difficult. Early RAFT response has proven effective in suppressing fires to small areas. Aerial reconnaissance and RAFT deployment may be considered as effective options to new ignitions and lightning strikes.	
All vegetation types	
Fire danger rating LOW - HIGH	• Direct attack to minimise fire size. • Consider a broad containment strategy using existing roads, allowing long-term management requirements for biodiversity
Fire danger rating VERY HIGH	• Close parallel or direct attack may be an option at night depending on weather conditions. • Distance between the flank and machinery and fire units should be kept to a minimum • Secure and deepen containment lines on the next predicted downwind side of the fire.
Fire danger rating SEVERE - EXTREME +	• May require aerial support to manage spot overs and monitor fire spread. • Firefighter safety is the paramount consideration in deployment. • Undertake broad containment strategies using main fire trails and cleared country. • Tactics will include property protection where safe and necessary. • Close parallel or direct attack and / or mop up of fire edge may be an option at night depending on weather conditions. **Warning: Fire burnt should be anticipated with winds from any direction. Entrapment risk is very, high.**

Operations Map

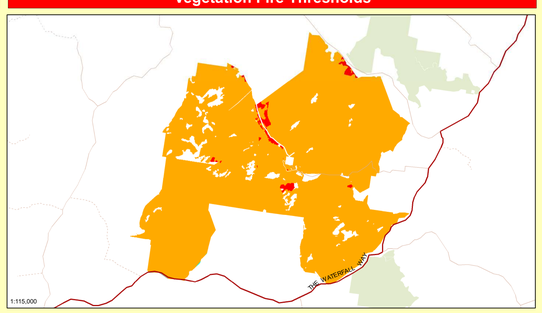


Vegetation



Vegetation Formation (Keith)	Vegetation Management Guidelines	Fire Behaviour
Dry Sclerophyll Forests (Shrubgrass sub-formation)	• The minimum interval between low intensity fires is more than 5 years. • The maximum interval between fire should be less than 50 years. • The minimum interval between high intensity fires should be evaluated on forest condition. • Fires should be excluded from the vicinity of the Waterfall Way and Round Mountain Road in elevated country.	• The potential rates of spread during extended dry season can be very high due to terrain factors. **OFH is normally in the range of Moderate to Very High.** • Spotting associated with uphill fire runs can be severe.
Dry Sclerophyll Forests (Shrubby sub-formation)	• Forest Fire intervals of less than 7 years and greater than 50 years. • The minimum interval between high intensity fires should be evaluated on forest condition. • A diversity of fire intervals across the local landscape should be maximised. This vegetation type is mainly in the south west of the reserve.	• OFH is highly dependent on time since fire. The potential rates of spread van vary from Moderate to Very High due depending on **OFH**.
Freshwater wetlands	• Fires should be avoided unless required for strategic protection of the reserve.	• Potential rate of spread is variable with seasonal factors. OFH may vary from Moderate to Very High depending on seasonal growth and stage of curing. • Fire intensity and ROS are dependent on OFH. However, given the generally small area of these communities, the effects will be localised.
Grassy woodlands	• Many of these sites are small areas surrounded by other more expansive Keith communities. The fire regimes in these surrounding vegetation types will to a large extent dictate the fire regimes of the Freshwater Wetlands. • Strategic burning should avoid fire intervals of less than 6 years and greater than 35 years. • This is a major vegetation type within the central part of Cathedral Rock NP	• Potential rates of spread are **High** due to the grassy nature of the flammable elements in generally **Moderate to Very High OFH.**
Heathlands	• The minimum fire interval in heathy stands of these grassy woodlands is five years. Where the health of the heathland is considered threatened, the minimum fire setback the minimum fire interval should be increased to 10 years. • The maximum fire interval is 40 years.	
Rainforest	• Avoid Fire intervals of less than 7 years and greater than 30 years. • A diversity of fire intervals across the local landscape should be maximised.	• OFH is highly dependent on time since fire. Wind and terrain effects are magnified in running heath fires. The potential rates of spread can vary from Moderate to Very High. • Potential rates of spread are usually very low to zero rate of spread.
	• These sites are very minor isolated pockets. • No prescribed burning should be conducted. • Avoid high intensity fires close to rainforest boundaries.	
Wet sclerophyll forests (shrubgrass sub-formation)	• The minimum interval between low intensity fires is less than 10 years. • The minimum interval between high intensity fires should be more than 10 years. Most of these high elevation communities burnt hot in the 2019 wildfires. Planned burns should consider the vegetation recovery from these fires. • A diversity of fire intervals across the local landscape should be maximised.	• The potential rates of spread during extended dry season can be high due to **Moderate to Very High OFH.** • There is a high potential for spotting in this vegetation type. • Fires are often of high intensity.
Wet sclerophyll forests (shrubby sub-formation)	• The minimum interval between moderate intensity fires is 25 years. This should be extended where fires have burnt with high intensity. • A diversity of fire intervals across the local landscape should be maximised.	• The potential rate of spread during an extended dry period can be high due to low fuel moisture content and **High to Extreme OFH.** • There is a high potential for spotting in this vegetation type. • Fires are often of high intensity
Native regrowth / exotics	• These small pockets are disturbed areas that have no vegetation management guidelines. Fire activities will be dictated by their surrounding vegetation types	• Variable and localised

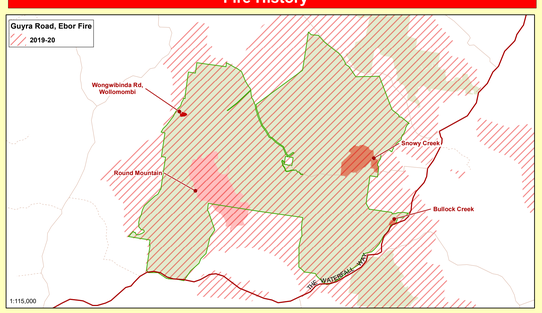
Vegetation Fire Thresholds



Vegetation Threshold	Treatment
Too Frequently Burnt	Fire thresholds have been exceeded. Protect from fire as far as possible.
Vulnerable to Frequent Fire	The current interval since last fire is shorter than the recommended minimum interval.
Within Threshold	Fire history is within the threshold for vegetation in this area. A burn is neither required nor should one necessarily be avoided.
Long Unburnt	Fire frequency is below fire thresholds in the area. A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.
Unknown	Insufficient data to determine fire threshold.
No Regime Assigned	Areas which do not have recommended fire intervals assigned to them eg. cleared land, rock.

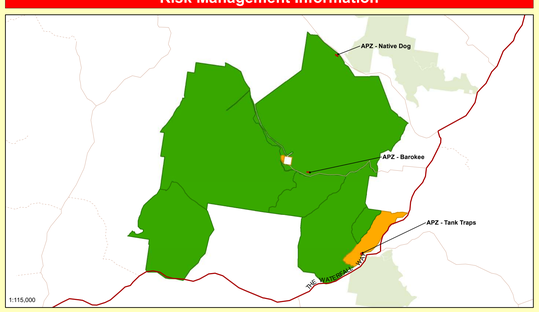
NB. Fire thresholds are defined for vegetation communities to conserve biodiversity

Fire History



Fire Type	Fire Details
Prescribed Burn	Last recorded prescribed burn was in 1999-2000
Wildfire	2019-20: Guyra Road, Ebor. A hot wildfire that burnt in intense drought. 2018-19: Wongwibinda Road, Wollommbi – a lightning strike spot fire that was extinguished by RART. 2016-17: Snowy Creek 2016-17: Bullock Creek 2015-16: Round Mountain – a hot wildfire started by lightning.

Risk Management Information



Fire Management Zone	Treatment
Asset Protection Zones	The objective of **APZs** is the protection of human life and property. This will have precedence 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 in locations to assist containment of wildfires, by maintaining the Overall Fuel Hazard at HIGH or below.
Land Management Zones	The objective of **LMZs** is to conserve biodiversity and protect cultural heritage. Manage fire consistent with fire thresholds.