Warrumbungle National Park Fire Management Strategy 2016 - 2020

Sheet 1 of 2

This strategy should be used with air photography and field reconnaissance.
This is a relevant Plan under S.38 (4) and S.44 (3) of Rural Fires Act 1997.

Published by: Office of Environment and Heritage (NSW).
Contact: NPWS Northern Plains Region,
PO Box 848 Narrabri NSW 2390 Ph 6792 7350

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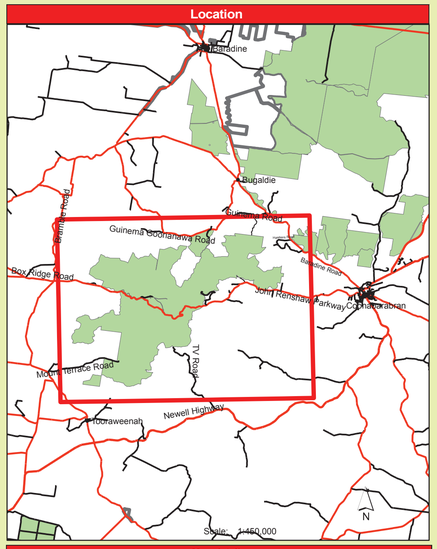
Incident Base Map

Location



Map details

Datum: GDA 1994 **Projection:** MGA 1994 **Map Zone:** 55 **Map Base:** Spot 5 2005
1:50,000 Topographic map coverage – Bugaldie 8735N, Coonabarabran 8735S, Tenandra 8635N, Toorawenah 8635S **Noted scales:** True when printed on A1 size paper

Local Government Areas
Coonamble - Gilgandra - Warrumbungle

Contact Information

Agency	Position / Location	Phone
National Parks & Wildlife Service	Duty Officer (24 hour)	6792 4680
	Coonabarabran Area Office (bus. hours)	6842 1311
RFS Castlereagh Zone	Corey Philip (Zone Manager)	0417 415 032
	Zone Office	6842 2645
RFS North West Team	Greg Sim (Zone Manager)	0428 253 224
	Team Office	6822 4422
RFS Zone/Team Duty Officer	Duty Officer (via RFS StateOps)	8741 5300
RFS Rural Fire Brigades	Group Captain – Tony Waldron	0417 654 431
	Belar Creek – Graeme Bowden	0467 023 895
	Bugaldie – Ian Watson	68434438
	Goorianawa – Ron Nash	6843 8228
	Gowang – Peter Hellyer	0428 422 753
	Gummin – Malcolm Webb	0437 254 374
	Timor – Chris Lowrie	0400 434 531
	Yearinan – Jesse Smith	
	Uargon – Mike Bowman	0438 481 001
	Warrumbungle – Tony Webb	0428 254 374
Fire & Rescue NSW	Communications Centre – Newcastle	4929 7177
Emergency Services	Police, Fire, Ambulance	000
SES		13 2500
Police	Coonabarabran	6842 7299
Councils	Warrumbungle	6849 2000
	Gilgandra	6817 8800
	Coonamble	6827 1900

Contact numbers for reserve neighbours are included in the *Northern Plains Regional Incident Procedures*

Communications Information

Service	Channel	Location and Comments
NPWS VHF Network	210 321 312 11 – 17 41 - 60	• Southern Vote Group • Needle Mountain • Wanda (southern Pilliga) • NPWS fire ground channels • RFS VHF fire ground channels (FG 1 – 20)
RFS DIGITAL	N001	• Castlereagh Vote
UHF - CB		• Small fires - Channel 10 • Large fires - determined by IMT
Aviation - CTAF	126.7	
Mobile phone		• Telstra 3G coverage, towers at Needle Mountain, Baradine and Coonabarabran

The park has very steep terrain, which results in highly variable communications Communications may need to be augmented by portable repeaters.

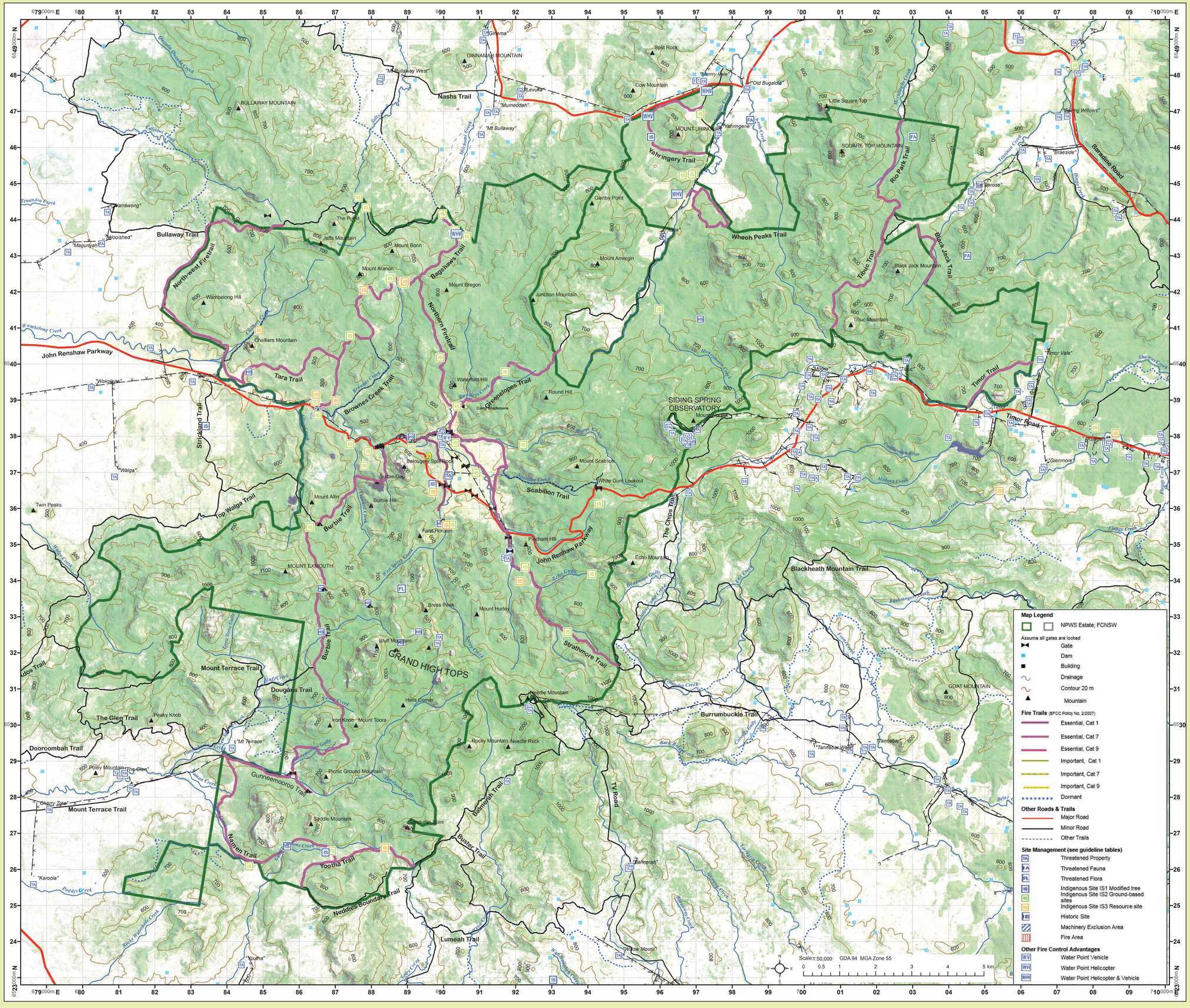
Fire Season Information

Wildfires	• The critical wildfire season generally occurs during November and December. • This may commence late September or extend into the first half of January during periods of strongly negative ENSO Indices, or very dry summers. • There is a risk of night-time runs along ridges with easterly winds during very dry seasons. • The end of the critical fire season is often marked by wet storm activity.
Prescribed Burning	• Effective prescribed burning may commence once the "critical fire s eason" and thunderstorm season is over. • Predicted rain events may be used to limit unbounded burns. • Prescribed burning attempted after autumn rain is NOT likely to be effective.

Meteorological WATCHOUTS

- **Forecast SEVERE+ Fire Danger**
- **Strong winds producing lee slope rotors (turbulence) which will affect aerial operations**
- **Large differences between forecast or apparent surface and 1500 metre winds**
- **Forecast C-Haines Index >11**
- **Night-time "easterly surges"**
- **Night-time humidity remains, or forecast to remain, below 40%**
- **Passage or development of a " Complex Continental LOW"**

Further information on Meteorological watchouts is included in the *Northern Plains Regional Incident Procedures*



Map Legend

- NPWS Estate; FCNSW
- Assume all gates are locked
- Gate
- Dam
- Building
- Drainage
- Contour 20 m
- Mountain

Fire Trails (BFCC Policy No. 2/2007)

- Essential, Cat 1
- Essential, Cat 7
- Essential, Cat 9
- Important, Cat 1
- Important, Cat 7
- Important, Cat 9
- Dormant

Other Roads & Trails

- Major Road
- Minor Road
- Other Trails

Site Management (see guideline tables)

- TA Threatened Property
- FA Threatened Fauna
- FL Threatened Flora
- IS Indigenous Site IS1 Modified tree
- IS Indigenous Site IS2 Ground-based sites
- IS Indigenous Site IS3 Resource site
- HS Historic Site
- Machinery Exclusion Area
- Fire Area

Other Fire Control Advantages

- WV Water Point Vehicle
- WH Water Point Helicopter
- WHV Water Point Helicopter & Vehicle

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Sheet 2 of 2

Office of Environment & Heritage

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Management Guidelines

Suppression Strategies

The majority of the Warrumbungle National Park was burnt by a catastrophic fire in 2013. The aim of suppression should be to minimise the extent of any fire, until large areas of the park return to biodiversity thresholds.

Conditions & forecast	Guidelines
All vegetation types	
Fire danger rating LOW - HIGH	• Evaluate the benefits and risks in deployment of RAFT crews as a first response. • A strategy that uses a combination of ground crews, aircraft, machinery and fire units to contain the fire is recommended.
Fire danger rating VERY HIGH - EXTREME	• Develop a strategy which aims to contain the fire to the smallest area practicable, using a combination of ground crews, fire units, machinery and aircraft. • Any proposed backburning **must be assessed** on the required resources, their capacity and the time required to mop-up and secure proposed burn edges **prior to** the onset of Severe + conditions, **and then hold**.
Catastrophic	• Revert to property protection.

NOTES

1. Volcanic land units are characterised by steep terrain and lower Overall Fuel Hazards. This will act to limit the potential downslope spread of wildfires. The OFH is also lower on northern aspects. (Check *Vegetation communities and biodiversity thresholds*)
2. Potential rates of spread are higher in Sandstone woodlands.
3. Upslope backburning should be avoided in steep terrain until fire fronts are within proximity of control lines. The aim is to minimise the length of upslope fire runs and spotting potential.
4. There is a risk of night-time runs along ridges with easterly winds during very dry seasons.

These notes are advisory only during the life of this document.

Fire behaviour calculations should consider both ***Surface*** and ***1500 metre*** wind forecasts

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 the Incident Controller.
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, slope or low humidity to maximise effectiveness.
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. • A senior NPWS officer is to liaise with the RFS to ensure that the agency in command and control is determined and an Incident Controller is appointed
Containment Lines	• Existing or previous roads, tracks and control lines should be used wherever possible • 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.
Earthmoving Equipment	• Plant may only be used with the prior consent of a senior NPWS officer. • Plant must always be supervised by an experienced officer, and accompanied by a fire-fighting vehicle when engaged in direct or parallel attack. • Containment lines running along valley areas should be constructed at 20 – 50 metres from the gullyline to avoid severe erosion. • Plant must not work in areas with slopes greater than 20 degrees. • Plant use must be minimised in open valley areas due to the presence of Aboriginal sites. • Plant must be washed down, where practicable, prior to entering and exiting NPWS estate.
Fire Suppression Chemicals	• The use of foam, gels and retardants will NOT be permitted within 50 metres of dams and watercourses holding water. • Exclude retardant use at Tara Cave and Dry Rainforests. • The aerial use of foam, gels and retardants requires the approval of a senior NPWS officer
Rehabilitation	• Where practicable, containment lines should be stabilised as part of the wildfire suppression operation. • Rehabilitation should be initiated as soon as possible after cessation of fire operations.
Watering points	• Evaluate the benefits of deployment of a bulk water carrier to support fire operations. • Evaluate the practicality of 1,000L pallet tanks in remote localities without water, to be refilled by helicopters, to reduce the time for fire unit turn around. • Water may be aerially lifted from the lower sewerage pond, if drop zone is greater than 50 metres from watercourses. Pilots must advise ground crews to the water source.
Smoke Management	• Potential smoke impacts and mitigation tactics will be assessed during the planning of fire operations. • Siding Spring Observatory and Broadcast Australia should be contacted when smoke is assessed to impact the Observatory or the broadcast facilities
John Renshaw Parkway	• Incident Controller or delegate to liaise with General Managers' of Warrumbungle and Gilgandra Shires regarding the need to close the John Renshaw Parkway when a fire is detected in the park.
Visitor Management	• Implement the emergency management plan during Severe + Fire Danger, or when fires are threatening walking trails and public use facilities. Ensure the closure is advertised on the NPWS visitor website. • A risk assessment of NPWS guided activities will be undertaken if the FDI is Very High+, or if there is a fire in the reserve.
WARNINGS	• RAFT operations should be given special consideration, if there is: ♦ FDI very high+ conditions ♦ a high risk of a storm moving through the area; or ♦ a forecast of a significant wind change. • Ensure RAFT Risk Analysis for Incident Controllers is completed prior to RAFT deployment
AVIATION HAZARDS	• Power lines with long spans located at: ♦ east of Needle Mountain communications facilities ♦ north side of Siding Spring • Winds from the NW to SW can produce severe turbulence within the Warrumbungle Ranges. The turbulence may extend some distance. The risk of turbulence must be assessed on the lee-side of steep terrain. Operations must be suspended during periods of high turbulence.
	Black text – general guidelines Blue text – reserve specific guidelines Red text – Major warnings

Operational Guidelines - Heritage

General	Guidelines
Aboriginal Cultural Heritage Site Management	*Tara Cave visitor facilities* • *Protect the site from fire, exclude area from fire where possible* • *Exclude the use of retardants at the cave area* *Modified trees (IS1), including scarred trees* • *Protect the site from fire, clear base of litter and shrubs, exclude site tree from fire where possible* • *Foam may be used to protect the tree, or to extinguish fire* • *Do not cut trees* *Ground based sites (IS2), including: camp sites, artefacts, grinding grooves, waterholes and quarries* • *Protect site from any ground disturbance, including the use of earth-moving equipment and vehicles* *Resource sites (IS3), including fig-tree groves* • *Protect site from physical disturbance* • *Avoid any burning into Dry Vine Rainforests* *Central valley area* • *Avoid mechanical construction of control lines*
Historic Heritage Site Management	*Historic structures, including Balor Hut, shelter at Pincham Camp* • *Protect the site from fire by clearing around the structure, exclude site from fire where possible* • *Foam may be used to protect the structures, or to extinguish fire* *Historic precincts, including Tara homestead* • *Protect site from any ground disturbance, including the use of earth-moving equipment*
Threatened Flora and Fauna Management	*Brush-tailed Rock-wallaby habitats* • *Avoid upslope burning into BTRW habitats* • *Prescribed burning in habitats undertaken according to the BTRW Recovery Plan* *Dry Rainforests (located in sheltered gullies and Scree woodlands)* • *Avoid any burning into Dry Rainforests* • *Avoid the aerial application of fire suppression chemicals* *Endangered ecological communities – Grassy Box Woodlands* • *Avoid mechanical construction of control lines*

Vegetation management guidelines

Two sets of vegetation management guidelines will apply during an interim period. These delineate between: a) *Extreme fire impact area*; and b) *Mosaic impact area*.

Extreme fire impact area is defined as the area burnt during the catastrophic fire runs of 13 January 2014. It is characterised by an almost uniform VERY HIGH / EXTREME fire severity, and high levels of stem death of canopy trees. The nature of vegetation communities, and their associated fuel and fire behaviour characteristics, may not become apparent for some years.

Mosaic impact area includes the remainder of the park area. It is characterised by a range of fire impacts, from UNBURNT, LOW to EXTREME fire severity. Guidelines applied prior to the 2013 Fire may still be valid.

All vegetation management guidelines will be reviewed, based on programmed research and monitoring

Extreme fire impact area guidelines

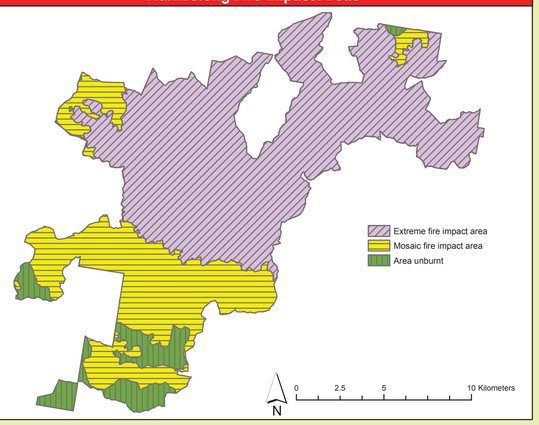
Community	Management guidelines	Fire Behaviour
Native communities	• Surface and near-surface fuels will develop slowly due to removal of canopy • Elevated (shrub) fuels may become available after 5 years for wind-driven fires • Avoid any fire events during next 5 years. • Monitor OFH in SFAZ areas.	• Initial recovery period - Potential ROS would be low • + 5 years - Potential for wind-driven fires in post-fire wattle / hop-bush regrowth Indicator: Increasing % of dead shrub material
Derived grasslands and herbfields	• Many derived grasslands have reverted to "climax weed communities". • Burning may only be proposed if an assessment indicates a low post-burn weed incidence	• Potential ROS dependant on seasonal conditions • A LOW OFH occurs during dry seasons • A MODERATE – HIGH OFH may develop after successive wet seasons producing continuous cover

Mosaic impact area guidelines – Non SFAZ areas

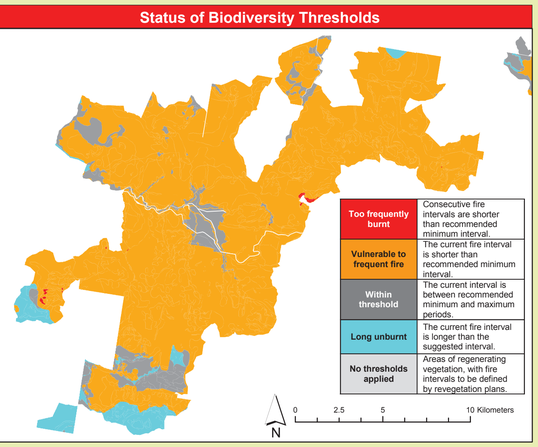
Community	Management guidelines	Fire Behaviour
Fire behaviour listed is based on ***LOW*** to ***VERY HIGH*** fire danger. Extreme fire intensity may be experienced during ***SEVERE+*** conditions		
Riparian forests and woodlands	• An interval between fire events less than 15 – 25 years should be avoided	• ROS would be low to moderate due to LOW - MODERATE OFH
Sandstone Woodlands Bloodwood / Scribby Gum / Ironbark Woodlands Hunter community C7	• An interval between fire events less than 15 – 25 years and greater than 40 years should be avoided	• Potential ROS is usually HIGH due to HIGH OFH • Localised areas of VERY HIGH OFH occur
White Box / White Pine / Ironbark woodlands White Box / White Pine / Narrow-leaved Ironbark woodlands Hunter community C3	• An interval between fire events less than 15 years and greater than 50 years should be avoided • Selected areas to be maintained with interval greater than 100 years	• Potential ROS would be low to moderate due to LOW - MODERATE OFH • Localised areas of HIGH OFH may occur
Black Pine / Ironbark woodlands Black Pine / Narrow-leaved Ironbark woodlands Hunter community C2	• An interval between fire events less than 15 years and greater than 40 years should be avoided	• Potential ROS would be low to moderate due TO LOW -MODERATE OFH
Valley woodlands Apple / Yellow Box / Red Gum / River Oak woodlands Hunter community C4	• Minimum interval between fire events less than 15 years and greater than 70 years should be avoided	• Potential ROS would be low to moderate due to MODERATE OFH
Scree woodlands Stringybark / Apple woodlands Includes some areas of low dry rainforest thickets Hunter community C1	• An interval between fire events less than 15 – 25 years and greater than 40 years should be avoided	• Potential ROS low due to NIL - LOW OFH • May not carry any fire due to rock cover • May be used as a suppression advantage
Dry Rainforests Dry Rainforests in sheltered gullies	• An interval between fire events less than 15 – 25 • Maintain with interval greater than 100 years	• Potential ROS low due to NIL - LOW OFH • May not carry any fire due to rock cover
Acacia woodlands and shrublands Motherumbah, Black Pine, White Pine, Bloodwood woodlands and shrublands Hunter communities C7 & C8	• High intensity fires required for recruitment events • Exclude low intensity prescribed burns and backburns • Minimum interval for fire events between 50 & 100 years, no maximum period applied	• Potential ROS is usually low due to NIL - LOW OFH • Some areas will not carry any fire due to rock cover
Derived grasslands and herbfields Hunter communities C5 & C6	• Minimum interval between fire events should be greater than 4 – 8 years • Prescribed burning in regeneration areas should be scheduled according to a revegetation / rehabilitation plan	• Potential ROS dependant on seasonal conditions • A LOW OFH occurs during dry seasons • A MODERATE – HIGH OFH may develop after successive wet seasons producing continuous cover

OFH – Overall fuel hazard - A rating system that includes surface (leaf litter), near surface (low shrubs & grasses), elevated (shrubs), and bark fuels.
ROS – Rate of spread **SFAZ** – Strategic Fire Advantage Zones

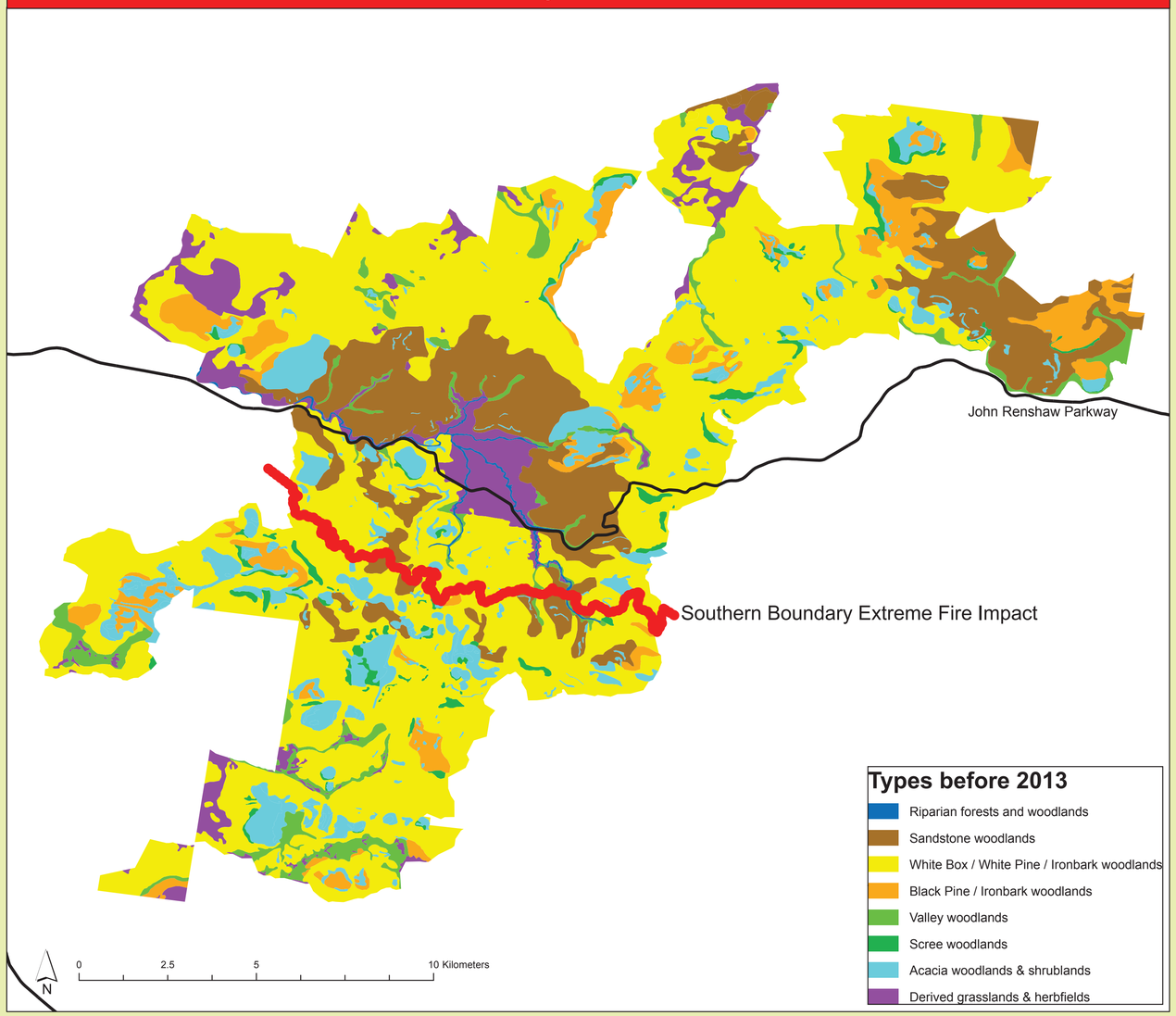
Wambelong Fire Impact Areas



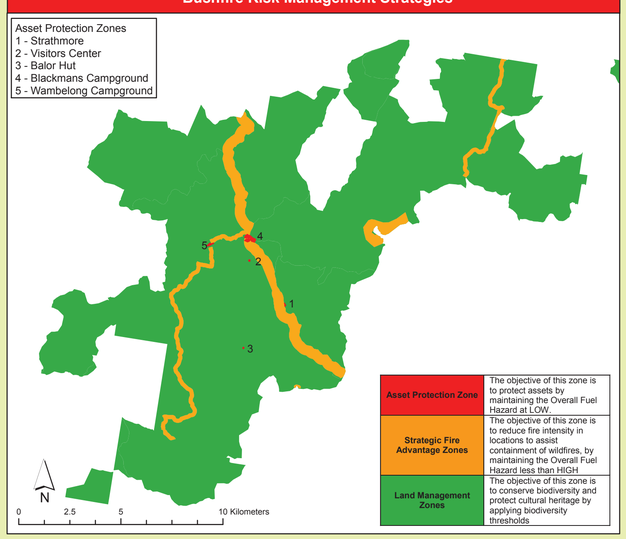
Status of Biodiversity Thresholds



Broad Vegetation Communities



Bushfire Risk Management Strategies



Vegetation Suitability For Prescribed Burn

Analysis of fuel loads, fire history and ecology required before identifying sites for burns.