Wollondilly River Nature Reserve
Fire Management Strategy 2009

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.

The NSW National Parks and Wildlife Service is part of the Department of Environment and Climate Change.
Published by the Department of Environment and Climate Change (NSW), June 2009
Contact: PO Box 44, Sutherland NSW 1499

ISBN 978 1 74232 349 7 DEC 2009/458

Date Approved: 30/6/2009

Fire Season Information

Wildfires	• The statutory wildfire season occurs between 1st October and 31st March. This may be extended if weather conditions lead to increased fire danger outside of this period.
Prescribed Burning	• Prescribed burning in this are a is normally undertaken in Autumn through to Spring.

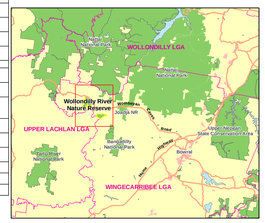
Related Documents

- National Parks and Wildlife Service Fire Management Manual.
- The Native Vegetation of the Warragamba Special Area.
- Part A – Technical Report Land Part B Vegetation Community Profiles, February 2003.
- Sydney South Region Incident Procedures and Contact Lists
- Threatened Species Hazard Reduction Guidelines, Parts 1,2 and 3. N.S.W. Rural Fire Service, As amended.
- Bowmans Hill Draft Conservation Plan (Rose Deso Planning and Design 2002)
- Draft Plan of Management, Wollondilly River Nature Reserve

Contact Information

Agency	Position / Location	Phone
National Parks & Wildlife Service	Regional Duty Officer (24 hour)	0419 428 054
	Nattai Area Manager	4677 0859 0419 408 651
	Fire Management Officer	9542 0636 0419 462 105
	Regional Operations Coordinator	9542 0624 0409 042 412
	Nattai Area Office	4677 0859 (fax) 4677 0854
	Sydney South Regional Office	9542 0624 (fax) 9542 1420
Sydney Catchment Authority	24 Hours	9751 1988
Wingecarribee District NSW Rural Fire Service	24 Hours	4871 3765
	Business Hours	4871 2666
SES	Business Hours	000 Wingecarribee Shire 4871 2433
Police	Emergency	000
	Bowral	4862 9299
	Mittagong	4871 1222
Ambulance	Emergency	000
Hospital	Bookings	131 233
	Camden District	4629 1000
	Bowral District	4861 0200
Council	Wingecarribee Shire Council	4868 0888
Other	River Island Resort	4888 9236
	Tuggelong Farm Stay	4878 9171
	Wollondilly River Station (Camping Area)	4888 9239

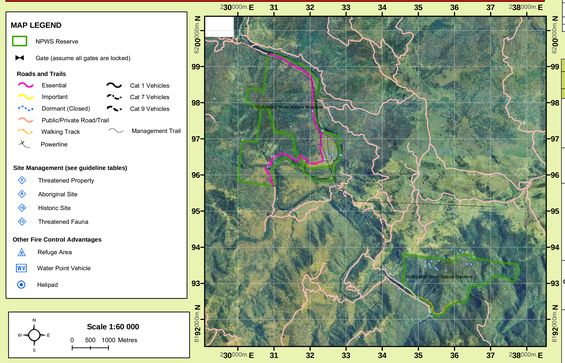
Locality of Reserve and Local Government Areas



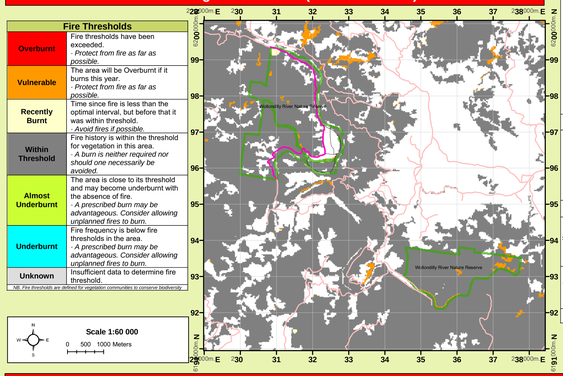
Map Details

Datum: Australian Geodectic Datum of Australia (AGD) 1966
Projection: Australian Map Grid (AMG) Zone 56
Aerial Photography: NSW Department of Lands (2006)
1:25k Topographic Map: Barrallier 8929-2N / Hanworth 8929-3S (LPI)

Bushfire Suppression



Current Vegetation Status (Fire Thresholds)



Fire Thresholds

Overburnt	Fire thresholds have been exceeded. *- Protect from fire as far as possible.*
Vulnerable	The area will be Overburnt if it burns this year. *- Protect from fire as far as possible.*
Recently Burnt	Time since fire is less than the optimal interval, but before that it was within threshold. *- Avoid fires if possible.*
Within Threshold	Fire history is within the threshold for vegetation in this area. *- A burn is neither required nor should one necessarily be avoided.*
Almost Underburnt	The area is close to its threshold and may become underburnt with the absence of fire. *- A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.*
Underburnt	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.

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

Communications Information

Service	Channel	Location and Comments
NPWS - VHF	2	• High Range – Moderate coverage
NPWS - VHF	95	• Sydney Catchment Authority Network – Moderate coverage
Mobile Phone – GSM	-	• Fair coverage on high points
Satellite Phone	-	• Moderate coverage

Operational Guidelines

Refer to Strategy for Fire Management 2003 and Fire Management Manual.
Brief all personnel involved in suppression operations on the following issues:

General	Guidelines
Aerial Water Bombing	• The use of bombing aircraft should support containment operations by aggressively attacking hotspots and spot-overs. • The use of bombing aircraft without the support of ground based suppression crews should be limited to very specific circumstances. • Where practicable foam should be used to increase the effectiveness of the water. • Ground crews must be alerted to water bombing operations.
Aerial Ignition	• Aerial ignition may be used during back-burning or fuel reduction operations where practicable, but only with the prior consent of NPWS Regional Manager or Section 44 delegate. • Utilise incendiaries to rapidly progress back-burns down slope where required.
Backburning	• Temperature and humidity trends must be monitored carefully to determine the safest times to implement back-burns. Generally, when the FDI is Very High or greater, backburning should commence when the humidity begins to rise in the late afternoon or early evening. With a lower FDI backburning may be safely undertaken during the day. • 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. • Avoid ignition of backburns at the bottom of slopes where a long and intense up slope burn is likely.
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.
Containment Lines	• 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. • Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation. • All containment lines not required for other purposes should be closed at the cessation of the incident. • All personal involved in containment line construction should be briefed on both natural and cultural heritage sites in the location.
Earthmoving Equipment	• Earthmoving equipment may only be used with the prior consent of a senior NPWS officer, and then only if the probability of its success is high. • Earthmoving equipment must be always 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 firefighting vehicle. • Containment lines constructed by earthmoving equipment should consider the protection of drainage features, observe the Threatened Species and Cultural Heritage Operational Guidelines, and be surveyed, where possible, to identify unknown cultural heritage sites. • Earthmoving equipment should be washed down, where practicable, prior to it entering NPWS estate. • In particular special consideration should be undertaken when constructing containment lines surrounding the Bowmans Hill Historic precinct.
Fire Advantage Recording	• All fire advantages used during wildfire suppression operations must be mapped and where relevant added to the database.
Fire Suppression Chemicals	• Wetting and foaming agents (surfactants) are permitted for use in wildfire suppression. • The use of fire retardant is only permitted with the prior consent of the senior NPWS officer, and should be avoided where reasonable alternatives are available. • Exclude the use of surfactants and retardants within 50m of rainforest, watercourses, dams and swamps. • Areas where fire suppression chemicals are used must be mapped and the used product's name recorded. • The Threatened Species Operational Guidelines are to be observed.
Rehabilitation	• Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Smoke Management	• The potential impacts of smoke and possible mitigation tactics must be considered when planning for wildfire suppression and prescribed burning operations. • If smoke becomes a hazard on local roads or highways, the police and relevant media must be notified. • Smoke management must be in accordance with relevant RTA traffic management guidelines.
Visitor Management	• The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations. • Note the neighbouring River Island Nature Resort contains large volumes of visitors from the period September through to March. • Prior to Reserve closures every effort should be undertaken to search the Cascades Pool Walking Track area within the Reserve.
Fireground Access	• Wombeyan Caves Road from River Island turn-off becomes narrow and difficult to negotiate for heavier vehicles.

Suppression Strategies

Current FDR	Forecast FDR	
Low – Mod	Low – Mod	• As far as possible, undertake indirect, parallel or direct attack along existing control lines. • As far as possible, maximise area burnt without threatening assets, including biodiversity. • Identify and survey backup control lines.
Low – Mod	= > High	• Undertake indirect, parallel or direct attack to minimise the time taken to contain the fire. • Construct new control lines if necessary to minimise the time to contain the fire. • Identify and survey backup control lines.
High	All	• Undertake indirect attack along existing or newly constructed control lines. • Secure and deepen control lines along the next predicted downwind side of the fire. • Identify and survey backup control lines.
All	All	• Ensure there is sufficient time to secure control lines before the fire gets to them. • If there is insufficient time to secure control lines, fall back to the next potential control line. • As far as possible, implement threatened species and cultural heritage management guidelines.

Vegetation Communities and Biodiversity Thresholds

Regime	Vegetation Community	Biodiversity Thresholds	Fire Behaviour	Year Burnt	Area (Ha)
I	Shrubby Dry Sclerophyll Forest	• Avoid successive fires at intervals of < 7 years. • Avoid fire exclusion for a period of > 30 years.	Moderate	2003-04	0.60
H	Grassy Dry Sclerophyll Forest	• Avoid successive fires at intervals of < 5 years. • Avoid fire exclusion for a period of > 50 years.	Moderate	-	-
N	Riparian Casuarina Forest	• Avoid any fire occurrence (a limited recovery ability exists).	Low	2003-04	2.20
G	Grassy Woodland	• Avoid successive fires at intervals of < 5 years. • Avoid fire exclusion for a period of > 40 years.	Moderate	2003-04	4.50
A	Rainforest	• Avoid any fire occurrence (a limited recovery ability exists).	Low	-	-
E	Wet Sclerophyll Forest	• Avoid successive fires at intervals of < 10 years. • Avoid fire exclusion for a period of > 50 years.	High	-	-

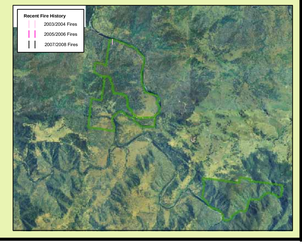
Threatened Fauna Fire Ecology

Label	Name	Fire Ecology
	Callocephalon fimbriatum Gang-gang Cockatoo (Vulnerable)	• Avoid high frequency fires in known habitat.
	Calyptorhynchus lathami Glossy Black-Cockatoo (Vulnerable)	• Avoid burning of Allocasuarina thickets. • No mechanical hazard reduction of Allocasuarina thickets.
	Chalinolobus dwyeri Large-eared Pied Bat (Vulnerable)	• Avoid burning around known roost sites. • No slashing, tritterning or tree removal around known roosting sites.
	Climacteris picumnus victoriae Brown Treecreeper (eastern subsp.) (Vulnerable)	• Recorded as being present in equal numbers in burnt and unburnt forest 8 months after fire.
	Falsistrellus tasmaniensis Eastern False Pipistrelle (Vulnerable)	• Protect hollows. • No removal of trees.
	Melanodryas cucullata Hooded Robin (Vulnerable)	• Likely to be affected by frequent fire due to its requirement for large areas of complex habitat with well developed shrub and ground layers.
	Xanthomyza phrygia Regent Honeyeater (Endangered)	• No removal of key nectar tree species
	Petaurus norfolcensis Squirrel Glider (Vulnerable)	• No removal of trees • Protect hollows.
	Pyrrholaemus sagittatus Speckled Warbler (Vulnerable)	• No slashing, tritterning or tree removal
	Neophema pulchella Turquoise Parrot (Vulnerable)	• Protect hollows. • No removal of trees.
	Phascolarctos cinereus Koala (Vulnerable)	• Intense wildfire with canopy scorch will cause high mortality and injury. • Post fire areas may be recolonised within 6 – 18 months. With eucalypts providing many nutritious and less toxic leaves for improved food quality.
	Stagonopleura guttata Diamond Firetail (Vulnerable)	• No slashing, tritterning or tree removal.

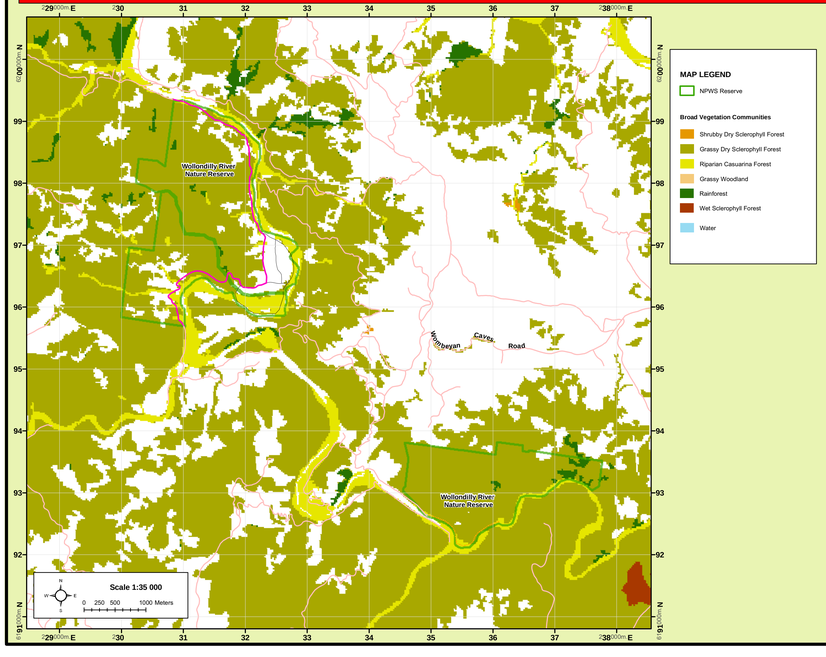
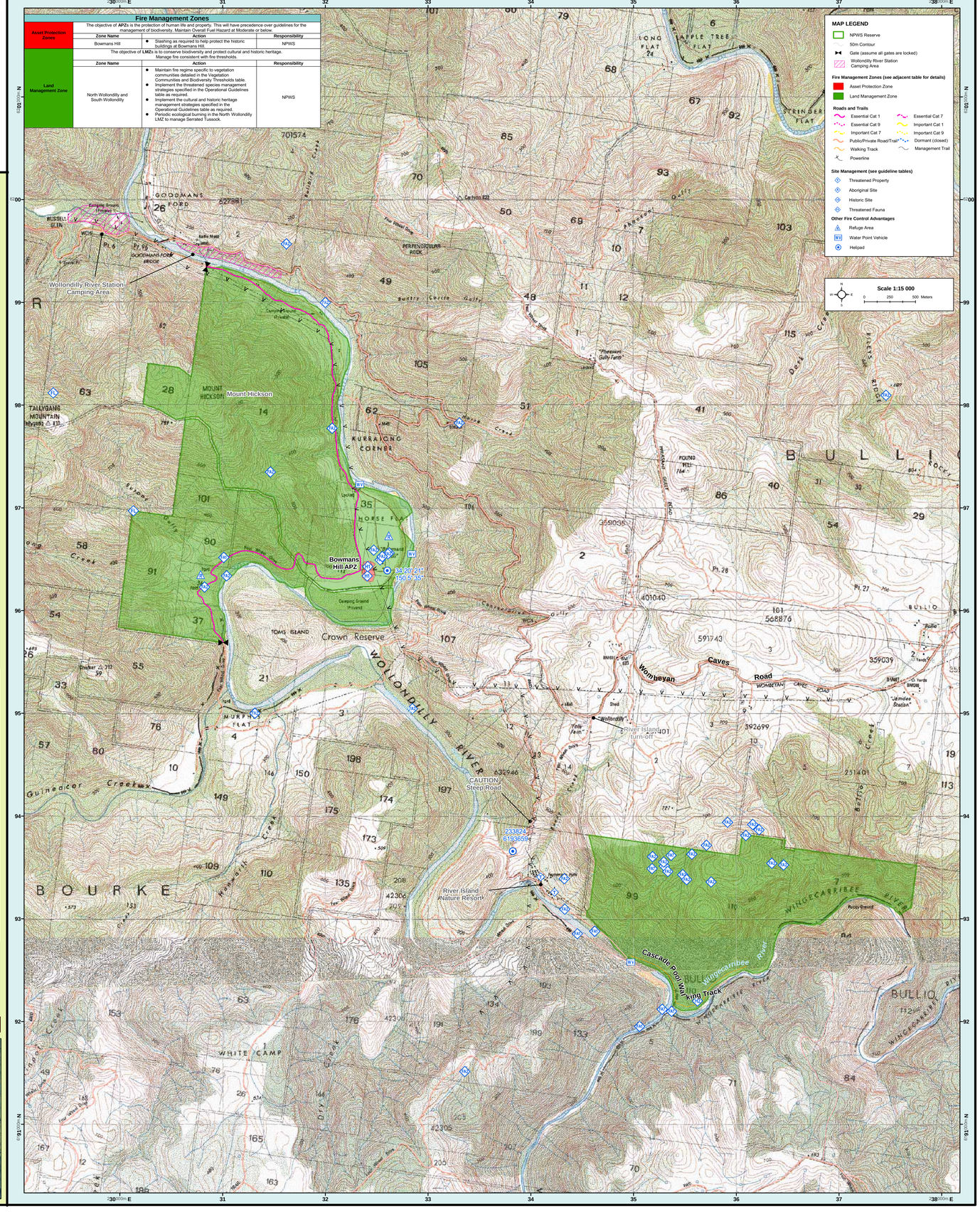
Threatened Flora Fire Ecology

Label	Name	Fire Ecology
	Solanum armourense (Endangered)	• Avoid high frequency fires in known habitat

Recent Fire History



Vegetation



Bushfire Risk Management Strategies