



# Avisford Nature Reserve Fire Management Strategy 2006

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 (2) of Rural Fires Act 1997.

The NSW National Parks and Wildlife Service is part of the Department of Environment and Conservation. Published by the Department of Environment and Conservation (NSW), July, 2006  
Contact: NPWS - Blue Mountains Region  
PO Box 562, KATOOMBIA 2780  
Last Updated: 20/10/2006

### Fire Season Information

**Wildfires**

- The statutory wildfire season occurs between 1<sup>st</sup> October and 31<sup>st</sup> March. This may be extended if weather conditions lead to increased fire danger outside of this period.
- Nearly all wildfires are caused by lightning strikes during summer.
- An annual program will be developed for prescribed burning. Priority areas are determined according to burn prescriptions for biodiversity conservation.
- Prescribed burns are carried out in Autumn, generally between March and May. Spring burns will only be undertaken in the reserve under specific conditions.

**Prescribed Burning**

**Related Documents**

- National Parks and Wildlife Service Fire Management Manual, September 2006.
- Cataguing Bush Fire Management Committee Operations Coordination Plan 2005
- Lisa Hill & Travis Peake - Vegetation of Avisford Nature Reserve - A report on vegetation mapping and survey for the management purposes.
- DEC - Avisford Nature Reserve, Draft Plan of Management, March 2006
- NPWS - Vertebrate Fauna of Avisford Nature Reserve, July 2002

### Locality of Reserve and Local Government Areas

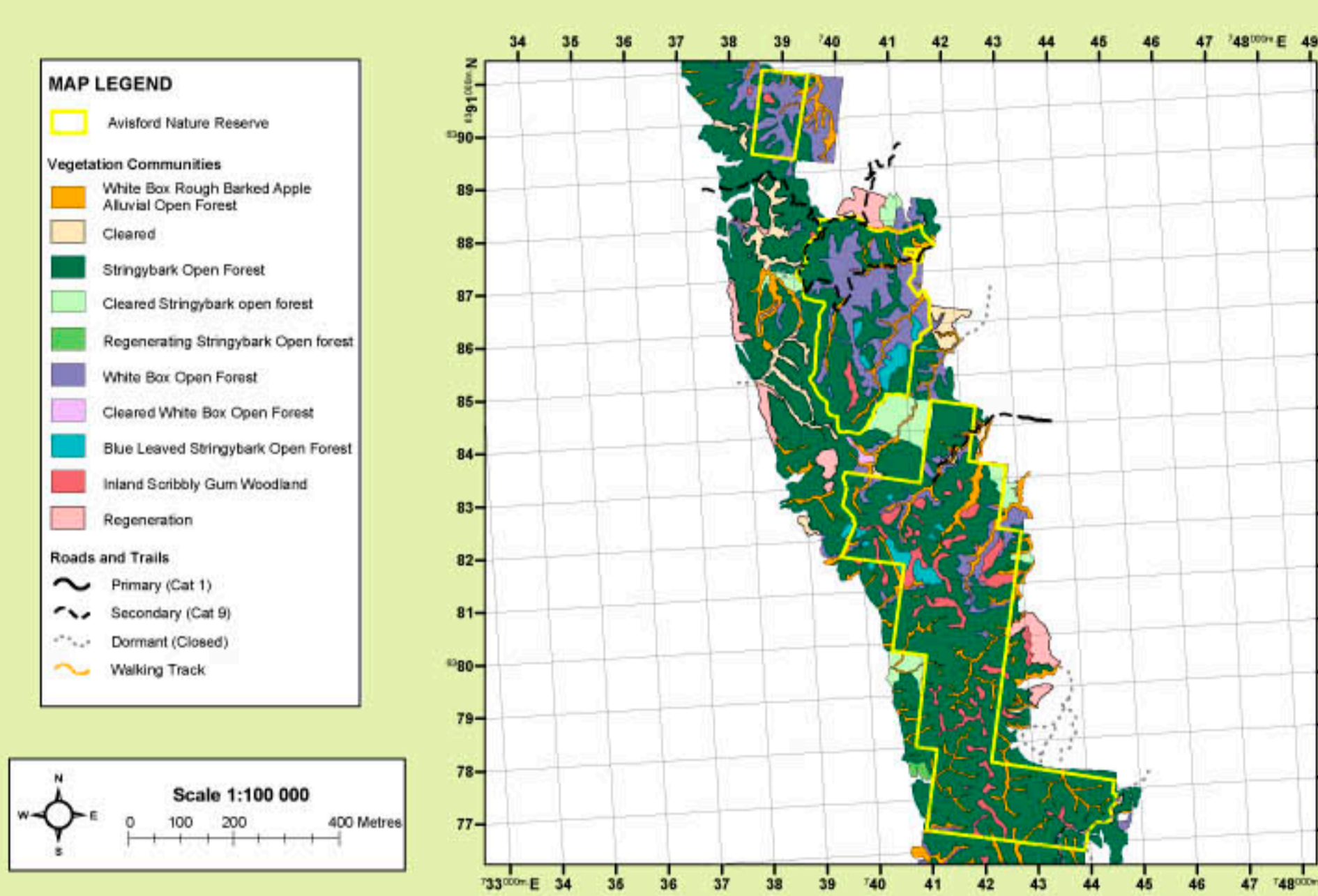
### Communications Information

Service	Channel	Location and Comments
NPWS - 139	3	Mudgee
NPWS - 139 (Prescribed)	3	Mudgee
139 - CB	1 - 80 (NPWS) 30,33,35	Choose channel on frequency. Not for strategic communication. Most RFS vehicles have CB. Most Commercial helicopters have 139.
State Police - 9933	-	Police - CB, or west of Mudgee
State Police - 1388	-	Land control on Mudgee
Sullivan Phone	-	Mudgee 1 - 0433 443 747 Mudgee 2 - 0252 910 199

### Contact Information

Agency	Position / Location	Phone
NPWS	Regional Duty Officer (24 hour)	Call pager 016 201 167 or for Blue Mountains Region Duty Officer 0372 7199
	Mudgee Area Manager	0424 218 219
	Fire Management Officer	0784 7306
	Regional Operations Coordinator	0428 985 171
	Regional Operations Coordinator	0428 7340
	Mudgee Area Office	0428 475 880
	Blue Mountains Regional Office	0784 7306
	Flight Services (Park Air)	Fax - 0372 7390
	NPWS Aviation Desk	Fax - 4781 6100
	Park Ops	0956 6681
RFS	Outgoing Fire Control Officer	0372 7199
	RFS Aviation	0428 790 881
SES	Emergency Mudgee	0372 4657
	Emergency Katoomba Call Centre	4762 6077
NSW FB	Emergency Mudgee	0372 8599
	Emergency Mudgee	Fax - 9372 8511
Police	Emergency Mudgee	000
Ambulance	Emergency Mudgee	000
Hospital	Bookings District Hospital	131 233
Council	Mid Western Regional Council	0378 2850
WRMS	Mudgee	0372 1611

## Vegetation



### Operational Guidelines

- Refer to Strategy for Fire Management 2005 and Fire Management Manual 2005. Brief all personnel involved in suppression operations on the following issues:
- 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, clear a 1m radius around dead and felled trees adjacent to containment lines prior to backburning, or wet down these trees as part of the backburning.
    - Avoid ignition of backburns at the bottom of slopes where a long and intense slope burn is likely.
    - The first containment agency on site may assume control of the fire, but then must ensure the relevant land management agency is notified promptly.
  - Backburning**
    - Temperature and humidity trends must be monitored carefully to determine the safest levels to implement backburns. 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 felled trees adjacent to containment lines prior to backburning, or wet down these trees as part of the backburning.
    - Avoid ignition of backburns at the bottom of slopes where a long and intense slope burn is likely.
    - The first containment agency on site may assume control of the fire, but then must ensure the relevant land management agency is notified promptly.
  - Command & Control**
    - On the arrival of other combatant agencies, the initial incident commander will consult with regard to the ongoing command, control and incident management team requirements as per the relevant BPMC Plans/Operations.
    - Continuation of new containment lines should be avoided, where practicable, except when they can be conducted with minimal environmental impact. New containment lines require the prior consent of a senior NPWS officer.
    - Where practicable, containment lines should be established 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 personnel involved in containment line construction should be briefed on both natural and cultural heritage sites in the location.
  - Containment Lines**
    - 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 galied and supervised by an experienced officer, and accompanied by a support vehicle. When engaged in direct or parallel attack the 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 entering NPWS sites.
  - Fire Advantage Recording**
    - At all fire advantages used during wildfire suppression operations use mapping and where relevant added to the database.
    - Mapping and burning agencies not permitted for use in wildfire suppression.
    - The use of fire advantage 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 name recorded.
    - The Threatened Species Operational Guidelines are to be observed.
    - Where practicable, containment lines should be established and rehabilitated as part of the wildfire suppression operation.
    - 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 roads must be notified.
    - Smoke management must be in accordance with relevant RTA traffic management guidelines.
    - The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
  - Fire Suppression Chemicals**
    - At all fire advantages used during wildfire suppression operations use mapping and where relevant added to the database.
    - 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 name recorded.
    - The Threatened Species Operational Guidelines are to be observed.
    - Where practicable, containment lines should be established and rehabilitated as part of the wildfire suppression operation.
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    - If smoke becomes a hazard on local roads or highways, the police and relevant roads must be notified.
    - Smoke management must be in accordance with relevant RTA traffic management guidelines.
    - The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
  - Rehabilitation**
    - Where practicable, containment lines should be established and rehabilitated as part of the wildfire suppression operation.
    - 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 roads must be notified.
    - Smoke management must be in accordance with relevant RTA traffic management guidelines.
    - The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
  - Smoke Management**
    - Where practicable, containment lines should be established and rehabilitated as part of the wildfire suppression operation.
    - 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 roads must be notified.
    - Smoke management must be in accordance with relevant RTA traffic management guidelines.
    - The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
  - Visitor Management**
    - Where practicable, containment lines should be established and rehabilitated as part of the wildfire suppression operation.
    - 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 roads must be notified.
    - Smoke management must be in accordance with relevant RTA traffic management guidelines.
    - The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.

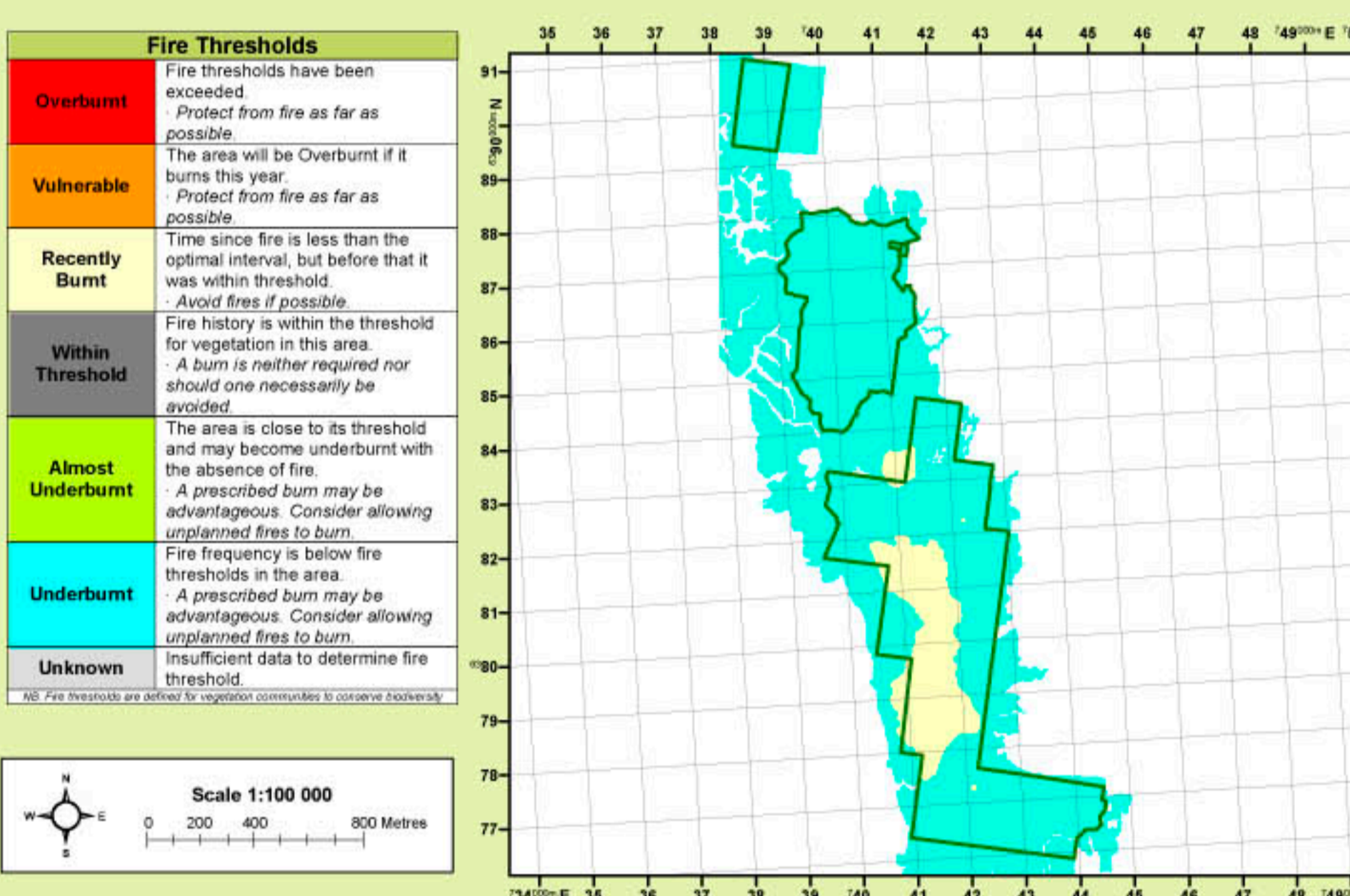
### Threatened Fauna Fire Ecology

Label	Name	Fire Ecology
	<i>Calyptorhynchus lathami</i> (Vulnerable)	<ul style="list-style-type: none"> <li>Fire likely to impact on adults.</li> <li>Avoid high intensity fires within potential habitat, to prevent damage to nesting sites (see hollows).</li> <li>Avoid implementing large area prescribed burns within habitat (where necessary, present) to avoid loss of sole food source - mosaic burn.</li> <li>Protect known nest sites by a 100-200 metre buffer.</li> <li>Maintain diversity of age structure over viable areas.</li> <li>Low intensity mosaic burn.</li> <li>Hollows in standing dead or live trees and tree stumps are essential for nesting.</li> <li>Maintain fire frequencies suitable for management of western slope Dry sclerophyll forest and western slopes Grey woodland (preferred vegetation associations).</li> <li>Fire unlikely to impact on adults.</li> <li>Potential for moderate fire intensity fire to impact on reproduction during breeding season (July-November).</li> <li>Maintain a mosaic of age classes within habitat.</li> <li>Physically protect (reduce fuels from base of tree) known nesting sites from burning activity.</li> <li>Encourage low-moderate intensity fuel reduction burns.</li> <li>Individuals likely to escape low-moderate intensity fires.</li> </ul>
	<i>Climacteris picumnus</i> (Vulnerable)	<ul style="list-style-type: none"> <li>Protect refuge areas from high intensity fires.</li> <li>No prescribed burning during breeding season.</li> <li>Maintain a variety of age classes in undisturbed vegetation by implementing a mosaic of fire intensities and frequencies.</li> </ul>
	<i>Ninox strenua</i> (Powerful Owl) (Vulnerable)	<ul style="list-style-type: none"> <li>Protect single large fire events which burn large areas of high intensity fire.</li> <li>Prescribe fires of lower intensity in known habitat.</li> <li>Avoid any fire management operations within known habitat.</li> <li>Establish strategic fire advantage zones to prevent single large fire events.</li> </ul>
	<i>Phalacrocorax penicillatus</i> (Vulnerable)	<ul style="list-style-type: none"> <li>Protect refuge areas from high intensity fires.</li> <li>No prescribed burning during breeding season.</li> <li>Maintain a variety of age classes in undisturbed vegetation by implementing a mosaic of fire intensities and frequencies.</li> </ul>
	<i>Phascogaster concolor</i> (Vulnerable)	<ul style="list-style-type: none"> <li>Protect single large fire events which burn large areas of high intensity fire.</li> <li>Prescribe fires of lower intensity in known habitat.</li> <li>Avoid any fire management operations within known habitat.</li> <li>Establish strategic fire advantage zones to prevent single large fire events.</li> </ul>
	<i>Pyroloporus sagittatus</i> (Vulnerable)	<ul style="list-style-type: none"> <li>Protect single large fire events which burn large areas of high intensity fire.</li> <li>Prescribe fires of lower intensity in known habitat.</li> <li>Avoid any fire management operations within known habitat.</li> <li>Establish strategic fire advantage zones to prevent single large fire events.</li> </ul>
	<i>Xanthopygia phylax</i> (Endangered)	<ul style="list-style-type: none"> <li>High intensity fires decrease the suitability of mature feeding trees and destroy nest (possibly container) habitat during breeding season (July-November).</li> <li>Avoid burning suitable habitat during breeding season (July-November).</li> <li>Avoid removing suitable feeding and nesting trees from potential or known habitat as part of fire management activities.</li> </ul>

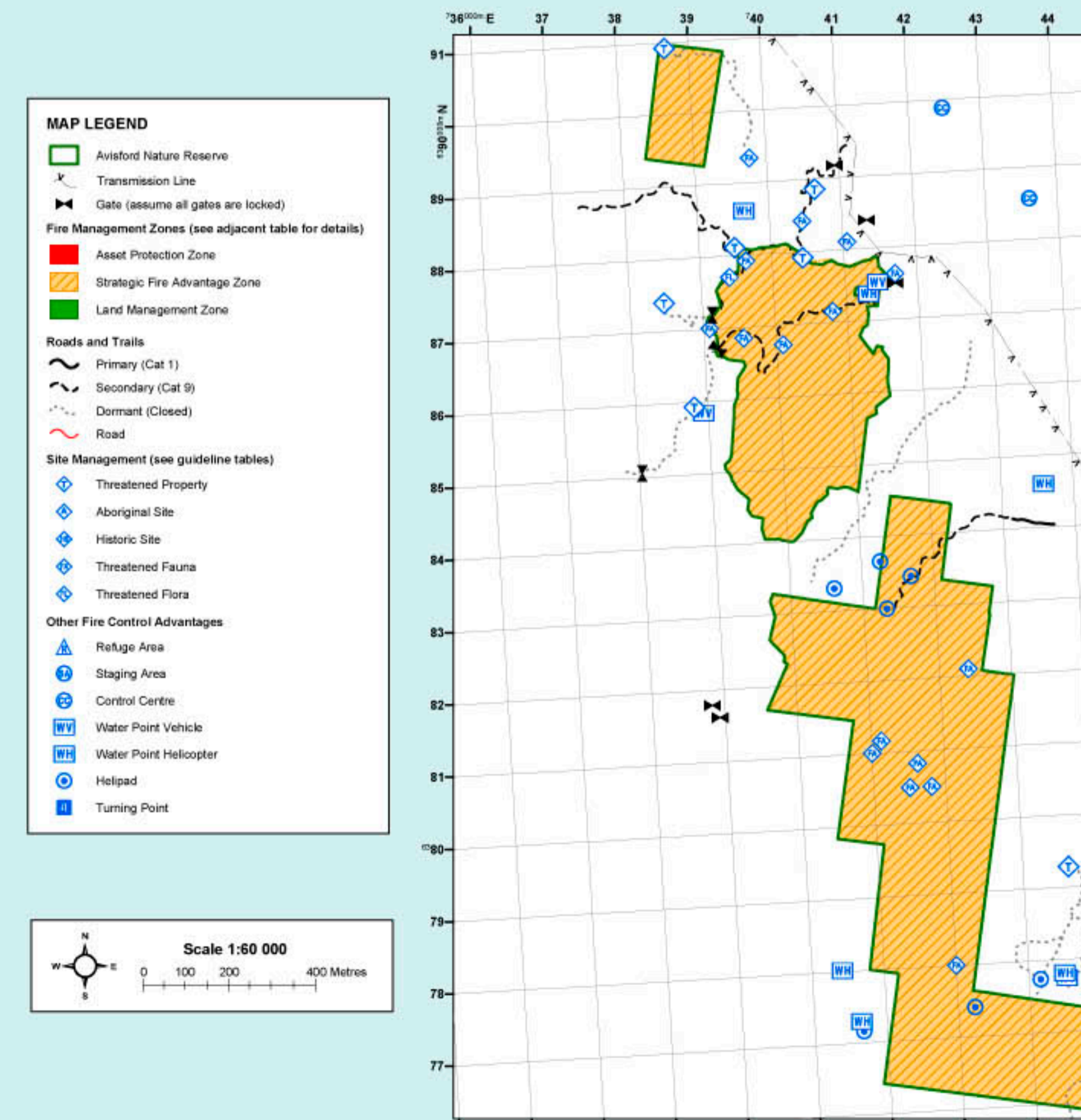
### Threatened Flora Fire Ecology

Label	Name	Fire Ecology
	<i>Silphoche</i> (Vulnerable)	<ul style="list-style-type: none"> <li>Fire responsive - recruits from epicormic buds.</li> <li>Avoid burning during flowering period (January - April).</li> <li>Fire interval 10-40 years.</li> </ul>

## Current Vegetation Status (Fire Thresholds)



## Bushfire Risk Management Strategies



### Suppression Strategies

Current FDR	Forecast FDR	Suppression Strategies
Low - Mod	Low - Mod	<ul style="list-style-type: none"> <li>Undertake indirect, parallel or direct attack along existing containment lines.</li> <li>Where practicable, consider maximising the fire area in accordance with the requirements of any proposed prescribed burns.</li> <li>In order to minimise fire area and secure banks as soon as possible, undertake direct, parallel or indirect attack along the closest containment line.</li> <li>Pay particular attention to the flank on the next predicted down side.</li> </ul>
Low - Mod	High	<ul style="list-style-type: none"> <li>Undertake indirect attack along existing or newly constructed containment lines.</li> <li>Secure and descan containment lines along the next predicted down side of the fire.</li> <li>If necessary, consider broader than normal containment strategies to avoid unaided effort and high risk of failure.</li> <li>Ensure there is sufficient time to secure containment lines prior to the fire impinging on them, otherwise fall back to next potential containment option.</li> </ul>
High	All	<ul style="list-style-type: none"> <li>Undertake indirect attack along existing or newly constructed containment lines.</li> <li>Secure and descan containment lines along the next predicted down side of the fire.</li> <li>If necessary, consider broader than normal containment strategies to avoid unaided effort and high risk of failure.</li> <li>Ensure there is sufficient time to secure containment lines prior to the fire impinging on them, otherwise fall back to next potential containment option.</li> </ul>
All	All	<ul style="list-style-type: none"> <li>Undertake indirect attack along existing or newly constructed containment lines.</li> <li>Secure and descan containment lines along the next predicted down side of the fire.</li> <li>If necessary, consider broader than normal containment strategies to avoid unaided effort and high risk of failure.</li> <li>Ensure there is sufficient time to secure containment lines prior to the fire impinging on them, otherwise fall back to next potential containment option.</li> </ul>

### Resource Guidelines

Resource	Guidelines
Aboriginal Cultural Heritage Site Management (see table 1)	There are no recorded Aboriginal sites in Avisford Nature Reserve.
AH1 Carved trees	<ul style="list-style-type: none"> <li>Exclude known trees from burn area.</li> <li>Trees close to and inside containment lines should have fuel raked/dropped away from the base for approx. 1 metre or be wetted down.</li> <li>Trees should be examined as soon as possible after the passage of the fire front in order to prevent destruction of the tree by fire where possible.</li> </ul>
AH2 Axe grinding grooves	<ul style="list-style-type: none"> <li>Creek lines and rock shelves should be checked for sites prior to containment line construction.</li> <li>As far as possible protect site from fire.</li> </ul>
Quarries & Stone arrangements	<ul style="list-style-type: none"> <li>Avoid ground disturbance including handbells, docks.</li> <li>Avoid water bombing which may cause ground disturbance.</li> <li>To prevent smoke damage to site, rake fuels away from site as part of prescribed burning preparation.</li> </ul>
AH3 Burials, artefact scatters, middens	<ul style="list-style-type: none"> <li>Avoid ground disturbance including use of earth moving machinery, hand line construction and vehicles driving over sites.</li> <li>Avoid direct water bombing.</li> </ul>

### Fire Management Zones

The objective of APZs is the protection of human life and property including infrastructure, pasture/crops and stock. The will have precedence over guidelines for the management of biodiversity. Maintain Overall Fuel Hazard at Moderate or below.

There are no asset protection zones identified within Avisford Nature Reserve.

The objective of SFZs is to reduce fire intensity across larger areas. Maintain Overall Fuel Hazard at High or below, however adherence to guidelines for biodiversity will take precedence where practical. Fire management strategies in the zone include burning, suppression or containment of fires inconsistent with the fire regime prescription. Fuels managed by burning, slashing, selective understorey clearing or trail construction. All of Avisford Nature Reserve is identified as being Strategic Advantage Zone.

The objective of LMZs is to conserve biodiversity and protect cultural and historic heritage.

There are no Land Management Zones identified in Avisford Nature Reserve.

