



TINGIRA HEIGHTS NATURE RESERVE

FIRE MANAGEMENT STRATEGY 2005 - 2006

This strategy should be used in conjunction with aerial photography and field reconnaissance during incidents and the development and incident action plans. This document is copyright. Apart from any fair dealing for the purpose of study, research criticism or review, as permitted under the Copyright Act, no part may be reproduced by any process without written permission. These data are not guaranteed to be free from error or omission. The NSW National Parks and Wildlife Service and its employees disclaim liability for any act done on the information in the data and any consequences of such acts or omissions. Published by the NSW Department of Environment and Conservation (NSW National Parks and Wildlife Service is part of the Department of Environment and Conservation). Central Coast Hunter Range Region PO Box 1477 Gosford NSW 2250

ISBN 1 7412 2205 2

Date approved 24 March 2006

Contacts & Communications

Contact Details

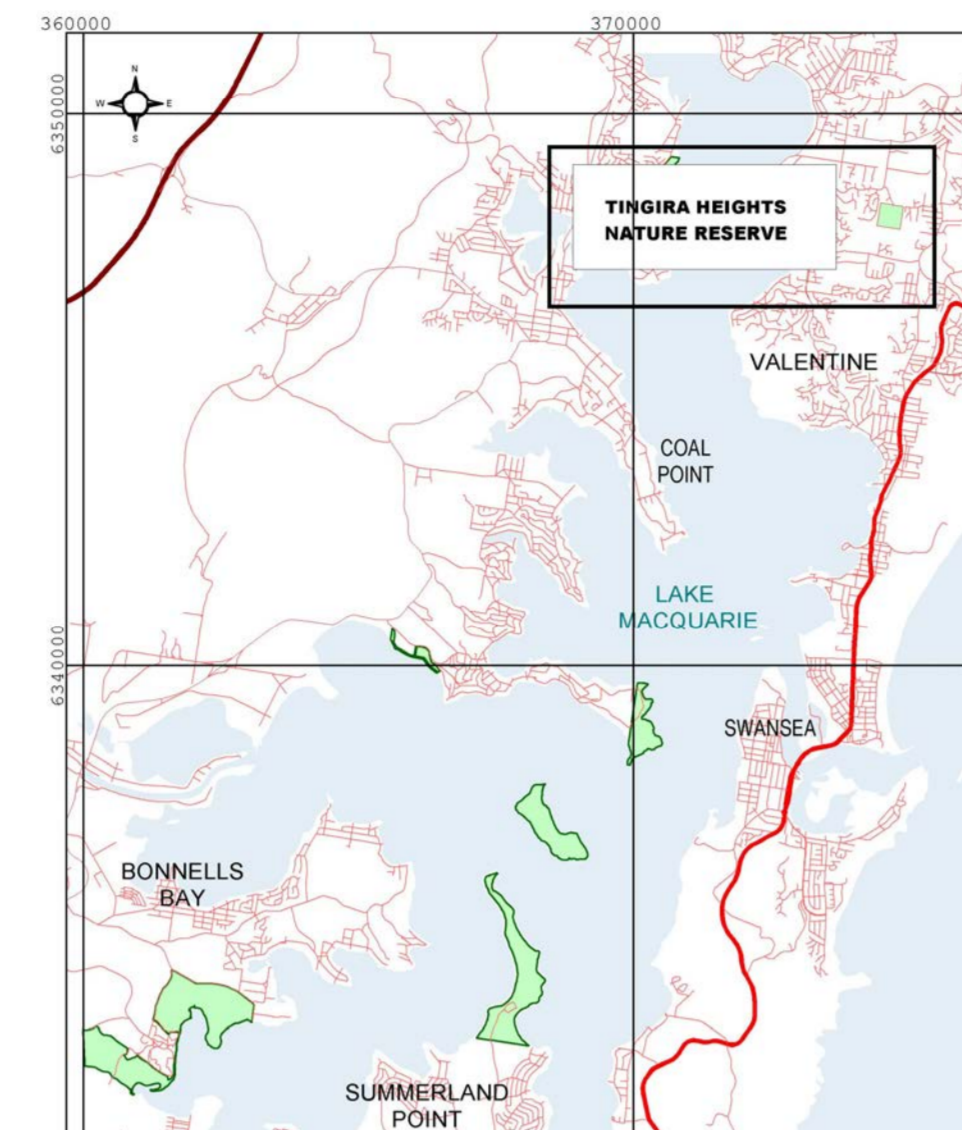
Agency	Position	Number
NSW National Parks & Wildlife Service Central Coast Hunter Range Region (CCHRR)	Duty Officer	4320 4255
	Regional Manager	4320 4201 / 0428 218 015
	Regional Operations Coordinator	4320 4232 / 0418 433 203
	Lakes Area Office Gosford Regional Office	4358 0400 4320 4200
Rural Fire Service	Duty Officer / Emergency Lake Macquarie Fire Control Centre	4955 2122 / 0418 684 681 4955 2222
SES	District Emergency Management Officer Lake Macquarie Shire	4937 2912 / 0417 416 590 4921 0610
Police	Lake Macquarie Belmont	4942 9904 4942 9899
Ambulance	Bookings Emergency	131 233 000
Hospital	John Hunter	4921 3000
Council	Lake Macquarie City Council	4921 0333

Communication Resources

Service	Channel	Location / Comments
NPWS - VHF	27 /24	Mangrove / Warrawalong
RFS - PMR (Fire Control Centre)	Main - 58 Other - 22	Lake Macquarie
RFS - GRN (Fire Control Centre)	195	Lake Macquarie
UHF - CB		Good
Mobile Phone Coverage		Good
Satellite Phone	118 7276 1881 578	The region has one satellite phone.

Map Details

Projection	UTM AGD 1966 To convert AGD66 to GDA94 Latitude - Decrease by 5.7 seconds Longitude - Increase by 4.1 seconds Northing - Increase by 190 metres Easting - Increase by 104 metres (GIS: Belmont_air.sid)
Air Photo	1: 25 000 Topography Map (GIS: Wallsend_9232-3-S (GIS: Swanssea.sid, Wallsend.sid)
UBD Map	Map 163 (Newcastle) (GIS: Ubd_west_wallsend.tif, Ubd_swanssea.tif, Ubd_newcastle.tif, Ubd_morrisset.tif)
Contour Interval	10 metres



Assets and Fire Fuels



This map illustrates fire fuels and the location of assets for use in bushfire suppression operations.

Bushfire Suppression Information

2005 / 2006

The information in this section will be updated annually based on fire history and completed fire management works.

Threatened Flora Management Strategies

ID	Species Name	Fire Management Strategies
FL1	<i>Tetratheca juncea</i> Status - Vulnerable	<ul style="list-style-type: none"> Avoid high frequency fires within known habitat. Maintain a fire free interval of >15 years once in 100 years. Avoid trail construction, ground disturbance in known locations.

Threatened Fauna Management Strategies

ID	Species Name	Fire Management Strategies
FA1	<i>Miniopterus australis</i> Little Bentwing-bat Status - Vulnerable	<ul style="list-style-type: none"> No fire around known roost sites (caves / tunnels / tree hollows) (NSW RFS 2003). No fire, smoke or machinery around known nursery / hibernating caves. Avoid frequent fires in heathland habitat.

Tingira Heights Nature Reserve provides suitable habitat for the following species. The following species have been observed in areas adjoining the reserve and it is likely these species could utilise its resources. The reserve's management will incorporate the following fire management strategies.

<i>Petaurus norfolcensis</i> Squirrel Glider Status - Vulnerable	<ul style="list-style-type: none"> Protect hollow bearing trees in locations where this species is known to occur. Avoid fire, machinery around known nests during breeding season (June-November). Utilise mosaic burn in habitat. No slashing, trittering or tree removal.
<i>Pteropus poliocephalus</i> Grey-headed Flying-fox Status - Vulnerable	<ul style="list-style-type: none"> Avoid the use of fire and machinery around known camps (gullies close to water).

Fire Suppression Strategies

Fire Danger	Guidelines
Low - Mod (FFDI: 0-12)	<ul style="list-style-type: none"> Subject to crew safety, undertake indirect, parallel or direct attack along existing control lines with the aim of minimising the area burnt without threatening values. Identify and survey alternate 'backup' containment lines. Subject to crew safety and where possible, implement threatened species and cultural heritage management guidelines. If values are threatened or the fire danger is forecast to be >= High, then the construction of new control lines may be required. 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. <p>Important **Crew safety should always be the first priority**</p>
High or above (FFDI: >12)	<ul style="list-style-type: none"> Subject to crew safety undertake indirect attack along existing control lines, and where necessary, newly constructed control lines to link up existing control lines. Subject to crew safety, secure and deepen control lines along the next predicted downwind side of the fire. Subject to crew safety and where possible, implement threatened species and cultural heritage management guidelines. Identify and survey alternate 'backup' containment lines. <p>Important **Crew safety should always be the first priority** Ensure there is sufficient time to secure control lines before the fire reaches them. If there is not sufficient time to secure control lines, fall back to the next potential control line.</p>

Fire Interval Guidelines, Fuels & Fire Behaviour Characteristics for Vegetation Communities

Vegetation Community	Fire Interval Guidelines	Last Burnt (Year & Total % Area)	Fuels & Fire Behaviour Characteristics
F4- Sydney Sandstone Sheltered Dry Forest	Minimum interval: 7 years Maximum interval: 35 years	2001 (100.00%)	Moderate bushfire behaviour potential.
F5- Permian Macquarie Grassy Forest	Minimum interval: 10 years Maximum interval: 50 years	2001 (72.10%)	High bushfire behaviour potential.

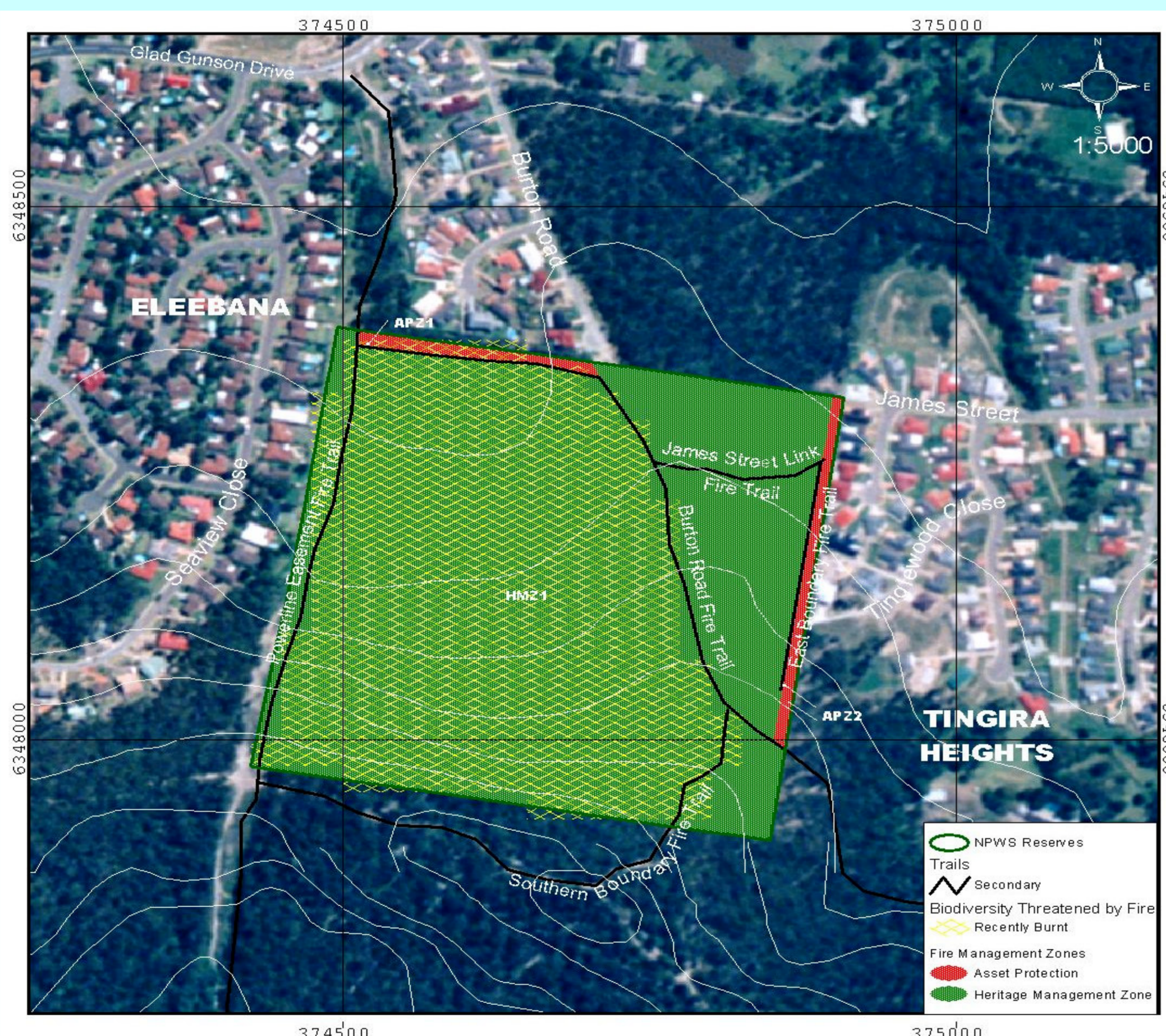
Fire Season Information

The statutory fire season occurs between 1 October and 31 March. This may be extended if weather conditions lead to increased fire danger outside of this period. Prescribed burning in this area is normally undertaken in spring and Autumn.

General Operational Guidelines

Issue / Area	Operational Guidelines
Containment Line Construction	<ul style="list-style-type: none"> Use existing tracks and trails where possible. Avoid steep terrain if possible. Wherever possible locate containment lines to avoid leaving unburnt fuels down slope.
Smoke Management	<ul style="list-style-type: none"> Close roads if smoke or fire fighting operations are likely to cause a traffic hazard. Notify neighbours of potential smoke hazard.
Aerial Ignition	<ul style="list-style-type: none"> May be used where considered appropriate.
Backburning	<ul style="list-style-type: none"> As far as possible, backburning should take into account threatened species and cultural heritage guidelines. On days when the fire danger > High, as far as possible, delay backburning until late afternoon - early evening when the temperature is decreasing and humidity increasing. Backburning may be safely undertaken during the day when the fire danger is < High
Water Bombing	<ul style="list-style-type: none"> Can be used to slow the spread of a fire, unlikely to extinguish a fire without support from ground crews. Ground crews must be warned of and be well clear of aerial bombing operations. Aerial bombing may be used to cool down hot spots, to catch spot fires or to slow the rate of spread of fire to increase the time available to undertake other suppression activities.
Tracks & Trails	<ul style="list-style-type: none"> Primary Fire Trails - are not identified in this plan. Secondary Fire Trails - can be used for control in either fire suppression or mitigation operations, is of a moderate standard and provides for Category 7/9 light fire tankers. Dormant Trails - are not identified in this plan.
Visitor Management	<ul style="list-style-type: none"> Close roads if smoke or fighting operations are likely to cause a traffic hazard. Notify neighbours of potential smoke hazard. Check and evacuate walking trails, known camping and picnic sites within and adjacent to the fire area. Close park to the public when it is considered necessary due to conditions, which create a very high to extreme fire danger, or during fire fighting operations.
Restoration	<ul style="list-style-type: none"> All new fire breaks will be restored as part of the fire suppression operation. Should be addressed in an incident-action plan, which is compiled in accordance with the Fire Management Manual. All new firebreaks will be restored as part of the fire suppression operation.
Earth Moving Equipment	<ul style="list-style-type: none"> Can only be used with consent of NPWS and only if the probability of success is considered high. As far as possible, restrict use to routes and other previously disturbed areas. Subject to operational constraints, minimise the length of break constructed

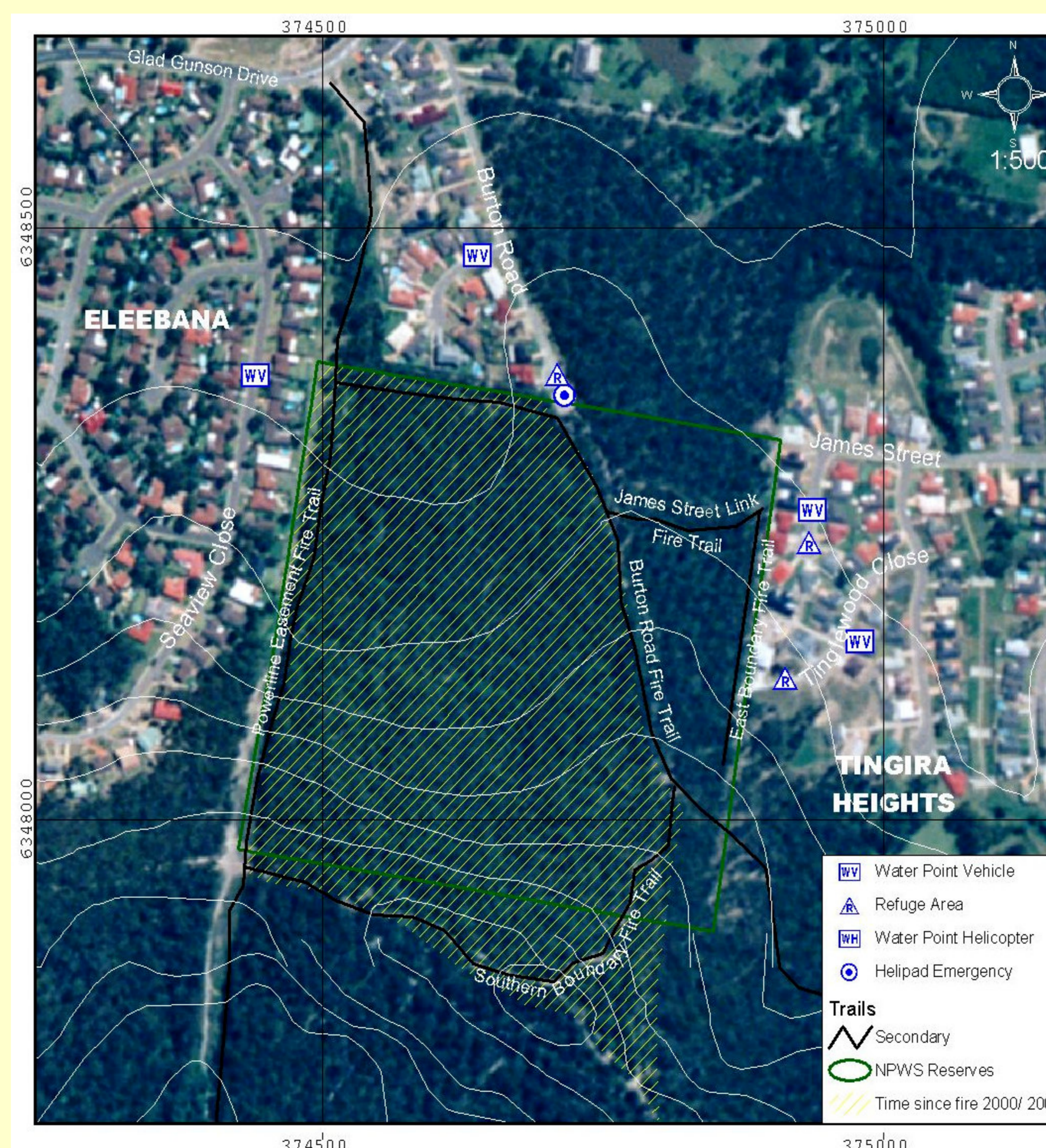
Bushfire Risk Management Strategies



Bushfire Risk Management Strategies

Fire Management Zone	Guidelines
Asset Protection Zone	<p>Objectives</p> <ul style="list-style-type: none"> To protect human life, including permanent residents, visitors and fire fighters from bushfires. To protect identified high-risk assets, which may include residential areas, utilities, camping areas, day use areas, urban interface, cultural heritage sites and other built assets. <p>Strategies</p> <ul style="list-style-type: none"> To initiate, where appropriate community education and community fireguard programs. APZ 1, 2 - Monitor and maintain fuel levels at or below 15 t/ha. Implement fuel reduction program (mechanical) if required.
Heritage Management Zone	<p>Objectives</p> <ul style="list-style-type: none"> To prevent the extinction of all species which are known to occur naturally within NPWS parks and reserves (conserve biodiversity). To protect aboriginal sites, historic heritage sites and other culturally significant features from fire. <p>Strategies</p> <ul style="list-style-type: none"> As far as possible maintain fire regimes within specified intervals. As far as possible implement specified threatened species management guidelines. <p>HMZ 1.</p>

Fire Control Advantages



This map illustrates fire control advantages that may be used during bushfire suppression operations