Jilliby State Conservation Area
(North)
Draft Fire Management Strategy
2006
Map Sheet 1 of 2

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.

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Contact Information

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	Fire Management Officer	4320 4248
	Regional Operations Coordinator	4320 4232
	Central Coast Regional Office	4320 4200
Lakes Team Rural Fire Service (Lake Macquarie/Wyong)	24 Hours	4393 3530
	Business Hours	4393 6222
SES	Emergency	000
	Lake Macquarie	49210610
	Wyong	4351 2244
Police	Emergency	000
	Toronto	4950 3699
	Wyong	4352 4899
Ambulance	Emergency	000
	Bookings	131233
Hospital	Wyong, Pacific Highway, Kanwal	4734 2000
	Cessnock, View Street, Cessnock	4991 0555
Council	Lake Macquarie City Council	4921 0333
	Wyong Shire Council	4350 5555
State Forests	Hunter Regional Office, Maitland	4931 6666

Communications Information

Service	Channel	Location and Comments
NPWS - VHF	24 Duplex 39 Simplex 20 Forestry	• Warrawolong; Good coverage • Forest NSW use Ch 20 VHF
UHF - CB	10 Forestry	• Available in most NSWFB and RFS vehicles • Choose channel on fire-ground with NSWFB and RFS
Mobile Phone - GSM	-	• Variable coverage

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 (NPWS FMM 4.7)	Prescribed burning in this area is normally undertaken in April through to September.

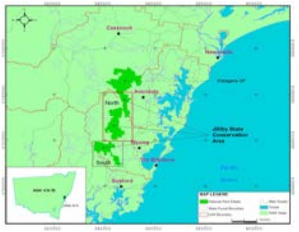
Related Documents

- National Parks and Wildlife Service Fire Management Manual, September 2005.
- Vegetation Mapping of Watagans National Park & Jilliby State Conservation Area Summary Roport, 2006.
- Watagans National Park & Jilliby State Conservation Area Plan Management, 2006.

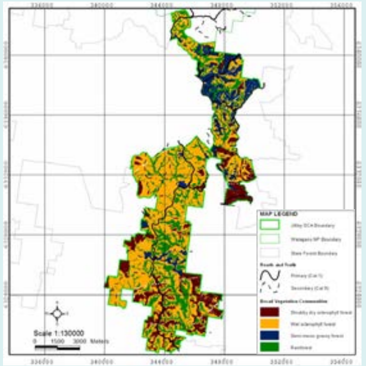
Map Details

Projection	UTM AGD 1966 AMG Zone 56
Air Photo	(GIS: Watagans_air.sid, Coorabong_air.sid, Warrawolong_air.sid, Olney west air.sid, Olney east air.sid, Cedar brush air.sid, Dooralong_air.sid, Kiar_air.sid
1:25K Topographic Map	Morisset 9131-1N, Dooralong 9131-1S, Wyong 9131-2N, 3rd Edition. (LPI). (GIS: Morisset.sid, Murraysrun.sid, Kulnura.sid, Dooralong.sid)
UBD Map	Central Coast, page 16, 17 and 27
LGA	Lake Macquarie, Cessnock, Wyong
Electorate	Lake Macquarie, Cessnock, Wyong

Locality of Area and Local Government Areas



Vegetation



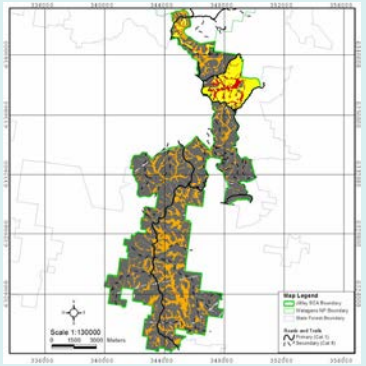
Vegetation Communities and Biodiversity Thresholds

Regime	Vegetation Community	Biodiversity Thresholds
A	Shrubby Dry Sclerophyll Forest	• Avoid successive fires at intervals of < 7 years. • Avoid fire exclusion for a period of > 30 years.
B	Wet Sclerophyll Forest	• Avoid successive fires at intervals of < 25 years. • Avoid successive fires at intervals of > 60 years. • Avoid fire exclusion for a period of > 200 years.
C	Semi-mesic grassy forest	• Avoid successive fires at intervals of < 10 years. • Avoid successive fires at intervals of > 50 years.
D	Rainforest	• Avoid any fire occurrence (a limited recovery ability exists).

Prescribed Burning Schedule

SFAZ 16	- Maintain fuel hazard ≤high - Hazard Reduction Burn from 2008
SFAZ 12	- Maintain fuel hazard ≤high - Hazard Reduction Burn from 2010
SFAZ 18	- Maintain fuel hazard ≤high - Hazard Reduction Burn from 2011

Current Vegetation Status (Fire Thresholds)

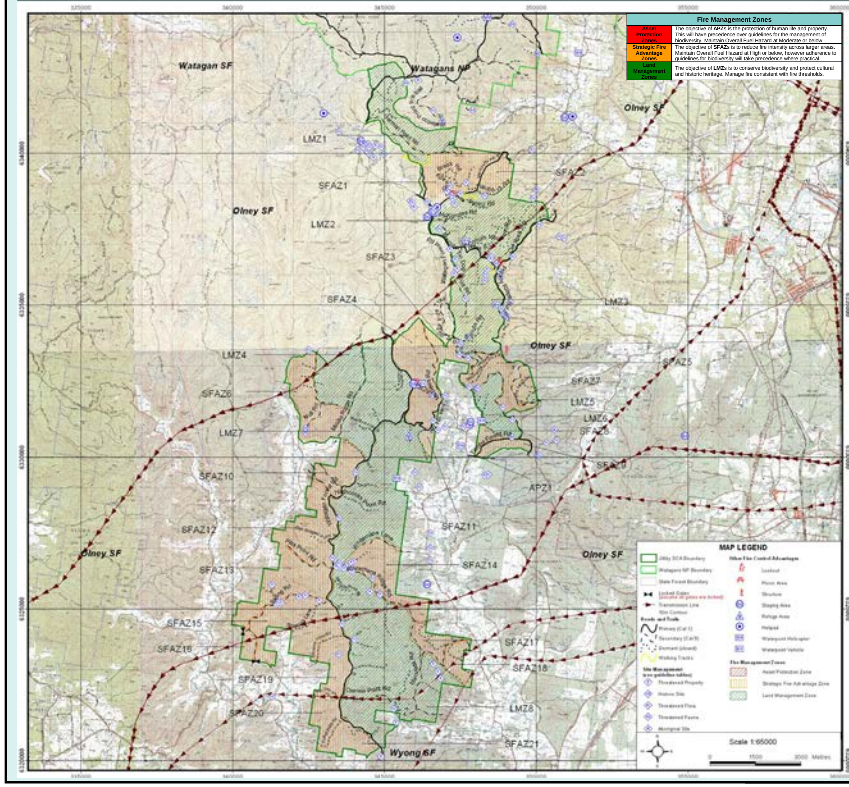


Fire Thresholds

Overburnt	Fire thresholds have been exceeded. *· Protect from fire as far as 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.*	Recently Burnt	Time since fire is less than the optimal interval, but before that it was within threshold. *· Avoid fires if possible.*
Vulnerable	The area will be Overburnt if it burns this year. *· Protect from fire as far as possible.*	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.*	Exceeds Upper Threshold	Fire frequency is below fire thresholds in the area. *· A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.*

N.B. Fire Thresholds are defined for vegetation communities to conserve biodiversity

Bushfire Risk Management Strategies



Fire Management Zones

Asset Protection Zones	The objective of **APZ**s 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 **SFAZ**s 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.
Land Management Zones	The objective of **LMZ**s is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.

Operational Guidelines

Refer to Strategy for Fire Management 2003 and Fire Management Manual 2005.
Brief all personnel involved in suppression operations on the following issues:

General	Guidelines
Aerial Water Bombing (NPWS FMM 4.4 / NSW Fire Agencies Aviation SOPs O2 / NPWS Guidelines for Effective Aircraft Management)	• 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 (NPWS FMM 4.2.20 & 4.4 / NSW Fire Agencies Aviation SOPs O2-4 / NPWS Guidelines for Effective Aircraft Management)	• 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 (NPWS FMM 4.8)	• 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 (NPWS FMM 4.2)	• 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 (NPWS FMM 2.2 & 3.9)	• 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 (NPWS FMM 4.2.20 & 4.3)	• 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.
Fire Advantage Recording	• All fire advantages used during wildfire suppression operations must be mapped and where relevant added to the database.
Fire Suppression Chemicals (NPWS FMM 4.2.20 & 4.9)	• 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/ 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 (NPWS FMM 5.1)	• Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Smoke Management (NPWS FMM 3.4)	• 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 (NPWS FMM 3.6 & 4.13)	• The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.

Resource	Guidelines
Label	**Threatened Property**
T	• Where possible property owners with assets at risk from wildfire event should be kept informed regarding the progress of the fire; and asked for an assessment of their current level of asset protection preparedness.

Label		Aboriginal Cultural Heritage Site Management (NPWS FMM 4.11)
A	A1	• As far as possible protect site from fire. • Do not cut down trees. • Use of foams, wetting agents and retardant is acceptable.
	A2	• Avoid all ground disturbances including the use of earthmoving machinery, handline construction and driving over sites. • Avoid water bombing which may cause ground disturbance. • Site may be burnt by bushfire, backburn or prescribed burn without damage.
	A3	• Avoid ground disturbance including handtools, dozers. • Avoid water bombing which may cause ground disturbance. • Site may be burnt by wildfire, backburn, prescribed burn.

Label		Historic Heritage Management (NPWS FMM 4.10)
		**RCHMS: Regional Cultural Heritage Management Strategy.* *• In areas where the asset may be in or close to a water body, wetland or swamp, no foam or retardant is to be used.* *• Earth-moving machinery is to be used around, rather than over/through assets.*
HS	HS1	• Heritage site unlikely to be effected by fire. Low RCHMS* priority
	HS2	• High RCHMS* priority. • Avoid fire, including wildfire, backburning & HR.
	HS3	• Low RCHMS* priority. • Avoid fire, including wildfire, backburning and HR
	HS4	• Low RCHMS* priority. • Low impact except where post-fire erosion causes artefact movement or changes to site.

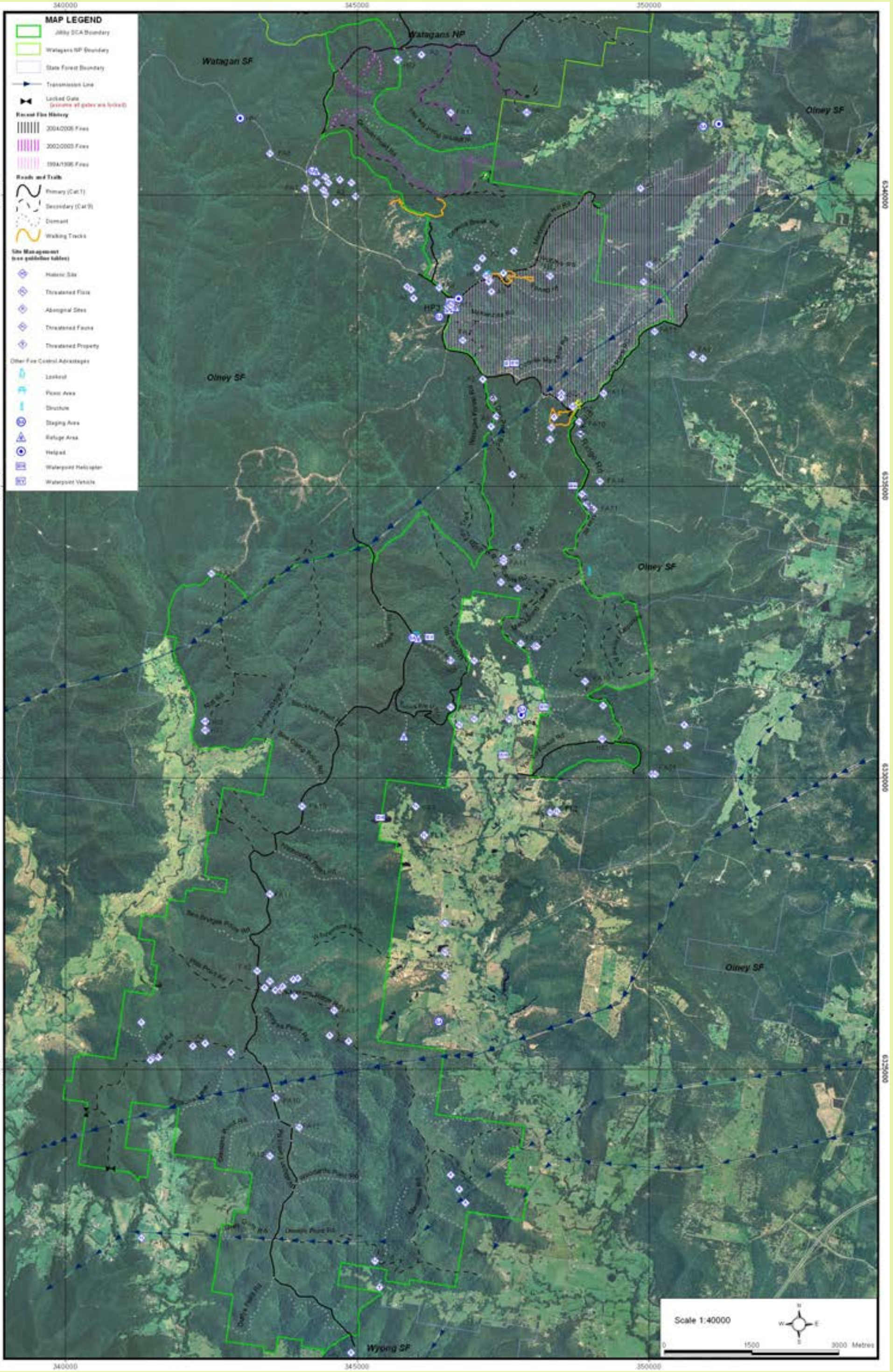
Resource		Guidelines
Label		**Threatened Fauna Management** (NPWS FMM 4.12 & 5.2)
FA	FA1	• Avoid burning within known / potential habitat during the breeding season. • Avoid fire management activities within known or potential habitat. • Implement low intensity, mosaic burns within known habitat. • Minimise frequency of fires within known/potential habitat. • Regulate hazard reduction burning in known habitat.
	FA2	• Fire likely to impact upon adults. • Avoid high intensity fires within potential habitat, to prevent damage to nesting sites (tree hollows). • Avoid implementing large area prescribed burns within habitat (*Allocasuarina spp* present) to avoid loss of sole food source – low intensity mosaic burn. • Protect known nest sites by a 50-200 metre buffer strip. • Maintain diversity of age structure over wide areas
	FA3	• Fire unlikely to affect this species.
	FA4	• As far as possible, avoid fire around large tree and log hollows in known locations. • Utilise mosaic burn to maintain suitable habitat and food resources. • Wet down large log hollows prior to burn. • Avoid fire, smoke and machinery during breeding season (April - July) in known locations.
	FA5	• Fire unlikely to affect this species (wet habitat), however, fire may reduce breeding success and availability of nesting sites. • Avoid high intensity frequent fires within close proximity to known or potential habitat to minimise sedimentation (degradation) of wetland areas. • Avoid fire management activities (any disturbance) within nesting areas, especially during the breeding season.
	FA6	• Avoid fire regimes that reduce or encroach on rainforest boundaries in known habitat. • Avoid burning 100m either side of creeklines to avoid sedimentation into creeks and ponds. • Implement low intensity mosaic burns to ensure refuge areas are available. • Avoid high intensity, frequent fires adjacent to known habitat – may cause sedimentation and potentially simplify the structure and species composition of the surrounding habitat.
	FA7	• Protect hollow bearing tree (live and dead ones) and large mature trees which will provide future hollows. • Avoid too frequent burning resulting in reduction of understorey vegetation and fallen timber.
	FA8	• Individuals likely to escape low to moderate intensity fire. • Avoid high intensity fires over large areas. • Avoid burning during the breeding season. • During mop-up operations avoid felling potential den trees • Maintain a variety of age class in understorey vegetation to satisfy habitat requirements. Mosaic burn. • Low intensity burns should be used in areas in or adjacent to species populations with high site fidelity. • On going monitoring of population demography in relation to fire regimes within the park.
	FA9	• Frequent fire near nursery cave may impact upon breeding success. • Forages for small, flying insects beneath the tree canopy, therefore, potential for inappropriate fire regimes to reduce prey diversity. • Avoid frequent fires within heathland habitat. • Low to moderate intensity fires within woodland communities may promote invertebrate density, however, too frequent fire swill decrease the invertebrate density significantly. • Avoid fire around known nesting sites, especially during the mating (July) and birth (December) and weaning (February) periods.
	FA10	• Fire unlikely to impact on adults. • Potential for inappropriate fire regimes to reduce habitat and prey diversity. • Potential for moderate to high intensity fire to impact on reproduction during breeding season. • Maintain a mosaic of age classes within habitat. • Physically protect (reduce fuels from base of tree) known nesting trees from burning activities. • Encourage low to moderate intensity fuel reduction burns.
	FA11	• Protect hollow bearing trees in locations where these species are known to occur. • Avoid use of machinery around known nests (tree hollows) during breeding season (August - September). • Avoid high intensity fires to maintain large mature eucalypts in the canopy.
	FA12	• Species likely to be unaffected by low to moderate intensity fires. • High intensity crown fires have potential to kill individuals and directly reduce habitat. • Prescribed burns within known or potential habitat should be low intensity and restricted to <10ha. • Protect know populations from fire, especially during the breeding season.
	FA13	• Buffer potential or known habitat (100m) from all fire management activities. • Fire may remove critical habitat (ground and canopy cover) therefore, mosaic burn to ensure refuge areas are available. • Avoid high frequency fires – may lead to a build up of sediments in small ponds used for breeding. May also simplify the structure and alter species composition of habitat. • Avoid fire during the breeding season.
	FA14	• Avoid burning in known habitat during breeding season (July – November). • Avoid hazard reduction burn during winter and spring in areas of eucalyptus currently in flower.
Label		**Threatened Flora Management** (NPWS FMM 4.12)
FL	FL1	• Avoid too frequent fires from impacting on populations. • Fire regimes for vegetation community containing this species is 8-15 years. Longer fire intervals will encourage seeding of this species. • Avoid use of heavy machinery in areas of known populations.
	FL2	• Apply fire regimes which maintain floristic and structural diversity. • Low frequency, low intensity burns. • Avoid the use of earth machinery in known locations. • Avoid the use of retardants and foams in locations where this species occurs (usually as riparian vegetation).

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.

Helipad Location

Label		Latitude	Longitude
H	HP 1	• 33° 03.218' South	• 151° 19.170' East
	HP 2	• 33° 03.341' South	• 151° 24.437' East
	HP 3	• 33° 04.926' South	• 151° 21.452' East
	HP 4	• 33° 08.775' South	• 151° 22.023' East

Bushfire Suppression