

Mid North Coast Region
Lake Innes Nature Reserve and State Conservation Area and Innes Ruins Historic Site
Fire Management Strategy (Type 2)
2006
Sheet 1 of 1

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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Department of Environment and Conservation (NSW) This strategy is a relevant Plan under Section 38 (4) and Section 44 (3) of Rural Fire Act 1997

Endorsed by: _____ Date: / /
 Director Northern, Parks & Wildlife Division

Locality

Produced by MNC GIS
PROJECTION
AMG Zone 56
DATUM: AGD66
 Notes scales are true when this map is reproduced on A0 paper

Vegetation

1:70,000

Rainforest	Arid & semi-arid shrubland
Swamp sclerophyll forest	Grassland
Casuarina swamp forest	Freshwater wetland
Wet sclerophyll forest	Saline wetland
Semi-mesic grassy forest	Water
Shrubby dry sclerophyll forest	Cleared
Grassy dry sclerophyll forest	Unknown
Sclerophyll grassy woodland	
Semi-arid woodland	
Heathland	

Risk Management Information

1:70,000

See inset above

1:3,000

Asset Protection Zones (APZs)
 The objective of APZs 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 (SFAZs)
 The objective of SFAZs is to reduce the severity across larger areas. Maintain Overall Fuel Hazard at High or below, however adherence to guidelines for biodiversity will take precedence where practical.

Heritage Management Zones (HMZs)
 The objective of HMZs is to conserve biodiversity and protect cultural heritage. Manage fire consistent with fire thresholds.

Status of Fire Thresholds

1:70,000

Fire Thresholds
 Fire thresholds have been exceeded.
 The area will be Overburnt if it burns this year.
 Protect from fire as far as possible.

Vulnerable
 The area is within the threshold for vegetation in this area.
 A burn is neither required nor should one necessarily be avoided.
 Time since fire is less than the optimum interval, but before that it was within threshold. Avoid fires if possible.

Recently Burnt
 Fire history is within the threshold for vegetation in this area.
 A burn is neither required nor should one necessarily be avoided.

Within Threshold
 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.

Almost Underburnt
 Fire frequency is below fire thresholds in the area.
 A prescribed burn may be advantageous. Consider allowing unplanned fires to burn.

Underburnt
 Insufficient data to determine fire threshold.

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

Contact Information Lake Innes NR

Agency	Position / Location	Phone
NPWS	Regional Duty Officer	016 301 161
	Area Manager Hastings	02 6588 5503
	Fire Management Officer	0417 265 117
		02 6586 8329
		0417497 031
Regional Operations Coordinator	Hastings Area Office	02 6586 8317
		02 6588 5555
	Regional Office	02 6588 5500 (fax)
Rural Fire Service	Operations Officer Hastings	02 6586 4565
	Hastings Fire Control Centre 24 hr Number	02 6585 1999
NSW Fire Brigade	Emergency	000
	Port Macquarie	02 6583 3000
	PMQ Zone Office	02 6583 8588
SES	Emergency	000
	Port Macquarie Unit	02 6583 2322
Police	Emergency	000
	Port Macquarie	02 6583 0199
Ambulance	Emergency	000
	All Bookings	13 1233
Hospital	Port Macquarie Base Hospital	02 6581 2000
	Taree	02 6552 2788
Dept. of Lands	Wauchope	02 6585 3744
	Hastings Council	02 6581 8111
State Forests	After Hours Number	6585 2225
	Barinya Aboriginal Land Council	02 6585 3882
Council	Hastings Council	02 6563 1862
	Regional Aboriginal Land Council	

Communications Information

Service	Channel	Location and Comments
NPWS - VHF	9	Channel 1 as alternate
NPWS - VHF (Fireground Comms)	41	Channel 33 as alternate
RFS - VHF (Portable Repeater)	13	Held at Hastings Depot in Port Macquarie.
RFS - UHF	89	Channel 89 (Jolly Nose), not Linked Channel 55 (Combyne) or 63 (Cairncross) as alternates
RFS - GRN		Not Available
SF - VHF	32	NPWS Equivalent Channel 91
CB - UHF	12	Alternate 25
Aircraft - VHF		N/A
Mobile Phone - CDMA		Yes
Mobile Phone - GSM		Yes

Operational Guidelines
 Refer to Strategy for Fire Management 2003 and Fire Management Manual 2004.
 Brief all personnel involved in suppression operations on the following issues:

Resource	Guidelines
Aboriginal Cultural Heritage Site Management (NPWS FMM 4.11)	<ul style="list-style-type: none"> AH1 - As far as possible protect site from fire. Do not cut down trees. AH2 - As far as possible protect site from fire. Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites. Avoid water bombing which may cause ground disturbance. AH3 - Avoid all ground disturbance. Avoid water bombing. Site may be burnt by bushfire, backburn or prescribed burn without damage.
Historic Heritage Management (NPWS FMM 4.10)	<ul style="list-style-type: none"> HH1 - As far as possible protect site from fire. Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites. Avoid water bombing, which may damage site. HH2 - As far as possible protect site from fire. Avoid all ground disturbance including the use of earthmoving machinery, handline construction and driving over sites. HH3 - Clear 1m radius around steps, habitat and feed trees, as well as on ground hollows adjacent to control lines, before commencement of HR or Backburn. HH4 - Avoid high intensity fire, where possible do not allow flame height to exceed one third of tree height. HH5 - Post fire fox baiting program suggested. HH6 - Wildlife rescue program to be implemented when IC declares it safe to undertake on ground rescue operations.
Threatened Fauna Management (NPWS FMM 4.12 & 5.2)	<ul style="list-style-type: none"> Clear 1m radius around dead and fibrous barked trees adjacent to containment lines, where possible do not allow flame height to exceed one third of tree height. Where possible do not allow flame height to exceed one third of tree height. Wetting agents, foams and retardants are not to be used within 50 metres of water way or water bodies.
Threatened Flora Management (NPWS FMM 4.12)	<ul style="list-style-type: none"> Where possible property owners with assets at risk from a 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.
Threatened Property	<ul style="list-style-type: none"> Where possible property owners with assets at risk from a 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.
General	<ul style="list-style-type: none"> The use of bombing aircraft should support containment operations by aggressively attacking hotspots and spotovers. 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 may be used during back burning or fuel reduction operations where practicable, but only with the prior consent of a senior NPWS officer. The use of incendiaries will require the prior consent of a senior NPWS officer.
Aerial Water Bombing (NPWS FMM 4.4 / NSW Fire Agencies Aviation SOPs O2.2 / NPWS Guidelines for Effective Aircraft Management)	<ul style="list-style-type: none"> 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 a part of the backburn ignition. Avoid ignition of backburns at the bottom of slopes where a long and intense up slope burn is likely. 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.
Aerial Ignition (NPWS FMM 4.2.20 & 4.4 / NSW Fire Agencies Aviation SOPs O2.4 / NPWS Guidelines for Effective Aircraft Management)	<ul style="list-style-type: none"> No new control lines will be constructed within the reserve. 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 personnel involved in containment line clearance should be briefed on both natural and cultural heritage sites in the location. 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 cleared 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, particularly in the Lake Innes Peninsular HS. Earthmoving equipment should be washed down, where practicable, prior to it entering NPWS estate.
Backburning (NPWS FMM 4.8)	<ul style="list-style-type: none"> All fire advantages used during wildfire suppression operations must be mapped and where relevant added to the database. Wetting and foaming agents (surfactants) are permitted for use in wildfire suppression. The use of fire retardant is not permitted without the prior consent of a senior NPWS officer. 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 products name recorded. The Threatened Species Operational Guidelines are to be observed. Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Command & Control (NPWS FMM 4.2)	<ul style="list-style-type: none"> The potential impacts of smoke and possible mitigation tactics must be considered when planning fire 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. The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
Containment Lines (NPWS FMM 2.2 & 3.9)	<ul style="list-style-type: none"> Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation. 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 products name recorded. The Threatened Species Operational Guidelines are to be observed. Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Earthmoving Equipment (NPWS FMM 4.2.20 & 4.3)	<ul style="list-style-type: none"> The potential impacts of smoke and possible mitigation tactics must be considered when planning fire 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. The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
Fire Advantage Recording	<ul style="list-style-type: none"> Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation. 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 products name recorded. The Threatened Species Operational Guidelines are to be observed. Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Fire Suppression Chemicals (NPWS FMM 4.2.20 & 4.9)	<ul style="list-style-type: none"> The potential impacts of smoke and possible mitigation tactics must be considered when planning fire 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. The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
Rehabilitation (NPWS FMM 5.1)	<ul style="list-style-type: none"> Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation. 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 products name recorded. The Threatened Species Operational Guidelines are to be observed. Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.
Smoke Management (NPWS FMM 3.4)	<ul style="list-style-type: none"> The potential impacts of smoke and possible mitigation tactics must be considered when planning fire 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. The reserve may be closed to the public during periods of extreme fire danger or during wildfire suppression operations.
Visitor Management (NPWS FMM 3.6 & 4.13)	<ul style="list-style-type: none"> Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation. 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 products name recorded. The Threatened Species Operational Guidelines are to be observed. Where practicable, containment lines should be stabilised and rehabilitated as part of the wildfire suppression operation.

Strategy Information

Wildfires

- Have been known to start as early as late August, but usually the potential for a large fire event is greatest between October and December. This period may extend into January in more severe years.
- General season is Autumn to late Winter. Burning is possible in early Spring but not desirable on a regular basis from an ecological point of view.

Prescribed Burning (NPWS Fire Management Manual 4.7)

- General season is Autumn to late Winter. Burning is possible in early Spring but not desirable on a regular basis from an ecological point of view.

Suppression Strategies

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

Bushfire Suppression

1:25,000

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 Macquarie Nature Reserve
 Sea Acres Nature Reserve
 PORT MACQUARIE 25k mapsheet 94352S
 Hastings LGA
 Innes Ruins Historic Site
 Lake Innes State Conservation Area
 Lake Innes Nature Reserve
 GRANTS HEAD 25k mapsheet 94341N
 Queens Lake State Conservation Area
 Queens Lake Nature Reserve

Legend

- Contour Interval 10 metres
- Roads and Trails: Pacific Highway, Primary (Cat 1), Secondary (Cat 2), Proposed Trail, Walking Track
- NPWS Estate
- State Forest Plantation
- Bulk Up Urban Area
- Fires 2005-2006
- Fires 2004-2005
- Fires 2001-2004
- Aboriginal Sites
- Historic Site
- Control Centre
- Endangered Fauna
- Threatened Property
- Escape Route
- Water Point Helicopter
- Water Point - H & V
- Water Point - H & V
- Sign
- Gate - NPWS
- Gate - non NPWS
- Loading Ramp - Old
- Turn Around Site
- Vantage Point
- Bee Sites
- Assume all gates locked