



BIAMANGA NATIONAL PARK
BOARD OF MANAGEMENT



BIAMANGA National Park & BERMAQUEE Nature Reserve
Fire Management Strategy
2011
Sheet 1 of 3

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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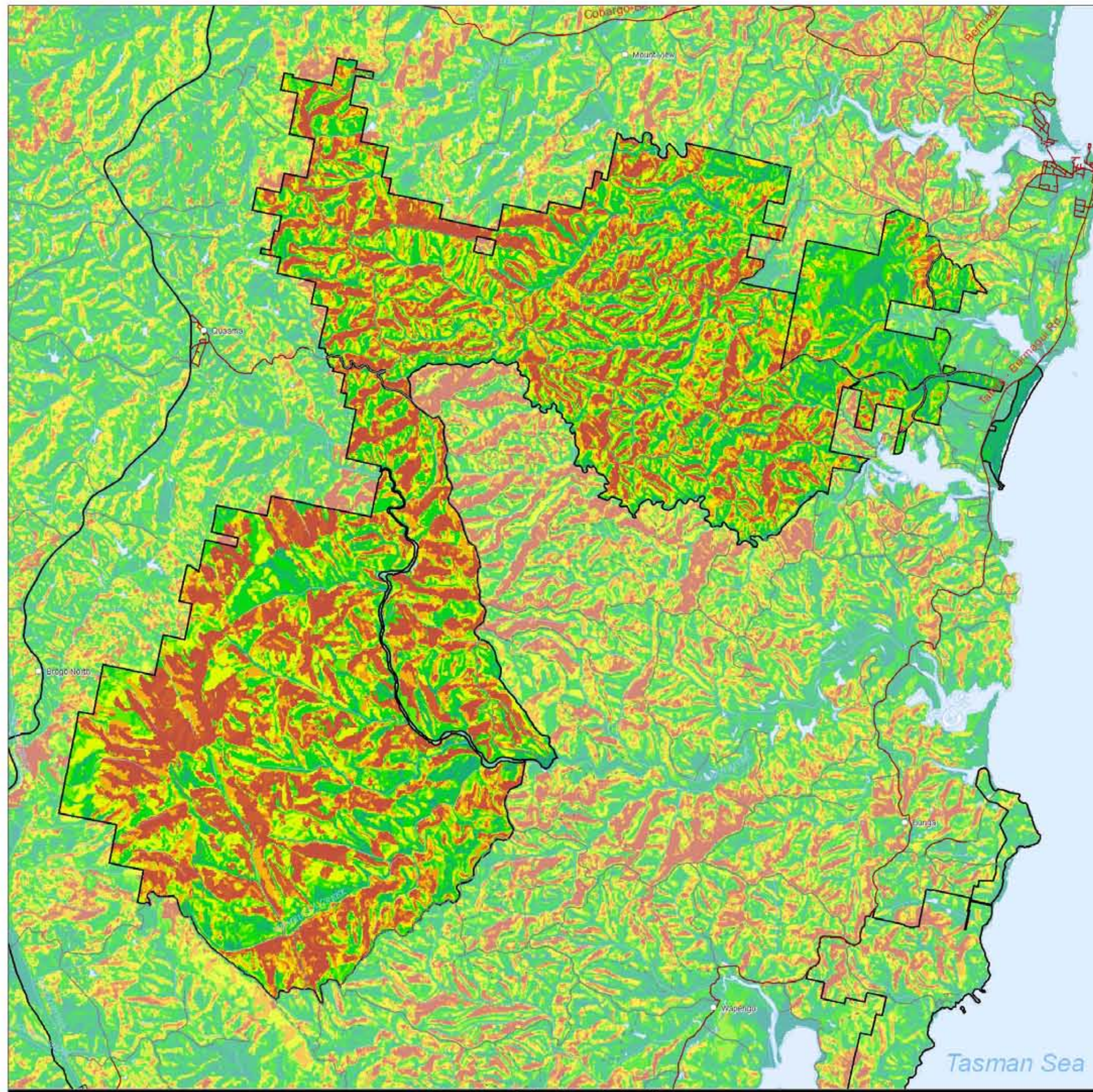
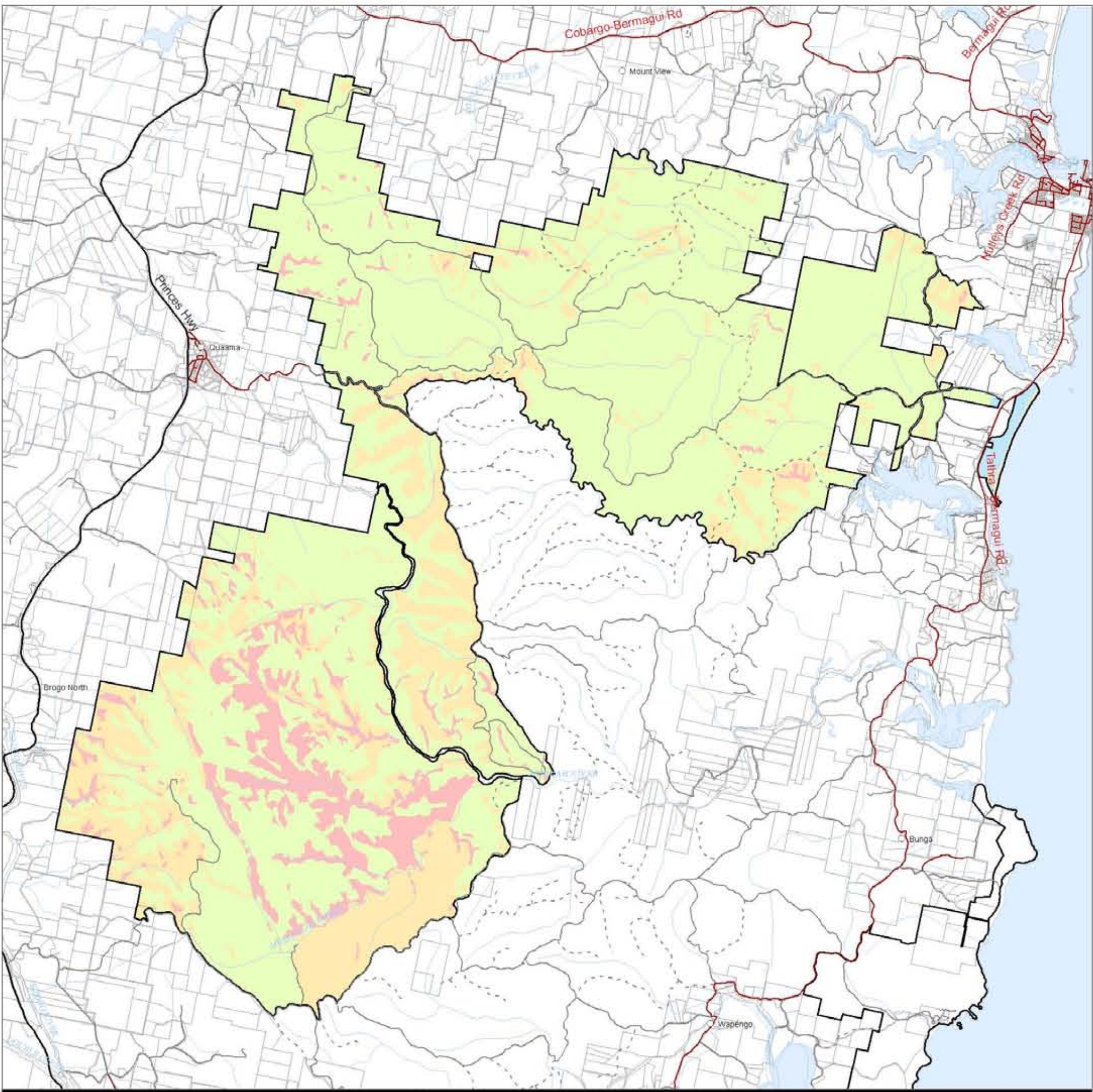
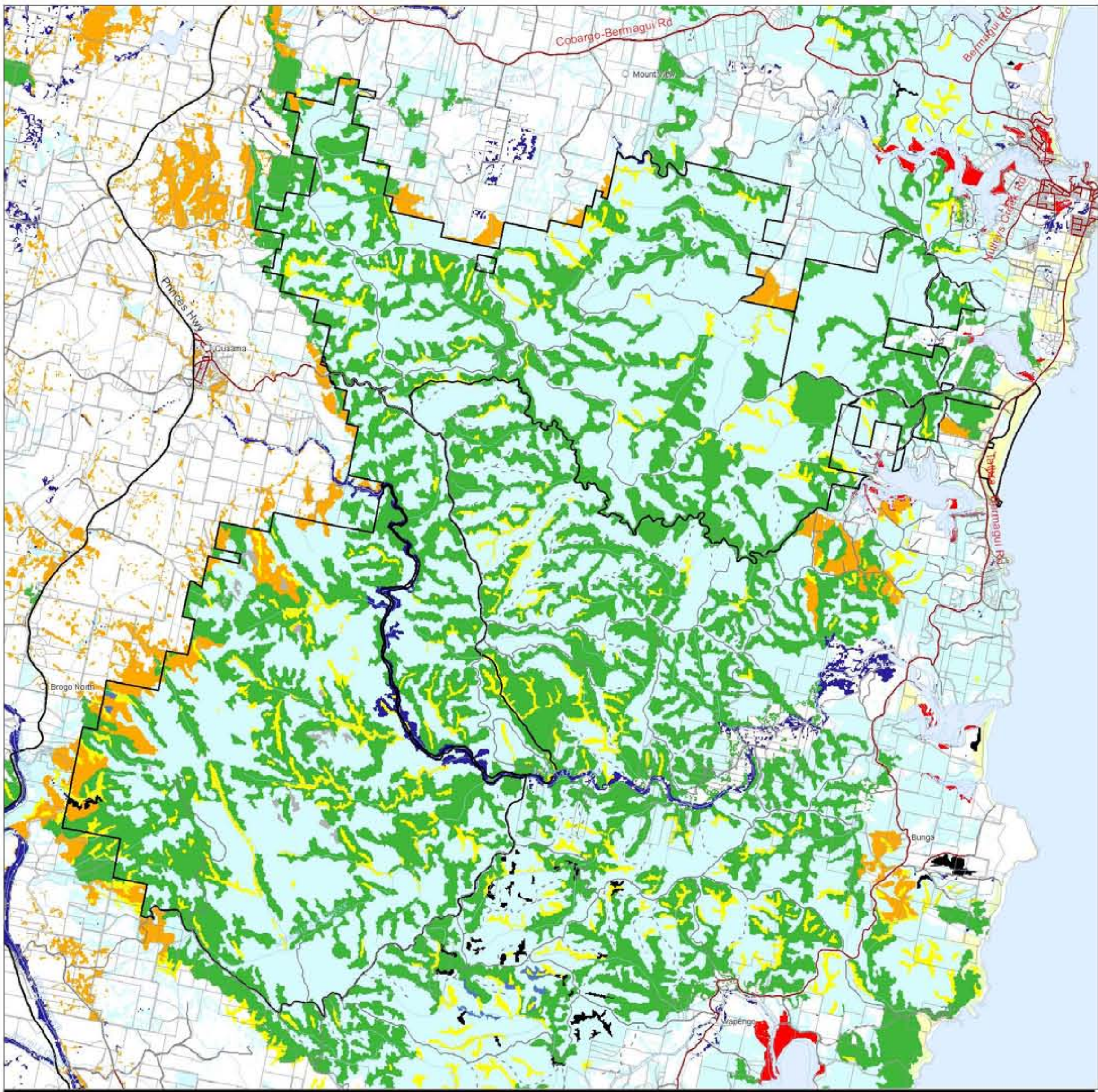
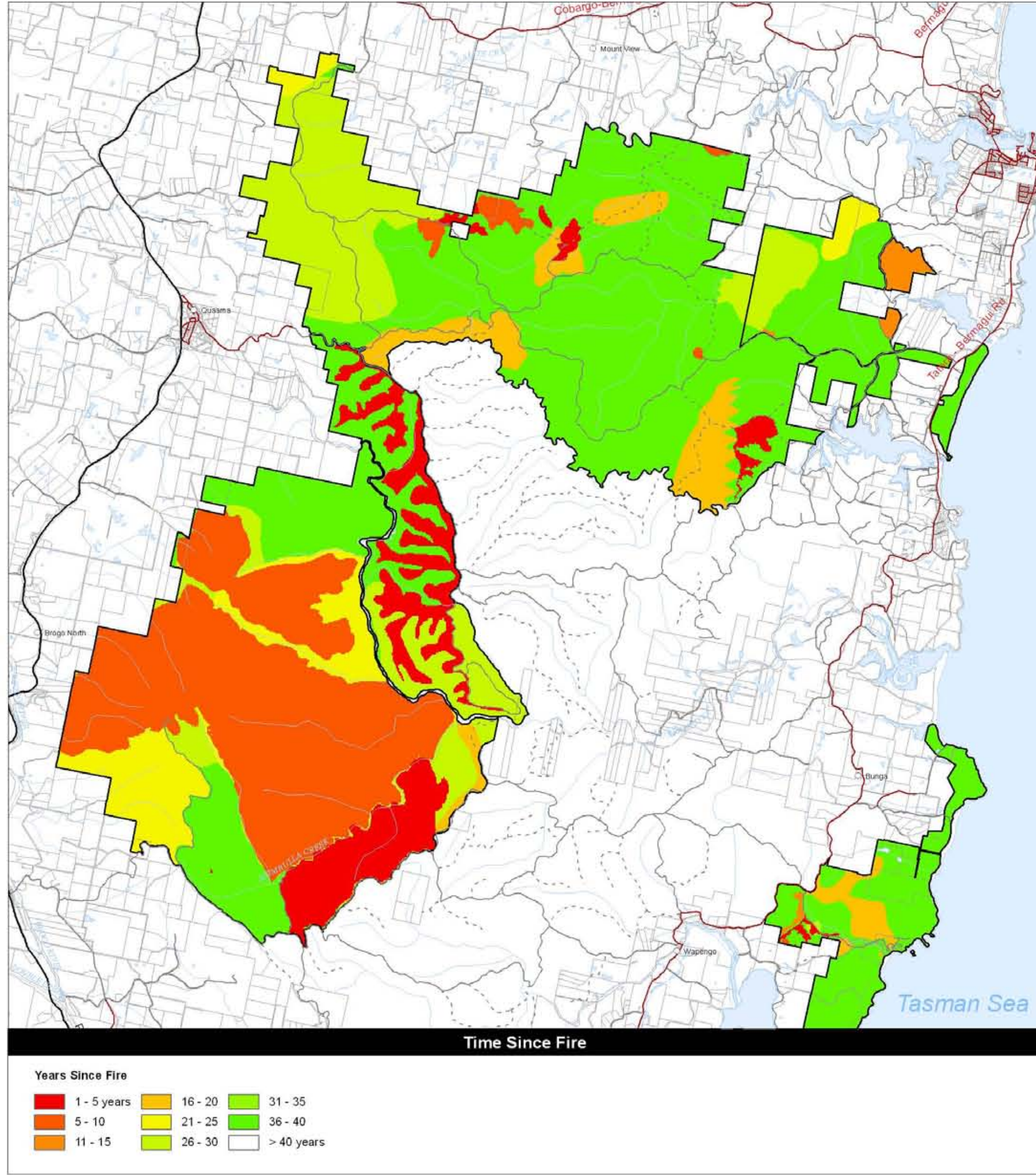
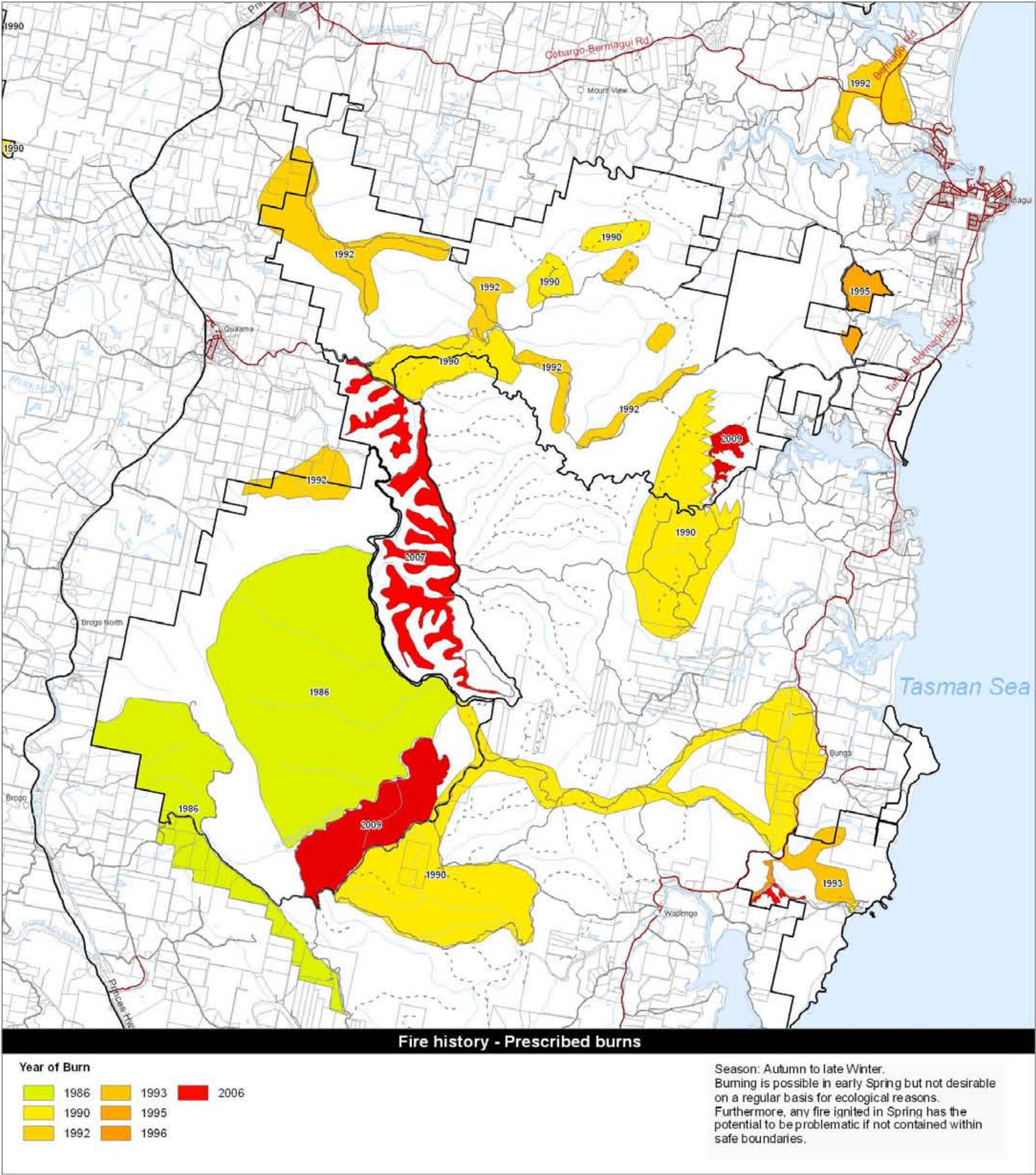
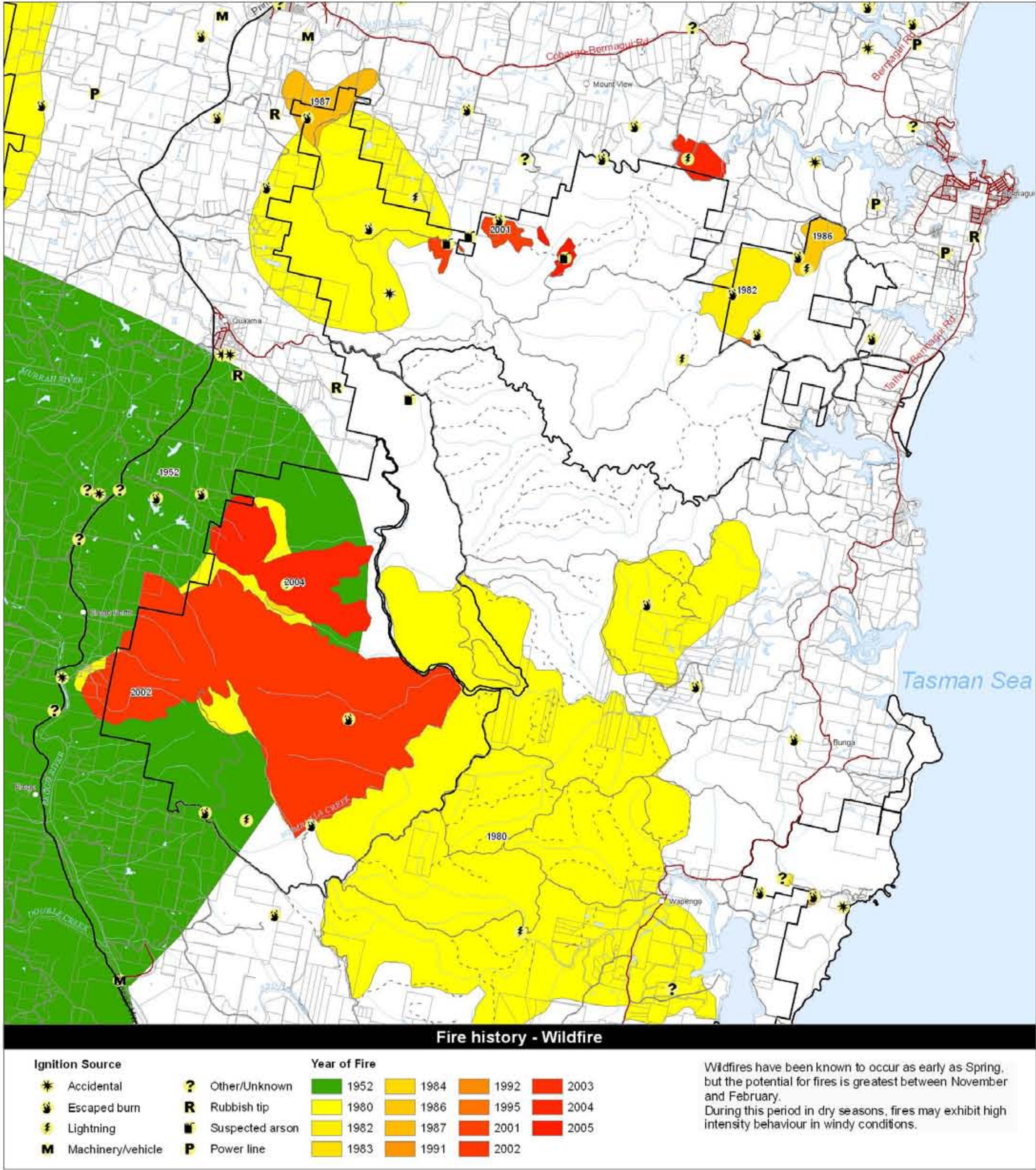
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The NSW National Parks & Wildlife Service is part of the Office of Environment and Heritage, Department of Premier and Cabinet.

Published by the Office of Environment and Heritage (NSW), May 2011.

Contact: NPWS Far South Coast, PO Box 656 Merimbula NSW 2548

ISBN: 978 1 74293 246 0 OEH: 2011/0332 Date approved: 4 March 2011





BIAMANGA NATIONAL PARK

BOARD OF MANAGEMENT

BIAMANGA National Park & BERMAGUEE Nature Reserve

Fire Operations Map

2011

Sheet 3 of 3

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QEW: 2011/0322

Date approved: 4 March 2011

Operational Guidelines

Refer to Strategy for Fire Management, 2011 and NPWS Fire Management Manual, 2010/11

Start all personnel involved in suppression operations on the following issues:

General

Guidelines

Aerial Water Bombing

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Aerial Ignition

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Backburning

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Command & Control

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Containment Lines

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Earthmoving Equipment

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Fire Advantage

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Fire Suppression

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Rehabilitation

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Smoke Management

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Visit or Management

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

NPWS Fire Management Manual 2010/11

Threatened Fauna

Fire Group

Common Name

Scientific Name

ISC Schedule

Vulnerable Period

Brush-tailed Phascogale

Phascogale tapoatahi

V

Jan-Oct

Grey-headed Flying-fox

Pteropus poliocephalus

V

Sept-Feb

Powerful Owl

Ninox strenua

V

Apr-Jul

Greater Broad-winged Bat

Scaevola n. n. n.

V

Dec-Feb

Kestrel

Falco tinnunculus

V

Nov-Mar

Yellow-bellied Gull

Larus californicus

V

Oct-Jan

Gang-gang Cockatoo

Calyptorhynchus latirostris

V

Mar-Aug

Glossy Black-Cockatoo

Alcedo n. n. n.

V

Mar-Aug

Eastern Freetail-bat

Myotis n. n. n.

V

Mar-Aug

Masked Owl

Tyto n. n. n.

V

Mar-Aug

Sooty Owl

Tyto n. n. n.

V

Mar-Aug

Square-tailed Kite

Lophotaxis n. n. n.

V

Mar-Aug

Little Lorikeet

Chalcophaps n. n. n.

V

Mar-Aug

Olive Whistler

Pachycephala n. n. n.

V

Mar-Aug

Spotted-tailed Quail

Turnix n. n. n.

V

Mar-Aug

Golden-headed Woodpecker

Dryocopus n. n. n.

V

Mar-Aug

White-tailed Woodpecker

Dryocopus n. n. n.

V

Mar-Aug

Long-nosed Potoroo

Potorous n. n. n.

V

Mar-Aug

Giant Burrowing Frog

Rhinophrynus n. n. n.

V

Mar-Aug

Sooty Oystercatcher

Haematopus n. n. n.

V

Mar-Aug

Pied Oystercatcher

Haematopus n. n. n.

V

Mar-Aug

Threatened Fauna Management Guidelines

Fire Group

Veg Groups

Threatened Fauna Management Guidelines

Rainforest, Tall Wet Bushy Forest, Tall Dry Eucalypt Forest, Riparian Scrub, Forest & Low Dry Eucalypt Forest

Some species require a home range between 500 - 1500 ha in size, where disturbance is limited to <20% of any of the vegetation group. Frequent fires may be up to 100m. Frequent fires may reduce prey availability and high intensity fires impact on nesting sites, both are undesirable. Vegetation corridors need to be protected in order to prevent declines in Yellow-bellied gull and kestrel populations.

Where possible:

Avoid high intensity fires that consume tree canopies and fallen logs.

Protect large and hollow bearing trees.

Avoid inter-fire intervals <10 yrs.

Rainforest, Vine scrub, Tall Dry Eucalypt Forest

Species in this group feed and/or nest at or near ground level. Felling hollow bearing trees during 'topping up' activities potentially decreases hollow availability. Frequent burning potentially reduces available habitat and changes vegetation structure. These species are likely to be disadvantaged by frequent fuel reduction fire because of the simplification of forest structure.

Where possible:

Avoid inter-fire intervals <10 yrs.

Avoid high intensity fires that consume fallen logs.

Avoid use of earth moving machinery.

Avoid loss of density and floristic diversity of understorey vegetation.

Prescribed burns should be of minimal intensity and should not be conducted during breeding seasons or other vulnerable periods.

During prescribed burns ensure patches of shrubs, standing and fallen timber are left in tact and protect hollow bearing trees.

Mosaic burning patterns are desirable.

Estuarine, Beach & Coastal Scrub

These species preferred habitats are rocky headlands, shelves and beaches. They are also seen on sandy beaches, grassy areas and estuarine mudflats. They lay eggs in a shallow depression above the high-tide mark. These species are unlikely to be affected by fire.

Where possible:

Avoid use of earthmoving machinery.

Note: The vegetation groups should be crosschecked against the vegetation community guidelines in the Biodiversity Threshold section of this plan, as fauna species requirements may differ to floristic requirements.

Aboriginal Cultural Heritage & Operational Guidelines

Refer to Biamanga NP and Bermagoe NP Fire Management Strategy for 2010

Supply copy of guidelines to & brief all personnel involved in suppression or prescribed burn operations on the following issues:

The following guidelines are to be followed at all times during Incident Management Operations in order to preserve, protect and maintain areas and items of Aboriginal cultural significance.

General

Aboriginal Place

Access (gender)

Biamanga Board of Management

Contacts

Earthmoving Equipment

Planning

Rehabilitation

Rocks

Scarred Trees

Unrecorded Sites Map

General

Aboriginal Place

Access (gender)

Biamanga Board of Management

Contacts

Earthmoving Equipment

Planning

Rehabilitation

Rocks

Scarred Trees

Unrecorded Sites Map

Gender Access Table

Area of Aboriginal Place

Mumbulla Creek Falls picnic area, walking tracks & falls lookout

Mumbulla Creek Falls picnic area - fenced area joining car parks

Mumbulla Creek - downstream from picnic area

Mumbulla Creek - upstream from falls

Mumbulla Trg Road - from Trg to Chalken Road intersection

Mumbulla Mountain

Male

Female

✓

✓

✓

✓

✓

✓

P:\Work\NPWS\Projects\Fire\BMS\Biamanga, Bermagoe\Biam, Berm - Operational Cultural Guidelines

*Local CORPORATE GOVERNANCE Board Joint BOM Contact Information Biamanga, Gungah Board Members

Communications Information

Service

Channel

Location and Comments

VHF Communications (NPWS Two Way Radios)

24.27

Reception is usually good for these channels. Some areas of poor reception may be experienced in lower elevations of the reserve.

UHF-RAR (RFS Two Way Radios)

70.78

Reception is usually good for both channels

Mobile Phone

3G

Variable - good from higher locations

Contact Information

Agency

Position / Location

Phone

NSW National Parks & Wildlife Service

Narooma Office (0830-1630 Mon-Fri)

(02) 4476 2888

Dept. of Environment, Climate Change & Water

Coastal Branch After Hours Call Answering Service

1800 232 170

NSW Rural Fire Service

Bega Fire Control

(02) 6494 9400

NSW Fire Brigade

Emergency

000

Forests NSW

Eden

(02) 6496 1500

SES

Emergency

132 500

Bega Headquarters

Unit Controller - John Dawson

(02) 6492 4123

Police

Bega

(02) 6492 9999

Narooma

Emergency

(02) 4476 2044

Ambulance

Bokings

000

Bookings

131 233

Hospital

Bega

(02) 6492 9111

Pambula

(02) 6495 6000

Council

Bega Valley Shire Council

(02) 6499 2222

Threatened Flora

Common Name

Scientific Name

Schedule

Chiefs Hat Correa

Correa baserianii

Vulnerable

Threatened Flora Management Guidelines

This species is recorded in riparian areas of tall eucalypt forests in the park; there is limited understanding of the species' fire ecology. Mature individuals may be killed if subjected to fire. There is some carry over of viable seed from year to year. The life cycle of the species could be significantly disrupted by: mechanical disturbance, hydrological changes at individual sites, invasion of weeds, or unfavourable fire regimes. Thresholds for vegetation groups should be used only as a guide.

Where possible:

Avoid inter-fire intervals <10 years.

Avoid spring/summer fires.

Protect areas of habitat from fire.

Biodiversity thresholds should be managed at maximum fire intervals.

Avoid control line construction.

Mosaic burns are more suitable in protecting species habitat.

Historic Heritage Management

Historic sites recorded within the park and reserve include a house site and two timber 'camps' camps.

All personnel involved in the suppression operations are to be briefed on site locations and the required management strategies for site protection.

If new sites are located consult with a senior NPWS officer.

The historic sites recorded here are not priority sites under the Regional Cultural Heritage Management Strategy.

Site unlikely to be affected by fire.

Avoid use of earth moving machinery.

Threatened Property

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.

Beeskeepers with bees on site need to be notified of a confirmed ignition; if the bee sites are in the predicted path of the fire, on, or adjacent to the fireground.

Contact Narooma Office for contact details of Beeskeepers.

For safety, bee keepers wanting to retrieve bees are to be accompanied by a Cat 9 and crew.

Legend

Assets

Fire control advantage

Elevation contours

Brush-tailed Phascogale

Base Camp

10 metre

Base Burning Frog

Fire Tower

100 metre

Pied Oystercatcher

Helipad

High point

Threatened Flora

Helipad

Spot height

Aboriginal Sites (AHIMS)

Refuge Area

Intermittent

Apiary site

Staging Area

Perennial

Powerline

Threatened Property

Beach

Buildup area

Vantage Point

Rock

Aboriginal place

Water Point H & V

Access standard

BFCC fire trail class

Water Point Helicopter

Highway / Major Road

Essential

Water Point Vehicle

Sealed Road

Important

Gate PWG

Unsealed Road

Dormant

Gate non PWG

4WD track

Fire trail capacity

Caution

Management Track

Cat 1

Helipad

Private Property Trail

Cat 7

Loading Ramp

Closed Road

Cat 9

RoutePoint

Tenure

Travel time from Narooma

Landing ground

NPWS Estate

Travel time from Tanja

State Forest

Crown land

Cadastre

NSW GOVERNMENT

Office of Environment & Heritage

Aboriginal Cultural Heritage & Operational Guidelines

Refer to Biamanga NP and Bermagui NR Fire Management Strategy for 2010

Supply copy of guidelines* to & brief all personnel involved in suppression or prescribed burn operations on the following issues:

The following guidelines are to be followed at all times during Incident Management Operations in order to preserve, protect and maintain areas and items of Aboriginal cultural significance.

General	Guidelines
Aboriginal Place	<ul style="list-style-type: none"> The area bounded by purple on the attached map is Biamanga Aboriginal Place within the Biamanga NP & Mumbulla SF.
Access (gender)	<ul style="list-style-type: none"> To show respect, gender access (Male or Female) protocols may apply to certain areas within the Aboriginal Place. At all times where possible the Gender Access Table (below) is to be adhered to for crew composition in identified areas of the Aboriginal Place.
Biamanga Board of Management	<ul style="list-style-type: none"> The lands gazetted as the National Park are freehold land vested with the Bega and Merrimans LALC and are leased to the NSW Government and managed jointly with NPWS through a Board of Management. The Biamanga National Park Board of Management with a majority of Aboriginal Owners has full care, control and management of the park and works together with the DECCW – Parks and Wildlife Group who undertakes the day to day management. In the event of a wildfire, the Incident Controller (IC) should make contact with the Chairperson of the Biamanga Board of Management or their delegated knowledge holder and local Aboriginal Heritage & Conservation Officer (AHCO) based in the Far South Coast Region.
Contacts	<ul style="list-style-type: none"> If the Chairperson or their delegated knowledge holder of the Board of Management or AHCO cannot be contacted, call the Manager of the Southern Country, Culture & Heritage Division for guidance on inclusion of appropriate staff in the Incident Management Team.
Earthmoving Equipment	<ul style="list-style-type: none"> No earthmoving equipment is to be used in the Aboriginal Place without the consultation and consent of the Chairperson of the Biamanga Board of Management or their delegated knowledge holder. Where possible, restrict control line construction to existing trails and routes.
Planning	<ul style="list-style-type: none"> Specific site protection strategies are to be included in Incident Action Plans. All prescribed burns that form part of this FMS have been endorsed by the Board of Management.
Rehabilitation	<ul style="list-style-type: none"> All planned rehabilitation works must be approved by the Chairperson of the Biamanga National Park Board of Management or a senior NPWS officer in charge of the emergency, prior to the commencement of works.
Rocks	<ul style="list-style-type: none"> Stone arrangements occur in the Aboriginal Place. No rocks of any size are to be moved for any purpose. RAFT crews are to be made aware and consider landing location when undertaking helicopter insertion onto rocky platforms.
Scarred Trees	<ul style="list-style-type: none"> Known (unrecorded) scarred trees occur at and near Mumbulla Creek Falls. At all times where possible the Gender Access Table (below) is to be adhered to for the operations to protect trees during prescribed burns and wildfire operations. RAFT crews constructing control lines (rake-hoe) and helpads are to inspect all trees closely for scars or carved symbols. If scarred or carved trees are found they should be protected (rake-hoe around) and chainsaws are not to be used. Senior NPWS officer in charge of the emergency and the Chairperson of the Biamanga Board of Management are to be notified of the scarred or carved tree location.
Unrecorded Sites Map	<ul style="list-style-type: none"> A confidential site map (kept in the Narooma Office safe) may be referred to by the IC during wildfire emergency operations in the absence of information from the Chairperson of the Biamanga Board of Management or their delegated knowledge holder.



GENDER ACCESS TABLE

Area of Aboriginal Place	Gender Access	
	Male	Female
Mumbulla Creek Falls picnic area, walking tracks & falls lookout	✓	✓
Mumbulla Creek Falls picnic area – forested area joining car parks	✗	✓
Mumbulla Creek – downstream from picnic area	✗	✓
Mumbulla Creek – upstream from falls	✓	✗
Mumbulla Trig Road – from Trig to Clarkes Road intersection	✓	✗
Mumbulla Mountain	✓	✗

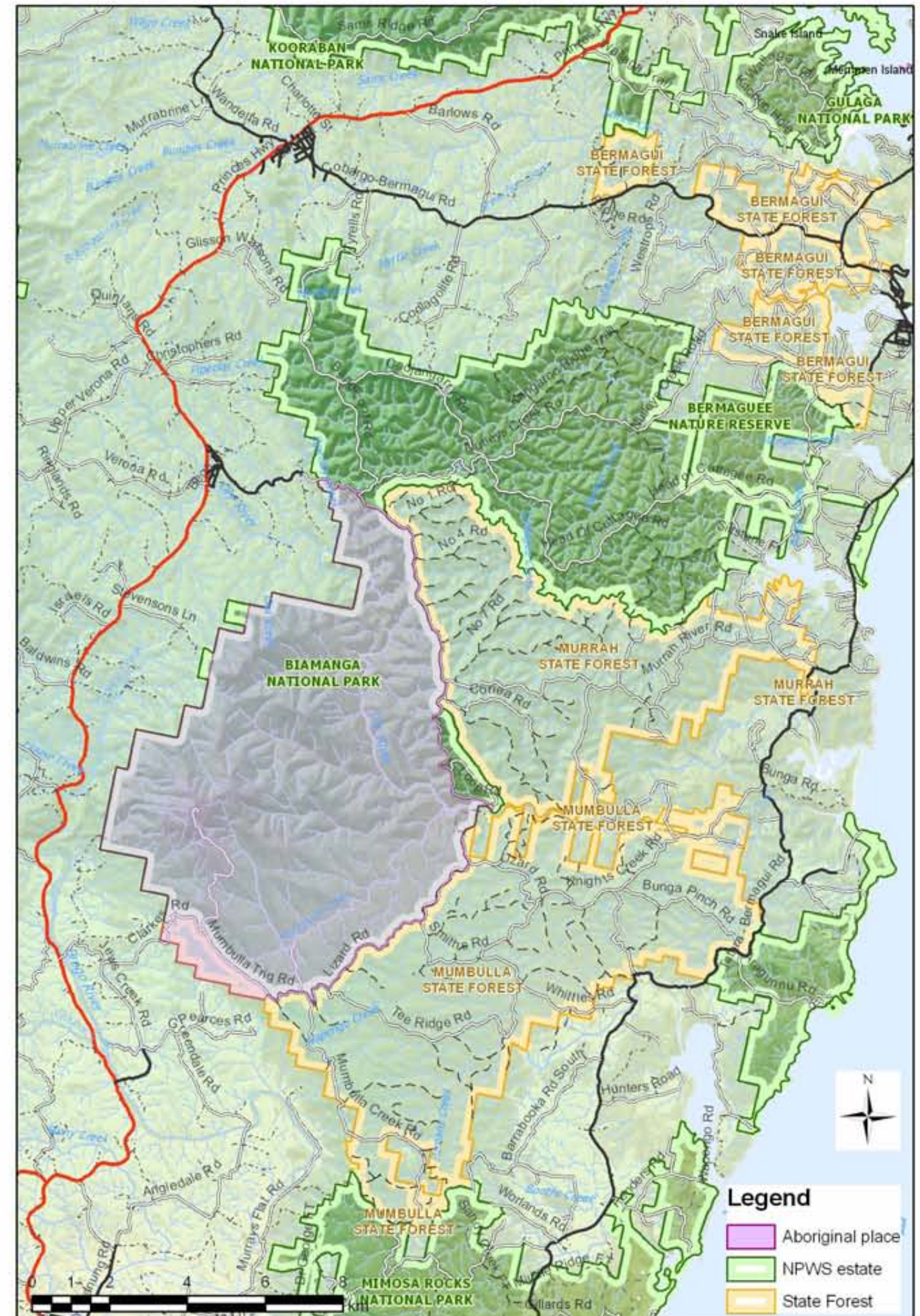
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Office of
Environment
& Heritage



BIAMANGA NATIONAL PARK
BOARD OF MANAGEMENT



BIAMANGA National Park & BERMAGUEE Nature Reserve
Fire Management Strategy
Zoning and Works map
2011
Sheet 2 of 3

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The NSW National Parks & Wildlife Service is part of the Office of Environment and Heritage, Department of Premier and Cabinet. Published by the Office of Environment and Heritage (NEHW), May 2011
Contact: NEHW Fire Risk Unit, PO Box 600 Werriami NSW 2546
Phone: 02 6331 7233 Fax: 02 6331 7234

Environment & Heritage
2011-2015
2011-2015

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Published by the Office of Environment and Heritage (NSW), May 2011
Contact: NPWS Far South Coast, PO Box 100, Merimbula NSW 2540

NSW 978 1 7239 246 6 06W-7041333 Date approved: 4 March 2011

ISBN: 978 1 74293 246 0 OEH: 2011/0332 Date approved: 4 March 2011

Fire Management Zones

Asset Protection Zones	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	The objective of SFAZs 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 LNZs is to conserve biodiversity and protect cultural and historic heritage. Manage fire consistent with fire thresholds.
-----------------------	---

Strategic Trails

Trails will be maintained to the BFOC Fire Vehicle category standards as detailed below.

Trail name	Fire vehicle standard	
	Cat 1	Cat 9
Backwater Access Trail		✓
Back River Road		✓
Bandooft Road		✓
Bermagui Management Trail	✓	✓
Cadjungary Road		✓
Cuttagee Creek Trail	✓	✓
Head of Cuttagee Road	✓	✓
The Honeymoon Fire Trail		✓
Honeymoon Ridge Fire Trail		✓
Kangaroo Ridge Trail		✓
Kangaroo Road		✓
Lizard Road		✓
Loop Road		✓
Mumbulla Creek Falls Road	✓	✓
Mumbulla Trip Road - from Clarkes Rd intersection to Mumbulla Creek Rd	✓	✓
Mumbulla Trip Road - from Trip to Clarkes Road intersection.	✓	✓
Murrumbidgee River Road	✓	✓
Myrtle Creek Fire Trail		✓
Nutleys Creek Road	✓	✓
Nutleys Link Road		✓
Pigs Crossing Road		✓
Powerline Access Trail		✓
Sitstone Fire Trail		✓
Westrops Road		✓




















Blamanga & Bermaquee

Land Management Zones	11,362 Ha
<p>Current status:</p> <ul style="list-style-type: none"> • <1% of zone above maximum biodiversity threshold • 35% of zone within biodiversity thresholds • 23% of zone below minimum biodiversity threshold or recovering from too frequent fire in the past. • 41% of zone has insufficient fire history to determine whether it is within thresholds or above maximum biodiversity threshold 	

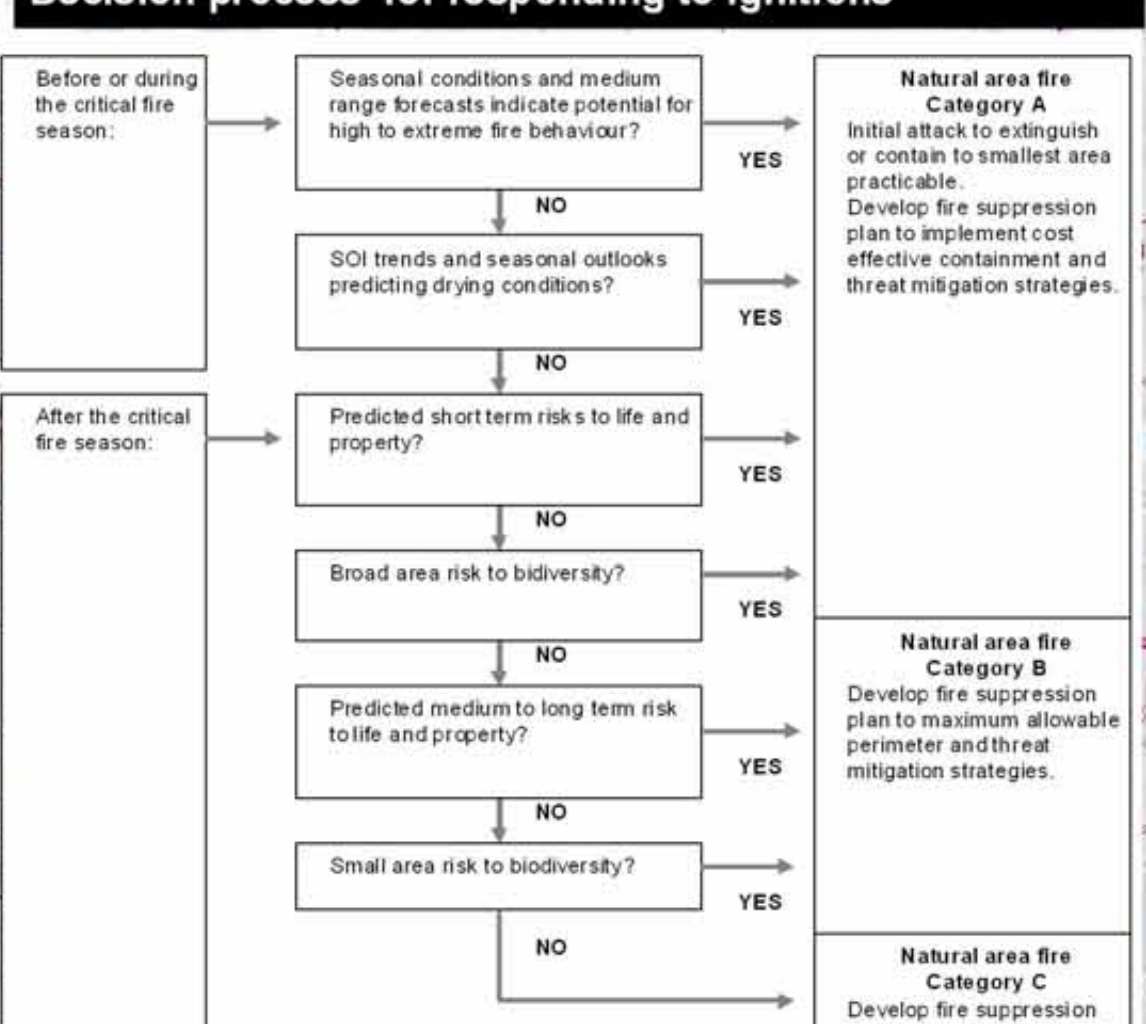
Proposed management:

- NPWS Fire Management Manual (2010/11, Section 2.1.5) suggests that at a landscape scale atleast 50% of vegetation formations within NPWS managed parks and reserves should be maintained between minimum and maximum biodiversity thresholds. The current status indicates that there is no requirement to deliberately introduce fire into Biangama National Park or Bermagui Nature Reserve. However:
- Fire may be deliberately applied to parts of this zone to achieve traditional fire management objectives.
- Fire may be deliberately applied to parts of this zone to achieve specific biodiversity conservation objectives.
- The response to unplanned fires will be guided by the decision process detailed at the foot of this sheet.

Legend

 Preferred koala habitat	Fire trail capacity
Fire Management Zone (NPWS estate)	 Cat. 1
 Asset Protection Zone	 Cat. 7
 Strategic Fire Advantage Zone	 Cat. 9
 Land Management Zone	Access standard
 High bushfire behaviour potential area	 4WD track
Complimentary off-park zoning	 Closed Road
 Strategic Fire Advantage Zone	 Highway / Major Road
 Asset Protection Zone	 Management Track
 Built area	 Private Property Trail
BFCC fire trail class	 Sealed Road
 Essential	 Unsealed Road

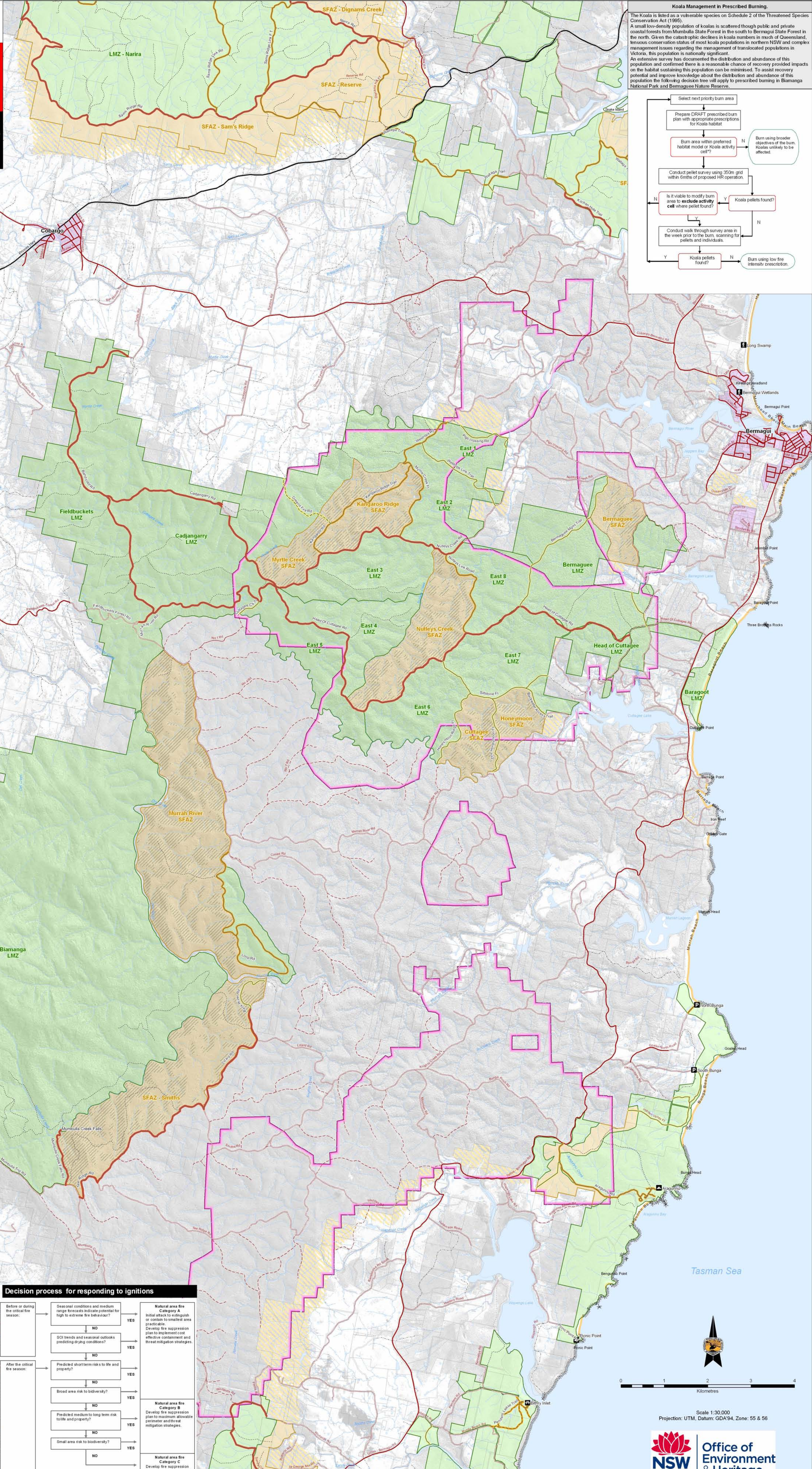
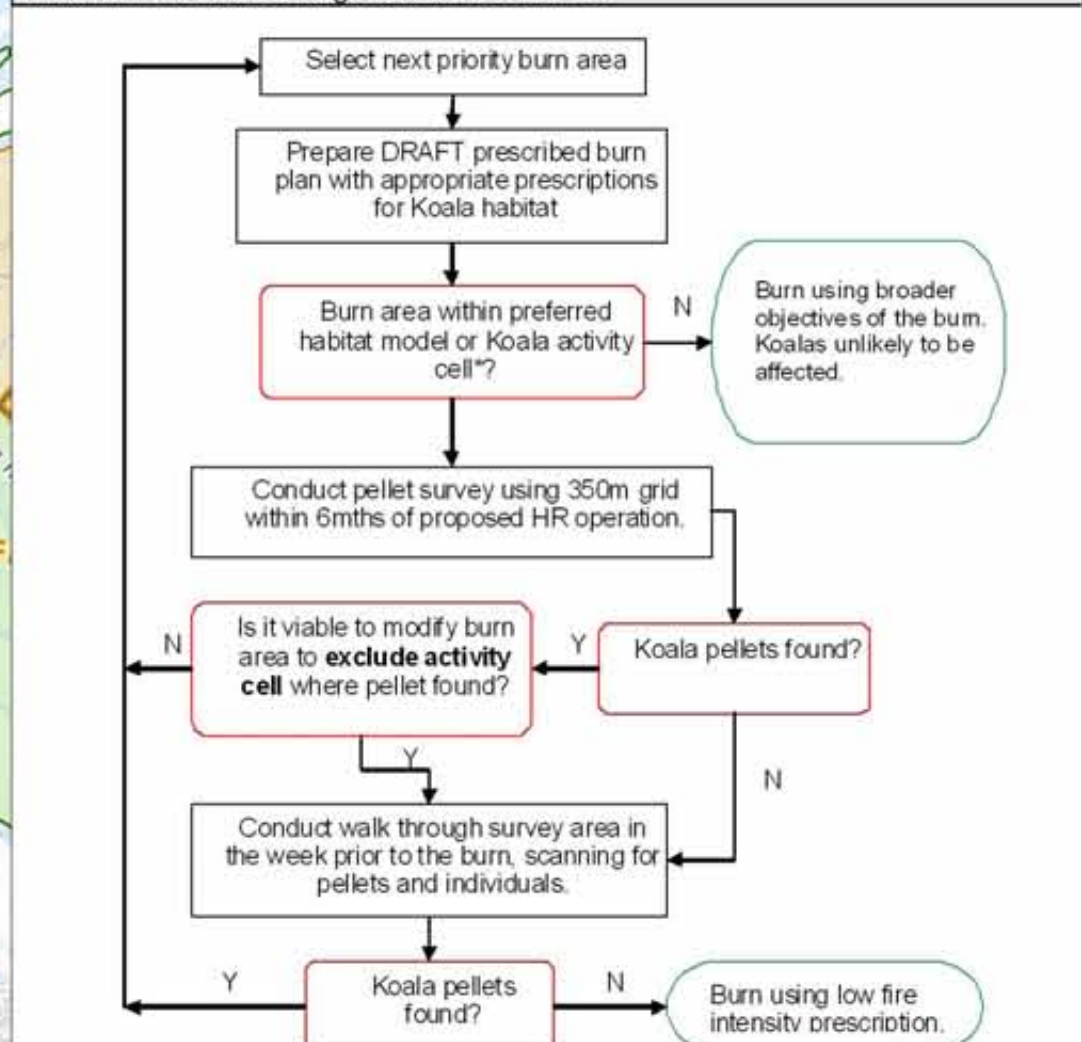
Decision process for responding to ignitions



Koala Management in Prescribed Burning.

The Koala is listed as a vulnerable species on Schedule 2 of the Threatened Species Conservation Act (1995).
A small low-density population of koalas is scattered through public and private land in the north of the Monbulla State Forest in the north to Berrigum State Forest in the north. Given the catastrophic declines in koala numbers in much of Queensland, numerous conservation status of most koala populations in northern NSW and complex land ownership issues, the conservation of the translocated populations in Victoria, this population is nationally significant.

An extensive survey has documented the distribution and abundance of this population. The survey has confirmed that the population is not dependent on any one habitat sustaining this population can be minimised. To assist recovery potential and improve knowledge about the distribution and abundance of this population, the following guidelines are recommended and apply to prescribed burning in Berrigum National Park and Berrigum Nature Reserve.



Scale 1:30,000
Projection: UTM, Datum: GDA'94, Zone: 55 & 56