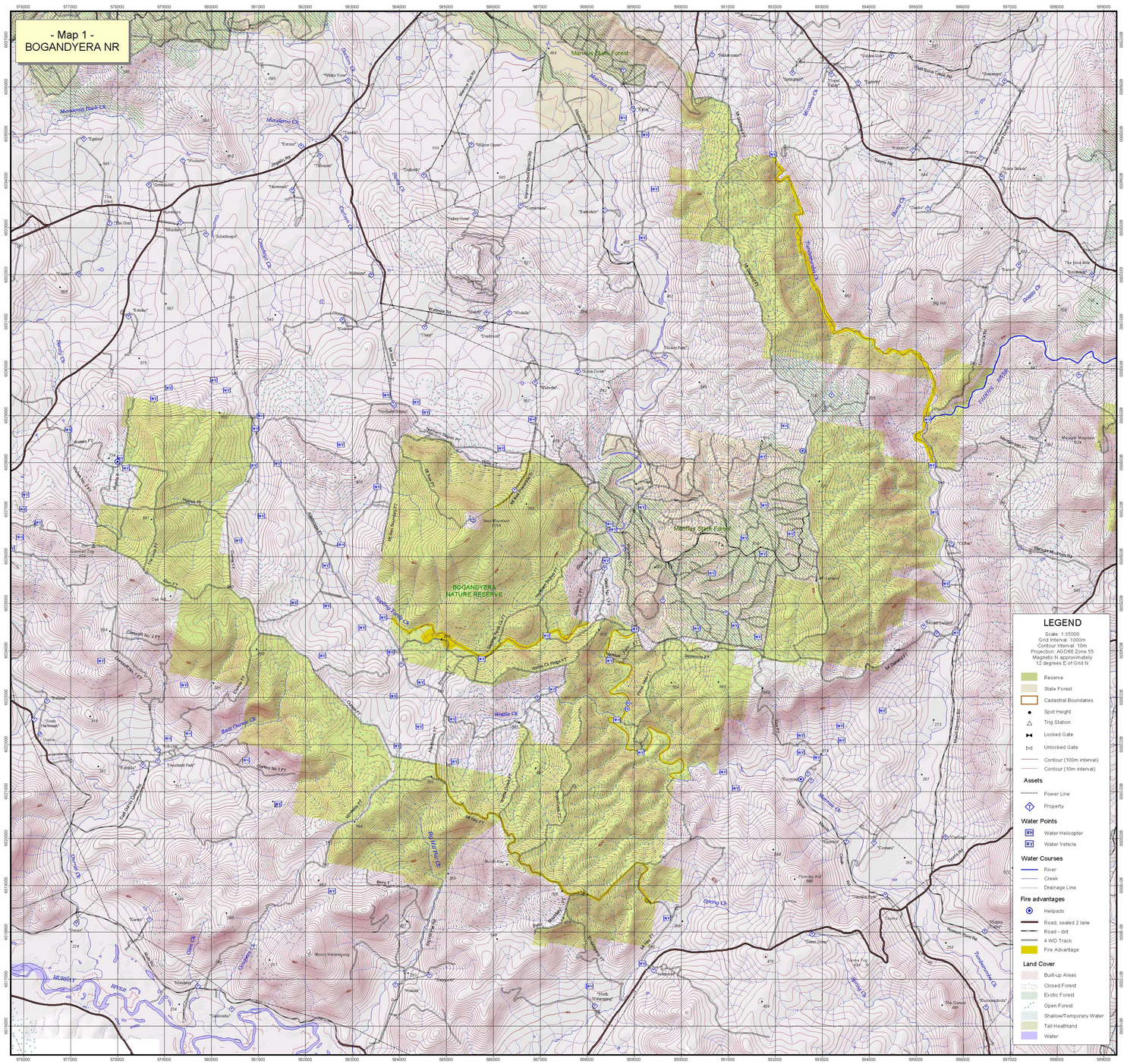
- Map 1 -
BOGANDYERA NR



LEGEND

Scale: 1:35000
Grid Interval: 1000m
Contour Interval: 10m
Projection: AGD66 Zone 55
Magnetic N approximately 12 degrees E of Grid N

- Reserve
- State Forest
- Cadastral Boundaries
- Spot Height
- Trig Station
- Locked Gate
- Unlocked Gate
- Contour (100m interval)
- Contour (10m interval)

Assets
- Power Line
- Property

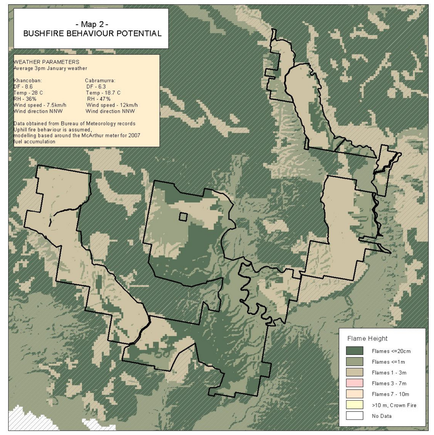
Water Points
- Water Helicopter
- Water Vehicle

Water Courses
- River
- Creek
- Drainage Line

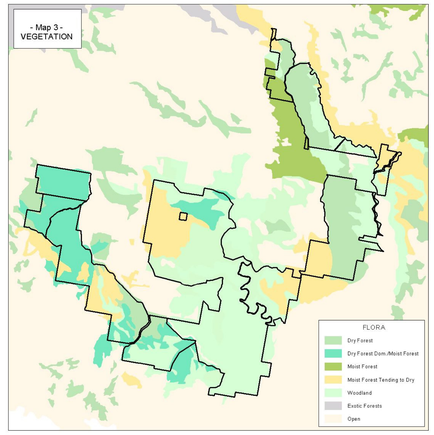
Fire advantages
- Helipads
- Road, sealed 2 lane
- Road - dirt
- 4 WD Track
- Fire Advantage

Land Cover
- Built-up Areas
- Closed Forest
- Exotic Forest
- Open Forest
- Shallow/Temporary Water
- Tall Heathland
- Water

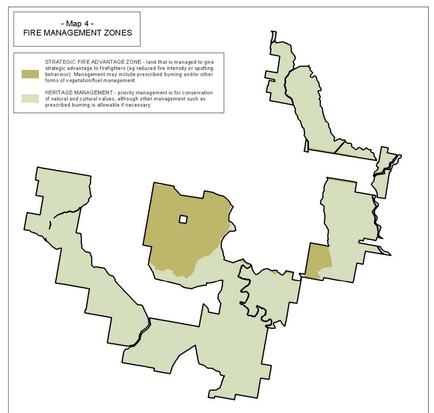
- Map 2 -
BUSHFIRE BEHAVIOUR POTENTIAL



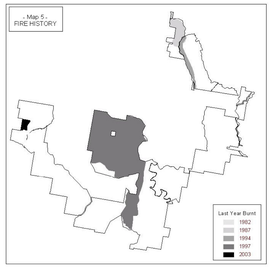
- Map 3 -
VEGETATION



- Map 4 -
FIRE MANAGEMENT ZONES

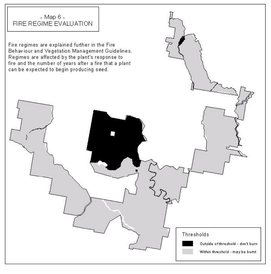


- Map 5 -
FIRE HISTORY

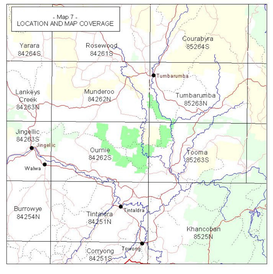


- Map 6 -
FIRE REGIME EVALUATION

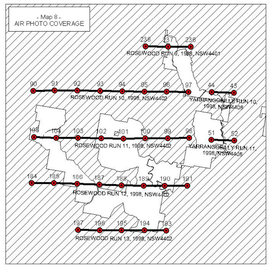
Fire regimes are explained further in the Fire Behaviour and Vegetation Management Guidelines. Regimes are affected by the plant's response to fire and the number of years after a fire that a plant can be expected to begin producing seed.



- Map 7 -
LOCATION AND MAP COVERAGE



- Map 8 -
AIR PHOTO COVERAGE



COMMENT ON FIRE BEHAVIOUR

Map 2 represents the potential uphill fire behaviour for a bushfire in average weather conditions for January. Note that flame height and rate of spread will vary under different weather conditions.
Management for worst-case conditions will focus on protection of life and property. Pre-fire measures in high fire danger periods will focus on maintenance of Asset Protection Zones along with general fire trail maintenance and standard NPWS fire preparedness procedures.

Fuel quantity has been assessed as averaging 5-10 t/Ha throughout the reserve, with overall fuel hazard assessed as: surface fuel - moderate, elevated fuel - high, bark - high, overall fuel - high. Spotting potential is high due to presence of Box and Red Stringybark bark types.

Areas of potentially greater flame height are mainly the steep SW and eastern edges of the reserve where shrub layers are present as, these areas will potentially support average flame height over 2m.

Extreme fire weather is likely to cause far more intense fire behaviour, with spotting from most of the reserve and potential impact on private property to the East as well as the potential for a continuous fire path eastward to Kosciuszko NP.

Snowy Mountains Region
Bogandyera Nature Reserve
Fire Management Strategy
2005 - 2010

Version: August 2005

This Map should be used in conjunction with air photos and ground reconnaissance during incidents and the development of incident action plans.

OPERATIONAL GUIDELINES

Area/Resource	Operational Guidelines
Command and Control	Following detection of a fire on Service lands, the RFS, Riverina Highlands Zone Operations Officer or State Forests will notify NPWS through the standard contact procedure outlined in the Ops Plan. Following detection of a fire on Service lands, the adjoining RFS Captain, Shire FCO, Deputy FCO, Group Captain or State Forests Officer may assume immediate responsibility for initial attack. When Service personnel arrive at the fire, the control of fire suppression activities will be assumed by the designated Service Operations Officer. All personnel operating within the park will come under his/her control with the direction of volunteer brigades being through the Zone Operations Officer and his/her command structure and State Forests personnel through their command structure.
Earth moving machinery	Earth moving machinery can only be used with the prior consent of the Senior NPWS officer and subject to any conditions imposed by NPWS. Where possible, earth moving machinery is to be washed down prior to entering the reserves to minimise spread of weed seed. As far as possible, restrict earth moving equipment to previously used containment lines. Earthmoving equipment must always be guided and supervised by an experienced NPWS officer, and accompanied by a support vehicle. When engaged in direct or parallel attack the support vehicle must be a fully equipped firefighting vehicle. Plant guides should be briefed on the location of the proposed control line & any cultural heritage sites. Control lines running along valley areas should be constructed 20-50m from the gully line where possible to avoid severe erosion. Locations subject to earth moving shall be surveyed to identify and monitor cultural heritage sites.
Aboriginal and Historic Heritage	For all Aboriginal sites identified, avoid all ground disturbance, including use of earth moving equipment, hand tool lines, and driving over sites. Brief all personnel involved in containment line construction &/or vehicle based fire suppression operations, on site locations and the required site management strategies appropriate to each site type. In the case of Aboriginal heritage, ensure close liaison with NPWS Sites Officer in order to check for and/or identify new sites.
Restoration	Soils in the area are typically granitic in origin and are highly susceptible to erosion. Fire control lines constructed by earth moving equipment should be stabilised and rehabilitated at the completion of fire operations.
Fire fighting chemicals	Foam may be used but not within 50 metres of any creek lines. Wetting agents and retardants are not to be used within 50 metres of any creek lines. This is to protect populations of the endangered Booroolong Frog. All use of wetting agents and retardants must be recorded
Smoke Management during Prescribed Burns	Smoke management is an issue of increasing importance in the local area with concern over smoke affecting some horticultural industries. Burning programs need to recognise a balance in providing protection to the community and environment, and minimising impact to the potential livelihood of different community groups. The worst conditions for smoke abatement are those where smoke persists for long periods at low altitude and in valley systems. The best conditions for minimising smoke impact are when smoke is quickly transported up and away from the burn area. These are usually indicated by a relatively unstable atmosphere with moderate to high winds and lower humidities at night. These conditions are not necessarily suitable for prescribed burning for a range of reasons including potential environmental damage, potential for fire escape, and fire crew safety.

SUPPRESSION STRATEGIES

Current FDR	Forecast FDR	Strategy
Low - Mod	Low - Mod	Where winter KBDI has been < 10 for a month, early summer KBDI <=50 or late summer KBDI <=130: consider patrol/surveillance strategy if in accordance with NPWS fire preparedness procedures. Consider reconnaissance strategy only if weather conditions are appropriate to allow the wildfire to carry out function of a prescribed burn. Extinguish with direct attack where possible, including RAFT.
Low - Mod	>= High	Extinguish with direct attack including RAFT where possible. If indirect attack is the only practical option, use closest practicable control lines to minimise fireground area. Pay particular attention to mop-up of the flank on the predicted downwind side.
High - V. High	Low - Mod	Direct/Parallel/Indirect attack to contain fire and maximise opportunities of direct attack success during predicted quiet weather.
High - V. High	>= High	Direct/Parallel/Indirect attack to contain fire, maximising firefighter safety and campaign efficiency by using a broader containment strategy where appropriate. Burnout country within control lines 3-4 days prior to expected extreme weather. Pay particular attention to mop-up of the predicted downwind side; prepare fallback and defence options.
Extreme	All	Defence

FIRE BEHAVIOUR AND VEGETATION MANAGEMENT GUIDELINES

Community	Fire Behaviour Characteristics	Vegetation Management Guidelines
Open	* Varying grass types give different behaviours * Cured grasses dry quickly and will be available before surface fuels	* Species decline is predicted if fires occur more often than every 2 years * Grassy understorey and surface fuels established very quickly * Soils prone to erosion and weed invasion with frequent fire
Dry Forest	* Fires possible at most times of the year depending on altitude * Quick rate of spread due to drier fuels	* Species decline predicted if successive fires occur less than 22 years apart or further than 50 years apart
Dry Forest dom./ Moist Forest	* Usually contains moderate to high fuel levels at most strata * Will burn intensely at moderate to high FDIs	* Species decline predicted if successive fires occur less than 15 years apart or further than 60 years apart * Frequent burning or opening of the canopy will cause faster drying of fuels and succession by more flammable species
Moist Forest	* Usually contains high fuel levels at all strata * Will burn intensely at high FDIs * Fires are rare but likely to be very hot	* Species decline predicted if successive fires occur less than 25 years apart or further than 60 years apart * Frequent burning or opening of the canopy will cause faster drying of fuels and succession by more flammable species
Moist Forest Tending to Dry	* Usually contains moderate to high fuel levels at most strata * Will burn intensely at moderate to high FDIs	* Species decline predicted if successive fires occur less than 26 years apart or further than 60 years apart * Frequent burning or opening of the canopy will cause faster drying of fuels and succession by more flammable species
Woodlands	* Fires possible at most times of the year * Quick rate of spread due to drier fuels * Lesser risk of crown fires with woodland formation although these will occur in drought conditions given sufficient non-grassy fuels * Fire in drought conditions will burn almost-bare grassy fuel areas only in high winds. ROS will be high	* Species decline predicted if successive fires occur less than 15 years apart. Decline predicted if fire interval exceeds 50 years. * Grassy understorey re-established quickly

FIRE SEASON INFORMATION

The critical fire season occurs between December and March, when the potential for larger fire events is at its highest. Particular care is required during extended periods of negative Southern Oscillation Indices, leading to periods of reduced rainfall.

The end of the critical fire season is marked by colder, more humid nights and cooler day temperatures with periods of relatively stable atmospheric conditions.

Prescribed burning for hazard reduction works should be undertaken before late autumn precipitation occurs. Burning may also be undertaken during late winter and early spring, although conditions are often too moist. Burning should be avoided in late spring to avoid negative impacts on fauna.

COMMUNICATIONS SCHEDULE

Service	Channel	Comment
NPWS-VHF	04 10	Mt Youngal Blackjack Mtn
NPWS-VHF	17, 18	Fireground Channels
NPWS-VHF	13 15	Portable repeater (Blue) stored at Jindabyne Portable repeater (Green) stored at Blowering Depot
RFS-PMR	70	Mt Ikes
UHF-CB	02 20	Mt Youngal UHF Transmitter Preferred RFS fireground UHF channel
Mobile Phone Reception		Weak signal at junction of Clarkes Hill FT and Tooma Rd. Stronger signal on Tooma Rd at Bald Hill (GR 973 207)

CONTACT NUMBERS

Agency	Position/Location	Phone	Mobile	Fax
	ALL EMERGENCY FIRE CALLS	**000**		
NPWS	After Hours Emergency		1800 629 104	
NPWS	Regional Office - Jindabyne	6450 5555		6456 2291
NPWS	Area Manager - David Lawrence	6076 9373	0428 484 338	6076 9567
NPWS	Ranger Bogandyera - Jamie Molloy	6076 9373	0427 652 814	6076 9567
NPWS	Regional Operations Coordinator - Megan Bowden	6450 5507	0428 484 119	6456 2291
NPWS	Senior Ranger Fire - Ian Dicker	6450 5576	0427 700 168	6456 2291
RFS	Riverina Highlands RFS Duty Officer (24 Hrs)	6947 0549		
RFS	Riverina Highlands Operations Centre	6947 0569		6947 0566
RFS	Operations Officer - Randall Ferrington	6947 0569	0427 029 592	6947 0566
RFS	Tumbarumba RFB Captain - Peter Lonergan	6948 8311	0427 483 583	
RFS	Maragle RFB Captain - Greg Lyons	6948 4456		
Council	Tumbarumba Shire Council	6948 9100		6948 2865
Forestry NSW	24 Hr Fire No. (diverts to Duty Officer)	6947 3911		
Forestry NSW	Operations Manager - Charlie Taylor	6947 3911	0428 692 017	6947 2865
Forestry NSW	Planning Manager Tumbarumba - Chris Rhynehart	6948 2400	0418 482 673	6948 2773
NSW Police	Tumbarumba Police Station - Sgt. Terry McGregor	6948 2044		6948 3182
Ambulance		131 233		
SES	Michael Pratt (Controller)	6948 2226	0407 483 705	