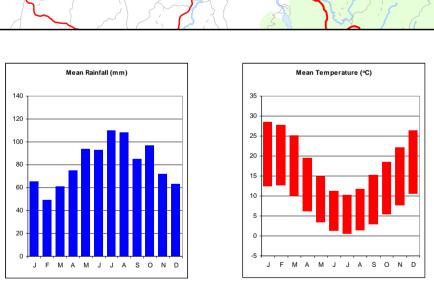


	MAPS 1 & 2: FIRE HISTORY
Ignitions	Recorded data prior to the year 2000 is limited, only one ignition for 1985 (cause lightning) exists. It is unknown whether all recorded fires began on Park or off Park. The only other known ignitions were recorded off Park in 2003, in the vicinity of Tabletop Mountain.
	Mapped records of prescribed burns applied during previous land management operations are poor. Two burns were implemented, one which is identified as burning the entire Park 1981-1982. There is insufficient mapped data to identify the actual burnt area or information that may suggest neighbouring land was targeted too.
Prescribed	During 1986-1987 fire season, a 62 ha burn was conducted on the east side of Meadow Creek. The coverage and intensity of either treatment area is not available.
Burns	Recently (May 2006), two prescribed burns were implemented within the Park by NPWS. Approximately 23 ha was treated on the western side of Gocup Trail and 85 ha was treated, between Hayes Trail and Minjary Trail. The treatments (62 ha south west of Minjary Trail) were done in conjunction with neighbours. These prescribed burns were reported to be of moderate intensity, where approximately 60–70% of the ground fuels were burnt.
	Trail maintenance and clearing have also been applied and will continue as part of the reserve maintenance program.
Wildfire	The Park has experienced several wildfires over the last 100 years. In general, the wildfire occurrence has become more frequent in the last 20 years. However, other fires may have occurred earlier in the 1900's that went unrecorded or have passed from local memory.
wildlife	A broad landscape fire burnt through the Park in 1902-03. The boundary of the fire was never mapped. The coverage of the fire has been isolated to the Park boundary to provide fire history for the Park vegetation threshold analysis.
Fire Frequency	The frequency and interval between fire has important implications relevant to biodiversity and future NPWS management of fire within the reserve. The Park has had frequent fires as demonstrated in the fire history. However, these fires are small and do not overlap in areas that may threaten declines in vegetation community values. Further research (including mapping fire scars) would establish approximate years the reserve burnt and the extent of the impact.

approximately 5 km	rk (11462 ha) was gazetted on 1st January 20 s north-west of Tumut. For the purpose of thi ess otherwise stated.		between the Gocup Road and Califat Creek, I Strategy, Minjary National Park will be referred
Department of Environment and Conservation	 Parks and Wildlife Division, National Parks and Wildlife Service. South West Slopes Region, Riverina Highlands Area 	Government Areas	Eden Monaro Federal Electorate. Burrinjuck State Electorate. Tumut Local Government Area
Rural Fire Service	Riverina Highlands Zone (Bush Fire Management Committee)	Other Agencies	Brungle Tumut Aboriginal Land Council Murrumbidgee Catchment Management Authority

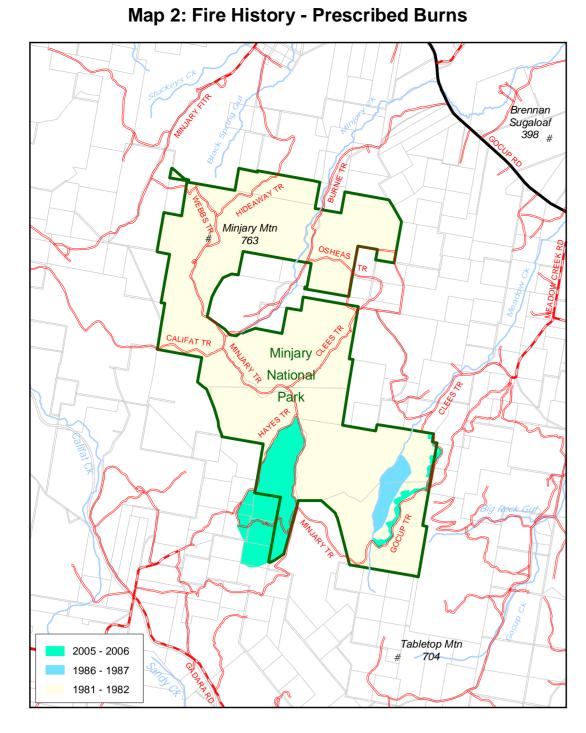
Location



MAP 6: CULTURAL HERITAGE
Key Management Guidelines
 Identified sites must be protected. DEC Databases, AHIMS and HHIMS, must be accessed during incidents and or for preparation of Review of Environmental Factors for prescribed burning or other works programs to ensure new records are included. Aboriginal site information from AHIMS is sensitive and subject to a Memorandum of Understanding. Site data must respect this agreement and must be used appropriately. For fuel reduction burning programs, protection measures will be outlined in the Review of Environmental Factors and burn program outlines.
Where possible,

	cers will provide advice on site protection methods. Il comply with all conservation management plans (where they exist).
Aboriginal Heritage	Recorded sites include modified trees and scattered artefact sites. Sites must be clearly identified and protected during fire suppression and prescribed burning programs. Other potential (tangible) sites may include burials, ceremonial sites and rock arrangements. Follow operational guidelines to protect heritage features.
Historic Heritage	 There were no historic sites recorded in the reserve. Other potential sites may include ruins, fence lines etc. If new sites become known/recorded, they must be clearly identified and protected during fire suppression and prescribed burning programs. Follow operational guidelines to protect heritage features.

Note: Cultural heritage sites are based on data recorded on AHIMS and HHIMS databases and field data recorded as at July 2005.



		,	moianear yas cacanata	•	54.1 B 66
В	*Striped Leg	less Lizard	Delma impar	V	Dec-Mar
	*Barking Ow	A .	Ninox connivens	V	Jun-Nov
С	Turquoise P	arot	Neophema pulchella	V	Aug-Dec
C	Gang Gang		Callocephalon fimbriatum	V	Oct-Feb
	Diamond Fir	e Tali	Stagonopleura guttata	V	Aug-Feb
Fire Group	Veg Groups	Th	reatened Fauna Management Guide	lines	
Α	· 35 · 48	often leads to a decline in inse Infrequent high intensity fire m long term. Felling hollow bear Where possible: Avoid frequent and or high Protect areas of habitat fro Fire should be kept to sma sustaining species habitat are left in tact. Prescribed fire should not of Implement mosaic fire regi understorey.	 Avoid frequent and or high intensity fires. Protect areas of habitat from any fire that consumes the canopy, mature & or hollow bearing trees. Fire should be kept to small areas or managed to produce mosaic burnt areas more suitable in sustaining species habitat requirements. Ensure large patches of shrubs, standing and fallen timbers are left in tact. Prescribed fire should not exceed 20% of vegetation group. Implement mosaic fire regimes designed to maintain the floristic & structural diversity of the understorey. 		
В	· 178 · 199	understorey. Avoid felling hollow bearing trees during 'mop up' activities. Species occur in grasslands and in open grassy woodland. Possibly affected by heavy grazing or earthmoving, where they may recolonise disturbed sites after cessation disturbance (Dorrough 1995). This shelter may take the form of tussock grasslands, less disturbed land, soil cracks or arthropod burrows. The behavioural reaction of <i>D. impar</i> to fire is unknown, although it seems likely that survivors would either move into unburnt areas or remain relatively inactive in the soil or under rocks until the vegetation recovers enough to provide shelter (NSW NPWS 1999). The impacts of fequent fire may cause extinctions if successive fires occur <3 years apart. Extensive fires over large areas may cause direct mortality by reducing available cover and prey abundance and exposure to increased predation. Least likely period of vulnerability to fire is between April and June. Where possible; Fire should be kept to very small areas and managed to create mosaic or patchy burning patterns			rrough 1995). arthropod by that survivors cks until the uent fire may as may cause sed predation.

MAP 6: THREATENED FAUNA

Climacteris picumnus

Pyrrholaemus sagittatus

Melanodryas cucullata

V May-Dec

V Aug-Dec

V Jun-Dec

Fire Common Name

Speckled Warbler

Hooded Robin

between January and July. 48 Where possible; Maintain (maximum) vegetation management guidelines.
Fire should be kept to the smallest possible size. Planned fire may be implemented to maintain floristic & structural diversity of the understorey suitable for this species, eg. an open grassy woodland. Avoid felling mature, hollow bearing trees during 'mop up' activities.

* Species occurring off park, however there is significant habitat within the reserve important for species survival.

Map 6: Risk Assessment - Cultural & Natural

within these vegetation groups.

Prescribed fires should be small, mosaic burns, implemented during low conditions to prevent total consumption of ground cover or implemented if prescribed as part of the recovery plan. Frequent fire and or high intensity fires will effect these species. Felling hollow bearing trees during 'mop

up' activities decreases nest hollow availability. Summer wildfire affects food availability coinciding with the caring of young (and consequent decreased mobility of adults). Depending on the effects of other variables of fire regime, particularly fire extent (habitat loss), fledgling success may decrease. Fires should be managed to create a long-term mosaic patterns. Least likely period of vulnerability to fire is

Tabletop Mtn # 704

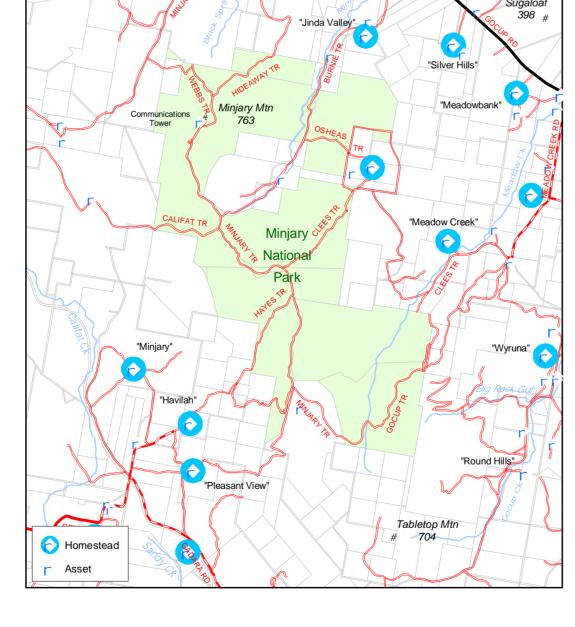
Map 3: Vegetation Communities

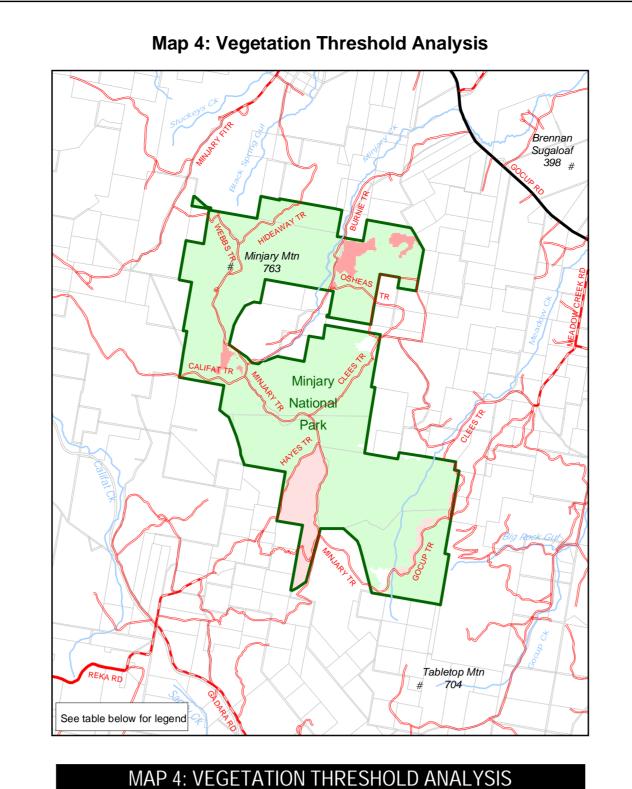
VegGroup	Vegetation Description	Ha's	% Parl Cove
32	Red Box & Long Leaved Box - Grassy Forest	42.0	3
33	Blakely's Red Gum/Apple Box & Yellow Box - Grass/Forb Forest	103.4	7
34	Blakely's Red Gum & Callitris Pine - Flax Lily Open Forest	443.3	30
35	Norton's Box & Red Box - Flax Lily/Tussock/Grass Open Forest	741.1	51
48	Broad Leaved Peppermint & Nortons Box - Grassy Forest	89.2	6
178	Partially Cleared	18.9	1
199	Cleared	21.8	1

	VEGE	ETATION THRESHOLDS
Fire Interval	Vegetation Group	Vegetation Management Guidelines
>10 - <50	Blakely's Red Gum/Apple Box & Yellow Box - Grass/Forb Forest	If fires are infrequent (eg. occur >50 years apart), 25% of species are estimated decline or become locally extinct. The same is forecast if consecutive fires of <10 years apart. Where possible; Prescribed fires should not be initiated where successive fires occur <10 yeapart. Avoid felling mature trees or fragmenting the vegetation within these communities.
>10 - <100	Red Box & Long Leaved Box - Grassy Forest & Blakely's Red Gum & Callitris Pine - Flax Lily Open Forest 32 & 34	Species decline predicted if successive fires occur <10 or >100 years apart. I vegetation community is susceptible to simplification where frequent fire regin are implemented. Grassy understorey & ground fuels predicted to establish ra after fire. <i>Daviesia, Platylobium</i> and C <i>assinia</i> species within the community, persistent after fire, are predicted to increase in cover, abundance and densit This has the potential to increase the bushfire behaviour within the community years after disturbance from fire. Soils prone to erosion with frequent fire and vegetation group 32 may be in danger of fragmentation. This community has attributes critical to TSC listed fauna habitat requirments. Where possible; Minimise the potential size of fire in areas were fire occurs <10 years apart. Reduce the potential for high intensity fire where shrubs are consumed an manage fire to produce long term mosaic patterns. Avoid felling large trees within vegetation communities.
>15 - <100	Norton's Box & Red Box - Flax Lily/Tussock/Grass Open Forest & Partially Cleared 35 & 178	Regular fire may lead to community decline and most species may become to extinct if fires are infrequent (eg. occur >100 - 110 years apart), however 40% estimated to decline where consecutive fires occur <15 years apart. This veg has a suite of species important to TSC listed fauna habitat requirments, partithe low shrub layer. Where possible; Avoid the potential size of any fire in areas burnt <15 years ago Minimise the potential for high intensity fire where shrubs and the canopy a consumed and manage fire to produce long term mosaic patterns. Prescribed fires should not be initiated where successive fire occur <15 yeapart. Avoid felling mature trees or fragmenting the vegetation within these communities.
>20 - <60	Broad Leaved Peppermint & Nortons Box - Grassy Forest 48	This vegetation is at high risk of simplification if inappropriate fire regimes imp Most species sampled indicate regular fire may lead to community decline or extinctions where consecutive fires occur <20 years apart. 20% of the specie sampled may become locally extinct if fires are infrequent (eg. occur >60-110 apart). 20-25% of the vegetation group are predicted to display little to no improm frequent and or infrequent fire, however the representatives are under researched and do not represent all strata. This vegetation contains the most significant habitat for TSC listed fauna. Where possible: All fires should be managed to contain to small areas and to minimise the potential spread in areas burnt <20 years ago. Minimise the potential for high intensity fire where shrubs and the canopy a consumed and manage fire to produce long term mosaic patterns.

Note: Vegetation group management may affect TSC species habitat requirements. Vegetation communities should be monitored to identify losses in biodiversity, including structural diversity across the landscape.

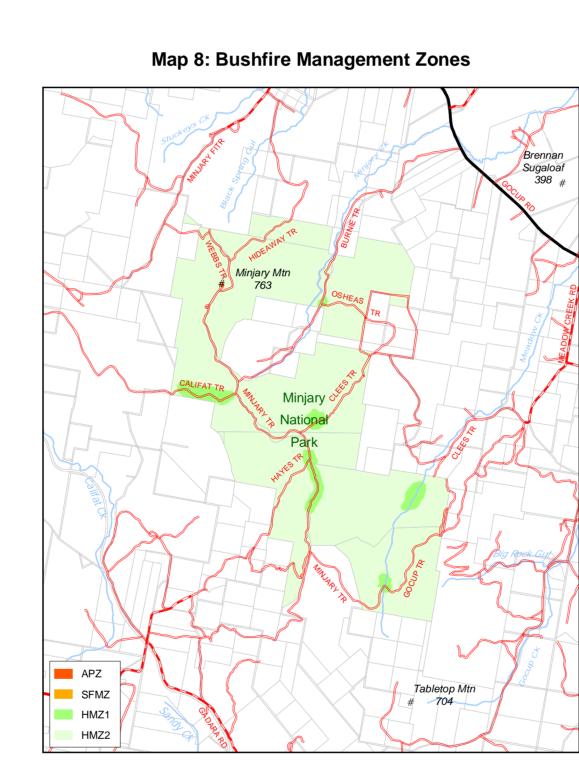
Map 7: Risk Assessment - Property



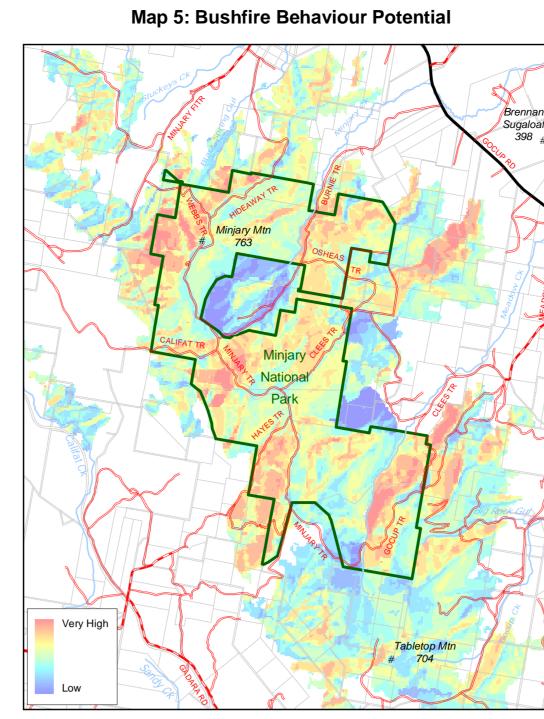


Threshold	Vegetation Group	% of Park	Interpretation & Management Guidelines
Overburnt	N/A	0	According to the vegetation regime thresholds, two consecutive fires have been recorded too close together and the area is Overburnt. Additional fire in this area will lead to adverse fire regimes and may threaten community biodiversity and lead to potential extinctions.
Vulnerable	35, 48, 178	3	These vegetation communities are vulnerable to further burning.
Recently burnt	33, 34, 35	7	Time since fire is less than the threshold intervals, but before that, it was OK. It will be vulnerable if it burns before the end of 2006-07.
Underburnt	N/A	0	May require fire for Asset protection, strategic or ecological reasons if area does not burn after 2007.
Almost Underburnt	N/A	0	May require a burn this year — either for Asset protection, strategic or ecological reasons — otherwise next year it will fall into the Underburnt Category
OK	32, 33, 34, 35, 48, 178	89	Areas where thresholds have been assigned to, that do not fall into one of the above categories. Fire is neither required or to be avoided.
Unknown/ No Regime Assigned	199	1	Areas that do not have a threshold assigned to them or data is missing, limiting the modelling capabilities in DEC GIS.

	MAP 9: FUEL LANDSCAPE
	elling are specific to Minjary National Park and map view area for a determined period of time. The information s not for comparison of the broader landscape managed by the NPWS South West Slopes Region, unless
(2004) to calculate ve	or the fuel landscape map was extrapolated from NDVI (Vegetation Index) relationships from LANDSAT Image egetation density across the landscape. No ground truthing has been performed to determine the accuracy of ayed in the modelled data for this reserve.
	with similar vegetation type and seasonal information is Ellerslie Nature Reserve. This reserve recorded an el of 7.9 t/ha in Vegetation Group 32. Which could be expected within Minjary Nature Reserve.
planning and operation	graphic references should be established in Minjary National Park to improve knowledge for fire management ons. It is recommended that a minimum of 4 sites be established within the reserve. Sites should be located ollected on different vegetation groups and fire.

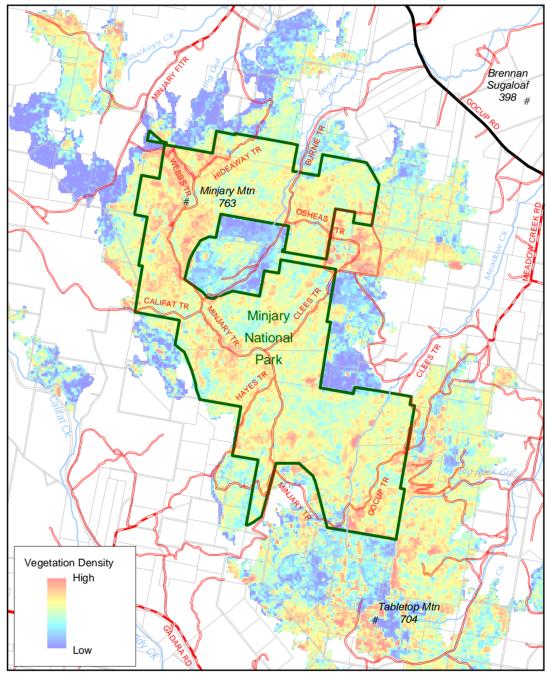


			A: (A
MAP Asset	7: RISK ASSESSME	NT - LIFE & PROPERTY Fire Management Guidelines & Considerations	
On park Assets (communications tower on Minjary Mountain)	This asset may be damaged by fire & radiant heat from the west north-west.	Maintain access trails and firebreaks within the park that will assist in fire fighting efforts. Monitor and assess fuels and vegetation within 30m of on park assets (annually).	Heri (H
Other assets (including private property or other lands adjacent to the park)	Property assets may be damaged by fire escaping the park.	Participate in fire management proposals through RFS Zone Bush Fire Management Committee meetings. During the fire season rapidly respond to all unplanned fires to minimise potential spread to private lands. Consult with neighbours of intended fire operations and strategic programs.	Heri (Hl

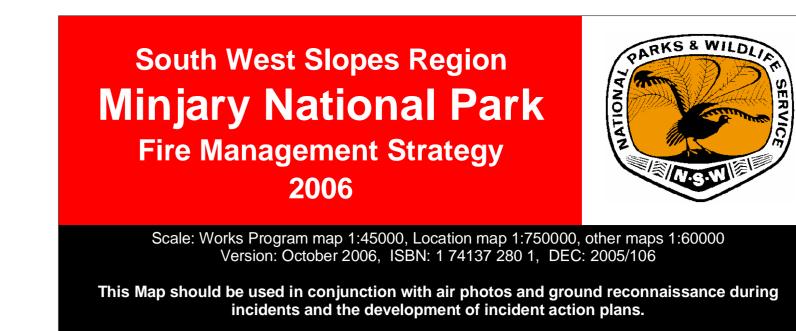


ne ratings and	d modelling are	ing (under moderate conditions) especific to the Park and map view a ged by the NPWS South West Slopes		he map area is not fo	or comparison of
Rating	Vegetation	Туре			% of Park
Low	Cleared				1
Medium	Partially Clea	Partially Cleared			1
High	Blakely's Re Red Box & L	ed Peppermint & Nortons Box - Grass d Gum & Callitris Pine - Flax Lily Ope ong Leaved Box - Grassy Forest d Gum, Apple Box & Yellow Box - Gr	en Forest		47
Very High	Norton's Box	& Red Box - Flax Lily, Tussock/Gra	ss Open Forest		51
spect Bushf	re Behaviour		Slope Bushfire Behavi	our	
Rati	ng	Aspect in degrees	Rating	Slope in degre	ees
Lo	V	50 - 225	Low	0 - 10 degrees	
Medi	um	15 - 50 & 225 - 260	Medium	11 - 20 degree:	S
Hig	h	335 - 15	High	20 -30 degrees	
Very High 260 - 335		260 - 335	Very High	>30 degrees	

Map 9: Landscape Fuels



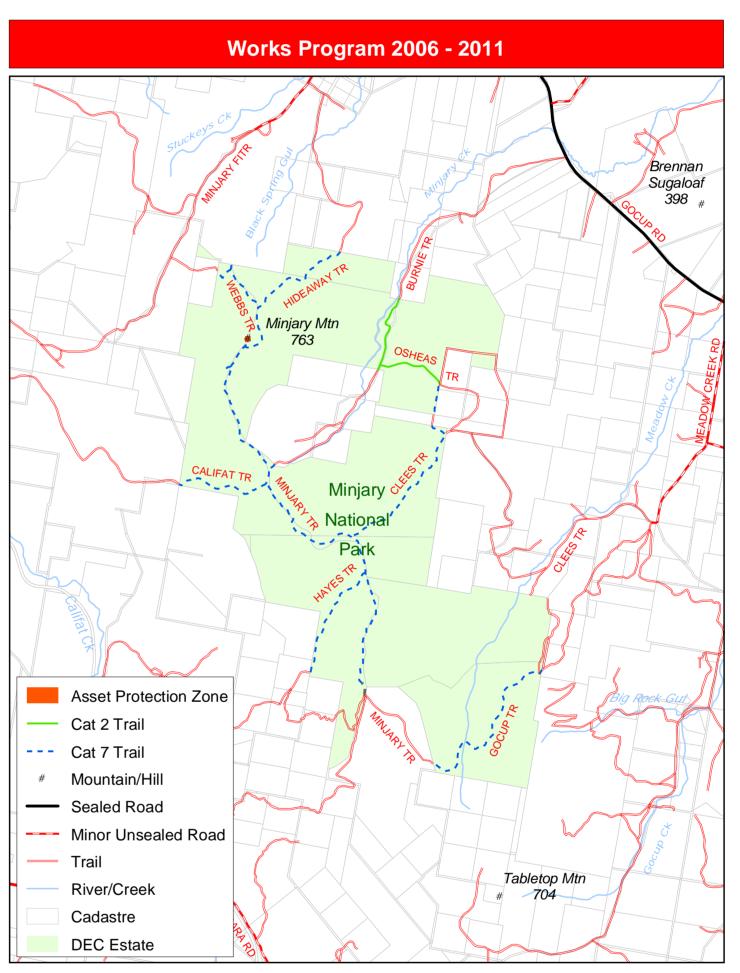
	MAP 8: BUSHFIRE MA	NAGEMENT ZONES
Management Zone	Definition	Management Guidelines
Asset (APZ)	Life, property and commercial assets in high Bushfire Behaviour Potential risk areas on DEC estate.	Assets should be evaluated annually to measure potential hazards and or increased threats. Works program to follow Risk Assessment (Life and Property) Guidelines.
Heritage 1 (HMZ1)	Areas of high priority natural and cultural conservation value. It identifies areas of 'recorded' cultural and natural assets. This zone is important for the protection of cultural heritage and the conservation of some species habitat to prevent declining numbers or extinctions.	Heritage areas should be assessed annually to determine potential hazard, threats to cultural heritage, and thresholds for TSC and vegetation communities. Prescribed fire may be applied in these areas if appropriate for ecological purposes or protection of cultural heritage. Implement recovery plan guidelines (where they exist). Manage during incidents according to HMZ1 guidelines.
Heritage 2 (HMZ2)	This zone identifies areas of significance for natural and cultural features across the broader landscape. This generally means 'parts of the reserve that have not been surveyed and or have no records of significant features or threatened species'.	These heritage zones should be monitored to determine threats to biodiversity and managed in accordance with conservation policy and principles. Prescribed fire may be applied in these areas if appropriate for ecological purposes or protection of assets and cultural heritage. Manage during incidents according to HMZ2 guidelines.





Copyright Department of Environment and Conservation. These data are not guaranteed to be free from error or omission. The Department of Environment and Conservation and its employees disclaim liability

for any act done on the information in the data and any consequences of such acts or omissions.
This map is based on Land and Property Information Standard 1:25000 Topographic Map Series.
Reproduced with permission of Land and Property Information.



Asset	Priority	Name, Area or Detail	Management Strategy	Proposed Works
Trails	High	Management Trails	 Maintain all trails to a standard for Category 7 fire fighting vehicle. All trails to be clearly signposted strategically at intersections and trailheads. 	Assess annually. Initiate maintenance programs and works as required, or as specified Regional Operations Program.
	Low	Closed or Dormant Trails	Monitor regeneration on dormant and closed trails. Closed or Dormant trails may be re-opended during an incident if necessary.	Assess every 5 years and register trail condition.
	Not all Reserve trails comply with the Bush Fire Coordinating Committee Guidelines for the Classification of Fire Trails - Policy No. 1/03.			
Heritage MZ 1	Medium	Cultural heritage, threatened, vulnerable & endangered species, habitats, communities and the landscape.	Manage and protect natural & cultural heritage values with appropriate fire management regimes.	Assess thresholds every 5 years, before works programs or directly after fire events.
Information & Research	Medium	Fuel and vegetation monitoring. Fire history recording	 Established Fuel monitoring sites (//= 4), including photographic reference points. Monitor potential fuel monitoring sites (before & after). Improve fire recording and mapping (to identify area burnt rather than treated blocks). 	Establish and monitor before 2009 fire season.
Fuel Management & Prescribed Burns	Low	Fuel Management identified as APZ's.	Any proposed fuel reduction burns must be managed in accordance with DEC policy, within the FMS contingency and agreements with the Local Bush Fire Management Committee.	Maintain low fuels within APZ to protect assets. Liaise with neighbours and the Bushfire Management Committee.