

MAPS 1 & 2: FIRE HISTORY

Ignitions

There are limited records for ignitions prior to 2000. However, one ignition was recorded within the Reserve in 2001 and another in 2003. The later ignition occurred 500m from the reserve and the north-western. Ignitions caused both ignitions.

Prescribed burns

No prescribed burns have been implemented within the Reserve by NPWS since 2001 and there are no records of prescribed burns by previous managers, NSW State Forest. Fuel management and clearing programs have been implemented and will continue as part of the Reserve annual maintenance program.

Wildfire

Since 1974, 3 fires have had an impact on the Reserve, most starting off the reserve. In 1974/75, a fire was contained on the south-western flank, western of Callaghan Trail and south of Turner's Trail. In 1979/79, the entire Reserve was burnt by another large fire, which contained on the eastern side of Callaghan Trail and another trail north of Banganding Trig. Containment provided an excellent example of the fire. These fires both started on the southern side of the Callaghan Trail, primarily grassy heath.

In 2001, a large wildfire was reported however a fire did not develop. In 2003, after a prolonged drought and under severe weather conditions a small fire started along a lightning strike on a grassy slope approximately 500m from the north-western boundary of the Reserve. This fire was contained south of Callaghan Trail and Turner's Trail. Approximately 3.7 hectares of the Reserve and 41.4 hectares of public land were burnt.

The frequency and interval between fires has important implications relevant to biodiversity and structural diversity. While frequent fires occur, many species may decline in presence or coverage, and it will favour fire species. The majority of fires in this reserve have been through natural means, with the influence from prescribed burning which generally accounts for more than 50% of all recorded fires in many other reserves. The northern section of the Reserve (west of Turner's Trail) has had a succession of fires within 4 years and 3 fires have affected a small part of the same section (7 hectares) within 26 years. As identified in the vegetation threshold analysis, the majority of the reserve has experienced considerable value when fire is frequent. However, infrequent fire may also produce desirable conditions in populations/communities that experience no events for extended periods. This may be desirable to ensure vegetation structure and habitat is not compromised by the inclusion of fire.

MAP 7: THREATENED FAUNA

Fire Group	Common Name	Scientific Name	TSC Schedule	Most vulnerable Period
A	Thorned treecreeper	<i>Alcedonnes australis</i>	V	Aug-Dec
	Wooded rail	<i>Alcedonnes schubertii</i>	V	Feb-Apr
	Common bent-winged rail	<i>Alcedonnes schubertii</i>	V	Feb-Apr
	Shoebill	<i>Alcedonnes schubertii</i>	V	Feb-Apr
B	Spotted warbler	<i>Alcedonnes schubertii</i>	V	Aug-Oct
	Spotted warbler	<i>Alcedonnes schubertii</i>	V	Aug-Oct
	Spotted warbler	<i>Alcedonnes schubertii</i>	V	Aug-Oct
C	Black-crowned nightjar (Eastern subspecies)	<i>Alcedonnes schubertii</i>	V	Jan-Dec
	Spotted rail	<i>Alcedonnes schubertii</i>	V	Sept-Feb
D	Turquoise fantail	<i>Alcedonnes schubertii</i>	V	Aug-Dec

MAP 3: VEGETATION COMMUNITIES & THRESHOLDS

Vegetation Group	Vegetation Description	HA %	% Cover
1	Apple Box - White Sedge/Grass/Heath Forest	0	0
2	Turners Red Box - Grassy Forest	144	46
3	Red Gum/Inland & Scribbly Gum - Dry Sedge/Grass Woodland	200	38
31	White Box - Grassy Woodland	106	14
32	Red Box & Long Leaved Box - Grassy Forest	2.5	<1
45	Red Sedge/Inland & Scribbly Gum - Shrub/Inland Red Box - Dry Foli/Inland/Grass Open Forest	0	0
108	Degraded Forest	0	0
109	Natural Vegetation - Partially Cleared	0	0
0	No Data (Missing data or not surveyed)	12	2

MAP 4: VEGETATION THRESHOLD ANALYSIS

Threshold	Vegetation Group	% of Reserve	Interpretation & Management Guidelines
Overburnt	NA	0	According to the vegetation regime thresholds, no consecutive fires have been recorded for the vegetation regime and the area is Overburnt. If identified, additional fire in this area will lead to adverse fire regimes and may increase community biodiversity. Fire should be avoided until another analysis of thresholds is modified to restore the area. Fire should be avoided until another analysis of thresholds is modified to restore the area.
Vulnerable	NA	0	Fire should be avoided until another analysis of thresholds is modified to restore the area. Fire should be avoided until another analysis of thresholds is modified to restore the area.
Recently burnt	25, 31	1	Fire should be avoided until another analysis of thresholds is modified to restore the area. Fire should be avoided until another analysis of thresholds is modified to restore the area.
Underburnt	30, 31	37	The vegetation community demonstrates a loss of biodiversity. Conditions are suitable. The intensity of recent vegetation fires and fauna community requirements. Management actions should be implemented to restore the area to a state of biodiversity. The area will still be in the Underburnt category by 2001 if it remains unburnt by 2013 or 2018 (dependent on the vegetation community). Fire should be avoided until another analysis of thresholds is modified to restore the area.
Almost Underburnt	NA	0	Fire should be avoided until another analysis of thresholds is modified to restore the area. Fire should be avoided until another analysis of thresholds is modified to restore the area.
OK	25, 31	40	Fire should be avoided until another analysis of thresholds is modified to restore the area. Fire should be avoided until another analysis of thresholds is modified to restore the area.
Unknown No Regime Assigned	NA	2	There is limited data, which limits the modelling capabilities of DEC GIS.

MAP 5: BUSHFIRE BEHAVIOUR POTENTIAL

Rating	Vegetation Type	SCA hectares	% of SCA
Low	Apple Box - White Sedge/Grass/Heath Forest	106	14
Medium	Turners Red Box - Grassy Forest	347	46
High	Red Gum/Inland & Scribbly Gum - Dry Sedge/Grass Woodland	200	38
Very High	Red Gum/Inland & Scribbly Gum & Shrub/Inland Red Box - Dry Foli/Inland/Grass Open Forest	0	0

RESOURCE INFORMATION

Tumblong Crown Reserve (716 ha) was gazetted on 1 January 2001. On the 1st April 2006, the Crown Reserve was registered State Conservation Area. For the purpose of this Fire Management Strategy, Tumblong State Conservation Area will be referred to as the Reserve, unless otherwise stated.

The Reserve is located approximately 22 km north-west of Tumult, New South Wales. It provides a refuge within a timbered corridor between the Nature Reserve and the National Park. The vegetation community is dominated by white and red box, long leaved box, and white sedge/grass/woodland. The vegetation community is dominated by white and red box, long leaved box, and white sedge/grass/woodland. The vegetation community is dominated by white and red box, long leaved box, and white sedge/grass/woodland.

Department of Environment and Conservation

- North West Slopes Regional Office
- South West Slopes Regional Office
- Rural Fire Service
- North West Slopes Regional Office
- Other Agencies

Government Areas

- Fairfield Local Government Area
- Barrack State Electorate
- Tumult Local Government Area

Other Agencies

- Barrack State Electorate
- Tumult Local Government Area

IMPORTANT: The following planning information is based on the best possible information for each table category. When used in conjunction with other information in the plan, decisions may be needed where asset management and biodiversity requirements differ.

MAP 6: LANDSCAPE THRESHOLDS

Slope Class	Fire Risk	Fire Risk	Fire Risk
0-10	3.5	Less potential on lower slopes. Fire fuels averaging 4 t/ha are favourable.	
10-15	4.7	Expect increased erosion in gullies and ravines. Fire fuels averaging 6 t/ha are favourable.	
15-20	12.2	Increase expected through mid slope and drainage lines. Fire fuels averaging 11 t/ha are favourable.	
20-25	14.14	Increase across disturbed slopes and trails. Fire fuels averaging 13 t/ha are favourable.	
25-30	16.18	Large scale soil loss expected in disturbed areas. Impacts may be severe in areas bedrock in the water courses. Fire fuels between 15 t/ha expected to prevent slope instability.	
>30	>10	High fuels on slopes >30° or extensive areas in the park. Soil loss can be intense where the fire fuels and grasses are >10 t/ha and vegetation remains undisturbed.	

MAP 7: THREATENED FLORA

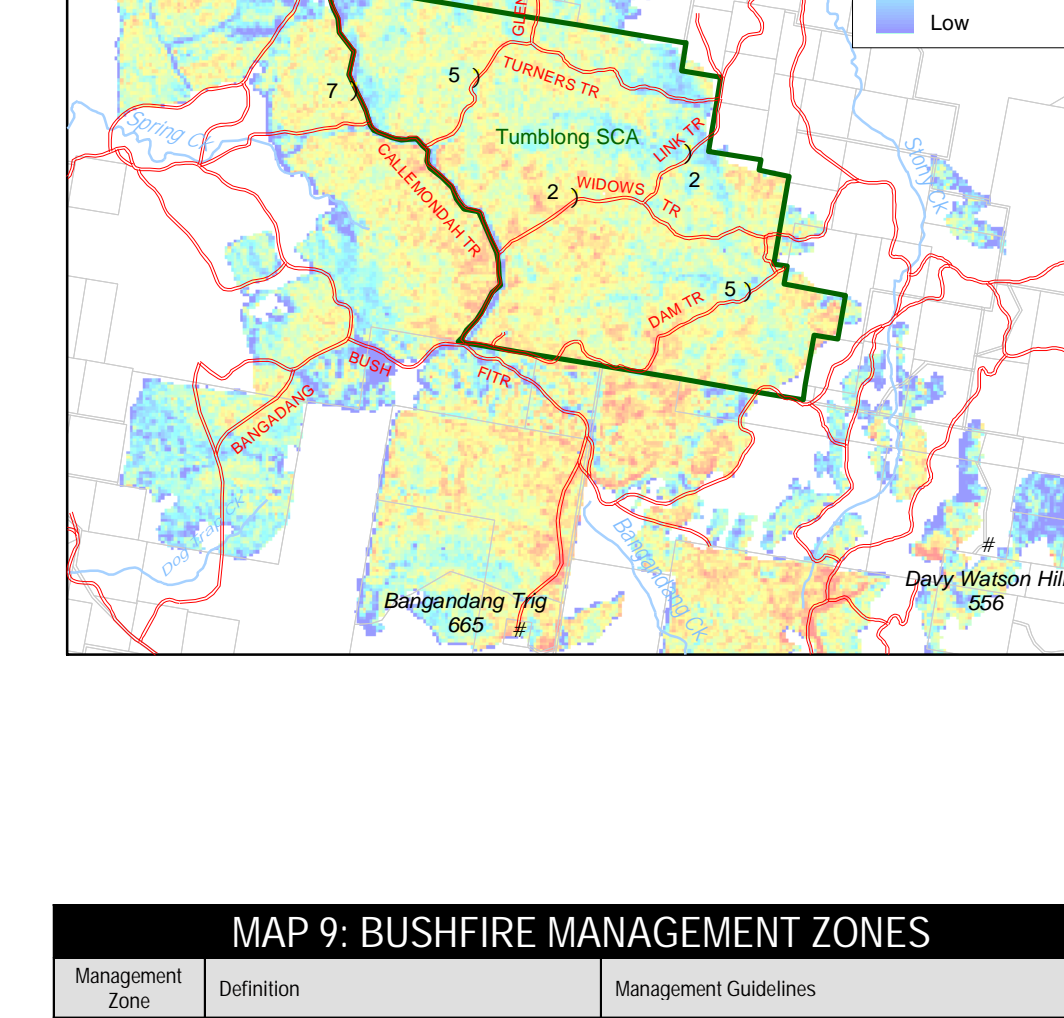
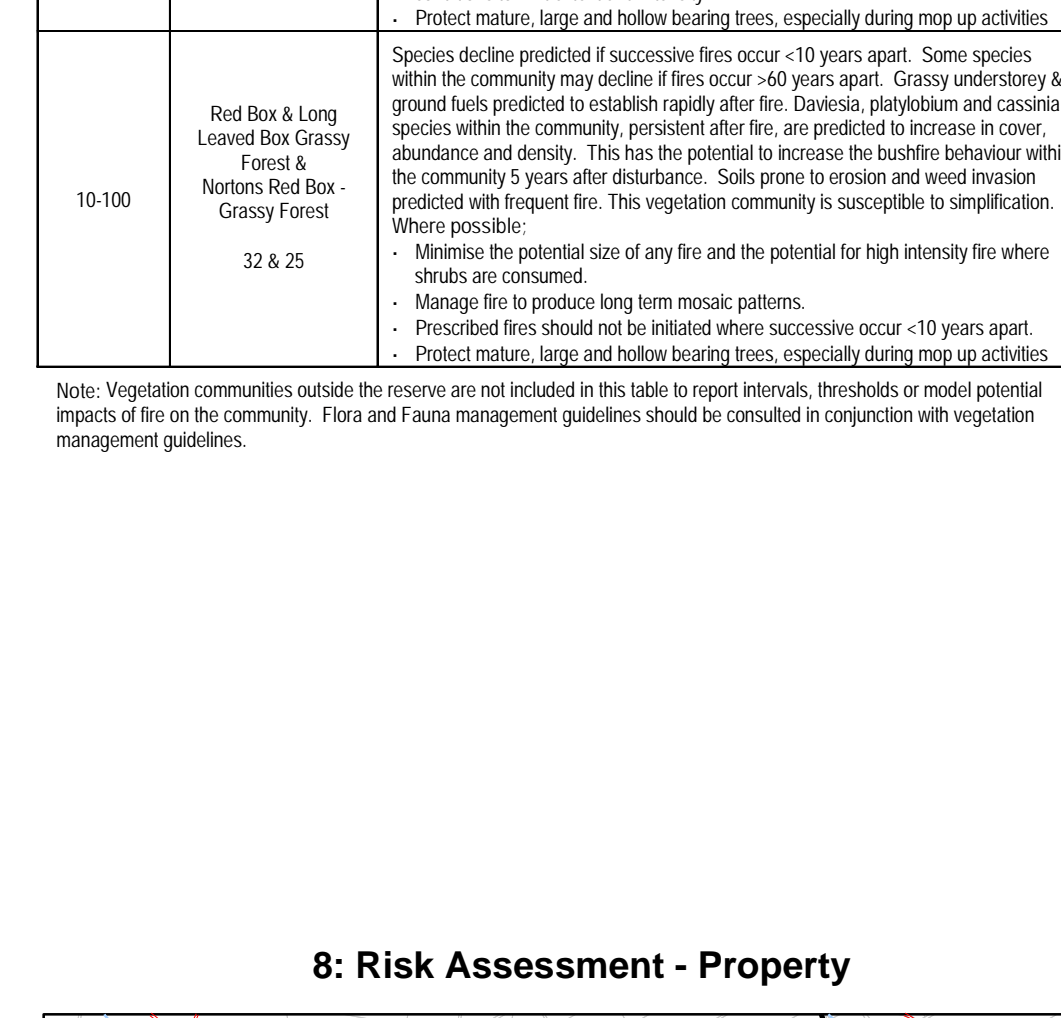
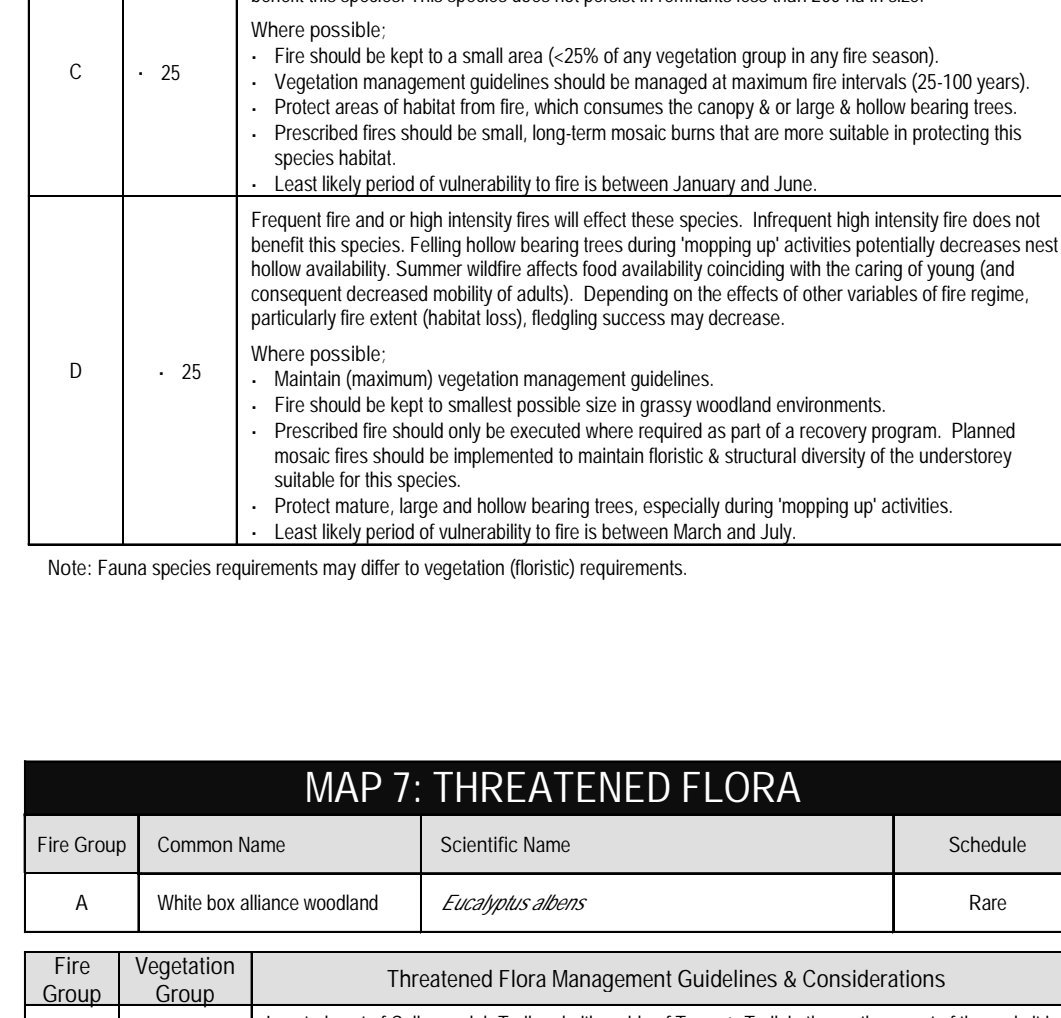
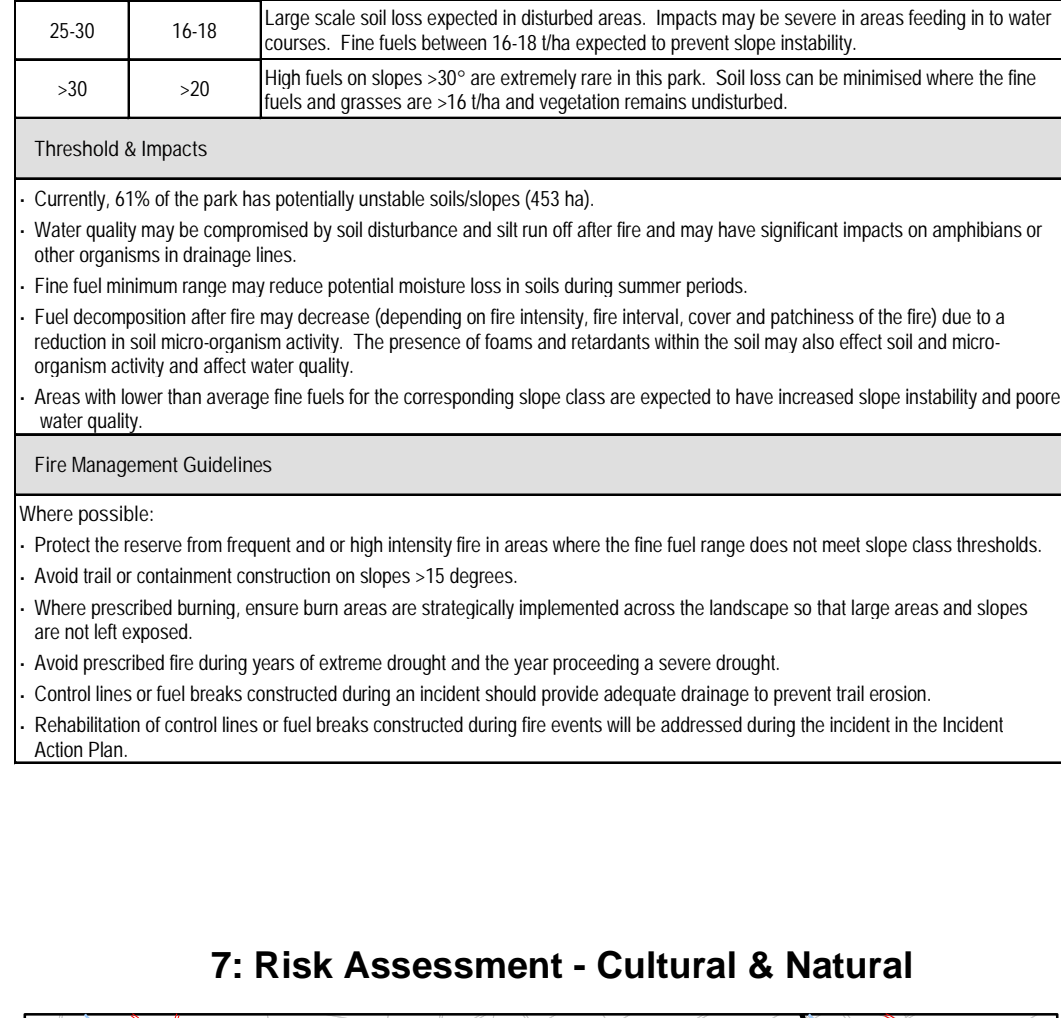
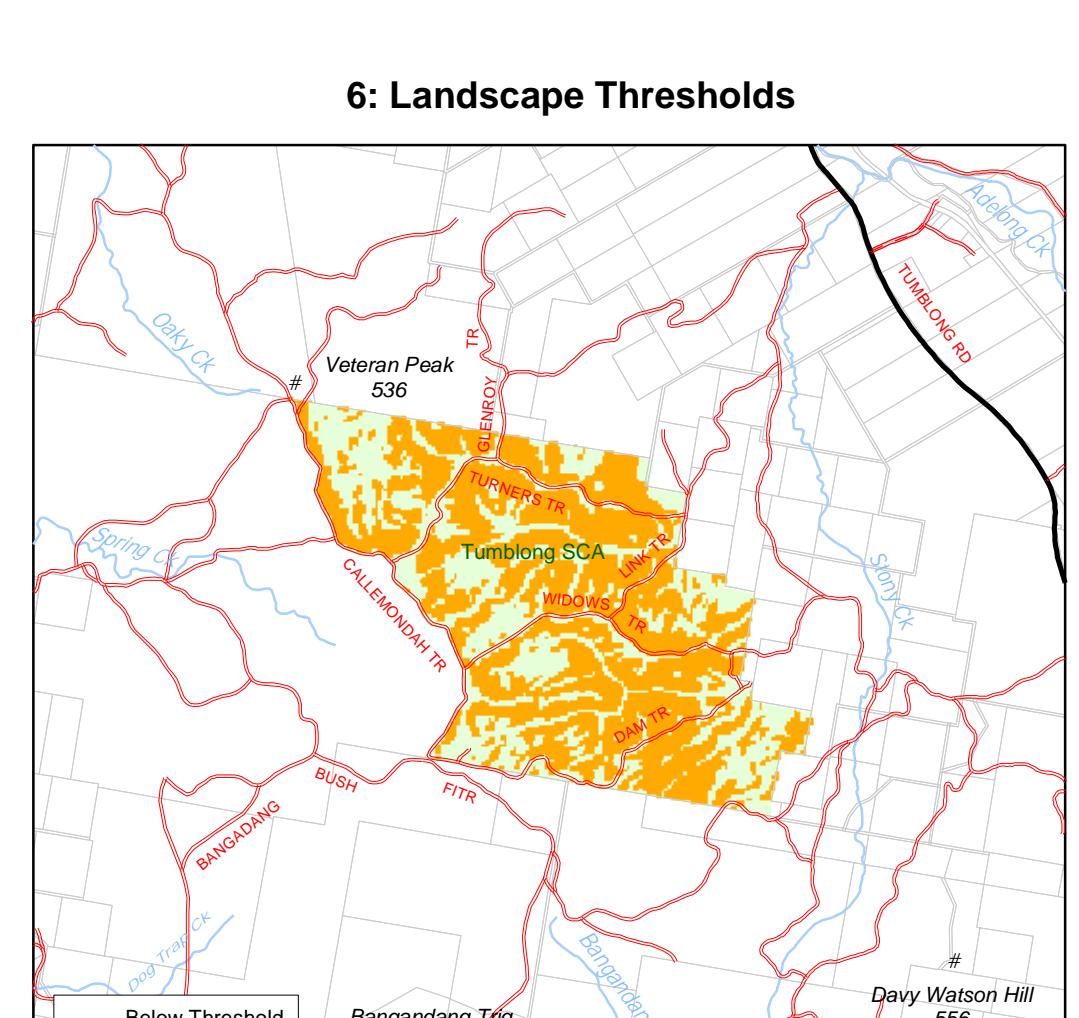
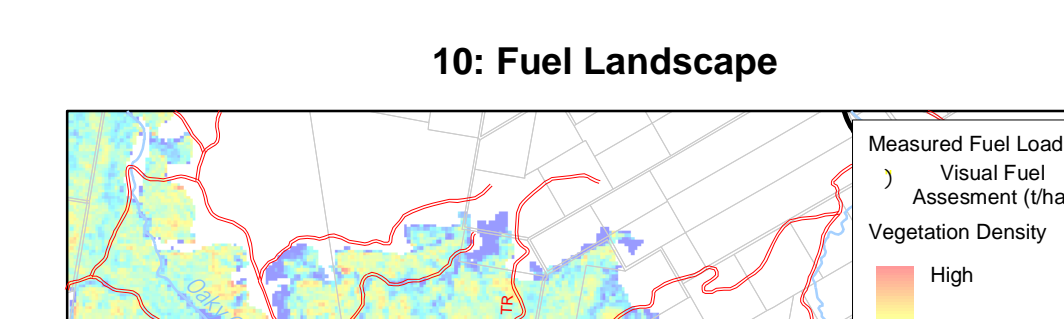
Fire Group	Common Name	Scientific Name	TSC Schedule	Most vulnerable Period
A	White box alluvial woodland	<i>Casuarina alvina</i>	Rare	

MAP 8: RISK ASSESSMENT - PROPERTY

Asset	Vulnerability & Impacts	Risk Mitigation
Reserve Assets	There are no identified reserve assets.	Provide guidelines in the event assets are constructed within the reserve.
Other assets (including private property of other landholders adjacent to the reserve)	Property assets may be damaged by fire escaping the reserve.	Participate in the management program through the Bush Fire Management Committee meetings. Following the reserve regular reports to all adjacent landholders to ensure potential private property risks.

MAP 9: BUSHFIRE MANAGEMENT ZONES

Management Zone	Definition	Management Guidelines
Asset (APZ)	Land, property and commercial assets in high bushfire behaviour potential risk areas on DEC reserves.	Assets should be evaluated annually to measure potential bushfire risk and to determine if the asset is in a high bushfire behaviour potential risk area. Management actions should be implemented to reduce the risk to the asset.
Fuel (FMA)	Fuel management zones are located for monitoring fire fuel, grasses, shrubs, and dead material and ecological health.	Monitor regularly to identify changes in the fuel landscape, which may indicate an increase in risk. Monitor to improve knowledge of ecological responses and health and identify undesirable changes in vegetation communities. Use areas to establish SPMZ, where appropriate.
Strategic (SMZ)	Strategic Fuel Management Zones are areas used to target general areas of high bushfire risk, high fire intensity, increased rate of ground scorching to considerable reserve APZ's. The zone is not a commitment to escalate prescribed burns in the target area, within the life of the plan.	The implementation of fuel management zones should comply with the SPMZ guidelines and should be conducted in areas identified in this strategy as a SPMZ. Implementing a program to reduce the risk of bushfire in the zone is not a commitment to escalate prescribed burns in the target area, within the life of the plan. Any program that includes monitoring before and after prescribed burns to determine effectiveness of the program on fuels and the ecological impacts.
Heritage 1 (HMZ1)	Areas of high priority natural and cultural conservation value. Identifies areas of cultural and natural assets. This zone is important for the protection of cultural heritage and the conservation of some species habitat to prevent bushfire damage or destruction.	Heritage areas should be assessed annually to determine potential bushfire risk 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 programs (where they exist). Manage during recovery according to RMI2 guidelines.
Heritage 2 (HMZ2)	This zone identifies areas of significance for cultural and natural assets across the broader landscape. This generally means parts of the reserve that have not been targeted and/or have no records of significant features or threatened species.	These heritage zones should be monitored to determine bushfire risk to biodiversity and managed in accordance with conservation policy and programs. Prescribed fire may be applied in these areas if appropriate for ecological purposes or protection of cultural heritage. Manage during recovery according to RMI2 guidelines.



MAP 7: CULTURAL HERITAGE

Key Management Guidelines

- Identified sites must be protected.
- DEC databases, maps and maps must be reviewed during incidents and for preparation of Review of Environmental Factors for fuel reduction burning or other works programs to ensure new records are included. Aboriginal site information from AHMS is available and subject to a Memorandum of Understanding. Site data must respect the agreement and must be used appropriately.
- For fuel reduction burning programs, protection measures will be applied in the Review of Environmental Factors and burn program guidelines.
- Where possible,
 - Traverse efforts will provide on-site site protection methods.
 - Activities will comply with all conservation management plans (where they exist).

Aboriginal Heritage

- No sites recorded, however potential tangible sites may include modified trees, scattered artefacts, banks, ceremonial sites and rock arrangements.
- Follow operational guidelines to protect heritage where new sites are identified.

Historic Heritage

- No sites recorded, however, potential tangible sites include ruins, fence lines etc.
- Follow operational guidelines to protect heritage where new sites are identified.

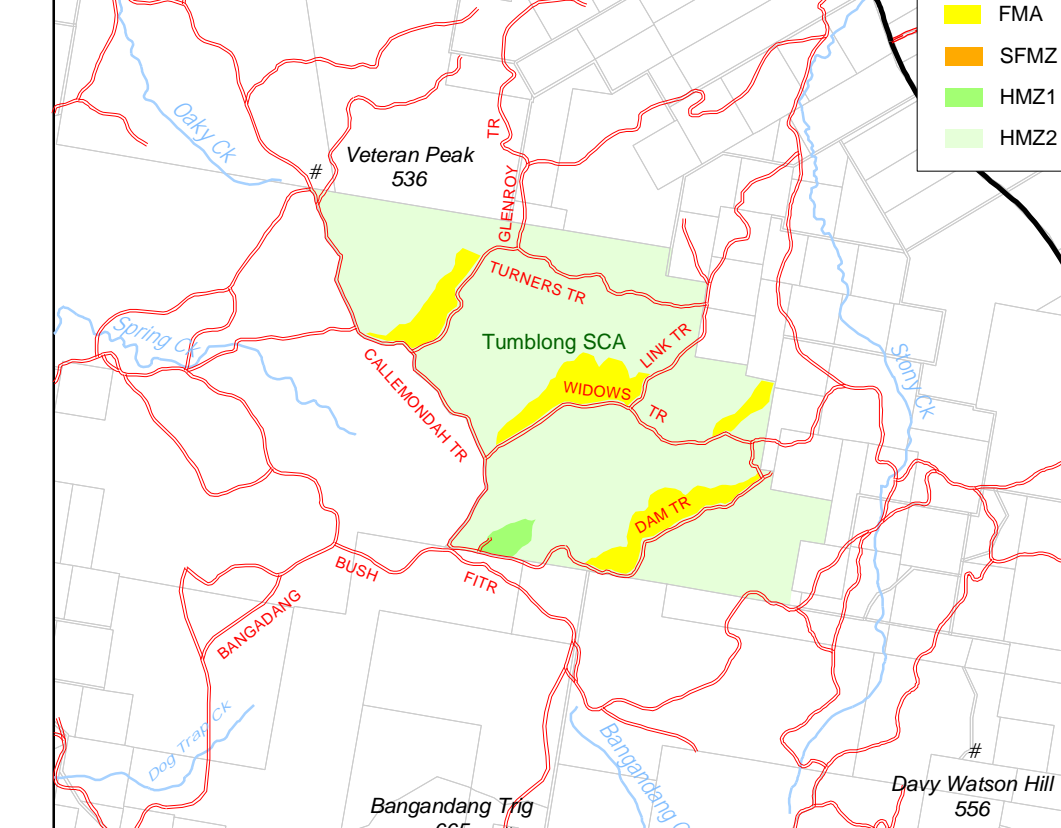
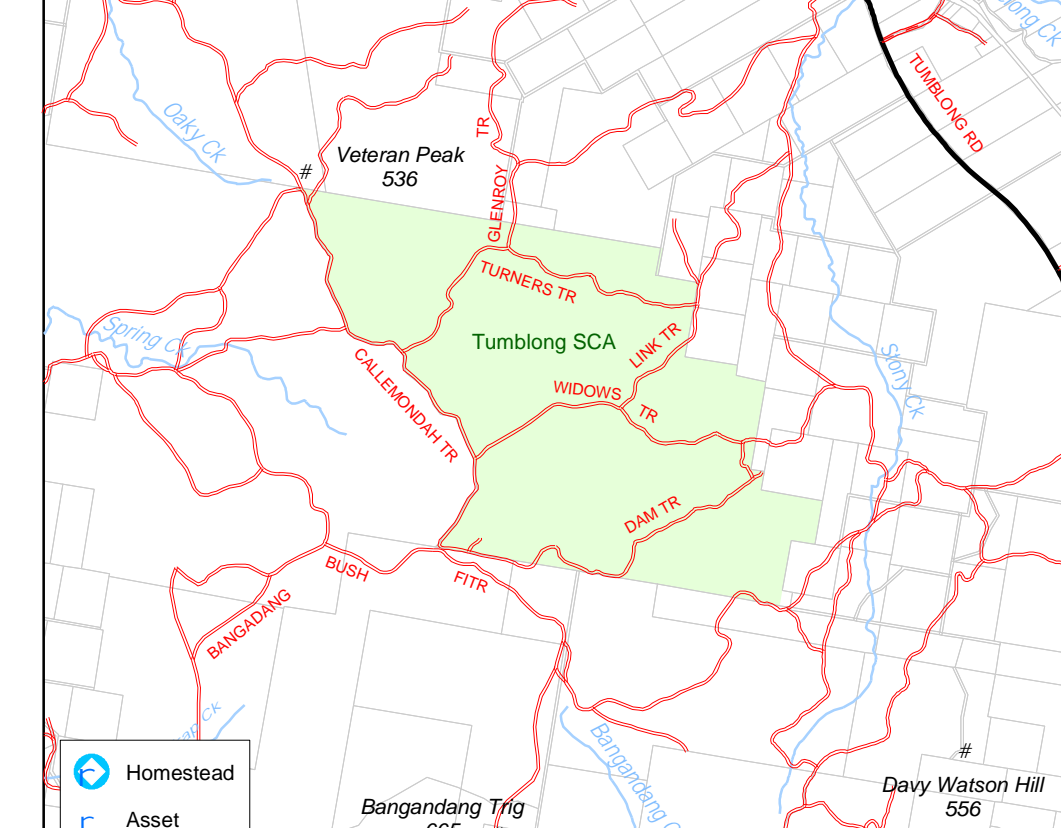
Note: Cultural heritage sites are based on data recorded on AHMS and HEMS databases, and field data recorded as at May 2005.

MAP 7: THREATENED FLORA

Fire Group	Common Name	Scientific Name	Schedule
A	White box alluvial woodland	<i>Casuarina alvina</i>	Rare

MAP 8: RISK ASSESSMENT - LIFE & PROPERTY

Asset	Vulnerability & Impacts	Risk Mitigation
Reserve Assets	There are no identified reserve assets.	Provide guidelines in the event assets are constructed within the reserve.
Other assets (including private property of other landholders adjacent to the reserve)	Property assets may be damaged by fire escaping the reserve.	Participate in the management program through the Bush Fire Management Committee meetings. Following the reserve regular reports to all adjacent landholders to ensure potential private property risks.



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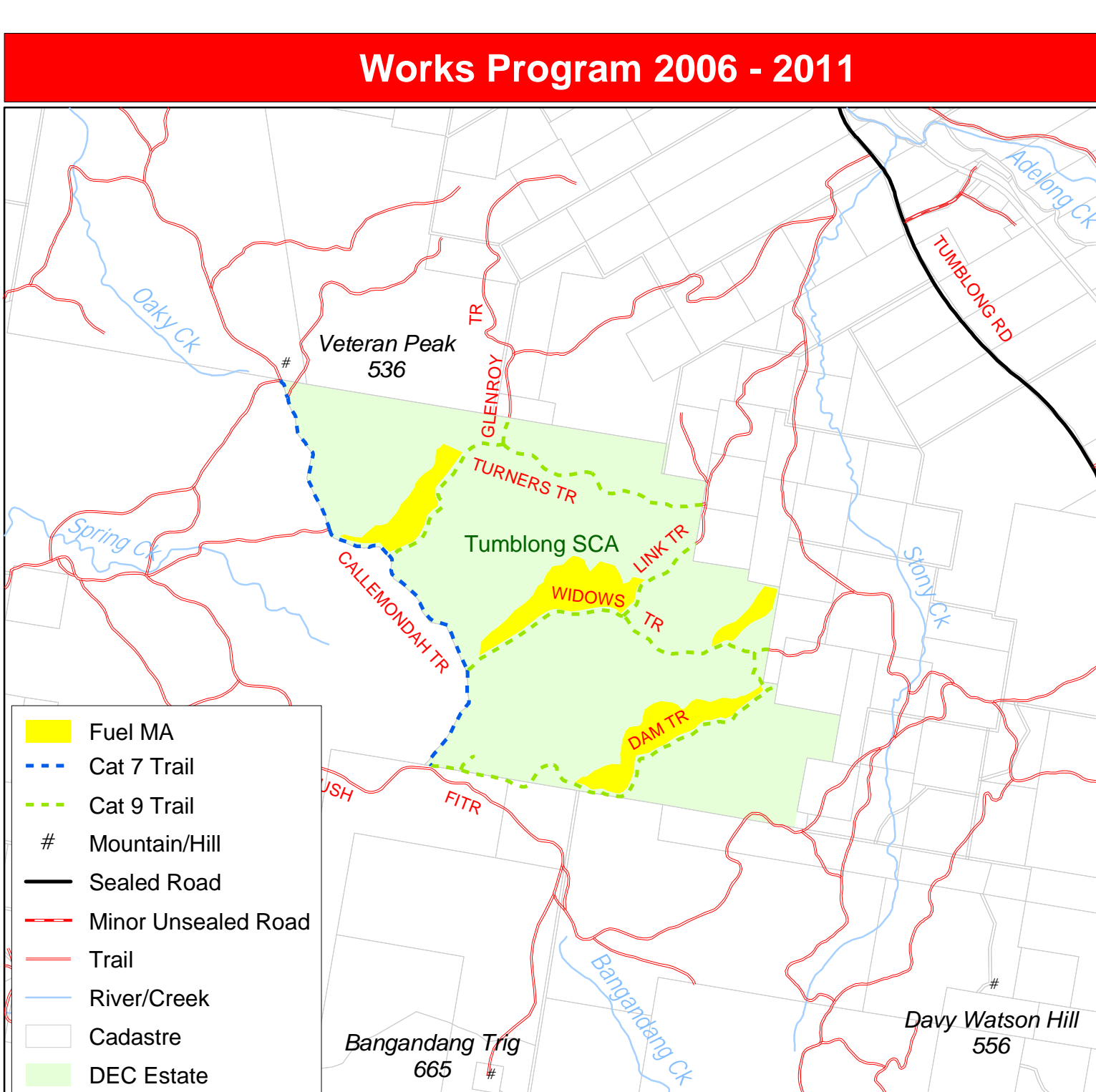
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South West Slopes Region Tumblong State Conservation Area Fire Management Strategy 2006

Scale: Works Program map 1:40,000, Location map 1:500,000, other maps 1:60,000
Version: June 2006 ISBN: 1 74137 289 5 DEC: 2005/115

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

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WORKS PROGRAM

Asset	Priority	Name, Area or Detail	Management Strategy	Proposed Works
Management	High	Management Trails	Maintain management trails for safe 4WD access for Category 1 fire vehicles. All trails to be clearly signposted at intersections and turnabouts.	Assess trails and signage annually and maintain or replace as per specific Regional Operations Program.
Trails	Low	Domestic Trails	Could be used during emergencies for Category 1 fire vehicles. Must be cleared to a standard level.	Assess trails and document condition and usability in a control register prior to each fire season.
Fuel MA	High	When and if they have been identified	Monitor areas to determine potential increased risk or changes within areas where Bushfire Behaviour Potential and Landscape slope have been identified.	Incorporate FMA's into Fuel Monitoring Information and Research section of this plan.
Heritage MZ 1	Medium	Cultural heritage, threatened species, habitats, communities and the landscape.	Monitor and protect natural cultural heritage values with appropriate fire management regimes. Monitor vegetation changes across the landscape (including fuel monitoring).	Identify site locations, through cultural research/monitoring (especially on trails or control lines) by the end of 2007. Assess vegetation thresholds every 2 years, within weeks program or directly after fire events. Follow operational guidelines.
Information & Research	High	Fuel and vegetation monitoring	Monitor established fuel monitoring sites (2) and areas identified as TMA's including photographic reference points.	Establish sites by 2008 for seasonal monitoring. Monitor sites by 2008 for seasonal monitoring. Monitor sites by 2008 for seasonal monitoring.
Fuel Management & Prescribed Burns	Low	No burns have been prepared for the life of this plan (5 years).	Any prescribed burns must be managed in accordance with RBC policy and planning guidelines.	Negative proposed works programs at Bushfire Management Committee Meetings where SPMZ's exist.