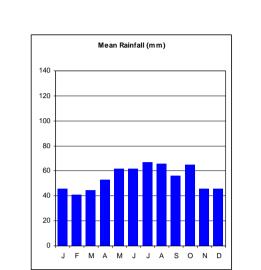
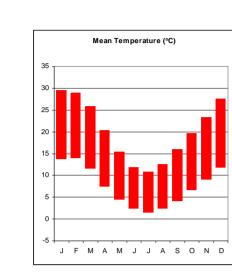
Location





RESOURCE INFORMATON

vingstone National Park (1919 ha) and Livingstone Crown Reserve (484 ha) were gazetted on 1st January 2001. On the 1st April 2005, the Crown Reserve was regazetted a State Conservation Area. The National Park and State Conservation Area represent similar terrain, floristics and fauna communities. For the purpose of this Fire Management Strategy, Livingstone National Park and Livingstone State Conservation Area will be referred to as the "Park" (2403 ha), unless otherwise stated. The Park covers an area of steep, terrain 25kms south of Wagga Wagga, New South Wales, where the highest point is 435 meters above sea level. The vegetation is largely made up of Eucalyptus Rossii, E. macrorhyncha, E. siderolxylon, Callitris endlicheri, box woodland species and large stands of grass trees. Creek lines feed into the agricultural dams, seepage lines and springs when significant rain falls. There is one permanent dam within the Park which holds water for the majority of the year, however it may be unreliable during periods of extended drought

unreliable during pe	nous of exterioed drought.			
Department of Environment and Conservation	Environment and Parks and Wildlife Service South West Slopes Region,		Riverina Federal Electorate. Wagga Wagga State Electorate. Wagga Wagga Local Government Area	
Rural Fire Service Riverina Zone (Bush Fire Management Committee) Other Agencies - Wagga Wagga Aboriginal Land Council - Murrumbidgee Catchment Management Authority				
IMPORTANT: The following planning information is based on the best possible data for each table category at the time of production of the plan (December 2005). When used in conjunction with other information and updates in NPWS GIS and Database management systems, concessions may be needed where asset management and biodiversity requirements differ.				

Slope Class	Min. Fine Fuel Range in T/Ha	Erosion Potential
0-10°	3-5	Less potential on lower slopes. Fuels of 4 t/ha average acceptable
10-15°	4-7	Expected increase in gullies and wash-outs Fuels of 6 t/ha acceptable
15-20°	10-12	Increase expected through mid slopes and drainage lines Fuels of 11 t/ha acceptable
20-25°	12-14	Increase across disturbed slopes and trails Fuels of 13 t/ha acceptable
25-30°	16-18	Large scale soil loss expected in disturbed areas. Impacts may be severe in areas feeding in to water courses. Fuels between 16-18 t/ha expected to prevent slope instability.
>30°	>20	High fuels on slopes >30° are rare in this Park. Soil loss can be minimised where the average fuels are >15 t/ha and vegetation remains undisturbed.

 Currently, 20.5% of the Park has potentially unstable soils/slopes (408 ha). Water quality may be compromised by soil disturbance and silt run off after fire and this may have impacts on amphibians or other organisms in drainage lines. Fine fuels potentially reduce moisture loss in soils during drier summer periods. - Fuel decomposition after disturbance may decrease after fire (depending on fire intensity, fire interval, cover and patchiness of the The presence of foams and retardants within the soil may effect soil and micro-organism activity.

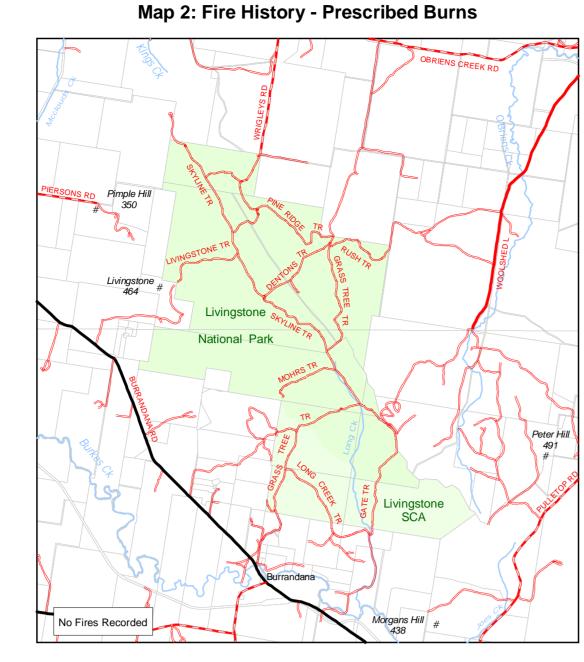
Fine fuel ranges below the recommended tonnes per hectare for the corresponding slope class are expected to increase slope instability, affect water quality and may affect some vegetation propagation. Fire Management Guidelines

Protect area from fire where the fine fuel range does not meet the slope class thresholds.

 Avoid trail construction on slopes >15 degrees. If prescribed burning, ensure burn areas are strategically implemented across the landscape so that large areas and slopes are not Avoid prescribed fire during years of extreme drought and for at least one year after a severe drought. Control lines or fuel breaks constructed during an incident should provide adequate drainage to prevent trail erosion.

Rehabilitation of control lines or fuel breaks constructed during fire events will be addressed during the incident in the Incident

Map 1: Fire History - Wildfire Army Ignition 9 Arson é Camp Fire d Lightning 1990 - 1991 1984 - 1985



scribed Burns	Map 3: Vegetation Communities
OBRIENS CREEK RD Peter Hill 491 Livingstone SCA Morgans Hill # 438	PERSONS RD Pimple Hill See table below for legend Description Descr

VegGroup Vegetation Description

27 Rough barked Red Box & White Box - Dry Shrub/Forb Open Forest

Dwyers Red Gum & Black Cypress Pine - Grass/Heath Woodland

Dwyers Red Gum - Heath Open Woodland

Currawang Wattle & She-Oak Shrubland

199 Natural Vegetation - Partially Cleared

MAP 4: VEGETATION THRESHOLD ANALYSIS

modelled to reassess threats.

conditions are suitable

conditions are suitable

Fire is neither required or to be avoided.

the modelling capabilities in DEC GIS.

Note: The threshold analysis is derived from vegetation community thresholds and fire history. In the event of fire in this Park, the

analysis would have to be performed again to identify changes and potential areas decreasing in biodiversity and structural diversity.

MAP 10: FUEL LANDSCAPE

Minimum Fuels (Modelled April 2004)

2.0 Data based on 10 fuel sites within Livingstone NP & SCA (760). This

Almost Underburnt and Underburnt.

almost underburnt and underburnt.

Areas which do not fall into one of the above categories.

be classed as Ok. Almost Underburnt and Underburnt.

<1 % Areas that do not have a threshold assigned to them or there is missing data, limiting

According to the vegetation regime thresholds, two consecutive fires have been

Additional fire in this area will lead to adverse fire regimes and may threaten

· Fire should be avoided for this year and until another analysis of thresholds is

• Fire should be avoided until vegetation communities reach minimum thresholds.

Planned fire may be introduced for fuel reduction burning for asset and strategic

protection programs, ecological purposes and unplanned fire events may be allowed

the intensity meets vegetation, flora and fauna community requirements

Planned fire may be introduced for fuel reduction burning for asset or strategic

the intensity meets vegetation, flora and fauna community requirements

>50% of any vegetation community group across the Park is classed as Ok,

protection programs and unplanned fire events may be allowed to burn if

• Fire should only be applied in areas if a loss of biodiversity is demonstrated.

Where possible, >50% of any vegetation community group across the Park should

The fire history is too short to determine whether it is underburnt or over burnt.

The vegetation community demonstrates a loss of biodiversity

>50% of any vegetation community group across the Park is classed as Ok,

May require fire for Asset protection, strategic or biodiversity reasons.

The vegetation community demonstrates a loss of biodiversity

recorded too close together and the area is Overburnt.

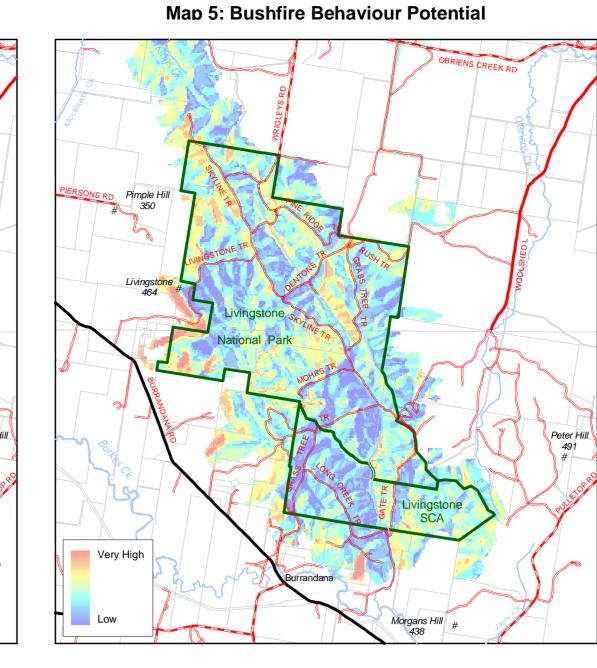
community biodiversity and lead to potential extinctions.

Time since fire is less than the threshold intervals.

· A fire will push this vegetation into the Vulnerable class.

Threshold Vegetation | % of Park | Interpretation & Management Guidelines

Map 4: Vegetation Threshold Analysis



MAP 5: BUSHFIRE BEHAVIOUR POTENTIAL

Vegetation Fuel Hazard Rating (under moderate conditions)

The fuel hazard ratings and modelling are specific to the reserve and map view area. The information is not for comparing reserves and landscapes across the area or broader landscape managed by the NPWS South West Slopes Region.

Map 10: Fuel Landscape

Slope Bushfire Behaviour

Very High >30 degrees

Scribbly Gum/Cypress Pine & Red Ironbark - Poa Tussock/Grass/Daphne Heath Woodland

Red Stringybark/Scribbly Gum & Rough barked Red Box - Dry Forb/Tussock/Grass Open

Low Nil recorded

Aspect Bushfire Behaviour

Rating

Dwyers Gum - Heath Open Woodland

Natural Vegetation - Partially Cleared

Dwyers Red Gum & Black Cypress Pine - Grass/Heath Woodland

Rough barked Red Box & White Box - Dry Shrub/Forb Open Forest

Aspect in degrees

20 - 60 & 160 - 210

210 - 250 & 330 - 20

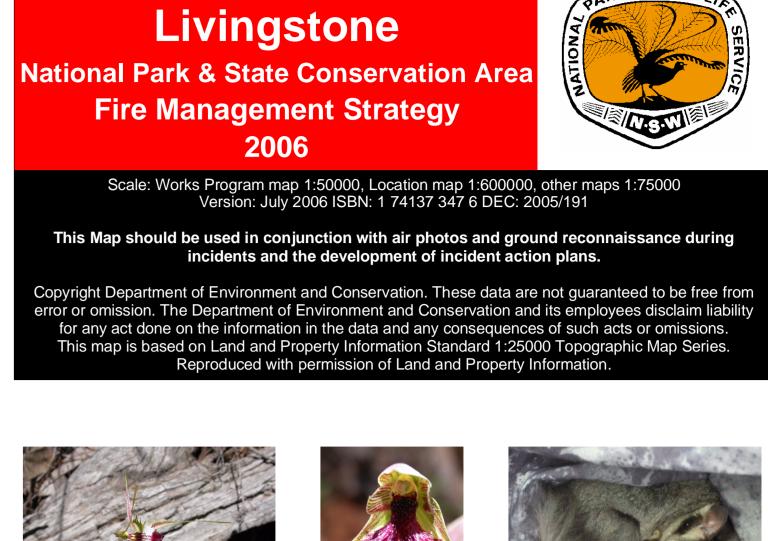
60 - 160

Medium Currawang Wattle & She-Oak Shrubland

Very High 250 - 330

Slope in degrees

0 - 10 degrees



South West Slopes Region







	MAPS 1 & 2: FIRE HISTORY				
Ignitions	There have been 7 recorded ignitions within the Park since 1985 (causes include lightning, arson, campfires and army ignitions). 3 other ignitions have been recorded adjacent to the Park (causes include lightning, campfire and arson). There is limited recorded data prior to 1984. Note that the area has been managed by NPWS since 2001.				
Prescribed Burns	No prescribed burns have been implemented within the Park by NPWS since gazettal in 2001. There is limited information regarding prescribed fire by previous management. Trail maintenance and clearing programs have been applied and will continue as part of the Park maintenance program.				
Wildfire	The 7 ignitions, recorded above, that started wildfire's within the Park were small (less than 1-2 hectares) and did not develop or spread beyond the Park boundary. This is probably due to the weather conditions at the time and the quick response of fire crews to suppress and limit the spread of fires. In 1992 a small fire occurred near the south-west boundary of the Park. It is unclear where the fire originated from, however this fire burnt agricultural land and a small proportion of the Park. State Forest records describe a fire that burnt a quarter of the area known as Livingstone State Forest in 1933. Apparently, timbers in the western part of the forest area were destroyed.				
Fire Frequency	The frequency and interval between fire has important implications relevant to biodiversity and fire management. In conjunction with fire history records, there are no indications (recent fire scars) of a large scale or intense fire event in the last 50 years. The park vegetation communities are rare representatives of a landscape unaffected by fire.				

MAP 7: THREATENE			THREATENED FLORA		
Fire Group	Common N	ame	Scientific Name	Schedule	
A Yass Dais		y Ammobium craspedioides		V	
Fire Vegetation Group Group		Thr	Threatened Flora Management Guidelines & Considerations		
А	27	species. There is litt resprout after fire. Where possible; Avoid ground dis within the vegeta Slashing may be The species shou Impact from retai	ctices (tilling, ploughing & slashing) are considered responsible to no impact expected from planned or unplanned fire. This turbance in close proximity to populations of this species and tion group where potential populations may exist. used within this community, but is not recommended during suld be monitored to ensure weed species do not interfere with redants and foams is unknown. Avoid application where species within the vegetation group management guidelines.	s species may minimise disturbance spring. plant recovery.	

Note: Floristic information is based on data researched in January 2005, collated from CSIRO and NPWS floristic fire response data sets. The vegetation group numbers should be referenced against the vegetation management guidelines in the Vegetation Communities and Thresholds section of this plan, as some community regimes may be in conflict with species management

MAP 7: CULTURAL HERITAGE

For prescribed burning programs, protection measures will be outlined in the Review of Environmental Factors and burn plans.

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.

 Trained officers will provide advice on site protection methods. Activities will comply with all conservation management plans (where they exist). Known sites must be clearly identified and protected during fire suppression and fuel reduction burning Recorded sites include, modified trees and scattered artefacts. Potential sites may include burials, ceremonial sites and rock arrangements. Follow operational guidelines to protect heritage during incidents.

Known sites must be clearly identified and protected during fire suppression and fuel reduction burning Recorded sites include, mining relics (shafts) which may be hazardous to crews and machinery during suppression and prescribed activities.

· Potential sites may include ruins, fence lines etc.

Prepare and implement regular preparedness programs that clear any debris not associated with the site to
decrease the potential of losing heritage feature.
Follow operational guidelines to protect heritage

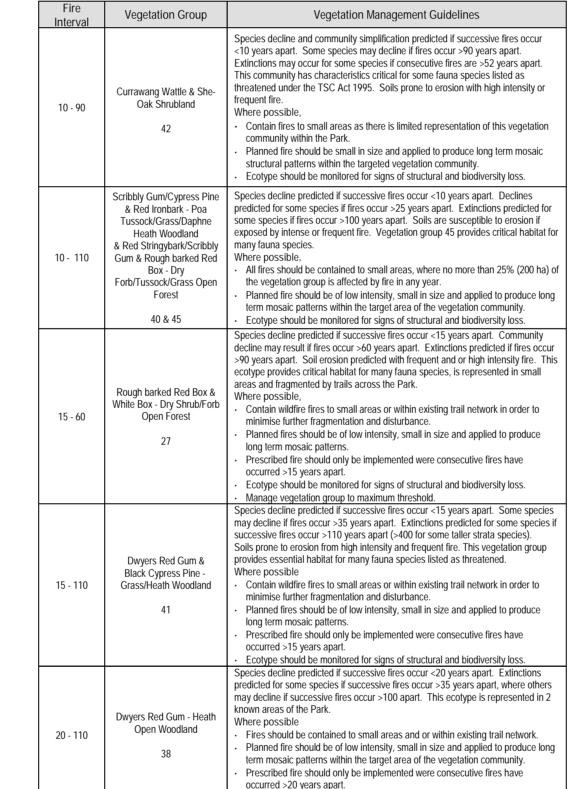
Note: Cultural heritage sites are based on data recorded on AHIMS and HHIMS databases and field data recorded as at Dec 2005.

Fire Group	Common Name	Scientific Name	TSC Schedule	Most vulnerable Period
	Diamond firetail	Stagonopleura guttata	V	Aug-Jan
	Gilbert's whistler	Pachycephala inornata	V	Aug-Dec
	Grey-crowned babbler (eastern subsp.)	Pomatostomus temporalis temporalis	V	Jul-Feb
Α	Hooded Robin	Melanodryas cucullata	V	Jul-Nov
	Regent honeyeater	Xanthomyza phrygia	Е	Jul-Feb
	Squirrel glider	Petaurus norfolcensis	V	Jun-Dec
ı	Superb Parrot	Polytelis swainsonii	V	Sept-Dec
В	Barking owl	Ninox connivens	V	Jun-Nov
	Gang Gang	Callocephalon fimbriatum	V	Oct-Jan
	Swift parrot	Lathamus discolor	Е	Sept-Dec
	Turquoise parrot	Neophema pulchella	V	Aug-Dec
	Brown treecreeper	Climacteris picumnus	V	May-Dec
С	Bush-stone Curlew	Burhinus grallarius	Е	Jul-Dec
C	Speckled warbler	Pyrrholaemus sagittatus	V	Aug-Dec
	Painted snipe	Rostratula benghalensis	V	Oct-Dec
D	Black-chinned honeyeater (eastern subsp.)	Melithreptus qularis qularis	V	Jul-Dec

Note: Fauna species requirements may differ to vegetation (floristic) requirements.

MAP 7: THREATENED FAUNA

ps	Threatened Fauna Management Guidelines			
	Frequent fire and or high intensity fires will effect these species. Fire often leads to a decline in insect abundance and biodiversity, which some species are dependent on. Infrequent high intensity fire may promote dense understorey growth, which benefit some, but not all species. Felling hollow bearing	Fire Interval	Vegetation Group	Vegetation Management Gui
	trees during 'mopping up' activities potentially decreases nest hollow availability for all species. The least likely period of vulnerability to fire is between March and May. Where possible; Any fire should be kept to small areas or managed to produce long term mosaic burn patterns more suitable in sustaining species habitat requirements. Prescribed fire should ensure large patches of shrubs, standing and fallen timbers are left in tact. Implement mosaic fire regimes designed to maintain the floristic & structural diversity of the understorey, however minimise fire in grassy woodland areas. Protect mature, large and hollow bearing trees.	10 - 90	Currawang Wattle & She- Oak Shrubland 42	Species decline and community simplification predicted <10 years apart. Some species may decline if fires occ Extinctions may occur for some species if consecutive This community has characteristics critical for some fauthreatened under the TSC Act 1995. Soils prone to error frequent fire. Where possible, Contain fires to small areas as there is limited reprecommunity within the Park.
	Frequent fire and or high intensity fires will effect these species. Infrequent high intensity fire does not benefit this species. Felling hollow bearing trees during 'mopping up' activities potentially decreases			 Planned fire should be small in size and applied to p structural patterns within the targeted vegetation cor Ecotype should be monitored for signs of structural
	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. The least likely period of vulnerability to fire is between February and April. Where possible; Maintain fire intervals within the vegetation group management guidelines (15- 110 years). Fire should be kept to smallest possible size. Prescribed fire should be executed where required as part of a recovery program. Planned mosaic fires should be implemented to maintain floristic & structural diversity of the understorey suitable for this species. Protect mature, large and hollow bearing trees.	10 - 110	Scribbly Gum/Cypress Pine & Red Ironbark - Poa Tussock/Grass/Daphne Heath Woodland & Red Stringybark/Scribbly Gum & Rough barked Red Box - Dry Forb/Tussock/Grass Open Forest	Species decline predicted if successive fires occur <10 predicted for some species if fires occur >25 years apa some species if fires occur >100 years apart. Soils are exposed by intense or frequent fire. Vegetation group many fauna species. Where possible, - All fires should be contained to small areas, where refer the vegetation group is affected by fire in any year. - Planned fire should be of low intensity, small in size term mosaic patterns within the target area of the vecal terms.
	Frequent fire may disadvantage these species by simplification of forest structure. Removal of dead and down trees limits potential available foraging & nesting sites. The decrease in invertebrate abundance and diversity following fire effects these species. The least likely period of vulnerability to fire is between January and May. Where possible; Avoid frequent and or high intensity fires. Protect areas of habitat from any fire that consumes the canopy & or large & hollow bearing trees. Prescribed fire should be of minimal size (not exceeding 20% of a vegetation group) Small, long-term mosaic burns may be more suitable in protecting this species habitat.	15 - 60	Rough barked Red Box & White Box - Dry Shrub/Forb Open Forest 27	Species decline predicted if successive fires occur <15 decline may result if fires occur >60 years apart. Extino >90 years apart. Soil erosion predicted with frequent a ecotype provides critical habitat for many fauna species areas and fragmented by trails across the Park. Where possible, Contain wildfire fires to small areas or within existing minimise further fragmentation and disturbance. Planned fires should be of low intensity, small in size long term mosaic patterns.



MAP 3: VEGETATION COMMUNITIES & THRESHOLDS

40 Scribbly Gum/Cypress Pine & Red Ironbark - Poa Tussock/Grass/Daphne Heath Woodland 818.9 34%

ed Stringybark/Scribbly Gum & Rough barked Red Box - Dry Forb/Tussock/Grass Open

Note: Secondary Grassland occurs off the park, but is included in the bushfire behaviour potential to evaluate the broader landscape.

		term mosaic patterns within the target area of the vegetation community.	Willimum Fuels (Wodelled April 2004)	2.0	Data based on 10 luer sites within Livingstone NP & SCA (760). This
	40 & 45	Ecotype should be monitored for signs of structural and biodiversity loss.	Maximum Fuels (Modelled April 2004)	9.7	data is used to determine the relationship of fuel sites with NDVI (Vegetation Index) from LANDSAT Imagery (2004) to calculate
		Species decline predicted if successive fires occur <15 years apart. Community decline may result if fires occur >60 years apart. Extinctions predicted if fires occur	Average Fuels (Modelled April 2004)	5.4	vegetation density across the park landscape.
		>90 years apart. Soil erosion predicted with frequent and or high intensity fire. This ecotype provides critical habitat for many fauna species, is represented in small	Recorded Fine Surface Fuels	T/ha	Notes
	Rough barked Red Box &	areas and fragmented by trails across the Park.	Minimum Fuels (Recorded April 2004)	3.7	Vegetation Group 41 - Low NDVI & Low Modelled fuels
	White Box - Dry Shrub/Forb	Where possible, - Contain wildfire fires to small areas or within existing trail network in order to	Maximum Fuels (Recorded April 2004)	14.3	Vegetation Group 27 - Medium NDVI & Medium Modelled fuels
60	Open Forest	minimise further fragmentation and disturbance.	Average Fuels (Recorded April 2004)	8.6	60% of sites measured below 10 t/ha.
	27	 Planned fires should be of low intensity, small in size and applied to produce long term mosaic patterns. 	Management Notes		
		 Prescribed fire should only be implemented were consecutive fires have occurred >15 years apart. Ecotype should be monitored for signs of structural and biodiversity loss. Manage vegetation group to maximum threshold. 	t/ha during 2004 destructive fuel samplin recorded fuel ranges between 2 and 8 t/h	project. Using a, where the over	and aerial fuels between 5 to 8 t/ha and 35% of the reserve between 2 to the Overall Fuel Hazard Guide (NRE 1998), 90% of sites surveyed erall all fuel hazard rating was low to moderate. This data indicates, acrocribed for strategic fuel management zones (8-15t/ha for 60-80% of zone
110	Dwyers Red Gum & Black Cypress Pine - Grass/Heath Woodland 41	Species decline predicted if successive fires occur <15 years apart. Some species may decline if fires occur >35 years apart. Extinctions predicted for some species if successive fires occur >110 years apart (>400 for some taller strata species). Soils prone to erosion from high intensity and frequent fire. This vegetation group provides essential habitat for many fauna species listed as threatened. Where possible - Contain wildfire fires to small areas or within existing trail network in order to minimise further fragmentation and disturbance. - Planned fires should be of low intensity, small in size and applied to produce long term mosaic patterns. - Prescribed fire should only be implemented were consecutive fires have occurred >15 years apart. - Ecotype should be monitored for signs of structural and biodiversity loss.	onto surrounding land. Although strategic fuel management zon landscape is important over the long tern references have been established in Livi vegetation conditions. Environmental co monitored regularly, provide data to upda	es have not been to determine ch gstone National nditions and vege te fuel landscape is reserve and m	July 1998). These fuel loadings are, however, sufficient to carry a wildfing established within the reserve, monitoring fuels and vegetation across the langes in environmental conditions. Fuel monitoring sites with photograph Park and State Conservation Area to monitor landscape fuel and etation structure will change and these established fuel sites will, if the maps and review fire management zones. It is information is not for comparing reserves across the egion.
		Species decline predicted if successive fires occur <20 years apart. Extinctions predicted for some species if successive fires occur >35 years apart, where others may decline if successive fires occur >100 apart. This ecotype is represented in 2 known areas of the Park.	Map 9:	Bushfir	e Management Zones
110	Dwyers Red Gum - Heath Open Woodland 38	Where possible Fires should be contained to small areas and or within existing trail network. Planned fire should be of low intensity, small in size and applied to produce long term mosaic patterns within the target area of the vegetation community. Prescribed fire should only be implemented were consecutive fires have occurred >20 years apart. Minimise the potential for fire to consume shrub layers	This of	WRIGLEYS RD	OBRIENS CREEK RD
olds or n	nodel potential impacts of fire on	oral Vegetation (Partially Cleared) has no available species lists to determine intervals, in the community. Vegetation group management may affect TSC species habitat guidelines should be consulted in conjunction with vegetation management guidelines.	PIERSONS RD Pimple Hill 350	3	

) Fuel Site

APZ

FMA

HMZ1

HMZ2

256.1 11%

27.4 1%

881.2 37%

	Vegetation Group 41 - Low NDVI & Low Modelled fuels		TR	12
	Vegetation Group 27 - Medium NDVI & Medium Modelled fuels		R MOHRS	
	60% of sites measured below 10 t/ha.		A A A A A A A A A A A A A A A A A A A	
			TR.	10.5
g the verses of the control of the c	and aerial fuels between 5 to 8 t/ha and 35% of the reserve between 2 to 5 to 8 t/ha and 35%, 90% of sites surveyed all all fuel hazard rating was low to moderate. This data indicates, across ribed for strategic fuel management zones (8-15t/ha for 60-80% of zone), July 1998). These fuel loadings are, however, sufficient to carry a wildfire established within the reserve, monitoring fuels and vegetation across the inges in environmental conditions. Fuel monitoring sites with photographic early and State Conservation Area to monitor landscape fuel and action structure will change and these established fuel sites will, if maps and review fire management zones. The information is not for comparing reserves across the gion.	Measured Fuel Average E) (t/ha Vegetation Den High	Ory Fuel 7.4	Morgans Hill #
re	Management Zones)		
	OBRIENS CREEK RD		MAP 9: BUSHFIRE MA	NAGEMENT ZONES
1		Management Zone	Definition	Management Guidelines
	The state of the s	Asset (APZ)	Life, property and commercial assets in high Bushfire Behaviour Potential risk areas on DEC estate.	Assets should be evaluated annually to measure poten hazards and or increased threats. Works program to follow Risk Assessment (Life and Property) Guidelines.
INE	Atop. TR Property To an artist of the state	Fuel (FMA)	Fuel Monitoring Areas are localities for monitoring fine surface fuel, grasses, shrubs, dead and down material and ecological health.	Monitor regularly to quantify changes in the fuel landsc which may indicate an increase in risk. Monitor to improve knowledge ecological responses an health and identify undesirable changes in vegetation communities. Use areas to establish SFMZ's where appropriate.
N N N N N N N N N N N N N N N N N N N	GRASS TREE TR	Strategic (SFMZ)	Strategic Fuel Management Zones are areas used to target 'potential' risks of high fuels, high fire intensity, increased rate of spread, spotting or to consolidate reserve APZ's. The zone is not a commitment to execute prescribed burns in the target area, within the life of the plan.	The implementation of fuel management programs sho comply with BFCC guidelines and should be conducted areas identified in this strategy as a SFMZ. Implementing prescribed burns or other vegetation manipulation program should only occur where more th 80% of the zone exceeds 15 t/ha (BFCC). Any program must include monitoring before and after prescribed burns to determine effectiveness of the progon fuels and the ecological impacts.
4			Areas of high priority natural and cultural conservation value. It identifies areas of	Heritage areas should be assessed annually to determ potential hazard, threats to cultural heritage, and thresholds for TSC and vegetation communities.

zone is important for the protection of cultural

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'.

heritage and the conservation of some species habitat to prevent declining numbers or

Prescribed fire may be applied in these areas if

appropriate for ecological purposes or protection of cultural

Implement recovery plan guidelines (where they exist).

These heritage zones should be monitored to determine

threats to biodiversity and managed in accordance with

appropriate for ecological purposes or protection of cultural

Manage during incidents according to HMZ2 guidelines.

Prescribed fire may be applied in these areas if

conservation policy and principles.

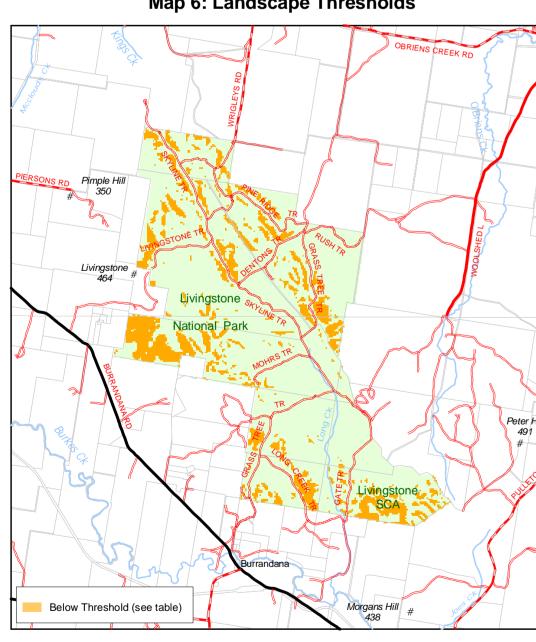
Manage during incidents according to HMZ1 guidelines.

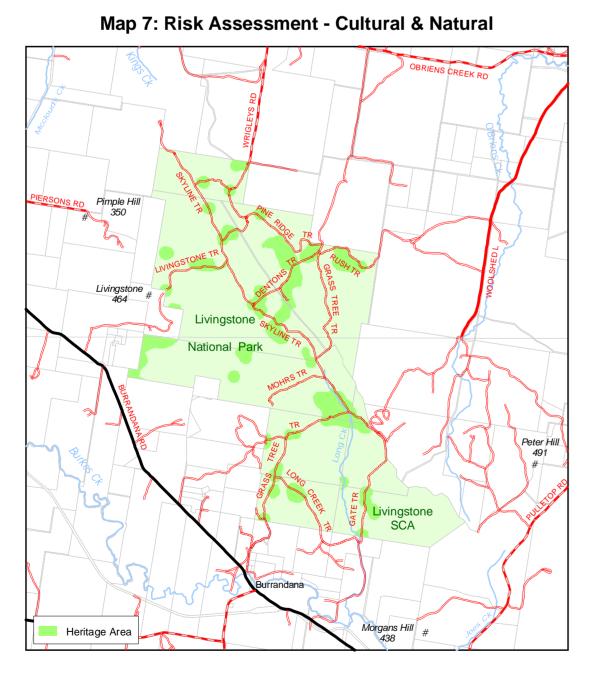
	Park Hectares	% of Park	Works Program 2006 - 2011
d	N/A 881	0 % 37 %	Fuel Monitoring Site Cat 1 Trail
	1261	52 %	# Mountain/Hill
	256	11 %	Sealed Road Main Unsealed Road
- 10 (1 - 20 0 -30	in degrees degrees degrees degrees grees		Minor Unsealed Road Trail River/Creek Cadastre
	SEEK RD ORIGINAL ORIG	Peter Hill 491 #	Livingstone Livingstone National Park National Park DEC Estate Peter Hill 491 Livingstone SCA Morgans Hill 438

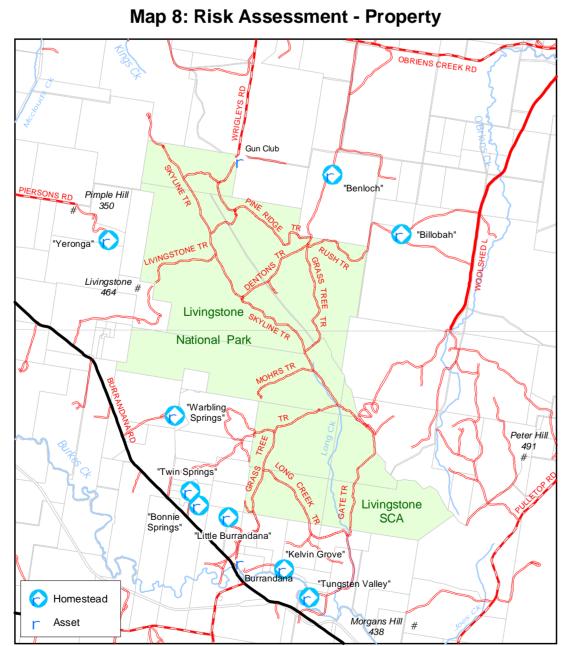
OBRIENS CREEK RD OBRIENS CREEK RD	Mana Z
TR (AUS) TR	F (F
vingstone structure Table Tabl	Str (S
Peter Hill 491 # Livingstone	Her (H
Burrandana Livingstone SCA	Her (H
Morgans Hill # 438	

		WODI	<s p="" program<=""></s>	
Asset	Priority	Name, Area or Detail	Management Strategy	Proposed Works
	High	Management Trail (Cat 1 vehicles)	 Maintain management trails for safe 4WD access for Cat 1 vehicles. All trails to be clearly signposted at intersections and trailheads. 	Assess annually. Maintain as required or as specified in Regional Operations Program and
Trails	Low	Management Trail (Cat 9 vehicles)	 Maintain access for Cat 9 Vehicles, as part of the NPWS multipurpose management trails. All trails to be clearly signposted at intersections and trailheads. 	coordinate with neighbour & local RFS programs.
	These trai	ls do not comply with the Bush Fire Cod	ordinating Committee Guidelines for the Classification of Fire	Trails - Policy No. 1/03.
Asset PZ	High	There are no Economic, commercial or inholdings with Assets within the park.	Where appropriate, compliment leaseholder & private property APZ, in areas identified as SFMZ.	As agreed through the Bushfire Management Committee.
Strategic FMZ	Medium	Where and if they are identified.	 Work with neighbours and local RFS to ensure appropriate access and firebreaks adjacent to the reserve are maintained to protect assets and reserve features. 	Agree through the Bush Fire Management Committee.
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.
Heritage MZ 2	Low	General landscape, natural and cultural conservation values.	Manage and protect natural & cultural values with appropriate fire management regimes.	Assess when possible or after fire events within the Parks.
Information & Research	Low	Fuel and vegetation monitoring.	 Continue measuring/monitoring fuels at all established sites (10). Maintain photographic site records. 	Every 5 years (min).Every 5 years & after fire (recovery monitoring).
Fuel Management & Prescribed Burns	Low	Prescribed fire may be used during the life of this plan where appropriate.	Monitor and assess changes in areas of potential hazard to assets. Any proposed hazard reduction burns must be managed in accordance with DEC policy and agreements with Local Bush Fire Management Committee.	Negotiated proposed works programs at Bushfire Management Committee Meetings.

Мар	6:	Land	Isca	ре	Thr	esho	olds	
11/					_			-







Frequent fire and or high intensity fires will effect this species. Infrequent high intensity fire does not benefit this species. This species does not persist in remnants less than 200 ha in size. The least likely

Vegetation management guidelines should be managed at maximum fire intervals (25-100 years).

Protect areas of habitat from fire, which consumes the canopy & or large & hollow bearing trees.

Prescribed fires should be small, long-term mosaic burns that are more suitable in protecting this

Fire should be kept to a small area (<25% of the vegetation groups in any fire season).

period of vulnerability to fire is between January and June.

MAP 8: RISK ASSESSMENT - LIFE & PROPERTY			
Asset	Vulnerability & Impacts	Fire Management Guidelines & Considerations	
On park Assets	There are no identified assets within the Park.	Provide guidelines in the event assets are constructed within the Park.	
Other assets (including private property or other lands adjacent to the park)	Property assets may be damaged by fire escaping the Park.	Maintain access trails and firebreaks within the Park that will assist in fire fighting efforts. 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.	

MAP Asset	8: RISK ASSESSME Vulnerability & Impacts	NT - LIFE & PROPERTY Fire Management Guidelines & Considerations
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