

Mount Buller and Mount Stirling Mountains Fire Management Plan



Mountains Fire Management Planning Committee, 2018

Preface

The Mount Buller and Mount Stirling Mountain Fire Management Committee (MFMP) is responsible for providing a strategic and integrated approach to fire management within the Mount Buller and Mount Stirling Alpine Resort areas. This task forms part of a broader state and regional framework established under the Emergency Management Act (1986) and is supported by the State Fire Management Planning Committee and the Hume Regional Strategic Fire Management Planning Committee (HRSFMPC).

A key responsibility of the Mount Buller and Mount Stirling MFMP is the development of a Mountains Fire Management Plan (MFMP) on behalf of the Mount Buller and Mount Stirling Mountains Emergency Management Planning Committee for considered endorsement by the Mount Buller and Mount Stirling Alpine Resort Management Board (RMB). This plan, which aligns with the Hume Regional Strategic Fire Management Plan 2011-2021, describes how regional authorities, RMBs, fire agencies and other relevant organisations can work together to effectively anticipate, respond to and recover from bushfire events affecting Mount Buller and Mount Stirling Alpine Resort areas.

The Mount Buller and Mount Stirling Municipal Fire Management Plan forms a subplan to the Mountains Emergency Management Plan.

While the management of all types of fires is important, this plan has focused on bushfire in the first instance. The life of this plan is for three years and it is envisaged that future updates will include planning for other types of fire. Furthermore, it is important to note that this plan recognizes, but does not duplicate, the extensive work already being undertaken in fire management across the resorts. This document is essentially a plan for improving integration of this existing work and developing improved methods for working together.



Version Control Table

Version #	Date of issue	Author(s)	Brief description of change
Version 1.0	4/5/12	C. Hajek and C. Price	Draft MFMP for Comment
Version 2.0	16/7/12	C. Price, J. Chivers	New edits, edits from ARMB
Version 3.0	30/11/12	MFMP	Responses to stakeholder comments
Final	8/03/2013	MFMP	Signoff
Version 4.0	7/3/2018	MFMP	Full revision

Authorisation

This MFMP was endorsed as a sub plan to the Mount Buller and Mount Stirling Mountains Emergency Management Plan through a formal motion by the Mount Buller and Mount Stirling Mountains Emergency Management Planning Committee (MEMPC) at their meeting on 7th March 2018, for which the interim Chairman/Mountain Emergency Recovery Officer (MRM) will sign for and on behalf of the Members of the Mount Buller and Mount Stirling MEMPC.



Signed:  Date: 13 March 2018

Louise Perrin
Interim Chairperson
Mount Buller and Mount Stirling Municipal Fire Management Planning Committee
Environmental Services Manager
Mount Buller Mount Stirling Resort Management

Signed:  Date: 13/3/18

Mark Bennetts
CEO
Mount Buller Mount Stirling Resort Management

Signed:  Date: 4/4/2018

Stewart Kreltshheim #21156
Operations Manager
District 23
CFA

Signed:  Date: 12/6/2018

Lucas Russell
Land and Fire Regional Manager
District Manager, Goulburn
Department of Environment, Land, Water and Planning

Signed:  Date: 22/5/2018

Laurie Blampied
General Manager
Buller Ski Lifts



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1 Introduction

1.1 Context and Background

Victoria has a long history of community, government and organisations working cooperatively to combat the threat of bushfire. However recent challenges such as the decade of dry conditions, an increase in people living in high risk areas and the occurrence of a number of major fires, prompted the need for increased coordination and cooperation to secure fire safety across the state.

In response to these challenges the Victorian Government established an Integrated Fire Management Project (IFMP) Framework for Victoria in 2008.

IFMP provides a framework for consistent and effective fire management planning (see Figure 1) across the fire management continuum, by providing a multi-agency approach, bringing together fire management planners and other stakeholders, including emergency service agencies, government departments, private organisations and the community. Working together they build relationships and share information to plan across public and private land tenures for all types of fire. IFMP is based on analysis and management of risk, uses best practices and builds on existing information.

IFMP aims to achieve a consistent and effective means for fire management planning within Victoria through a commitment to cooperation, including information sharing and the building of collective knowledge.

— The Integrated Fire Management Planning Framework, State Fire Management Planning Committee

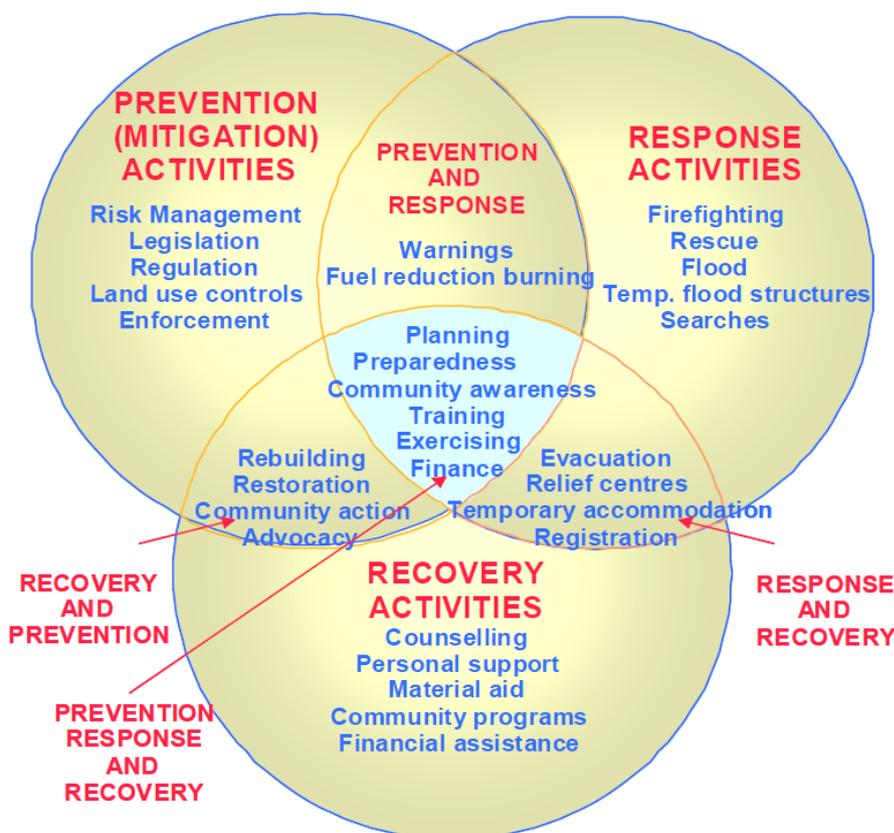
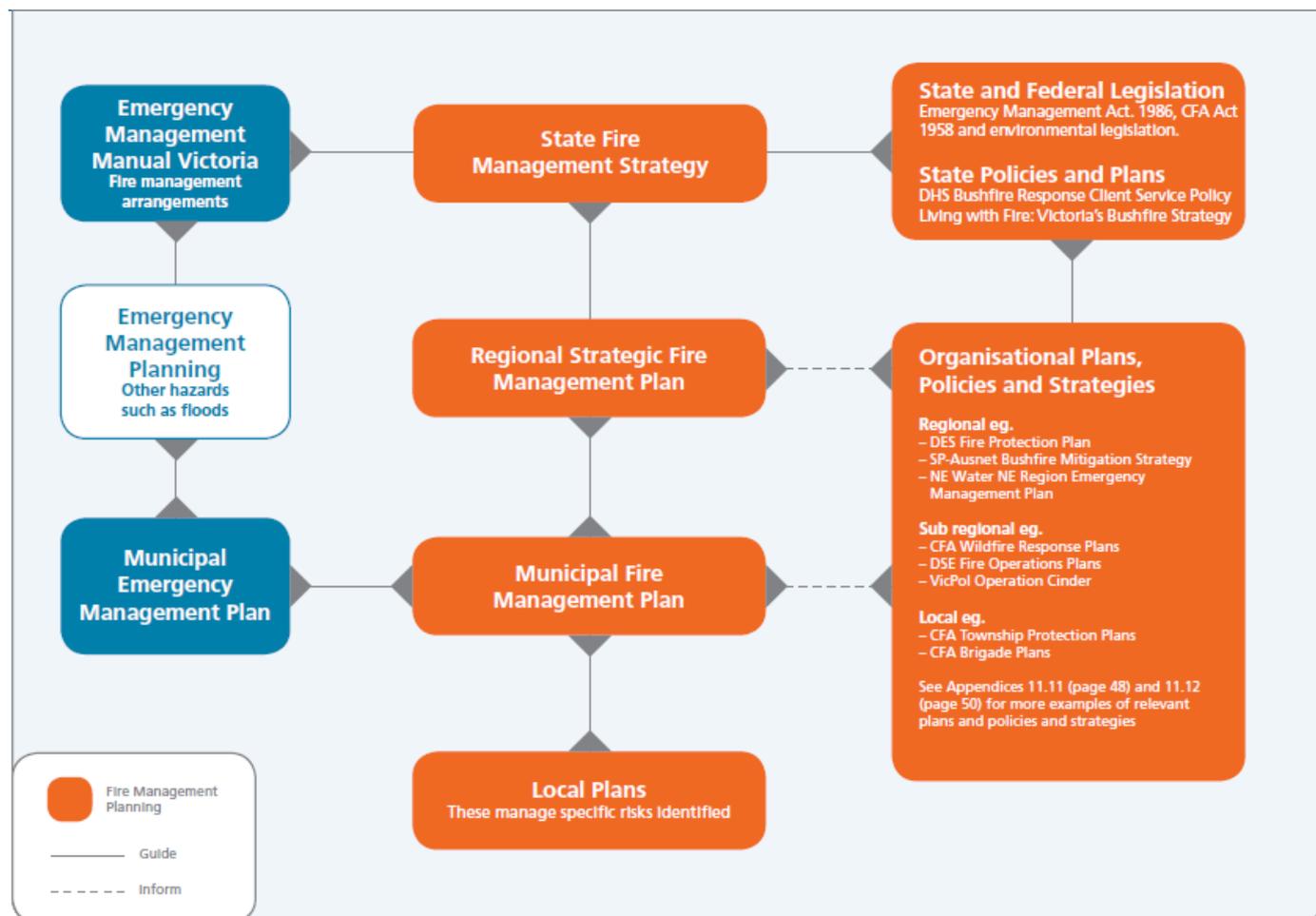


Figure 1: Examples of Emergency Management Activities clustered into groups



Figure 2: Victorian Management Plans and Policies



The framework provides structures, policies and procedures to help build on the existing spirit of cooperation and networks that already exist in fire management. It establishes a tiered system of state, regional and municipal plans that provide strategic direction to fire management in Victoria, as illustrated in Figure 2.

The purpose of Municipal Fire Management Committees (MFMPC) is to provide a municipal level forum for building and sustaining organisational partnerships with regards to fire management; and to ensure that plans of individual agencies are linked effectively so as to complement each other. This is facilitated by MFMPs having a membership consisting of representatives from key stakeholder organisations with respect to fire management within the municipality.

MFMPs also act as a sub-committee of their respective Municipal Emergency Management Planning Committee. *Part 6A: Guidelines for Municipal Fire Management Planning*, of the *Emergency Management Manual of Victoria*, outlines the terms of reference for these committees, identifies their minimum core membership and requires the development of a Municipal Fire Management Plan.

Mount Buller and Mount Stirling MFMPC membership consists of:

- Mount Buller and Mount Stirling RMB
- CFA
- DELWP
- Buller Ski Lifts



The formation of an MFMP and the development of a MFMP signify an important first step in the transition from Municipal Fire Prevention Plans developed under the guidance and direction of Municipal Fire Prevention Committees, to a MFMP developed under the guidance and leadership of a MFMP.

1.2 Period and Purpose

Organisation and agencies involved in fire management already have a range of activities, plans, policies and procedures that are directly involved with, or that impact on fire management. This MFMP builds on this existing work, so as to chart and coordinate the implementation of measures in use across the municipality designed to minimise the occurrence and mitigate the effects of bushfires. It also seeks to identify the need for adopting or developing new activities, processes and policies, and communicating this need to the relevant responsible authority.

In doing so it takes into consideration all aspects of fire management;

- Prevention – Regulatory and physical measures to ensure that emergencies are prevented, or their effects mitigated
- Preparedness – Arrangements to ensure that in the event of an emergency occurring all those resources and services that area needed to cope with the effects can be efficiently mobilised and deployed
- Response – Actions taken in anticipation of, during and immediately after an emergency, to ensure its effects are minimised and that people affected are given immediate relief and support
- Recovery – The coordinated process of supporting emergency affected communities in the reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical wellbeing.

MFMPs have a three year planning cycle and this plan has a three year duration commencing from the date of Board endorsement. However it will be subject to annual review and modification as appropriate. The current MFMP concentrates on bushfires, however it is expected that future iterations of the plan will further incorporate management of *structural and chemical* fires as well as the use of fire for a variety of purposes.

1.3 Preparation Process

This MFMP has been developed in accordance with Part 6A of the Emergency Management Manual of Victoria and using the IFMP planning process as described in the IFMP Guide. This process follows a seven stage planning cycle as illustrated in Figure 3.

Stage 1: Environmental Scanning – establish a municipal base line from which fire management planning and decision making can be made and measured, including development of fire management objectives.

Stage 2: Risk Assessment – identification, analysis and evaluation of the fire risks that potentially impact on the municipality.

Stage 3: Analysis – analysis of treatment options for achieving the fire management objectives.

Stage 4: Decide – select the most appropriate risk treatment options to achieve the fire management objectives.

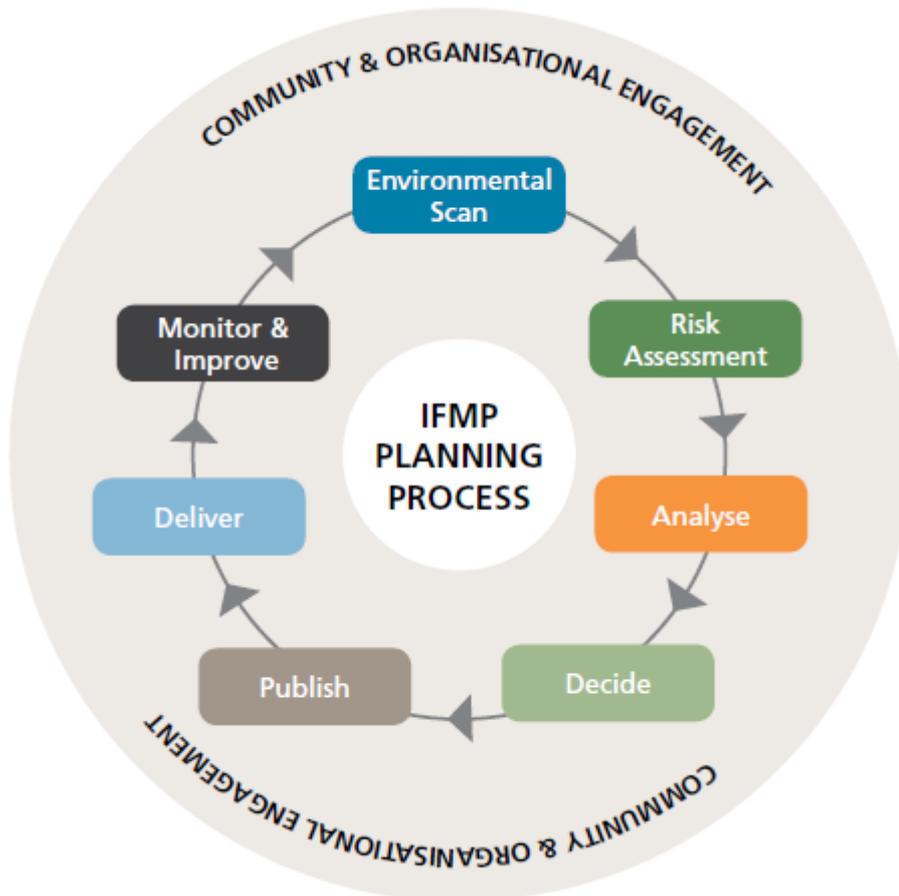
Stage 5: Publish –once the community and stakeholders have validated the draft MFMP, the relevant authorities endorse, publish and distribute it.



Stage 6: Deliver - relevant organisations implement the agreed risk treatments in the MFMP.

Stage 7: Monitor and Improve – track delivery and effectiveness of risk treatments so as to continually improve the MFMP’s contribution to realising the fire management objectives.

Figure 3: Integrated Fire Management Planning Process



Over a period of 12 months members of the committee met on a regular basis to work through the steps outlined above for the purpose of developing this plan. This commenced with formally establishing the Mount Buller and Mount Stirling MFMP as a subcommittee of the Mount Buller and Mount Stirling MEMPC and endorsing the terms of references based on those in Part 6A of the Emergency Management Manual of Victoria.

Subsequent activities include undertaking a stakeholder analysis, developing a communications strategy, identifying and assessing fire risks of concern with the municipality and assigning appropriate treatments to address them.

This planning process is risk based and aligns with the Australian Standard AS/NZS ISO 31000:2009 Risk Management – Principles and Guidelines, Figure 4 describes how this is achieved.

All concerns identified were considered and defined as risk statements with the cause and impact clearly described. Each of these risk statements were then assessed using the State Bushfire Consequence Table, Likelihood table and Risk Assessment matrix (See Attachment 1) as endorsed by the State Fire Management Planning Committee.



Figure 4: IFMP Alignment with AS/NZS ISO 31000:2009

Stage of the IFMP planning cycle	Relevant aspect of the AS/NZS ISO 31000:2009 Risk Management – Principals and Guidelines
Engagement Plan	Communicate and consult
Environmental Scan	Establish the context
Risk Assessment > Analyse	Identify the risk > Analyse the risk > Evaluate the risk
Decide > Publish	Determine and document treatment options
Deliver	Treat the risk
Monitor and improve	Monitor and review

2 Engagement and Communications

Stakeholder engagement and participation is an essential element of fire management planning. Stakeholders are required to participate for a range of reason, including (but not limited to);

- Legislative responsibilities in relation to fire management.
- Leadership
- Provision of hazard expertise and technical advice
- Subject to hazard impact – directly and/or indirectly
- Land tenure and management arrangements
- Expressed expectation
- Influenced and/or support mitigation.

Stakeholder engagement is required during all seven stages in the IFMP planning cycle, the aim being for them to participate together in the collaborative development, delivery and monitoring of the MFMP.

Engaging with stakeholders in the development and implementation of the MFMP is an essential tool for drawing on existing knowledge and experience and to build support for and involvement in this plan.

These communication and engagement tasks have been built around the model of public engagement developed by the International Association of Public Participation (IAP2). This model is called the Public Participation Spectrum and is detailed in Figure 5 below. This spectrum provides a framework for planning effective stakeholder engagement about any issue or plan. It is used as the basis for communication and engagement planning during the development and subsequent implementation phases.

Figure 5: IAP2 Public Participation Spectrum

Inform	Consult	Involve	Collaborate	Empower
Provide balanced information to stakeholders	Obtain feedback on analysis and decisions	Work directly together to ensure issues are understood	Partner in each aspect of decision making	Place final decision making in the hands of primary stakeholders



2.1 Community and Organisational Engagement Plan

In accordance with the IFMP planning guide the Mount Buller and Mount Stirling MFMP undertook a stakeholder analysis and used this as a basis for the development of a Communication and Engagement Plan concerning the MFMP.

The stakeholder analysis consisted of a two-part process; first identifying the key stakeholders who needed to be engaged in the MFMP's development and secondly determining the nature and level of their interest in fire management planning. This second step involved considering each stakeholder in relation to eight different fire management roles which are described in Figure 6 and four different stakeholder types as outlined in Figure 7.

Figure 6: Fire Management Roles

Role	Description
Fire Coordination	Bringing together of fire management agencies and elements to ensure effective response to an incident or emergency. CFA has legislated responsibility under the <i>CFA Act 1958</i> for the prevention and suppression of fires and for the protection of life and property in the Country Area of Victoria. In accordance with provisions in the <i>CFA Act 1958</i> and the <i>Forest Act 1958</i> , DELWP has fire management and fire suppression responsibilities for state forests and national, state and regional parks.
Land Owner/Manager Responsibilities	Landholder/managers are heavily involved in fire prevention and fire suppression on land under their control. They have legislated responsibilities to extinguish a fire burning on their land and to prevent fires from starting from the use of equipment and vehicles (<i>CFA Act 1958, Crimes Act 1958</i>). They are also required to comply with relevant government laws, relevant planning or building permit codes/conditions and conditions associated with permits to burn.
Response	Actions taken in anticipation of, during and immediately after a fire incident to minimise the impact of the fire.
Recovery	A coordinated process of supporting emergency affected communities in the reconstruction of physical infrastructure and restoration of emotional, social, economic and physical wellbeing.
Community Education	Community education is learning and social development, working with individuals and groups in their communities using a range of formal and informal methods
Community Care	Community care is about identifying and catering for groups or individuals with specific needs, before during and after fire.
Asset Protection	Asset protection involves protecting key community infrastructure such as power, water supplies, roads, gas pipes and protecting community assets such as parks and the environment. Asset protection can also involve the protection of private assets such as housing, plantations, crops and fences.
Regulatory	The issuing of permits for lighting fires. The development of and compliance with planning controls and permits for developments and building that take into account fire risk/management. The regulation and issuing of permits involving vegetation removal or fuel reduction activities for fire management purposes.

Figure 7: Stakeholder Type and Engagement Level

Stakeholder Type	Description	Participation Level
Internal	Formal responsibilities for IFMP process and outcomes	Collaborate and empower
Primary	MFMP membership, responsibility for development of the plan, communication and engagement across and within organisations rest with these organisations	Collaborate and empower
Secondary	RSFMPC membership or fire management role within municipality, may be requested to provide specific inputs, dependent upon outputs, or requested to be involved in specific tasks,	Involve and consult
Tertiary	Strong interest in outcomes and may have valuable information/viewpoints to share	Inform and consult



Once a stakeholder had been categorised, the appropriate level of participation in the process and the different types of engagement activities required were determined. The results of this stakeholder analyses and the resulting Communication and Engagement Plan can be found in Attachment 2.

2.2 Community Engagement

This Plan was initially developed with strong community engagement and consultation with Stakeholders. Community engagement is very much seen as an ongoing responsibility of the Mount Buller and Mount Stirling MFMP and is especially important during review periods. Consequently, the Communication and Engagement Plan is a live and evolving document that will be shaped according to the MFMP's needs over time. In this manner it will be able to guide the process of broader community engagement with additional activities and details being incorporated as required.

In addition to the activities attributed to the MFMP, individual key stakeholders will be utilising their existing processes and undertaking their own community engagement activities in support of IFMP and the MFMP.

3 Environmental Scan

Environmental scanning involves identifying key themes, issues, trends and gaps that may affect or influence fire management. It establishes the base level of knowledge and understanding required for supporting risk identification, risk assessment and risk treatment within a fire management context.

It involves gathering and interpreting data and information relevant to fire management, so as to make predictions, assumptions and conclusions concerning fire risk for the Resorts over the period of the plan. It also provides the basis for identifying fire management objectives and decision making with regard to selecting strategies to achieve these objectives.

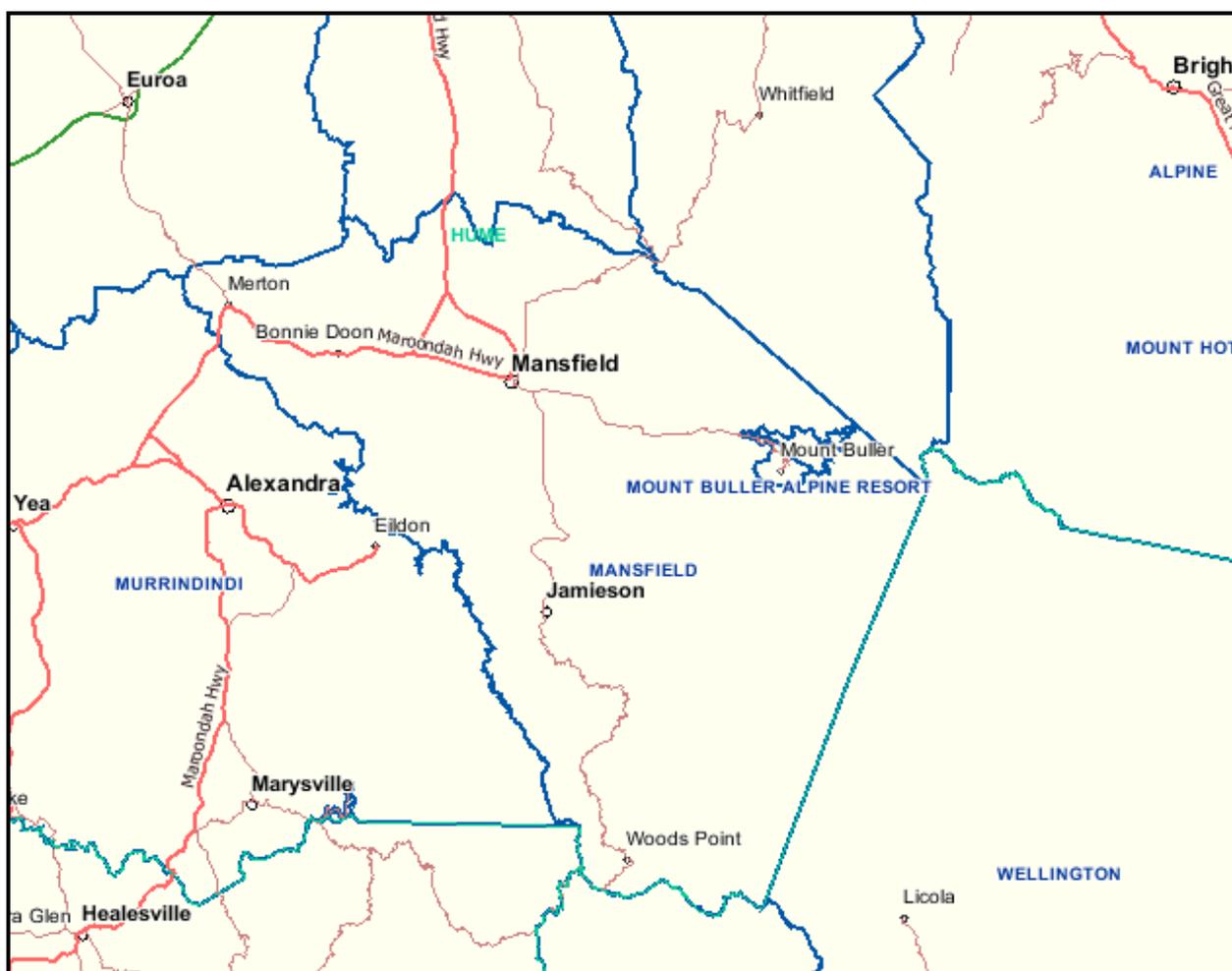
In undertaking this environmental scanning exercise the MFMP gathered information relevant to fire management from a wide range of sources. Data sources used included the CFA's VFRR, DELWP Fuel loads and natural values, OESC Consequence of Loss and ABS IRSED. This information was interpreted using the committee's extensive knowledge and experience with fire management to make predictions, assumptions and conclusions concerning fire risk for the municipality over the period of the plan.

3.1 Alpine Resorts Profile

3.1.1 Location and Tenure

Mount Buller and Mount Stirling Alpine Resorts are surrounded entirely by Mansfield Shire but are managed independently by the Mount Buller and Mount Stirling Alpine Resorts Management Board ("RMB").





The RMB was created in 2004 and is charged under the *Alpine Resorts (Management Act) 1997* with the management of the areas of Mount Buller and Mount Stirling Alpine Resorts. The RMB is therefore a statutory body and works as a committee of management over the Crown Land area of the Resorts. The RMB delivers a number of services on the mountain including providing services such as garbage disposal, water supply, sewage, roads, fire protection and snow making and developing tourism and marketing strategies for promoting the Resorts. The RMB is also responsible for the protection, enhancement and restoration of the natural and cultural heritage of the Resorts.

The Resorts are Alpine areas located to the west of the Great Dividing Range and snow can fall at any time of the year particularly in areas above 1,200 metres in elevation. The Resorts both have similar natural topography and vegetation and cover an area of just under 5,000 hectares. They are both approximately 250km from Melbourne and 46 km from Mansfield.

Mount Stirling Alpine Resort's lowest point is 603 metres (above sea level) at its western margin on the Delatite River at Mirimbah. The summit of Mount Stirling is its highest at 1,749 metres. Similarly, Mount Buller Alpine Resort rises from the 603 metre mark at Mirimbah on its western margin to the summit of Mount Buller at 1,805 metres. The ski field and village is generally situated between 1,400 meters and 1,800 metres

Both of the Resort boundaries are generally defined by the 1,300 to 1,350 metre contour line with approximately 67% or 3,296ha of the Resorts above 1,300m. The Resorts abut the Alpine National Park to the south and southwest and the Mansfield State Forest on other boundaries.

DELWP and Parks Victoria and the Shire of Mansfield are major land managers adjacent to the Resort areas.



3.1.2 Population and Demographics

Mount Buller Alpine Village has a permanent residential population of less than 30 during the warmer months. Over the winter period the total number of people using the resort during the day can reach 16,000 and the village can accommodate up to 7,900 people in private apartments, commercial premises, ski lodges and staff accommodation. During the ski season from June to September, approximately 268,000 people visit the resort. Over the summer period, this is reduced to approximately 150,000 visitors.

There are no permanent residents living on Mount Stirling. Total annual visitor numbers are estimated at 50,000 with the majority of people visiting the area during the summer months. These summer visitors consist of four-wheel drivers (57%) and sightseers (25%). Other visitors to the area include horse riders, bushwalkers, school groups, orienteers and mountain bike riders.

There are no lift facilities at Mount Stirling and winter visitors participate in alpine touring, cross country and back country skiing, snowboarding, snow camping, snow shoeing and snow play. In summer many people pass through the Resort to get to Craig's Hut, the surrounding Mansfield State Forest or the Alpine National Park. There is only ski patrol accommodation on the mountain (at Mirimbah) and visitor accommodation is not catered for other than in permanent refuge huts or temporary campsites (including the Alpine Camp at the Cricket Pitch). A number of people and groups regularly camp, in both summer and winter, within the boundaries of the resort.

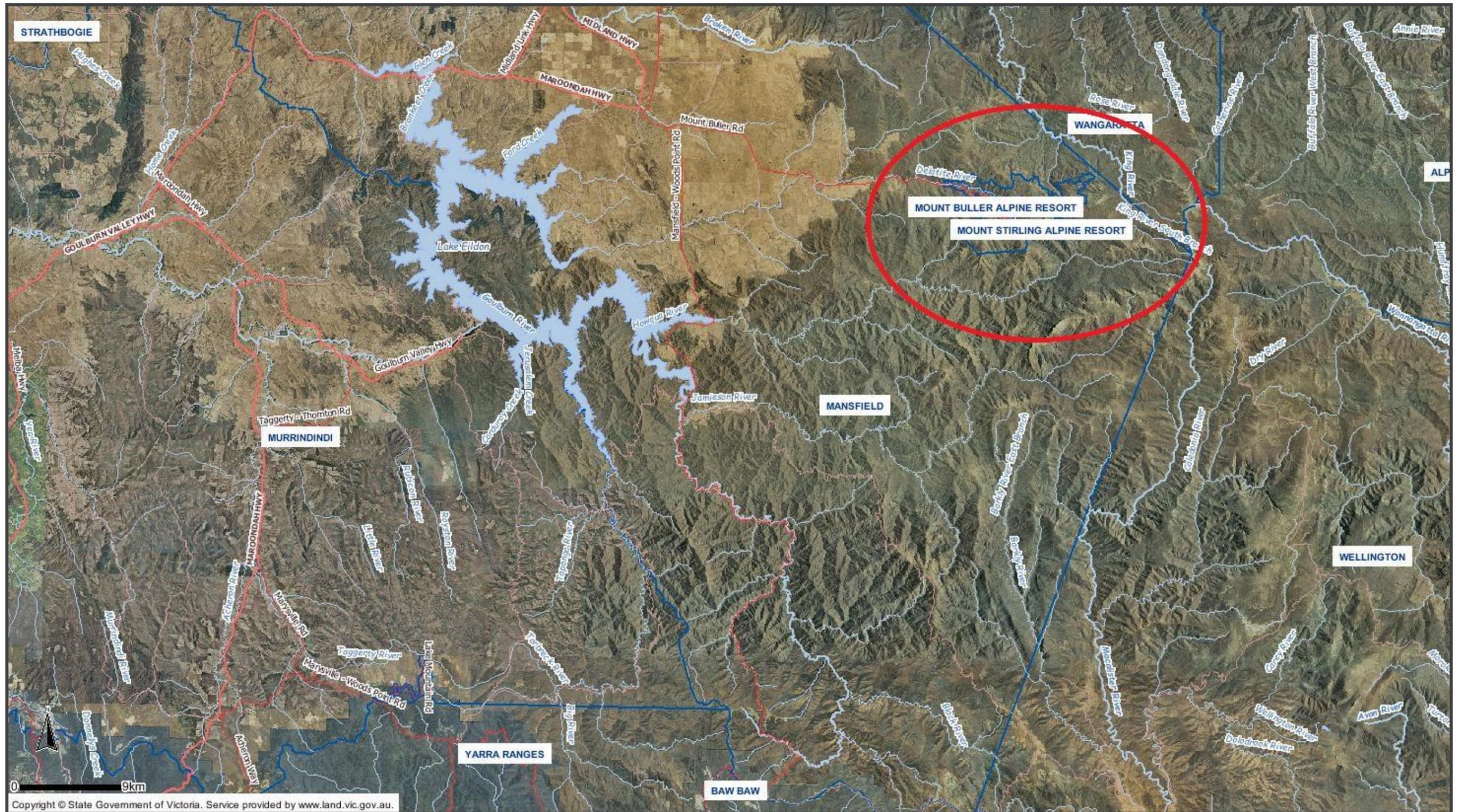
3.1.3 Natural Environment

The Resorts are situated at the headwaters of one of the major rivers in northeast Victoria: the Goulburn River. They also form part of the Ovens River catchment. Mount Buller Resort area includes the headwaters of the Howqua and Delatite Rivers and Mount Stirling Resort, the headwaters of Delatite, Howqua and King Rivers. A number of smaller tributaries occur in both Resort areas including Boggy Creek, Buller Creek and Chalet Creek which all feed into the Delatite River. The Howqua River tributaries include Black Dog Creek, Cow Camp Creek, Gin Creek, Whisky Creek, Little Buller Creek, South Buller Creek, Falls, Stirling, Bluff, Brown and Currajong.

At Mount Buller the water supply is sourced from Boggy Creek where it is pumped into reservoirs at Burnt Hut and Baldy. The Mount Buller Waste Treatment Plant treats sewage and discharges to the Black Dog Creek. Water supply for Mount Stirling (TBJ) is sourced from Falls Creek.



Figure 8: Mount Buller and Mount Stirling Alpine Resorts



The Resorts are both heavily vegetated with Dry (Montane) and Wet (Sub Alpine) Forests. Within the Montane vegetation community, the most common tree species are Mountain Ash whilst the sub-alpine regions most commonly contain Snow Gum. Some sub-alpine woodland, approximately 300 hectares, has been cleared around the summit of Mount Buller to provide ski runs and areas for the village. At Mount Stirling, the Mountain Ash was extensively logged in the past and the regrowth is generally less than 70 years old. Near the summit of Mount Stirling 200 hectares, which is alpine, has no trees. Snow Grass and Heath are the dominant forms of vegetation in this area.

319 species of plants have been recorded within the Resorts boundaries. Of these, 38 species are considered to be threatened. One threatened ecological community also exists within the Resorts – Alpine Sphagnum Bogs and associated Fens Community (Fed).

The Alpine Resorts vegetation types have been mapped as either fire sensitive or fire influenced vegetation types. Fire sensitive vegetation types include plants that may be either damaged or killed by fire. Fire influenced vegetation refers to the influence fire can have on vegetation structure by favouring or eliminating certain plants. Figure 9 below includes the mapped areas of fire sensitive and fire influenced vegetation in Mount Buller and Mount Stirling Alpine Resorts.

Indigenous fauna, including 26 types of mammals, 56 varieties of birds, 8 species of reptile and five frog taxa have been recorded within 5 kilometres of the Resorts. Invertebrate fauna within the Resorts is largely unknown although some species, such as the Bogong Moth (*Agrotis infusa*) are common in the resort areas. 8 rare or threatened fauna have been recorded within the Resorts, whilst a further 14 have been recorded within 5kms of the Resorts. The most well known of these is the Mountain Pygmy-Possum (*Burramys parvus*) who heavily exploit the Bogong Moth as a food source during the breeding season.

The Mountain Pygmy-possum, listed as endangered at state and national levels, is a small mouse sized marsupial of approximately 45 grams, is restricted to a few known alpine sites in Australia, in the Bogong High Plains and Mount Hotham in Victoria and Mount Kosciusko in New South Wales. The Mount Buller population is the most southern population and is isolated and therefore genetically distinct from other populations. It was discovered on Mount Buller in 1996. In 1996 the population was estimated at 300 adult females but dropped to less than 100 in 2004. Via the implementation of a recovery plan for the species the population is now stable.

3.1.4 Land use, Economy and Employment

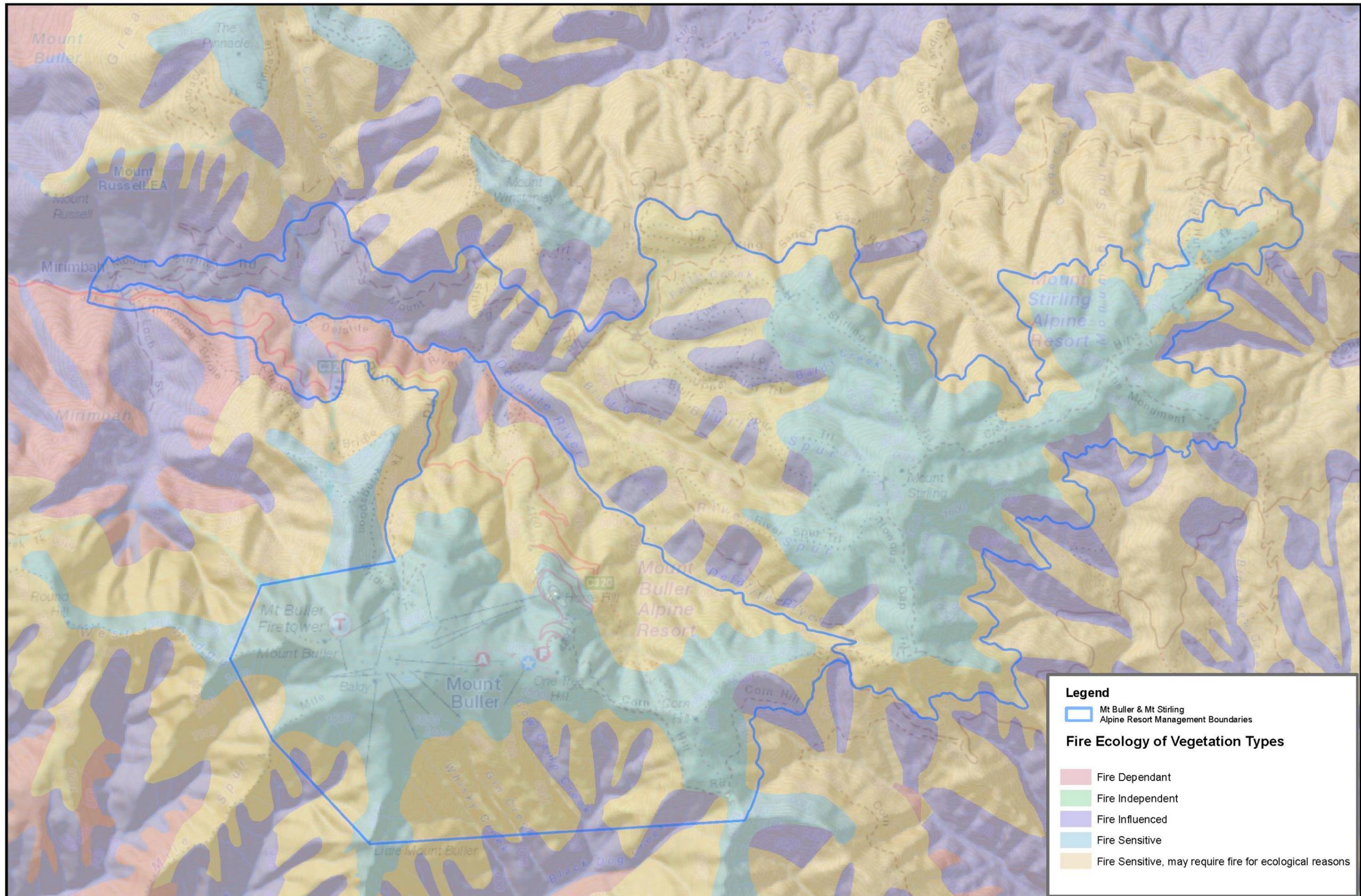
The Alpine Resorts rely on Tourism for their income with Resorts entry, site rental fees and service charges making up the main income of the Resorts. Both the Resorts of Mount Buller and Mount Stirling are used by visitors for a range of winter activities including downhill and cross-country skiing, snowboarding and snow play. Summer activities include bushwalking, camping, mountain biking, horse riding and four-wheel driving.

Buller Ski Lifts are the major employer on the mountain, employing up to 800 people over the winter ski season. Jobs include retail, hospitality, lift operation, mountain operations, ski and snowboard school, ticketing, sales and administration staff. In addition, Mansfield Mt Buller Bus Lines employ a significant number of staff during the declared snow season to provide transport services to and within the Mt Buller Resort. Approximately 1000 people are employed in total at Mount Buller during the ski season. The Mount Buller and Mount Stirling Alpine Resort Management Board generates annual revenue of approximately \$12 million.

Mount Buller has traditionally been a winter resort, but recent figures show an increasing trend of summer visitation. Mount Stirling is the only Alpine Resort that attracts more visitors over the summer period and consistently records approximately 50,000 summer visitors a year. The Mount Buller road sees significant traffic during the winter (up to 2,500 vehicles per day).



Figure 9: Fire Influenced and Fire Sensitive Vegetation, ARMB Area



3.1.5 Traditional Owners

Both Mount Stirling and Mount Buller Alpine Resorts lie in the traditional territory of the *Taungurung* (or *Daung wurrung*) language group which covered a large part of central Victoria. Unfortunately, there is a lack of ethnographic information relating to the Aboriginal people in and around the Alpine Resorts. Evidence for Aboriginal groups and tribal boundaries comes from recorded sites within the Resorts and observations made by Europeans during early settlement and contact.

There is one Registered Aboriginal Party (RAP) in the area of the Mount Buller and Mount Stirling Alpine Resorts; the Taungurung Clans Aboriginal Corporation (TCAC). RAPs have responsibilities relating to the management of Aboriginal Cultural Heritage under the *Aboriginal Heritage Act 2006*. These responsibilities include evaluating Cultural Heritage Management Plans, provide advice to applications for Cultural Heritage Permits, making decisions on Cultural Heritage Agreements and offer advice or applications for Protection Declarations.

For further information about RAPs and their contact details see:

- <http://www.dpcd.vic.gov.au/indigenous/aboriginal-heritage-council/registered-aboriginal-parties> and <http://www.taungurung.com.au>

3.1.6 Climate

Mount Buller and Mount Stirling are characterised by Alpine weather patterns and both can have snow fall at any time of year. Average summer temperatures vary from 6.6 C° to 15.5 C° and average winter temperatures vary from -2.8 C° to 1.6 C°. The Mount Buller Weather Station records an average rainfall of 1,530.9mm and has varied as much as 633mm (in 1995) to 1971.4mm (in 1989). As a comparison, the Weather Station at Mansfield Post Office averages 705.7mm of annual rainfall but has varied to as low as 318.4mm (in 2006) and as high as 1093.2mm (in 1956).

The future climate in the greater Goulburn-Broken region is expected to become hotter and drier than it is today¹. It is also expected that there will be a larger proportion of hotter days, fewer frosts and a greater incidence of drought². Higher intensity, but lower predictability of rain events is also likely to occur with less rain available for irrigation. These climatic changes will influence and possibly increase the likelihood of fire in the Resorts and may also directly affect Alpine areas as less snow may fall during winter.

By 2030 it is predicted that the average temperatures in the region will increase by 0.8°C and by 2070, depending on emissions, temperatures will increase on average by 1.4°C to 2.7°C. The climate is likely to become increasingly erratic with higher occurrences of heat waves, storms and frosts. These climatic changes will also make fire behaviour harder to predict.

3.1.7 Fire History

Two bushfires have occurred in close proximity to or within the Mt Buller Mt Stirling Resorts over the past 20 years. The 2002-2003 fires approached, but did not impact the Resort(s). The 2006-2007 bushfires burnt the majority of the Resort areas. Whilst built infrastructure was unaffected, patches of hazardous fire killed trees, particularly alpine ash, remain. Refer map of hazardous trees.

The CFA has a volunteer brigade located at the Mount Buller Alpine Resort. In the 10 years prior to July 2017 Mount Buller CFA has responded to:

¹ CSIRO and BOM 2012. *State of the Climate 2012*, Commonwealth Scientific and Industrial Research Organisation, Bureau of Meteorology.

² DSE, 2008. *Climate change in Goulburn Broken*, Department of Sustainability and Environment, Victoria, Melbourne



• Hazardous Condition	10
• Type of incident undetermined	1
• Service Calls	17
• Not specified	1
• Fire and Explosions	70
• Support External Agency	4
• MVA, Rescue, EMS Calls	27
• Overpressure Rupture	0
• Good Intent Call	76
• Unlinked Support Report	0
• False Alarms and False Calls	239
• Other Situations	3

3.2 Strategic Implications

Bushfire can occur in any type of vegetation, such as grassland, trees or shrubs. This section describes the Mount Buller and Mount Stirling Alpine Resort areas and factors that increase the likelihood of a fire starting and spreading across this region. Ensuring the Alpine Resorts are a safe and healthy place to recreate and work, involves protecting the social, environmental and economic fabric of the resorts.

Mount Buller and Mount Stirling Alpine Resorts have a range of assets and features which make them a vibrant place to work or visit. Located within the Mount Buller Alpine Resort is the Mount Buller Alpine Village which has a range of infrastructure focused on the snow and skiing industry. It provides a diverse range of accommodation and entertainment facilities, ski and snowboard hire, restaurants and pubs. Infrastructure also exists on Mount Buller to provide telecommunications, water, gas, power and waste water treatment. Mount Stirling does not have accommodation facilities but has some limited infrastructure located at Telephone Box Junction including a ski patrol building, ski hire shop, a public shelter, cafe, a generator, hydro electricity facility and toilet block. Several refuge huts and associated pump out toilets are also located throughout the Mount Stirling Resort.

In addition to the built environment the Alpine Resorts boast a range of natural assets such as montane woodland dominated by Alpine Ash (*Eucalyptus delegatensis*), and sub alpine areas where the predominant tree is Snow Gum (*Eucalyptus pauciflora*). Also, there are areas above the tree line where trees cannot exist which are dominated by snow grasses and heath. These areas are highly valued for their environmental, commercial and visual aesthetics.

Although highly valued for their natural values, the Resorts contain large tracts of remnant vegetation which could subject the Alpine Resorts to possible bush fires in the warmer months. Similarly, the range of topography present in the Resorts presents a number of challenges to firefighting as access to some areas is difficult or impossible.

3.2.1 Vegetation

The vegetation and topography of the Mount Buller and Mount Stirling Alpine Resorts create a number of challenges for fire management. There is a diverse range of vegetation types spread throughout the resort areas including Montane Dry Woodland, Montane Damp Forrest, Shrubby Dry Forest, Damp Forest, Wet Forest, Herb-Rich Foothills and others. Corresponding fuel loads can also vary to a large degree throughout the Resort areas. For example, sub-alpine treeless mosaic occurs on the summit areas where tree growth is limited due to climatic extremes. These areas are dominated by snow grasses and herbs. Below these areas are the higher elevated ridges and upper slopes support sub-alpine woodlands, dominated by Snow Gum (*Eucalyptus pauciflora*).



Further downhill, these sub-alpine woodlands give way to Alpine Ash (*Eucalyptus delegatensis*) and Mountain Gum (*Eucalyptus dalrympleana* ssp) Forests. Some sheltered gullies in these areas also support Wet Forests and Montane Riparian Thicket. Damp Forest and Wet Forest are generally located on the lower southern slopes within the Resorts. Herb-rich Foothill Forest is confined to the lower slopes and gullies in the Resort areas. Each of these vegetation types is associated with differing fuel loads and an understanding of them is essential to predict fire behavior.

The Alpine Resorts also have a number of steep escarpments and highly varying topography, are heavily vegetated, have little access or egress and have a number of water courses flowing through them. All of these combine to make fire control and response in these areas difficult as locating and accessing fires with emergency equipment can be challenging.

3.2.2 Weather and Climate

Weather conditions and climate also impact on fire management in Mount Buller and Mount Stirling Alpine Resorts. For instance, the bushfire season from 2000-2009 was increased in length due to the wide-spread impact of severe drought. In more recent years, summers have been milder and have had more rainfall, a condition which is predicted to change in the foreseeable future. Typically, the Alpine Resorts experience spring rains and mild conditions that promote a short period of growth followed by mild to warm summers which can lead to high fuel loads.

The usual pattern during summer months over time is of north westerly winds accompanied by moderate to high day time temperatures and low relative humidity building up over several days to a storm event with a change to south westerly winds. This creates a situation whereby fire ignition from lightning becomes a likely possibility, with a propensity for the fire to run quickly in one direction before changing direction quickly, thus transforming the fires extensive flank into a new fire front.

With current trends and thinking in climate change, research modelling suggests the future climate will be warmer, drier and less predictable. We can therefore expect an increase in the number of extreme fire danger days as well as longer fire seasons.

3.2.3 People

Mount Buller and Mount Stirling Alpine Resorts have experienced two fires in since 2000. The combination of topography, climate and vegetation coupled with the increasing number of people visiting high fire risk localities during the fire danger period poses a significant issue for the Alpine Resort area. Both Mount Buller and particularly Mount Stirling are experiencing a growth in tourist numbers in the warmer months with holiday makers drawn to the area by their natural values and milder summer conditions compared with non-alpine areas.

The Mount Buller and Mount Stirling Resort have community different perspectives and different needs in regard to fire and fire safety. Understanding these needs is central to delivering effective community safety initiatives. This is particularly important for people new to the area or those that have recently experienced a severe fire event.

Tourism also has considerable impact on human movement during the fire danger period, interacting with fire management at several points, particularly in the heavily forested areas around Mount Stirling and surrounding the Mount Buller Alpine Village. The same landscape features that may lead to increased fire danger, can also be underpinning elements of what makes the site attractive for tourism. Furthermore, visitor numbers tend to increase as the fire season advances creating a situation of increasing potential impact as the fire risk rises.



4 Municipal Fire Management Objective

The Municipal Fire Management Objective provides a framework for considering, selecting and evaluating fire management activities. This objective was developed using the information examined during the environmental scanning process, as well as being informed by the Hume Regional Fire Management Plan and relevant issues and priorities from regional stakeholders and adjoining municipalities.

4.1 Municipal Objective

The fire management objective of Mount Buller and Mount Stirling MFMP is;

Mount Buller and Mount Stirling Alpine Resorts working together to plan for, respond to, recover from and reduce the risk of fire to the unique Alpine community, environment and economy

4.2 Strategic Direction

In developing strategic directions for the MFMP the MFMP was mindful of the planning context within which they were undertaking this task. As illustrated in Figure 2 the MFMP forms a critical third tier in the State of Victoria's Fire Management Planning hierarchy and therefore must not be developed in isolation from State and Regional level fire management plans. The MFMP are keen to ensure any actions within the MFMP's support and complement any relevant State objectives and strategies with regard to fire management. Consequently, they have adopted the following broad strategic directions from the State Fire Management strategy 2009

- Active participation of the community, the sector and government, working together in fire management planning to reduce the destructive impact of fire on communities and the environment.
- Communities that are resilient to fire.
- Greater understanding of the fire sector within the community.
- Healthy natural, social and built economic environments.

4.3 Alignment of Regional & Municipal Objective

The Mount Buller and Mount Stirling municipal fire management objective aligns closely with the Hume Regional Strategic Fire Management Planning Committee (RSFMPC) objectives and vision for fire management. The development and implementation of this plan will therefore contribute significantly to the realisation of the Hume RSFMP's vision.

Furthermore, the formation of the Mount Buller and Mount Stirling MFMP and the development of a MFMP using the designated IFMP Planning Guide have strongly supported several of the RSFMP's key objectives. Evidence of this is described in the following table.

Hume Regional Fire Management Vision

The Hume Region working together to effectively anticipate, respond to and recover from major bushfire – to secure a safer region, more resilient community, healthier environment and a prosperous economy.



Figure 10: Alignment of MFMP & RSFMP objectives

RSFMP element	RSFMP objective	MFMP contribution
Planning together	Develop state, regional, municipal and local fire management plans and planning with a clear purpose and a consistent assessment of risk.	The MFMP provides the third tier in the IFMP process and utilises the same risk base approach as used with State and Regional plans
Collaborative implementation	Develop and implement fire management programs and activities in a collaborative manner.	The MFMP consists of multiagency representation and has incorporated community engagement strongly into the development of the MFMP.
Building knowledge & capacity:	Build and share knowledge in the fire management sector and across the community. Improve the capability of communities, the fire management sector and the government to deal with fires.	The aspirations of the MFMP converge with the regions in seeking to build both its members and the communities' knowledge and understanding of fire management.
Implementation support	Support the implementation of the IFMP framework in the Hume region	The development of this MFMP clearly demonstrates support for IFMP at a municipal level.

5 Fire Management Risk Strategies

Integrated fire management planning is the risk management process to establish priority setting for fire management activities and is consistent with the international standard for risk Management ISO 31000. Risk is described within the standard as;

$$Risk\ Analysis = Consequence \times Likelihood$$

The standard emphasises the need to establish and manage the risk to the objectives that have been set during the plan development process.

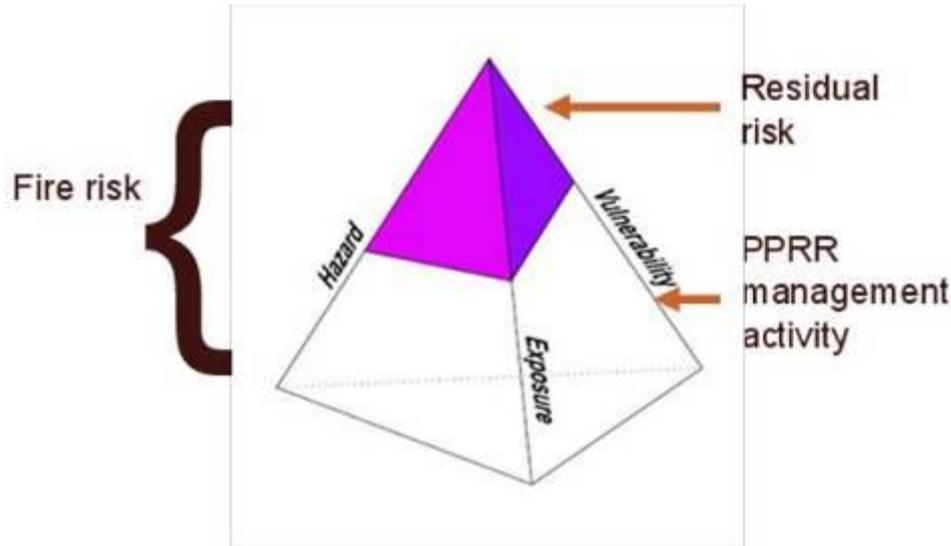
5.1 Risk Identification Process

These objectives and risks were identified through the environmental scanning process and primary to this process is Chrighton's Risk Pyramid. Chrighton's Risk Pyramid provides a framework for sorting, analysing and assessing information with respect to fire risk. It helps identify the amount of risk generated by the hazard x exposure x vulnerability relationship within the context (people, property, infrastructure, social and economic, biodiversity, the economy and heritage values) of a location or situation. Where;

- Hazard - is a specific event characterised by a certain magnitude and likelihood of occurrence
- Exposure - refers to the factors, such as people, buildings, networks the environment and economy that are subject to the impact of a specific hazard
- Vulnerability - refers to the characteristics of an element exposed to a hazard - road, building, person, and economy – that contributes to the capacity of that element to resist, cope with and recover from the impact of a natural hazard.



Figure 11: Chrighton's Risk Pyramid



By this means the MFMPC was able to generate a list of bushfire risks for the Resorts. As IFMP encompasses planning across all fire hazard environments, hazards need to be considered within a range of categories, so as to better understand the likely consequences and recovery risks involved. A copy of these categories can be found in Attachment 1.

5.2 Risk Assessment Process

Risk is assessed by determining consequences and the likelihood of the consequence occurring, and the elements at risk. An event or set of circumstances may have multiple consequences and may affect multiple objectives. Existing risk treatments and their effectiveness should be taken into account when rating the level of risk.

As a first step in the assessment process each of the identified risks were refined into a succinct risk statement and entered into the Risk Register. Risk statements are a description of the risk and simply describe the risk in terms of the source through to the impact. Each risk statement should outline:

- the hazard (source of risk)
- the element at risk
- the consequence of the interaction as a result of an event.

Each of these statements was then qualitatively assessed for their impact using the State Fire Management Planning Committee's State Bushfire Consequence Table (Attachment 1). Each consequence was considered in terms of both damage and disruption (loss of service or function) and in some cases, the consequence of an event was not realised at the local, level but was of a significant impact at regional and/or state level. In addition, the committee took into account existing treatments and their impact on the risk level. Consequence ratings were then entered into the risk register.

The likelihood of each an event being realised was assessed using the data derived from the environmental scan and the *Likelihood Table* (Attachment 1). Where the committee did not believe it held the necessary technical expertise to make an assessment, advice was sought from relevant authorities outside the committee. Once agreement as to *Consequence* and *Likelihood* was reached the *Likelihood x Consequence matrix* (Attachment 1) was used to assign a risk level to each risk statement.



The following Figure (12) is a summary of the risk assessment process, detailing the highest priority bushfire risks at the Mount Buller and Mount Stirling Alpine Resorts. The priority risks were determined by the combined fire experts on the MF MPC which utilised the fire experience of committee members, the VFRR risk register and the former Mount Buller and Mount Stirling Fire Prevention Plan.

Figure 12: Mount Buller and Mount Stirling Risk Assessment

ID #	RISK DESCRIPTION	CAUSE	IMPACT	COMMENT
1	Risk to people, and infrastructure at the Mirimbah from fire	Natural (lightning), human factors	Loss of life, assets and infrastructure, time and cost of recovery, impact on tourism, environmental impacts.	Access/egress limited, includes Mirimbah store, Resort Entry, campground, potable water treatment plant, accommodation, power, park and river area (as per VFRR)
2	Risk of structural fire during both winter and summer months impacting infrastructure, people.	human factors, mechanical failure, equipment failure, natural (lightning)	Loss of life, assets and infrastructure, time and cost of recovery, impact on tourism, loss of accommodation	Access/egress limited, depends on the type of building/role of building (e.g. staff accommodation, treatment plant)
3	Risk of structural fire spreading to become a bushfire potentially impacting upon infrastructure, people, and environmental values during warmer months	human factors, mechanical failure, equipment failure, natural (lightning)	Loss of life, assets and infrastructure, time and cost of recovery, impact on tourism, environmental impacts	Area contains habitat for nationally threatened species, large number of empty buildings (detection of fire may take time)
4	Risk to people in transit up or down Mount Buller or Mount Stirling from fire during the warmer months	human factors, mechanical failure, equipment failure, natural (lightning)	Loss of life, reduction in public confidence. Assets, infrastructure, time/cost, recovery, tourism, environmental impacts.	Access/egress on hazardous/mountain road - Mount Buller is not shut on Code Red days. Mount Stirling is shut on Code Red days.
5	Risk from recreational users in the park areas as a source of ignition of bushfire during the warmer months	human factors, mechanical failure, equipment failure	Loss of Biodiversity. Loss of life, assets and infrastructure, time and cost of recovery, impact on tourism, environmental impacts	No event caused by people in last 50 years
6	Risk to recreational users in the park from bushfire during the warmer months of the year	human factors, mechanical failure, equipment failure, natural (lightning)	Loss of life, assets and infrastructure, time and cost of recovery, impact on tourism, environmental impacts	Includes: Horse riding, mountain bikes, 4wd users, campers, bushwalkers
7	Risk to essential infrastructure including water supply and sewage treatment plant from fire.	mechanical failure, natural lightning, contamination	Disruption to service delivery (power, water, sewage, gas). Time and cost of recovery, impact on tourism, environmental impacts, non-compliance with Government agencies.	Includes roads, gas, electricity, sewage and water. If any one of these is impacted it may close the Resort. Can be winter or summer (structural or bushfire). Highest vulnerability is fire polluting the water supply



Figure 12: Mount Buller and Mount Stirling Risk Assessment

ID #	RISK DESCRIPTION	CAUSE	IMPACT	COMMENT
8	Risk of fire impacting upon the Resort due to increased fuel loads from winter storms.	Winter storms	Loss of life, assets and infrastructure, time and cost of recovery, impact on tourism, loss of accommodation	Increased fuel loads from storm events regularly supplement high fuel loads.
9	Risk to major events and high periods of visitation on Mount Buller and Mount Stirling from fire	Natural lightning, bushfire	Loss of life, assets and infrastructure, time and cost of recovery, impact on tourism, loss of accommodation	Events have EMPs, significantly more people on mountain during events
10	Risk of mobile service being interrupted due to towers being impacted by bushfire	Indirect impacts e.g. Loss of power to tower (most likely cause), direct impact to structure (unlikely)	Temporary loss of mobile telephone service for a small area. Time, cost, recovery.	Towers themselves fairly fire resistant, other communications devices still operating
11	Risk of telephone communications being interrupted due to damage to cables, or exchange building, during a bushfire	Dozer cutting lines during fire response or burning tree route near cable (rare), plastic risers, telephone exchange being impacted by fire	Loss of all public communications services for a small area	Unusual but has been known to happen
12	Risk of Statenet Mobile Radio (SMR) service being interrupted due to towers being impacted by bushfire	Indirect impacts e.g. Loss of power to tower (most likely cause), direct impact to structure (unlikely)	Emergency Services communications systems impaired for a small area - may lead to loss of fire line communications in some remote areas	Reduced quality but not total service, other communications still available (e.g. mobile telephone) - location dependent
13	Risk of fire influenced or fire sensitive vegetation being impacted or changed by fire during warmer months	Natural lightning, bushfire	The loss of vegetation species diversity and structure leading to a long term change in the vegetation class/structure. Water catchment impacts.	Specifically Boggy Catchment.
14	Risk of fire impacting State and Federally listed flora and fauna sites/habitat	Natural lightning, bushfire	Loss of habitat and threatened species	A number of nationally listed flora and fauna occur in the Mount Buller and Mount Stirling areas
15	Risk of sub stations being impacted/damaged by bushfire (on an extreme and above FDR day) leading to a loss of service	Direct fire impact on poles/wires/structures, falling debris or vehicle accidents, natural lightning	Loss of power to local community (location of effect dependant on location of impact). Time, cost, recovery.	May take up to a week to restore power to towns, loss of power to snowflake factory (as fire fighting tool)



Figure 12: Mount Buller and Mount Stirling Risk Assessment

ID #	RISK DESCRIPTION	CAUSE	IMPACT	COMMENT
16	Risk of distribution lines to Mount Buller being impacted/damaged by bushfire (on an extreme and above FDR days) leading to a loss of service	Direct fire impact on poles/wires/structures, falling debris or vehicles accidents, natural lightning	Loss of power to Mount Buller (effect dependant on location of impact). Time, cost, recovery	Long length of exposed line, alternative supply route underground (from Mirimbah)

5.3 Risk Management Strategy

Having developed a register of risks for Mount Buller and Mount Stirling Resorts, the committee was able to allocate the current treatments of responsible agencies against relevant risk areas and thus develop a Risk Management Strategy. This strategy is a matrix of;

Priority risks x treatment x agency x time frames

Thus creates a snapshot of who is doing what where and why, to reduce the risks posed by fire within the Resorts.

The following table (Figure 13) details all of the treatments or procedures being undertaken by all of the major infrastructure providers, regulatory agencies and community based agencies throughout the Alpine Resorts. Each of the statements was given by the Responsible Agency as something that they see as treatment essential to fire prevention, preparedness, response recovery and the use of fire. It should be noted that these are proposed treatments only for the next three years and that actual implementation in any given year may be influenced by a variety factors such as availability of resources and seasonal conditions.

Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	ID #
1.	Vegetation Management	Advice to landholders & linkages to CFA Brigades to manage vegetation & lower bushfire risk	✓	✓	.	.	.	CFA	Y	All	1, 3-16
2.	Statutory & Legislative activities	Bushfire Prone Areas & Bushfire Management Overlay, declaration of TFBS, declared danger periods, regulation of burning permits.	✓	✓	.	.	.	CFA	N	All	All
3.	Vulnerable Communities Fire Awareness	Community education & information for vulnerable groups about fire.	✓	✓	.	.	.	CFA	N	All	1, 3-6
4.	Awareness	Fire awareness programs targeted at communities via shows/events/displays	.	✓	.	.	.	CFA	N	All	All



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk ID #
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	
5.	Fire Ready Victoria	Assists in perception & understanding of bushfire risk so as to modify behaviours and make individuals act more safely. Includes bushfire awareness sessions for communities, community groups, businesses & service providers.	.	✓	.	.	.	CFA	Y	All	1, 3-6, 9
6.	Public Information	Fire information through Fire Danger Rating signs, media etc. to raise awareness of fire risk. Includes Fire Action Week.	✓	✓	.	.	.	CFA	N	All	All
7.	Emergency Management Plan (Site)	CFA input into site specific Emergency Management Plans including bushfire component	.	✓	.	.	.	CFA	N	All	1-12, 15, 16
8.	Fire Access Roads, Tracks & Water Points	Coordination of Fire Access Roads Subsidy Scheme (FARSS) to enable construction & maintenance of roads, bridges & water points.	.	✓	.	.	.	CFA	Y	All	1, 3-16
9.	Schools Program	Fire Safe Kids, Mobile Education Bushfire Unit.	.	✓	.	.	.	CFA	N	All	See CFA annual Bushfire Project Plan
10.	Standard Operating Procedures	Dictate level of readiness according to the conditions so as to ensure appropriate resourcing & preparedness for optimum response	.	✓	.	.	.	CFA	N	All	All
11.	Community Information Guide	Planned response (for both emergency services & the community) to a bushfire within a close proximity to a township, which has the potential to impact on the local community.	.	✓	.	.	.	CFA	Y	All	See CFA Annual Bushfire project Plan
12.	Community Fire Guard	A community development program designed to help reduce the loss of lives & homes in bushfires. It assists neighbouring residents to develop bushfire survival strategies that suit their level of risk, lifestyle, environment & values.	.	✓	.	.	.	CFA	Y	All	See CFA annual Bushfire Project Plan
13.	Home Bushfire Advice Service	Individual 1:1 fire awareness & education for residents with the highest level of bushfire risk. Advice on property management, planning, personal capacity & potential fire hazards.	.	✓	✓	.	.	CFA	Y	All	1-3



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk ID #
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	
14.	Bushfire Planning Workshops	Interactive workshop for residents living in high bushfire risk areas. Participants are guided through the Fire Ready Kit by a trained facilitator to identify their own bushfire risks and the considerations they'll need to make when putting together their bushfire survival plan.	.	✓	✓	.	.	CFA	Y	All	See CFA annual Bushfire Project Plan
15.	Resourcing	Strategic network of qualified & equipped staff, volunteers & appliances for mounting timely response to fires.	.	.	✓	.	.	CFA	N	All	All
16.	Fire research	Targeted research into impacts of different fire/fire regimes on ecological communities/species	.	.	.	.	✓	PV/DELWP	Y	All	13, 14
17.	Patrol/Inspection	Inspections of assets to ensure compliance with regulations and safety requirements and to assess for fire hazards. Includes Campfire Patrols and Parks Victoria Ranger Patrol Program.	✓	✓	.	.	.	PV/DELWP	Y	All	5, 6, 13, 14
18.	Access Roads and Tracks	Establishment of constructed and maintained roads, bridges and tracks to allow safe passage for fire fighting vehicles. Includes Walking Track Maintenance.	.	✓	.	.	.	PV/DELWP	Y	All	5, 6, 13, 14
19.	Park/Forest closures	Closure of Parks, Forest and facilities on Code Red Fire Danger Rating days	.	✓	.	.	.	PV/DELWP	N	All	4, 5, 6, 8, 9, 13, 14
20.	Routine Site Maintenance	Ongoing mowing/slashing/spraying of sites to reduce fuel loads for protection of assets or adjoining properties. Includes Asset Protection work around high value assets and maintenance of Neighbourhood Safer Place	.	✓	.	.	.	RMB	Y	All	5, 6, 13, 14
21.	Emergency Management Response Plans	Ensure that proper and sufficient works for bushfire prevention and suppression activities are conducted in an operationally safe, environmentally sensitive and cost-effective manner. Ensure efficient and appropriate response	.	✓	✓	.	.	PV/DELWP	Y	All	5, 6, 13, 14
22.	Technical advice	Provision of specialist technical advice and support to other agencies involved in fire mgmt. activities	.	.	✓	.	.	PV/DELWP	N	All	All



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	ID #
23.	Fire Management Planning	DELWP Fire Management Zones. Strategic landscape scale zoning of public land across the state to achieve fuel mgmt. outcomes	.	✓	.	.	.	DELWP	N	All	All
24.	Fire Operations Plan	Planning of proposed fire prevention activities to be carried out on public land (includes all land managed by DELWP and PV) with the objective of reducing impacts of bushfire on life, community, critical infrastructure, industry and the environment. Includes planned burns, slashing and track works, grazing, and additions to the permanent network of strategic fuel breaks.	.	✓	.	.	.	DELWP	Y	All	All
25.	Planned burning	Implementation of planned burning and other works as identified in FOP on public land	.	✓	.	.	.	DELWP	Y	All	All
26.	Crown Land fuel mgmt.	Managing fuel loads on crown land. Includes slashing, mulching and burning.	.	✓	.	.	.	DELWP	Y	All	All
27.	Waterpoint Maintenance	Maintenance of a strategic network of water points	.	✓	.	.	.	DELWP	Y	All	All
28.	Fire Access Roads and Tracks	Maintenance of roads, bridges and tracks to specified standards.	.	✓	.	.	.	DELWP	Y	All	All
29.	Communications	Maintenance of a trunk radio communication network	.	✓	.	.	.	DELWP	N	All	All
30.	Detection	Maintenance of a detection network. Includes fire lookout towers and detection flights	.	✓	.	.	.	DELWP	N	All	All
31.	Incident Control Centres	Maintenance of a strategic network of incident control facilities to support response in emergency management incidents. Includes agreed level 3 ICCs to predetermined standards	.	✓	.	.	.	DELWP	N	All	All
32.	Air support facilities	Maintenance of a strategic network of air support facilities. Includes airbases & helipads.	.	✓	.	.	.	DELWP	Y	All	All
33.	Bushfire readiness	Provision of specified levels of skills and resources to respond to emergencies. Includes people (PFFs), equipment, heavy plant, aircraft, facilities and consumables	.	✓	.	.	.	DELWP	N	All	All



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk ID #
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	
34.	Education	Programs which maintain public awareness of the bushfire threat, promote the importance of self-protection & encourage the responsible use of fire by the community. Includes multimedia messaging, in field patrols and publications.	✓	.	.	.	.	RMB	N	All	All
35.	Enforcement	Programs which support legislative compliance. Includes patrols to enforce campfire regulations, forest closures, fire cause investigations and prosecutions.	✓	.	.	.	.	RMB	N	All	All
36.	Bushfire response	Respond to bushfires on public land to protect life and minimise impacts on property, communities and the environment. Includes timely provision of public information.	.	.	✓	.	.	DELWP	N	All	All
37.	Emergency mgmt. support	Provide support to other organisations for emergency management, including expertise and specialist resources.	.	.	✓	.	.	DELWP	N	All	All
38.	Native animal welfare	Management of native animal welfare associated with an emergency incident.	.	.	.	✓	.	DELWP	N	All	All
39.	Rehabilitation plan	Implement a works program to repair or replace fire affected infrastructure and minimise impacts upon natural values.	.	.	.	✓	.	DELWP/PV	N	All	All
40.	Information kits	"After the fires: Practical Advice" & "Recovery from emergencies"; information kits containing brochures & fact sheets for people affected by fire/emergency	.	.	.	✓	.	DHHS	N	All	1-3
41.	Fire risk mgmt. system	GIS program identifying location & details of community facilities managed by DHHS and allied agencies.	.	✓	.	.	.	DHHS	N	All	1-3
42.	Vulnerable persons toolkit	Identifies location, contact details & describes needs of vulnerable persons within a municipality	.	✓	.	.	.	DHHS	N	All	1-3
43.	Regional Resourcing & activation guidelines	Identifies DHS resource requirements for different emergencies and describes triggers for activation of different levels	.	✓	.	.	.	DHHS	N	All	1-3
44.	Emergency grants	Grant to families whose home is impacted by fire, allocated by	.	.	.	✓	.	DHHS	N	All	1-3



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	ID #
		municipality.									
45.	Bushfire plan	Individual Bushfire plans for DHS run facilities (as necessary)	.	.	.	✓	.	DHHS	N	All	1-3
46.	Emergency Relief Handbook	Information & direction for emergency relief arrangements in Vic	.	.	.	✓	.	DHHS	N	All	1-3
47.	Protection of life from alpine resorts project	Provision of templates and assistance to ARBs to prepare and update plans concerning fire mgmt.	.	.	.	.	.	DELWP Alpine Planning			2-12, 15, 16
48.	Bushfire hazard identification framework	Identifies the different level of bushfire hazard at a state wide scale and the different responses that planning and building systems will implement	✓	.	.	.	.	DELWP Alpine Planning	N	All	1, 3, 7
49.	Bushfire Management Overlay	Development of a new overlay to replace Bushfire Mgt Overlays, includes opportunity to modify to local conditions through schedules.	✓	.	.	.	.	DELWP Alpine Planning	N	All	1, 3, 7
50.	Bushfire Prone Areas	Interactive online map service that identifies areas likely to be subject to fires and consequent construction standards requirements	✓	.	.	.	.	DELWP Alpine Planning	N	All	1, 3, 7
51.	Public Awareness	Fire information through notice boards, brochures, signage etc. to raise awareness of fire risk.	.	✓	.	.	.	RMB	N	All	All
52.	Routine Maintenance of facilities	Ongoing mowing/slashing/spraying of sites to reduce fuel loads to ensure protection of assets, minimise ignition potential and ensure adequate access and egress. Includes routine maintenance of structures (e.g. gutter cleaning).	✓	✓	.	.	.	RMB	N	All	All
53.	Routine maintenance of transmission & powerlines	Aerial inspection, routine asset inspection and vegetation management around powerlines and within easement/s, regular hardware maintenance & inspections, maintenance of access tracks (transmission only).	✓	✓	.	.	.	AusNet Services	N	All	All
54.	Technical advice	Provision of specialist technical advice, information & assistance to other agencies involved in emergency response or planned fuel reduction activities e.g. temporary isolation of power supply/s, line inspection in	.	.	✓	.	.	AusNet Services	N	All	All



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	ID #
		conjunction with field operations.									
55.	Supply continuity	Maintain a response capability (scaled to level of risk) so as to minimise duration of power disruption/s from incidents e.g. fire/storms/asset failure	.	.	✓	.	.	AusNet Services	N	All	15,16
56.	Restoration	Repair & replace damaged assets post fire so as to restore full services and minimise community impact	.	.	.	✓	.	AusNet Services	N	All	All
57.	Powerlines Hazard Identification	Preparedness around powerlines including risk ratings, inspections, maintenance and response arrangements. Includes Powerlines Bushfire Mitigation Strategy, Powerlines Faults and Emergency Events.	.	.	.	.	.	AusNet Services	Y	All	All
58.	Specialist Support	Provide specialist support to other agencies (e.g. VicPol, CFA, DHHS, DELWP, RMB) involved in response to an emergency, eg door knocks, transport, staging area mgt.	.	.	✓	.	.	SES	N	All	All
59.	Traffic Diversion Plans	Establishment of an appropriate traffic flow, through traffic management in the community and appropriate access and egress for property and business owners. Includes Traffic Management Strategies Assistance to other agencies.	.	.	✓	✓	.	Vic Roads	N	All	4
60.	Roadside Vegetation Management	Removal of fuel and vegetation management along roadsides. Includes Strategic Fire Fuel Breaks and routine Roadside Maintenance.	.	✓	.	✓	.	Vic Roads	N	All	4
61.	Response program	Maintain service continuity and minimise disruptions by responding to faults or damage to facilities, includes deployment of mobile communication units and use of generators during power outages	.	.	✓	✓	.	Telstra	N	All	11, 12
62.	Routine Maintenance of facilities	Ongoing mowing/slashing/spraying of sites to reduce fuel loads to ensure protection of assets, minimise ignition potential and ensure adequate access and egress. Includes routine maintenance of structures (eg	.	✓	.	.	.	Telstra	N	All	11, 12



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	ID #
		gutter cleaning).									
63.	Bushfire Mitigation	Removal of identified fire risks to lines & facilities, eg tree lopping	.	✓	.	.	.	Telstra	N	All	11, 12
64.	Vegetation Management	Advice to lessees and stakeholders to manage vegetation and lower bushfire risk	✓	✓	.	.	.	RMB	Y	All	3
65.	Fire Access Roads, Tracks and Water Points	Coordination, construction and maintenance of roads and water points	.	✓	.	.	.	RMB	Y	All	3-8, 10-16
66.	Access Roads and Tracks	Maintenance of roads and tracks including walking, cycling, horse and ski trails to allow for passage of vehicles and staff/volunteers	.	✓	.	.	.	RMB	Y	All	3-8, 10-16
67.	Rosters	Dictate level of readiness according to conditions to ensure appropriate resourcing and preparedness for optimum response	.	✓	.	.	.	RMB	N	All	All
68.	Resourcing	Availability of suitably trained and equipped staff and machinery for mounting a timely response	.	.	✓	.	.	RMB	N	All	All
69.	Community Debriefs	Post Fire Debriefings for staff, community and stakeholders	.	.	.	✓	.	RMB	Y	All	All
70.	Patrol/Inspection	Inspections of assets to ensure compliance with regulations and safety requirements and to assess for fire hazards	✓	.	.	.	.	RMB	Y	All	1-3, 7, 10-12, 15, 16
71.	Resort Closure (Mount Stirling)	Closure of Mount Stirling Resort and facilities at times of very high fire danger	✓	.	.	.	.	RMB	Y	All	All
72.	Resort Information	Provide information to increase awareness of fire regulations	✓	✓	.	.	.	RMB	N	All	All
73.	Routine Site Maintenance	Ongoing mowing/slashing/spraying of sites to reduce fuel loads for protection and maintenance of assets	✓	✓	.	.	.	RMB	Y	All	1-3, 7, 10-12, 15, 16
74.	Fire Awareness	Support and provide information to community, tourists, and stakeholders about bushfire. Signage, notifications, attendance at community events, interpretive activities	✓	✓	.	.	.	RMB	Y	All	1-6
75.	Rehabilitation activities	Post fire monitoring of ecosystem recovery and implementation of rehabilitation/restoration works to protect waterways, repair/replace damaged assets	.	.	.	✓	.	RMB	Y	All	13, 14



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	ID #
76.	Technical advice	Provision of specialist technical advice to support other agencies involved in fire management activities	.	.	✓	.	.	RMB	N	All	All
77.	Specialist Support	Provide specialist support to other agencies (e.g. VicPol, CFA, DHHS, DELWP, RMB) involved in response to an emergency, e.g. door knocks, transport, staging area mgt.	.	.	✓	.	.	RMB	N	All	All
78.	Communications	Maintenance of a communications network	.	.	.	.	.	RMB	Y	All	All
79.	MECC	Maintenance of a facility to support response in emergency management incidents	.	✓	.	.	.	RMB	Y	All	All
80.	Air support facilities	Maintenance of support facilities (helipads)	.	.	✓	.	.	RMB	Y	All	All
81.	Bushfire response	Respond to bushfires on Resort land and minimize impacts on property, communities and the environment	.	.	✓	.	.	RMB	Y	All	3-16
82.	Animal welfare	Management of animal welfare associated with an emergency incident	.	.	.	✓	.	RMB	Y	All	3, 14
83.	Enforcement	Actions which support legislative compliance.	✓	.	.	.	.	RMB	N	All	All
84.	Emergency Management Plan	Emergency evacuation procedures to handle a mechanical failure of a lift while passengers are on board	.	.	✓	✓	.	Buller Ski Lifts	Y	All	6
85.	Routine Maintenance of facilities	Ongoing mowing/slashing/spraying of sites to reduce fuel loads to ensure protection of assets, minimise ignition potential and ensure adequate access and egress. Includes routine maintenance of structures (eg gutter cleaning)..	.	✓	.	.	.	Buller Ski Lifts	Y	All	2, 7, 11, 12
86.	Resourcing	Availability of suitably trained and equipped staff and machinery for mounting a timely response	.	.	✓	.	.	Buller Ski Lifts	N	All	All
87.	Summer Slashing	Summer slope grooming. Involves removal of fuel loads and vegetation from ski slopes.	✓	✓	.	.	.	Buller Ski Lifts	Y	All	3, 7, 10-16
88.	Bushfire response	Respond to bushfires on leased land, including use of the snowmaking systems to minimize impacts on property, communities and the environment	.	.	✓	.	.	Buller Ski Lifts	Y	All	3-16



Figure 13: Mount Buller and Mount Stirling Risk Management Strategy

Treatment		Treatment description	Spectrum					Responsible agency	Application		Risk
ID #	Name		Prevention	Preparedness	Response	Recovery	Use		Targeted	Period (Year 1, 2, 3)	ID #
89.	Access Roads and Tracks	Maintenance of roads and tracks on the ski area lease to allow for passage of vehicles and staff/volunteers	.	✓	.	.	.	Buller Ski Lifts	Y	All	3-8, 10-16
90.	Rehabilitation activities	Post fire monitoring and implementation of rehabilitation/restoration works to repair/replace damaged assets including ski field	.	.	.	✓	.	Buller Ski Lifts	Y	All	13, 14
91.	Technical advice	Provision of specialist technical advice to support other agencies involved in fire management activities	.	.	✓	.	.	Buller Ski Lifts	N	All	All
92.	Operation Firesetter	Increased resources in high risk areas on Severe+ FDI days, increased patrols, increased visibility and covert surveillance so as to reduce the risk of arson and increase capacity in the event of a bushfire occurring.	.	.	✓	.	.	VicPol	Y	All	1, 4-6
93.	MERC	Coordinate municipal emergency response effort in the event of a major bushfire	.	.	✓	.	.	VicPol	N	All	All
94.	Evacuations	Coordinate evacuation measures undertaken in response to a bushfire threat	.	.	✓	.	.	VicPol	N	All	1-6, 9
95.	Investigations	Investigate suspicious fires to ascertain cause and identify perpetrators	.	.	.	✓	.	VicPol	N	All	2-7, 9-12, 15, 16
96.	Specialist Support	Provide specialist support to other agencies involved in response to a bushfire e.g. vehicle escorts	.	.	✓	.	.	VicPol	N	All	All



5.4 Specific Treatments

In addition to the above Risk Assessment and Risk Management Strategy, the MFMPC came up with a number of Specific Treatments. Specific Treatments (Figure 14) highlights the specific activities either currently undertaken or proposed to be undertaken to mitigate fire risk further and give additional detail than listed in the Risk Management Strategy. Activity custodians refer to agencies involved in the treatment regime. In terms of a timeline, the year column refers to the three-year life cycle of the plan and which year the treatment is applicable.

Figure 14: Mount Buller and Mount Stirling Specific Treatments

Action Plan ID #	Risk Description	Specific Treatment Activity	Activity Type	Treatment Status	P.P.R.R or Use	Activity Custodian	Year 1	Year 2	Year 3	Comment	Implementation Considerations
1	Mirimbah Precinct	Site Maintenance	Action	Current	Prevention	RMB	Yes	Yes	Yes	Includes mowing, removal of vegetation, environmental and aesthetic works, tree assessments	
2	Inter-agency links	Investigate the strengthening of links between agencies	Research	Proposed	Preparedness	RMB, CFA, DELWP, VicPol, Vic Roads	Yes			Includes scenario planning/exercised based planning	
3	Develop EVC based fuel hazard information and maps	Develop a project on EVC based fuel hazards including mapping relevant to Mount Buller and Mount Stirling	Research	Proposed	Preparedness	DELWP, MFMPC	Yes			The MFMPC decided that EVCs give a better indication of bush fire hazards than the data set presented by IFMP. This project requires writing an explanation of how EVC's relate to fuel loads and fire danger	IFMP data sets will need to be removed and replaced by EVC data when available.



5.5 Fire Management Responsibility

Fire management responsibility within the Resorts may be described in three categories.

5.5.1 Response Agencies

Country Fire Authority (CFA): is charged under the CFA Act with the responsibility for Fire Safety Planning and Fire Suppression in all areas of Victoria excepting the area covered by the Metropolitan Fire Brigade and Fire Protected Areas. The CFA is a community based fire and emergency service whose mission is to protect lives and property. CFA responds directly to a range of emergency incidents, as well as conducting broader activities with the community such as education, awareness raising, industry brigades and fire investigation.

Link to CFA Website: www.cfa.vic.gov.au

Department of Environment Land Water and Planning (DELWP): is responsible for fire suppression and management on public land (with support from Parks Victoria), including planned burning for ecological and risk management objectives. Their objective is to protect communities and critical infrastructure from fire and to promote healthy and resilient ecosystems. DELWP is also responsible for managing the state's planning system and building stronger communities.

Link to DELWP Website: <https://www2.delwp.vic.gov.au/>

5.5.2 Regulatory and Service Providers

Mount Buller and Mount Stirling Alpine Resort Management Board is a statutory authority under the Alpine Resort (Management) Act and is responsible for (INSERT functions from ACT). As the Land Manager, the RMB assists Crown Land Lessees to mitigate fire risk in addition to undertaking preventative activities.

Link to RMB Website: www.mtbuller.com.au/rmb/

Department of Health and Human Service (DHHS): is the appointed agency to co-ordinate recovery planning and operations at the state and regional levels. At a municipal level, the responsibility for recovery is with the Mount Buller and Mount Stirling RMB with recovery arrangements and plans outlined in the Municipal Emergency Management Plan (MEMP).

Link to DHS website: <https://dhhs.vic.gov.au/>

Parks Victoria: Parks Victoria is responsible for managing the parks and reserves in Victoria and supporting DELWP response efforts.

Link to Parks Victoria Website: <http://parkweb.vic.gov.au/>



State Emergency Services (SES): VICSES is a volunteer based organisation responding to emergencies and working to ensure the safety of communities around Victoria. VICSES is the lead agency when responding to floods, storms and earthquakes and support agency in fire situations.

Link to SES website: www.ses.vic.gov.au/

Vic Roads: Vic Roads manage the Victorian arterial road network and its use as an integral part of the overall transport system.

Link to Vic Roads Web site: www.vicroads.vic.gov.au/

Victoria Police (VICPOL): Victoria Police are responsible for ensuring a safe and secure society.

Link to Victoria Police Web Site: www.police.vic.gov.au/

AusNet Services: AusNet Services manages three Victorian energy networks – electricity transmission, electricity distribution and gas distribution.

Link to AusNet Web Site: <https://www.ausnetservices.com.au/>

Telecommunications: Telstra, Optus and Vodaphone provide communication services and are responsible for telephone exchanges, mobile telephone towers, cabling and radio communication towers.

Link to Telstra Website: www.telstra.com.au/

Link to Optus Website: www.optus.com.au/

Link to Vodaphone Website: www.vodafone.com.au/

5.5.3 Community

Land managers, the community and individuals all have a responsibility to maintain their properties and to conduct their activities in a responsible manner with respect to fire management. The effectiveness of the Risk Management Strategy relies heavily upon the community understanding and accepting their responsibilities and acting accordingly.

While specific treatments cannot be attributed to private individuals and organisations within the Risk Management Strategy the MFMP does have an expectation that members of the community will where appropriate;

- Prepare and plan for fires, both bushfire and structural
- Prepare their properties for fire events
- Ensure adequate access and water for firefighting appliances
- Maintain an awareness of fire danger levels and listen for alerts and warnings.

Advice, training and support to groups, businesses and individuals concerning all of these expectations can be obtained from the CFA and RMB where native vegetation removal is proposed.



5.6 Balancing Fire Risk Against Other Values

In the course of developing the Risk Register it became apparent to the MFMP that some of the concerns being raised lay less with the impact of the actual fire and more with that of the treatments being applied. A number of the fire risk treatments adopted in the Risk Management Plan pose a potential threat to some of the very values the MFMP is seeking to safeguard. It is important that these threats are noted and that a balance be struck between protecting the community from fire and maintaining the economic, social, and environmental well-being of the Resorts.

A number of processes and treatments are already in place to ensure that all values are taken into consideration and protected during the planning and implementation of fire risk treatments. Where conflict between agencies does occur the MFMP offers a dispute resolution process by establishing a pathway for issues to be escalated and resolved at either a regional or state level by the responsible authorities.

5.7 Cross boundary Management and Links to Other Programs/Processes

In developing this plan the Mount Buller and Mount Stirling MFPC has endeavoured to ensure that concerns which cross municipal, regional or state boundaries are treated in a seamless manner with regard to risk assessment and treatments. This has been achieved through;

- Consistent use of processes and tools across the region.
- Deliberate alignment of municipal and regional objectives.
- Frequent cross membership of MFMP's by agencies.
- Making draft and final MFMP's available to other MFMP's.

6 Improvement and Plan Reporting and Review Process

Monitoring and improvement forms the final stage in the IFMP process during the development of the initial MFMP. However, from this point on monitoring and improvement should be viewed as an ongoing activity as it entails continuous action, undertaken throughout the Plan's three year life.

It is important to track the performance of the plan and the degree to which it contributes to achieving the desired outcomes once implementation of the Fire Management Plan has commenced. Monitoring, evaluation and reporting occur throughout the life of the plan, the aim being to identify those treatments working effectively and those that may need to be modified. It also seeks to provide a transparent and accurate means of assessing the MFMP's progress in achieving its objective. The table below summarises the proposed implementation, reporting and review activities, as well who is responsible for undertaking them.



Figure 15: Mount Buller and Mount Stirling MFMP Reporting and Evaluation Program

Frequency	Task/Action	Responsible Party
Ongoing	Implement treatments, as per agreed Action Table (attachment D)	All treatment owners
	Further explore identified opportunities for new or enhanced treatments with relevant stakeholders, and agree course of action	MFMPC
Biannually (every 6 months)	Report to MEMPC on the progress of treatment implementation, including an evaluation of treatment appropriateness, impact, effectiveness, efficiency, and legacy	All treatment owners
	Update Risk Assessment & Work Plan to reflect treatment status, as reported by treatment owner	MFMPC
Annually (every 12 months)	Conduct strategic review of risks and associated treatment program, asking: Are the identified risks still valid? Do their pre-treatment and residual risk ratings still hold true? Are there new risks that need to be added to the register and managed? Do the treatments currently in place adequately address the identified risks? Are there any new or enhanced treatments required?	MFMPC
	Review and update Plan content and mapping to ensure validity	MFMPC
	Provide overarching progress report to Municipal Emergency Management Planning Committee (MEMPC), focusing on the collective effectiveness of treatments in the management of risks and progress towards the achievement of objectives	MFMPC
Triennially (every 3 years)	Conduct end-to-end review of Plan, with particular focus on the environmental scan and objectives	MFMPC

The integrated fire management planning process operates within a complex and challenging environment, with often limited and competing resources to achieve the desired outcome of acceptable levels of residual risk to the community. Therefore, fundamental to its success is the establishment and preservation of healthy stakeholder partnerships that allow for continued transparent and robust dialogue in the interest of achieving the Plan’s objectives in the long-term. It is the role of the MFMPC to spearhead relationship management for this purpose.



Attachments

Attachment 1: Risk Assessment Tables

Risk categories table

Risk Group	Risk Category	Risk Element
SOCIAL	People & Social Setting	<i>Life & injury:</i> Public Safety <i>Social services:</i> Functional continuity <i>Health & wellbeing:</i> Social networks <i>Displacement of people:</i> Employment/income
	Infrastructure	<i>Residential:</i> House, flat, caravan, apartments <i>Public accommodation</i> Boarding house, hotel, hostel, correctional facilities <i>Public assembly:</i> Education, hall, theatre, stadium, cafe, restaurant <i>Health care:</i> Special accommodation homes, nursing homes and hospitals
	Cultural, Heritage	<i>Heritage sites and buildings</i> <i>Indigenous sites</i> <i>Iconic sites and features:</i> e.g. Puffing Billy
ECONOMIC	Infrastructure	<i>Commercial:</i> Shopping complex, office <i>Industrial:</i> Factory (heavy, light, special), warehouse, silo, chemical, petrol <i>Essential Infrastructure:</i> Pipelines, Power, public transport systems, Water Catchments, Power Water & Sewerage, Gas, Communications <i>Transport:</i> Road, rail, bridge, tunnel, port, marine, airport
	Production	<i>Agriculture and Farming:</i> Plantation, crop, pasture, poultry, feedlot, sawmill <i>Business/Industrial Capacity</i> <i>Tourism</i>
ENVIRONMENT	Biodiversity	<i>Assets that provide biological based ecosystem functions and/or services considered of value.</i>
	Water	<i>Assets that provide of atmospheric/climatic ecosystem functions and/or services considered of value</i>
	Air	<i>Assets that provide water-based ecosystems functions and/or services considered of value.</i>
PLANNING	Governance & Regulation	<i>Corporate Governance Issues, including organisation structures; Boundary issues, Inter-Agency Agreements; Environmental scans; Population projections; urban development projections/planning; Volume projections; Long term/short term solutions; Infrastructure requirements to meet projected community needs</i>
	Planning & Communication	<i>Internal, external, multi-municipal, communications strategies</i>
	Stakeholder Management	<i>Community Expectations; Government expectations; Business and Industry Issues, including risks associated with developing and implementing programs to minimise the impact of fire on business and industry;</i>
	Operational	<i>Encompasses the planning, daily operational activities, resources (including people) and support required within the 'area of interest', that results in the successful development and delivery of products/ services.</i>
	Financial	<i>Ability to allocate limited financial resources to maximum effect; Ability to fund adequate resources to meet community needs; Skills & technical expertise; Management skills; Equipment maintenance, upgrades, and replacement funding; Geographical remoteness location needs; Government's ability to fund requirements to meet population growth needs</i>



State Bushfire Consequence Table³

STATE DESCRIPTOR BUSHFIRE	People - Bushfire	Infrastructure - Bushfire	Public Admin - Bushfire	Environment - Bushfire	Economy - Bushfire	Social Setting
Catastrophic	50+ lives lost. Hundreds injured 1000+ houses destroyed. 2000+ people displaced. 30,000 + livestock lost.	Loss of critical infrastructure and/or services for 24-48 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for more than a week.	Significant statewide outrage. Royal Commission or other similar inquiry leading to changes in policy and practice.	Permanent total loss of one or more ecosystems or critical habitat elements. Loss of nationally significant cultural assets.	\$1B or 30% of State revenue	Severe disruption to community wellbeing over the whole area or a large part of it for a period of many years
Major	10 -50 fatalities as a direct result of the bushfire event. 300 - 1000 houses destroyed. 500 -2000 people displaced. 10,000 - 30,000 livestock lost. Significant loss of breeding stock.	Loss of critical infrastructure and/or services for up to 8-24 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for 4 days and up to a week.	Significant regional and local outrage, with some occurring at state level. Parliamentary or other inquiry leading to change in practice.	Permanent partial loss of one or more ecosystems or critical habitat elements. Extinction of a species or significantly increase the likelihood of extinction to almost certain that intervention such as captive breeding programs are required. Loss of state significant cultural assets.	Damage costs including legal actions and/or industry impacts (tourism, forestry, wine and grape etc) to the value of more than \$300M.	Severe disruption to community wellbeing over a wide area or for more than 24 months.
Serious	2 - 10 fatalities as a direct result of the bushfire event. Large number of people affected by smoke. 30 - 300 houses lost. 200- 500 people displaced 4000 - 10000 livestock lost.	Loss of critical infrastructure and/or services for up to 2-8 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for 2-4 days.	Some outrage at local and regional level.	Long term disturbance to one or more ecosystems or critical habitat elements. National response and/or support for animal welfare. Loss of a regionally significant cultural asset such as Phillip Island penguins, Healesville Sanctuary, Puffing Billy.	Damage costs including legal actions and/or industry impacts (tourism, business etc) to the value of more than \$100M.	Major disruption to community wellbeing over a moderate to large area* or for a period of months.
Significant	Single fatality and/or multiple serious injuries requiring hospitalisation as a direct result of the bushfire event. Up to 30 houses lost. 50 - 200 people displaced. 2000 - 4000 livestock lost.	Loss of critical infrastructure and/or services for up to 1 hour to the Melbourne metropolitan area. Loss of services to a major regional city for 1 day. Loss of services to local community for a week.	Local outrage and concern.	Temporary disturbance to one or more ecosystems or critical habitat elements. Local response and/or support for animal welfare.	Damage costs including legal actions and/or industry impacts (tourism, business etc) to the value of more than \$30M.	Localised disruption to community wellbeing over a small area or for a period of weeks.
Important	Serious injury and disability, up to 50 people displaced, up to 2000 livestock lost	Loss of services to regional town for a day. Loss of services to local community of up to a week	Local concern	Temporary disturbance to local habitat . Local response and/or support for animal welfare.	Damage costs including legal actions and/or industry impacts (tourism, business etc) to the value of less than \$30M.	Localised disruption to community wellbeing over a small area or for a period of up to one week.

³ Sourced from the State Fire Management Planning Committee



Likelihood Table

Level	Descriptor	Description
		In any one year, the likelihood of the event occurring is:
A	Almost Certain (Annually)	Close to 100% - Annually.
B	Likely	33% (i.e., once in every three years)
C	Possible	10% (i.e., once every 10 years)
D	Unlikely	3% (once every 30 years)
E	Rare	1% (once every 100 years)

Risk Assessment Matrix

		Consequence Level				
Likelihood Level	Important t	Significant	Serious	Major	Catastrophic	
Almost Certain	Moderate	Moderate	High	Extreme	Extreme	
Likely	Low	Moderate	High	High	Extreme	
Possible	Low	Low	Moderate	High	High	
Unlikely	Low	Low	Moderate	Moderate	High	
Rare	Low	Low	Low	Moderate	Moderate	



Attachment 2: Stakeholder Analysis & Community Engagement Plan

Stakeholder type and engagement level		
Stakeholder Type	Description	Participation Level*
Internal	Formal responsibilities for IFMP process and outcomes	Collaborate and empower
Primary	MFMP membership, responsibility for development of the plan, communication and engagement across and within organisations rest with these organisations	Collaborate and empower
Secondary	RSFMPC membership or fire management role within municipality, may be requested to provide specific inputs, dependant upon outputs, or requested to be involved in specific tasks,	Involve and consult
Tertiary	Strong interest in outcomes	Inform and consult

*IAP2 Public Participation Spectrum: *empower* → *collaborate* → *involve* → *consult* → *inform*

Fire Management Roles	
Role	Description
Fire coordination	Bringing together of fire management agencies and elements to ensure effective response to an incident or emergency. CFA has legislated responsibility under the CFA act 1958 for the prevention and suppression of fires and for the protection of life and property in the Country Area of Victoria. In accordance with provisions in the CFA Act and the Forest Act 1958, DELWP has fire management and fire suppression responsibilities for state forests and national, state and regional parks.
Land owner/manager responsibilities	Landholder/managers are heavily involved in fire prevention and fire suppression on land under their control. They have legislated responsibilities to extinguish a fire burning on their land and to prevent fires from starting from the use of equipment and vehicles (CFA Act 1958, Crimes Act 1958). They are also required to comply with relevant State government laws, local government laws, relevant planning and building permit conditions and conditions associated with permits to burn
Response	Actions taken in anticipation of, during and immediately after a fire incident to minimise the impact of the fire.
Recovery	A coordinated process of supporting emergency affected communities in the reconstruction of physical infrastructure and restoration of emotional, social, economic and physical well being.
Community education	Community education is learning and social development, working with individuals and groups in their communities using a range of formal and informal methods
Community care	Community care is about identifying and catering for groups or individuals with specific needs, before during and after fire.
Asset protection	Asset protection involves protecting key community infrastructure such as power, water supplies, roads, gas pipes and protecting community assets such as parks and the environment. Asset protection can also involve the protection of private assets such as housing, plantations, crops and fences.
Regulatory	The issuing of permits for lighting fires. The development of and compliance with planning controls and permits for developments and building that take into account fire risk/management. The regulation and issuing of permits involving vegetation removal or fuel reduction activities for fire management purposes.



Mount Buller and Mount Stirling MF MPC stakeholder analysis

Stakeholder	Type				Fire management role within Hume region									
	Internal	Primary	Secondary	Tertiary	Fire coord	Land mgr	Response	Recovery	Comm info	Comm care	Asset protect	Regulate	RSFMPC member	Other
Hume RFMPC	✓						✓	✓	✓				✓	Regional IFMP oversight & strategic fire planning
MEMPC	✓						✓	✓	✓					Municipal integrated & strategic emergency planning
MF MPC	✓						✓	✓	✓					Municipal integrated & strategic fire planning
Mount Buller and Mount Stirling Resort Management		✓				✓	✓	✓	✓	✓	✓	✓		
CFA		✓			✓		✓	✓	✓		✓	✓	✓	Fire safety expertise
DELWP		✓			✓	✓	✓	✓	✓		✓	✓	✓	Forest fire expertise
VicPol		✓					✓						✓	
Buller Ski Lifts		✓												
HVP		✓				✓	✓	✓			✓			
Parks Victoria			✓			✓	✓	✓	✓		✓		✓	
Buller Ski Lifts		✓												Operates ski lift and snow-making infrastructure
Landcare Groups			✓			✓								
DHS			✓				✓	✓		✓			✓	
DELWP Alpine Planning			✓					✓				✓	✓	Oversight of rural adjustment & development programs, development of planning controls
DEDJTR/				✓				✓					✓	Animal health, agricultural loss



Mount Buller and Mount Stirling MFMPC stakeholder analysis														
Stakeholder	Type				Fire management role within Hume region									
	Internal	Primary	Secondary	Tertiary	Fire coord	Land mgr	Response	Recovery	Comm info	Comm care	Asset protect	Regulate	RSFMPC member	Other
Agriculture Victoria														& recovery responsibilities
SES			✓				✓						✓	
Vic Roads			✓			✓	✓			✓	✓	✓	✓	
AusNet Services			✓							✓			✓	
Buller Gas			✓											Operates reticulated gas system
Goulburn Valley Water			✓							✓	✓		✓	
Goulburn Murray Water			✓			✓					✓			
Telstra			✓							✓	✓		✓	
Optus			✓							✓	✓			
Vodaphone			✓											
VFF				✓		✓								
GBCMA				✓		✓	✓				✓	✓		
DEECD				✓						✓				
Geelong Grammar				✓						✓				
Lauriston				✓						✓				
School Camps				✓						✓				
Ambulance Vic				✓						✓				
Media				✓			✓		✓					
Local community/				✓										



Mount Buller and Mount Stirling MFMP stakeholder analysis														
Stakeholder	Type				Fire management role within Hume region									
	Internal	Primary	Secondary	Tertiary	Fire coord	Land mgr	Response	Recovery	Comm info	Comm care	Asset protect	Regulate	RSFMPC member	Other
industry groups														
General public				✓		✓	✓	✓			✓			Responsibility for private property, social networks & personal well being.
Tourism Industry				✓		✓			✓	✓				

Mount Buller and Mount Stirling FMPC Communication & Engagement Plan										
Stakeholder	Engagement Level	Engagement activity								
		Meeting minutes, reports & agendas	1:1 consultation	IFMP & Mount Buller and Mount Stirling Shire web site	Email updates	Media articles	Special meetings	Draft consultation	3 year review	Individual org networks
Internal Stakeholders										
Hume RSFMPC	Collaborate & empower	✓		✓	✓	✓	✓	✓	✓	
MEMPC										
MFMP										
Primary – answerable for activity/decision										
Municipal Council/Alpine Resort Board	Collaborate & empower	✓	✓	✓	✓	✓	✓	✓	✓	✓
CFA										
DELWP										
VicPol										
BSL										
Secondary – Contributory responsibility										



Mount Buller and Mount Stirling FMPC Communication & Engagement Plan											
Stakeholder	Engagement Level	Engagement activity									
		Meeting minutes, reports & agendas	1:1 consultation	IFMP & Mount Buller and Mount Stirling Shire web site	Email updates	Media articles	Special meetings	Draft consultation	3 year review	Individual org networks	
Parks Victoria	Involve & consult										
Landcare Groups											
DHS											
DELWP Alpine Planning											
SES											
Vic Roads				✓	✓		✓	✓	✓	✓	✓
AusNet Services											
Buller Gas											
Goulburn Valley Water											
Goulburn Murray Water											
Telstra											
Optus											
Vodaphone											
Tertiary - Interested											
VFF	Inform & consult										
DEDJTR											
GBCMA											
DEECD											
Geelong Grammar											
Lauriston					✓		✓	✓	✓		
School Camps											
Ambulance Vic											
Media											
Local community/industry groups											
General public											
Tourism Industry											



Attachment 3: Environmental Scan maps & data

Map 1: Mount Buller and Mount Stirling RMBs Burnt Area (Bushfire) Last 10 years

- This map shows the area burnt in the areas around the RMBs in the last 10 years by bushfire

Map 2: DELWP Fuel Loads for Mount Buller and Mount Stirling RMBs

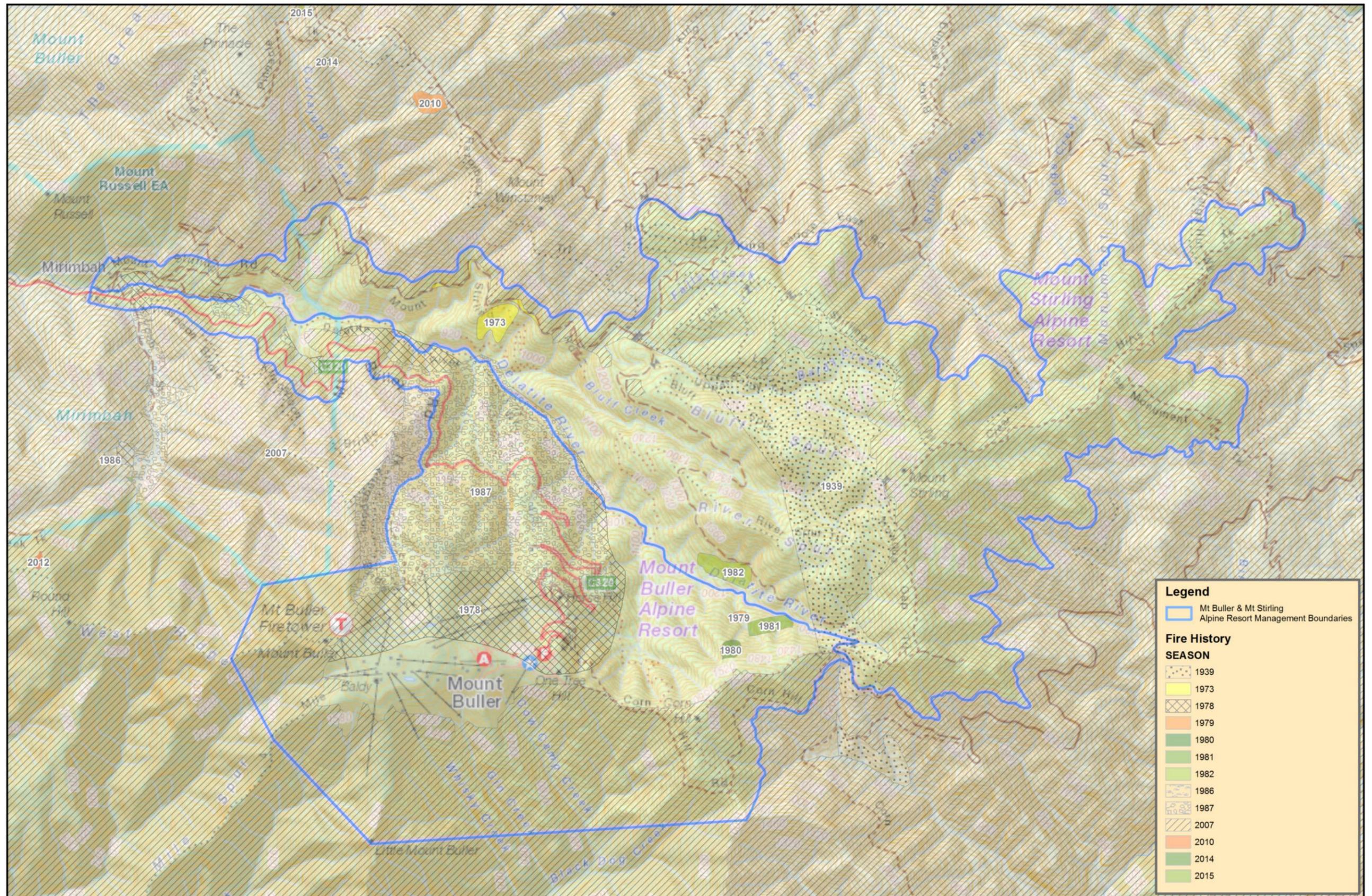
- The map is a Hazard layer developed and maintained by DELWP, Office of Land and Fire. It is a state-wide coverage of <30 m²> cell resolution with approximately 27 attributes detailing surface and elevated fuel loads, hazard ratings and vegetation descriptions. This map is a DELWP data layer and based upon computer modelling and limited ground verification. It is updated yearly by DELWP. The fuel load map details where it might be expected to find fuel loadings of low to extreme. This map is simply a guide and should not be relied upon to provide 100% accuracy in the determination of fuel loads. Visual and scientific tests should be applied in the field to properly determine fuel loads

Map 3: Ecological Vegetation Classes (EVCs)

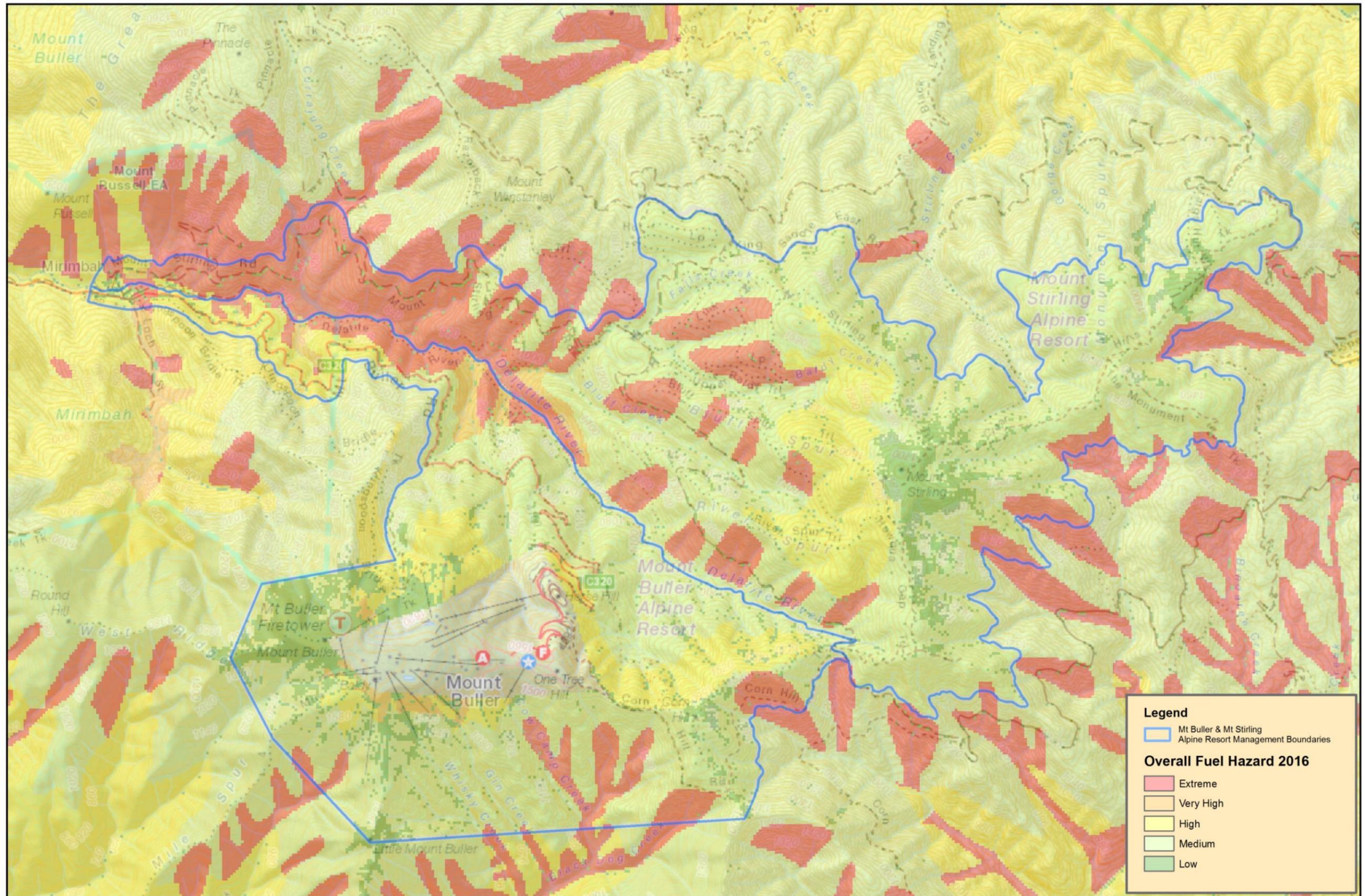
- This map shows the EVCs present in and around the Mt Buller and Mt Stirling Alpine Resorts.



Fire History - Mount Buller And Stirling Alpine Resort Areas



Overall Fuel Hazard at 2016 - Mount Buller And Stirling Alpine Resort Areas



Attachment 4: HAZARD TREES – IDENTIFICATION AND NOTIFICATION PROCEDURES

The *Electricity Safety Act 1998* (Vic) (**ES Act**) provides that a municipal council/Resort Management Board must specify, within its Municipal Fire Prevention Plan:

- (a) procedures and criteria for the identification of trees that are likely to fall onto, or come into contact with, an electric line (**hazard trees**); and
- (b) procedures or the notification of responsible persons of trees that are hazard trees in relation to electric lines for which they are responsible.

Under the ES Act, the person responsible for maintaining vegetation and clearance space around power lines is referred to as the 'responsible person'.

The procedures outlined in this section of the MFMP seek to address the requirement detailed above.

Each responsible person should have its own internal procedure regarding the steps that will be taken when it receives notification of a potentially hazardous tree.

What is a hazard tree?

According to the ES Act, a hazard tree is a tree which is likely to fall onto, or come into contact with an electric line.

The Electricity Safety (Electric Line Clearance) Regulations 2010 (**the Regulations**) further provide that a responsible person may cut or remove such a tree, provided that the tree has been assessed by a suitably qualified arborist and that assessment confirms the likelihood of contact with an electric line having regard to foreseeable local conditions.

Due to legal requirements which require a clearance space be maintained around an electric line, hazard trees are usually located outside the regulated clearance space. Despite being outside the clearance space, a hazard tree may still have the potential to contact the line due to its size or because of a structural fault or weakness which renders part, or all, of the tree likely to contact or fall onto the line.

Who is responsible for a hazard tree?

Under the ES Act, the person responsible for maintaining vegetation and clearance space around power lines is referred to as the "responsible person". This includes responsibility for keeping the whole or any part of a tree clear of the line.

Under the ES Act, responsibility is allocated between distribution businesses and other owners of electricity infrastructure, land owners and occupiers, public land managers such as municipal councils and VicRoads.

Municipal councils are responsible for trees on public land within their municipalities, for which they are the land manager, where these are also within a Declared Area for the purposes of the ES Act. Primary responsibility for vegetation clearance and management within the municipality, for areas



which are not within a Declared Area, will usually fall to the relevant electricity distribution company.

Responsible Persons within the Mt Buller and Mt Stirling Alpine Resort

There are a number of organisations that have responsibility for line clearance in the Mt Buller and Mt Stirling Alpine Resort including:

- AusNet Services for distribution lines
- VicRoads for the Mt Buller and Mt Stirling Roads
- Mt Buller and Mt Stirling Alpine Resort Management (see map of Hazardous Trees)

Other relevant information

Responsible persons, other than private persons, must have an electric line clearance management plan in place for areas for which they have responsibility (refer Electricity Safety (Electric Line Clearance) Regulations 2010).

PROCEDURES AND CRITERIA FOR IDENTIFYING HAZARD TREES

In the course of everyday duties, potentially hazardous trees may come to the attention of staff or volunteer members of the entities with representation on the Municipal Fire Management Planning Committee, (**the Committee**), staff of the distribution business(es) or other persons, including members of the public.

There are a range of factors which may indicate that a tree is a hazard tree. That is, a tree which is likely to fall onto, or come into contact with, an electric line. Some of these factors will be obvious when looking at the tree but many may only be apparent when the tree is assessed by a person with specific expertise and training such as an arborist.

The following criteria may be used to assist in identifying a hazard tree:

- The size of the tree suggests that it is likely to come into contact with the electric line, for example because it appears to be encroaching or growing into the line clearance space.
- There is an excessive lean on the tree, or branches hanging off the tree and the tree is in proximity to an electric (power) line.
- The size or appearance of the tree suggests it could come into contact with the line including under foreseeable local conditions.

If a potentially hazardous tree is identified, the notification procedure outline below should be followed. Where a responsible person becomes aware of a potentially hazardous tree for which they have responsibility, they must follow their own applicable internal procedure and the notification procedure described does not apply.



PROCEDURES AND CRITERIA FOR NOTIFYING HAZARD TREES

To ensure that information regarding potentially hazardous trees is captured in an efficient manner and, as appropriate, referred to the responsible person for action, the following procedure for the notification of hazardous trees should be followed:

- The person with responsibility for the highest percentage of lines within the municipality (**the primary responsible person**) [*or alternative person as nominated and agreed by the Committee*] is the person to whom potentially hazardous trees should be reported.
- The primary responsible person (or their representative) is referred to in these Procedures as the primary responsible person representative (**PRPR**).
- Where any person becomes aware of, or receives a report of, a potentially hazardous tree within the municipality, this should be referred to the PRPR. Where the Committee becomes aware of, or receives a report of, a potentially hazardous tree within the municipality, this must be referred to the PRPR.
- Reports of potentially hazardous trees must be provided to the PRPR for action as soon as practicable. Reports must include, at a minimum:
 - The name and contact details and any relevant qualifications where known of the person making the report
 - As much detail as possible about the location of the trees (including, where known, GPS coordinates, details of numerical/name plate on nearest pole, name of nearest road or crossroads, closest landmark, whether tree is on private land or road reserve etc.)
 - A description of the tree (including, if known, the genus and species of tree)
 - The primary reasons given for the tree being identified as potentially hazardous (eg. Tree is in proximity to an electric line AND there is evidence of structural weakness and/or excessive lean and/or appears to be encroaching into line clearance space etc.)
 - An indication of whether or not urgent action is required.
- The PRPR must take all necessary steps to advise the person responsible for the tree that it may be hazardous.

Primary Responsible Person Representative (PRPR)

For the purposes of this part of the Plan, the primary responsible person is AusNet Services with responsibility for the highest percentage of lines within the Resort area.

Contact details for AusNet Services are as follows:

AFTER HOURS (EMERGENCY)

**CEOT DIRECT CONTACT – 9229 3778 (24 HRS) Availability:
Alternatively – General Faults 131799**



BUSINESS HOURS

AUSNET SERVICES (HEAD OFFICE) **1300 360 795**
Request to speak to **Vegetation Management Group**
Otherwise e-mail contact: csc@ausnetservices.com.au

PROCEDURES FOR NOTIFICATION OF RESPONSIBLE PERSONS

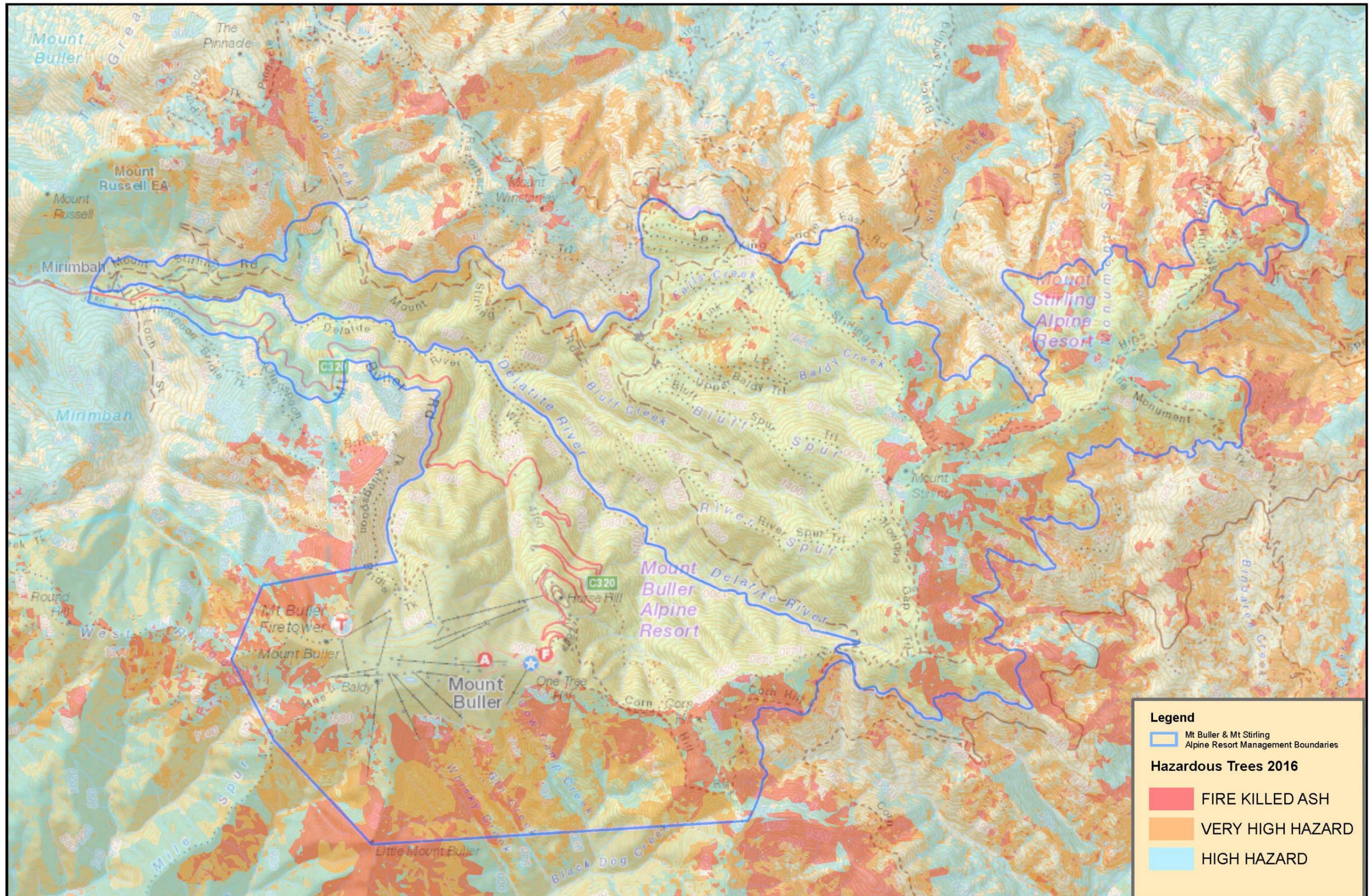
Where a potentially hazardous tree has been reported to the PRP, the PRPR should follow the procedure outlined below:

- | | | |
|---------------|--|---|
| Step 1 | Report provided to PRPR | |
| Step 2 | PRPR to determine who the responsible person is in relation to the reported tree (If necessary, the PRP can seek assistance from ESV for this step.) | |
| Step 3 | Is the responsible person the primary responsible person? | Yes => applicable internal procedure for referral and assessment of potentially hazardous tree to be followed
No=> proceed to Step 4 |
| Step 4 | Did the report indicate that urgent action is required? | Yes+> the responsible person should be notified as soon as possible, and by [<i>insert period, eg. The close of the next business day</i>].
No=> the PRPR must advise the responsible person of the existence and location of a potentially hazardous tree in accordance with the timelines below. * |

* The PRPR should put in place mutually agreed arrangements for the manner in which it passes on reports of potentially hazardous trees to responsible persons.



Hazardous Trees - Mount Buller And Stirling Alpine Resort Areas



Reporting Timelines

The PRPR should provide reports to the relevant responsible person as soon as practicable.

In circumstances where:

- the potentially hazardous tree is located within a high bushfire risk area (as per s.80 of the ES Act) and the potentially hazardous tree is reported during the fire danger period declared under the Country Fire Authority Act 1958 (Vic); or
- the report indicated that there is an imminent danger that the tree will contact or fall onto lines as a result of minor environmental changes;

the potentially hazardous tree must be referred to the relevant responsible person for action as soon as possible, i.e. by the close of the next business day.

Each responsible person (other than the primary responsible person) must provide the PRPR with contact details of the person (position title) to whom reports should be provided. It is the responsibility of each responsible person to ensure that the PRPR is provided with up-to-date contact details.

Register

It is recommended that the PRPR maintain a register in which all notifications are recorded together with the date of receipt of the notification and the date the notification was reported to the responsible person.

It is recommended that responsible persons also maintain a register of notifications received of hazardous trees for which they are the responsible person.

PRPR Consultation

The Committee notes that the Primary Responsible Person was consulted in relation to the development of these procedures.



Attachment 5: Neighbourhood Safer Places

Neighbourhood Safer Places (NSPs):

Neighbourhood Safer Places are a place of last resort and do not guarantee safety. They should only be used if a resident's Bushfire Survival Plan (see link below for more information) fails and residents have no other place for shelter. Welfare facilities will not be made available and the place may not provide shelter from smoke and embers

For more information on Bushfire Survival Plans go to the CFA Website:

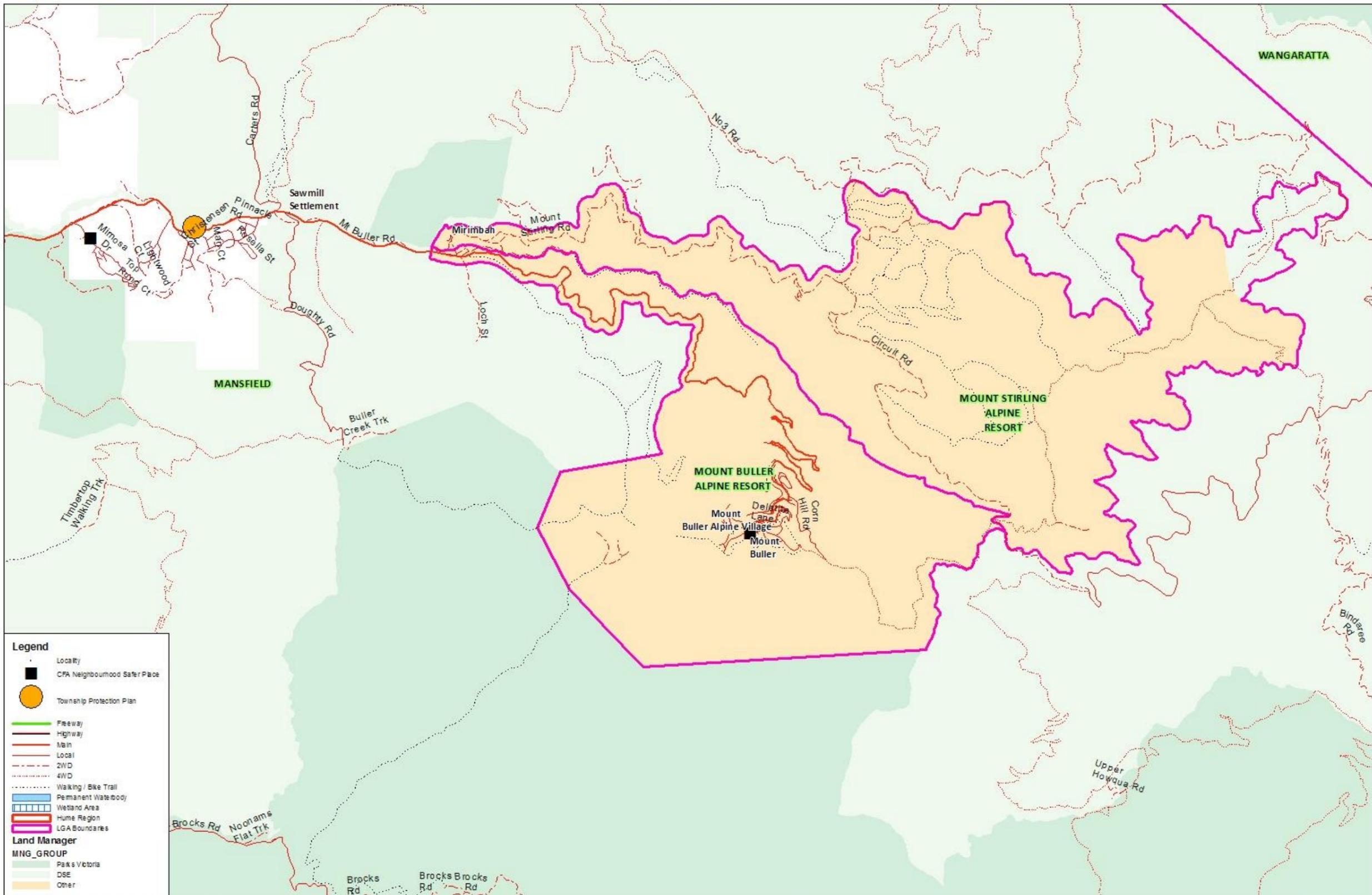
<http://www.cfa.vic.gov.au/plan-prepare/your-bushfire-plan>

Neighbourhood Safer Places have a number of limitations:

- They have limited capacity and provide no guarantee of safety;
- They do not cater for animals;
- There is no expectation that emergency services will be present;
- They do not provide meals, amenity or cater for special needs (e.g. Infants, the elderly, the ill or the disabled);
- They may not provide shelter from the elements, particularly flying embers;
- There are risks to people during access, shelter during passage of the fire front and egress from the Neighbourhood Safer Place.
- They are NOT a Fire Refuge, Relief Centre, Recovery Centre, Assembly Area, or informal Places of Shelter, each of which has a different and specific purpose.



Neighbourhood Safer Places & Township Protection Plans - Mount Buller Alpine Resort and Mount Stirling Alpine Resort



Map Produced by Wodonga GIS team, August, 2012
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This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

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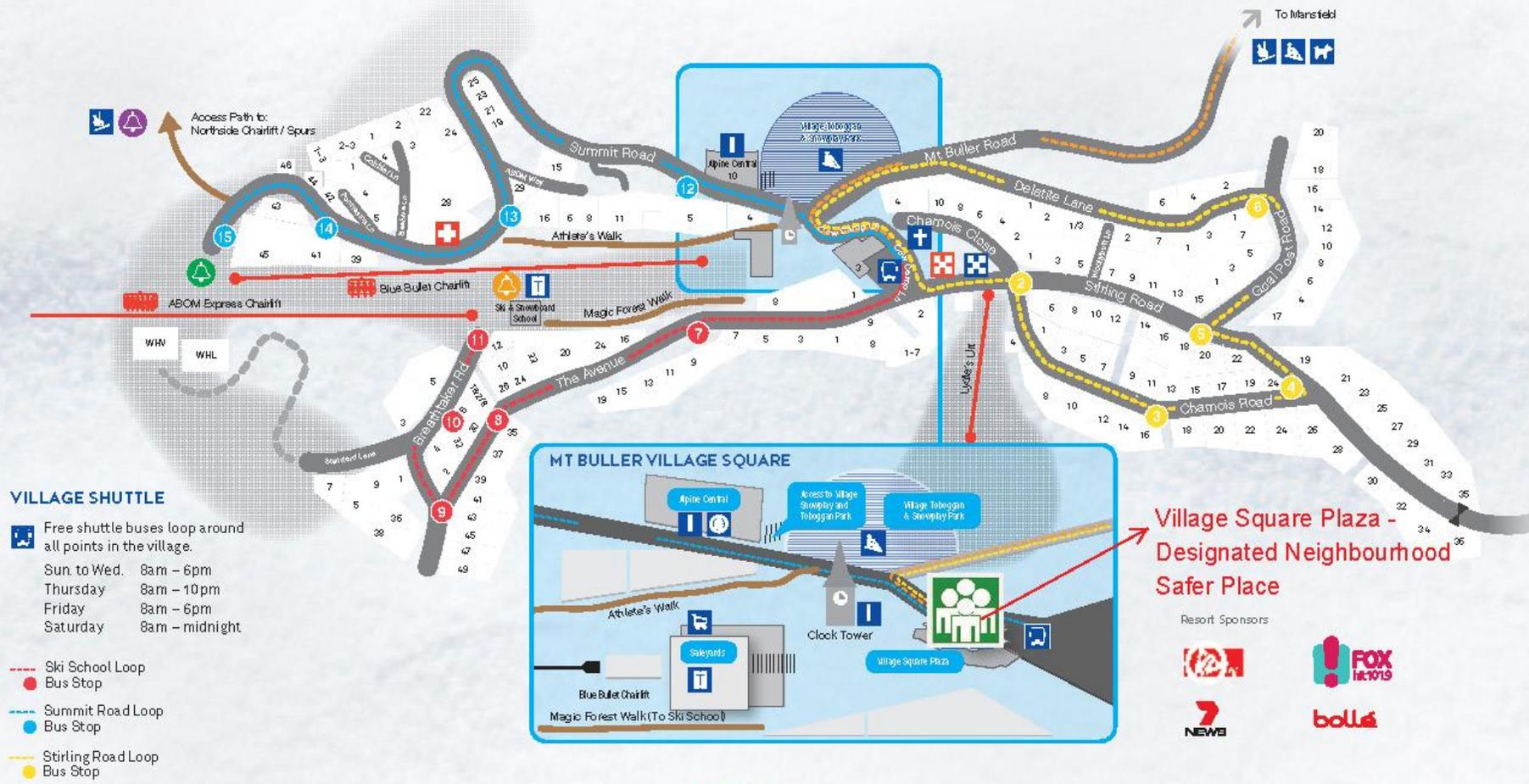


Scale: 1:50,000

GDA 1994 VICGRID94



VILLAGE MAP



Information	Chairlifts	Police	Chairlifts	Ski & Snowboard School	Village Toboggan & Snowplay Park
Ticket Office	Toboggan Slope	Fire Station	Six-pack Chairlift	Northside Ski & Snowboard School Meeting Place	Ski Runs
Public Toilets	Supermarket	Sled Dog Tours	Quad Chairlift	Bluff View Adult Snowboard School Meeting Place	Day Visitor Car Park Shuttle
ATM	Alpine Chapel	Day Visitor Car Park Shuttle, Intra Village Shuttle & Taxis	Medical Centre, Ski Patrol & Ambulance		



Attachment 6: Glossary

Term	Description
ABS	Australian Bureau of Statistics
Acceptable Risk	The level of potential losses that a society or community considers acceptable, given existing social, economic, political, cultural, technical and environmental conditions.
ARMB	Alpine Resort Management Board
AIIMS	Australasian Inter-service Incident Management System A nationally adopted structure to formalise a coordinated approach to emergency incident management.
Assets and Values	Recognised features of the built, natural and cultural environments. Built assets may include buildings, roads and bridges; Structures managed by utility and service providers; or recognised features of private land, such as houses, property, stock and crops plus associated equipment. Natural assets may include forest produce, forest regeneration, conservation values including vegetation types, fauna, air and water catchments. Cultural values may include recreational, indigenous, historical, and archaeological and landscape values. (Code of Practice for Emergency Management on Public Land)
AWS	Automatic Weather Station The Bureau's standard AWSs use sensors to monitor temperature, humidity, wind speed and direction, pressure and rainfall. Various advanced sensors are available for specialised applications. These sensors can monitor cloud height (ceilometer), visibility, present weather, thunderstorms, soil temperature (at a range of depths) and terrestrial temperature. (Developed from the BOM).
BASO	Brigade Administration Support Officer
BMO	Bushfire Management Overlay
BOM	Bureau of Meteorology
Burning Program	A program of planned burns scheduled these for a designated area over a nominated time, normally looking ahead over one fire season (for the coming spring to the following autumn), but can also look ahead five years or more.
Burn Plan	The plan which is approved for the conduct of planned burning. It contains a map identifying the area to be burnt and incorporates the specifications and conditions under which the operation is to be conducted.
Bushfire	Unplanned vegetation fire. A generic term which includes grass fires, forest fires and scrub fires both with and without a suppression objective.
Bushfire Danger Period	A period of the year either established by legislation or declared by the relevant agency, when restrictions are placed on the use of fire due to dry vegetation and the existence of conditions conducive to the spread of fire.
Bushfire Management	All those activities directed to prevention, detection, damage mitigation, and suppression of bushfires. Includes bushfire legislation, policy, administration, law enforcement, community education, training of fire fighters, planning, communications systems, equipment, research, and the multitude of field operations undertaken by land managers and emergency services personnel relating to bushfire control.
Campaign Fire	A fire normally of a size and/or complexity that requires substantial



Term	Description
	firefighting resources, and possibly several days or weeks to suppress.
CERM	Community Emergency Risk Management
CFA	Country Fire Authority
COL	Consequence of Loss - OESC A dataset is owned and maintained by the OESC. The dataset contains records of infrastructure and assets under the categories: Economic Infrastructure, Economic Production, Environmental Biodiversity, Social Cultural, Social Human Life and Social Infrastructure. The dataset contains detailed attributes about the assets type, value and location.
CIG	Community Information Guide (Formerly known as Township Protection Plan (TPP))
Consequence	Outcome or impact of an event
Control Authority	The agency, service, organization or authority with legislative responsibility for control of the incident. (Also referred to as the responsible authority or agency.)
Coordination	The bringing together of agencies and elements to ensure effective response to an incident or emergency. It is primarily concerned with the systematic acquisition and application of resources in accordance with the requirements imposed by the emergency or emergencies. Coordination relates primarily to resources and operates: <ul style="list-style-type: none"> • vertically, within an agency, as a function of the authority to command; • horizontally, across agencies, as a function of the authority to control.
Essential Infrastructure	Those services, physical facilities, supply chains, information technologies and communication networks that, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact on the social or economic wellbeing of the community E.g. Water supply facilities.
Curing	Drying and browning of herbaceous vegetation due to mortality or senescence.
DEECD	Department of Education and Early Childhood Development
DHS	Department of Human Services
DOT	Department of Transport
DEDJTR	Department of Economic Development, Jobs, Transport and Resources
DELWP	Department of Environment Land Water & Planning
DELWP Alpine Planning	Department of Environment, Land, Water and Planning – Alpine Planning
EHO	Environmental Health Officer – Council
Elements at Risk	The population, buildings and civil engineering works, economic activities, public services and infrastructure etc., exposed to sources of risk.
EMA	Emergency Management Act
EMMV	Emergency Management Manual Victoria
EPBC	Environmental Protection Biodiversity Conservation
Essential Service	A service (including the supply of goods) that if rendered unavailable for an extended period would significantly impact on the social or economic wellbeing of the community E.g. Electricity



Term	Description
	supply. (Adapted from Essential Services Commission Act 2001)
FDI	Fire Danger Index A relative number denoting the potential rates of spread, or suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed.
FDR	Fire Danger Rating A relative class denoting the potential rates of spread, or suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed, indicating the relative evaluation of fire danger.
FFG Act 1988	Flora and Fauna Guarantee Act 1988 – Victorian State Legislation
Fire Management	All activities associated with the management of fire prone land, including the use of fire to meet land management goals and objectives.
FOI	Freedom of Information
Fuel Break System	A series of modified strips or blocks tied together to form continuous strategically located fuel breaks around land units.
Fuel Management	Modification of fuels by prescribed burning, or other means.
Fuel Modification	Manipulation or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control (e.g., lopping, chipping, crushing, piling and burning).
Fire Season	The period during which bushfires are likely to occur, spread and do sufficient damage to warrant organised fire control.
FRB	Fuel Reduction Burn
Fuel	Any material such as grass, leaf litter and live vegetation which can be ignited and sustains a fire. Fuel is usually measured in tonnes per hectare. Related Terms: Available fuel, Coarse fuel, Dead fuel, Elevated dead fuel, Fine fuel Ladder fuels, Surface fuels, and Total fine fuel.
Fuel Hazard	A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.
Fuel Management	Modification of fuels by prescribed burning or other means. (AFAC)
GBCMA	Goulburn Broken Catchment Management Authority
G-MW	Goulburn-Murray Water
GVW	Goulburn Valley Water
Hazard	A source of potential harm or situation with a potential to cause loss. A potentially damaging physical event that may cause loss of life or injury, property damage, social and economic disruption or environmental degradation.
Hazard Layer – DELWP	Hazard layer developed and maintained by DELWP, Office of Land and Fire. It is a state-wide coverage of <30 m ² > cell resolution with approx 27 attributes detailing surface and elevated fuel loads, hazard ratings and vegetation descriptions.
IAP	Incident Action Plan
IFMP	Integrated Fire Management Planning
IRSED	Index of Relative Social & Economic Disadvantage ABS scoring method for determining and comparing levels of social and economic disadvantage in given areas at a given point in time, with information displayed according to IRSED values from lowest (most disadvantaged) to highest (least disadvantaged).
ISO	International Standards Organisation



Term	Description
ISO 31000:2009	An international risk management standard that provides principles and general guidelines on how to manage risk
ICC	Incident Control Centre The location where the Incident Controller and various members of the Incident Management Team provide overall direction of response activities.
LGA	Local Government Authority Represents relevant Municipal Council (or ARMB) for area of concern.
Likelihood	Probability or frequency of an event can be either qualitative or quantitative.
Loss	Any negative consequence or adverse effect, financial or otherwise.
MBS	Municipal Building Surveyor - Council
MDA	Map Display Area
MEMP	Municipal Emergency Management Planning
MEMPC	Municipal Emergency Management Planning Committee
MERC	Municipal Emergency Response Coordinator – Victoria Police
MERO	Municipal Emergency Resource Officer – Council
MFB	Metropolitan Fire Brigade
MFMP	Municipal Fire Management Planning
MFMPC	Municipal Fire Management Planning Committee
MFPC	Municipal Fire Prevention Committee (<i>superseded by MFMPC</i>)
MFPP	Municipal Fire Prevention Plan (<i>superseded by MFMP</i>)
MFPO	Municipal Fire Prevention Officer
Mitigation	Measures taken in advance of a disaster, aimed at decreasing or eliminating its impact on society and environment.
Municipal Area	The geographic footprint of the relevant LGA/ARMB
NSP	Neighbourhood Safer Place – Place of Last Resort
OESC	Office of Emergency Service Commission
PPRR	Prevention, Preparedness, Response, Recovery
Practicable	What is realistic to achieve in the context of: The severity of the hazard. The state of knowledge about the hazard or risk and any ways of removing or mitigating it. The availability and suitability of ways to remove or mitigate that hazard or risk. The cost of removing or mitigating that hazard or risk. (Dangerous Goods (Storage and Handling) Regulations 2000)
Preparedness	Arrangements to ensure that in the event of an emergency occurring all those resources and services that area needed to cope with the effects can be efficiently mobilised and deployed.
Planned Burning	The controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity, and rate of spread required to attain planned resource management objectives.
Prevention	Regulatory and physical measures to ensure that emergencies are prevented, or their effects mitigated.
Probability	A measure of the chance of an event occurring, often expressed as a number.
Recovery	The coordinated process of supporting emergency affected communities in the reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical wellbeing.



Term	Description
Residual Risk	Risk remaining after implementation of a risk treatment.
Resilience	The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures. (UN/ISDR, Geneva 2004)
Response	Actions taken in anticipation of, during and immediately after an emergency, to ensure its effects are minimised and that people affected are given immediate relief and support.
Risk	The exposure to the possibility of such things as economic or financial loss or gain, physical damage, injury or delay, as a consequence of pursuing a particular course of action. The concept of risk has two elements, i.e. the likelihood of something happening and the consequences if it happens.
Risk Analysis	A systematic use of available information to determine how often specific events may occur and the magnitude of their likely consequence.
Risk Assessment	The overall process of risk identification, analysis and evaluation.
Risk Criteria	Terms of reference by which the significance of risk is assessed.
Risk Evaluation	Process of comparing the level of risk against criteria.
Risk Identification	The process of determining what, where, when, why and how something could happen.
Risk Management	The culture, process and structure that are directed towards potential opportunities whilst managing adverse effects.
Risk Management Process	The systematic application of management of policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing risk.
Risk Reduction	Actions taken to lessen the likelihood, negative consequences, or both, associated with a risk.
Risk Register	A listing of risk statements describing sources of risk and elements at risk, with assigned consequences, likelihoods and levels of risk.
Risk Treatment	Process of selection and implementation of measures to modify risk.
REMPC	Hume Regional Emergency Management Plan Committee
RSFMP	Hume Regional Strategic Fire Management Plan
RSFMPC	Hume Regional Strategic Fire Management Planning Committee
SES	State Emergency Services
SFMPC	State Fire Management Planning Committee
SMR	StateNet Mobile Radio
SOP	Standard Operating Procedures
Source of Risk	Source of potential harm
Stakeholders	Those people and organisations who may affect, be affected by or perceive themselves to be affected by a decision, activity or risk.
Susceptibility	The potential to be affected by loss
TAPO	Technical Administrative Project Officer
TBJ	Telephone Box Junction (Mt Stirling)
TFB	Total Fire Ban (A day of Total Fire Ban)
Tolerable Risk	A risk within a range that society can live with so as to secure certain net benefits. It is the range of risk regarded as non-negligible and needing to be kept under review and reduced further

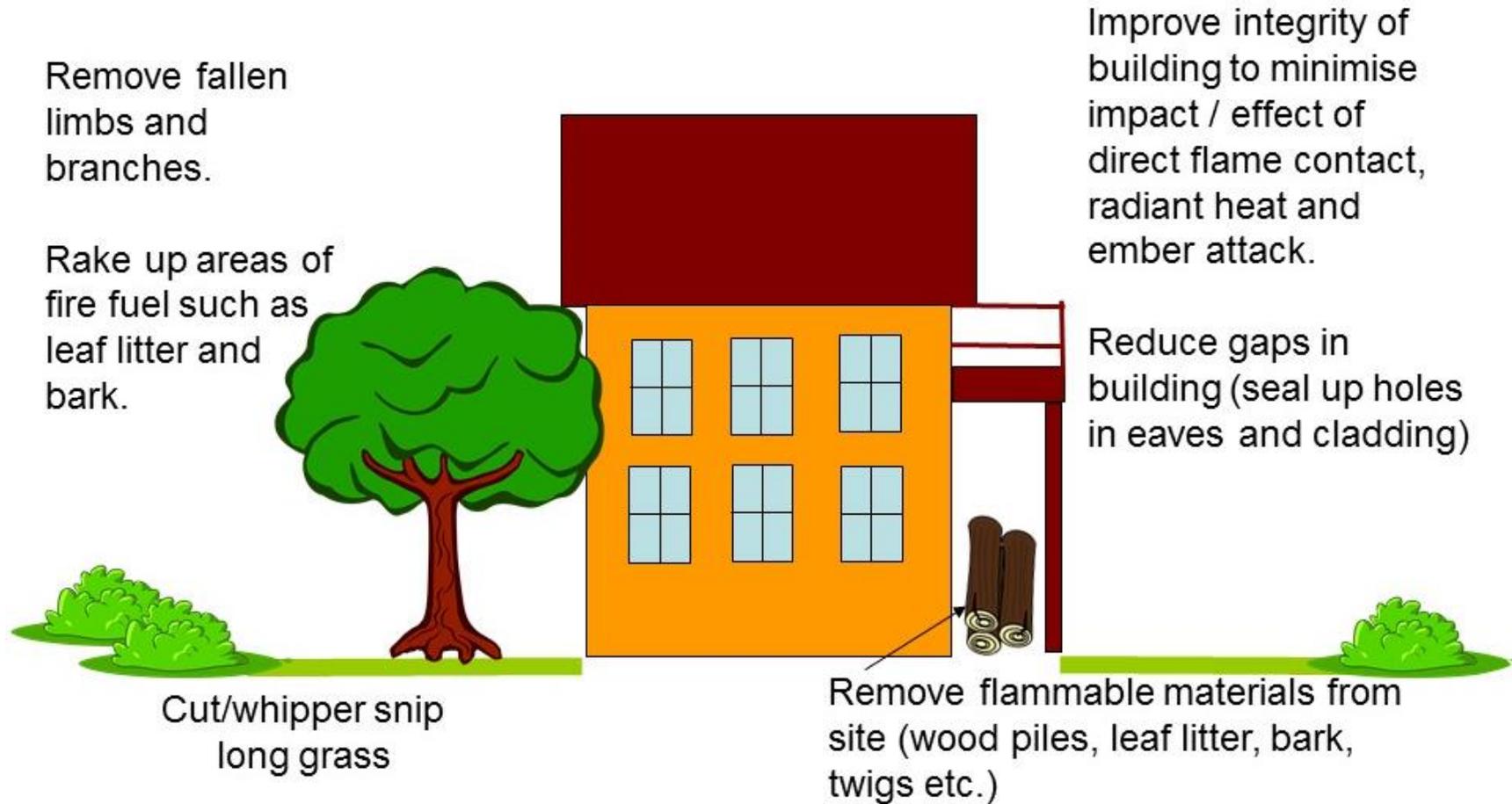


Term	Description
	if possible.
TOR	Terms of Reference
Treatment	An existing process, policy, device, practice or other action that acts to minimise negative risk or enhance positive opportunities. The word control may also be applied to a process designed to provide reasonable assurance regarding the achievement of objectives.
Treatment Assessment	Systematic review of processes to ensure that controls are still effective and appropriate.
Urban Rural Interface	The line, area, or zone where structures and other human development adjoin or overlap with undeveloped bushland.
VFRR	Victoria Fire Risk Register CFA process that identifies assets at risk from bushfire, assesses the level of risk and highlights the risk mitigation treatments currently in place along with the responsible agencies for implementing these treatments. The output is a geographic layer and associated attributes that identifies the asset type; name; location and risk factors and priorities of these assets based on a bushfire occurring in its vicinity on a day of 100 FDI.
VICPOL	Victoria Police
Vulnerability	The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards. (UN/ISDR, Geneva 2004)
Vulnerable People	Those living in high bushfire risk areas and who are unable to make an independent decision, including due to cognitive impairment; physically dependant and totally reliant on in home personal care and support; and people who live alone and are geographically isolated with no co-resident carer or family. (DHS)
WTP	Water Treatment Plant



Attachment 7

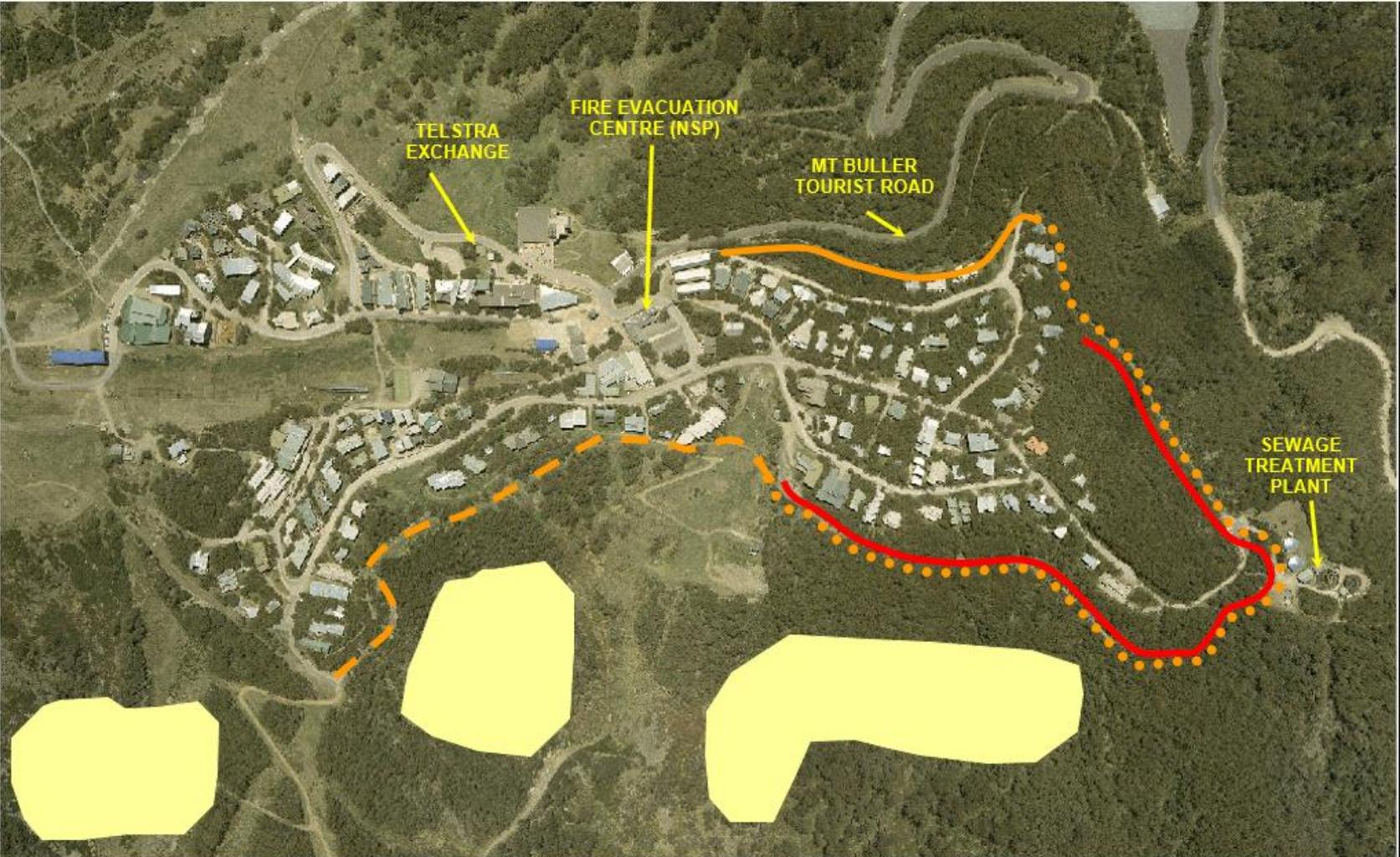
a: Property Fire Ready Guide



For information regarding the removal of native vegetation (i.e. tree or foliage trimming) lessees are to contact the RMB for advice on appropriate procedures.



b: Map of Fire Breaks

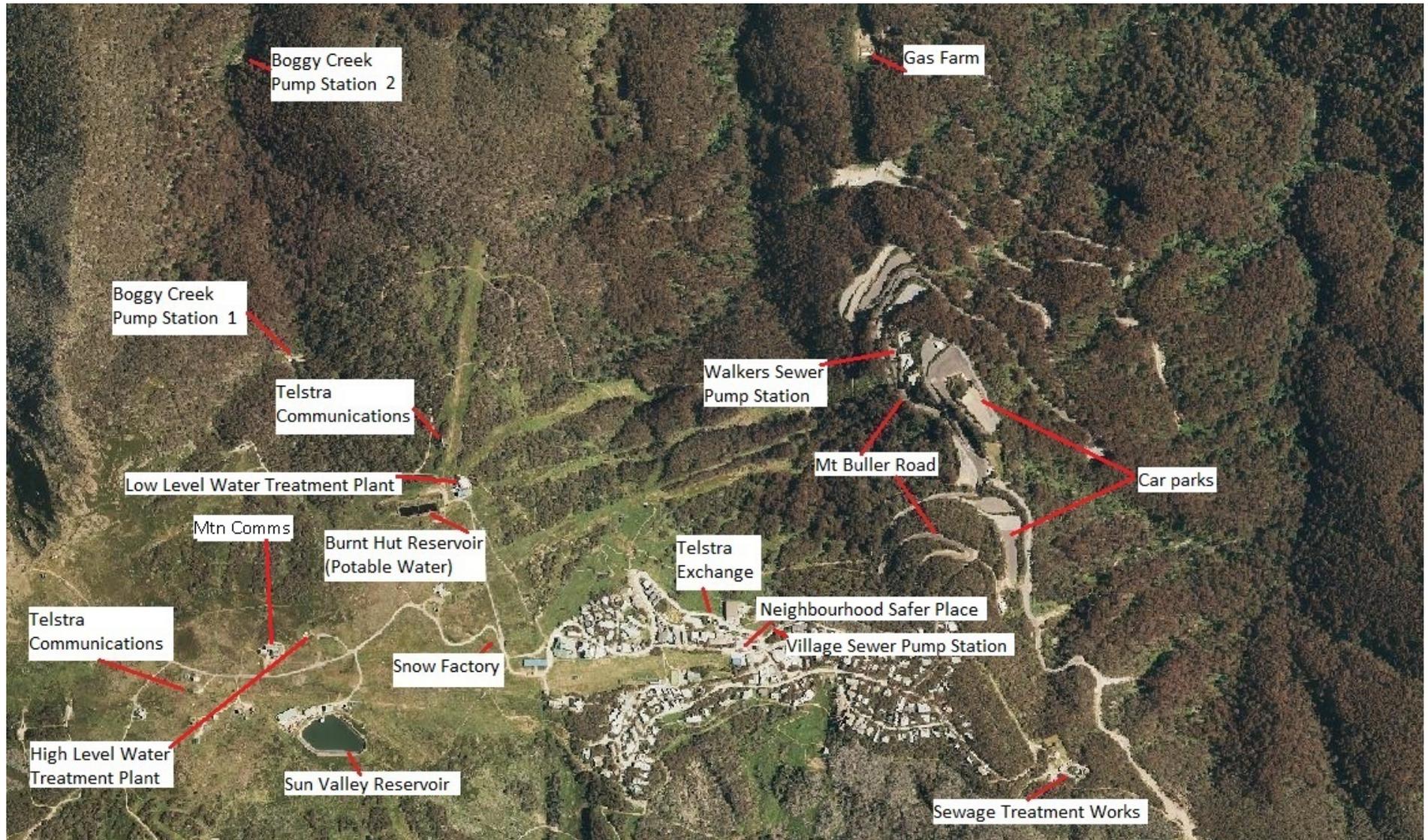


Legend

- 5m Primary Fire Break (represented by a solid orange line and a dashed orange line)
- 5m Secondary Fire Break (represented by a solid red line)
- Type II Mountain Pygmy Possum Habitat (represented by a yellow shaded area)



c: Map of Key Infrastructure – Mt Buller



d: Mount Buller Alpine Resort Bushfire Prevention Plan Action Table

LOCATION/FEATURE/ ISSUE	TREATMENT	RESPONSIBILITY	ACTION	COMPLETION DATE
1 Pre-fire vegetation management treatments (a) Village Circuit Track	Maintain the roadway to allow unimpeded passage of vehicles engaged in fire prevention/fighting activities. Establish vehicle passing bays as appropriate. Remove/trim vegetation and 1m beyond verges.		As required	End of October
(b) All buildings in the Alpine Village.	<ol style="list-style-type: none"> 1 Remove fallen limbs and branches. 2 Rake up areas of fire fuel such as leaf litter and bark. 3 Cut/whipper snip long grass. 4 Improve integrity of building to minimise impact / effect of direct flame contact, radiant heat and ember attack. 5 Reduce gaps in building (seal up holes in eaves and cladding). 6 For information regarding the removal of native vegetation (i.e. tree of foliage trimming) lessees are to contact the RMB for advice on appropriate procedures. 	Building owners/occupiers.	Site clean-up notification to be sent by RMB to all site holders in mid October	
(c) Planned Burns	Planned burns in accordance with DELWP Fire Operations Plan.	DELWP	Refer to DELWP Fire Operations Plan	



LOCATION/FEATURE/ ISSUE	TREATMENT	RESPONSIBILITY	ACTION	COMPLETION DATE
(d) Mt Buller RMB key assets including: Boggy Creek Pump Stations 1 & 2, and Sewerage treatment works.	Maintain site. Reduce fuel levels. Trim foliage as required. Ensure back-up systems operational.	RMB	As required	
(e) Telstra communication towers at Burnt Hut and Koflers Ski Lift	Maintain site. Trim foliage as required.	RMB/Telstra	As required	
(f) Telstra exchange adjacent to Mount Buller Chalet.	Maintain site. Trim foliage as required.	RMB	As required	Regularly mowed by RMB staff
(g) Ski Lifts and Ski Runs and Snow Making Infrastructure, Ski Area Control Centre Building	Manage vegetation in accordance with the annual permit application for summer grooming.	Buller Ski Lifts Pty Ltd		
(h) Gas supply storage facility at Dump Inn	Maintain fenced enclosure free of flammable materials. Remove any trees outside the enclosure that could fall across any of the Assets within the fenced area.	Buller Gas/RMB	As required	
(i) Boggy Creek Water Catchment Valley	Manage to reduce possibility of fire in water catchment areas.	DELWP RMB	As required	
(j) Power Supply	Ensure vegetation clearance along and below power lines and electrical assets have been inspected in accordance with AUSNET Services routine maintenance schedules	AUSNET Services	Regular monitoring As required	



LOCATION/FEATURE/ ISSUE	TREATMENT	RESPONSIBILITY	ACTION	COMPLETION DATE
2 Community Education	<p>Permanent Residents & Staff and Absentee Land/Lodge Owners:</p> <ol style="list-style-type: none"> 1. Evaluate the establishment of a Community Fireguard group. 2. Conduct an annual 'Fire Ready Spring Clean' program, prior to the declared Fire Danger Period. 3. Conduct a bi-annual Residential Fire safety program, prior to the ski season 4. IFMP accessible on website 5. Community Forum information 	CFA /RMB	<p>Ongoing</p> <p>Prior to 30 November annually</p>	
3 Bushfire Emergency Response/Township Protection Plans	Develop emergency and/or township protection plan for Mt Buller Resort.	CFA Operations Manager Region 23.		
4 Minimum water supply for fire fighting	<p>Maintain a minimum of 3 megalitres of water for fire fighting purposes in the primary water storage facility.</p> <p>Maintain the Sun Valley water storage at capacity (70MI) during the Fire Danger period.</p>	RMB	Ongoing	
5 Structural Bushfire Protection	Assist in facilitating the application of AS 3959 (sprinklers, appropriate doors, signage, hoses etc) for premises.	CFA/RMB/DELWP Alpine Planning	Ongoing	

