GREATER SHEPPARTON

Municipal Fire Management Strategy

Municipal Fire Management Planning Committee – 2021

Preface

Under the *Emergency Management Act 2018*, Municipal Fire Management Planning Committees (MFMPC) are no longer required by legislation. The Greater Shepparton Municipal Emergency Management Planning Committee (MEMPC) agreed that the MFMPC provided an integrated, coordinated and comprehensive approach to fire management and chose to retain the MFMPC following the amendments to legislation.

A key responsibility of the Greater Shepparton MFMPC is the development of a Municipal Fire Management Strategy (MFMS) on behalf of Greater Shepparton MEMPC for considered endorsement. This strategy, which aligns with *the Hume Regional Strategic Fire Management Plan 2011-2021*, describes how regional authorities, local government, fire agencies and other relevant organisations can work together to effectively anticipate, respond to and recover from bushfire events affecting Greater Shepparton.

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

I join with the members of the Greater Shepparton MFMPC in commending this document to you. We see the development and implementation of this strategy as important step in the ongoing journey to securing a safer, more resilient community, healthier environment and a prosperous economy for our municipality.

Commander Rohan Taylor
Chair
Greater Shepparton Municipal Fire Management Planning Committee
Sub Committee of the Municipal Emergency Management Plan 2021

Version Control Table

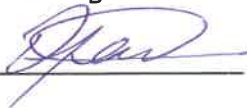| Version number	Date of issue	Author(s)	Brief Description of Change
Version 1.0	4/5/12	C. Hajek and C. Price	Draft MFMP for Comment
Version 2.0	31/5	C. Price	Edits included from MFMPC M4 on 18/5/12
Version 3.0	7/6/12	C. Price	Edits included from MFMPC M4.2 on 5/6/12
Version 4.0	26/9/12	G. McKenzie	Edits included from CFA & DELWP feedback – Email C. Hajek
Version 5.0	04/03/13	G. McKenzie & C. Hajek	Edits included from CFA & DELWP feedback – Email C. Hajek
Version 6.0	24/10/19	Kaye Thomson (GSCC) & Travis Harris (CFA)	Revision on all document content. Change of title from 'Plan' to 'Strategy'. Comment from MFMPC via email. Endorsed by MEMPC 24/10/19
Version 7.0	2021	Kaye Thomson (GSCC) & Commander Rohan Taylor (Chair MFMPC)	Revision on all document content. Inclusion of Fire Rescue Victoria. Include changes from ongoing reform in Emergency Management Sector.

Review

Content of this Strategy will be reviewed annually, at the completion of the summer season, as part of the MFMPC. Organisations delegated with responsibilities in this strategy are required to notify the Committee's Executive Officer of any changes in details.

Amendments are produced and distributed by the Committee Administrative Officer as required.

The document is due for review in **March 2022.**

Authorisation

This integrated MFMS was adopted as the first iteration of the Greater Shepparton MFMS. This Strategy was endorsed through a formal motion by the Greater Shepparton MEMPC at their meeting on ⁙ March 2021.

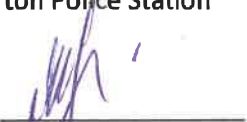Signed: _____ Date: 23/4/2021   **Strategy endorsed by:**

Commander Rohan Taylor
Country Fire Authority
Chair
Municipal Fire Management Planning Committee

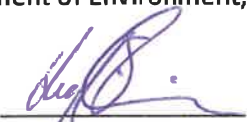Signed: _____ Date: 15/4/2021   .**Strategy endorsed by:**

Kaye Thomson
Municipal Emergency Management Officer
Director Community
Greater Shepparton City Council

Signed: _____ Date: 30-04-2021   **Strategy endorsed by:**

Brad Fisher
Senior Sergeant / Municipal Emergency Response Coordinator
Victorian Police
Shepparton Police Station

Signed: _____ Date: 4/5/2021 .   **Strategy endorsed by:**

Phil Savage
Fire Management Officer
Forest Fire Management
Department of Environment, Land, Water and Planning

Signed: _____ Date: 5/7/2021   **Strategy endorsed by:**

Hugh Sinclair
Ranger Team Leader
Parks Victoria

Signed: _____ Date: 7/7/21   **Strategy adopted by Council:**

Peter Harriott
Chief Executive Officer
Greater Shepparton City Council

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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 continual 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.

Safer Together is our approach to reducing the risks of bushfire. It focuses on how effective our actions are in reducing risk, not just the amount of activity we undertake.

This approach saw us move from a hectare target for planned burns, to a risk reduction target for bushfire management. It means a more integrated approach across public and private land. Fuel management is just one of the actions we will take to protect lives, homes, jobs and the environment.

The aim has always been to reduce risk from bushfires, with planned burning being only one of a range of tools available to reduce risk. Using a hectare target to guide planned burning meant we increased our activity, but it didn't tell us how effective our actions were at reducing risk. It didn't take into account that some areas in the state are more or less likely to be impacted by bushfires, or that too much planned burning can damage ecosystems.

The new approach is about:
- Better assessing where and when to use fuel management and other risk reduction activities.
- Avoiding unacceptable impacts on the environment and communities.
- Better integration across public and private land.
- Land and fire managers working together and with communities to plan and deliver integrated bushfire management.
- Involving local communities in decision making, drawing on local values and insights to promote resilience.
- Using world-leading science to manage fire and ecosystems.

For further information visit the Safer Together website:
https://www.safertogether.vic.gov.au/landscapes/alpine-and-north-east

At present the MFMS focus is on Bushfire. As further information relating to structural fires becomes available through the Victorian Fire Risk Registry (VFRR), we will continue to update this strategy.

Fire Management Planning
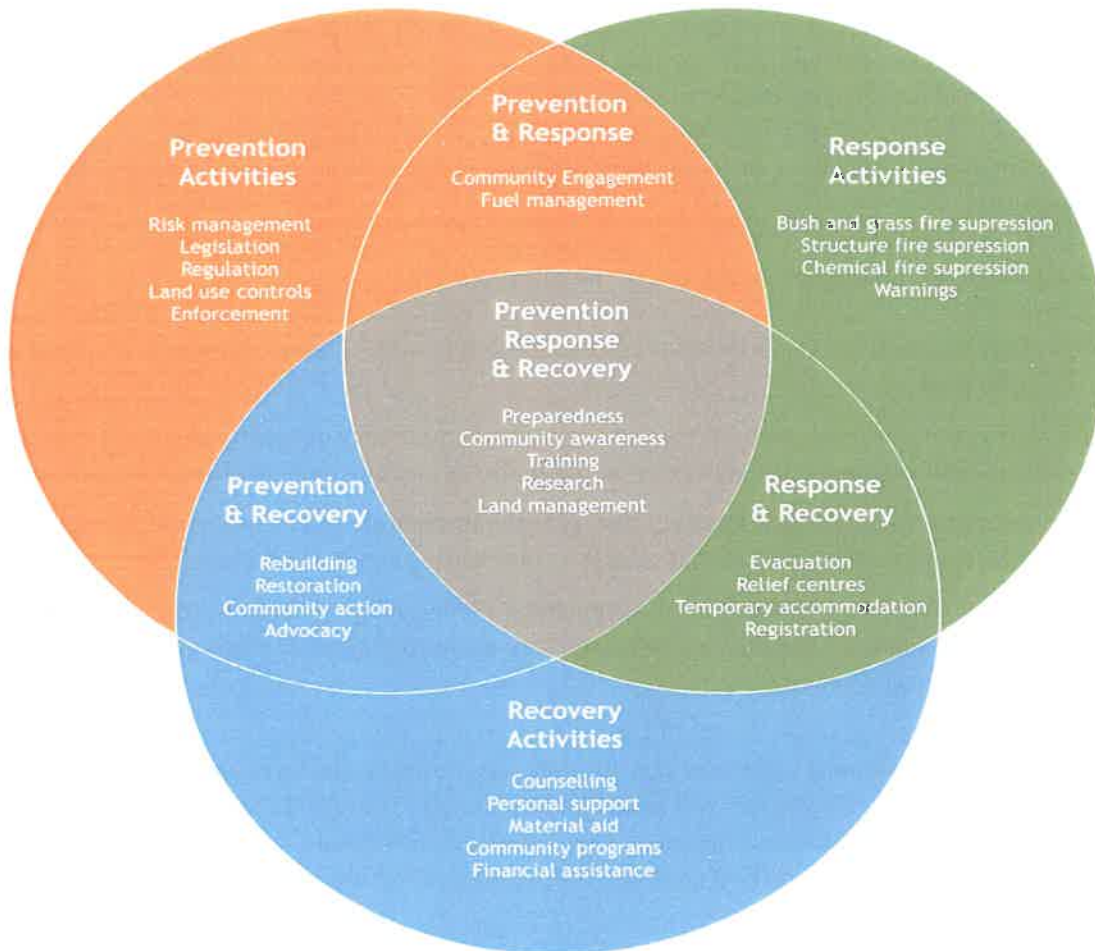
The purpose of MFMPC's are the development of the MFMS, provide a municipal level forum to build and sustain organisational partnerships, generate a common understanding and shared purpose with regard to fire management and ensure that the plans of individual agencies are linked and complement each other.

The role of the MFMPC is:

- To plan for fire management in a manner that coordinates fire management activities across agencies.
- Provide information to engage with the community on matters related to fire management planning.
- Use the planning guide issued by the State Fire Management Planning Committee (SFMPC), draft a MFMS for recommendation to the MEMPC and comment by the RSFMPC, prior to consideration by the Council.
- Monitor, review and report on the delivery of the MFMS.
- Advocate to the RSFMPC for municipal fire management needs.
- Work with the MEMPC to align planning activities.

Greater Shepparton MFMPC membership consists of:
- Greater Shepparton City Council
- CFA
- FRV
- DELWP
- Parks Victoria
- Victoria Police
- RRV
- ARTC

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 MFMS 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 fire. 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.

MFMSs have a three year planning cycle and this strategy has a three year duration commencing from the date of council endorsement. However it will be subject to annual review and modification as appropriate. This MFMS concentrates on bushfires; however it is expected that future versions of the strategy will incorporate management of structural and chemical fires as well as the use of fire for a variety of purposes.

1.3   Preparation Process

This MFMS has been developed in accordance with Part 6A of the Emergency Management Manual of Victoria (EMMV) and using the Safer Together model.

Greater Shepparton MFMPC is a sub-committee of the Greater Shepparton MEMPC and endorses the terms of references based on those in Part 6A of the EMMV.

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.

2 Engagement and Communications

The Safer Together model highlights:

Community First
Managing bushfire risk is an ongoing and shared responsibility and everyone has a role. Under our new approach, we will involve local communities in decision making about bushfire management all year round – this means understanding what you care about most and working with you to determine local solutions to reduce bushfire risk.

Working together
Bushfires burn across public and private land. Land and fire agencies need to work as one sector planning and delivering bushfire management activities

Science and Technology
Risk is dynamic and constantly shifting. We are committed to continuing our investment in science, and partnerships with research institutions, to build knowledge of the relationship between fire and the environment and to better manage risk.

Understanding Risk
Bushfires impact the things we care about - our communities, our homes, our businesses, liveability and our environment. We can better reduce these impacts by understanding where and how bushfires spread, how they impact communities and the environment, and measuring how effective our actions are in reducing these impacts.

For further information visit the Safer Together website:
https://www.safertogether.vic.gov.au/landscapes/alpine-and-north-east

2.1 Service Delivery

2.1.1 CFA has developed the Outcomes Framework (Year One) to guide the organisation to deliver on its Vision of Victorian communities prepared for and safe from fires. The Outcomes Framework outlines CFA commitment to support and empower our volunteers and deliver high quality services to the community to manage fire risks and create resilient communities. The Outcomes Framework (Year One) also represents the strategic direction of CFA under the new fire services model, where CFA has been restored to a volunteer and community focused organisation.

The Outcomes Framework is part of CFA's broader strategic direction, which will soon be released in the *CFA Strategy 2020-2030*.

CFA will report on our performance against our outcomes every quarter. These reports will be made public.

The Outcomes Framework (Year One) uses existing measures and indicators to report on the new outcomes. Given some measures and indicators need to be developed or refined for the new outcomes, some of the new outcomes will not be reported against until Year Two and once the reform has been bedded down.

For further information, visit the CFA website:
https://www.cfa.vic.gov.au/about/our-mission

2.1.2 Fire Rescue Victoria (FRV) - The 2017 Fire Services Statement articulated the Victorian Government's vision for the reform of the state's fire and rescue services – a modern, integrated and sustainable system that keeps Victorians safe.

The Victorian Government has released its Year One Implementation Plan for Fire Services Reform, which outlines its commitment to the Fire Services Statement and a shared course of action.

The plan details actions across five priority areas:
- strengthen CFA as a volunteer firefighting agency
- strengthen FRV as a career firefighting agency
- plan and build for the future
- value our firefighters (career and volunteer)
- ensure the sustainability of the fire and rescue services.

For further information, visit the FRV website:
https://www.frv.vic.gov.au/fire-services-reform-implementation-plan

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 municipality over the period of the strategy. It also provides the basis for identifying fire management objectives and decision making with regard to selecting strategies to achieve these objectives.

3.1 Municipal Profile

3.1.1 Population and Demographics

The Greater Shepparton region located at the confluence of the Goulburn and Broken Rivers is northern part of the state, approximately two hours north of Melbourne. It has an area of 2,420 square kilometres and has an estimated population of 66,498 (Australian Bureau of Statistics ERP 2019). Shepparton combined with Mooroopna is the fourth largest regional city in the State after Geelong, Ballarat and Bendigo.

The population is nearly evenly split between the major urban centres of Shepparton and Mooroopna (53%) and the surrounding rural areas including the smaller townships of Tatura, Murchison, Dookie, Merrigum, Congupna, Toolamba, Undera, Katandra and Tallygaroopna (47%).

Greater Shepparton is more culturally diverse than many of its neighbouring Shires. The multicultural population expanded rapidly after World War Two, largely as a result of immigration.

A summary of the municipalities profile from the 2016 Census:
- Median age - 39 years
- Children aged 0-14 years - 19.9% of the population
- People aged 65 years and over - 17.5% of the population
- Aboriginal and Torres Strait Islander people - 3.4% of the population
- 14.9% of people in the Greater Shepparton area were born overseas

- The most common countries of birth were:
  - o   India - 1.9%.
  - o   United Kingdom - 1.7%.
  - o   Italy - 1.3%.
  - o   Afghanistan - 1.2%
  - o   New Zealand - 1.1%.
- 76.8% of people speak English at home. Other languages spoken at home include:
  - o   Italian - 2.1%
  - o   Arabic - 1.9%
  - o   Persian/Dari – 1.7%
  - o   Punjabi - 1.4%
  - o   Turkish - 0.8%.

Recent migration into Greater Shepparton includes representatives from the:

- Afghan communities
- Albanian communities
- Congolese communities
- Indian Communities, predominantly from the Punjab Region
- Iraqi communities
- Sudanese communities
- Turkish communities.

3.1.2   Natural Environment

The majority of Shepparton lies in the 'Victorian Riverina' bioregion and forms part of the Goulburn-Broken Catchment. Across the catchment, 97% of the Victorian Riverina area has been cleared of its native vegetation.

The natural environment of Greater Shepparton is centred on the floodplains and river systems that also support the agricultural base of the region. Areas of remnant vegetation are generally confined to river corridors and roadside areas with some areas of native vegetation on private land. The municipality includes the Goulburn River K50 Streamside Reserve, Arcadia Streamside Reserve, Shepparton Regional Park, Gemmill Swamp Nature Conservation Reserve and areas of the Lower Goulburn National Park. These contain large stands of River Red Gum *(Eucalyptus camaldulensis)* and form important wildlife corridors. Understorey plants along these river corridors include Golden Wattle *(Acacia pycnantha or Gold-dust Wattle Acacia acinacea)* and Silver Wattle *(Acacia dealbata)*. Reedy Swamp, located in the Lower Goulburn National Park, adjacent to Shepparton is home to a large number of waterbirds (both migratory and local).

Major threats to the environment in the Shepparton region include a decline in water quality, flooding, pest plants, animal disease, salinity, soil degradation and the degradation of ecosystem process resulting in a loss of biodiversity. These elements not only threaten the region's natural assets but also threaten the economy and social assets of the City of Greater Shepparton.

The Goulburn River, running essentially south-north, forms a major physical barrier through the centre of the Municipality. This river may form a natural control line, but also severely limits access to either side. The Municipality is also traversed by a large number of smaller creeks and tributaries. These creeks in many instances are difficult to cross as the creek gullies are deeply embedded in the surrounding land and access from one side to the other is often difficult.

3.1.3   Land Use, Economy and Employment

Land in the municipality is approximately 85% privately owned with the remaining public land generally managed by the Department of Environment, Land, Water and Planning, Goulburn Broken Catchment

Management Authority and the Greater Shepparton City Council. The only significant land rise in the municipality is Mount Major, located near the township of Dookie.

Agricultural land in the Shepparton region occupies 8,800 square kilometres, or 81 per cent of the region. Areas classified as conservation and natural environments also occupy 1,300 square kilometres, or 11 per cent of the region.

The municipality is dissected by two major highways that meet in Shepparton; the Goulburn Valley Highway running north-south and the Midland Highway running east-west. A number of other major roads traverse the municipality and there is generally good access for emergency vehicles. However there are also a high number of watercourses and major rivers spread throughout the municipality. Although these water bodies provide access to reliable water to fight fires, they may also inhibit emergency vehicle access as crossing them is restricted to bridges and fords.

Rail corridors in the municipality include the lines to Shepparton, Strathmerton-Cobram, Dookie and Echuca.

Shepparton is also serviced by high quality medical services and offers a number of tertiary level training institutions including Latrobe University, Melbourne University and the Goulburn-Ovens TAFE. Tourism is also a key supporting industry in the region and the city has a strong history of attracting major tourism events to the region.

Shepparton also has a large number of manual workers employed in the fruit and food processing industries. Much of this work is seasonal and many of the workers speak a language other than English.

Greater Shepparton is currently experiencing rapid population growth. As part of this growth, many people are moving into lands traditionally managed by farming communities and a landscape-wide shift in land management practices is occurring. Many farms have been sold divided into 'lifestyle' blocks, many of which are being re-vegetated or alternatively being developed as hobby farms which increases the interface between farming and residential areas. Some areas that were irrigated farms also no longer utilize channel infrastructure or utilise channel water for crops. This places financial pressures on those remaining irrigators to maintain the same infrastructure with fewer users. Those areas that were previously irrigated have had an increase in the area of 'dry land' which has also increased the length of the fire season. This landscape change also increases the potential for fires started on farms to directly impact residents. Conversely, due to increased number of residents, the potential for fire ignitions has also increased which may cause fires to impact farms.

3.1.4   Traditional Owners

There is one Registered Aboriginal Party that encompasses the entire geographic area of Shepparton: the Yorta Nation Aboriginal Corporation. These Parties 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 and make decisions on Cultural heritage Agreements and offer advice or applications for Protection Declarations.

For further information about RAPs and their contact details see:
https://www.vic.gov.au/aboriginalvictoria/heritage/registered-aboriginal-parties.html

3.1.5 Climate

The City of Greater Shepparton is characterised by a temperate climate with cool winters. Average rainfall is approximately 450mm through most of the municipality although generally, average rainfalls are higher in the east (e.g. Dookie with an average of 553.5mm). Summer temperatures average approximately 30-31 C° during the day throughout most of the municipality and nigh time summer temperatures are between 13-14.5 C°. Winter maximums average around 14 C° and minimums around 3.5 C°. Flooding is a natural phenomenon throughout the Shepparton region.

From 2000-2009 the Shepparton region and many other parts of Victoria experienced a prolonged drought. More recently large rain events have occurred in 2010, 2011 and particularly in 2012 causing extensive flooding in low lying areas. This variance in annual weather patterns is becoming increasingly erratic and harder to predict.

3.1.6 Climate Change

Long-term records show an increase in bushfire danger and the length of the bushfire season for Victoria in recent decades. Projections for Victoria's future climate indicate that the frequency and intensity of bushfires in south-east Australia will continue to increase.
Projections also include:
- Reduced average rainfall and stream flows
- Fewer and heavier rainfall days and more consecutive dry days
- An increase in the extent and frequency of droughts
- More days over 35° and a higher annual mean temperature
- An increase in the number of extreme fire danger days (with FFDI greater than 75), by between 15% and 70% by 2050.

The precise impacts of climate change on the landscape's flora and fauna are not known, but are likely to include the arrival of species to new areas in the landscape, altered fire regimes and altered hydrology. Climate change is likely to change the attributes and availability of habitat, which will pose a particular threat to species that are isolated in the landscape, or have little ability to relocate to more suitable habitat.

PHOENIX Rapidfire simulations can be done for any weather scenario, including extreme weather conditions. We can therefore use it to assess bushfire risk resulting from changes in our climate over time.

Figure 3: Historical Total Fire Ban Day Declarations for Greater Shepparton

2009 - 2020

■ No. of Days

Year	No. of Days
2009	11
2010	2
2011	0
2012	5
2013	11
2014	13
2015	12
2016	6
2017	4
2018	6
2019	8
2020	7
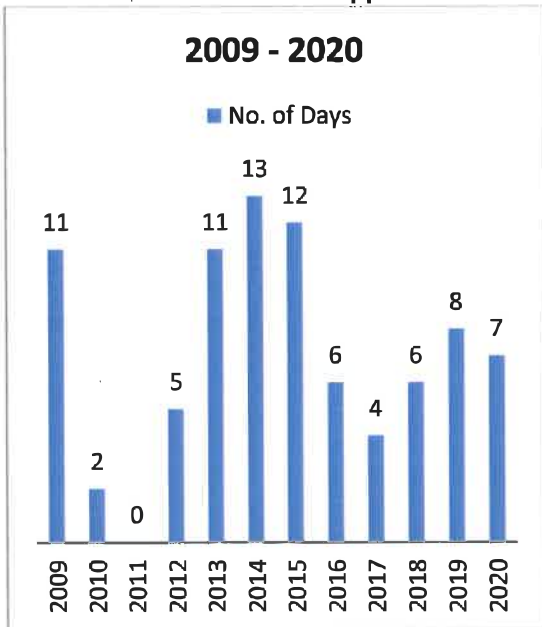
See https://www.cfa.vic.gov.au/warnings-restrictions/history-of-tfbs for more information.

Figure 4: Greater Shepparton Fire Danger Period (Restrictions) Dates

FDP Start Date	FDP End Date
23/11/2020	TBC
28/10/2019	30/03/2020
22/10/2018	13/05/2019
20/11/2017	01/05/2018
05/12/2016	18/04/2017
26/10/2015	04/04/2016
17/11/2014	13/04/2015
25/11/2013	02/04/2014
03/12/2012	08/04/2013
05/12/2011	19/03/2012
20/12/2010	28/02/2011
23/11/2009	15/03/2010
10/11/2008	01/05/2009

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 Greater Shepparton MFMPC is:

The community of Greater Shepparton working together to plan and prepare for, respond to and recover from fire and to reduce the risk and consequence of fire to the community, environment and the economy.

4.2   Strategic Direction

In developing strategic directions for the MFMS, the MFMPC was mindful of the planning context within which they were undertaking this task. As illustrated in figure 2 the MFMS forms a critical third tier in Victoria's Fire Management Planning hierarchy and therefore must not be developed in isolation from State and Regional level fire management plans. The MFMPC are keen to ensure any actions within the MFMS's support and compliment any relevant State objectives and strategies with regard to fire management as outlined in the Safer Together model.

4.3   Alignment of Regional & Municipal Objective

Greater Shepparton MFMS objective aligns closely with the Hume RSFMP objectives and vision for fire management. The development and implementation of this strategy will therefore contribute significantly to the realisation of the Hume RSFMP's vision.

Furthermore the formation of the MFMPC and the development of a MFMS using the designated Safer Together Model strongly support several of the RSFMP's key objectives.

> **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.*

5 Fire Management Risk Strategies

The Victorian Fire Risk Register - Bushfire (VFRR-B) is a process in which representatives from local government, fire services, public land managers, utilities and community groups map and identify assets at risk from bushfire and assess the level of risk to the asset. Assets may include residential areas, children's services, hospitals, aged-care facilities, infrastructure, commercial industry, tourism events, flora, fauna and those that are culturally significant. Agency representatives also record the current treatments which are carried out to mitigate the risk to the asset. Treatments may include fire prevention, community education and hazard reduction.

The VFRR-B supports and informs Municipal Fire Management Strategies and use the evidence based data to support their bushfire planning and decision making.

Further information on VFRR-B can be found in Appendix B.

To view specific Risk Assessments and Risk Strategies for the Greater Shepparton municipality, visit the VFRR-B website:
https://www.vfrr.vic.gov.au/

5.1 Fire Management Responsibility

Fire management responsibility within the municipality may be described in the following three categories:

5.1.1 Response Agencies

Country Fire Authority (CFA) is one of the world's largest, and most highly regarded community based emergency services organisations. CFA respond to fire and other emergencies 24 hours a day, seven days a week. CFA volunteers and staff deliver prevention, preparedness, response and recovery programs and services to over 4 million Victorians. Whether delivering community education programs to prevent fires or responding effectively to fires that have occurred, the services CFA deliver seek to achieve a common vision – Victorian communities that are prepared for and safe from fire.

For further information, visit the CFA website:
https://www.cfa.vic.gov.au/home

Fire Rescue Victoria (FRV) is a modern fire and rescue service that meets the needs of twenty-first century Victoria. The new organisation was established on 1 July 2020 as part of Victoria's Fire Services Reforms. FRV serve and protect communities across Melbourne and Victoria's major regional centres. There are 85 FRV fire and rescue stations across the state. FRV firefighters operate 47 fire stations in metropolitan Melbourne and 38 regional stations, most of which are co-located with CFA volunteer brigades. FRV respond to fires, complex rescues, road crashes, emergency medical calls and hazardous chemical spills. FRV people are highly trained and ready to respond to emergencies across Victoria, Australia, and the world. FRV proudly works with the Country Fire Authority (CFA), which is a community-based volunteer fire service.

For further information, visit the FRV website:
https://www.frv.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.

For further information on the Joint Fuel Management Program, visit the DELWP website:
https://www.ffm.vic.gov.au/bushfire-fuel-and-risk-management/fire-operation-plans

5.1.2   Regulatory and Service Providers

Greater Shepparton City Council (GSCC) are responsible for the management of all council owned property, as well as ensuring that private land holders appropriately manage their land. Council officers inspect properties within the municipality to assess the potential risk of a bushfire and where necessary may issue a fire prevention notice. They also undertake annual fire prevention works on roadsides and reserves leading up to and during the fire season

For further information, visit the GSCC website:
http://greatershepparton.com.au/

Department of Health and Human Services (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 Local Government Authority with recovery arrangements and plans outlined in the MEMP.

For further information, visit the DHHS website:
https://www.dhhs.vic.gov.au/

5.1.3   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 MFMPC 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.

Community Information Guides (CIG) are a key source of information for the community and an important tool to emphasise the shared responsibility between community, fire services and local government. Guides have been developed for a number of community's state-wide that are at risk of bushfire or grassfire.

To view the CIG for Shepparton and Mooroopna, visit the CFA website:
https://www.cfa.vic.gov.au/plan-prepare/community-information-guides
Further advice, training and support to groups, businesses and individuals concerning all of these expectations can be obtained from the CFA website:

https://www.cfa.vic.gov.au/plan-prepare

5.1.4   Electric Line Clearance

Vegetation in close proximity to electric lines is managed to reduce the risks of electrocution, fire (including bushfire) and diminished reliability of electricity supply.

More information on this can be found on the Energy Safe Victoria website https://esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/managing-trees-near-powerlines/electric-line-clearance-and-bushfire-mitigation/

Greater Shepparton City Council also has a responsibility to manage vegetation in the vicinity of electric lines in declared areas of the Greater Shepparton Municipality.

More information on this can be found on Councils website: http://greatershepparton.com.au/council/operations

5.2   Roadside Management

Fuel Reduced Corridors

Fuel Reduced Corridors must be sufficiently fuel-reduced to:
- Minimise the risk to the travelling public.
- Provide a means of establishing a control line.
- Reduce the time of travel to low-risk areas.
- Slow the spread of fire on the road reserve.

It should be noted that these roads may be closed to the general public when they are impinged upon by fire.

Fuel Reduced Corridors should have the fine fuel reduced to within the road maintenance envelope on either side of the road where practical. All overhanging obstructions less than 5 m above the road pavement must be removed, and dangerous trees/limbs need to be removed to allow the safe passage of firefighting appliances. They must be inspected annually by the controlling road authority and maintained prior to the fire danger period.

Fuel Reduced Corridors

Dangerous Trees or Limbs Removed

Thin out vegetation and/or fuel reduction burning by brigades

F/L

5 m Minimum

F/L

3m
Approximately

1-3 m

C/L
Not To Scale

1-3 m

3 m
Approximately

Mow, Slash, Spray or Grade to ensure fine fuel reduction

Optional Location for Works. To be undertaken as per the requirements of Fuel Reduced Corridors (See Appendix D).
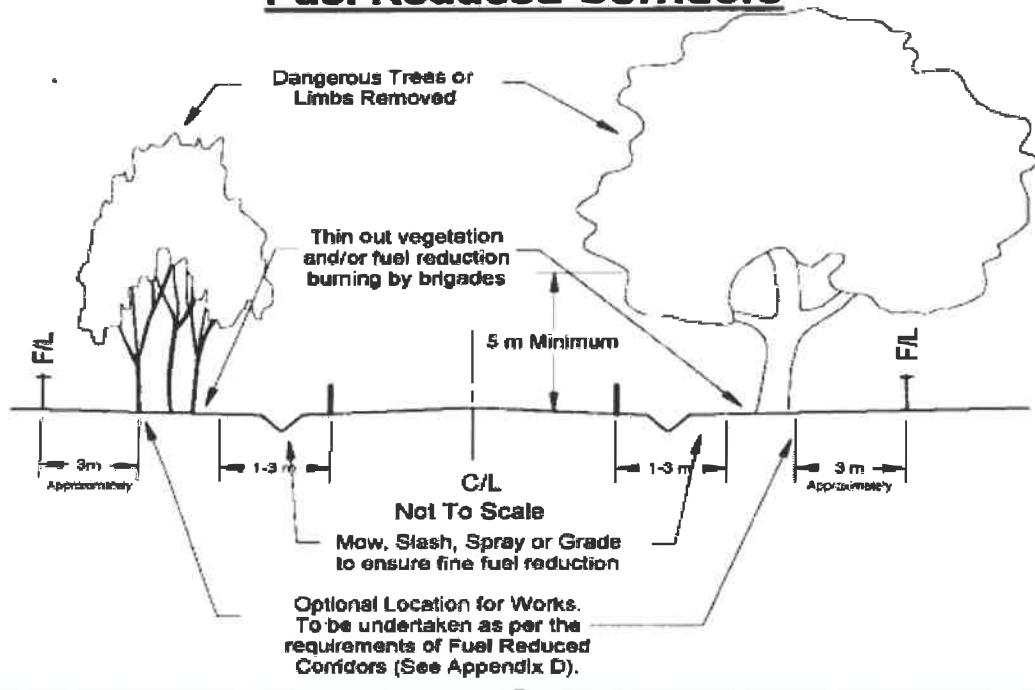
Appendix A   Greater Shepparton Key Access / Egress Roads

Legend

Key Access/Egress Roads 2017 update
Priority
— 1
— 2

VFRR Assets - Human Settlement (Polygon)
Risk Rating
■ Extreme
■ Very High
■ High
■ Medium
▢ LGA Boundaries (VM Admin)

This map has been produced in the North East Area
Date Prepared: 16/08/2019
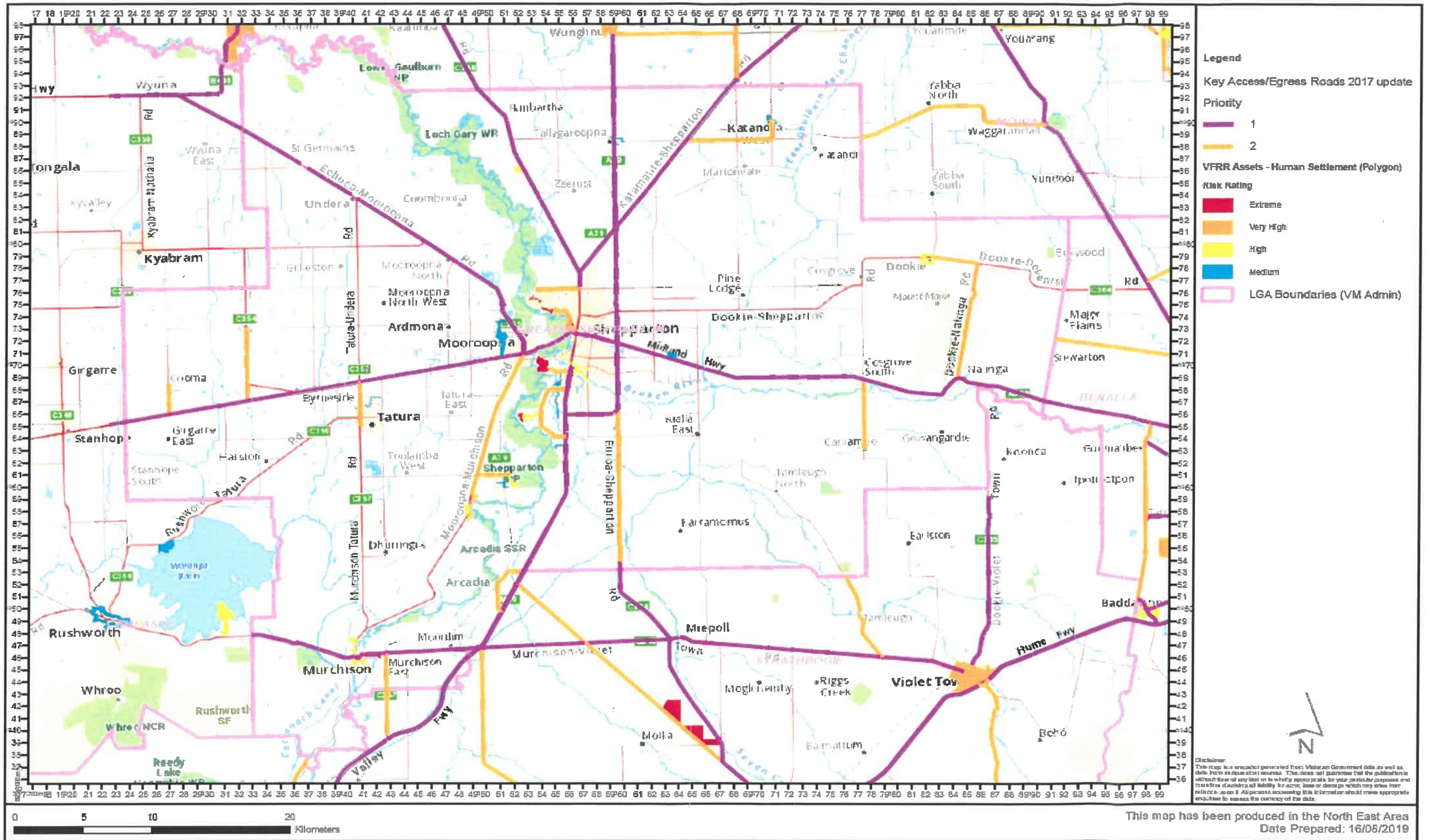
Appendix B   Victorian Fire Risk Register- Bushfire Information Sheet

VICTORIAN FIRE RISK REGISTER BUSHFIRE

WHAT IS THE VFRR-B?

The Victorian Fire Risk Register—Bushfire (VFRR-B) is a systematic process that identifies assets at risk from bushfire, assesses the level of risk to those assets and records the risk mitigation treatments currently in place along with their responsible agencies.

VFRR-B AIMS to collect, assess and validate risk data and local knowledge in a consistent way to support and inform bushfire planning and priorities.

Objectives

- Identify and rate bushfire risk to assets.
- Produce a risk register for responsible agencies.
- Identify current treatments to manage the risk and the responsible agencies for implementing these strategies.
- Support and inform planning.

Criteria for Risk Assessment

Identification and assessment of assets at risk from bushfire must be undertaken with consistency and context.

The VFRR-B assumes that:

- the source of risk is an ignition that has the potential to result in a developed bushfire.
- a developed bushfire may have 20+ appliances, an IMT set up, >100m fire front, cause poor visibility, radiant heat and spot fires.
- conditions are similar to 100 Fire Danger Index (Code Red).
- vegetation is in its natural state.
- assets would have direct flame impact or significant ember attack.
- response and suppression activities are not taken into consideration.

DETERMINING LIKELIHOOD

The likelihood assessment is the same for all asset classes and subclasses.

Likelihood has two considerations: Ignition Frequency & Spread and Reach

Ignition Frequency

Do ignitions occur frequently?

When answering this question it is recommended that the fire density layer be utilised.

It is important to look at the fire density layer within the threatening vegetation identified.

*NOTE: We consider ignitions over a 10 year period.

Answer NO for ignition frequency where:

- N/A ignitions identified
- LOW 1-10 ignitions

Answer YES for fire frequency where:

- AVERAGE 11-100 ignitions
- HIGH 100+ ignitions

These ignitions include vegetation fires, non-structure fires, road board/vehicle fires and undefined fires.

Spread & Reach

If an ignition occurs, is it expected to spread and reach assets?

When answering this question information such as access, containment potential (fuel load), fire run potential and fire paths should be considered. Take into account disseminate fuel(s) is there a barrier that is going to block the fire path to the asset? This could include but is not limited to, e.river, concrete parking area or a road. Ignition data, situation reports (sitreps) and fire history can be used to see where fires occur historically and how they run. Assets are assessed on conditions similar to 100 Fire Danger Index (Code Red).

VFRR-B GLOSSARY

Assets: Anything valued by people that may be at risk from Bushfire including houses, heritage buildings, infrastructure etc. (Note: All assets identified within the VFRR-B are required to be mapped spatially).

Fire Danger Index (FDI): FDI is related to the chances of a fire starting, its rate of spread, intensity and difficulty of suppression.
The index is divided into five danger ratings; Low, Moderate, High, Very High, Extreme.
An index of 100 means that fires will burn so fast and hot that control is virtually impossible.

Geographical Information Systems (GIS): Is any system that captures, stores, analyses, manages and presents data that are linked to locations. In the simplest terms, GIS is the merging of cartography (map drawing) and database technology.

Likelihood: The chance of a Bushfire igniting and spreading.

Mitigation: The elimination or reduction of the frequency, magnitude or severity of exposure to risk to minimisation of the

Susceptibility: is a measure of the vulnerability of a residential and other assets to the impact of fire. Susceptibility considers property preparedness, access & egress, community profile and water supply.

Recovery: The process of supporting emergency affected communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical wellbeing.

Risk: the exposure to the possibility of economic loss or gain, physical damage, injury, as a consequence of pursuing a particular course of action. Concept of risk has two elements, likelihood & consequence.

Treatment: a mitigation activity which aims to reduce risk of bushfire, for example, planned burning and community engagement.

Urban Rural Interfaces the line, area or zone where structures and other human development adjoin or overlap with bushland.

Example of Fire Density Layer

Consequence
+
Likelihood
=
Priority Rating

Risk Rating	Priority Rating
Extreme	1A, 1B, 1C
Very High	2A, 2B, 2C
High	3A, 3B, 3C, 3D
Medium	4
Low	N/A

VFRR-B Risk Intelligence

CFA   FOREST FIRE MANAGEMENT VICTORIA   VICTORIA Environment, Land, Water and Planning   VICTORIA POLICE

GREATER SHEPPARTON

🏠🏠🏠🏠🏠 HUMAN SETTLEMENT

Threat + Susceptibility = Consequence Rating
Hazard (Veg) | Access & Egress | Water Supply
Slope | Property pre-paredness
Separation Distance

Consequence Rating + Likelihood = Risk Rating

Risk Rating
- Extreme
- Very High
- High
- Medium
- Low

START HERE

Select Asset Subclass, below:

Asset Subclass	Criteria
Residential	Dense and highly populated areas that meets at least three of following criteria points: • CFA precincts Township and Suburban Living risk type of 50 dwellings • Density/Densities of up to 4 hectares • ABS Towns in Time 2006 on population (approximately 200 people) • Bushfire Management Overlay (BMO) • Community hub/congregation point
Other	Assets that meet less than three of the five point VFRR-B Residential criteria (above). These assets are considered as 'vulnerable localities' and fall under the 'Other' subclass.
Special Fire Protection	A vulnerable congregation of people in a particular location at one time. For example Schools, Hospitals, Retirement Villages.

DETERMINE THREAT RATING

Determine Hazard, see VFRR-B Vegetation Guide in folder.

Determine Slope using table below:

Slope direction	Slope angle	Description
Asset looks down to the vegetation	0-5 degrees	Level ground
Asset looks down to the vegetation	5-10 degrees	Easy to walk, but cycling is difficult to moderate to walk, too steeping for cycling
Asset looks down to the vegetation	10-15 degrees	moderate to walk, too steeping for cycling, too hard to climb, limit of 2WD roads
Asset looks down to the vegetation	>15 degrees	Difficult to climb
Asset looks up to the vegetation	Upslope	N/A

DETERMINE SEPARATION DISTANCE

Determine Separation Distance from the threatening vegetation using table below:

Separation Distance
<20m
20-60m
>60m

DETERMINE SUSCEPTIBILITY

Determine Susceptibility for residential & other assets using table below:

Residential & other Susceptibility
Low	Adequate access and egress Adequate water supply Properties prepared Residents/Owners likely to be able to defend their own property
Moderate	Adequate access and egress Adequate water supply Properties are not prepared Residents/Owners likely to be able to defend their own property
High	Unadequate access and egress Inadequate water supply Properties are not prepared Residents/Owners unlikely or unable to defend their own property

To determine the Susceptibility of special fire protection assets use Table 6 Special Fire Protection Susceptibility below:

Special Fire Protection Susceptibility
Low	Not considered for Special Fire Protection assets
Moderate	Emergency management plan in place
High	No emergency management plan in place

UP NEXT – DETERMINE LIKELIHOOD
Flip page, Determining Likelihood

ECONOMIC $$$$$

Level of Impact + Consequence = Consequence Rating
Local | Recovery Time | cost
Regional/State

Consequence Rating + Likelihood = Risk Rating

Risk Rating
- Extreme
- Very High
- High
- Medium
- Low

START HERE

Select Asset Subclass, below:

Asset Subclass	Examples of Assets
Agriculture	All areas under production (e.g. cropping, grazing, orchards, vineyards) but excluding commercial forests. Note: NatMPC or working groups should not assess agriculture assets at the level of individual farms
Commercial/Industrial	Major industries or sawmills
Infrastructure	Large Power Lines, Gas and Oil Pipelines, Railway Lines, Electricity Substations, communication Facilities or Waste Treatment Plants
Tourist and Recreational	Towns, Reserves, Retreats, Ecotourism or Facilities
Mines	The assessment of mines in this category is on the risk of bushfire to the socio-economic interests rather than risk to human life. Note: Mines which are no longer being actively mined should not be included as an asset
Commercial Forests	Plantation or Commercial Native Forests
Drinking Water Catchments	Land and infrastructure associated with drinking water catchments

DETERMINE LEVEL OF IMPACT

Determine level of impact using table below:

	Local	Region	Nation/State
People (including livestock)	- Health system operating at optimum capacity levels. - Displacement of 50+ people within regional capacity to cope. - Single fatality and/or multiple serious injuries requiring hospitalisation as a direct result of one bushfire event. - Up to 10 houses lost/ up to 3,000 livestock lost.	- Health system operating at surge capacity, under severe pressure. - Displacement of 200-500 people within capacity of the state to cope. State personal support system operating at maximum capacity. - 5 fatalities as a direct result of a bushfire event and large number of people affected by smoke. - 1000+ houses/ 3000 – 10,000 livestock	- Health system unable to cope. - General displacement of 500+ people. - Beyond capacity of the State. State personal support system unable to cope. - 20+ lives lost as a direct result of bushfire, hundreds injured. - 1000+ houses destroyed/ 10,000+ livestock lost, significant loss of breeding stock.
Infrastructure	Loss of critical infrastructure. Loss of services for: -Main Metro: up to 1hr -Major regional city: 1 day -Local community: 1 week	Loss of critical infrastructure. Loss of services for: -Main Metro: up to 2-4hrs -Major regional city/several suburbs 3-4 days.	Loss of critical infrastructure and/or services for 24-28 hours to the Melbourne metropolitan area. Loss of services to a major regional city several suburbs for up to 1 week.
Public Administration	Local outrage and concern.	Some outrage at local and regional level.	Significant state-wide outrage. Royal commissions or other similar inquiry leading to changes in policy and practice.
Environmental	Temporary disturbance to 1+ ecosystems. Local response/support for animal welfare.	Long term disturbance to 1+ ecosystems. National response/Support for animal welfare. Loss of regionally-significant cultural asset.	Permanent total loss of 1+ ecosystems, extinction of species or increased likelihood of extinctions. Loss of state significant cultural assets.
Financial	>$30M++ Damage costs including legal actions and/or industry impacts (tourism, business etc.) to the value of more than $30M.	>$100M++ Damage costs including legal actions and/or industry impacts (tourism, business etc.) to the value of more than $100M.	>$500M++ 5B or 50% of State Revenue. Damage costs including legal actions and/or industry impacts (tourism, forestry, wine and grape etc.) to the value of more than $500M.

Determine recovery using the table to the right:

	Cost		
Time	Approximately to the value of $50M or complete loss	Approximately to the value of more than $100M	Approximately to the value of more than $500M
Hours/Days	Low	Low	Moderate
Weeks	Low	Moderate	High
Monthly/Years	Moderate	High	High

UP NEXT – DETERMINE LIKELIHOOD
Flip page, Determining Likelihood

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Appendix C   **Fire Rescue Victoria Shepparton Fire District Map**
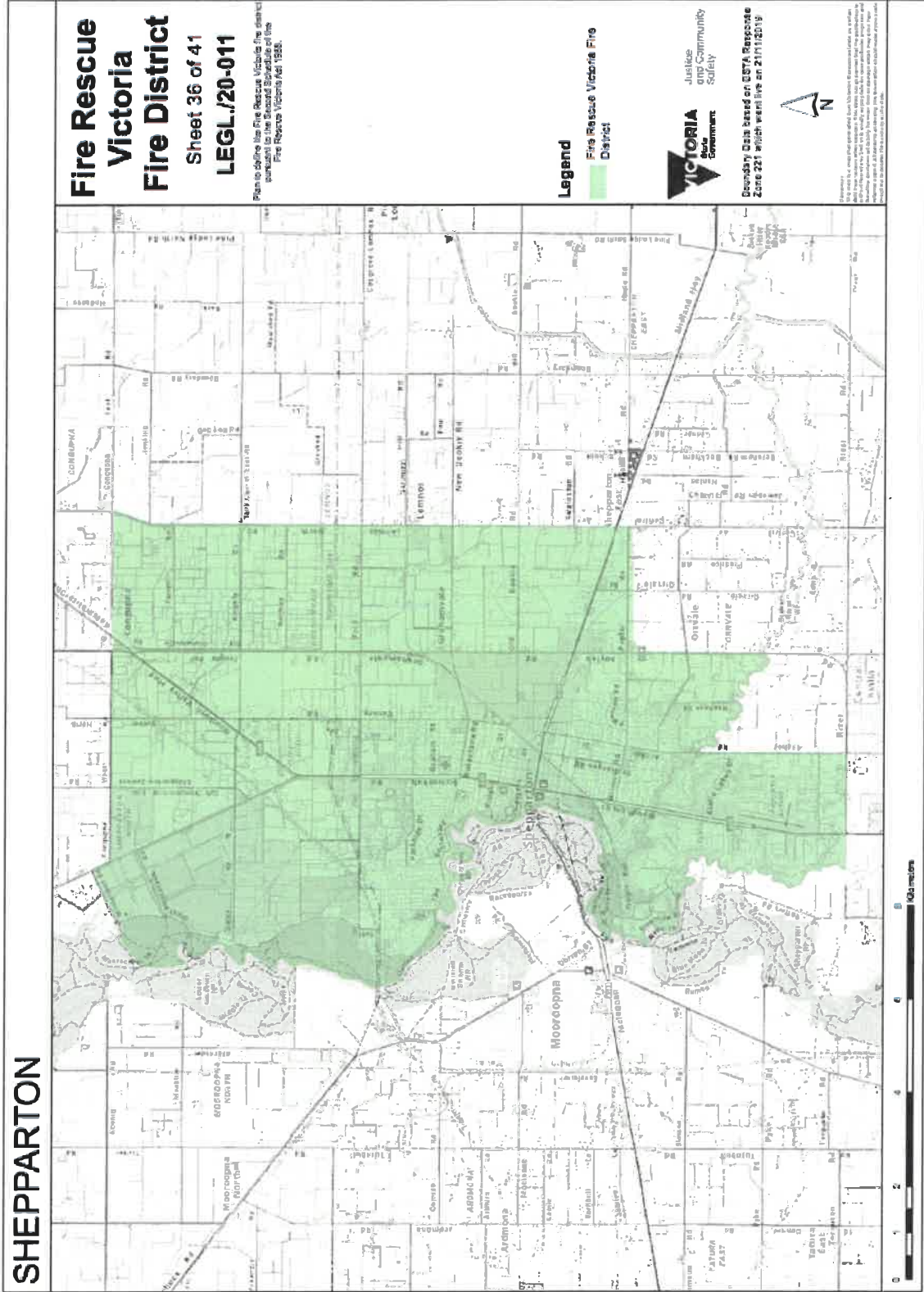
Appendix D　　　Glossary

CIG	Community Information Guide
CFA	Country Fire Authority
DHHS	Department of Health and Human Services
DELWP	Department of Environment, Land, Water and Planning
EMMV	Emergency Management Manual Victoria
FRV	Fire Rescue Victoria
GSCC	Greater Shepparton City Council
MEMP	Municipal Emergency Management Planning
MEMPC	Municipal Emergency Management Planning Committee
MFMS	Municipal Fire Management Strategy
MFMPC	Municipal Fire Management Planning Committee
RSFMPC	Regional Strategic Fire Management Planning Committee
SFMPC	State Fire Management Planning Committee
VFRR	Victoria Fire Risk Register
VFRR-B	Victoria Fire Risk Register - Bushfire

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