

2019-2022

KNOX
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Municipal Fire Management Plan



This iteration of the Knox Municipal Fire Management Plan was finalised in September 2018.

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Authorisation

This Municipal Fire Management Plan was endorsed by the Knox Municipal Emergency Management Committee on 19 September 2018 and presented to Council for adoption on 22 October 2018.

Signed: on file

Date: 02/10/18

Steven Dickson

Chair of the
Knox Municipal Emergency Management Planning Committee

Signed: on file

Date: 22/10/18

Cr John Mortimore

Mayor
Knox City Council

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Acronyms

BFM	Bushland Fire Management
BMO	Bushfire Management Overlay
BPA	Bushfire Prone Area
CFA	Country Fire Authority
CFA Act	Country Fire Authority Act (Vic) 1958
DHHS	Department of Health and Human Services
DTPLI	Department of Transport, Planning and Local Infrastructure
EMCEMP	Eastern Metro Councils Emergency Management Partnership
EMMV	Emergency Management Manual Victoria
EMV	Emergency Management Victoria
ESV	Essential Services Victoria
FFMvic	Forest Fire Management Victoria
HAZMAT	Hazardous Materials
IAP2	International Association for Public Participation Australasia
IFMP	Integrated Fire Management Planning
KCC	Knox City Council
KPI	Key Performance Indicator
MEMP	Municipal Emergency Management Plan
MEMPC	Municipal Emergency Management Planning Committee
MERO	Municipal Emergency Resource Officer
MFPO	Municipal Fire Prevention Officer
MFPC	Municipal Fire Prevention Committee
MFMP	Municipal Fire Management Plan
PPRR	Prevention, Preparedness, Response, Recovery
RSFMPC	Regional Strategic Fire Management Planning Sub Committee
SFMPC	State Fire Management Planning Committee
SOP	Standard Operating Procedure
TFB	Total Fire Ban
V-BERAP	Victorian Built Environment Risk Assessment Process
VFRR-B	Victoria Fire Risk Register – Bushfire
VICPOL	Victoria Police
VICSES	Victoria State Emergency Service

1. Introduction

Fire management planning in the State of Victoria is undertaken to ensure adequate management of all aspects of fires; from prevention through to response and recovery. It brings together a range of agencies and organisations to discuss, plan and manage fire with the community. It aims to provide quality outcomes for communities at risk.

This plan is a sub-plan of the Municipal Emergency Management Plan and has been prepared by a working group of the Knox Municipal Emergency Management Planning Committee (MEMPC). It reflects the shared responsibilities of government, fire agencies and communities. It demonstrates a collaborative approach between responsible agencies and covers both public and private lands, and is a three (3) year plan to be reviewed on an annual basis.

The plan is a written presentation of the dynamic and continually evolving fire planning process undertaken in the Knox municipal area.

The Knox municipal area of the Eastern Metropolitan Region is located in the State of Victoria, Australia. We have a diverse range of environments, vulnerable to all types of fire hazard. The State Fire Management Strategy along with the Emergency Management Manual Victoria (EMMV) provides direction for the development and implementation of structures, systems, processes and products that improve fire management planning in Victoria.

Approaches to fire management are framed by the assessment of risk. This includes an analysis of the fire risks and identification of options for positive change. It places greater emphasis on addressing underlying causes and seeking long-term, sustainable solutions that incorporate the four essential elements of emergency management of planning, preparedness, response and recovery.

Consultation, participation and engagement are essential to enable an integrated approach to fire management. This plan documents how agencies involved in fire management within the Knox municipal area actively participate in this process.

Municipal fire management planning

The Municipal Emergency Management Planning Committee (MEMPC) established a working group to determine procedures subject to the guidelines provided in the EMMV.

The working group replaced the existing Municipal Fire Prevention Committee (MFPC) and does not alter existing requirements for municipal councils to make statutory appointments of a Municipal Emergency Resource Officer (MERO) and a Municipal Fire Prevention Officer (MFPO).

The MEMPC are responsible for integrated planning at the municipal and local level. Members of these committees work collaboratively, meet at appropriate intervals, share planning information and produce the Municipal Fire Management Plan (MFMP).

The fire management planning process is managed and supported with the technical expertise of the relevant fire services. The working group is responsible for writing the MFMP, ensuring implementation of the actions detailed in the plan, and monitoring the effectiveness of those actions.

The members of the Knox working group review and report fire management planning actions to the MEMPC who, in turn, report to Knox City Council (KCC) and other stakeholder agencies with accountabilities in the MFMP, and raise matters to the Eastern Regional Strategic Fire Management Planning Sub Committee (RSFMPSC) when required.

Agencies working together with the community

The Knox MFMP brings together all agencies with legislative responsibility for fire management to collectively work with the community to effectively and efficiently prepare for, respond to and recover from fire. The Knox MFMP assesses bushfire, chemical incidents and structural fire and will be further investigated and developed as the risk assessment tools for these areas are developed and reach maturity.

Key agencies involved in the planning process include:

Agency	Responsibilities
Country Fire Authority (CFA)	Emergency service agency that prevents and responds to bushfires, structural fires, chemical incidents, road accidents, rescues and other emergencies.
Department of Health & Human Services (DHHS)	Provides recovery advice, information and assistance to communities and municipalities affected by an emergency event which endangers or threatens to endanger the safety or health of any person in Victoria.
Department of Transport, Planning & Local Infrastructure (DTPLI)	Leads and supports development of liveable communities, including improving urban planning and development, particularly in outer suburbs and growth areas.
Emergency Management Victoria	Shares responsibility with a range of agencies, organisations and departments for ensuring the system of emergency management in Victoria is sustainable, effective and community focussed.
Forest Fire Management Victoria (FFMVic)	Responsible for fire suppression and preparedness on public land in coordination with Parks Victoria.
Knox City Council - MERO	Responsible for coordinating Council's resources in response to community emergencies, as required under the Victorian Emergency Management Act 1986.
Knox City Council - MFPO	Under the Country Fire Authority Act 1958 (CFA Act) this role is required to be appointed by Council to undertake and regularly review council's fire prevention planning and plans.
Knox City Council - Strategic Planning Officer	This role prepares, reviews and participates in the development of land use planning and development strategies, policies and projects.
Metro Trains	Metro Trains operate Melbourne's train network. The Metro train network has 15 lines and 212 train stations, servicing more than 200 million customer journeys per year.
Parks Victoria (ParksVic)	Responsible for managing and expanding Victoria's parks networks.
SP AusNet	Transports high voltage electricity from where it is generated into electricity distribution networks. It is also a gas distribution network.
VicRoads	Manages the Victorian arterial road network and its use as part of the overall transport system.

Victoria Police (VICPOL)	VICPOL provides a 24-hour police service to the Victorian community. VICPOL is also responsible for the effective coordination of resources and services in response to emergencies and for: relocation/evacuation; registration of evacuees – in conjunction with the Australian Red Cross; and provision of media coordination.
Victoria State Emergency Service (VICSES)	Prepares and responds to floods, severe storms, earthquakes, road crash rescue and conducts search and rescue operations in bush and alpine areas.
Vic Track	Vic Track is the owner of Victorian railway land and infrastructure which is leased to public transport operators.

Community engagement, education and safety

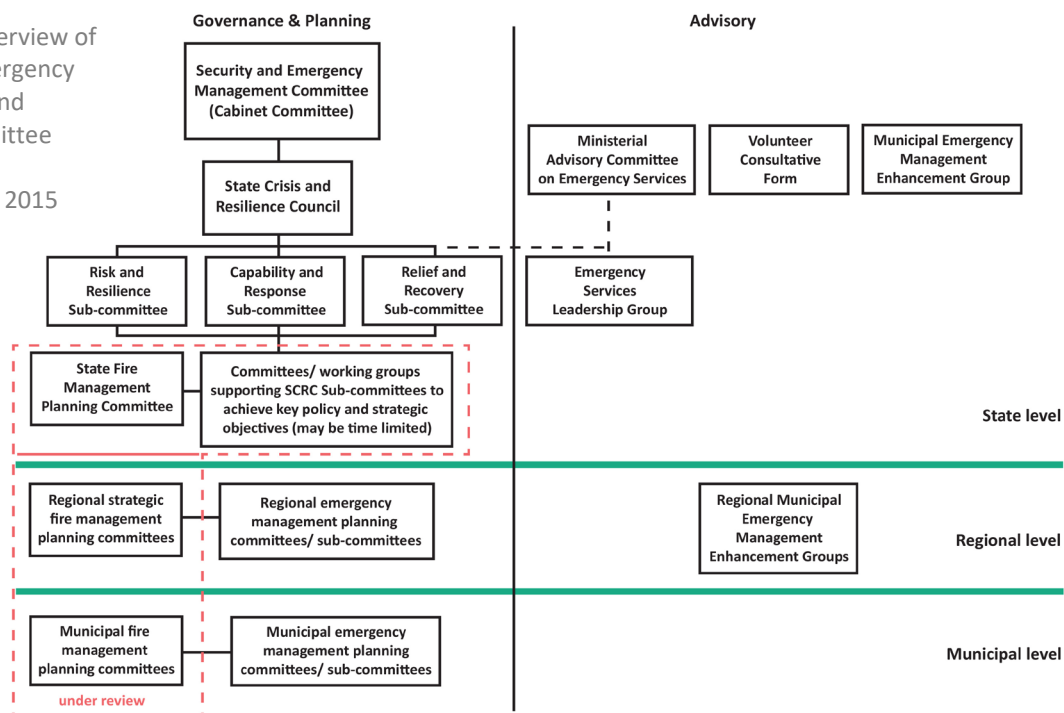
Community engagement, education and safety through the development and delivery of relevant community education and activities, is a vital component of prevention and preparedness. Resilient communities are well prepared for, better able to respond to an emergency, and therefore better able to recover from the impacts of an emergency.

Knox Municipal Fire Management Plan

The Knox MFMP has been prepared and will be maintained as a sub-plan to the Municipal Emergency Management Plan (MEMP) to ensure that the linkages across fire prevention, preparedness, response and recovery programs are consistent and holistic. The MFMP is risk-based, having regard for the social, economic, built and natural environment aspects of fire, and will prove to be a useful tool for agencies and personnel involved in fire management planning activities. The MFMP also contains appropriate reference to other applications of fire, including ecological and cultural.

Legislative arrangements for the operation of fire management planning are detailed in Part 6a of the EMMV (<http://www.emv.vic.gov.au/policies/emmv>). The Knox Municipal Fire Management Planning Committee resolved that the committee be dissolved in July 2014 with all decisions requiring formal process to be managed by the MEMPC.

Figure 1: An overview of the State's emergency management and planning committee structure (EMMV, March 2015 p.6-2)



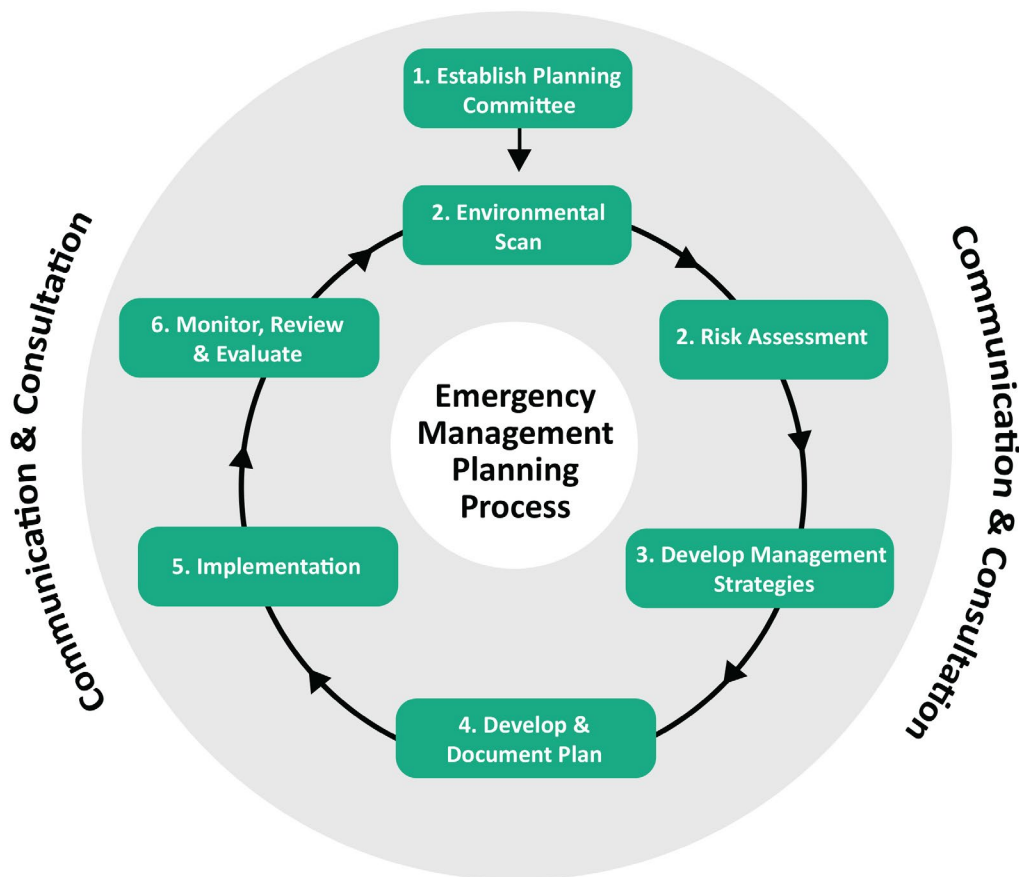
The Planning Process

The Knox MFMP documents the process undertaken and presents the outcomes of this collaborative process. Requirements in accordance with the CFA Act for municipal fire prevention planning will continue to be met through this process. It follows a continuous planning process.

The planning process can be seen as a series of steps that result in the development, maintenance and refinement of the MFMP. Each of the stages guides the planning process that Knox has followed and will continue to do so into the future. The community and organisational engagement process follows the planning cycle (

Figure 2) and is documented in the following sections of this document.

Figure 2:
Emergency management planning process
(EMMV, January 2011, p.6-3)



The following table outlines the planning process at regional, municipal and local levels.

Table 1. Additional information relating to Regional and Municipal planning contexts (IFMP Guide page 10)

Governance	Regional Context	Municipal Context
Governance	Strategic	Operational
Timeframe	10-year planning cycle	3-year planning cycle
Geographic coverage	Large areas that cross many ownership, administrative and management boundaries	Single municipality
Stakeholder and partner interests	State, regional and municipal	Regional, community and local level
Planning environment	Broader landscape land management agencies, government, utility, entitles and landholders likely to have management plans	Municipal area or district; business and property owners that are less likely to have formal management plans
Size and scale	Organisations with large resource and asset bases, with application across whole region; delegated authorities	Business and small landholders, such as farmers and residents with less delegation and resource capacity
Stakeholder decision-making processes	Part of the regional (resource allocation)	Regional and/or local (program delivery)
Local plans	Part of the region	Part of the municipality
Primary plan linkages and integration	Links upwards to the state strategy and is informed by Municipal Fire Management Plans in the region; no state or municipal planning duplication	Provides input in to, and is developed with reference to, Regional Strategic Fire Management Plan; no state or regional planning duplication
Data and information	National, state and regional	Regional and municipal

2 Vision, Mission & Objectives

2.1 Vision

Active partnerships with our community, emergency services and local government, working together; to reduce the destructive impact of fire on communities and the environment and strengthen community resilience to the effects of fire by providing a greater understanding of fire management planning within the community and the environment.

2.2 Mission

Agencies of Knox working together with communities to reduce the impact of fire. This will be achieved by the objectives listed in Section 2.3 of this document.

2.3 Objectives

- Lead fire management planning across the Knox municipal area in prevention, preparedness, response and recovery (PPRR);
- Develop fire management plans based on shared knowledge;
- Work with the community to manage fire;
- Deliver outcomes that address fire risk in the local environment regardless of boundaries;
- Identify significant natural, social, built and economic environments at risk within the Knox municipal area and in consideration of neighbouring communities;
- Ensure effective community engagement; and
- Commit to continuous improvement.

For each of these objectives there is a goal set and an action defined in order to achieve these goals. This information is presented in the action plan located in section 6 of this document.

2.4 Alignment with regional objectives

The development of the vision and mission for the Knox MFMP were guided by the Regional Strategic Fire Management Plan vision and mission. The Regional vision aligns with the State vision.

Fire management in the Eastern Metropolitan Region that delivers:

- Active participation of 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 the effects of fire;
- Greater understanding of the fire sector within the community; and
- Healthy natural, social, built and economic environments.

Eastern Metropolitan Region Strategic Fire Management Plan mission:

Agencies of the Eastern Metropolitan Region working together with communities to reduce the impact of unplanned fire. The Region will achieve this by the following key themes:

- Committee becomes the driver (lead body) for fire management planning across the region;
- Building and using knowledge;
- Working with the community to manage fire;
- Delivering cross tenure outcomes that address fire risk at a landscape and regional level;
- Effective communications and marketing;
- Continuous improvement; and
- Identifying and treating significant natural, social, built and economic environments at risk.

3 Engagement and communication

Community participation is an integral part of risk management. The engagement plan used identifies key stakeholders and the level, method and timing of stakeholder engagement for this Plan, and has been developed using International Association for Public Participation Australasia (IAP2). The engagement levels within IAP2 are as follows:

Inform

Provide appropriate detailed and accurate information to assist stakeholders in developing a shared understanding of the complexity of issues, alternatives and possible solutions.

Consult

Utilise stakeholder expertise and diversity to obtain input into analysis, alternatives and develop key decisions.

Involve

Work directly with the suite of key stakeholders throughout the various processes to ensure key issues and intent are understood and considered.

Collaborate

Partner with key stakeholders in each aspect of decision making. This includes the development of alternatives, and the identification of contributions and priority actions with a clear understanding of the responsibilities of each stakeholder.

Empower

Foster and promote transparent and accountable processes that allow each stakeholder organisation to empower themselves through key actions and the implementation of responsibilities (IAP2, 2011).

3.1 Community and stakeholder engagement plan

Objective & commitment

Objective	Commitment
To gather local knowledge, develop community ownership and responsibility for fire management planning, educate the community to build fire management planning skills and understanding.	To better integrate the management of fire and increase the safety of the Knox communities.

The key stakeholders that were identified as part of this planning include key representation from agencies and organisations, which individually represent the community through their own engagement strategies.

Council is collaborating with CFA and MFB to introduce the Fire Home Emergency Letter Program (Fire HELP) that encourages the community to take action in their own homes to improve home fire safety. Along with key stakeholders from the MEMPC, Council participates in an interactive display annually at Stringybark Festival taking residents through an emergency and the response, relief and recovery process.

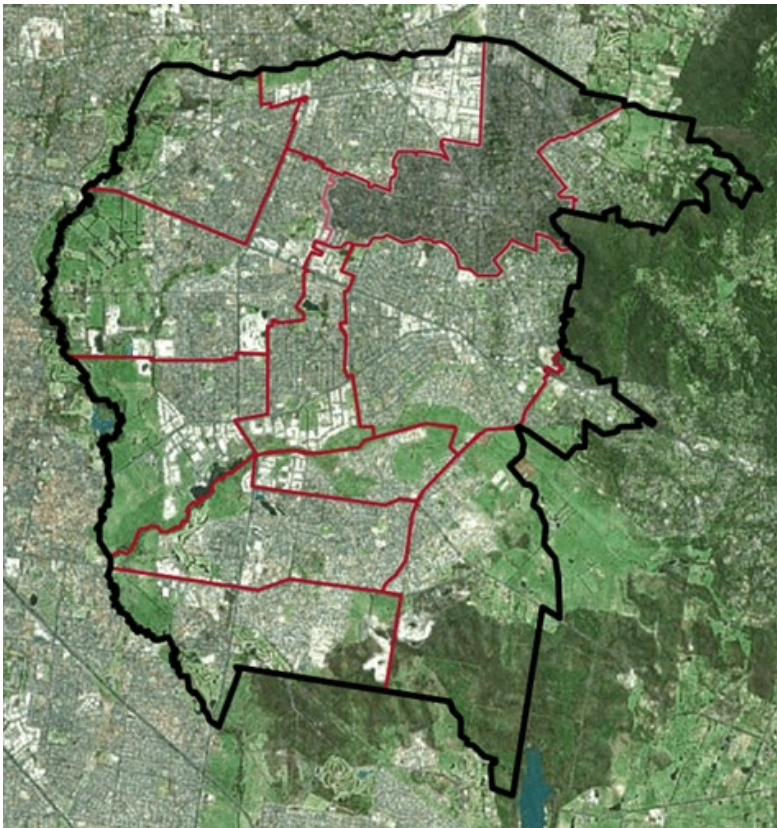
Engagement Process

Stakeholder	Details	Level of Engagement	When
Knox community	Broader Knox community	Inform & collaborate	Ongoing
Knox MEMPC	Knox MEMPC established under the Emergency Management Act (1986), to conduct emergency management planning.	Empower	Endorsement and ongoing
	Knox MEMPC established to ensure fire management planning across all agencies at a local level.	Empower	Ongoing
Knox City Council	Endorsement role	Empower	Endorsement of the Knox MFMP
Eastern Metropolitan RSFMPSC	Eastern Metropolitan RSFMPSC established to ensure fire management planning across all agencies at a regional level.	Inform	Quarterly
Relevant Knox City Council staff	Strategic planning, MFPO, land managers, environment	Collaborate	As required
EMCEMP	Neighbouring Councils with a shared risk	Consult	As required

4 Summary of the environmental scan and assumptions for the future

Description of the Knox municipal area

The Knox municipal area is located 25 kilometres east of the Melbourne Central Business District. The district boasts a green, leafy image extending to the foothills of the picturesque Dandenong Ranges. Knox municipal area is one of the most populous and diverse municipalities in Victoria, with more than 160,000 residents living in eleven suburbs.



Aerial view of Knox municipal area and surrounding municipalities

Location and land tenure

The Knox municipal area is located at the foothills of the Dandenong Ranges and includes the geographic area known as the City of Knox. This area is 114 square kilometres and includes predominant land tenures of Parks Victoria, Knox City Council and private land & property owners. It is supported by seven local CFA Brigades and borders the Metropolitan Fire District.

Surrounded by major parks, with five creeks running through the Knox municipal area, Knox celebrates, and protects, its' environment. It has a strong and growing business, educational and industrial life, and is located close to growing markets and transport hubs.

The City of Knox is a major hub of cultural, commercial, business and innovative activity in the eastern suburbs of Victoria's capital city. It is the gateway to both a major growth area in Melbourne and the urban-rural fringe.

Population and demographic information

The population of the Knox municipal area is approximately 160,700 spread over 114 square kilometres and 11 suburbs. Suburbs include Bayswater, Boronia, Ferntree Gully, Knoxfield, Lysterfield, Rowville, Scoresby, The Basin, Upper Ferntree Gully, Wantirna and Wantirna South.

Age structure

Table 2 profiles the City of Knox population from the 2016 census data, and shows the age group with the highest number of people living within the city's boundaries in 2016 was the 45 to 49 year age group.

Table 2: Age structure of City of Knox

Age Group:	2016 Census			2011 Census			Change
	Males	Females	Persons	Males	Females	Persons	2011-2016
0-4 years	4,605	4,410	9,014	4,743	4,185	8,928	+86
5-9 years	4,778	4,285	9,063	4,618	4,373	8,991	+72
10-14 years	4,601	4,385	8,986	4,972	4,759	9,731	-745
15-19 years	5,083	4,831	9,911	5,499	5,375	10,874	-963
20-24 years	5,223	4,974	10,200	5,268	5,010	10,278	-78
25-29 years	4,954	4,968	9,919	4,670	4,648	9,318	+601
30-34 years	5,061	5,347	10,413	4,676	4,771	9,447	+966
35-39 years	5,058	5,220	10,280	5,027	5,334	10,361	-81
39-44 years	5,042	5,428	10,471	5,350	5,786	11,136	-665
45-49 years	5,216	5,833	11,047	5,501	5,874	11,375	-328
20-54 years	5,326	5,706	11,032	5,406	5,742	11,148	-116
55-59 years	5,090	5,405	10,497	4,809	5,138	9,947	+550
60-64 years	4,477	4,919	9,399	4,344	4,445	8,789	+610
65-69 years	3,883	4,174	8,062	2,970	3,153	6,123	+1,939
70-74 years	2,598	3,007	5,607	2,187	2,326	4,513	+1,094
75-79 years	1,975	2,252	4,229	1,480	1,796	3,276	+953
80-84 years	1,235	1,648	2,887	1,061	1,476	2,537	+350
85 years and over	1,102	2,008	3,105	823	1,705	2,528	+577
Total persons	75,307	78,800	154,122	73,404	75,896	149,300	+4,822

Source: Australian Bureau of Statistics, Census of Population and Housing, 2011 and 2016.

In summary between 2011 and 2016 census the largest changes in age structure for the City of Knox were:

- An increase in the age group 65 to 69;
- An increase in the age group 70 to 74;
- A decrease in the age group 15 to 19, and
- A decrease in the age group 10 to 14.

Culturally and Linguistically Diverse Communities (CALD)

The Knox municipal area has a diverse population with 46,424 residents born overseas (30% of the total population) and 23% of residents from non-English speaking backgrounds providing the Knox municipal area with a diverse cultural landscape. The top ten listed countries of birth other than Australia includes United Kingdom, China, India, Malaysia, Sri Lanka, New Zealand, Philippines, Hong Kong, Vietnam and Germany.

Vulnerable groups

Within the Knox municipal area there are several vulnerable groups/facilities:

- **Lower socio economic groups.** There are 14,000 people living in 8,600 low income households in Knox (those households that fall into the bottom 25% of incomes across Australia).
- **Indigenous community.** Knox has an Aboriginal and Torres Strait Islander population of 750 people, the second largest population in the Eastern region of Melbourne, which has greater disadvantage in terms of education, economic capacity, employment and housing security compared with the wider population.
- **Culturally diverse communities.** There is an increasing number of people for whom English is not their first language living in Knox. This increased from 31,500 in 2011 to 38,800 by 2016, with the majority (12,800) speaking a Chinese language. This has implications for communication during a fire event.
- **Senior citizens and residential care facilities.** 15% of the population is aged 65 years and older. There are 25 residential aged care facilities and a further 4 supported residential service facilities within the Knox municipal area, 17 older person independent living complexes and retirement villages. An emerging trend is for older people to remain living in their own homes and have care services delivered at home.
- **Hospitals.** There are four hospitals within the Knox municipal area, two public (The Angliss and Wantirna Health) and two private (Knox Private and Melbourne Eastern Private Hospital).
- **Children and young people.** 18% (27,000) Knox residents are children under 15 while young people aged 15-24 years account for a further 13% (20,000 residents). There are 50 schools in the Knox municipal area, both public and private, and one tertiary education institution.
- **Need for assistance.** In 2016 there were approximately 7,400 people with a major disability living in Knox. This is based on need for assistance in regard to self-care, mobility or communication (very young children requiring assistance due to age are filtered out of this figure). This information can assist us in our continued planning for supporting our vulnerable community during a fire.

Assumptions for the future in the Knox municipal area

Different areas within the Knox municipal area have different functions based on both era of development and amount of new housing opportunities. The variety of periods of settlement in the City mean that various suburbs are at quite different periods in the suburb lifecycle. In the northern and eastern areas of the City such as Bayswater, Boronia and Ferntree Gully, the original settlers have passed on, resulting in a diversity of age groups. Areas such as Wantirna and Wantirna South by contrast, are expected to experience some renewal over the next 15-20 years, while over the period to 2021 Rowville will see a large increase in the population over age 60 (+1500). Boronia, Bayswater, Knoxfield, Rowville, Scoresby and The Basin are expected to attract some families and older adults and retirees, while losing relatively large numbers of young adults leaving home. Wantirna is expected to experience a large loss through migration in young adults leaving home to establish new households elsewhere. Ferntree Gully by contrast is expected to attract family households again as the area regenerates. The variety of function and role of the small areas of this municipal area mean that population outcomes differ significantly across the suburbs.

There are also significant differences in the supply of residential property within the Knox municipal area that will have a major influence in structuring different population and household futures over the forecast period. Wantirna South, Rowville, Bayswater, Boronia and Ferntree Gully are expected to experience the largest amount of new residential development over the next 25 years, followed by Scoresby and Lysterfield. This development will generally take the form of medium density development and development of former non-residential uses, however in the case of Rowville and Ferntree Gully, some small pockets of greenfield development will occur early in the forecast period. By contrast, The Basin and Upper Ferntree Gully are not expected to add significant numbers of new dwellings over the forecast period. The majority of new residential development within the time frame of the Plan (to 2021) is forecast to occur in Wantirna South (+800 dwellings); Boronia (+630); Rowville (+560); with an additional 400 dwellings each anticipated for Bayswater and Ferntree Gully.

Recent history of fire in the Knox municipal area

Statistics for the Knox municipality show that CFA have responded to 3521 calls from 1 July 2017 to 30 June 2018. Fire and explosions make up almost a quarter of the calls and over 20% were false alarms. The only notable fire within this time was at the transfer recycling station in Wantirna South. Although bushfires have predominately occurred in neighbouring municipalities, the Quarry Road bushfire on 7 February 2009 (Black Saturday), had the potential to damage parts of Knox and cause widespread damage to Ferny Creek and the Dandenong Ranges and posed a significant potential threat to life and property. This fire is a clear indicator of the potential for bushfires starting within the Knox municipal area and causing significant threat to the area and neighbouring communities.

The Knox municipal area has a history of suspicious fire events. For the period 1 June 2017 to 31 May 2018, 34 reported arson incidents occurred within this area (data obtained from VICPOL). A small percentage reported were grassfires, while the majority of incidents were damage to property and infrastructure. There are serious consequences from bushfire due to arson, with the potential to impact heavily upon our environment and residents. To address the issue of bushfire arson prevention, VICPOL have implemented a strategy with a primary focus upon prevention, intelligence and enforcement strategies. This statewide approach involves effective cooperation with partners at a State and local level. Within the Knox municipal area during the average bushfire season, on those days activated as severe, extreme or code red, intensive police, Knox Community Laws and FFMVic patrols focus upon high bushfire arson locations and time periods.

5 Risk assessment

5.1 Risk assessment process

When developing a fire management strategy it is necessary to undertake a risk management process. The AS/NZS ISO 31000:2009 Risk Management Standards provide a risk management model used to guide decision making in a wide range of applications including emergency management and fire safety. This standard defines risk as the chance of something happening that will have a negative impact on objectives.

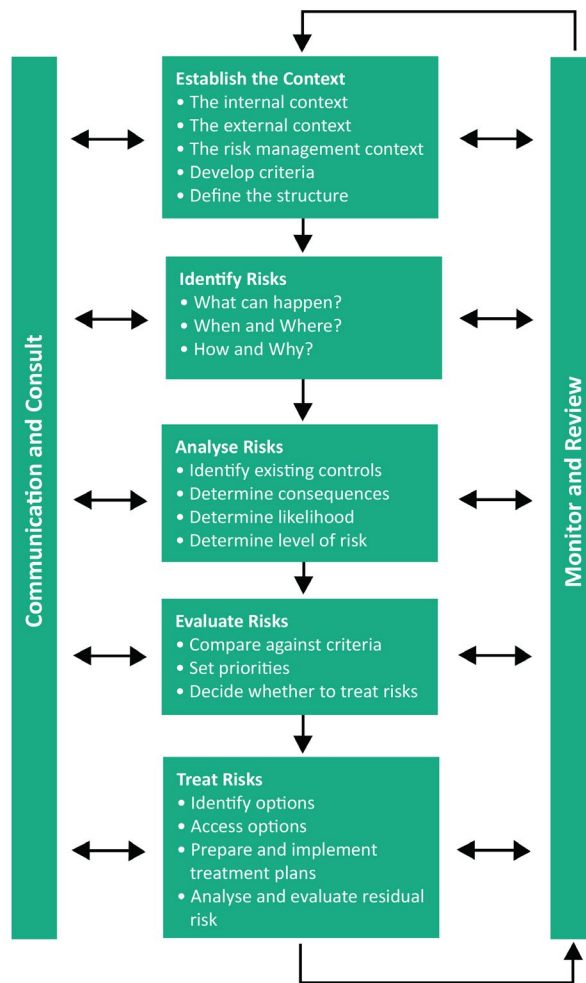


Figure 3: AS/NZS ISO 31000:2009 Risk Management – Principles and guidelines (Standards Australia, 2009)

In the Knox municipal area the risk assessment process is informed by the environmental scan and the use of fire specific risk assessment processes and tools.

Risk assessment processes and tools that inform the risk assessment process are:

- Victorian Fire Risk Register (VFRR-B)
- Victorian Built Environment Risk Assessment Process (V-BERAP)
- Bushfire Management Overlay
- Bushfire Prone Area mapping

5.2 Victorian Fire Risk Register - Bushfire

The Victorian Fire Risk Register - Bushfire (VFRR-B) is used to identify and address bushfire risks within the Knox municipal area. The VFRR-B is reviewed every three years. Risk identification is ongoing as the municipality changes.

The VFRR-B is a systematic process that helps to identify assets at risk from bushfire, assesses the level of risk to these assets and highlights the treatments currently in place along with the responsible agencies for implementing these strategies. Outputs from the VFRR-B inform and support this plan.

The assets of the VFRR-B are divided into four classes: human settlement, economic, environmental, and cultural heritage.

5.3 Victorian Built Environment Risk Assessment Process

The V-BERAP provides a sound platform for conducting a structure fire risk assessment which is clearly defined by a robust 10 step process. The V-BERAP Guideline uses the methodology recognised in the National Emergency Risk Assessment Guidelines (NERAG) which is underpinned by ISO31000, the International Standard for Risk Management.

A Risk Working Group was formed and during the first workshop risks were identified by their building class via the following statement “There is potential that an accidental ignition will result in a fire in a:

- Class 2 building (flats, apartments)
- Class 8 building (factory)
- Class 1(a) building (house)
- Unregistered/illegal Class 1(b) building (boarding house)
- Class 9(c) building (aged care facility)
- Class 3 building (large boarding house)

that in turn will cause serious injury or loss of life, economic loss and/or displacement.”

Using available evidence, the expertise in the room and participant agreement, the group identified the consequence categories for the above building classes to include – ‘People’ and ‘Economy’, with ‘Social Setting’ also identified for Class 2 and Class 1(b) buildings and ‘Environment’ also identified for Class 8 buildings. A risk assessment was then completed for each consequence category.

5.4 Bushfire Management Overlay and Bushfire Prone Area

The following two planning controls are also used to inform risk identification and prioritisation the delivery of treatment programs for bushfire in Knox.

Bushfire Management Overlay

The Bushfire Management Overlay (BMO) is established under the Victorian Planning Provisions, mapping developed by the State government and administered by local government identifies land in Victoria that may be at risk from bushfire. Land identified as BMO in the local planning scheme may require a planning permit to develop or subdivide. In 2017 there was an increase of almost 500 properties making the total of 2,490 properties that fall within the BMO.

Bushfire Prone Area

Bushfire prone areas (BPA) are designated under Regulation 810 (Building Regulations 2006) as areas that are subject to or likely to be subject to bushfires. This building control aims to regulate the construction standards of residential buildings depending on the level of bushfire risk posed to the planned dwelling. Properties in designated BPA’s will require Bushfire Attack Level assessment and minimum constructions standards applied.

5.5 Hazard Trees

The Electricity Safety Act 1998 (Victoria) (ES Act) Section 86 B provides the obligation for municipal councils in the “Municipal Fire Prevention Plan must specify procedures for the identification of trees that are hazardous to electric lines”. This will be achieved through:

- 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 for the notification of responsible persons of trees that are hazard trees in relation to electric lines for which they are responsible.

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

Responsibility is allocated between distribution businesses and other owners of electricity infrastructure, land owners and occupiers for clearance of private power lines, public land managers, where they are identified as the responsible person such as municipal councils, the DELWP and VicRoads.

Councils are responsible for trees on public land within their municipalities, for which they are the land manager, that are within a Declared Area for the purpose of the ES Act. Primary responsibility for vegetation clearance and management within the municipality, for areas which are not within the Declared Area, will usually fall to the relevant electricity distribution company.

There are a number of organisations that have responsibility for line clearance in Knox including:

- United Energy
- SP AusNet
- Metro Trains
- VicRoads
- Knox City Council

There are two electricity distribution business in the Knox municipality being Unite Energy and SP Ausnet. Declared Areas under Section 81 of the ES Act that are the responsibility of the Council can be seen in the Knox City Council Electric Line Clearance management Plan 2018-2019.

Knox’s Electric Line Clearance Management Plan is update annually on 1 April and is available on:

http://www.knox.vic.gov.au/files/StreetTrees/Electrical_Line_Clearance_Management_Plan_-_Knox_City_Council_-_2018_-_19.pdf

5.6 Risk Assessment Working Group

After identifying the risks, the Knox Fire Management Planning working group apply expert knowledge and experience whilst analysing and prioritising risk using a matrix (refer to Table 5). This process also takes into consideration current controls. The outcome of the process produces a range of actions that will guide the Knox MEMPC to minimise risk and improve public safety in the fire environment.

The risk assessment methodology requires the working group to:

- Identify the likelihood of an event occurring;
- Identify the consequence of an event occurring;
- Identify current controls in place to manage the risks;
- Identify a corresponding risk level of the event occurring (based on the matrix below);
- Make an assessment of the effectiveness of the controls; and
- Identify a suite of new controls, risk mitigation and treatment measures (goals/actions).

Based on these assessments, participants then identify a suite of risk preparedness, prevention, response and recovery measures.

Table 3: Measuring the likelihood of a hazard occurring

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

Table 4: Measuring the consequence of a hazard occurring

Level	Indicative guide to potential consequences					
	People	Infrastructure	Public Administration	Environment	Economy	Social Setting
Catastrophic	50+ lives lost Hundreds injured 1,000+ houses destroyed 2,000+ people displaced 10,000 – 30,000 livestock lost.	Loss of critical infrastructure and/or services for 24-48 hours to the Melbourne metropolitan area.	Significant State-wide 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.	\$1 billion or 30% of State revenue.	Severe disruption to community wellbeing over a whole area or large part of it for a period of many years.
Major	10 fatalities as a direct result of the event 300+ houses destroyed 500+ people displaced 10,000 – 30,000 livestock lost Significant loss of agricultural breeding stock.	Loss of critical infrastructure and/or services for 8-16 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for up to a week.	Significant regional and local outrage, with some occurring at state level. Parliamentary or other inquiry leading to changes 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 \$300 million.	Severe disruption to community wellbeing over a wide area of for more than 24 months.
Serious	5 fatalities as a direct result of the event Large number of people affected by the event 100+ houses destroyed 200+ people displaced 3,000 – 10,000 livestock lost.	Loss of critical infrastructure and/or services for 2-5 hours to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for 3-4 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 regionally significant cultural assets.	Damage costs including legal actions and/or industry impacts (tourism, forestry, wine etc.) to the value of more than \$100 million.	Severe disruption to community wellbeing over a moderate to large area for a period of months.
Important	Single fatality and/or multiple serious injuries requiring hospitalisation as a direct result of the event Up to 30 houses destroyed 50+ people displaced 3,000 – 10,000 livestock lost.	Loss of critical infrastructure and/or services for 1 hour to the Melbourne metropolitan area. Loss of services to a major regional city/several suburbs for 1 day. Loss of services to a 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, forestry, wine etc.) to the value of more than \$30 million.	Localised disruption to community wellbeing over a small area for a period of weeks.

Table 5: Determining a risk level for each hazard – the risk matrix

Having determined the likelihood and expected consequence of a hazard occurring, an overall level of risk can be identified through the use of the following matrix.

Likelihood	Consequence			
	Important	Serious	Major	Catastrophic
Almost certain	Moderate	High	Extreme	Extreme
Likely	Moderate	High	High	Extreme
Possible	Low	Moderate	High	High
Unlikely	Low	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate

Table 6: Recommended action for each risk category

The following levels of action are recommended for each of the risk categories:

Risk category	Recommended action
Extreme	Must be managed with a detailed plan – will require resources and training
High	Requires immediate planning – resource priority and training
Moderate	Manage by specific monitoring or response procedures
Low	Manage by routine procedures

Table 7: Determining the effectiveness of control measures

Descriptor	Guide
Fully effective	Nothing more to be done except review and monitor the existing controls. Controls are well designed for the risk, are largely preventative and address the root-causes and management believes that they are affective and reliable at all times. Reactive controls only support preventative controls.
Substantially effective	Most controls are designed correctly and are in place and effective. Some more work to be done to improve operating effectiveness of management has doubts about operational effectiveness and reliability.
Partially effective	While the design of controls may be largely correct in that they treat most of the root-causes of the risk, they are not currently very effective. There may be an over-reliance on reactive controls. OR Some of the controls do not seem correctly designed in that they do not treat root-causes, those that are designed correctly are operating effectively.
Largely ineffective	Significant control gaps. Either controls do not treat root-causes or they do not operate at all effectively. Controls, if they exist, are just reactive.
None or totally effective	Virtually no credible control. Management has no confidence that any degree of control is being achieved due to poor control design and/or very limited operational effectiveness.

5.7 Risk Assessment

Current controls

The following table has been designed to describe current controls used in the risk matrix.

Control Category	Control	Hazard Control Type	Responsibility
Community education	Fire Ready Victoria program Property Advice Visit Service	<ul style="list-style-type: none"> ▪ Bushfire ▪ Grassfire 	CFA
	Hazardous atmospheres – Shelter-in-Place advice messages	<ul style="list-style-type: none"> ▪ Industrial/commercial fire ▪ Chemical spill (hazardous materials (HAZMAT)) 	CFA
	Community Information Guide	<ul style="list-style-type: none"> ▪ Bushfire ▪ Grassfire 	CFA
	Total Fire Ban (TFB) days, Fire Danger Periods & Fire Danger Ratings	<ul style="list-style-type: none"> ▪ Bushfire 	CFA/Bureau of Meteorology
	Home Fire Safety Sessions, Smoke Alarm Replacement Program, Fire HELP, Ready2Go	<ul style="list-style-type: none"> ▪ Structure fire 	CFA/KCC
	Fire Danger Rating signage and Fire Ready signage	<ul style="list-style-type: none"> ▪ Bushfire 	CFA/KCC
	Emergency Management Planning Industry Training Programs	<ul style="list-style-type: none"> ▪ Structure fire 	CFA
	Community education program	<ul style="list-style-type: none"> ▪ Bushfire 	FFMVic
	Police Proactive Patrol – Operation HASSAR, Operation Fire Setter and proactive high risk fire danger patrols	<ul style="list-style-type: none"> ▪ Bushfire 	VICPOL
	Community Fire Guard program	<ul style="list-style-type: none"> ▪ Bushfire 	CFA
	Community Warnings	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	All agencies
	Brigade advice	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	CFA
	Community information	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	All

Control Category	Control	Hazard Control Type	Responsibility
Hazard Reduction	KCC's Hazard Clearance program Bushland Fire Management (BFM) plans Fire prevention notices Permits to burn	▪ Bushfire	KCC
	Fire Operations Plans	▪ Bushfire	FFMVic
	Electrical Safety – maintenance of power infrastructure	▪ Bushfire	KCC/SP Ausnet
	Vegetation Management Program/Fuel Reduction Planning	▪ Bushfire	CFA
	Clandestine Lab	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire	VICPOL/CFA/KCC
	Road Management plans	▪ Bushfire	KCC/VicRoads/FFM Vic
	Hazard Trees Management Planning	▪ Bushfire	KCC
Ignition Management	Police Arson program/Fire Setter strategy Operation Fire Setter, TFB days	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire	VICPOL
	Fire patrols – Operation Bushfire Patrols	▪ Bushfire	VICPOL
	Operation HUSSAR (Covert Operation Dandenong Ranges)	▪ Bushfire	VICPOL
	Essential services maintenance	▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	Utilities
	Security	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	VICPOL
	Road Management plans	▪ Bushfire	KCC/VicRoads
	VicRoads Bushfire Roads Risk Assessment	▪ Bushfire	VicRoads
	Hazard Trees Planning	▪ Bushfire	Responsible Land Manager

Control Category	Control	Hazard Control Type	Responsibility
Legislation & regulations	Bushfire Management Overlay	▪ Bushfire	KCC/DTPLI
	Bushfire Prone Area	▪ Bushfire	DTPLI
	SP Ausnet – plans for substations	▪ Bushfire	SP Ausnet
	Emergency management plans	▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	All agencies
	Industry Codes of Practice	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	All agencies
	Non-compliant cladding	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire	KCC/CFA
	Occupational Health & Safety	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	All agencies
	Certification & accreditation of facilities	▪ Public accommodation fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	All agencies
	Sprinkler & alarm systems	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire	All agencies
	Health regulations	▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	All agencies
	Electrical regulations	▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire	All agencies
	HAZMAT regulations	▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	All agencies
	Environmental protection regulations	▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT)	All agencies

Control Category	Control	Hazard Control Type	Responsibility
General evacuation, vulnerable persons & evacuation of vulnerable persons	Vulnerable persons register	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	KCC/VICPOL/ funded agencies
	Vulnerable facilities register	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	KCC/VICPOL/ funded agencies
	VICPOL Evacuation Plans	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	VICPOL
	KCC Aged Care Vulnerable Persons register	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	KCC
	KCC Children Services High Fire Danger Rating Policy and Procedure	<ul style="list-style-type: none"> ▪ Bushfire 	KCC
	Eastern Metropolitan Region Emergency Relief Centre Guidelines	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	Councils within Eastern Metropolitan Region
	Traffic management plans	<ul style="list-style-type: none"> ▪ Bushfire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	VICPOL/VicRoads
Response planning	Local Response Plans	<ul style="list-style-type: none"> ▪ Bushfire 	CFA
	Pre Plans	<ul style="list-style-type: none"> ▪ Structure fire ▪ Bushfire 	CFA
	Practices/exercises/drills	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	All agencies
	Agency response plans	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) ▪ Non-compliant cladding 	All agencies

Control Category	Control	Hazard Control Type	Responsibility
Response planning (contd.)	Hazardous atmospheres – Shelter in Place	<ul style="list-style-type: none"> ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	CFA
Recovery planning	Agency recovery plans	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	All agencies
	Insurance	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	All agencies
	Agency business continuity plans	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	All agencies
	Municipal recovery plan	<ul style="list-style-type: none"> ▪ Bushfire ▪ Public accommodation fire ▪ Single incident fire ▪ Industrial/commercial fire ▪ Chemical spill (HAZMAT) 	KCC

5.8 Bushfire risk assessment matrix

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Natural	Parklands being impacted by bushfire.	<p>Wantirna, William Morris Reserve (Melway 63 F7)</p> <p>Wantirna South, Blind Creek Corridor/Lewis Road retarding basin (Melway 64 B10)</p> <p>Ferntree Gully, Blind Creek Billabong Reserve (Melway 64 H11)</p> <p>Ferntree Gully, Forest Rd, Koolunga Native Reserve (Melway 65 B11)</p> <p>Ferntree Gully, Quarry (Melway 74 D5)</p> <p>The Basin, Sugarloaf Hill, Liverpool Road retarding basin (Melway 65 G5)</p> <p>The Basin, Wicks Reserve (Melway 65 H8)</p> <p>Boronia, Old Joes Creek Retarding Basin (Melway 65 A6)</p> <p>Wantirna, Bateman Reserve (Melway 63 F4)</p> <p>Lysterfield, Hanson/Boral Quarry (Melway 82 E7)</p> <p>Dandenong Creek Corridor (Melway 81 G9 – 81 D4)</p>	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Almost certain	Important	Moderate	Maintain and review current controls.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Natural	Parklands being impacted by bushfire (contd.).	Boronia, Forest Rd, Wirrianda Reserve (Melway 65 C10)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Low	Adequate controls in place.	Knox MEMPC
		Knoxfield, Lakewood Estate bushland (Melway 73 B2) The Basin, Mountain Hwy, Road Reserve (Melway 65 G7-H7) Lysterfield, Lysterfield Road, Road Reserve (Melway 74 B10) Lysterfield, Wellington Road, Road Reserve (Melway 83 D4) SP Ausnet, grass and bushland (Melway 82 A7-63 E3) Rowville South, Timbertop Drive, Further info on reserve (Melway 81 F4) Rowville, Heany Park Reserve (Melway 82 C6) Lysterfield, Lysterfield Lake Park (Melway 83 C12)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Likely	Important	Moderate	Maintain and review current controls.	Knox MEMPC
		Melbourne Water wetlands (Melway 81 E4)		Substantially effective	Possible	Serious	Moderate	Maintain and review current controls.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Economic	Businesses being impacted by bushfire.	Upper Ferntree Gully Township (Melway 74 F6) Ferntree Gully Township (Melway74 C3) The Basin Township (Melway 65 G7) Rowville, Wellington Road, Boral and Hanson Quarries (Melway 82 E4)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Moderate	Maintain and review current controls.	Knox MEMPC
Built	Communities (human settlement) being impacted by bushfire.	Ferntree Gully Fringe, National Park Boundary (Melway 74 E1)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Serious	High	Better promotion of Fire Ready programs. Review of fire loads abutting park and support fuel reduction actions.	Knox MEMPC/ CFA/ FFMVic
		Upper Ferntree Gully, North of Quarry Rd (Melway 74 D5)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Serious	High	Manage fire load within the former quarry.	KCC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Built (contd.)	Communities (human settlement) being impacted by bushfire contd.	Upper Ferntree Gully, Glenfern Road (Melway 74 E9)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Serious	Moderate	Maintain and review current controls.	Knox MEMPC
		Wantirna, Bateman Reserve (Melway 63 F4) Boronia, Corner Colchester Road and Mountain Highway (Melway 65 D4)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Low	Adequate controls in place.	Knox MEMPC
		Upper Ferntree Gully, Rail Line, Old Belgrave Road (Melway 74 E5)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Substantially effective	Almost certain	Serious	High	Ensure fuel reduction and education programs are relevant and integrated across agencies.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Built (contd.)	Communities (human settlement) being impacted by bushfire contd.	The Basin, Academy Drive (Melway 65 F6) Knoxfield, Lakewood Estate (Melway 73 B2) Boronia, Old Joes Creek Retarding Basin (Melway 65 A6) Wantirna South, Flamingo Reserve (Melway 63 E11) Wantirna South, Kindergarten, Flamingo Drive (Melway 63 E11)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Low	Adequate controls in place.	Knox MEMPC
		Wantirna, William Morris Reserve (Melway 63 F7)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction 	Substantially effective	Almost certain	Important	Moderate	Maintain and review current controls.	Knox MEMPC
		Ferntree Gully, Forest Road, Koolunga Native Reserve, (Melway 65 B11) Lysterfield, Lysterfield Interface (Melway 82 H7) Rowville, Hanson Lysterfield Quarry (Melway 82 E4) Rowville South, Timbertop Drive (Melway 81 H5) Wantirna South, Blind Creek Corridor (Melway 72 D3-63 H12) Ferntree Gully, Blind Creek Corridor (Melway 64 F11-74 C1) Ferntree Gully, Billabong Reserve, Blind Creek Billabong Reserve (Melway 64 H11) Knox Park Primary School, Knoxfield (Melway 73 C3)	<ul style="list-style-type: none"> ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Substantially effective	Likely	Important	Moderate	Maintain and review current controls.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Built (contd.)	Communities (human settlement) being impacted by bushfire contd.	Boronia, Wirrianda Reserve, Forest Road (Melway 65 C10)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Substantially effective	Unlikely	Important	Low	Adequate controls in place.	Knox MEMPC
		The Basin/Sassafras (Melway 66 B7) The Basin, Sheffield Road (Melway 65 J7) Lysterfield South, Lysterfield/Wellington Road (Melway 83 D4) The Basin, Wicks Reserve (Melway 65 H8) The Basin, Church of God (Melway 65 J9) Rowville, Heany Park Scout and Guide Camp (Melway 82 C6) The Basin, Doongalla, Doongalla Road (Melway 65 J7) Ferntree Gully Fringe, National Park Boundary (Melway 74 E1) Upper Ferntree Gully, Glenfern Road (Melway 74 E9)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Serious	High	Ensure fuel reduction and education programs are relevant and integrated across agencies.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Built (contd.)	Communities (human settlement) being impacted by bushfire contd.	The Basin, The Basin Primary School Liverpool Road (Melway 65 F6). Upper Ferntree Gully Primary School, Talaskia Road (Melway 74 G6) The Basin, Salvation Army Mountain View, Liverpool Road (Melway 65 E5) The Basin, Salvation Army Rehabilitation Centre, Basin Olinda Road (Melway 65 H7)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Substantially effective	Likely	Important	Moderate	Maintain and review current controls.	Knox MEMPC
		Upper Ferntree Gully, Railway Line (Melway 74 E5)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Partially effective	Almost certain	Serious	High	Ensure fuel reduction and education programs are relevant and integrated across agencies.	Knox MEMPC
	Critical infrastructure being impacted by bushfire.	Powerlines/supply	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Evacuation & vulnerable persons ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Major	High	Plans in place need to be reviewed annually.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Built (contd.)	Critical infrastructure being impacted by bushfire.	Major roads Rail corridor	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Major	High	Work closely with key agency. Owners ensure plans are in place across PPRR.	Knox MEMPC
		Eastlink	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning 	Partially effective	Likely	Serious	High	Work closely with key agency. Owners ensure plans are in place across PPRR.	Knox MEMPC
		Hospitals	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Low	Adequate controls in place.	Knox MEMPC
		Telecommunications Infrastructure	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Major	High	Work closely key agency. Owners Ensure plans are in place across PPRR.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Social	Historically/culturally significant gathering places being impacted by bushfire.	Ferntree Gully, Ambleside Park Homestead (Melway 65 D12) Boronia, Millers Homestead (Melway 65 D6) Stamford Park Homestead (Melway 72 H11)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Rare	Important	Low	Adequate controls in place.	Knox MEMPC
		The Basin, The Chandler Oak Tree, Sheffield Road (Melway 65 J7) The Basin, Como Gardens (Melway 65 K8)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Likely	Important	Low	Adequate controls in place.	Knox MEMPC
		Rowville, Starlight Reserve (Melway 81 F5)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Low	Adequate controls in place.	Knox MEMPC

5.9 Other fire risk assessment matrix

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness of Controls	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Natural	Waterways being impacted industrial/commercial fire/chemical spill (HAZMAT).	All creeks and water bodies	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Serious	Moderate	Maintain and review current controls.	Knox MEMPC
	Atmospheres being impacted industrial/commercial fire/chemical spill (HAZMAT).	All atmospheres	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning ▪ Community warnings 	Substantially effective	Unlikely	Serious	Moderate	Maintain and review current controls.	Knox MEMPC
		All parklands	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Unlikely	Serious	Moderate	Maintain and review current controls.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness of Controls	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Economic	Businesses being impacted by industrial/ commercial fire/ chemical spill (HAZMAT).	Commercial/ industrial estates	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Moderate	Maintain and review current controls.	Knox MEMPC
	Businesses being impacted by single incident fire.	All commercial businesses	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Moderate	Maintain and review current controls.	Knox MEMPC
Built	Human settlement being impacted by industrial/ commercial fire/ chemical spill (HAZMAT).	All human settlement within the vicinity of industrial estates and major road.	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Serious	High	Utilise tools to further identify risk and treatment options.	Knox MEMPC
	Human settlement being impacted by public accommodation fire.	All public accommodation properties. (e.g. boarding houses, nursing homes, hospitals)	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Unlikely	Serious	Moderate	Work closely with key agency. Owners ensure plans are in place across PPRR.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness of Controls	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Built	Shopping precincts	Major shopping centres throughout the municipality (e.g. Westfield Knox City Shopping Centre, Stud Park Shopping Centre, Wellington Village Shopping Centre)	<ul style="list-style-type: none"> ▪ Property management plans ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Likely	Important	Moderate	Agency Plans in place need to be reviewed annually. Exercising with local management and other agencies.	CFA Centre Mgmnt
	Multi storey apartments complex	Throughout the municipality	<ul style="list-style-type: none"> ▪ Property management plans ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Likely	Important	Moderate	Detection and sprinkler systems, emergency plans, warden training, response plans, education programs	CFA
	Critical infrastructure being impacted by fire.	Powerlines/supply	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Major	High	Plans in place need to be reviewed annually.	Knox MEMPC
		Major roads Rail corridor	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Major	High	Work closely with key agency. Owners ensure plans are in place across PPRR.	Knox MEMPC

Hazard Environment	What is the Risk	Risk Location/ Element	Current Controls	Effectiveness of Controls	Likelihood	Consequence	Risk Category	Actions to Reduce Risk	Lead Agency
Built	Critical infrastructure being impacted by fire (contd.)	Eastlink	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Serious	High	Work closely with key agency. Owners ensure plans are in place across PPRR.	Knox MEMPC
		Hospitals	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Possible	Important	Low	Adequate controls in place.	Knox MEMPC
		Telecommunications Infrastructure	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Partially effective	Likely	Major	High	Work closely key agency. Owners Ensure plans are in place across PPRR.	Knox MEMPC
Social	Historically/culturally significant gathering places being impacted by fire.	<p>Ferntree Gully, Ambleside Park Homestead (Melway 65 D12)</p> <p>Boronia, Millers Homestead (Melway 65 D6)</p> <p>Stamford Park Homestead (Melway 72 H11)</p>	<ul style="list-style-type: none"> ▪ Community education ▪ Hazard reduction ▪ Ignition management ▪ Legislation & regulations ▪ Response planning ▪ Recovery planning 	Substantially effective	Rare	Important	Low	Adequate controls in place.	Knox MEMPC

5.10 High risk treatment plan

Having identified hazards in the built environment that represent a high level of risk to the community, the following treatment plan is established.

Communities (Human settlement) being impacted by bushfire

Description	The Basin, Sheffield Road Lysterfield South, Lysterfield/Wellington Road The Basin, Church of God Site Rowville, Heany Park Scout and Guide Camp The Basin, Doongalla, Doongalla Road Ferntree Gully Fringe, National Park Boundary Upper Ferntree Gully, Glenfern Road Upper Ferntree Gully, Railway Line The Basin, Wicks Reserve, The Basin-Olinda Road, The Basin
Likelihood of occurring	Almost certain/Likely
Consequence of occurring	Serious
Risk rating	High
Nature of hazard	Risk of bushfire to life and property
Those people in the community most vulnerable	Residents, visitors and those working in the Knox municipal area
Responsibility to respond/manage risk	All land managers
Agencies role in relation to this risk	Risk identification, treatment management, education and response
Prevention activities	Fuel reduction programs/modification, Hazard Trees identification & notification procedures
Preparedness activities	Community education – Fire Ready program, Community Fireguard, testing & exercises
Response activities	CFA operational plans, traffic management plans, MEMP
Recovery activities	MEMP - recovery plan, Hazard Trees identification, rehabilitation plans, restoration plans

Human settlement being impacted by industrial/commercial fire/chemical incident (HAZMAT)

Likelihood of occurring	Likely
Consequence of occurring	Serious
Risk rating	High
Nature of hazard	Risk of human settlement being impacted by industrial/commercial fire/chemical spill (HAZMAT)
Those in community most vulnerable	All human settlement within the vicinity of industrial estates and major roads
Responsibility to respond/manage risk	CFA
Agencies role in relation to this risk	Risk identification, treatment management, education and response
Prevention activities	Development of risk identification tools, legislation
Preparedness activities	Education programs, enforcement, equipment testing programs
Response activities	Crisis management, CFA operational plans, traffic management plans, MEMPC, emergency management plans in place and tested
Recovery activities	MEMP - recovery plan, restoration plans

Critical infrastructure being impacted by bushfire (**major roads including Eastlink, public transport and telecommunications infrastructure**)

Likelihood of occurring	Likely
Consequence of occurring	Major
Risk rating	High
Nature of hazard	Risk of bushfire to infrastructure
People in the community most vulnerable	Majority of community & neighbouring communities
Responsibility to respond/manage risk	Key agency owners
Agencies role in relation to this risk	Risk identification, treatment management, education and response
Prevention activities	Fuel reduction programs/modification – roadside maintenance
Preparedness activities	Planning, business continuity planning, education, agency contingency plans
Response activities	Crisis management, CFA operational plans, traffic management plans, MEMPC, emergency management plans in place and tested
Recovery activities	MEMP - recovery plan, Hazard Trees identification, rehabilitation plans, restoration plans

Critical infrastructure being impacted by bushfire (powerlines/supply)

Likelihood of occurring	Likely
Consequence of occurring	Major
Risk rating	High
Nature of hazard	Risk of bushfire to infrastructure
Those in community most vulnerable	Majority of community and neighbouring communities
Responsibility to respond/manage risk	Key agency owners
Agencies role in relation to this risk	Risk identification, treatment management, education and response
Prevention & preparedness activities	<p>Transmission network</p> <p>Plan easement patrols and report condition, address as per priority. Works to be completed by priority date. This is monitored through the BFM index which is reported monthly to Essential Services Victoria (ESV)</p> <p>Check all off road vehicles and plant by approved mechanic</p> <p>Arrange inspection of vacant sites & report condition, reduce fuel loads as required</p> <p>Arrange remedial action for vacant sites</p> <p>Inspect stations and depots, report and rectify any anomalies</p> <p>Arrange annual fire training for transmission linemen</p> <p>Program works for all bushfire mitigation activities and related lines maintenance work</p> <p>Terminal stations have regular inspection program for whole year</p> <p>Fire equipment on all terminal stations inspected regularly</p> <p>Regular grass cutting and yard spraying program in place</p> <p>Distribution network</p> <p>All distribution lines have a vegetation assessment as per ESV requirements and cut according to priority. All poles and wires inspected as per cyclic inspection plan. Defect items prioritised and maintained accordingly</p> <p>Policy requires that at the start of the BFM period the company maintenance index is zero. ie. no overdue defects for line hardware or encroaching trees</p> <p>Audit progress and reporting</p> <p>Audit field works and reports</p> <p>Monthly BFM progress reports</p> <p>Network monthly reports</p> <p>Audit bushfire mitigation program implemented prior to declaration</p> <p>Audit summary for preparedness reports</p> <p>Conducted by ESV, BFM field and desktop audits prior to BFM season</p>
Response activities	Crisis Management, CFA operational plans, traffic management plans, MEMPC, emergency management plans in place and tested
Recovery activities	MEMP - recovery plan, Hazard Trees identification, rehabilitation plans, restoration plans

5.11 Shelter options

Neighbourhood safer places – places of last resort (Bushfire) and community fire refuges may be provided for community as last resort survival options. They do not replace having a well thought out and practiced safety plan. Based on the relatively low risk of bushfire, Knox municipal area does not have any designated neighbourhood safer places or fire refuges. However, it does have a number of accessible areas such as shopping centres, libraries and other community facilities available.

6 Action Plan

No.	Goals	Actions	When	Who	Key Performance Indicators (KPIs)
Strategic Objective 1: To lead fire management planning across the municipal area in prevention, preparedness, response and recovery (PPRR)					
1.1	Build capacity and ownership within agencies to support fire management planning in Knox by establishing effective engagement strategies within and across agencies.	Promote the importance of the Knox Municipal Fire Management Plan to relevant agency heads.	Ongoing	MEMPC	Attendance and participation by all agencies at Municipal Emergency Management Planning Committee (MEMPC) and plan review meetings.
			Ongoing	MEMPC	Executive summary of the Knox Municipal Fire Management Plan is available to the committee, community and stakeholders.
		Build improved relationships across agencies.	Ongoing	MEMPC	Collaborative activities that benefit all stakeholders undertaken (ie. participation in multi-agency exercises, engagement activities).
Strategic Objective 2: Developing fire management plans based on shared knowledge					
2.1	Ensure the Knox Municipal Fire Management Plan aligns with regional and State strategic direction.	Consider the Knox Municipal Fire Management Plan aligns with any new plans, strategies or guides produced by the State and regional committees.	Ongoing	MEMPC	State and regional activities monitored and implement any changes relevant to the Knox municipal area.
2.2	Utilise existing networks and resources to develop a coordinated approach to expand knowledge sharing across and within agencies.	Ensure adequate representation of member agencies at reviews of the Knox Municipal Fire Management Plan.	Ongoing	MEMPC	Records of attendees kept and generally accord with the recommendations of the working committee.
		Agencies actively share information, reports and plans.	Ongoing	MEMPC	MEMPC is inclusive of information.
2.3	Advocate for and use fire risk planning tools to support decision making (within and between agencies).	Knox Council to follow the Community Emergency Risk Assessment (CERA) process.	Ongoing	MEMPC	CERA reviewed annually.
		Continue to review potential bushfire risk.	Annually	MEMPC	VFRR-B reviewed annually.
		Continue to review potential structure fire risk.	Annually	MEMPC	V-BERAP reviewed annually.

No.	Goals	Actions	When	Who	Key Performance Indicators (KPIs)
Strategic Objective 3: Working with the community to manage fire					
3.1	Undertake coordinated multi-agency community engagement to improve efficiencies and build community resilience.	Be involved in integrating all agency activities. Look at using mediums that are more effective. Consider targeting at a range of demographics. Maximise joint collaboration at festivals/community events. <ul style="list-style-type: none"> ▪ Fire HELP ▪ Ready2Go ▪ Let's Get Ready 	Ongoing	MEMPC	Multi-agency community engagement activities planned and implemented.
3.2	Support initiatives and actions that prevent accidental ignition of fires.	Undertake community initiatives to reduce and prevent accidental fires in our communities: <ul style="list-style-type: none"> ▪ Fuel reduction initiatives undertaken at high risk locations. ▪ Fire HELP ▪ Community Incident Engagement Program 	Pre and post fire season	MEMPC	Fuel reduction activities planned and undertaken.
Strategic Objective 4: Delivering outcomes that address fire risk in the local environment regardless of boundaries					
4.1	Focus on reviewing fire management as a priority.	Prioritise the threat to life from fire as a part of planning.	Ongoing	MEMPC	Treatment options prioritised.
			Ongoing	MFPO	Undertake fire management assessments in high risk areas.
4.2	Support and review fuel management projects on private land in context of the municipal risk environment.	Support all relevant agencies and property owners in delivering and developing fire prevention programs.	Ongoing	MFPO and the MEMPC	Fire prevention inspection program reviewed and updated annually.
			Ongoing	Coordinator Emergency Management – Knox City Council	Knox represented on the Regional Strategic Fire Management Planning Sub Committee.
4.3	Support opportunities for projects/programs where cross-tenure fuel management can occur.	Investigate the opportunity to develop integrated fuel management programs.	Ongoing	MEMPC	Opportunities identified investigated and programs implemented.

No.	Goals	Actions	When	Who	Key Performance Indicators (KPIs)
Strategic Objective 5: Identify significant natural, social, built and economic environments at risk within Knox and in consideration of neighbouring communities					
5.1	Use Community Emergency Risk Assessment (CERA) to assess and treat significant fire risks at the local level.	Undertake review and ensure specific management strategies in place for: <ul style="list-style-type: none"> ▪ local physical assets and infrastructure ▪ local threatened and endangered flora and fauna ▪ locations of aesthetic, historic, scientific and social cultural significance ▪ major industry and business at significant risk of fire 	Annually	MEMPC	Risks and treatments contained in CERA reviewed.
5.2	Systems in place to manage hazardous trees in proximity to power lines.	Hazardous tree inspection and management process is developed and reviewed.	Ongoing	Project Officer – Trees, Knox City Council, Power Company	Process is in place and reviewed annually.
Strategic Objective 6: Ensuring effective community engagement					
6.1	Undertake effective community engagement.	Undertake community engagement within the municipality <ul style="list-style-type: none"> ▪ Fire Help ▪ Ready2Go ▪ Let's Get Ready ▪ Community events ▪ Community Incident Engagement Program 	Ongoing	MEMPC	Opportunities identified investigated and programs implemented.
Strategic Objective 7: A commitment to continuous improvement					
7.1	Implement systems to ensure we maintain best practice across PPRR.	Review conducted of action plan by working group.	Annually	MEMPC	Action plan is reviewed, evaluated and updated.
		Conduct After Action Reviews post significant events in municipality.	Post event	MEMPC	Action plan is reviewed, evaluated and updated.

7 Monitor and improve

The outcomes of this plan will be monitored and improved throughout the planning cycle. These evaluations will inform the current and future planning cycles.

7.1 Monitoring and evaluation

The Knox MEMPC monitors progress towards the completion of treatment works listed in this plan. The KPIs stated in the action plan are used to determine if the actions were completed successfully and if the goals for each of the strategic objectives set by the Committee have been achieved. Additional measures for evaluation such as training, exercises and real event After Action Reviews are used in the monitoring and evaluation of this plan and contribute to recommendations for the future.

7.2 Review

The Knox MEMPC will review this plan annually and as necessary account for any changes in context or risk. This may be triggered by a range of circumstances, including but not limited to:

- Changes to the Knox municipal area, organisation responsibilities and capacity or legislation;
- Changes to the bushfire or structural risk in the area;
- Following a major fire event; or
- Further development of fire management tools including the VFRR-B and the V-BERAP.

7.3 Reporting

The Knox MEMPC reports every six months to the Eastern Metropolitan RSFMPSC on its progress towards implementing the fire risk management activities identified in the Knox MFMP.



7.4 Continuous improvement and Best Practice

This version of the Knox MFMP captures the learnings from fire events, reviews, training and exercises conducted since the publication of the 2015-2018 Plan. This Plan will continue to be updated to reflect future continuous improvement opportunities for fire management within the Knox municipal area.



Knox City Council
511 Burwood Highway
Wantirna South VIC 3152
knox.vic.gov.au

T +61 3 9298 8000
F +61 3 9800 3096
E knoxcc@knox.vic.gov.au
f [knoxccouncil](https://www.facebook.com/knoxccouncil)
t [knoxcc](https://twitter.com/knoxcc)
@ [knoxccouncil](https://www.instagram.com/knoxccouncil)

 133 677 (ask for 03 9298 8000)
 Interpreter
131 450

Speak and Listen Users
1300 555 727 (ask for 03 9298 8000)

ABN 24 477 480 661

