

GANNAWARRA SHIRE

# MUNICIPAL FIRE MANAGEMENT PLAN

Version 4 – February 2019



## Version Control Table

<b>Version number</b>	<b>Date considered by Council</b>	<b>Distribution Date</b>	<b>Brief description of change</b>
1	04/05/2012	May 2012	Draft Plan out for public comment
2	17/07/2012	July 2012	Draft Plan submitted to the MFMPC for final approval
3	15/08/2012	August 2012	Final Plan endorsed by the Gannawarra Shire Council
4	N/A	April 2019	Revised. Inclusion of Terms of Reference, update statistical data, fire history and other administrative updates.

## Table of Contents

AUTHORISATION .....	1
SUMMARY OF CHANGES.....	2
FOREWORD.....	3
1 INTRODUCTION.....	4
1.1 The Integrated Fire Management Planning Framework .....	4
1.2 Authority for the Plan.....	4
1.3 Plan Endorsement and Adoption .....	4
1.4 Plan Reviews and Updates .....	5
1.5 Plan Audit.....	5
1.6 Planning Process .....	5
1.7 Committee Terms of Reference .....	6
2 ENGAGEMENT AND COMMUNICATIONS .....	10
2.1 IAP2/ community engagement principles.....	10
2.2 IFMP engagement process.....	10
3 ENVIRONMENTAL SCAN.....	11
3.1 The Municipality.....	11
3.2 Demographics .....	12
3.3 Geographic Characteristics.....	12
3.4 Fire History .....	13
3.5 Bushfire Landscapes.....	13
3.6 Fire hazard areas .....	14
3.7 Assumptions and Implications about the future.....	15
4 MUNICIPAL FIRE MANAGEMENT OBJECTIVES .....	16
4.1 Alignment to regional objectives .....	16
4.2 Objectives and outcomes proposed.....	16
4.3 Strategic Directions .....	17
4.4 Links to other agency programs.....	18
5 FIRE MANAGEMENT RISK STRATEGY .....	19
5.1 Risk assessment methodologies.....	19
5.2 Physical, Geographical and Systems Risks.....	20
5.3 Treatments & Actions .....	24
5.4 Cross Boundary Arrangements .....	25
5.5 Planning Support Activities .....	26
6 IMPROVEMENT AND PLAN REPORTING AND REVIEW PROCESS .....	28
6.1 MERI - Monitoring, Evaluation, Reporting and Improvement .....	28
Appendix A – Victorian Fire Risk Register (VFRR) – Bushfire .....	30
Appendix B – Hazard Trees .....	33
Appendix C – Maps .....	37

## Acronyms used in this plan

CFA	Country Fire Authority
DELWP	Department Environment Land Water and Planning
EMV	Emergency Management Victoria
EMMV	Emergency Management Manual Victoria
EVC	Ecological Vegetation Class
FFMV	Forest Fire Management Victoria
GIS	Geographic Information Systems
IFMP	Integrated Fire Management Planning
IAP2	International Association of Public Participation
LMR	Loddon Mallee Region
LMRSFMPC	Loddon Mallee Region Strategic Fire Management Planning Committee
LMRSFMP	Loddon Mallee Regional Strategic Fire Management Plan
MEMPC	Municipal Emergency Management Planning Committee
MEMP	Municipal Emergency Management Plan
MERC	Municipal Emergency Response Coordinator
MERI	Monitoring, Evaluation, Reporting and Improvement
MERO	Municipal Emergency Resource Officer
MFMP	Municipal Fire Management Planning Committee
MFMP	Municipal Fire Management Plan
MFPP	Municipal Fire Prevention Plan
NSP	Neighbourhood Safer Place
PPRR	Prevention, Preparedness, Response, Recovery
RSFMP	Regional Strategic Fire Management Plan
TPP	Township Protection Plan
VBRC	2009 Victorian Bushfires Royal Commission
VFRR	Victorian Fire Risk Register
VicPol	Victoria Police
VicSES	Victoria State Emergency Service

## AUTHORISATION

At the September 2017 Municipal Fire Management Planning Committee meeting, the Committee resolved to review and amend this Municipal Fire Management Plan to ensure it remains compliant with legislation but contains current and relevant information that will assist with municipal fire planning.

This Gannawarra Municipal Fire Management Plan Version 4 (February 2019) was endorsed by the Municipal Fire Management Planning Committee on [28 March 2019].

Endorsement was subsequently received from the Municipal Emergency Management Planning Committee on [4 April 2019] for the updated Plan to exist as the new fire management sub-plan of the Municipal Emergency Management Plan.

The version update of the Municipal Fire Management Plan was not required to go to Council for adoption.

This reviewed Plan was endorsed through a formal motion by the Gannawarra Municipal Fire Management Planning Committee (MFMPC) at its meeting held 28 March, 2019.

Signed:   
Brian Roberts  
MFMPO/Committee Chair  
Municipal Fire Management Planning Committee

This reviewed Plan was endorsed through a formal motion by the Gannawarra Municipal Emergency Management Planning Committee (MEMPC) at its meeting held 4 April, 2019.

Signed:   
Cr Brian Gibson  
Chair  
Municipal Emergency Management Planning Committee

## SUMMARY OF CHANGES

The majority of policy content within the Plan was retained from Version 3. This version contains wording changes reflecting department and agency name changes, policy and program changes, inclusion of the MFMPC Terms of Reference and updates to demographic data.

Detailed information relating to stakeholder and community engagement during development of the Plan has been removed; however copies of previous versions of the Plan can be obtained by contacting the Gannawarra Shire Municipal Fire Prevention Officer.

## FOREWORD

The Gannawarra Shire Council Municipal Fire Management Planning Committee (MFMP) has reviewed this plan through a defined risk assessment and review process in relation to the Preparedness, Prevention, Response and Recovery from fire, using consistent processes, treatments and tools as they become available.

The MFMP is a living document and will continue to be reviewed and updated as information is gathered and risks are identified that may impact on economic, environmental and community safety within the shire. The ongoing implementation of the MFMP will be underpinned by the continued support of Stakeholders.

The Gannawarra Shire Council acknowledges and thanks those who have contributed to the development and review of the MFMP, and strongly encourages members of the community to provide feedback to assist Council in managing the risk of fire and to provide for a safer community.

Brian Roberts  
Chairperson  
Gannawarra Shire Council  
Municipal Fire Management Planning Committee

# 1 INTRODUCTION

This Gannawarra Municipal Fire Management Plan, (MFMP - *the Plan*), was prepared by the Gannawarra Municipal Fire Management Planning Committee (MFMP) in line with Part 6A of the Emergency Management Manual of Victoria (EMMV) and the State Fire Management Planning Committee's guidelines for integrated fire management planning.

## 1.1 The Integrated Fire Management Planning Framework

In response to previous challenges that have emerged in fire management, the Victorian Government established an Integrated Fire Management Planning (IFMP) Framework for Victoria. The IFMP framework operates under existing fire and emergency management legislation. As part of implementing the IFMP framework, the Gannawarra Shire Council MFMP is required to prepare a three year Municipal Fire Management Plan (MFMP). IFMP has adopted a planning process that is consistent with International Standard for risk management ISO 31000.

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

**Figure 1: IFMP Alignment with AS/NZS ISO 31000:2009**

This can be found on the IFMP website: [www.ifmp.vic.gov.au](http://www.ifmp.vic.gov.au)

## 1.2 Authority for the Plan

The Gannawarra Shire Council has a legislative responsibility under section 21(4) of the *Emergency Management Act 1986* to prepare and maintain a Municipal Emergency Management Plan (MEMP), and under the *CFA Act 1958*, to develop and implement a Municipal Fire Prevention Plan (MFPP). The MFMP will replace the requirement for the MFPP. The MFMP is a sub plan of the MEMP and is prepared by the Municipal Fire Management Planning Committee (MFMP).

The final Plan as adopted by Council, and subsequent revisions, will be deemed to meet the requirements for a MFPP under section 55A (1) of the *CFA Act (1958)*, provided it contains provisions as set out in section 55A (2) of the *CFA Act (1958)*.

## 1.3 Plan Endorsement and Adoption

Gannawarra Shire Council is the custodian of this Fire Management Plan pursuant to current legislative arrangements. The Fire Management Planning Committee developed the MFMP and received endorsement of the Plan from the Committee and where appropriate, non-committee members with responsibilities and accountabilities under the Plan.

The Version Control Table lists the dates the Plan was considered by Council and distribution dates.

## 1.4 Plan Reviews and Updates

MFMP's have a three year planning cycle. This Plan was endorsed for a period of three years by Council at its meeting on 15 August 2012, and was due for further endorsement during 2015.

In 2015 the MFMP was requested to delay the development of the MFMP until further notice by the State Fire Management Planning Committee (SFMP) pending the development of the Fire Planning Guide. This request was followed up in May 2016 with a formal request from the Chair of the SFMP to await the release of the Victorian Fire Management Strategy (VFMS) prior to undertaking a comprehensive review of Regional and Municipal Fire Management Plans. As of August 2018 the development of the VFMS is not yet completed.

The latest review of the MFMP has been undertaken to ensure it is current in accordance with section 55A.

## 1.5 Plan Audit

This MFMP will be audited under section 55B of the *CFA Act (1958)* every three years.

The MFMP incorporates the provisions of section 55A (2) of the *CFA Act (1958)* relating to fire risks and their treatment and will be determined to meet the requirements for a Municipal Fire Prevention Plan (MFPP) under section 55A (1) of the *CFA Act (1958)*.

Current arrangements for audit under the *Emergency Management Act (1986)* do not include audit to MEMP sub plans.

## 1.6 Planning Process

The Integrated Fire Management Planning framework enhances existing approaches to fire management planning and includes the following elements:

- Integration of plans and processes
- Consistency at State, Regional, Municipal and local levels
- Coordination of stakeholders and planning processes
- High levels of community and stakeholder engagement
- Performance management
- Monitoring and continuous improvement
- Supportive planning structure and environment
- Consistent identification and assessment of risk.

The IFMP planning cycle links the steps of contemporary planning and is consistent with International Risk Management Standards.

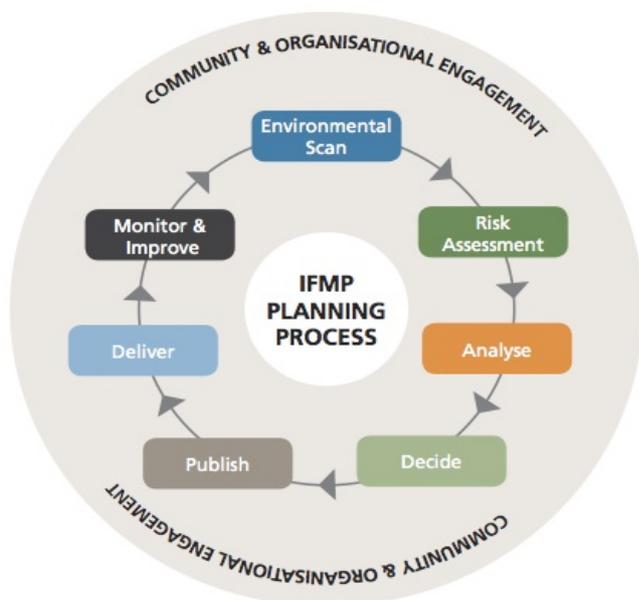


Figure 2 – The Seven Stage Planning Process

## Figure 2: Integrated Fire Management Planning Cycle

Source: *Integrated Fire Management Planning Guide, 2010.*

Details of the Integrated Fire Management Planning process can be found in the planning guide. This can be found on the Emergency Management Victoria (EMV) website: <http://www.ifmp.vic.gov.au/guides-resources/planning-guide>.

## 1.7 Committee Terms of Reference

### **Purpose**

The Municipal Fire Management Planning Committee's purpose, of which the development of a municipal fire management plan is part, is to 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.

### **Role of the Committee**

- Plan for fire management in a manner that coordinates fire management activities across agencies.
- Provide information to and engage with the community on matters related to fire management planning.
- Using the planning guide issued by the State Fire Management Planning Committee, draft a Municipal Fire Management Plan for recommendation to the MEMPC and comment by the Regional Strategic Fire Management Planning Committee, prior to consideration by the Council.
- Monitor, review and report on the delivery of the Municipal Fire Management Plan.
- Advocate to the Regional Strategic Fire management Planning Committee for municipal fire management needs.
- Work with the Municipal Emergency Management Planning Committee to align planning activities.
- Share knowledge and create an environment of continuous improvement.

## **Membership**

The Municipal Fire Management Planning Committee, appointed by the Municipal Emergency Management Planning Committee, has representation from the following organisations:

- Gannawarra Shire Council
  - Municipal Fire Prevention Office (MFPO) - Chair
  - Assistant MFPO
  - Municipal Emergency Resource Officer (MERO) \* or Deputy
  - Executive Officer Emergency Management (EOEM)
  - Councillor
- Country Fire Authority (CFA)
  - District 20 Operations Manager
  - District 20 Operations Officer
  - Manager Community Safety
  - Gannawarra CFA Brigades Group Representative
- Victoria Police (VicPol)
  - Senior Sergeant (MERC)
  - Sergeant (Deputy MERC)
- Forest Fire Management Victoria
  - Forest and Operations Manager
- Parks Victoria
  - Ranger in Charge – Fire and Emergency
- VicRoads
  - Northern Region Representative.

In addition to this standing membership, the Committee welcomes attendance of other organisations, agencies and individuals at meetings, including the following:

- Goulburn Murray Water
- Lower Murray Water
- Coliban Water
- Grampians Wimmera Mallee Water
- Powercor
- AusNet
- VLine
- VicTrack
- NSW Parks and Wildlife
- Solar Farm Managers
- Minerals Quarries
- Hospitals and Aged Care Facilities
- Traders/Progress Associations
- Environmental Trust Organisations.

Their contribution and attendance is of particular relevance during risk assessment and treatment monitoring processes and when relevant sections of the MFMP are being reviewed.

### **Member Conduct**

In performing their role on the MFMPC, members must:

- Act with integrity
- Impartially exercise their responsibilities in the interests of the local community
- Not improperly seek to confer an advantage or disadvantage on any person
- Treat all persons with respect and have due regard to the opinions, beliefs, rights and responsibilities of other persons
- Commit to regular attendance at meetings
- Not make improper use of information acquired because of their position or release information that the member knows, or should reasonable know, is confidential information.

### **Governance**

The Municipal Fire Management Planning Committee is established and undertakes planning as a sub-committee of the Municipal Emergency Management Planning Committee formed under s21(3) of the Emergency Management Act 1986.

- The MFMPC will be chaired from within its membership
- The MFMPC will receive support and guidance from the Regional Strategic Fire Management Planning Committee.
- Composition will be as determined by the MEMPC.

### **Structure**

The agencies/organisations listed above will provide representation at the appropriate level to enable decisions and commitment to be made on behalf of their agencies/organisations.

The Committee will provide direction and support to agencies/organisations.

The Committee request appointment of new members as required.

The Committee may convene working groups, as required.

### **Chair and Deputy Chair**

The Committee will be chaired by the MFPO.

The Assistant MFPO or MERO will fill the role of Chair in the event of a casual absence.

### **Schedule of meetings**

- The Committee will conduct a minimum of four meetings each year
  - March – Focus area/s - Season and fire statistic reviews and identification of any required projects for FARSS applications
  - June – Focus area/s – Negotiate strategic priority works, Preparation for VFRR Reporting, MFMP Review
  - September – Focus area/s – Report current risk treatment progress, FARSS applications, agency preparedness and readiness procedures.
  - December – Focus area/s – Report and monitor previous actions, issues and readiness, including an update on current resources on the ground.
- Where possible meetings will be scheduled to support appropriate information flow between the MFMPC and MEMPC.
- Scheduled meetings - the second Thursday of March, June, September and December each year.
- As required for special projects and initiatives.

- After a major emergency or incident that required the use of the MFMP, or organisational changes.
- After significant amendments have been made to the MFMP through review or legislative changes.

### ***Quorum***

A minimum number of Committee members are required for the meeting to be recognised as an authorised meeting for the recommendations or resolutions to be valid.

The Quorum must contain at least 50% plus 1 or greater of the Committee membership.

### ***Agenda Items/Minutes***

Committee members will be invited to submit items to be included on the Agenda, one month prior to meetings. Members will also be invited to submit Agency Reports and Issue Sheets to communicate matters of relevance to the Committee for information, direction or action.

Agenda items, Agency Reports and Issue Sheets must be forwarded to the Executive Officer at least fourteen days prior to the next scheduled meeting.

The Agenda with attached reports and meeting papers will be made available to the Committee members seven days prior to the next scheduled meeting.

The meeting Minutes will be made available within fourteen days of the meeting.

### ***Reporting***

The Municipal Fire Management Planning Committee will report quarterly to the Municipal Emergency Management Planning Committee and the Regional Strategic Fire Management Planning Committee.

### ***Support***

Administrative support requirements will be determined by the Committee and resourced through committee members where possible.

Planning processes will be managed and supported with technical expertise by relevant fire services.

### ***Review of Terms of Reference***

This Terms of Reference is valid for 3 years and will be reviewed by the MFMPC.

## 2 ENGAGEMENT AND COMMUNICATIONS

### 2.1 IAP2/ community engagement principles

Community and organisational participation played an important part in the development of this Plan. To support this, the MFMPC adopted the International Association for Public Participation (IAP2) Framework. The IAP2 framework guided the engagement decisions by the Committee in development of this Fire Management Plan and made clear the engagement commitment by the MFMPC.

Hierarchy Level	Public Participation Goal
Inform	To provide the public with balanced and objective information to assist them in understanding the problems, alternatives, opportunities and / or solutions
Consult	To seek and obtain public feedback on analysis, alternatives and / or decisions
Involve	To work directly with the public throughout the process to ensure that the concerns and aspirations of the public are consistently understood and considered
Collaborate	To partner with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution
Empower	To place final decision-making in the hands of the public

Figure 3: Extract from the IAP2 Public Participation Spectrum

Source: International Association for Public Participation, [www.iap2.org](http://www.iap2.org).

### 2.2 IFMP engagement process

A Stakeholder and Community Engagement Plan was developed as part of the Project Management Plan, to detail the Committee's deliberations and the objectives of a community engagement process in the development of the MFMP.

Stakeholder engagement and participation is an essential element of fire management planning. The MFMPC identified a list of stakeholders that were engaged when developing this Plan, their relationship to fire management and intended engagement approach.

The list included a range of emergency services, community groups/organisations, medical services, industry/employers/business, utilities, adjoining municipalities and Government departments.

A series of community 'Open House' meetings in Cohuna, Koondrook, Kerang and Quambatook were held, in conjunction with a widely circulated flyer, media releases, a television interview and radio announcements when the revised MFMP was ready for exhibition and community consultation. Council's website and Facebook page were also used as a means to provide updated information to the community.

## 3 ENVIRONMENTAL SCAN

The Environmental Scan was developed to ascertain the social, economic, built, cultural and natural environments of the municipality. The scan looked at the demographic makeup of the Shire as well as identifying the most important built, cultural and natural assets that would be impacted in the event of a fire within the municipality.

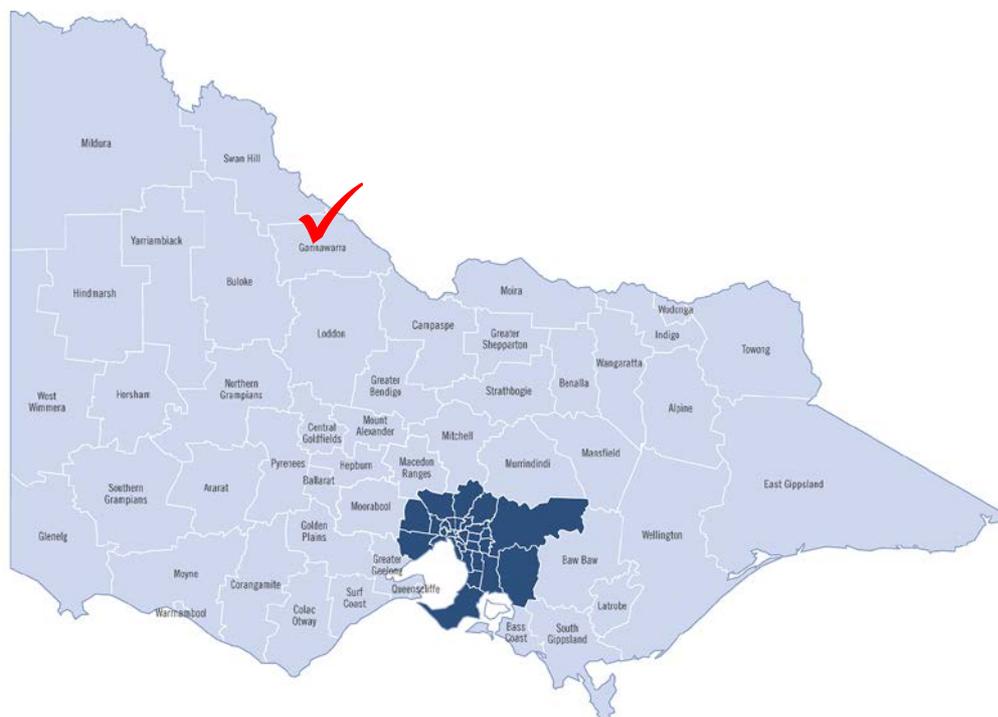


Figure 4: Geographic Location

### 3.1 The Municipality

Gannawarra Shire covers an area of 3,734 square kilometres and is located beside the Murray River, in the Loddon Murray region of Victoria, a three hour drive from Melbourne. The major regional centres of Bendigo, Echuca and Swan Hill are each about one hour away by road. Gannawarra Shire is a diverse agricultural region. Its economic base is primarily agriculture, with some important concentrations of manufacturing. Agricultural activities include cropping, dairying, grazing, horticulture and viticulture.

The population of the Shire is concentrated in the larger centres of Kerang and Cohuna with smaller communities in Murrabit, Leitchville, Koondrook, Lake Charm, Quambatook and Lalbert giving way to rural residential properties and farms.

The economic basis of the Shire relies heavily on the irrigation industry and is built around dairy, broad acre, agriculture and horticulture with a mix of secondary associated agriculture, manufacturing, service industries and retail and professional businesses.

Due to high solar resources (sun) and a high capacity terminal station, an emerging industry for the Gannawarra Shire is large scale renewable energy production. Australia's largest integrated solar farm and battery storage facility became operational in 2018 and permits for further solar projects have been approved and are progressing through the planning and preparation stage.

There are a significant number of lakes in the Gannawarra Shire, with major environmental features including the Reedy Lakes, Lake Charm, Kangaroo Lake and Gunbower Creek.

The built environment of the Shire is made up of buildings of historic significance, private homes, business premises, schools, hospitals, halls and community buildings.

Development of the MFMP utilised a spatial analysis of weather, ignition history, fuel hazard and intensity scenario mapping to provide for the protection of the social, built and environmental assets within the municipality.

## 3.2 Demographics

The Gannawarra Shire has a population of approximately 10,549, with the biggest populations in the centres of Kerang (3,893), Cohuna (2,428), Murrabit (201), Leitchville (558) and Koondrook (991). The smaller communities of Lalbert, Mystic Park, Lake Charm, Macorna and Tragowel are serviced as part of the broader catchment population which is in excess of 15,000 in the border region between Northern Victoria and Southern New South Wales. The population within the municipality fluctuates on a seasonal basis due to itinerant workers, campers, tourists and those taking part in other recreational activities.

As at the 2016 census, 27.6 per cent of the Shire's population was aged 65 and over and 21.8 per cent were under 19 years of age. Aboriginal and/or Torres Strait Islander people made up 1.9 per cent of the total population of the Shire.

According to the 2016 census, 86.5 per cent of the population were born in Australia with 91.0 per cent speaking English as a first language in the home.

Vulnerability of communities is not measured by proximity to a fire event alone, but is also influenced by other factors such as income, age, physical and mental health, mobility, education, access to communications, transport, social connectedness and location.

## 3.3 Geographic Characteristics

The geography of the Gannawarra Shire is characterised by its close proximity to undulating mallee soils to the north and west, featuring heavy clay reactive soils overtopped with light sandy soils, suitable for broadacre agriculture and horticulture. Standing crop, stubbles and dry vegetation present a low risk fire hazard for this area, however the mechanization of the agricultural industry is presenting other risks into the environment not previously recognized as significant.

The municipality has a Mediterranean climate which underpins an extensive dry land and 137,000 hectares of irrigated land combined with fertile soils creating a Shire rich in agricultural diversity.

The Gunbower Koondrook Perricoota Forest straddles the Victoria-NSW border and covers about 50,000 hectares between the Murray River and Gunbower Creek. The forest has been designated in part as Gunbower State Forest and Gunbower National Park. The 'Forest' includes several lakes, wetlands and sand hills. At the Torrumbarry end of the forest, away from the waterways, Black Box and Grey Box are the dominant trees, with Grey Box dominating on slightly higher, less flood-prone land to the north. Red Gum is the dominant tree around wetlands, along the rivers and over much of the remainder of the forest. The eastern boundary takes in the riverine Benwell and Guttrum red gum forests.

The Murray River flows past Koondrook where the floodplain broadens to cater for the Loddon and Avoca Rivers. Historically the Avoca River flowed into Lake Tutchewop, but in more recent times has been diverted north to outfall into Lake Boga. The Loddon River joins the Murray River at Benjeroop. The floodplain is interspersed with a wetland system of 57 freshwater lakes and swamps, and includes many natural saline lakes.

The Mallee landscape to the west provides stark contrast to the wetlands and forests, and contains significant areas of remnant native vegetation that form important habitat for wildlife. The importance of this vegetation has been recognised and it is now protected, principally through the State Conservation of Native Flora and Fauna overlay and the local Environmental Significance overlay in the Gannawarra Shire Planning Scheme.

These geographic attributes have been taken into account in the development of the Environmental Scan for the MFMP.

### 3.4 Fire History

Gannawarra Shire is located in an area of mixed flat dry land suitable for cereal cropping, grazing and irrigated dairy farming. Hay is also produced from both the irrigated and dry land. There are many areas of bushland adjacent to the Loddon and Murray Rivers and around the extensive network of lakes in this area. Fuels loads vary from full crops to grazed stubble, woodlands to forest understory and generally equate to 4t/ha in grassland. Baled hay is also produced on irrigated land and dryland areas where crops have not reached yield potential.

Most fires will occur in the grasslands during late spring and early summer where at least 90% of the land is under crop or covered by pasture. Harvesting activities usually commence in November reducing the fuel loads but increasing the likelihood of fire. The risk of on-farm fodder storage fires also increases during these months. Following in late January and through February depending on rainfall, further reduces the risk of fire spread. By late March 30% of the dry land is under fallow and another 30% grazed out.

### 3.5 Bushfire Landscapes

The Gannawarra Shire has five key bushfire landscapes each with unique characteristics which, when combined with weather conditions of the day, will determine how fire behaves.

Landscape	Fuel Hazard Level	Topography	Primary Driver	Spotting / Ember Potential
Mallee forest	Moderate to Extreme	Flat	Wind/fuel/plume	Moderate/high
Grass, Crop and Stubble	Low to Moderate	Flat to Undulating	Wind	Low
Box and Ironbark Forest and Woodland	High to Extreme	Undulating	Fuel/Topography	Moderate/High
Riverine Forest	High to Extreme	Flat	Fuel	Low
Urban	Low to High	Flat to Undulating	Wind/Fuel	Low

**Table 1: Gannawarra Shire Bushfire Landscape**

Source: Loddon Mallee Regional Strategic Fire Management Plan, August 2011

The higher than average likelihood for grass and forest fires reflects the long length of the bushfire season, (averaging 147 days) for the municipality. The distribution of fuel load across the municipality is closely aligned to land use. Within the municipality, 90% of the fuel load is rated as Low or Moderate level. The remaining 10% of the fuel load, rated as High, Very High or Extreme, is associated with riverine forest, wetlands and roadsides.

The history of broad scale agricultural use has changed the landscape significantly in the Gannawarra Shire. Gannawarra has the equal highest level of endangered and vulnerable Ecological Vegetation Class (EVC) remnants of native vegetation in the region.

Fire regimes have an influence on the floristic composition and structure of vegetation. The presence, absence or frequency of wildfire and fuel reduction burning can also affect habitat and the faunal elements associated with it.

The way in which we respond to and prepare for fire can also have an effect on many significant environmental assets within the Gannawarra Shire.

The Loddon Mallee Region contains many sites of ecological significance. These sites may be home to individual species of flora and fauna or may be entire vegetation communities. Many of these species or vegetation communities may be listed under various acts of state and federal legislation or are protected by local planning provisions.

Those on roadsides are particularly vulnerable to roadside fire management activities. Much of the vulnerable vegetation is made up of native grassland ecosystem. Fire sensitive Aboriginal artefacts, mostly associated with riverine and lake systems, are the highest in the region.

It is imperative that planning and implementation of fire prevention works (including grading, slashing, vegetation removal and fuel reduction burning) takes into account the potential impacts on native flora and fauna.

### 3.6 Fire hazard areas

To support bushfire planning, the RSFMPC prepared scenario maps that display bushfire intensity for the municipality. Maps based on probable fire behaviour and the associated fire intensity were prepared for Severe, Extreme or Code Red fire danger days. The maps measure the predicted head fire intensity, measured in Kilowatts/linear metres.

These scenarios are modelled to provide benchmarks around which strategies and actions can be built. The mapping has segmented the landscape to reflect the important fire management thresholds that were identified during the Victorian Bushfires Royal Commission.

#### **Based on description to the Victorian Bushfires Royal Commission 2009:**

- 0-1000 kW/m – Controlled burns are feasible
- 1001- 4000 kW/m – Direct attack at the fire's front is possible
- 4001-10,000 kW/m – May be feasible to actively work on flanks of fire front, but not head
- 10,001 – 30000 kW/m – Direct attack not feasible, but asset protection may be possible depending upon circumstance
- 30,000+ kW/m – Traditional fire fighting not feasible and asset protection generally not feasible.

The scenarios established are typical of what we may experience in the Loddon Mallee region in any mid-summer period when a fire is fully established and has been running for several hours. Extreme wind events have not been included.

The MFMPC has used the fire intensity maps as one of the key tools in the identification of risk, a basis for the risk analysis and determining appropriate treatments. The maps allowed the MFMPC to understand the maximum potential fire intensity if a fire was to occur under optimal conditions. The Committee was then able to make appropriate decisions based on these maps, their local knowledge of the landscape and their understanding of fire behaviour.

### 3.7 Assumptions and Implications about the future

An element of the development of the MFMP was to include assumptions made by the MFMPC about some future elements of the Gannawarra Shire. These assumptions have implications for integrated fire management planning and will be reviewed as changes occur.

Some of the major assumptions made by the MFMPC are:

- **The availability of water within the Shire:** Land use in the municipality is currently irrigation and dryland, but this ratio may change as irrigation infrastructure is reconfigured and land use changes:
  - Less water may be available for irrigation, which may contribute to drier vegetation, increasing available fuel loads
  - Access to water – modernisation of the irrigation system potentially means less open channels
  - In the dryland part of the municipality, a reticulated pipeline system has been established. A series of water tanks and hydrants have been made available as part of this pipeline system.
- **Population decline across the Shire:** Population has decreased since the 2006 Census with larger concentrations of people in the Kerang and Cohuna area. Implications potentially may be:
  - Less maintenance of infrastructure due to absentee property owners;
  - Fewer willing and available volunteers in rural areas;
  - May cause a change in response times for rural area fires.
- **Human vulnerabilities exist within the Shire which may affect some people's ability to plan for fire. Implications may potentially be:**
  - Those with vulnerabilities may be unable or unwilling to undertake long term planning;
  - Low income families may be attracted to rural living due to reduced living costs and may be unaware of potential hazards.
- **Climate variability:** Drier and hotter seasons with potential for droughts which may result in:
  - Less available water;
  - Longer fire seasons;
  - More available fuel.

Gannawarra Shire Council aims to meet its fire management responsibilities in an environmentally sustainable manner. Areas within the municipality having significant conservation value will be identified through consultation with appropriate organisations such as the Department Environment, Land, Water and Planning, Parks Victoria as well as community interest groups and the general public.

Vulnerable groups have been identified through the risk assessment process and taken into account during the planning stages. These groups will be continually monitored and treatments assessed over the life of this Plan.

## 4 MUNICIPAL FIRE MANAGEMENT OBJECTIVES

### 4.1 Alignment to regional objectives

The MFMP provides input into, and is developed with reference and alignment to the Loddon Mallee Regional Strategic Fire Management Plan. The MFMP is principally a plan that coordinates and aligns the fire management activities in a manner that is consistent with the Regional Plan. Of particular relevance, the MFMP is aligned with the Regional Strategies and Objectives of an integrated agency approach to fire management across the region creating a more fire ready, educated and resilient community.

REGIONAL FIRE MANAGEMENT PLAN OBJECTIVES	GANNAWARRA MUNICIPAL FIRE MANAGEMENT PLAN OUTCOMES
Healthier Environment	Protection of all cultural and natural values/assets Healthy environments Protection of all community assets (built)
Safer Communities	A better prepared community Preservation of life Protection of all community assets (built) Safer community
Prosperous economy	Healthy environments A better prepared community Mitigation of risk
Cohesive fire management system	Integration of agencies and community Confidence in the plan Mitigation of risk
Positive response from the fire management community	Fulfill all legislative requirements

**Table 2: Alignment to Regional Objectives**

### 4.2 Objectives and outcomes proposed

The MFMP considered many factors in developing a fire management vision for the Gannawarra Shire. The Committee believes that this vision portrays its responsibility to ensure the safety and wellbeing of the social, environmental, cultural and economic assets within the Shire from the risk of fire events.

#### **Vision Statement**

***“Our vision is to manage the risk of fire to all life, property, cultural and environmental assets in the Gannawarra Shire to provide a safer community for all”.***

The Committee, through this Plan intends to achieve these outcomes:

- The mitigation of risk to all life, property, cultural and environmental assets
- The integration of agencies and community in delivering this plan
- There is confidence in the Plan by agencies and the community
- The protection of all cultural and natural values/assets
- The protection of all community assets (built)
- The Plan to comply with all legislative requirements
- A safer community for all residents
- To maintain a healthy environment
- A better prepared community for the threat of fire
- The preservation of life.

### 4.3 Strategic Directions

To assist in the development of the Municipal Fire Management Plan, the MFMPC developed the following key strategies:

#### **STRATEGY 1: Development of risk treatments for the preservation of life**

- Collaborate in the analysis of risk utilising consistent tools, data and existing plans
- Share knowledge and understand risk implications
- Ensure participation in effective development in the treatment of bushfire or structural and hazmat fire events
- Gain agency and community participation in planning initiatives to identify what is important to the community
- Develop ongoing education and learning programs for community and agencies to identify and reduce risk
- Ensure vulnerable community members are supported by those with skills and knowledge.

#### **STRATEGY 2: Shared responsibility through the integration of agencies and the community**

- Maximise community and agency collaboration to strengthen existing partnership arrangements
- Ensure that community and agencies understand and manage the risks of fire through shared knowledge
- Develop a fire plan in partnership addressing community and agency needs.

#### **STRATEGY 3: Development of risk treatments for the protection of all assets (natural, cultural and built)**

- Collaborate in the analysis of risk utilising consistent tools, data and existing plans
- Share knowledge and understand risk implications
- Ensure participation of agencies with the community in effective development in the treatment of bushfire, or structural and hazmat fire events
- Gain agency and community participation in planning initiatives to identify what is important to the community
- Provide ongoing education and learning programs for community and agencies to identify and reduce risk.

#### **STRATEGY 4: Support and use all existing legislative tools**

- Ensure that the Plan meets and complies with all legislative requirements.

## 4.4 Links to other agency programs

The development of the MFMP has been carried out in consultation with key stakeholders and the community in accordance with Section 43(1) of the *Country Fire Authority Act (1958)*. Every public authority shall take all practical steps (including burning) to prevent the occurrence of fires and to minimise the danger of the spread of fires on, or from any land and roads vested in it or under its control.

### 4.4.1 Other supporting Legislation and Policies

The Municipal Fire Management Plan assists in making the community safer. However, Council has the responsibility to provide a range of services and programs that go well beyond this restricted charter.

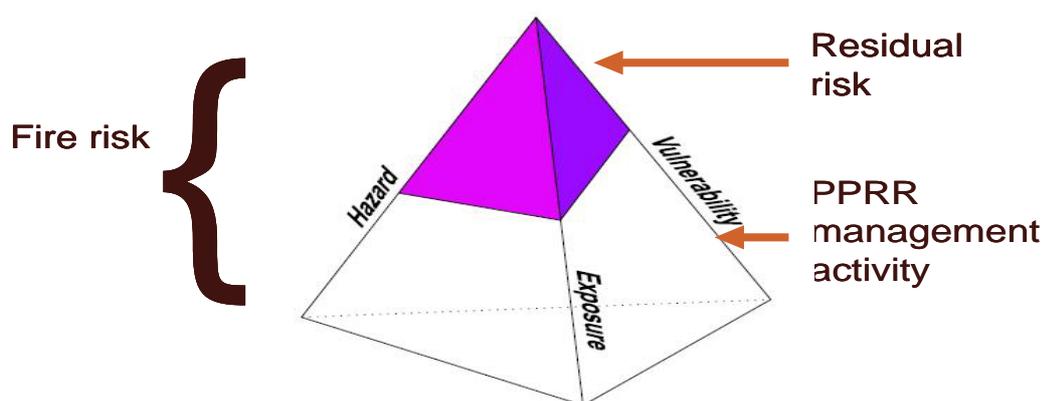
This Plan has been prepared in consultation with various community and statutory bodies and is supported by:

- Loddon Mallee Strategic Fire Management Plan
- DELWP Fire Operations Plan
- CFA Brigade Operational Plans
- Powercor Bushfire Mitigation Strategy
- Ausnet Bushfire Mitigation Plan and Vegetation Management Plan
- CFA Loddon Mallee Community Safety Plan
- Neighbouring Shire Fire Management Plans
- The State Fire Management Strategy (2009)
- Recommendations of the 2009 Victorian Bushfires Royal Commission Report
- Municipal Emergency Management Plan
- Municipal Fire Hazard Mapping Reports
- Council Declared Bush Fire Prone Areas
- Road Management Plans
- Victorian Planning Provisions and the Municipal Planning Scheme
- Other Fire Prevention, Preparedness, Response and Recovery strategies and codes of practice of Statutory Authorities and MFMP member organisations.

## 5 FIRE MANAGEMENT RISK STRATEGY

### 5.1 Risk assessment methodologies

Risk is generally described as the combination of the likelihood of an event occurring and consequence should it happen. In fire management planning the Crichton Risk pyramid helps people to understand the idea of fire risk in greater detail.



**Figure 5: Risk Pyramid**

In the risk pyramid the relationship between the amount of risk generated by the “hazard”, “exposure” and “vulnerability” and the values (people, property, infrastructure, social and economic, biodiversity, the economy and heritage) of a location is identified.

Typically fire management activities (sometimes categorised as prevention, preparedness, response and recovery (PPRR) activities) are applied across the pyramid to effectively:

- Reduce the incidence and severity of the hazard;
- Reduce the exposure of assets and values to the hazard; and
- Build the resilience (reduce vulnerability) of the assets and values within society.

This MFMP Plan has considered the following risk statements:

1. The risk of a bush fire igniting, spreading and impacting upon assets and values;
2. The risk that the management (PPRR) of fire is in line with the level of exposure and vulnerability of assets and values;
3. The risk of a structural fire igniting, spreading and impacting upon assets and values;
4. The risk of a hazardous materials incident occurring, catching fire, spreading and impacting upon assets and values.

With the development of appropriate tools in the future, the MFMPC will have the opportunity to further consider risk statements associated with structures and hazardous materials fires.

To undertake this assessment the Committee has undertaken a risk analysis process where it has:

- Identified the characteristics, values and directions of the municipality;
- Established the three fire intensity scenarios for the municipality on days of severe, extreme and code red fire danger ratings;
- Identified the primary risks to life, property, the environment, the economy and social values and their contributors;

- Reviewed these risks in line with state wide likelihood and consequence tables and prepared a risk register which:
  - i. identified the current fire management strategies and treatments that are in place
  - ii. considered the adequacy of those strategies and treatments for each scenario
  - iii. identified alternate strategies or treatments where treatments are identified as inadequate
  - iv. reviewed the risk level to establish the perceived effectiveness of the alternate strategies or treatments
  - v. agreed on process to establish improved fire management.

To support this approach, GIS mapping techniques were used. Mapping of fire hazards, history, treatments, assets and zoning information was an important tool used in the risk management process.

## 5.2 Physical, Geographical and Systems Risks

As part of the risk management process, the MFMPC identified a list of 14 Risk Categories which it felt needed to be addressed as part of this Plan. These risks are detailed in the table below.

Under each risk category, the MFMPC attributed appropriate 'Risk Contributors' that made up this risk. Risk contributors were developed using the VFRR, as a basis for key, social, built and environmental assets within the municipality. The Committee then identified further risk contributors based on its knowledge and understanding of fire risks within the Shire.

The Committee considered the broad range of risks that may occur, and undertook specific analysis for bushfire on days of severe, extreme or code red bushfire danger rating. The analysis considered the effectiveness of the current treatments that are in place.

It is important to note that the criteria used in the level of consequence, were undertaken in a State wide context. The consequence of even a single fatality is significant to the family, community and emergency services. This combined with likelihood of its occurrence in the municipality means that many ratings are rated as 'low' against the State Bushfire Consequence Table. Whilst most bushfires occur on days of lower fire danger ratings, they are generally manageable and rarely create significant damage to life, property and/or natural/cultural assets.

The table on the following page details the risk categories the Committee has developed as part of the Plan. Under each category, applicable 'Risk Contributors' have been grouped, and the results of the risk assessments for the grouped risk contributors are outlined. For more specific details, please refer to the Risk Register in Appendix A or contact Council's Municipal Fire Prevention Officer for a copy of more detailed treatment/work programs.

<b>Risk ID</b>	<b>Risk Category</b>	<b>Risk Contributor</b>	<b>Risk Assessment Result</b>
R01	<b>Loss of or injury to human life</b>	Townships in Shire Isolated Rural Properties	Low Low
R02	<b>Loss of or damage to property</b>	Caravan Parks Riverside Camping	Low Low
R03	<b>Loss of or damage to critical infrastructure (communications, electricity, water, essential services)</b>	Highways throughout Shire Rail Lines Airfields Electricity Communications Towers Transmission Lines Pump Stations Water Treatment Plants Filtration Plants	Low Low Low Moderate Low Moderate Low Low Low
R04	<b>Loss of or damage to essential community infrastructure (schools, hospitals etc)</b>	Schools Health Precincts	Low Moderate
R05	<b>Risk of structural fire occurring to industrial/commercial and residential property</b>	Interface Living Township Living Industry and State Infrastructure Business and Community Activity Centres Farming and Rural Living	Low Moderate Low Low Low
R06	<b>Risk of Hazmat incident occurring which causes impact to business/industry and the community</b>	Interface Living Township Living Industry and State Infrastructure Business and Community Activity Centres Farming and Rural Living Transport	Low Low Low Low Low Moderate
R07	<b>Lack of awareness or understanding of fire risks and associated responsibilities</b>	Visitors/ Campers/ Transient Works Complacency	Moderate Low
R08	<b>Loss of life or impact upon prevalent vulnerable groups</b>	Over 65 – Urban and Rural Under 14 – Urban and Rural Tree Tops Scout Camp	Low Low Moderate

Risk ID	Risk Category	Risk Contributor	Risk Assessment Result
R09	<b>Lack of suitable access to and egress from areas of high fire danger</b>	Forests	Low
R10	<b>Loss of community infrastructure that supports social connectedness</b>	Hotels/ Halls Recreation Reserves	Low Low
R11	<b>Loss of economic viability for the municipality</b>	Horticulture Dairy Piggeries Dry Land Cropping and Grazing	Low Low Low Low
R12	<b>Loss or damage to significant cultural, social and natural assets</b>	Scarred Trees/Midden Mound Earth Features Bridge/Historical Tram/Museum	Low Low
R13	<b>Reduced economic viability and long term sustainability</b>	Markets Ski Races Camping/ Fishing	Low Low Low
R14	<b>Loss of Major Industry</b>	Saw Mill Industrial Sites/ Estates Wineries	Low Low Low

**Table 3: Risk Register Summary**

The following 'Risk Contributors' were identified through the risk identification processes and detail some of the higher risk assessment ratings for the Shire giving some context to the table above. For more specific details, please refer to the Risk Register in Appendix A or contact Council's Municipal Fire Prevention Officer for a copy of more detailed treatment/work programs.

All townships within the Shire were assessed as being 'Low' for the 'Loss of Life' risk category, however the following assets have a 'Moderate' risk rating:

- The Kerang Power Station has a risk rating of 'Moderate' on all three fire scenarios. The likelihood was considered 'Rare' however the consequence if the asset was damaged was considered to be 'Major' in the State Consequence Table due to its role in supplying electricity to much of the Loddon Mallee Region and western NSW.
- The 220KV power lines that supply and distribute power from the Station also had the same 'Moderate' risk rating.
- Similarly, the Cohuna Zone Substation (Horfield) has the same 'Moderate' rating for the same reasons. While it doesn't supply the region with power it was considered 'Major' for this community if it was damaged by fire.

- The health precincts of Cohuna and Kerang were assessed and rated 'Moderate'. Again, this was based on the consequence considered 'Major' if these were impacted due to the potential for loss of life. The 'Likelihood' of these occurring was considered 'Rare' based on their location.
- The risk of structural fire within the Townships Living category was considered to be 'Moderate'. This rating was based on the 'Likelihood' of a fire within any of the towns in the Shire being 'Almost Certain', however the consequence was considered 'Important'. This assessment was not based on the three bushfire scenarios as it was considered not to affect the likelihood of a structural fire.
- The risk category 'Hazardous Material Incidents with the Potential for Fire' identified the risk contributor 'Transport Incidents' as being a 'Moderate' risk. The likelihood of the event occurring was considered 'Likely' (once in every 3 years) with a 'Significant' consequence if an incident was to occur in the municipality. Again the three bushfire scenarios were not applicable in the determination of risk for the Hazardous Material Incidents.
- The Risk assessment results for the CFA precincts in the 'Structural Risk' and 'Hazardous Material Incidents with a Potential for Fire' categories in most cases resulted in a risk assessment of 'Low'. These determinations were completed on the Committee's understanding at that point in time. Further work on Structural and Hazardous Material Incident risks will be concentrated on in the future of this Plan as a key priority.
- The Tree Tops Scout Camp near Spences Bridge Road at Cohuna has a risk rating of 'Moderate' on days of Severe and Extreme fire danger due to the risk of loss of life. The assessment is 'Low' for Code Red days because the camp would be closed to the public on Code Red days. The MFMPC was proposing additional treatments to alleviate the risk to those vulnerable groups who may be staying at the camp if a fire was to occur as part of this Plan.

For more specific details, please refer to the Risk Register in Appendix A or contact Council's Municipal Fire Prevention Officer for a copy of more detailed treatment/work programs.

Due to low or moderate risk assessments in most Risk Categories, the MFMPC determined that it would develop further proposed treatments where it identified a specific gap or where it saw a need for further treatments to alleviate the risk. Where there was nothing further proposed, the Committee accepted this as the 'residual risk'.

Risk Categories and 'risk contributors' will be monitored through this Plan and changed where appropriate. 'Loss of Human Life' is a key risk category and will continue to be a focus. The MFMPC is aware of vulnerabilities within the municipality with regard to fire and will continue to build its understanding and look at opportunities to alleviate these risks to life.

The MFMPC has completed risk assessments on Structural and Hazardous Material risks from its current understandings. These risk contributors have been based on the 'CFA Precincts' to identify key areas of townships and urban areas. In future years of the Plan these two risks will be a key focus for the Committee and will be addressed when appropriate tools are developed through the CFA and other agencies.

The MFMPC will continue to review bush & grass fire risks. As further tools for bushfire assessments are developed to deal with fire risks, these will be implemented.

Loss or damage to significant cultural, social and natural assets were assessed as being 'Low' during the risk management process, however the MFMPC will continue to concentrate on alleviating these risks and gaining a better understanding of the environment within the municipality.

For more specific details, please refer to the Risk Register in Appendix A or contact Council's Municipal Fire Prevention Officer for a copy of more detailed treatment/work programs.

Community safety programs often seek to raise the capability and capacity in a community of fire relevant skills, attributes of individuals and the condition of properties in which they live. It is the primary assumption that enhancement of these skills and attributes will improve the safety of the community and its members.

### 5.3 Treatments & Actions

The strategies of *Capacity Building, Management of Risk, Partnership* and *Legislation* have provided a risk analysis framework that has been utilised in the development of a comprehensive risk register and integrated agency treatment strategies and work plan. Multiple agency workshops were undertaken as a part of the risk analysis process utilising hazard, exposure and vulnerability and risk management tools. The process undertaken has assisted in the identification of the effectiveness of existing treatments and also assisted in the development of a range of additional treatment options against identified risks.

Activities and identified treatments linked to the strategies and objective of this Plan have been developed during the multi-agency workshops and are detailed in the treatments and actions table in the section following.

The key activity undertaken by the Committee was the risk management process using IFMP risk management tools and hazard mapping to review, develop and manage effective risk treatments.

Key Preparedness, Prevention, Response and Recovery opportunities identified across the municipality are summarised as follows:

- Alignment of fire prevention strategies across the region
- Further hazard treatments in some areas
- Targeted community education programs relating to vulnerable persons
- Refinement of preparedness treatments.

Refer to the Risk Registers in Appendix A for further details relating to the identified risks.

For more specific details, contact Council's Municipal Fire Prevention Officer for a copy of detailed treatment/work programs.

Many organisations and individuals undertake activities in the municipality to treat fire related risks and keep them at a lower level. These actions may reduce the size of a fire event or stop it occurring, reduce the exposure of places and things that are important or that we value, or build the resilience of people, assets and values should a fire occur.

No single action or treatment will effectively manage the fire risk and each relies on the other to reduce the real risk to that which is acceptable by the community. In the Gannawarra Shire fire services, community, land managers and support agencies of government all work together to achieve this. Generally these activities are considered to be Preparedness, Prevention, Response or Recovery based.

Some programs conducted with the Gannawarra Shire are:

**Prevention activities:** are undertaken by agencies and the community to prevent the possibility of fire within the municipality including slashing/herbicide programs undertaken by Council, VicRoads and FFMV relating to vegetation management on public land. Various education programs are conducted by the CFA to educate the community about hazards of fire.

The CFA and Council manage the introduction and termination of the Fire Danger Period in the Gannawarra Shire.

**Bush/Grass fire:** Land managers and community members take a primary role in preventing bushfires. Vic Roads, Council, FFMV, Parks Victoria and community members manage an extensive slashing program on road sides within the municipality to reduce the incidence of fires starting from vehicles and plant. Where camping is popular, particularly along the rivers and around lakes, FFMV, Council, Parks Victoria and Victoria Police patrol, provide fire places or enforce regulations, including total fire bans, and provide community education to reduce campfire escapes. On Code Red days many public land areas are closed. The CFA, including volunteers provide community education and advertising to encourage responsible decisions around fire.

**Structural fire:** CFA is the lead agency for suppressing structure fires when they occur. CFA works closely with the building industry and Council to ensure structures are built to regulations and as building occupancy changes, to meet current fire safety regulations. This reduces the incidence of structural fires. In addition, CFA provides education programs to children and adults about fire safety within the home and has many publications and programs to facilitate home fire safety plans.

For more specific details, please refer to the Risk Register in Appendix A or contact Council's Municipal Fire Prevention Officer for a copy of more detailed treatment/work programs.

## 5.4 Cross Boundary Arrangements

The Gannawarra MFMP seeks to ensure risk environments that cross municipal and regional boundaries are treated in a collaborative manner with regard to risk assessments and treatments. In part, this is achieved through a collaborative approach and the use of consistent processes and tools.

The Gannawarra Shire is bounded by the Swan Hill Rural City Council to the north, Buloke Shire to the west, the Loddon Shire to the south, the Campaspe Shire to the east and the Murray River Council to the north in the state of New South Wales.

Gannawarra Shire Council is a signatory to the Municipal Association of Victoria (MAV) Inter Council Emergency Management Resource Sharing Protocol.

Cross border arrangements exist with neighbouring Victorian and New South Wales councils to assist each other as necessary in an emergency event.

Clear linkages to existing organisational cross boundary agreements and memorandums of understanding between agencies dealing with Preparedness, Prevention, Response and Recovery activities and resource allocation arrangements are vital.

To ensure that shared risks are appropriately addressed, MFMPs are considered by the LMR SFMPC to ensure they address risks shared across municipal and agency boundaries in a consistent and seamless manner.

It is also recognised that agencies and municipalities have existing planning relationships across multiple boundaries and that these planning arrangements need to be considered when developing future plans.

A map identifying the Gannawarra Shire Council Area relative to other municipalities including the Murray River Council is provided in Appendix C.

## 5.5 Planning Support Activities

The following arrangements and procedures are in place to support the Municipal Fire Management process by addressing risks that have been identified within this Plan.

### 5.5.1 Township Protection Plans (TPP)

The Gannawarra Shire does not currently have any Township Protection Plans.

### 5.5.2 Neighbourhood Safer Places – Place of Last Resort

The purpose of a Neighbourhood Safer Place – Place of Last Resort is to provide some protection from the effects of radiant heat during a bushfire when all other plans have failed. Neighbourhood Safer Places should not be considered as a place to relocate when leaving early as it will not guarantee safety or survival from fire, embers or radiant heat.

Neighbourhood Safer Places are public spaces or buildings such as:

- recreational reserves
- streets
- car parks
- shopping strips.

They are designated community areas that may provide some protection from radiant heat, the biggest killer during bushfire. They are not inherently safe places during a bushfire.

Going to a Neighbourhood Safer Place won't guarantee your safety - the safest option is still to leave early.

A Neighbourhood Safer Place - Place of Last Resort may not have the capacity to cater for special needs; and there will be no support services (food or drink, material aid) or provision for pets.

There is no guarantee that emergency services will be present during a bushfire.

Gannawarra Shire Council has identified the sites set out in the table below as its Neighbourhood Safer Places – Place of Last Resort:

Cohuna	Cohuna Secondary College Oval	Murray Valley Highway
Kerang	Kerang Racecourse	Park Road
Koondrook	Koondrook Recreation Reserve	Penglase Street
Murrabit	Murrabit Recreation Reserve	Browning Street

**Table4: Neighbourhood Safer Places – Place of Last Resort**

Refer to Appendix C4 for NSP location maps.

### 5.5.3 Community fire refuges

The Gannawarra Shire does not currently have any community fire refuges.

#### 5.5.4 Hazard Trees

The *Electricity Safety Act 1998* requires a municipal council to specify within its Municipal Fire Prevention Plan:

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

As such, the Gannawarra Shire Council has a Hazardous Trees Management Plan which forms Appendix B to this Plan. The municipality is the Responsible Person for electric lines within the declared area of Kerang, and this is the only area within the shire that Council is accountable as the Responsible Person within the meaning of the legislation.

## 6 IMPROVEMENT AND PLAN REPORTING AND REVIEW PROCESS

### 6.1 MERI - Monitoring, Evaluation, Reporting and Improvement

The integrated fire management planning process is a continuous cycle of analysis, review and improvement, which operates within a complex and challenging environment.

Within this complex environment are limited and competing resources to achieve the desired outcome of acceptable levels of residual risk to the community. Therefore, fundamental to its success is the establishment and preservation of healthy stakeholder partnerships that allow for continued transparent and robust dialogue in the interest of achieving the Plan's objectives in the long-term. It is the role of the MFMPC to spearhead relationship management for this purpose.

In addition to monitoring the 'health' of the process, implementation of the Plan itself must be monitored and reported upon to enable continuous improvement. The table below summarises the proposed implementation, reporting and review activities.

Frequency	Task / Action	Responsible Party
Ongoing	Implement treatments, as per agreed Work Plan	All treatment owners
	Further explore identified opportunities for new or enhanced treatments with relevant stakeholders, and agree course of action	MFMPC
Biannually (every 6 months)	Report to MFMPC on the progress of treatment implementation, including an evaluation of treatment appropriateness, impact, effectiveness, efficiency, and legacy	All treatment owners
	Update Risk Register and Work Plan to reflect treatment status, as reported by treatment owner	MFMPC
4 per year or as required	Conduct strategic review of risks and associated treatment program, asking: <ul style="list-style-type: none"> <li>• Are the identified risks still valid?</li> <li>• Do their pre-treatment and residual risk ratings still hold true?</li> <li>• Are there new risks that need to be added to the register and managed?</li> <li>• Do the treatments currently in place adequately address the identified risks?</li> <li>• Are there any new or enhanced treatments required?</li> </ul>	MFMPC
	Review and update Plan content and mapping to ensure validity	MFMPC

Frequency	Task / Action	Responsible Party
	Provide overarching progress report to Municipal Emergency Management Planning Committee, focusing on the collective effectiveness of treatments in the management of risks and progress towards the achievement of objectives	MFMP
Triennially (every 3 years)	Conduct end-to-end review of Plan, with particular focus on the environment scan and objectives	MFMP

**Table 5: MERI**

Note: For a copy of the MERI Works Program, contact Gannawarra Shire Council's Municipal Fire Prevention Officer.

## Appendix A – Victorian Fire Risk Register (VFRR) – Bushfire

As at February 2019

Asset Class	Asset Subclass	Asset Name	Location	Consequence Rating	Likelihood Rating	Risk Rating
Cultural Heritage	Non-Indigenous	Condidorios Bridge	Koondrook	Major	Likely	Very High
Economic	Infrastructure	Cannie Ridge WPS	913 Thompson RD Lalbert	Moderate	Likely	High
Economic	Infrastructure	Meatian WPS	Meatian West RD	Moderate	Likely	High
Economic	Infrastructure	Quambatook WTP	Charlton RD Quambatook	Moderate	Likely	High
Human Settlement	Special Fire Protection	Cohuna District Health Precinct	111 King George ST Cohuna	Moderate	Likely	High
Human Settlement	Special Fire Protection	Lake Charm Caravan Park	Murray Valley HWY Lake Charm	Moderate	Likely	High
Human Settlement	Special Fire Protection	Lake Charm Foreshore Caravan Park	36 Park RD Lake Charm	Moderate	Likely	High
Human Settlement	Special Fire Protection	Pelican Waters Caravan Park	CRN of Benjeroop and Boat RD Lake Charm	Moderate	Likely	High
Human Settlement	Special Fire Protection	Quambatook Caravan Park	Meering RD Quambatook	Moderate	Likely	High
Human Settlement	Special Fire Protection	Quambatook Group School	13 Charlton RD	Moderate	Likely	High
Human Settlement	Special Fire Protection	Cohuna Guide Hall	Belmont ST Cohuna	Moderate	Likely	High
Economic	Infrastructure	Kerang Power Terminal Station	Loddon Valley HWY Kerang	Major	Unlikely	Medium
Economic	Infrastructure	Macorna WPS 35	Macorna	Minor	Likely	Medium
Economic	Infrastructure	Cohuna SWR	Cohuna	Minor	Likely	Medium
Economic	Infrastructure	Macorna Basin	Macorna	Minor	Likely	Medium
Economic	Infrastructure	Cohuna Clearwater Storage Well	Cohuna	Minor	Likely	Medium
Economic	Infrastructure	Macorna WT 1	Macorna	Minor	Likely	Medium
Economic	Infrastructure	Macorna WT 2	Macorna	Minor	Likely	Medium
Economic	Infrastructure	Quambatook Booster PS	Quambatook	Minor	Likely	Medium
Economic	Infrastructure	Lalbert Urban PS	Lalbert	Minor	Likely	Medium
Economic	Infrastructure	Mystic Park mobile site	Murray Valley HWY Mystic Park	Minor	Likely	Medium
Economic	Infrastructure	Koondrook mobile site	62 Loop RD Koondrook	Minor	Likely	Medium
Economic	Infrastructure	Cohuna mobile site	Wineberg ST Cohuna	Minor	Likely	Medium

Asset Class	Asset Subclass	Asset Name	Location	Consequence Rating	Likelihood Rating	Risk Rating
Economic	Infrastructure	Quambatook 3G mobile site	Dumosa-Quambatook RD Quambatook	Minor	Likely	Medium
Human Settlement	Special Fire Protection	Tree Tops Scout Camp	Spences Bridge RD Cohuna	Major	Unlikely	Medium
Cultural Heritage	Non-Indigenous	Koondrook Tram Complex	Koondrook	Moderate	Unlikely	Low
Economic	Infrastructure	Cohuna WTP	Cohuna	Minor	Unlikely	Low
Economic	Tourist & Recreational	Murrabit Market	Murrabit	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 5	2 Livingston ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 4	14 Kirby ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 3	26 Channel ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 11	McLennan ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 2	Stewart ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 12	O'Brien's RD Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 13	Heils RD Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Leitchville SPS 2	Leitchville Recreation Reserve Reitchville	Minor	Unlikely	Low
Economic	Infrastructure	Leitchville Outfall SPS 1	Railway AVE Leitchville	Minor	Unlikely	Low
Economic	Infrastructure	Leitchville WTP	Leitchville	Moderate	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 9	Western RD Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 6	Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 7	101 Channel ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 10	Murray ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 1	Cullen ST Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna SPS 8	Off Railway AVE Cohuna	Minor	Possible	Low
Economic	Infrastructure	Cohuna Elevated WT	Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Cohuna CWST	Cohuna	Minor	Unlikely	Low
Economic	Infrastructure	Leitchville WTP Clearwater Storage	Leitchville	Minor	Unlikely	Low
Human Settlement	Special Fire Protection	Ibis Caravan Park	Murray Valley HWY Kerang	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Kangaroo Lake Caravan Park	2625 Murray Valley HWY Kerang	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Koondrook PS	9 Punt RD Koondrook	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Kerang Tech HS	Murray ST Kerang	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Kerang Christian Community School	98 Wyndham ST Kerang	Minor	Unlikely	Low

Asset Class	Asset Subclass	Asset Name	Location	Consequence Rating	Likelihood Rating	Risk Rating
Human Settlement	Special Fire Protection	Kerang Caravan and Tourist Park	21 Museum DR Kerang	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Cohuna Waterfront Holiday Park	58 Cohuna Island RD Cohuna	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Koondrook Caravan Park	5 Keene ST Koondrook	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Koondrook Preschool	9 Punt RD	Moderate	Unlikely	Low
Human Settlement	Special Fire Protection	Kerang Guide Hall and Shed	Maxwell ST Kerang	Moderate	Unlikely	Low
Cultural Heritage	Non-Indigenous	Bael Bael Homestead	Lake Bael Bael	Not currently rated on the VFRR		
Cultural Heritage	Non-Indigenous	Barham-Koondrook Bridge	Koondrook Murrabit RD			

Note: For a full copy of the Risk Register, contact Gannawarra Shire Council's Municipal Fire Prevention Officer.

## Appendix B – Hazard Trees

### Identification and Notification Procedures

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

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

Under the ES Act, the person responsible for maintaining vegetation and clearance space around power lines is referred to as the 'responsible person'. The procedures outlined in this section of the MFMP seek to address the requirement detailed above.

Each responsible person should have their own internal procedure regarding the steps that will be taken when they receive notification of a potential hazard tree.

### What is a hazard tree?

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

The Electricity Safety (Electric Line Clearance) Regulations 2015 (**the Regulations**) further provide that a responsible person may cut or remove such a tree 'provided that the tree has been assessed by a suitably qualified arborist; and that assessment confirms the likelihood of contact with an electric line having regard to foreseeable local conditions.'

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

### Who is responsible for a hazard tree?

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

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

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

## Responsible Persons within Gannawarra Shire Council

There are a number of organisations that have responsibility for line clearance in Gannawarra Shire, including:

- Powercor - After hours: Powercor 13 24 12
- Gannawarra Shire Council

## Other relevant information

Responsible persons, other than private persons, must have an electric line clearance management plan in place for areas for which they have responsibility (*refer Electricity Safety (Electric Line Clearance) Regulations 2015*).

Gannawarra Shire Council has in place an Electric Line Clearance Management Plan, updated in accordance with the Regulations for the Kerang Declared Area.

## Procedures and criteria for identifying hazard trees

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

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

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

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

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

## Procedures and Criteria for Notifying Hazard Trees

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

- The person with responsibility for the highest percentage of lines within the municipality (**the primary responsible person**) is the person to whom potential hazard trees should be reported.
- The primary responsible person (or their representative) is referred to in these Procedures as the primary responsible person representative (**PRPR**).
- Where any person becomes aware of, or receives a report of, a potential hazard tree within the municipality, this should be referred to the PRPR. Where the Committee becomes aware

of, or receives a report of, a potential hazard tree within the municipality, this must be referred to the PRPR.

- Reports of potential hazard trees must be provided to the PRPR for action as soon as practicable. Reports must include, at a minimum:
  - The name and contact details and any relevant qualifications where known of the person making the report
  - As much detail as possible about the location of the tree (including, where known, GPS coordinates, details of numerical/name plate on nearest pole, name of nearest road or crossroads, closest landmark, whether tree is on private land or road reserve etc.)
  - A description of the tree (including, if known, the genus and species of tree)
  - The primary reasons given for the tree being identified as potential hazard (eg. tree is in proximity to an electric line AND there is evidence of structural weakness and/or excessive lean and/or appears to be encroaching into line clearance space etc.)
  - An indication of whether or not urgent action is required.

The PRPR must take all necessary steps to advise the person responsible for the tree that it may be a hazard tree.

### Primary Responsible Person Representative (PRPR)

For the purposes of this part of the Plan, the primary responsible person is *Powercor*

### Procedures for Notification of Responsible Persons

Where a potential hazard tree has been reported to the PRPR, the PRPR should follow the procedure outlined below.

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

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

## Reporting Timelines

The PRPR should provide reports to the relevant responsible person as soon as practicable. In circumstances where:

- the potential hazard tree is located within a high bushfire risk area (as per s.80 of the ES Act) and the potential hazard tree is reported during the fire danger period declared under the Country Fire Authority Act 1958 (Vic); or the report indicates that there is an imminent danger that the tree will contact or fall onto lines as a result of minor environmental changes;
- the potential hazard tree must be referred to the relevant responsible person for action as soon as possible, and by close of business the next business day.

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

## Register

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

## Appendix C – Maps

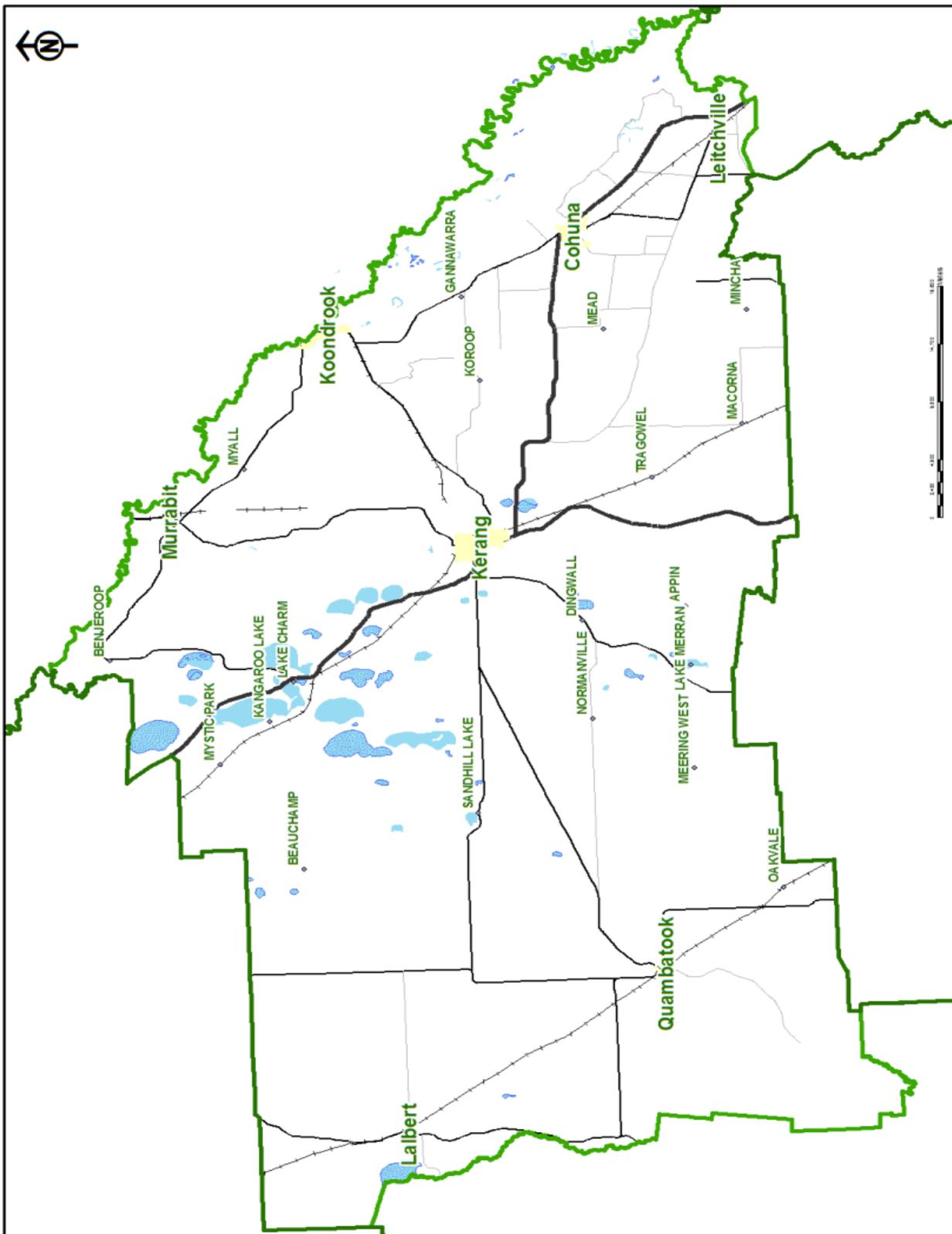
C1 – Shire Township Map

C2 – Strategic Fire Breaks

C3 – Location Map (Static Water Tanks, Rural Fire Hydrants, Fire Enforcement Signage) linked to Table – Features of Signage and Tanks

C4 – Location Map – Neighbourhood Safer Places (NSPs)

# C1 – Shire Township Map

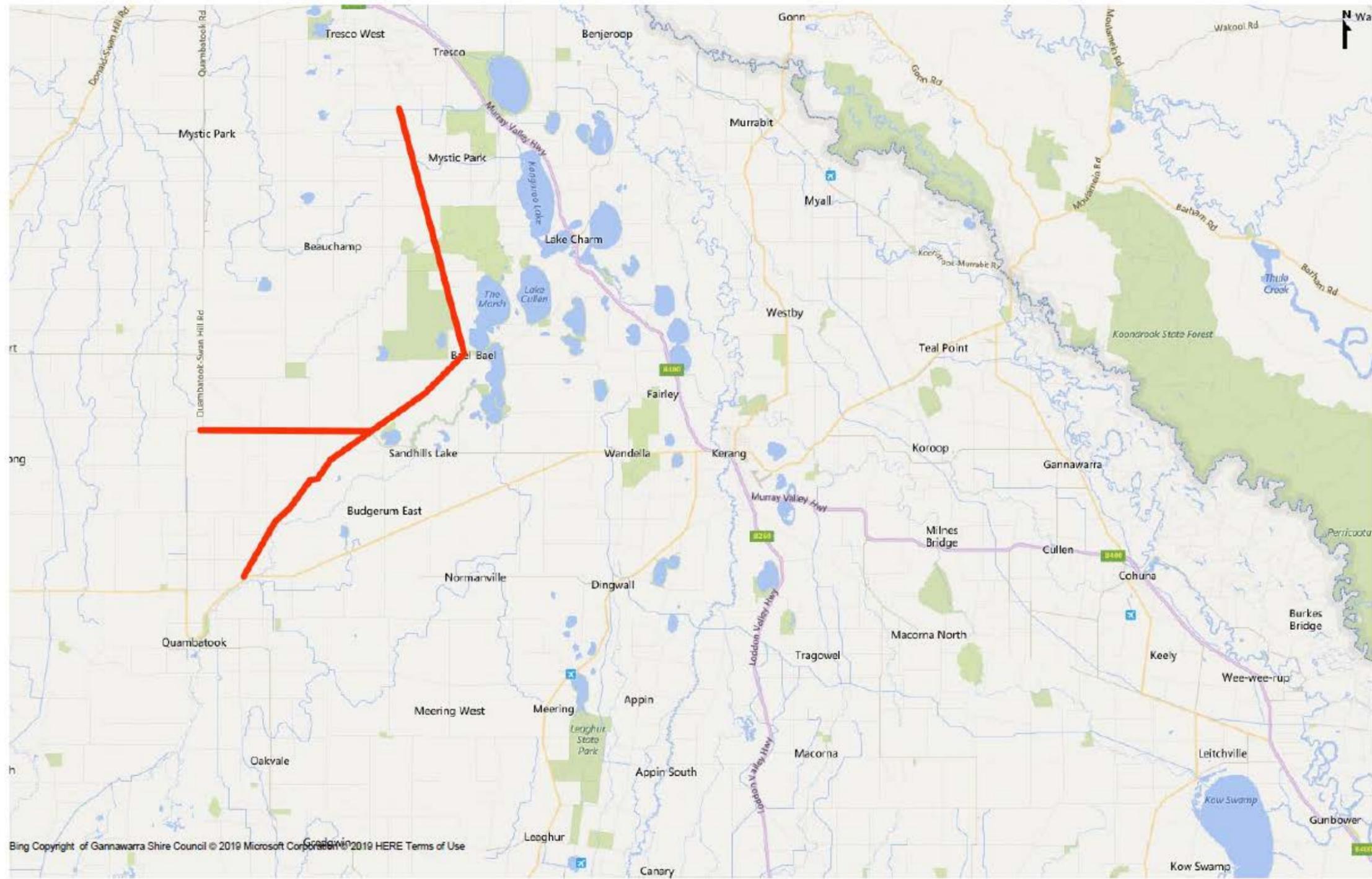


## C2 – Strategic Fire Breaks

(Bael Bael Boga Road, Lake Charm Quambatook Road, Lalbert Kerang Road)

29-Mar-2019

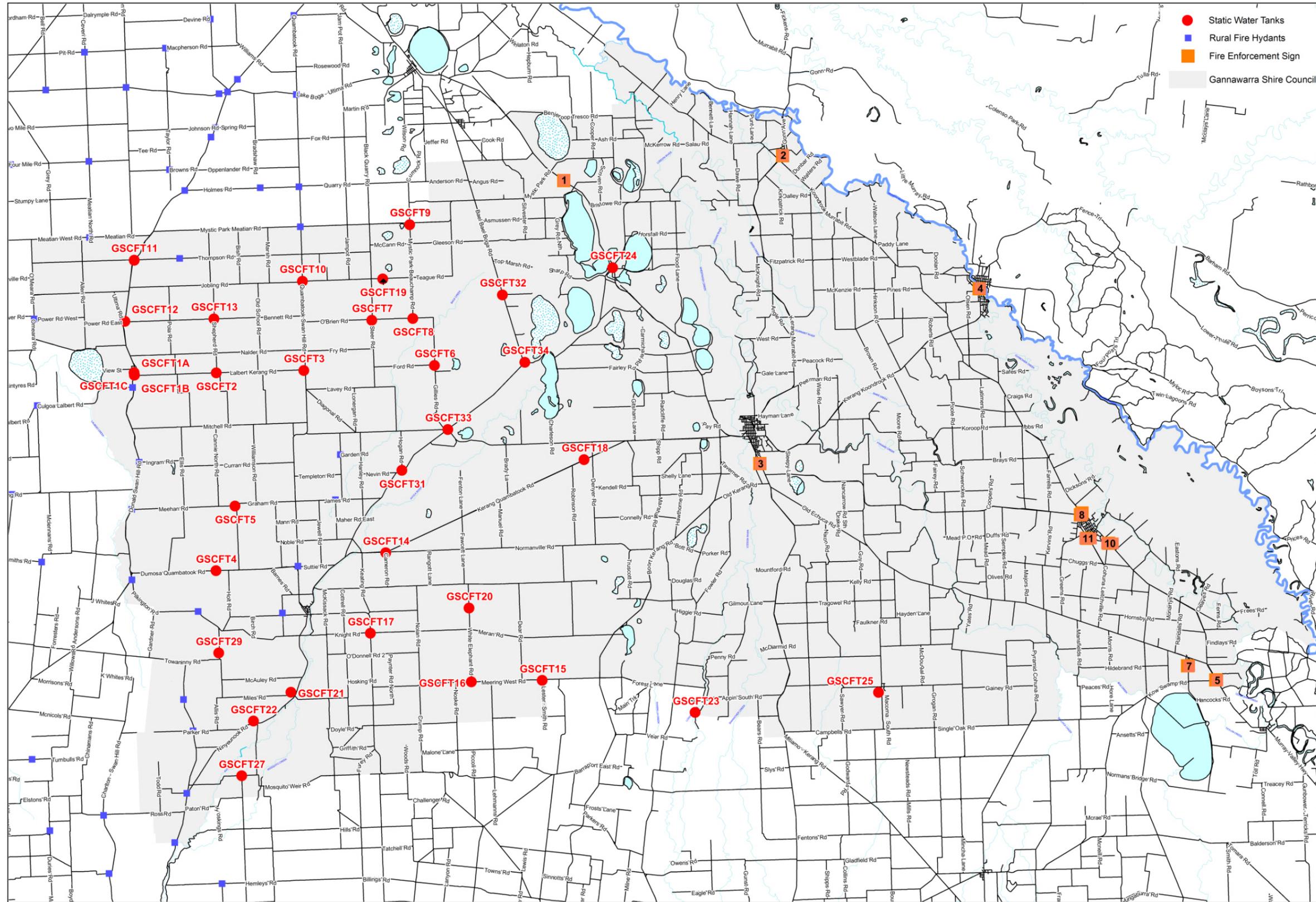
Gannawarra Shire - Strategic Fire Breaks



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### C3 – Location Map (Static Water Tanks, Rural Fire Hydrants, Fire Enforcement Signage) linked to Table – Features of Signage and Tanks



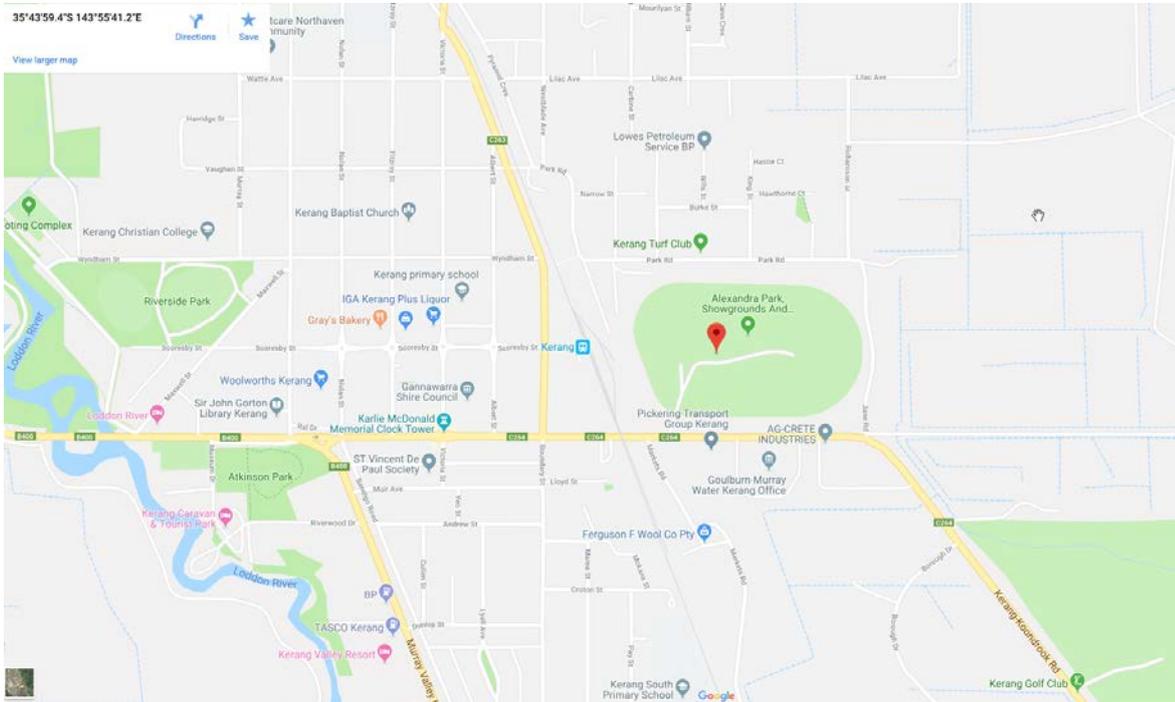
Asset ID	Location Description	Ownership	Feature Notes
<b>GSCFT1A</b>	Lalbert Township - Concrete	GSC	20000L
<b>GSCFT1B</b>	Lalbert Township - Plastic	GSC	45000L
<b>GSCFT1C</b>	Lalbert Township Fire Shed	CFA	31700L
<b>GSCFT2</b>	Cnr Kerang Lalbert Rd and Sheperd Rd	GSC	45000L
<b>GSCFT3</b>	Cnr Kerang Lalbert Rd and Swan Hill Quambatook Rd	GSC	45000L
<b>GSCFT4</b>	Quambatook Dumosa Rd	GSC	45000L
<b>GSCFT5</b>	Cnr Cannie and Graham Rd	GSC	20000L
<b>GSCFT6</b>	Cnr Gillies and Ford Rd	GSC	45000L
<b>GSCFT7</b>	Cnr Steer and O'Brien Rd	GSC	20000L
<b>GSCFT8</b>	Cnr O'Brien and Loughran Rd	GSC	20000L
<b>GSCFT9</b>	Cnr Meatian Mystic Park Rd and Mystic Park Beauchamp Rd	GSC	20000L
<b>GSCFT10</b>	Cnr Swan Hill Quambatook Rd and Mystic Park Beauchamp Rd	GSC	45000L
<b>GSCFT11</b>	Cnr Swan Hill Donald Rd and Thompson Rd	GSC	45000L
<b>GSCFT12</b>	Cnr Swan Hill Donald Rd and Bennett Rd	GSC	20000L
<b>GSCFT13</b>	Cnr Bennett Rd and Shepherd Rd	GSC	20000L
<b>GSCFT14</b>	Cnr Normanville Rd and Cameron Road Rd	GSC	45000L
<b>GSCFT15</b>	Meering West Fire Station	GSC	45000L + 13500L CFA tank
<b>GSCFT16</b>	Cnr Meering West Rd and White Elephant Rd	GSC	45000L
<b>GSCFT17</b>	Cnr Meran Rd and Quambatook Boort Rd	GSC	45000L
<b>GSCFT18</b>	Sandhill Lake Fire Station	GSC	45000L + 13500L CFA tank
<b>GSCFT19</b>	Beauchamp Fire Station	GSC	31700L + 13500L CFA tank
<b>GSCFT20</b>	White Elephant Rd (1/2 way between Weir Rd and Meran Rd)	GSC	45000L
<b>GSCFT21</b>	Ninyeunook Rd at intersection of Miles road	GSC	45000L
<b>GSCFT22</b>	Ninyeunook Rd near Holmes Bridge Rd	GSC	45000L
<b>GSCFT23</b>	Appin South Fire Station	CFA	13500L
<b>GSCFT24</b>	Lake Charm Fire Station	CFA	13500L
<b>GSCFT25</b>	Macorna Fire Station	CFA	13500L
<b>GSCFT27</b>	Cnr Holmes Bridge and Repper Road	GSC	Added 2014 from GWM

Asset ID	Location Description	Ownership	Feature Notes
<b>GSCFT29</b>	55 Good Rd	GSC	Added 2014 from GWMW
<b>GSCFT31</b>	Cnr of Lake Charm Quambatook Rd and Hogans Rd (sheepyards)	GSC	45000L
<b>GSCFT32</b>	Cnr of Lake Charm Quambatook Rd and Kerang Lalbert Rd	GSC	45000L
<b>GSCFT33</b>	Cnr Bael Bael Beauchamp Rd and Doyle Rd	GSC	45000L
<b>GSCFT34</b>	Bael Bael Boga Rd - Intersection of Lake Charm Quambatook Rd	GSC	45000L
<b>H</b>	Hydrants at various locations	GSC	Hydrants at various locations

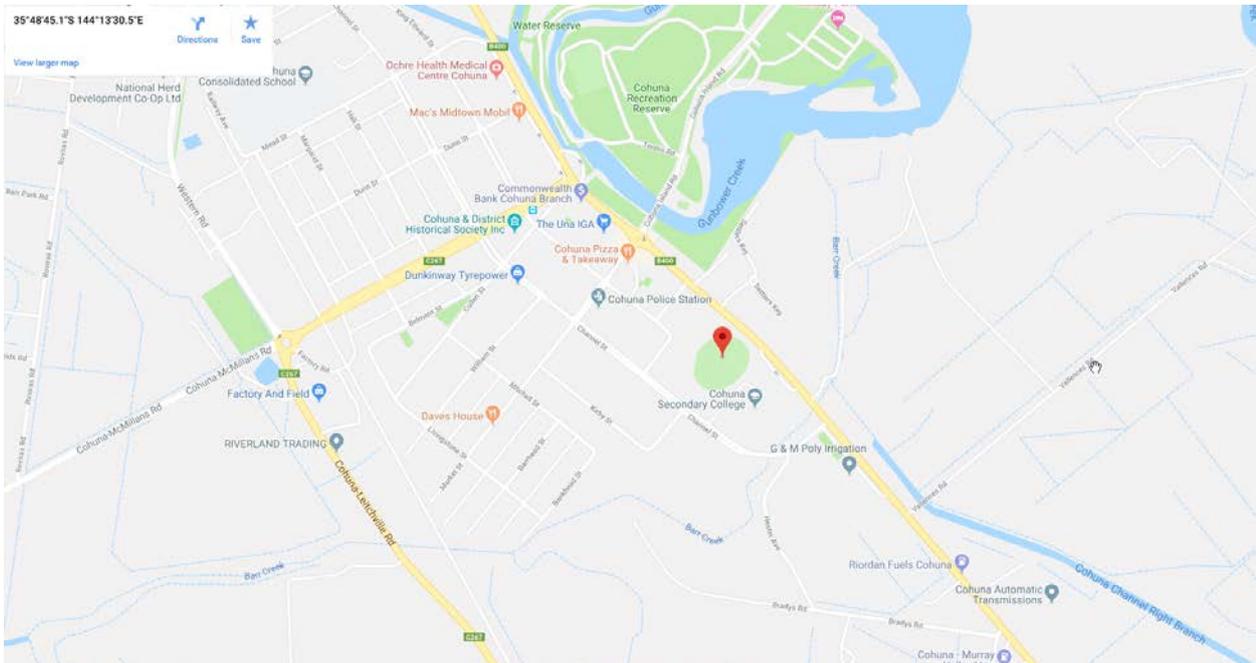
Sign No	Road Name	Direction Facing	Zone	Map Reference	Comments
1	Murray Valley Highway B400	Swan Hill	100	20E3	Mystic Park South of Lake William Rd
2	Kerang-Murrabit Rd	North	100	20H2	Murrabit 200m south of Town
3	Murray Valley Highway B400	Echuca/Bendigo	80	20G6	Kerang 1km north of Loddon Valley Highway
4	Kerang Koondrook Rd C265	NSW	60	21P7	Near Murray River Bridge (border0
5	Murray Valley Highway B400	Echuca	100	21G8	Leitchville, near Bowlands Rd
7	Leitchville South Rd	Pyramid Hill			Gannawarra Shire sign
8	Murray Valley Highway	West			
9	Cohuna Koondrook Rd	North			
10	Murray valley Highway	South			
11	Cohuna Leitchville Rd	South			

## C4 - Location Map - Neighbourhood Safer Places (NSPs)

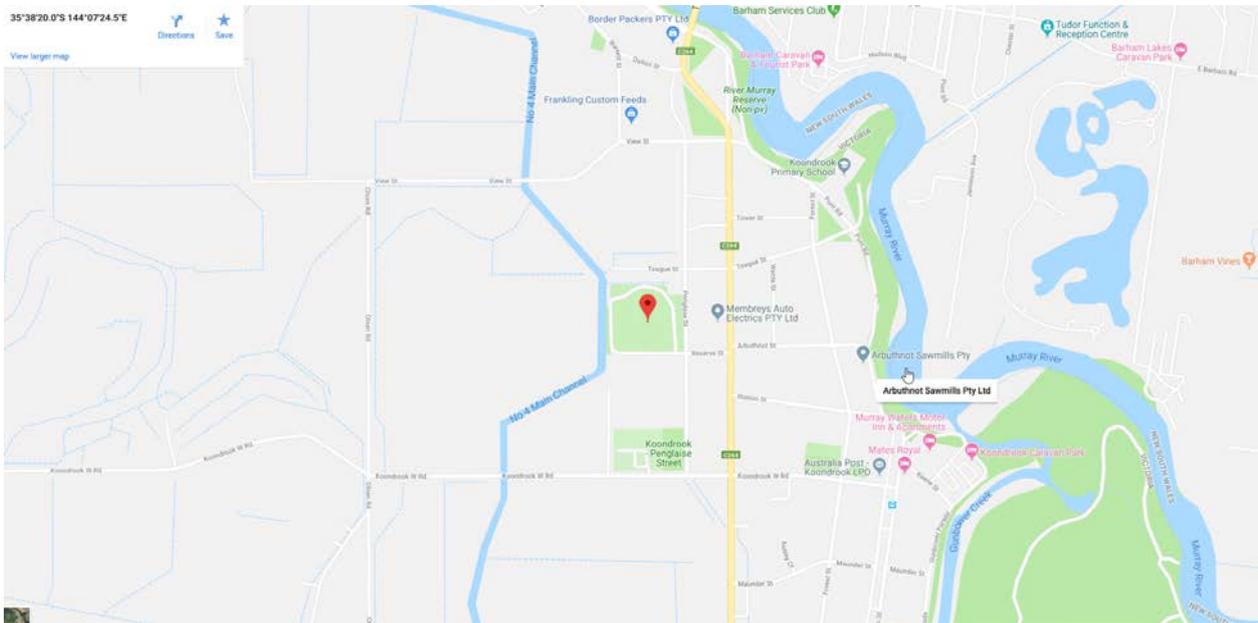
### Kerang Race Track, Alexandra Park, Park Road, Kerang



### Cohuna Secondary College Oval, Murray Valley Highway, Cohuna



## Koondrook Recreation Reserve, Penglase Street, Koondrook



## Murrabit Football Ground, Browning Avenue, Murrabit

