



# Regional Bushfire Planning Assessment

## LODDON MALLEE REGION

April 2012

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## RECOMMENDATION 38 of the Victorian Bushfires Royal Commission states...

*“The State implement a regional settlement policy that:*

- takes account of the management of bushfire risk, including that associated with small, undeveloped rural lots*
- includes a process for responding to bushfire risk at the planning stage ... ”*

## 1.0 INTRODUCTION

The 2009 Victorian Bushfires Royal Commission (VBRC) emphasised the importance of considering bushfire matters at all stages of the planning process, including through regional settlement planning and in the Local Planning Policy Framework. The State Planning Policy for Bushfire also identifies that strategic and settlement planning should assist to strengthen community resilience to bushfire.

The Regional Bushfire Planning Assessment (RBPA) supports this approach and is part of the Government's response to Recommendation 38 of the VBRC relating to the development of regional settlement policy in Victoria.

### 1.1 What is the RBPA?

The RBPA provides extra information about areas (referred to in this document as 'identified areas') where a range of land use planning matters intersect with a bushfire hazard to influence the level of risk to life and property from bushfire. This information should be addressed as part of strategic land use and settlement planning at the regional, municipal and local levels.

The RBPA will inform the Regional Growth Plans currently being prepared by the Department of Planning and Community Development in conjunction with councils. It provides a basis to initiate further detailed analysis as part of other planning processes such as settlement planning and preparing planning scheme amendments.

The RBPA is not a statutory planning provision and does not directly translate into planning schemes. However, it complements planning scheme provisions such as the Bushfire Management Overlay (BMO) by providing spatial and qualitative information from a variety of sources which together can inform considerations about where bushfire should be assessed early in the strategic planning process.

### 1.2 What information is contained in the RBPA?

The RBPA provides information on matters which may be relevant to strategic and settlement planning and focuses on the factors considered particularly important by the VBRC, including:

- areas where smaller sized lots (less than 0.4ha) which may be used for residential purposes are in or close to a bushfire hazard
- areas where medium sized lots (between 0.4-4ha) which may be used for residential purposes are in or close to a bushfire hazard
- areas where there is a settlement or urban interface with the bushfire hazard
- locations which may have limited access and egress, indicated by a single access road to and from a settlement in addition to roads which connect a number of settlements in areas with a bushfire hazard
- areas where future strategic directions contained in planning schemes may conflict with the bushfire hazard
- areas where the broader landscape is particularly affected by a bushfire hazard
- areas identified from local information provided by either the relevant fire authority or the council that may need to be considered in planning decision making
- areas where multiple issues occur in a single area.

This information is shown spatially on maps at a strategic scale. It is supported by a table that gives a brief explanation for each identified area.

### 1.3 How is the RBPA different to the BMO?

The BMO is applied to areas where there is potential for bushfire behaviour such as a crown fire, extreme ember attack and radiant heat. The application of the overlay is based on a technical evaluation of the bushfire hazard validated with relevant fire authorities and councils. The key purpose of the BMO is to identify areas where a planning permit is specifically required to consider the bushfire matters prior to development occurring.

The RBPA informs a broader consideration of bushfire issues by recognising that, in specific locations, the bushfire hazard increases the potential bushfire risk to life and property in very specific ways, for example, due to access constraints. Addressing these factors is an important way that strategic and settlement planning can respond to bushfire issues before specific development proposals are considered. This provides an opportunity to resolve issues and implement mitigation measures early in the planning process and at a strategic level.

### 1.4 How is an RBPA prepared?

The information in the RBPA has been identified through a two-step process:

**Step 1** – Base data on planning zones and overlays, vegetation quality, lot location, sizes and patterns and single roads into settlements was collected and correlated against the latest information on the bushfire hazard. For the RBPA a bushfire hazard was generally considered to be a significant extent of vegetation and the area of reference for identified areas was land in or in close proximity (200 metres) to the vegetation. Step 1 provided the initial identified areas.

**Step 2** – A qualitative review of the initial identified areas was undertaken with councils, the relevant fire authority and the Department of Sustainability and Environment and any further information based on local knowledge was included as identified areas.

## 1.0 INTRODUCTION cont..

The development of the RBPA was supported by a reference group of representatives from the Department of Planning and Community Development, Municipal Association of Victoria, councils, the Country Fire Authority, the Metropolitan Fire and Emergency Services Board, and the Growth Areas Authority.

### 1.5 How should an identified area be treated?

The bushfire risk in identified areas should be assessed as part of strategic and settlement planning and where land use issues are a factor in strengthening community resilience to bushfire (for example, where development and growth is occurring or planned).

*Minister's Direction No. 11 - Strategic assessment of amendments* requires a planning authority to evaluate and discuss how an amendment addresses bushfire risk. The RBPA will assist planning authorities in determining when bushfire risk should be addressed.

Not every identified area shown in the RBPA requires a specific planning response because:

- there are limited land-use planning responses that can be implemented where an area is not experiencing any change or development pressure
- the anticipated nature and extent of development in specific areas, including areas already zoned for particular uses, can be appropriately managed through the planning permit process where the BMO applies
- planning schemes cannot prevent the continuation of a lawful existing use where Clause 63 of planning schemes protects existing use rights
- bushfire issues may be best managed through non-planning responses such as Integrated Fire Management Planning.

### 1.6 Important things to note

The RBPA complements other information that can also inform planning decisions. This includes the Victorian Fire Risk Register, Integrated Fire Management Planning and its associated plans and strategies and the operations and workings of fire authorities, councils and communities. Investigation of an identified area should be informed by these and other activities that together support community resilience to bushfire.

The RBPA therefore does not include all information captured by other processes.

The RBPA is not a bushfire risk assessment of any of the identified areas. Identified areas are based on where the bushfire **hazard** correlates with land use planning considerations that may influence the bushfire risk. The RBPA has not sought to replicate bushfire risk assessments undertaken through other processes, particularly the Victorian Fire Risk Register.

## 2.0 LODDON MALLEE REGIONAL OVERVIEW

The Loddon Mallee region is located in the north-west of Victoria and has an area of about 59 000 square kilometres, the equivalent of one quarter of the State. It has a population of about 320 400 across ten municipalities – Buloke, Campaspe, Central Goldfields, Greater Bendigo, Gannawarra, Loddon, Mildura, Macedon Ranges, Mount Alexander and Swan Hill.

The Loddon Mallee region consists of four distinct areas with differing characteristics: the Riverina, which follows the Murray River corridor forming the north-eastern boundary of the region, the Mallee district in the north-west, the central agricultural belt, and the goldfields district in the south. The far southern edge of the region also interfaces with metropolitan Melbourne. The main urban centres are Bendigo, Mildura, Echuca, Swan Hill and Maryborough.

The City of Greater Bendigo was affected by the Black Saturday bushfires in 2009. The Shire of Macedon Ranges was affected by the 1983 Ash Wednesday bushfires.

### 2.1 The Riverina

This area covers the northern area of the region and contains the Murray River, Gunbower National Park and river red gum floodplains. Main centres and small rural settlements are located along the Murray River with direct interfaces to bushfire hazard areas. There is development pressure for some rural-residential lots in areas in commuting distance of the main township centres.

### 2.2 The Mallee district

The Mallee scrublands of the Murray-Sunset and Wyperfeld National Parks, Big Desert Wilderness Park and vast flat agricultural areas characterise this area. Large lot subdivisions dominate the west and south-west areas.

### 2.3 The central agricultural belt

The central agricultural belt is characterised by open grassland and is well irrigated. The Avoca, Avon and Richardson Rivers traverse areas that contain significant wetlands and natural lakes. Subdivisions with rural lot sizes of more than four hectares generally dominate agricultural areas with few settlements.

### 2.4 The Goldfields district

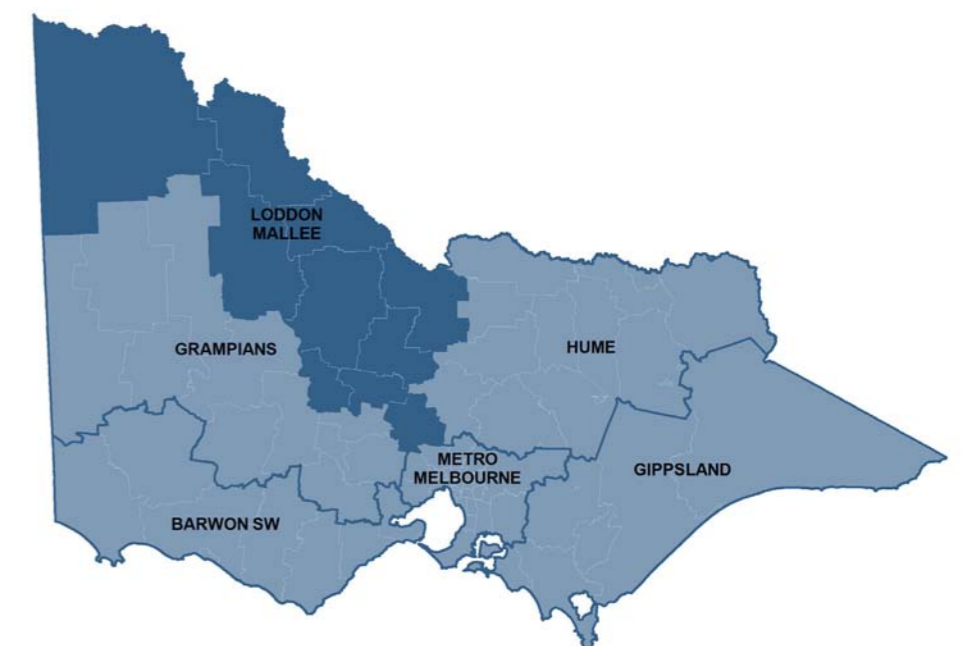
Settlement patterns are linked to the region's gold rush history. The area south-west of the Loddon River contains many state parks and forest areas. Settlements are located either in or on the fringes of these areas and contain small residential and rural-residential lots which directly interface with the bushfire hazard. Other areas contain small rural lots in a grassland landscape.

Bendigo is Victoria's third largest urban centre outside metropolitan Melbourne and a major centre for central Victoria. The urban fringes and surrounding settlements are located among extensive areas of box-ironbark forest with interfaces to the Greater Bendigo National Park and Bendigo Regional Park. The urban fringes of Bendigo and nearby settlements directly interface with these bushfire hazard areas.

### 2.5 The Melbourne region interface

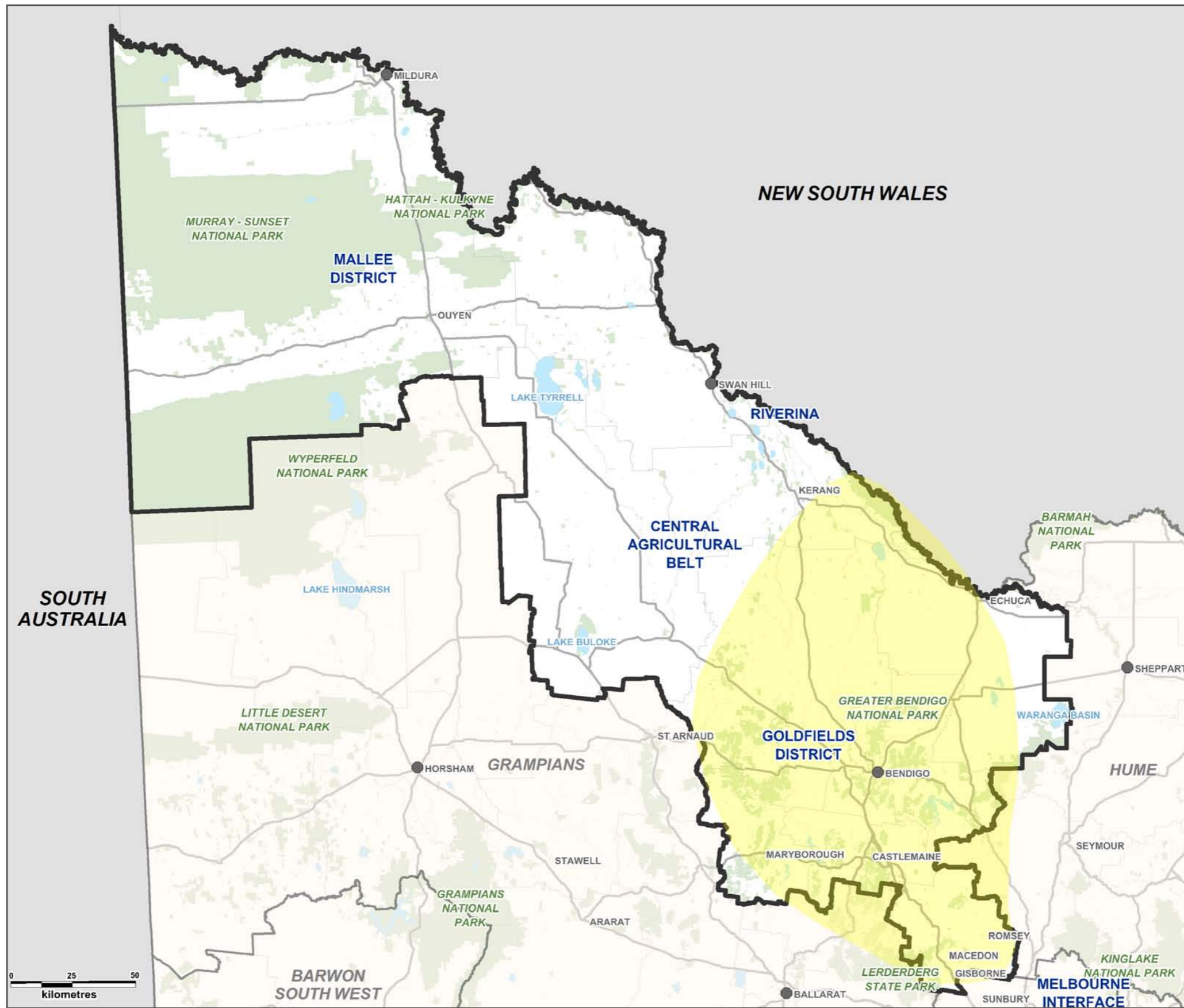
The proximity of the southern Loddon Mallee region to Melbourne and its landscape and aesthetic values supports a strong network of small and rural-residential settlements.

Small rural and vegetated lots with limited access are widespread across this area.





# LODDON MALLEE REGIONAL MAP



## 3.0 MUNICIPAL OVERVIEW – BULOKE SHIRE

Buloke Shire is located in the north-west of the region and has an area of about 8000 square kilometres. It has a population of about 7050. There are ten townships in the Shire; the largest are Birchip, Charlton, Donald, Sea Lake and Wycheproof. The main centre is Donald.

Agriculture, particularly grain production, is the primary land use. Open grassland environments dominate the flat landscape. Woodlands are fragmented and largely depleted, and generally limited to roadsides, public reserves and riparian corridors.

The south of the Shire is characterised by the fringes of box-ironbark forests of the Central Goldfields and the Wimmera Clay Plains. The north is dominated by the red sand dunes of the Mallee. The Avoca, Avon and Richardson rivers flow through the Shire on their way to the Murray, and include a number of wetlands. Sea Lake and Lake Buloke and their associated lake and wetland environments are located in the north and south of the municipality respectively.

### 3.1 Northern and central area

Lake Tyrrell and the Lake Tyrrell Nature Reserve are located in the north of the Shire. The area surrounding the lakes and towards the centre of the municipality are dominated by large lot subdivisions in a predominantly grassland environment.

### 3.2 South-eastern area

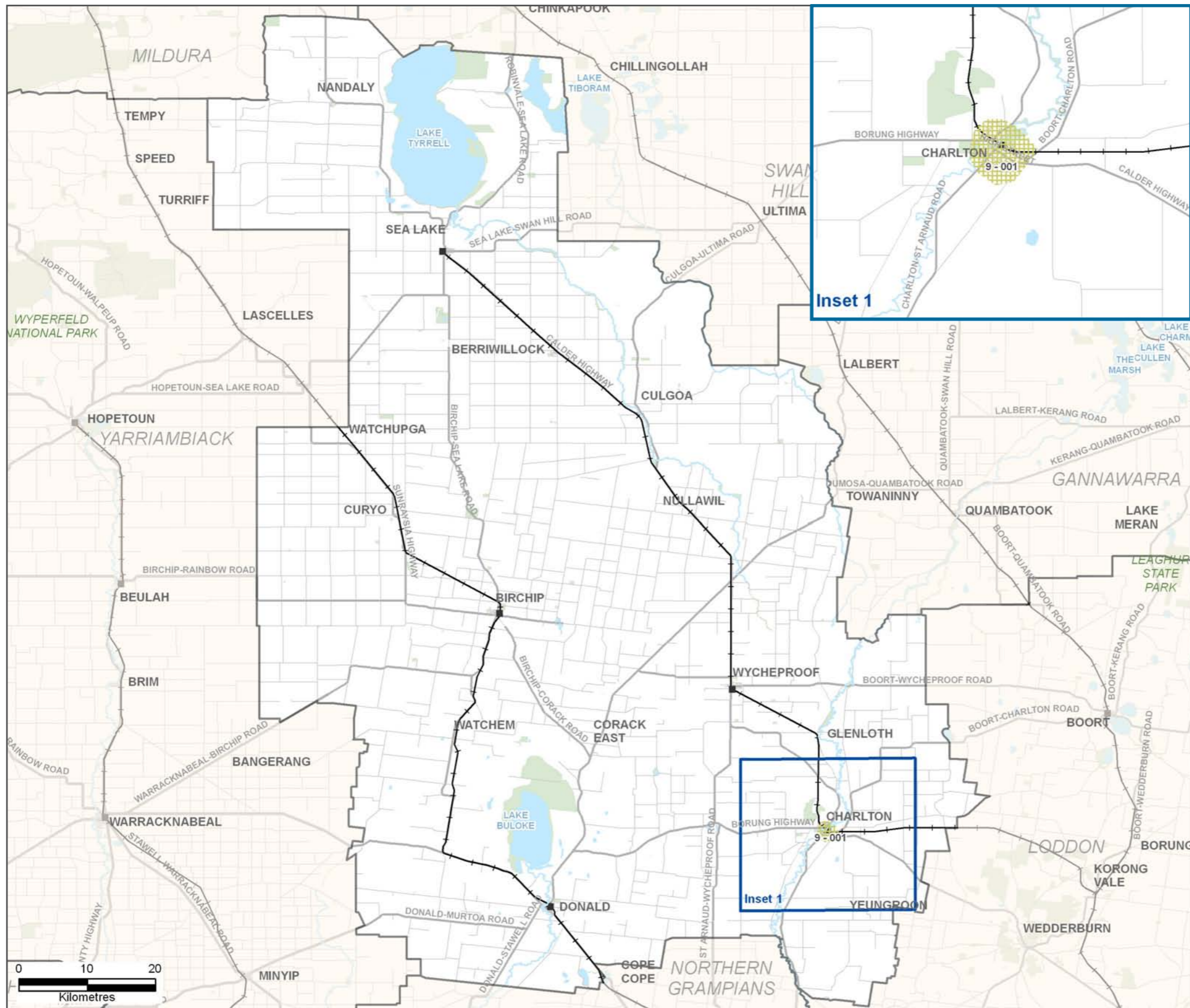
The Avoca River and its associated vegetated riparian corridor traverse the southern region of the municipality. Settlements with small residential lots on both sides of the Avoca River have a direct interface with bushfire hazard areas. The river red gums in the river corridor are identified as being of high or very high conservation significance.

## BULOKE – IDENTIFIED DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
9-001	Charlton	Residential lots in the township of Charlton are located on either side of the Avoca River, interfacing with a bushfire hazard area associated with riparian vegetation. Includes vegetation of high and very high conservation significance.









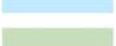
# BULOKE MUNICIPAL MAP

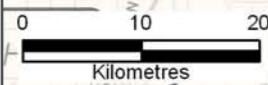


## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land





## 4.0 MUNICIPAL OVERVIEW – SHIRE OF CAMPASPE

The Shire of Campaspe is located in the north-east of the region and has an area of about 4520 square kilometres. It has a population of about 39 000. Its main population centre is Echuca. There are also population concentrations in a number of smaller townships. Scattered populations associated with rural activities occupy the remainder of the municipality. The Northern Highway provides the main access into the municipality from the south.

The predominant land uses are related to forestry and agriculture, which includes cropping and grazing across all rural regions. Manufacturing, wholesale retail trade, health and community services are concentrated in the townships.

Much of the municipality contains irrigation systems with a landscape consisting of open grassland and scattered pockets of woodland along watercourses, drainage lines and roadsides. Kow Swamp is located in the far north-western corner. It is the largest permanent wetland in the Victorian Riverina and is a designated wildlife sanctuary. The Lake Cooper Water Supply Reserve is located to the south of Corop in the centre of the municipality. Land to the south and south-west of Rushworth Hills contains heavily vegetated areas.

### 4.1 Northern area

The northern area of the Shire contains the Murray Valley Highway, the Murray River corridor, the Gunbower State Forest, river red gum floodplains, small townships, scattered rural-residential development and irrigated farming lots. Settlements are located on the fringes of the state forest and contain lots of varying sizes that interface with vegetation.

Settlements adjoining Gunbower State Forest are surrounded by forest containing vegetation of high and very high conservation significance.

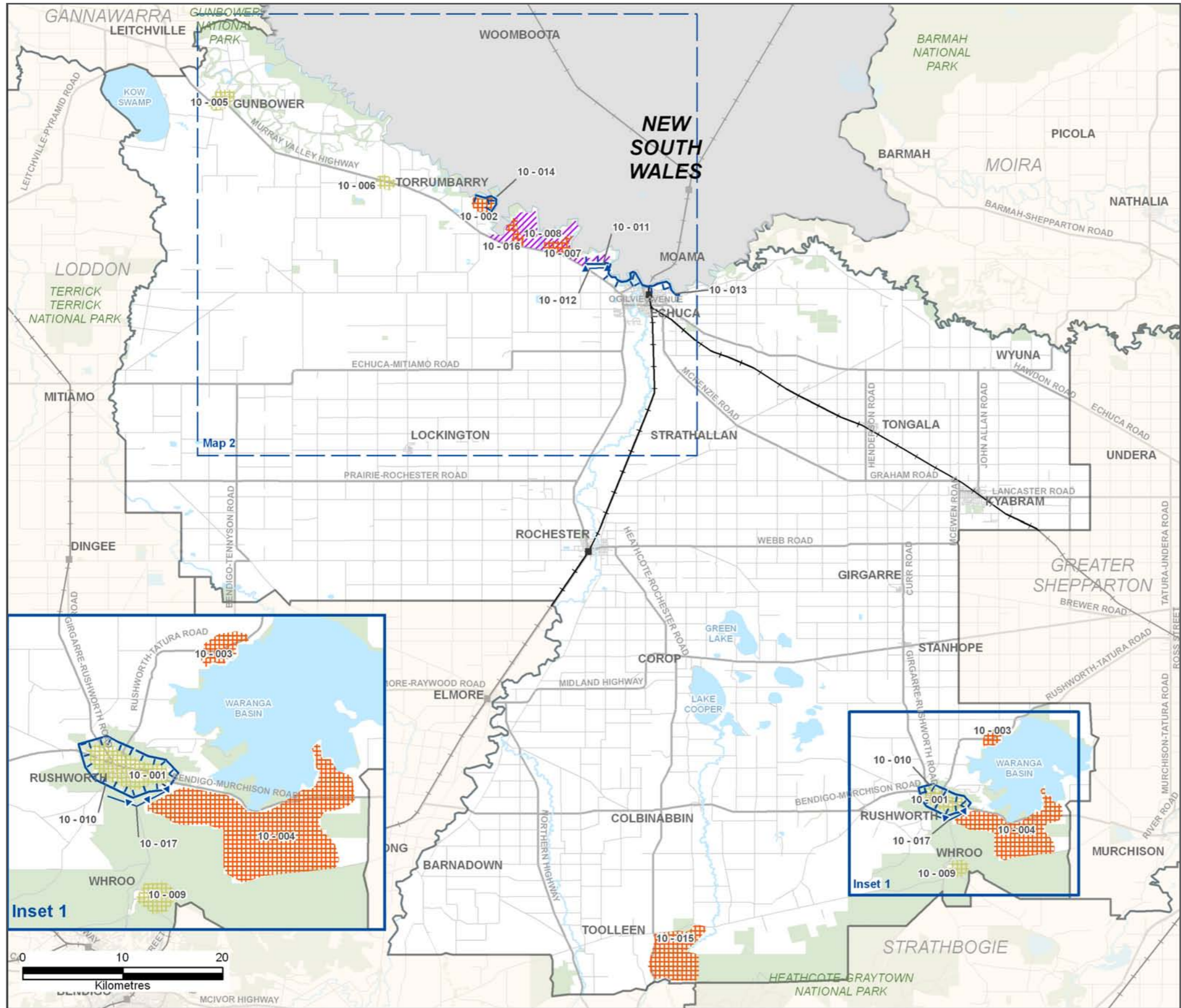
### 4.2 Central area

The central area of the municipality is flat. It contains irrigated landscapes and is generally devoid of vegetation.


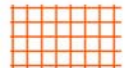






### 4.3 Southern area

The southern area of the municipality contains the Waranaga Reservoir to the north-east of Rushworth and state forest at the interface with Strathbogie and Greater Shepparton Shires. The topography in this area is hilly and densely vegetated with rocky landscapes associated with the Strathbogie Ranges. Several townships and rural-residential settlements are either accessed via or sit located among this landscape and interface with vegetated areas. These areas include vegetation of high and very high conservation significance. Clusters of small rural-residential lots are located in the bushfire hazard areas. Single access roads service clusters of dwellings.








# CAMPASPE MUNICIPAL MAP - MAP 1

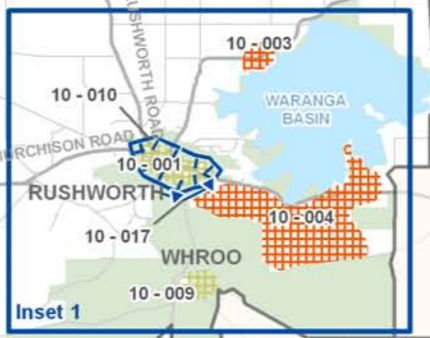
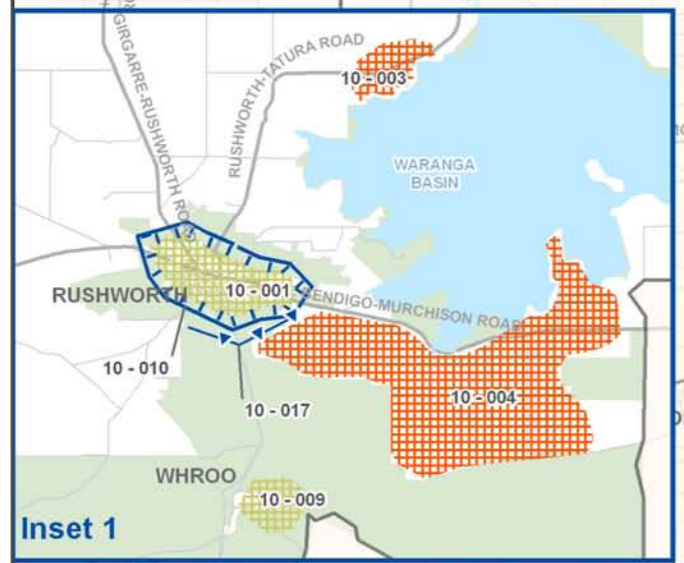


## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

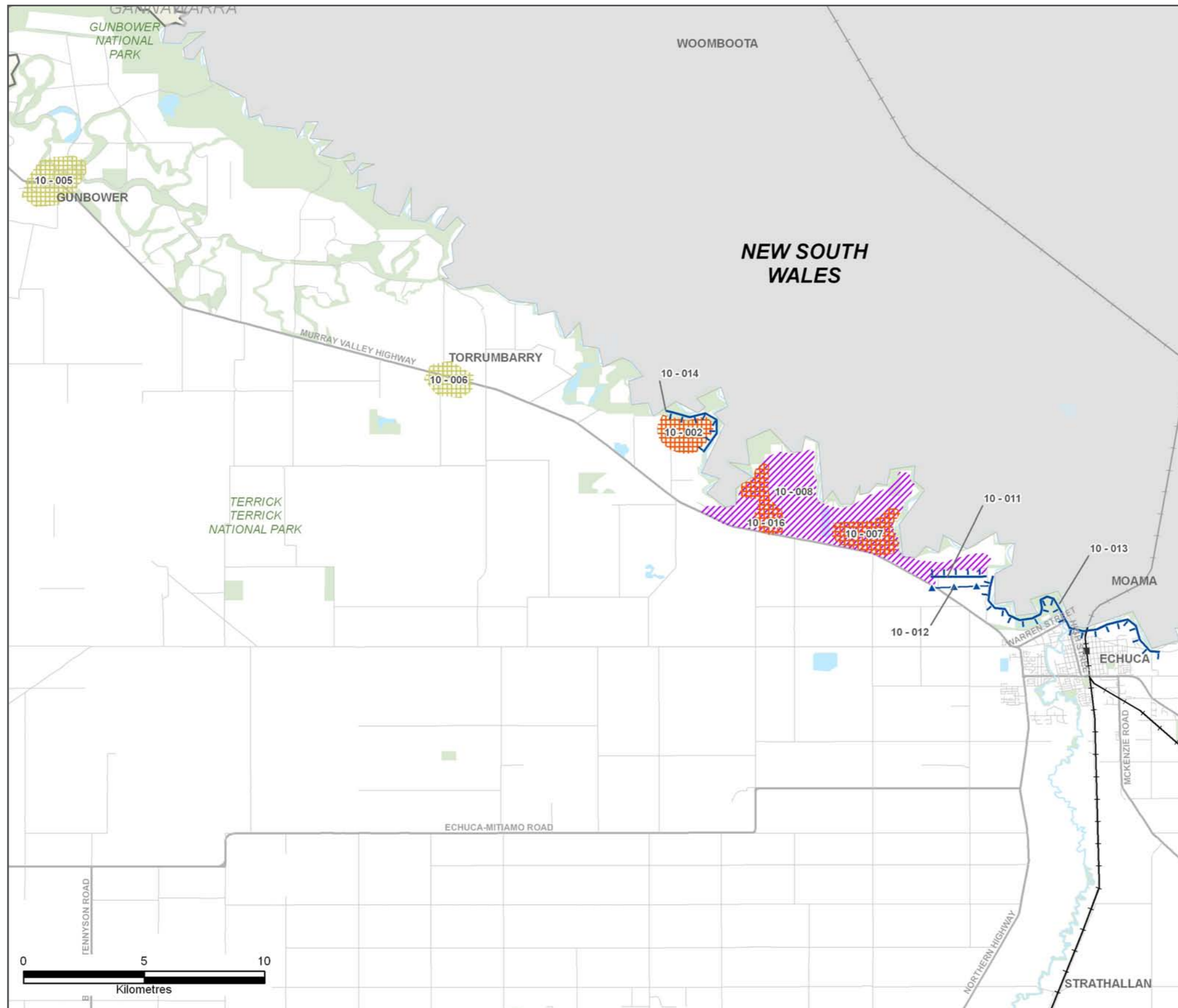
## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land


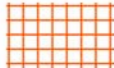
















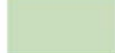
# CAMPASPE MUNICIPAL MAP – MAP 2



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land

## CAMPASPE – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
10-001	Rushworth	Township of Rushworth includes heavily vegetated lots and is adjacent to bushfire hazard areas associated with the Heathcote–Graytown National Park.
10-002	Wharparilla	Cluster of medium size rural-residential lots adjacent to Murray River and Gunbower Forest. Contains direct interface with heavily vegetated areas and riparian vegetation associated with the Murray River Corridor.
10-003	Waranga Shores	Cluster of medium size rural-residential lots in bushfire hazard area adjacent to the Waranga Basin.
10-004	Rushworth (east)	Rural living area to the east and south-east of Rushworth is within, and in proximity to, the bushfire hazard area associated with the Heathcote-Graytown National Park.
10-005	Gunbower	Cluster of small lots in close proximity to bushfire hazard area associated with Gunbower Forest and riparian vegetation of the Murray River. Includes vegetation of high and very high conservation significance.
10-006	Torrumbarry	Cluster of small lots in close proximity to bushfire hazard associated with Gunbower Forest and riparian vegetation of the Murray River. Includes vegetation of high and very high conservation significance.
10-007	Wharparilla	Cluster of medium sized rural-residential lots to the north-east of Echuca are in proximity to the bushfire hazard area associated with riparian vegetation.
10-008	Wharparilla	Cluster of small lots and medium rural-residential lots in or in close proximity to bushfire hazard area. Includes vegetation of high and very high conservation significance. Development pressure being experienced throughout the area due to proximity to Echuca and Murray River corridor.
10-009	Whroo	Cluster of generally undeveloped small lots, including heavily vegetated lots, surrounded by the Heathcote–Graytown National Park and associated bushfire hazard.
10-010	Rushworth	Rushworth township interfaces with bushfire hazard areas associated with the Heathcote–Graytown National Park.
10-011	Wharparilla	Northern boundary interfaces with bushfire hazard associated with Murray River and Gunbower Forest.
10-012	Echuca	Strategic direction for residential and rural living development associated with Echuca is in proximity to bushfire hazard.
10-013	Echuca	Northern extent of Echuca interfaces with bushfire hazard associated with riparian vegetation of the Murray River.
10-014	Wharparilla	Northern boundary interfaces with bushfire hazard associated with Gunbower Forest and riparian vegetation (Murray River).
10-015	Toolleen	Medium size rural-residential lots zoned for Rural Living located adjacent to state forest and scattered remnant vegetation.
10-016	Wharparilla	Cluster of medium sized rural-residential lots to the north-east of Echuca are in proximity to the bushfire hazard area associated with riparian vegetation.
10-017	Rushworth	Growth of Rushworth planned up to boundary of bushfire hazard area to the south associated with Heathcote–Graytown National Park.



## 5.0 MUNICIPAL OVERVIEW – CENTRAL GOLDFIELDS SHIRE

Central Goldfields Shire is located in the south-east of the region and has an area of 1550 square kilometres. It has a population of about 12800. The main urban centre of the Shire is Maryborough. It also contains smaller towns such as Bealiba, Carisbrook, Dunolly, Majorca, Talbot, Bowenvale-Timor and scattered rural settlements surrounding these centres.

The predominant land uses are cropping (wheat, lupins, canola, peas, lucerne, oats and other fodder crops) as well as beef and sheep raising. Land in the northern part of the Shire is irrigated. The municipality contains a mix of open farmland on gently undulating landscapes in the eastern and western districts, while the central and northern regions are generally comprised of heavily vegetated hills and valleys. The municipality also contains a number of water catchments and associated reservoirs.

A combination of Environmental Significance, Significant Landscape and Vegetation Protection Overlays manage the removal of native vegetation across large areas of the municipality.

### 5.1 Eastern area

The eastern area of the municipality contains open undulating farmland and contains a number of watercourses. This area contains the Cairn Curran Reservoir and Tullaroop Reservoir. Carisbrook is the main centre of population for this area with the remainder of population scattered throughout the rural landscape of the municipality.

### 5.2 Central area

The majority of the Shire's population is located in the hilly and densely vegetated central area of the municipality. Key townships include Maryborough, Talbot and Dunnolly, as well as numerous scattered rural settlements. This area contains numerous forests including the Simsons, Craigie and Daisy Hill, Havelock and Paddy's Ranges. Towns and other settlements are located on the fringes of these areas and contain small residential and rural-residential lots which directly interface with corresponding bushfire hazard.

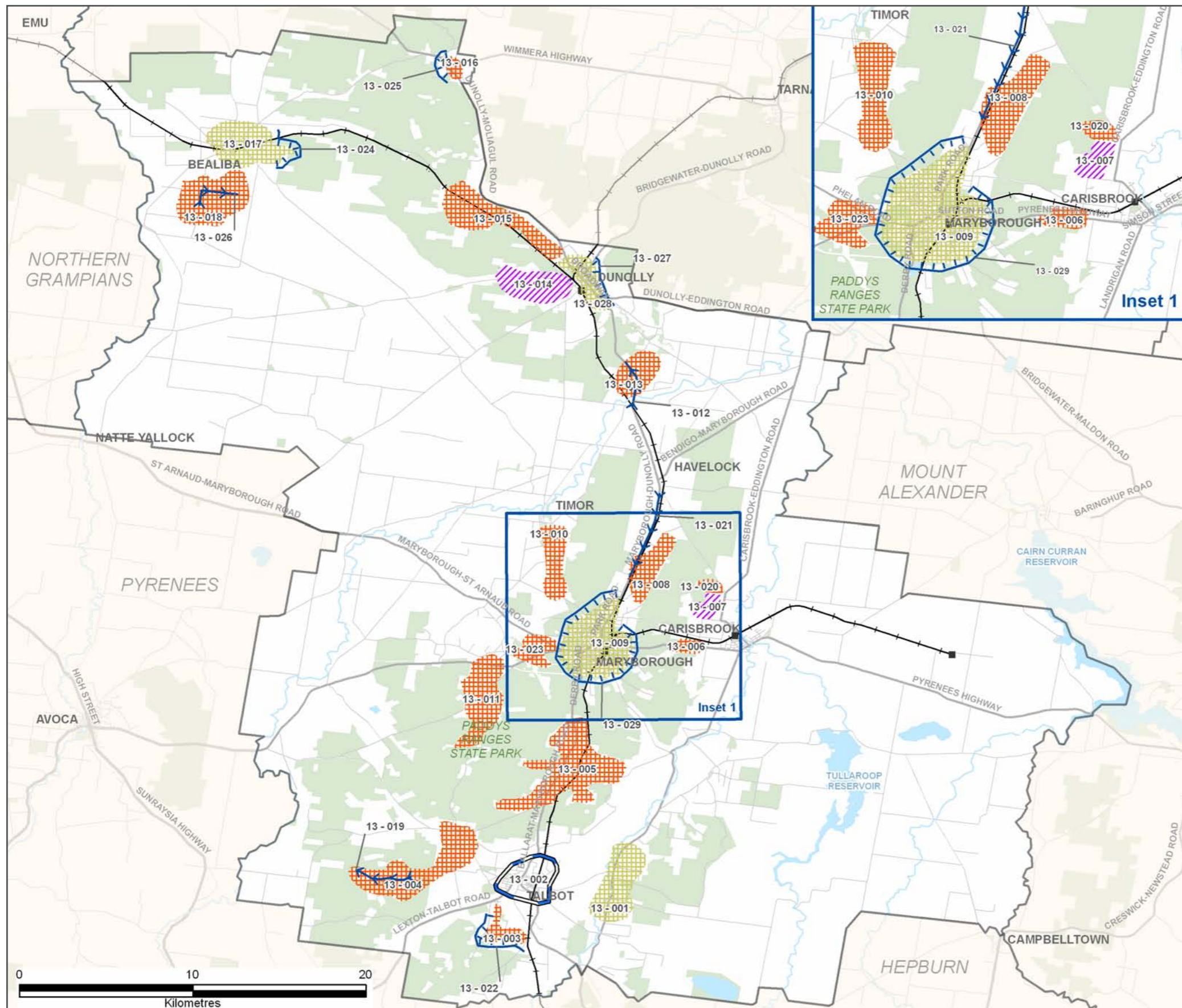
Settlements located in this area contain or are surrounded by vegetation of high and very high conservation significance. Settlements are also surrounded by state parks and forests and contain small rural lots in a grassland landscape and interface with more significant bushfire hazard. Surrounding areas contain single access roads in bushfire hazard areas.

The settlements scattered throughout the agricultural landscape are intersected by vegetation corridors of high or very high conservation significance. These areas contain lots of varying sizes in or close to bushfire hazard.


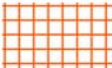






### 5.3 Western area

The western area of the municipality contains open and undulating farmland traversed by a number of watercourses. Vegetation in this area is denser than to the east, with areas mapped as being of high and very high conservation significance. Scattered and isolated settlements with rural-residential lots are located in the associated high bushfire hazard areas. Many of these settlements have single road access.








# CENTRAL GOLDFIELDS MUNICIPAL MAP



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land



## CENTRAL GOLDFIELDS – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
13-001	Red Lion	Cluster of small lots in or in close proximity to heavily vegetated areas of remnant vegetation.
13-002	Talbot	Grassfires are a known bushfire hazard in the Talbot area.
13-003	Talbot	Cluster of medium rural-residential lots to the south of Talbot township in or in close proximity to bushfire hazard area.
13-004	Amherst	Cluster of small and medium developed and undeveloped rural-residential lots in and in close proximity to bushfire hazard associated with state park and sloping topography. Includes vegetation of high and very high conservation significance.
13-005	Daisy Hill	Cluster of medium size rural-residential lots directly adjoining Paddys Ranges State Park and State Forest, including sloped topography. The area consists of lots which contain patches of remnant vegetation.
13-006	Flagstaff	Cluster of small lots in close proximity to heavily vegetated areas associated with state forest as well as patches of remnant native vegetation in an open landscape.
13-007	Carisbrook / Flagstaff	Area identified for rural living in proximity to bushfire hazard with subdivision potential.
13-008	Simson	Cluster of rural-residential lots to the north of Maryborough (Simson) in close proximity to heavily vegetated areas associated with Simson Forest, as well as patches of remnant native vegetation. Includes vegetation of high and very high conservation significance.
13-009	Maryborough	Maryborough township is surrounded by Paddys Ranges State Park, Simson State Forest and other vegetated public land. Lots on the fringe of the township are also heavily vegetated.
13-010	Bowenvale / Timor	Developed and undeveloped rural-residential lots in and in close proximity to bushfire hazard area (Havelock Forest) and patches of remnant vegetation in open landscapes. Includes vegetation of high or very high conservation significance.
13-011	Adelaide Lead	Cluster of rural-residential lots in and in proximity to bushfire hazard associated with the adjoining Paddys Ranges State Park, state forest, and scattered remnant vegetation. Some vegetated lots include vegetation of high or very high conservation significance.
13-012	Bet Bet	Cluster of dwellings with access and egress constraints in bushfire hazard area, serviced primarily by Maryborough-Dunolly Rd.
13-013	Bet Bet	Cluster of medium size rural-residential lots in or in close proximity to bushfire hazard area. The settlement adjoins state forest and patches of remnant vegetation. Includes vegetation of high or very high conservation significance.
13-014	Dunolly	South of Dunolly is identified as an area requiring further study with a Land Capability Assessment. Development pressure is being experienced south of Dunolly settlement in proximity to a high bushfire hazard area.
13-015	Dunolly	Medium sized rural-residential lots in or in close proximity to bushfire hazard area. The lots are located north-west of the urban settlement of Dunolly township and adjoins state forest containing patches of remnant vegetation.  Includes vegetation of high or very high conservation significance.
13-016	Moliagul	Moliagul township and associated rural-residential lots are in and in close proximity to bushfire hazard areas. The settlement adjoins areas of state forest and contains patches of remnant and riparian vegetation. Includes vegetation of high or very high conservation significance.
13-017	Bealiba	The township of Bealiba and associated small lots are in proximity to a bushfire hazard area. The settlement adjoins areas of state forest and contains patches of remnant and riparian vegetation in open landscapes which provide a connection to bushfire hazard areas. Includes vegetation of high or very high conservation significance.
13-018	Bealiba South	Cluster of medium size rural-residential lots in and in close proximity to bushfire hazard area. The settlement contains patches of remnant vegetation, including vegetation of high or very high conservation significance.

## CENTRAL GOLDFIELDS – IDENTIFIED AREA DESCRIPTION TABLE cont...

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
13-019	Amherst	Single access roads servicing clusters of medium size lots containing dwellings including Scotts Road and Peacocks Track.
13-020	Carisbrook / Flagstaff	Cluster of medium size rural-residential (Carisbrook-Eddington Road) lots in close proximity to heavily vegetated areas associated with Simson Forest as well as patches of remnant native vegetation in an open landscape. Grasslands to the east are a known bushfire hazard. Includes vegetation of high and very high conservation significance.
13-021	Simson	Single access road servicing clusters of dwellings connecting to Maryborough-Donolly Road.
13-022	Talbot	Grasslands are a known bushfire hazard to the south of Talbot.
13-023	Maryborough	Cluster of medium size lots located to the west of Maryborough township located in and at the fringe of bushfire hazard generally north of Pyrenees Highway.
13-024	Bealiba	Eastern boundary of Bealiba township interfaces with state forest, remnant scattered vegetation and associated bushfire hazard.
13-025	Moliagul	Boundaries of Moliagul interface with state forest, remnant scattered vegetation and bushfire hazard.
13-026	Moliagul	Boundaries of Moliagul interface with state forest, remnant scattered vegetation and bushfire hazard.
13-027	Dunolly	Eastern boundary of Dunolly interfaces with remnant scattered vegetation and bushfire hazard associated with existing forested landscape.
13-028	Dunolly	Small residential lots in the township of Dunolly are in proximity to bushfire hazard area associated with vegetation to the east.
13-029	Maryborough	Maryborough township interfaces with Simson State Forest and corresponding bushfire hazard.



## 6.0 MUNICIPAL OVERVIEW – GANNAWARRA SHIRE

Gannawarra Shire is located generally in the central north part of the Loddon Mallee region and has an area of about 3732 square kilometres. It has a population of about 11 600, generally located in Kerang and the smaller towns of Cohuna, Quambatook, Lalbert, Leitchville, Murrabit and Koondrook. Kerang is located about 250 kilometres north-west of Melbourne.

The Shire is located on the alluvial plains of the Murray, Loddon and Avoca Rivers, and is characterised by the openness of its irrigated and dryland farming areas. The predominant land uses and industry in the municipality are dairying, cereal cropping and animal husbandry.

Areas of significant biodiversity are associated with lakes, swamps, marshes and wetlands scattered throughout the municipality. The Loddon River traverses the centre of the municipality with the Avoca River located in the western portion.

Native vegetation is managed through the Environmental Significance and Vegetation Protection Overlays which apply to watercourses, wetlands and pockets of remnant vegetation throughout the municipality.

### 6.1 North-eastern area

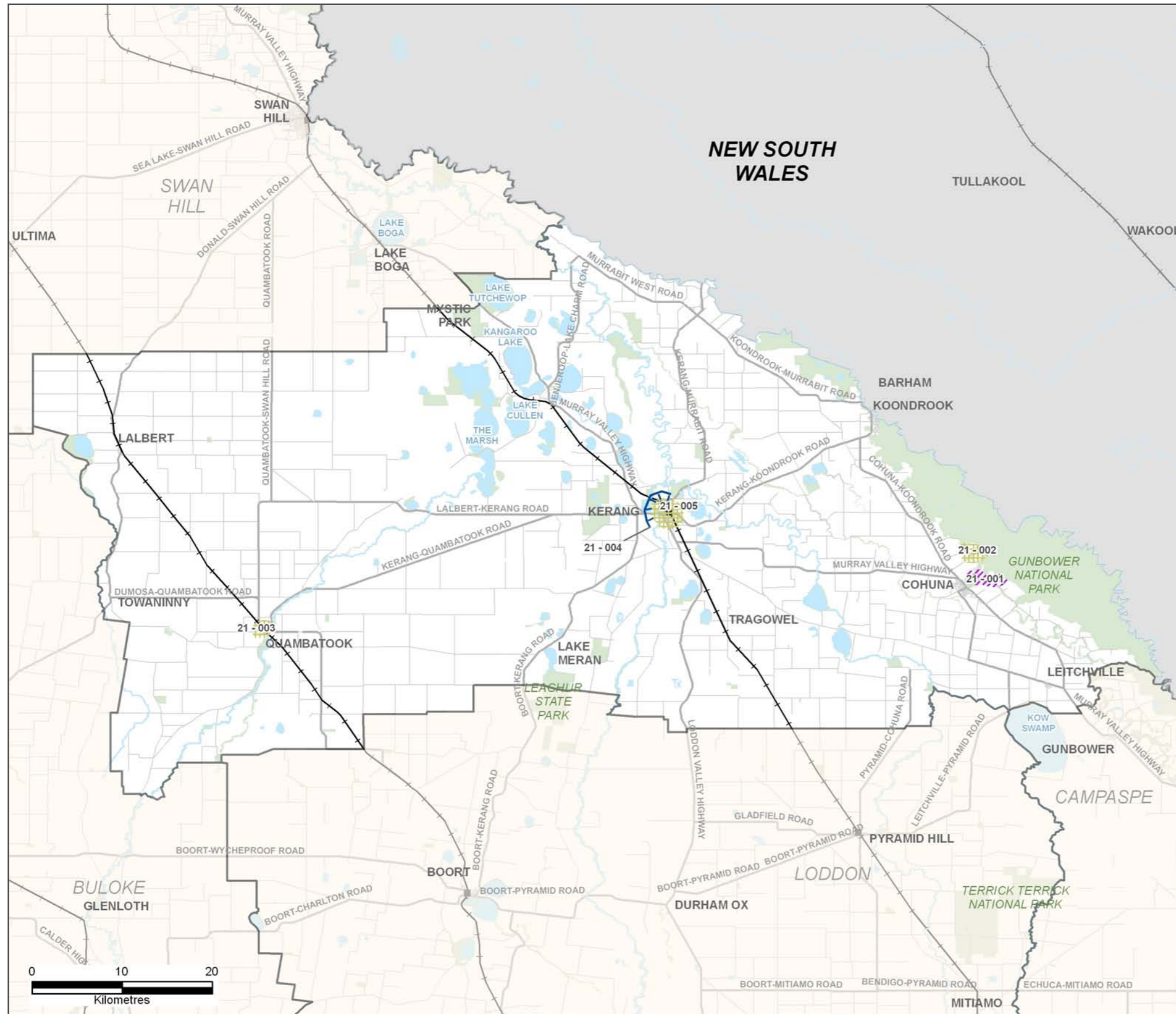
The north-eastern area of the Shire is bound by the Murray River and the associated red gum forests of the Gunbower National Park to the north-east. Settlements located between the Murray Valley Highway and the Gunbower National Park consist of small residential and rural-residential lots which interface with bushfire hazard areas.

Other settlements surrounding the Gunbower National Park adjoin vegetation mapped as being of high and very high conservation significance. These settlements contain a direct interface with the bushfire hazard associated with the vegetated area. Clusters of small rural-residential lots in this area are also located in the corresponding bushfire hazard. These settlements contain single access arrangements adjacent to and in bushfire hazard areas.









### 6.2 Central and southern areas

The central and southern areas of the municipality contain open agricultural areas with linear corridors of remnant vegetation. Settlements in the area do not generally interface with vegetated bushfire hazard areas.








# GANNAWARRA MUNICIPAL MAP



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land

## GANNAWARRA – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
21-001	Cohuna	Low-density dwellings east of Cohuna in bushfire hazard area. Gunbower Creek and riparian corridor runs through this location.
21-002	Cohuna	Cluster of smaller rural-residential lots north-east of Cohuna in bushfire hazard area associated with Gunbower Creek riparian corridor.
21-003	Quambatook	Settlement of Quambatook is in close proximity to a bushfire hazard area, associated with the riparian corridor along the Avoca River.
21-004	Kerang	North-west boundary of Kerang interfaces with bushfire hazard associated with remnant vegetation.
21-005	Kerang	Township of Kerang is in close proximity to bushfire hazard area associated with remnant vegetation.

## 7.0 MUNICIPAL OVERVIEW – CITY OF GREATER BENDIGO

The City of Greater Bendigo is located in the centre of the state and has a land area of about 3000 square kilometres. The City has a population of about 104 200, primarily located in Bendigo, 150 kilometres north of Melbourne. The municipality is centred on the City of Bendigo, which is Victoria's third largest urban centre outside metropolitan Melbourne and is a major regional centre for north-central Victoria.

The economy is focused on Bendigo's regional service role, primary production, telecommunications, manufacturing and tourism. Bendigo is often referred to as the 'city in the forest' given the presence of box ironbark forests which surround and penetrate settlements. In addition to extensive areas of box ironbark forest, the regional hinterland of Bendigo contains agricultural activities, natural resources and a number of large towns.

Rural and low-density residential settlements are located in the areas surrounding Bendigo and Heathcote. This form of housing tends to be concentrated in the Strathfieldsaye and Heathcote areas, close to the services of Bendigo. The terrain consists of undulating country covered by the box ironbark forests. A significant portion of the municipality's land area is made up of national park, regional park, reserve or bushland; including the Greater Bendigo National Park, Heathcote-Graytown National Park, Bendigo Regional Park and Lake Eppalock.

A combination of Environmental Significance, Significant Landscape, Vegetation Protection and Erosion Management Overlays manage native vegetation across large areas of the municipality.

### 7.1 Northern area

The northern area of the municipality is dominated by subdivisions with large lot sizes.

### 7.2 Eastern area

The eastern area of the municipality contains state parks and forest, various small nature reserves and vegetated watercourses. The state parks, state forests and immediate surrounds are identified as bushfire hazard areas. Nearby settlements are located in the foothills of these areas and contain clusters of small and medium size rural-residential lots with an interface to bushfire hazard areas. These areas include vegetation mapped as being of high and very high conservation significance.

The south-eastern district borders the Shire of Mount Alexander, the Mount Alexander Regional Park and surrounding agricultural areas. This area contains known bushfire hazards which interface with rural-residential settlements.

### 7.3 South-western area

The south-western area of the municipality contains the urban centre of Bendigo, which is surrounded by national, state and regional parks, state forests, numerous reserves, historical goldmining areas and various watercourses. These areas are of significant environmental, landscape and recreational value to the municipality, and the Loddon Mallee and Hume regions.

The urban fringes of Bendigo directly interface with these bushfire hazard areas, as do smaller settlements scattered around the township. The aesthetic, natural and recreational values, and associated national and regional parks surrounding the township of Bendigo attracts development pressure in areas of bushfire hazard. These areas include vegetation mapped as being of high or very high conservation significance.

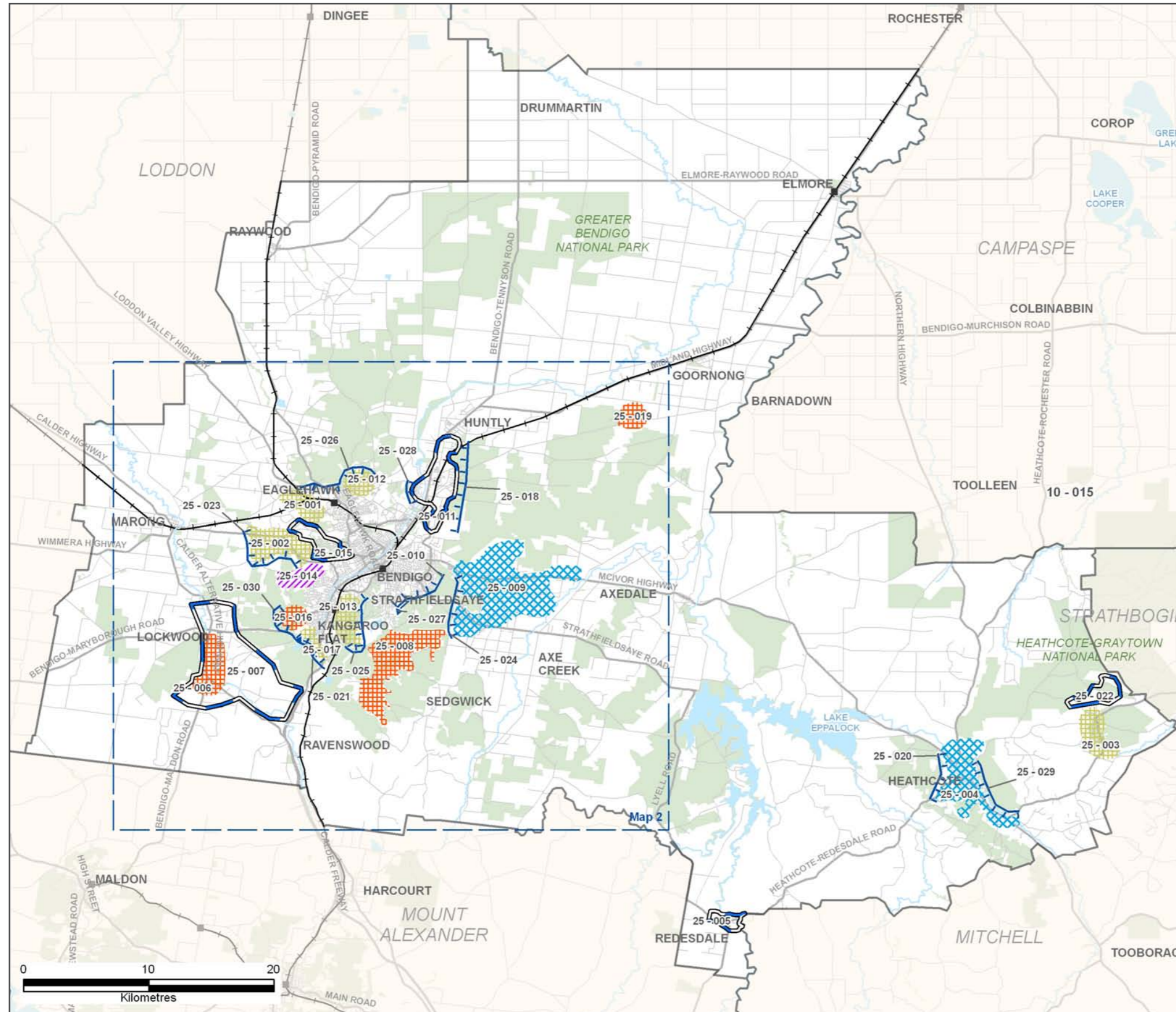
The rural areas south-west of Bendigo contain expansive areas of vegetation which provide biodiversity and habitat corridors between adjoining state parks. This area contains rural living lots with known local fire conditions that provide an interface between bushfire hazard areas and surrounding settlements.

Settlements developed along either side of the Midland Highway to the north of the Bendigo town centre are bordered by multiple small vegetated reserves, riparian corridors and state forests. The areas adjoining the urban fringes of Bendigo contain vegetation susceptible to bushfire at the interface between rural-residential settlements and the broader landscape.

The towns of Bendigo and Redesdale were affected by the Black Saturday bushfires of 2009.

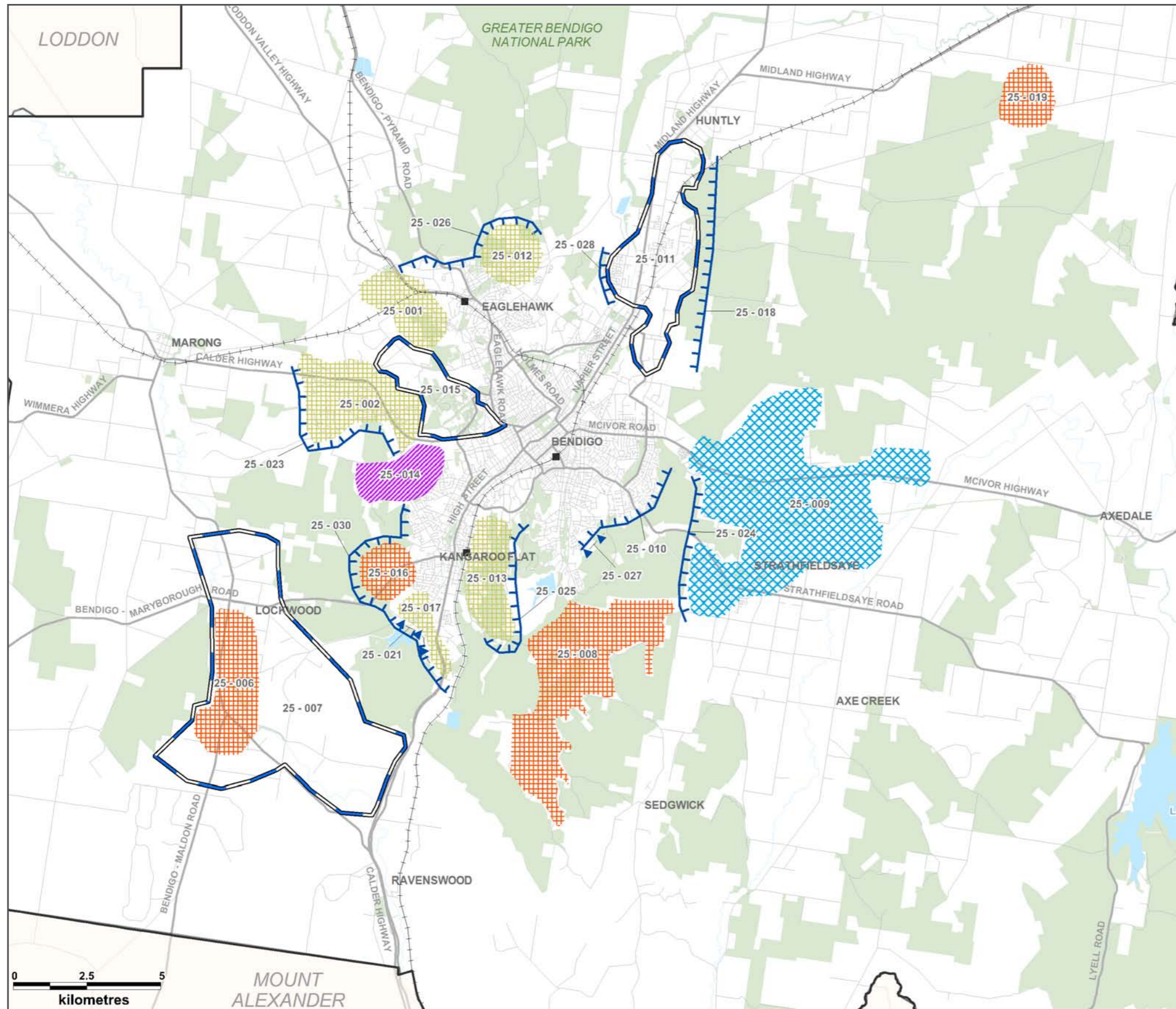


# GREATER BENDIGO MUNICIPAL MAP – MAP 1


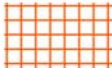















# GREATER BENDIGO MUNICIPAL MAP – MAP 2



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land

## GREATER BENDIGO – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
25-001	West Bendigo	Cluster of small lots between Loddon Valley Highway and Allies Road in proximity to bushfire hazard area associated with scattered remnant vegetation and state forest. Includes vegetation of high and very high conservation significance.
25-002	Maiden Gully	Cluster of smaller lots in or in close proximity to bushfire hazard area associated with scattered remnant vegetation and state forest. Includes vegetation of high and very high conservation significance.
25-003	Costerfield	The township of Costerfield consists of a cluster of small lots with further subdivision and development potential in a bushfire hazard area associated with scattered remnant vegetation and state forest. Includes vegetation of high and very high conservation significance.
25-004	Heathcote	The township of Heathcote and associated rural-residential lots are surrounded by state park and forest. Grasslands surrounding Heathcote are also a known bushfire hazard. The area includes vegetation of high and very high conservation significance.
25-005	Redesdale	Local vegetation conditions at Redesdale are a known bushfire hazard. Grasslands interface with cluster of lots with a riparian vegetation corridor.
25-006	Lockwood South	Cluster of rural-residential lots in or in close proximity to bushfire hazard area associated with scattered remnant vegetation and state forest. Includes vegetation of high and very high conservation significance.
25-007	Lockwood	Scattered remnant vegetation and grassland surrounding Lockwood are known bushfire hazards. These local conditions provide an interface to Lockwood south and associated bushfire hazards.
25-008	Mandurang to Mandurang South	Mandurang is surrounded by the One Tree Hill Regional Park (north) and state forest (south-east and south-west). Clusters of small and rural-residential lots in or in close proximity to bushfire hazard area associated with scattered remnant vegetation and state forest. Includes vegetation of high and very high conservation significance.
25-009	Junortoun to Strathfieldsaye	Multiple bushfire hazard matters consisting of: <ul style="list-style-type: none"> <li>• clusters of small and medium rural-residential lots in or in close proximity to bushfire hazard area</li> <li>• development pressure is being experienced north of McIvor Highway between Junortoun and Longlea settlements which are in close proximity to high bushfire hazard areas</li> <li>• sheepwash and Emu Creeks contain riparian vegetation and bushfire hazard corridors with direct interface to small and rural-residential lots</li> <li>• includes vegetation of high and very high conservation significance.</li> </ul>
25-010	Flora Hill to Spring Gully	Western and south-western boundaries interface with bushfire hazard associated with scattered remnant vegetation and state forest.
25-011	Epsom	Grasslands around Epsom are a known bushfire hazard.
25-012	North Bendigo	Cluster of small lots in or close to bushfire hazard area along Simpsons Road. Includes vegetation of high and very high conservation significance.
25-013	Kangaroo Flat	Cluster of small lots in close proximity to bushfire hazard area associated with scattered remnant vegetation and state forest. Includes vegetation of high and very high conservation significance.
25-014	Golden Square	Development pressure is being experienced west of Golden Square in proximity to a bushfire hazard area.
25-015	West Bendigo	Small and medium size lots mixed with scattered trees, some larger patches of trees and grassland areas. Part of this area was affected by the 2009 bushfires.
25-016	South Bendigo	Cluster of smaller and medium size lots near Kangaroo Flat in or in close proximity to bushfire hazard area associated with scattered remnant vegetation and state forest.



## GREATER BENDIGO – IDENTIFIED AREA DESCRIPTION TABLE cont...

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
25-017	South Bendigo, north of Big Hill	Cluster of small lots in or in close proximity to bushfire hazards are associated with scattered remnant vegetation and state forest. Includes vegetation of high and very high conservation significance.
25-018	Epsom	Eastern boundary interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.
25-019	Goornong	Cluster of medium size lots between Bagshot and Goornong used for residential purposes adjoining an area of remnant vegetation and associated bushfire hazard area.
25-020	Heathcote	North-western boundary of Heathcote interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.
25-021	South Bendigo	Residential Strategic Framework Plan identifies investigation areas for potential development into area of bushfire hazard associated with scattered remnant vegetation and state forest.
25-022	Costerfield	Grasslands north of Costerfield are a known bushfire hazard.
25-023	Maiden Gully	Southern and western boundaries of residential area interface with bushfire hazard associated with scattered remnant vegetation and state forest.
25-024	Strathfieldsaye	Western boundary interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.
25-025	East of Kangaroo Flat, South Bendigo	Eastern boundary of rural lots interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.
25-026	North Bendigo, Simpsons Road	Northern boundary of urban area and rural-residential development interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.
25-027	Spring Gully to Strathdale	Strategic Framework Plan identifies investigation areas for potential residential development into area of bushfire hazard associated with scattered remnant vegetation and state forest.
25-028	Epsom	Western boundary interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.
25-029	Heathcote	Eastern boundary of Heathcote township interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.
25-030	Big Hill / Kangaroo Flat	Western boundary interfaces with bushfire hazard associated with scattered remnant vegetation and state forest.

## 8.0 MUNICIPAL OVERVIEW – LODDON SHIRE

Loddon Shire is located in the south of the Loddon Mallee region and has a land area of about 6700 square kilometres. It has a population of about 8050. The municipality is characterised by a number of small towns and scattered settlements. The Shire is crossed on a north-south axis by the Loddon Valley Highway and Loddon River.

The predominant land uses are crop raising, sheep grazing, dairying, viticulture, tomato growing, oil seeds, pulses, olives and fodder crops.

The majority of the municipality contains flat, irrigated open farmland and pasture surrounded by gentle slopes of the Pyramid Hill and Mount Hope. The north is characterised by riverine plains and flood plains of the Loddon and Avoca Rivers while the southern reaches of the Shire is characterised by undulating hills and wooded environments, including the Kooyoora State Park.

Areas of significant vegetation are generally located in the south and east of the Shire, with small patches in the north. Woodland areas in the remainder of the municipality are fragmented and depleted and largely limited to watercourse and roadside reserves.

The removal of native vegetation is managed by the Environmental Significance, Salinity Management, Erosion Management and Vegetation Management Overlays applied to watercourses, riparian corridors and other areas of remnant vegetation in the municipality.

### 8.1 Northern area

The northern area of the municipality is dominated by expansive grasslands, predominantly used for cropping and grazing and is well irrigated. It also contains the Terrick Terrick National Park in the east as well as significant wetlands such as Boort Lakes, Lake Lyndger, Lake Yando, Lake Marmal and Tang Tang Swamp. The population in this area is scattered, with the exception of Pyramid Hill, Boort and the smaller townships along the Loddon Valley Highway. The area is largely devoid of woodland or forest vegetation and corresponding bushfire hazards.

### 8.2 Central area

The western part of the central area of the Shire contains woodland environments which create a bushfire hazard for surrounding townships. These settlements contain small and medium rural-residential lots and include vegetation mapped as being of high and very high conservation significance. Many of the settlements also have single access road arrangements.

The western area is dominated by open grassland predominantly used for cropping and grazing and is well irrigated. The area is largely devoid of woodland or forest vegetation and corresponding bushfire hazards.

Other settlements scattered throughout the agricultural landscape are intersected by vegetation corridors, including vegetation of high and very high conservation significance.

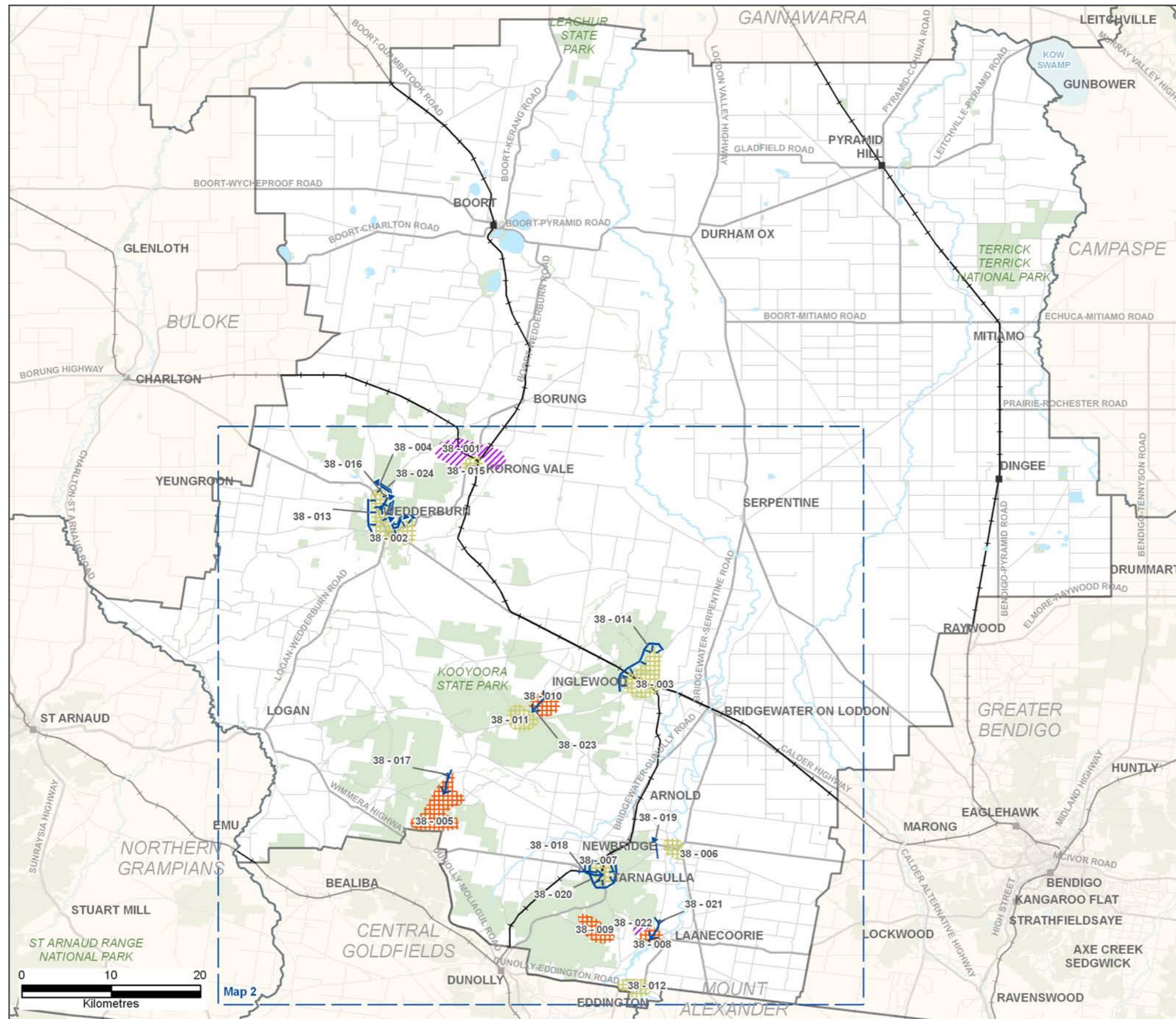
### 8.3 Southern area

The southern area of the municipality is part of the Central Highlands and contains Mount Korong, Melville Caves, Mount Kooyoora, the Kingower Ranges, Wychitella Granites and Mount Brenanah, as well as extensive areas of state forest. Settlements are often located either within, or on the fringes of these areas and contain small residential and medium size rural-residential lots which interface with bushfire hazard areas.


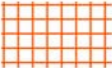






Settlements adjoining the state parks are surrounded by vegetation of high and very high conservation significance. These townships contain a direct interface with the bushfire hazard associated with this vegetation.

Isolated rural settlements containing rural-residential development lots are scattered throughout the agricultural landscape and intersected by vegetation corridors mapped as being of high and very high conservation significance.







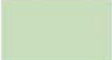
# LODDON MUNICIPAL MAP – MAP 1



## Identified Areas

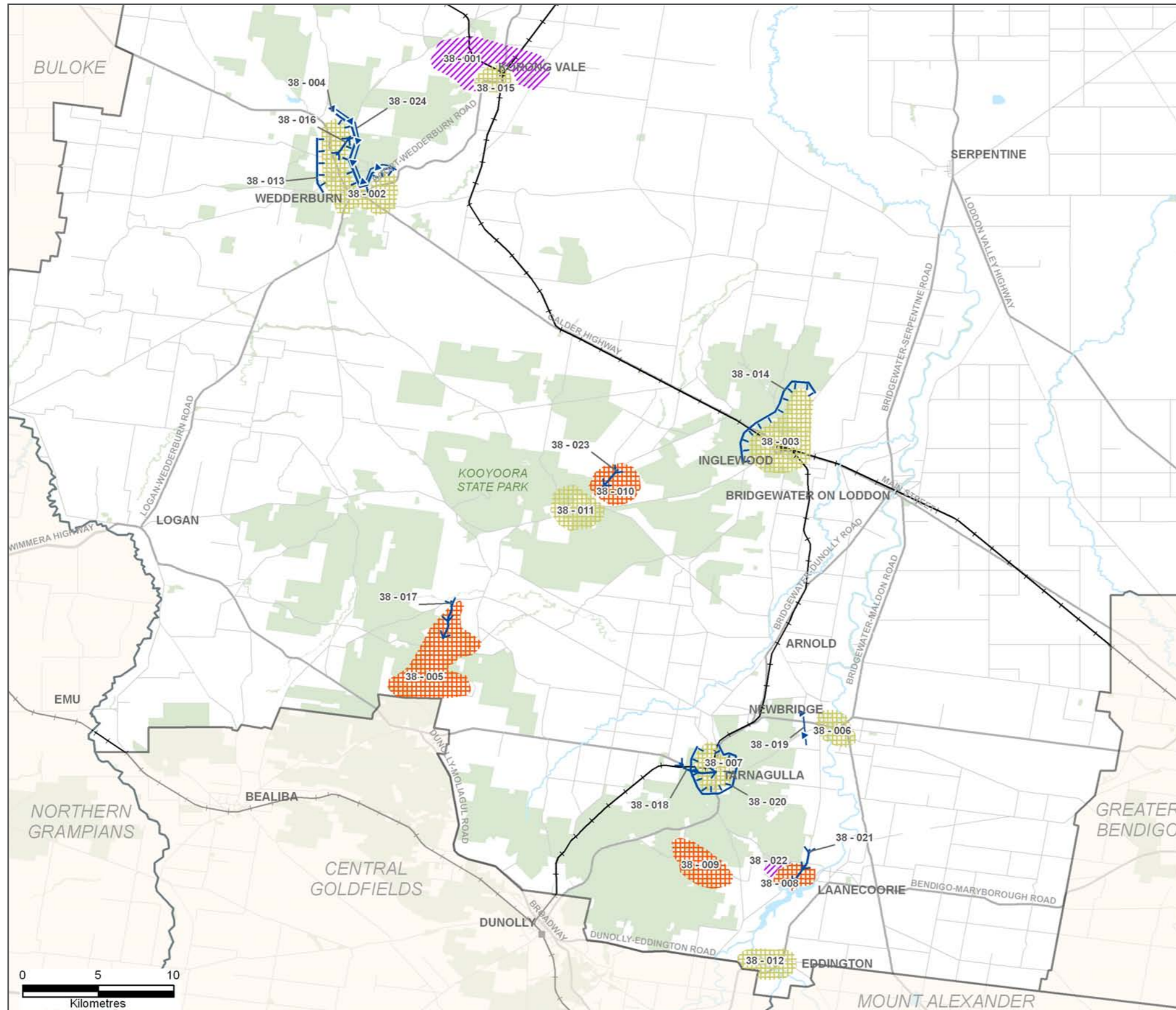
-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features


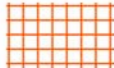






-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land








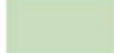
# LODDON MUNICIPAL MAP – MAP 2



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land

## LODDON – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
38-001	Korong Vale	Development pressure being experienced on undeveloped rural lots in proximity to bushfire hazard associated with remnant vegetation.
38-002	Wedderburn	Wedderburn township and associated clusters of small developed and undeveloped lots are in or in proximity to a bushfire hazard area. Some rural-residential clusters around Wedderburn are serviced by single access roads.
38-003	Inglewood	Township of Inglewood consists of small lots and lots in or in close proximity to bushfire hazard area associated with remnant vegetation. Includes areas of vegetation of high and very high conservation significance.
38-004	Wedderburn	North-eastern boundary interfaces with bushfire hazard associated with remnant vegetation.
38-005	McIntyre	Cluster of developed and undeveloped medium size rural-residential lots in or in close proximity to bushfire hazard associated with remnant vegetation. Includes areas of vegetation of high and very high conservation significance.
38-006	Newbridge	Cluster of small lots at Newbridge in close proximity to bushfire hazard area associated with riparian corridor of Loddon River which passes through the centre of the town, and remnant vegetation to the west.
38-007	Tarnagulla	Township of Tarnagulla and associated small residential lots are in close proximity to bushfire hazard associated with remnant vegetation. Existing vegetation includes areas of vegetation of high and very high conservation significance.
38-008	Laanecoorie	Cluster of medium size rural-residential lots west of Laanecoorie in close proximity to a bushfire hazard area.
38-009	Waanyarra	Cluster of medium size rural-residential lots east of Waanyarra in or in close proximity to bushfire hazard area associated with riparian corridor along the Waanyarra Creek, which passes through the cluster, and surrounding remnant vegetation.
38-010	Kingower	Cluster of medium size rural-residential lots north-east of Kingower in or in close proximity to bushfire hazard.
38-011	Kingower	Cluster of small, generally undeveloped, lots in Kingower in close proximity to bushfire hazard area associated with remnant vegetation.
38-012	Eddington	Cluster of small lots in close proximity to bushfire hazard area associated with the riparian corridor of the Loddon River.
38-013	Wedderburn	Part of western boundary of Wedderburn interfaces with bushfire hazard associated with remnant vegetation.
38-014	Inglewood	Western and northern boundaries of Inglewood interface with bushfire hazard associated with remnant vegetation.
38-015	Korong Vale	Cluster of small developed lots at Korong Vale in close proximity to bushfire hazard associated with remnant vegetation.
38-016	Wedderburn	Lots located in bushfire hazard area to the north of Wedderburn township have limited access and egress.
38-017	McIntyre	Single access road servicing cluster of lots used for residential purposes in the McIntyre area (O'Briens Drive).
38-018	Tarnagulla	Single constructed roads servicing clusters of dwellings in the area.
38-019	Newbridge	Development pressure is being experienced west of Newbridge towards a bushfire hazard area associated with remnant vegetation.
38-020	Tarnagulla	Eastern, south-eastern and southern boundaries of Tarnagulla township interface with bushfire hazard associated with remnant vegetation.
38-021	Laanecoorie	Single constructed roads servicing clusters of dwellings in the area.
38-022	Laanecoorie	Development pressure is being experienced towards a bushfire hazard area associated with remnant vegetation.

## LODDON – IDENTIFIED AREA DESCRIPTION TABLE cont...

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
38-023	Kingower	Potentially limited access to dwellings in Kingower locality in bushfire hazard areas.
38-024	Wedderburn	Wedderburn Structure Plan provides for residential development into an area of bushfire hazard associated with remnant vegetation to the north of the township.



## 9.0 MUNICIPAL OVERVIEW – MACEDON RANGES SHIRE

Macedon Ranges Shire is located in the south-eastern area of the Loddon Mallee region and has a land area of about 1747 square kilometres. It has a population of about 42 650. Mount Macedon, on the tail end of the Great Dividing Range, is the prominent natural feature of the Shire. The main centre is Gisborne, located about 70 kilometres north-west of Melbourne. Other main centres are Kyneton, Woodend and Romsey. Smaller settlements include Riddells Creek, Macedon and Mount Macedon.

Agriculture is a dominant land use in the north of the Shire around Kyneton and to the east between Lancefield and Romsey. Areas of public land include Mount Macedon Regional Park and Black and Bald Hill Reserves, Cobaw and Wombat State Forests. Mountainous forested landscapes characterise the south of the Shire in parts of the Great Dividing Range, including Mount Macedon, Hanging Rock, Bald Hill and Mount Bullengarook. Forested areas include pine plantations in areas around Macedon and Woodend. Grassy, flat volcanic plains exist around Gisborne and Lancefield.

Areas of significant biodiversity exist both in the public reserves and across private land. Much of the Shire's remnant native vegetation is located on sloping land, water catchments, road reserves and in areas unsuitable for agriculture. The removal of native vegetation is managed through a range of Environmental Overlays.

The townships of East Trentham and Mount Macedon were affected by the Ash Wednesday bushfires of 1983.

### 9.1 Central and southern areas

The central and southern areas of the Shire are located close to Melbourne's urban fringe, providing attractive rural living environments and containing many scattered rural settlements. Small lots in bushfire hazard areas on sloping land and accessed by single roads are widespread across the area. Some rural-residential lots are developed close to the boundaries of the Wombat State Forest in hilly areas that are difficult to access. Bushfire hazards also exist on the fringes of larger settlements, which are projected to grow in the future, bounded by the foothills of the Macedon Ranges.

### 9.2 North area

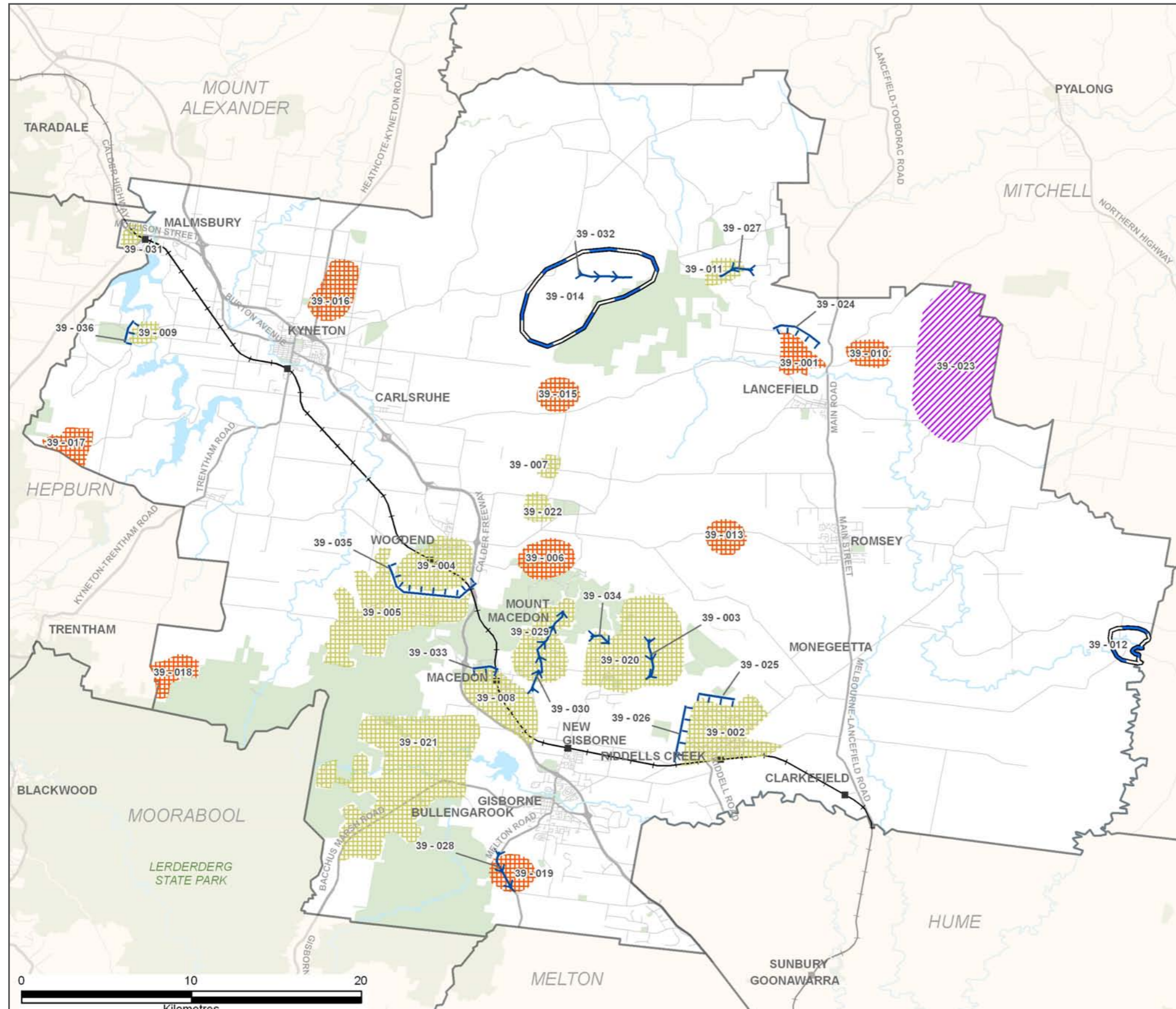
Land uses in the northern area of the municipality have a rural living focus, with dispersed rural settlements and cleared farmland. This region includes the Cobaw State Forest, Lauriston State Forest and Black and Bald Hill Reserves. Clusters of small properties are located on the fringes of large areas of public land, particularly around the Cobaw State Forest. These areas include some older housing stock vulnerable to bushfire.

Dwellings on small lots are located between Mount Macedon and the Cobaw State Forest in areas of vegetation mapped as high and very high conservation significance and affected in parts by a Vegetation Protection Overlay. Further, rural living opportunities exist in smaller parcels of land located in the Farming Zone, some of which are developed.


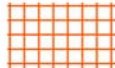






### 9.3 Eastern area

Quality agricultural land dominates the eastern area of the Shire. It is largely devoid of vegetation and therefore bushfire hazard areas are less extensive. Identified bushfire hazard areas exist in the vegetated corridor of Deep Creek and other small areas with vegetation of high conservation significance. Clusters of dwellings exist on smaller lots adjacent to these bushfire hazard areas.







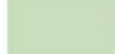
# MACEDON RANGES MUNICIPAL MAP



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land

## MACEDON RANGES – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
39-001	North Lancefield	Cluster of medium rural-residential lots north of Lancefield is in proximity to bushfire hazard associated with remnant vegetation.
39-002	Riddells Creek	Residential lots in Riddells Creek are in and in proximity to the bushfire hazard area associated with vegetation to the north. Riddells Creek Structure Plan provides for the intensification of residential use in serviced areas proximate to remnant bushland vegetation. Existing vegetation includes areas of vegetation of high and very high conservation significance.
39-003	Cherokee	Cluster of dwellings to the south of Cherokee in bushfire hazard area serviced primarily by a single access road.
39-004	Woodend	Small residential lots in and surrounding the town of Woodend are in proximity to a bushfire hazard area associated with patches of vegetation to the south. Woodend Township Structure Plan provides for intensification of residential development into area of a bushfire hazard associated with remnant vegetation.
39-005	Woodend	Clusters of small rural-residential lots to the south of Woodend are in a bushfire hazard area associated with remnant vegetation.
39-006	Woodend	Cluster of medium size rural-residential lots east of Woodend, south of Woodend-Wallan Road with a bushfire hazard area associated with remnant vegetation.
39-007	Newham	Cluster of small lots at Newham located in proximity to bushfire hazard area associated with remnant vegetation to the west.
39-008	Macedon	Clusters of small lots to the south of Macedon in a bushfire hazard area associated with remnant vegetation.
39-009	Lauriston	Cluster of small lots at Lauriston in proximity to bushfire hazard area associated with adjoining forest to the west.
39-010	Lancefield	Cluster of medium size rural-residential lots east of Lancefield along Red Gap Road in bushfire hazard area associated with vegetation nearby and in the cluster. Existing vegetation includes areas of vegetation of high and very high conservation significance.
39-011	Benloch	Cluster of lots in a bushfire hazard area associated with remnant vegetation. Existing vegetation includes areas of high and very high conservation significance.
39-012	Darraweit Guim	Grasslands around Darraweit Guim are a known bushfire hazard in this location.
39-013	Romsey	Cluster of medium size rural-residential lots west of Romsey in bushfire hazard area associated with remnant vegetation.
39-014	Pastoria	Cluster of older housing stock on larger rural-residential lots in and surrounding Pastoria adjacent to Cobaw State Forest.
39-015	Newham	Cluster of medium size rural-residential lots at Wisemans and Egans Lane in proximity to bushfire hazard area associated with remnant vegetation to the north and north-west. Includes vegetation of high and very high conservation significance.
39-016	Kyneton	Cluster of medium size rural-residential lots in a bushfire hazard area associated with Black Hill Reserve and vegetation in private properties. Includes vegetation of high and very high conservation significance.
39-017	West of Upper Coliban Reservoir	Cluster of medium size rural-residential lots off Kyneton Springhill Road in proximity to bushfire hazard area associated with remnant vegetation to the north, west and south.
39-018	North Blackwood	Cluster of medium size rural-residential lots south-east of North Blackwood in a bushfire hazard area associated with state forest.
39-019	Gisborne	Cluster of medium rural-residential lots south of Gisborne on the Gisborne-Melton Road in a bushfire hazard area associated with the Pyrite State Forest.
39-020	Cherokee to South Macedon	Clusters of small lots dispersed in bushfire hazard area with dwellings on sloping land.



## MACEDON RANGES – IDENTIFIED AREA DESCRIPTION TABLE cont...

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
39-021	Bullengarook	Clusters of small lots in the area to the west of Rosslynne Reservoir dispersed throughout a bushfire hazard area associated with remnant vegetation.
39-022	Newham	Cluster of small lots south of Newham in a bushfire hazard area associated with remnant vegetation to the east.
39-023	Mt William Road	Clusters of dwellings in low density rural subdivisions, including the settlement of Goldie, along both sides of Mt William Road in close proximity to bushfire hazard area. Single access roads servicing clusters of dwellings.
39-024	North Lancefield	Northern boundary of rural-residential properties in North Lancefield interfaces with bushfire hazard associated with remnant vegetation.
39-025	Riddells Creek	Northern boundary of Riddells Creek interfaces with bushfire hazard associated with remnant vegetation.
39-026	Riddells Creek	Western boundary of Riddells Creek interfaces with bushfire hazard associated with remnant vegetation.
39-027	Benloch	Cluster of rural-residential lots at Benloch relies on a single road for access and egress from a bushfire hazard area.
39-028	Gisborne	Cluster of rural-residential lots to the south-west of Gisborne relies on a single road for access and egress from a bushfire hazard area.
39-029	Mount Macedon	The township of Mount Macedon containing small lots is surrounded by vegetation and is in a bushfire hazard area.
39-030	Mount Macedon	Township of Macedon relies primarily on a single arterial road for access and egress from a bushfire hazard area.
39-031	Malmsbury	Cluster of small lots west of Malmsbury in proximity to bushfire hazard associated with state forest.
39-032	Pastoria	Constructed single access road servicing cluster of dwellings in bushfire hazard area.
39-033	Macedon	Northern boundary of Macedon interfaces with bushfire hazard associated with Macedon Regional Park.
39-034	Mount Macedon	Limited road access to a cluster of small lots in a bushfire hazard area east of Mount Macedon.
39-035	Woodend	Small lots in the Woodend area interface with bushfire hazard to the south.
39-036	Woodend	Small lots in the Lauriston area interface with bushfire hazard to the west.

## 10.0 MUNICIPAL OVERVIEW – MILDURA RURAL CITY

Mildura Rural City is located in the far north-west of the Loddon Mallee region and has an area of about 22 087 square kilometres. It has a population of about 54 350, primarily located in Mildura city and a number of smaller settlements along the Murray River.

The predominant land uses in the municipality are dryland farming, irrigated horticulture and associated manufacturing industries. The municipality is a key service and economic hub of inland Australia. The land area is generally characterised by the flats of the Murray River in the north and east, and flat to rolling hills in the south with a range of significant eco systems, natural habitats and ecological assets. Some land in the north-east of the municipality is irrigated.

Mildura Rural City includes roughly 40 percent of the total area of the Victorian Parks system. Major parks in the municipality include the Hattah-Kulkyne, Murray-Sunset and Wyperfeld National Parks, the Big Desert Wilderness and Murray-Kulkyne Parks. Apart from the River Red Gum parks along the Murray River corridor, the remainder of the municipality is characterised by Mallee Scrub. Road access is limited in and around large areas of national parks and reserves. The removal of native vegetation from remnant pockets and riparian corridors is managed by Environmental Significance and Vegetation Protection Overlays.

### 10.1 North-eastern area

The north-eastern area of the municipality is bound by the Murray River corridor to the east, the Mallee scrub dominated Hattah-Kulkyne National Park to the south and the Murray-Kulkyne Park to the west. There are small settlements in the region located adjacent to areas which may interface with a bushfire hazard.

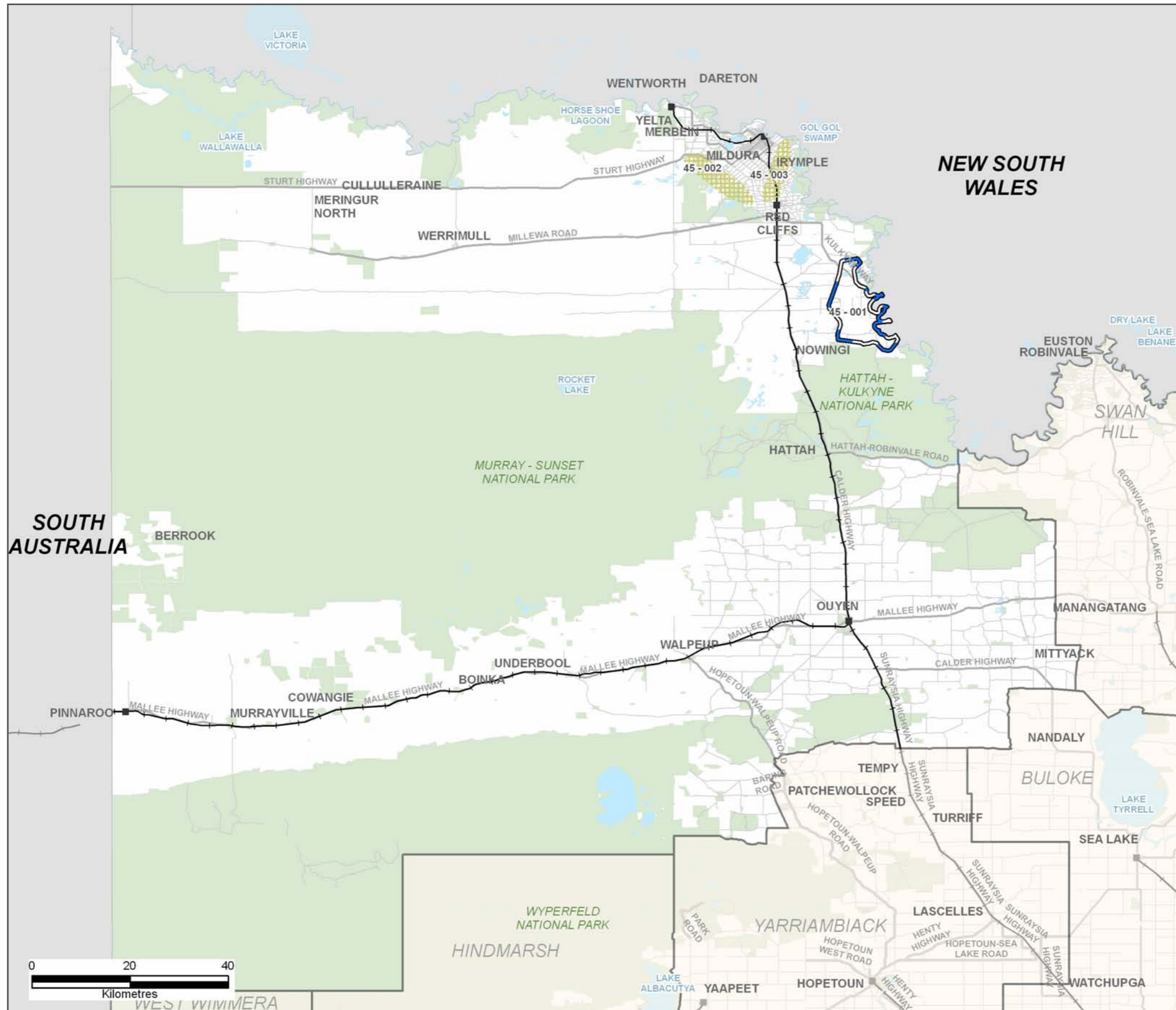
### 10.2 Central and southern areas

The Murray-Sunset and Wyperfeld National Parks and the Big Desert Wilderness Park are located in the central and southern areas of the region. Large lot subdivisions are located either side of the Mallee Highway towards these parks. Settlements contain limited woodland or forest vegetation with associated bushfire hazards.


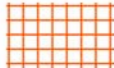






## MILDURA – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
45-001	East of Carwarp	Cluster of small developed and undeveloped lots in close proximity to bushfire hazard area.
45 - 002	Merbein south to Cardross	Cluster of small lots on the outskirts of south Mildura near a bushfire hazard area associated with scattered remnant vegetation.
45 - 003	Nichols Point to Cardross	Cluster of small lots on the outskirts of east Mildura near a bushfire hazard area associated with scattered remnant vegetation.







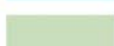
# MILDURA MUNICIPAL MAP

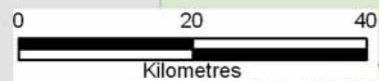


## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land





## 11.0 MUNICIPAL OVERVIEW – MOUNT ALEXANDER SHIRE

Mount Alexander Shire is located in the south-east of the Loddon Mallee region and has an area of about 1500 square kilometres. It has a population of about 18400, located in towns and small settlements scattered through rural environments. The main centre of the municipality is Castlemaine, with Maldon, Harcourt, Chewton and Newstead being the other main population centres.

The predominant land use is primary production, which principally covers the eastern, western and northern parts of the Shire. These areas contain pockets of open grassland environments, while woodland areas cover the central southern parts of the Shire. The Shire contains a number of settlements in commuting distance of Bendigo. Woodland areas are fragmented and largely limited to roadsides and public reserves.

Areas of significant biodiversity are contained in the undulating landscapes of:

- the Mount Alexander Regional Park in the east near Harcourt
- Castlemaine Diggings National Heritage Park and Castlemaine - Chewton Historic Area
- central region around Castlemaine and Mount Tarrangower
- the Maldon Historic Reserve in the west near Maldon.

The removal of native vegetation is managed through the Erosion Management, Significant Landscape, Environmental Significance and, in some instances, Heritage Overlays.

### 11.1 Eastern area

The area of the municipality to the east of the Calder Freeway contains the Mount Alexander Regional Park, numerous smaller state forest areas, and scattered rural settlements. With the exception of Harcourt, there is limited settlement in this area. However where there are settlements, they are located on the fringes of these parks and forests and contain small residential and medium size rural-residential lots which interface with bushfire hazard areas. The vegetation in these areas has been mapped as being of high and very high conservation significance.

### 11.2 Central area

The central area of the municipality, which is to the west of the Calder Freeway, contains the Castlemaine Diggings National Heritage Park and numerous state forest areas. Towns and scattered rural settlements are often located on the fringes of the parks and forests and contain small residential or rural-residential lots which interface with the bushfire hazard.

Settlements adjoining Castlemaine Diggings National Heritage Park are surrounded by vegetation mapped as being of high and very high conservation significance. These townships interface with the bushfire hazard associated with vegetated areas. Other settlements are surrounded by the Heritage Park and contain small lots in a vegetated landscape. Some settlements in bushfire hazard areas also have limited or single road access.

### 11.3 Southern area

Vegetated areas extend to the southern reaches of the municipality, however populations throughout this region are generally scattered. These areas are dominated by large lot subdivisions largely devoid of woodland or forest vegetation.

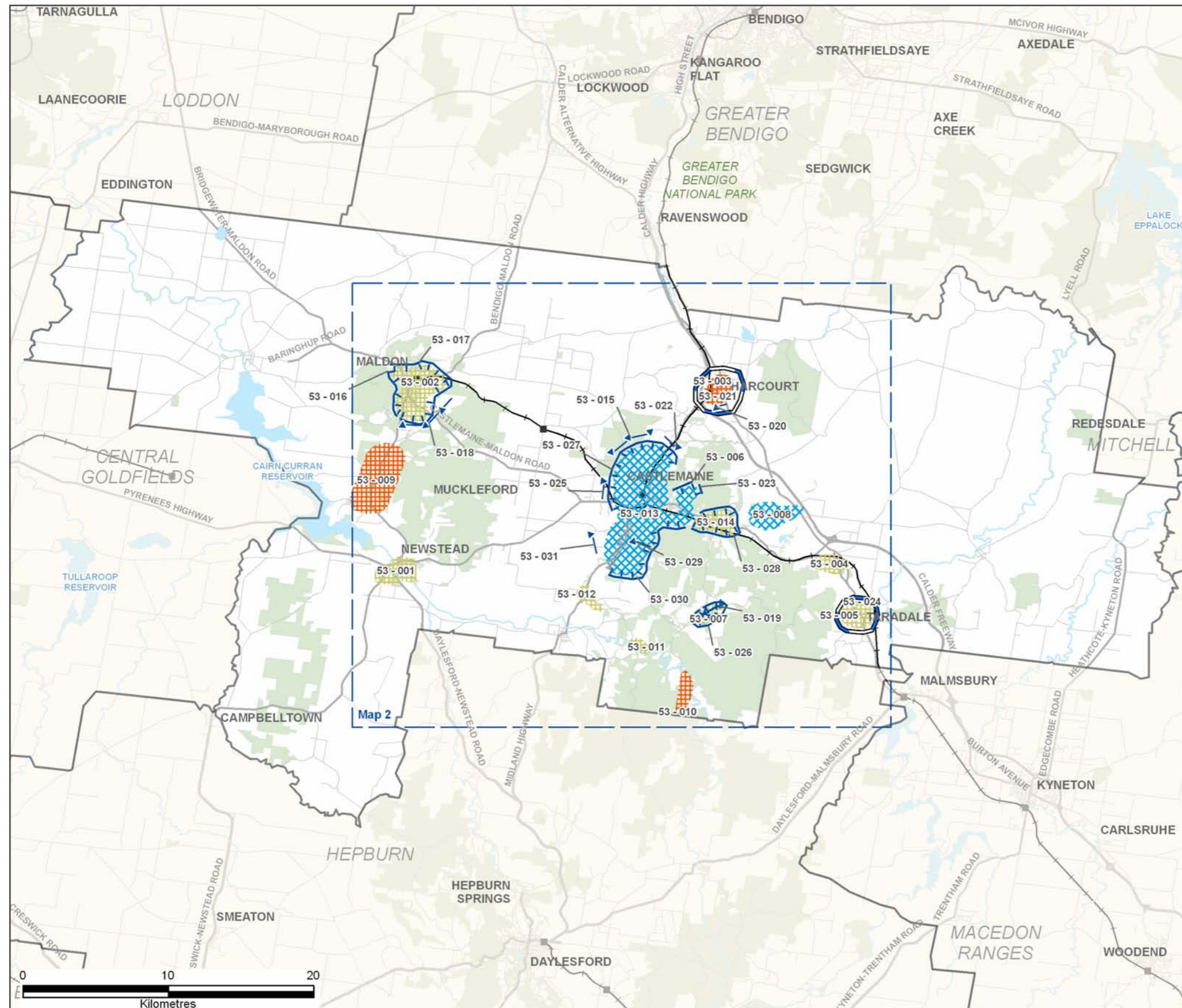
### 11.4 Western area

The western area of the municipality contains Mount Tarrangower and the Maldon Historic Reserve, as well as numerous smaller state forest areas, towns and scattered rural settlements. The vegetated areas establish a bushfire hazard for surrounding townships.

Settlements adjoining Maldon Historic Reserve and other forested areas are surrounded by vegetation mapped as being of high and very high conservation significance. These townships interface with the bushfire hazard associated with vegetated areas. Other settlements are surrounded by the forest and contain small lots in a vegetated landscape. Some settlements in bushfire hazard areas also have limited or single road access.

Vegetated areas extend south-east of the forest towards the agricultural landscape in the north and western parts of the Shire. Vegetation in these areas is mapped as being of high or very high conservation significance. Clusters of small lots in this area are located in vegetated landscapes. Some settlements in bushfire hazard areas also have limited or single road access.

# MOUNT ALEXANDER MUNICIPAL MAP - MAP 1



### Identified Areas

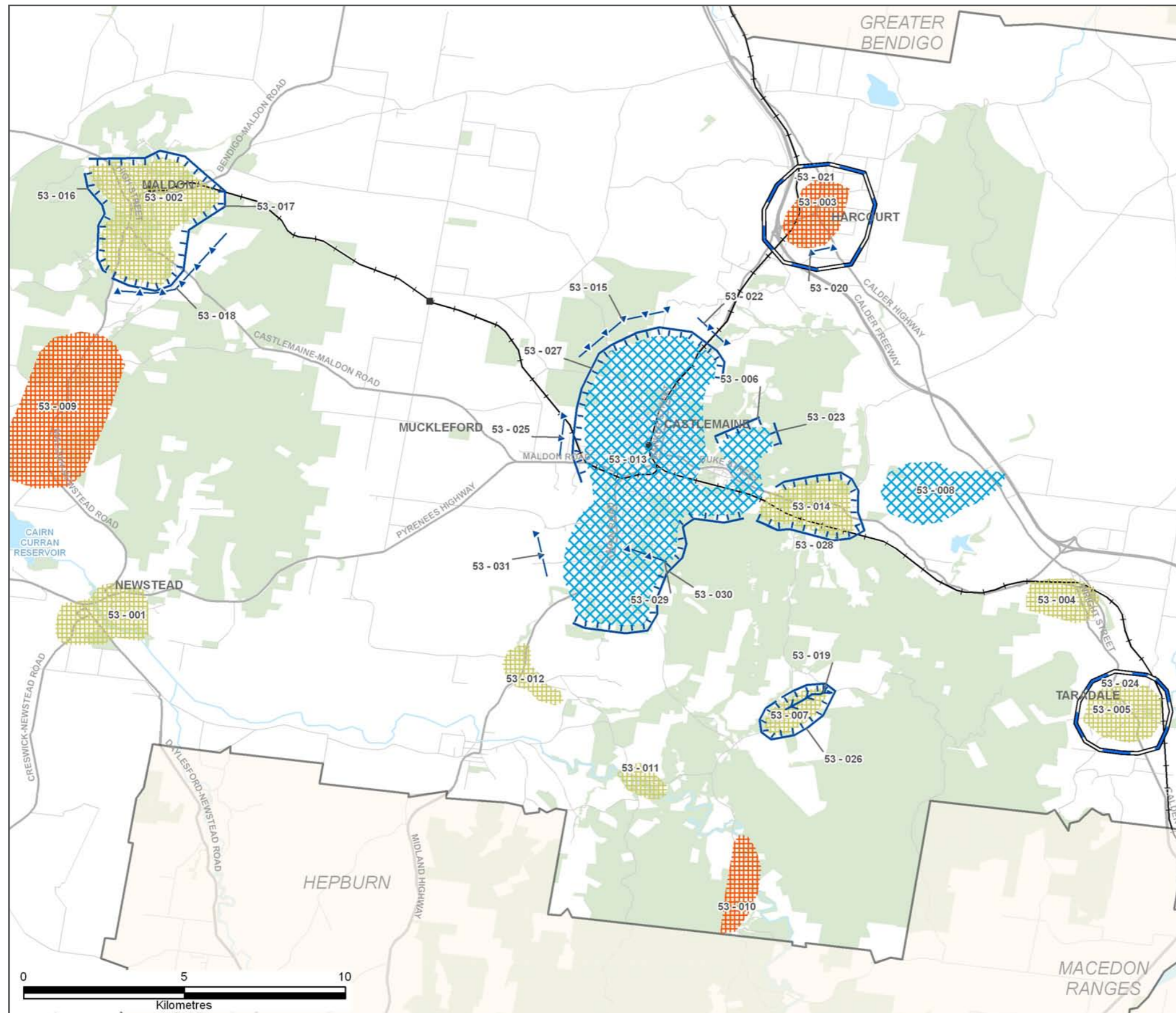
- Small lots in or close to hazard (0 - 0.4 hectares)
- Medium lots in or close to hazard (0.4 - 4 hectares)
- Specific local knowledge
- Other information of interest to planning
- Multiple matters
- Limited access and egress
- Urban/bushfire hazard interface
- Future strategic directions and bushfire hazard conflict

### Features









- Major road
- Road
- Railway
- Railway station
- Watercourse
- Waterbody
- Public land










# MOUNT ALEXANDER MUNICIPAL MAP - MAP 2



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land



## MOUNT ALEXANDER – IDENTIFIED AREA DESCRIPTION TABLE

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
53-001	Newstead	The township of Newstead interfaces with bushfire hazard area associated with scattered remnant vegetation patches to the east and south-west. Riparian vegetation passes through the centre of the township.
53-002	Maldon	The township of Maldon is surrounded by the Maldon Historical Reserve and state forest.
53-003	Harcourt	The township of Harcourt is proximate to bushfire hazard associated with remnant vegetation patches, riparian vegetation and Mount Alexander Regional Park. Grasslands are also a known bushfire hazard.
53-004	Elphinstone	Cluster of small lots in and in proximity to bushfire hazard area associated with state forest, scattered remnant vegetation patches and riparian vegetation.
53-005	Taradale	Cluster of small lots in an open landscape proximate to a bushfire hazard area including state forest and scattered remnant vegetation patches. Includes vegetation of high and very high conservation significance.
53-006	Moonlight Flat	North-eastern boundary interfaces with a bushfire hazard associated with state forest and scattered remnant vegetation patches. The settlement is surrounded by state forest.
53-007	Fryerstown	Cluster of small lots in Fryerstown with direct interfaces to a bushfire hazard area associated with state forest and scattered remnant vegetation patches. Vegetation is also located in existing lots along property boundaries and close to existing dwellings.
53-008	Chewton Bushland	Multiple bushfire matters consisting of: <ul style="list-style-type: none"> <li>• cluster of small lots surrounded by and interfacing with Chewton State Forest</li> <li>• multiple clusters of dwellings with limited access by single and dirt access roads servicing clusters of lots.</li> </ul> Includes vegetation of high and very high conservation significance.
53-009	Welshmans Reef	Cluster of medium size rural-residential lots along Maldon-Newstead Road in a bushfire hazard area including scattered remnant vegetation patches and state forest.
53-010	Glenluce	Cluster of medium size rural-residential lots in an open landscape proximate to a bushfire hazard area, including scattered remnant vegetation patches and state forest.
53-011	Vaughan	Cluster of small lots in or in a bushfire hazard area including riparian vegetation and scattered remnant vegetation patches. Grasslands surrounding Vaughan are a known bushfire hazard providing an interface between the state forest and the township.
53-012	Yapeen	Township of Yapeen is in proximity to a bushfire hazard area including riparian vegetation and scattered remnant vegetation patches. Grasslands surrounding Yapeen are a known bushfire hazard providing an interface between the state forest and the township.
53-013	Castlemaine	Multiple bushfire matters in and around Castlemaine and Campbells Creek consisting of: <ul style="list-style-type: none"> <li>• clusters of small and medium size rural-residential lots on the edges of the township with interfaces to bushfire hazard areas including state forest, Kalimna Park and scattered remnant vegetation patches</li> <li>• multiple single access roads servicing clusters of lots on the edges of the township.</li> </ul> Includes vegetation of high and very high conservation significance.
53-014	Chewton	The township of Chewton includes small and medium size rural-residential lots in proximity to bushfire hazard areas, including adjoining state forest and scattered remnant vegetation patches. Includes vegetation of high and very high conservation significance. The settlement is surrounded by state forest.

## MOUNT ALEXANDER – IDENTIFIED AREA DESCRIPTION TABLE cont...

IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
53-015	Castlemaine	Township Structure Plan identifies future residential development to the north-west of Castlemaine in proximity with bushfire hazard associated with state forest, Kalimna Park and scattered remnant vegetation patches.
53-016	Maldon	Western boundary of Maldon interfaces with a bushfire hazard area associated with the Maldon Historical Reserve.
53-017	Maldon	Eastern and southern boundary of Maldon interface with bushfire hazard areas associated with state forest and remnant vegetation patches.
53-018	Maldon	The Township Structure Plan provides for an extension of the township (Rural Living) to the south-east in proximity to bushfire hazard associated with state forest and remnant vegetation patches.
53-019	Fryerstown	Clusters of dwellings in and around Fryerstown with limited access, including unconstructed roads.
53-020	Harcourt	Township Structure Plan identifies future residential development to the south-east of Harcourt towards a bushfire hazard area.
53-021	Harcourt	Grasslands and scattered remnant vegetation along the western and southern boundaries of Harcourt are a known bushfire hazard providing an interface between the Mount Alexander Regional Park and lots on the edge of the township.
53-022	Castlemaine	Township Structure Plan provides for extension of township into proximity with bushfire hazard associated with grasslands and scattered remnant vegetation patches (future residential to the north-east).
53-023	Moonlight Flat	North-eastern boundary interfaces with a bushfire hazard area associated with scattered remnant vegetation patches, riparian vegetation and state forest.
53-024	Taradale	Grasslands and scattered vegetation are a known bushfire hazard providing an interface between the state forest and lots on the edge of the township.
53-025	Castlemaine	Township Structure Plan provides future residential to the west (McKenzie's Road) into proximity with a bushfire hazard area associated with the state forest and scattered remnant vegetation.
53-026	Fryerstown	Fryerstown interfaces with bushfire hazard associated with state forest and scattered remnant vegetation patches.
53-027	Castlemaine	Northern and western urban areas of Castlemaine interface directly with bushfire hazard.
53-028	Chewton	Northern and southern boundaries interface with bushfire hazard associated with state forest and scattered remnant vegetation patches.
53-029	Castlemaine	The Township Structure Plan provides for future Residential 1 Zone to the south of Castlemaine, into proximity with bushfire hazard areas.
53-030	Campbells Creek	South-east boundary interfaces with bushfire hazard associated with state forest and scattered remnant vegetation patches.
53-031	Castlemaine	The Township Structure Plan provides for future residential to the west (Diamond Gully Road) into proximity with a bushfire hazard associated with the state forest and scattered remnant vegetation.

## 12.0 MUNICIPAL OVERVIEW – SWAN HILL RURAL CITY

Swan Hill Rural City is located in the far north-west of the Loddon Mallee region and has an area of about 6100 square kilometres. It has a population in excess of 22 200. Swan Hill and Robinvale are the two largest service centres in the municipality, with the remainder of the population located in smaller townships and rural areas. The main centre is Swan Hill, located about 320 kilometres north-west of Melbourne.

Most of the municipality is a rural area and is used for agricultural and horticultural purposes, including wool, wheat, maize, citrus fruits, grapes, wine and dairy products. Woodlands are fragmented and depleted and largely limited to road and public reserves.

The Swan Hill landscape is typically a diverse collection of vegetation communities and topography. Areas of significant biodiversity are limited to the Murray River and the River Red Gums on the flood plain. Away from the river the land becomes characterised by the dunes of the Mallee. Swan Hill has only a small number of public reserves with remnant native vegetation compared to other parts of the Mallee (for example, Mildura Rural City). The removal of native vegetation is managed in only a few areas and along some watercourses through the Vegetation Protection Overlay.

### 12.1 Eastern region

The eastern region directly adjoins the Murray River and the River Red Gum forests along its floodplain. Settlements are located on the fringes of these areas and contain small residential and medium size rural-residential lots which directly interface with bushfire hazard. Other settlements are also located in the corresponding bushfire hazard.

### 12.2 Central and south region

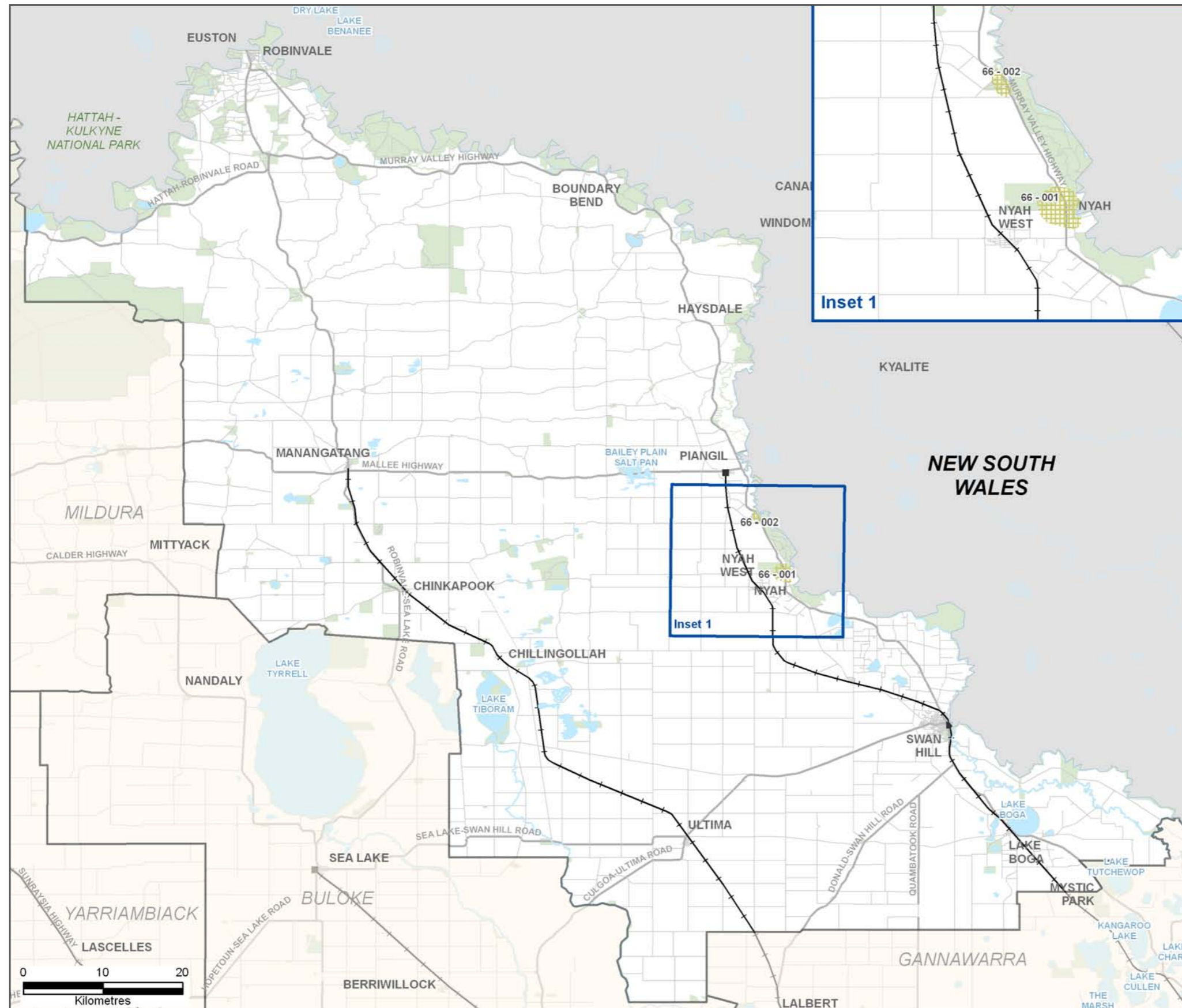
Large lot size subdivisions dominate the central and southern areas of the municipality and are generally devoid of woodland or forest areas and bushfire hazard.

## SWAN HILL – IDENTIFIED AREA DESCRIPTION TABLE

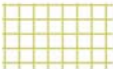
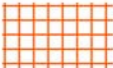






IDENTIFIED AREA CODE	LOCATION	IDENTIFIED AREA DESCRIPTION
66-001	Nyah	The township of Nyah and associated small lots to the north are in close proximity to the bushfire hazard area associated with Gunbower National Park. Includes vegetation of high and very high conservation significance.
66-002	Nyah	Rural living style lots to the north of Nyah proximate to the bushfire hazard area to the west, associated with the Gunbower National Park. Includes vegetation of high and very high conservation significance.









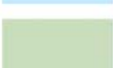
# SWAN HILL MUNICIPAL MAP



## Identified Areas

-  Small lots in or close to hazard (0 - 0.4 hectares)
-  Medium lots in or close to hazard (0.4 - 4 hectares)
-  Specific local knowledge
-  Other information of interest to planning
-  Multiple matters
-  Limited access and egress
-  Urban/bushfire hazard interface
-  Future strategic directions and bushfire hazard conflict

## Features

-  Major road
-  Road
-  Railway
-  Railway station
-  Watercourse
-  Waterbody
-  Public land

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