

MOORABOOL RURAL LANDUSE STRATEGY

BACKGROUND REVIEW + ISSUES AND OPPORTUNITIES PAPER

Prepared by **Hansen Partnership & Ag-Challenge Consulting**
for **Moorabool Shire Council**

AUGUST 2024

ACKNOWLEDGEMENT OF COUNTRY

Council respectfully acknowledges the Traditional Owners of the land on which Moorabool Shire sits, the Wurundjeri Woi-wurrung, Wadawurrung, and Dja Dja Wurrung peoples. We pay our respects to the Elders past, present and emerging.

This report has been prepared by Hansen Partnership with technical inputs from Ag-Challenge Consulting in collaboration with Moorabool Shire Council.



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|------------|------------|------------|------------|------------|------------|
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TABLE OF CONTENTS

INTRODUCTION

MOORABOOL CONTEXT

| | |
|------------------------------------|----|
| Moorabool Shire | 9 |
| Rural Land | 30 |
| Agricultural Land Class Assessment | 38 |
| Agricultural Activity | 42 |
| Strategic & Policy Context | 46 |

ISSUES & OPPORTUNITIES

| | |
|--|----|
| Emerging Trends & Key Pressures | 52 |
| Agricultural Productivity | 54 |
| Intensive Agriculture | 55 |
| Value Add | 56 |
| Non-Agricultural Activities | 57 |
| Climate Change & Environmental Risks | 58 |
| Peri-Urban Land | 59 |
| Rural Subdivision | 60 |
| Rural Dwellings | 62 |
| Rural Living | 64 |
| Rural Tourism | 65 |
| Environment, Landscape and Heritage Values | 66 |

APPENDICES

Appendix One: Literature and Planning Scheme Review

INTRODUCTION

Overview

Moorabool Shire Council, with the assistance of Hansen Partnership (Hansen) and Ag-Challenge, has prepared a Rural Land Use Strategy (RLUS). The RLUS provides a strategic framework to guide the use and development of rural land within the Shire over the coming years. The Background Review + Issues and Opportunities Paper functions to document background analysis and the identification of key issues and opportunities relevant to Moorabool's rural land.

The Moorabool Shire Economic Development Strategy 2023-2027, outlines the importance of rural land and associated rural based economic activity. The report makes the following key observations regarding the economic drivers of Agriculture (page 20):

- *Agriculture, forestry and fishing is a key contributor to the Shire's total output (9%) and employment (9%), as well as generating almost one-third of total export value (23%). The region is a vital food bowl for Victoria, driven by horticultural production (particularly fruit and flowers), as well as sheep and cattle farming.*
- *The role of agriculture is critical to the Shire, particularly as it supports transport and distribution of production to export markets, as well as manufacturing raw materials (particularly downstream food processing).*
- *There is also a strong mining sector in Moorabool Shire, which contributes to regional exports (10%), including production of rock materials and brown coal. This is a unique strength for the Shire which could drive future economic growth.*

The report highlights further strategic considerations relating to agriculture, including (page 25):

Support a strong and productive agricultural sector.

Moorabool Shire has a competitive advantage in agriculture, with well-irrigated and productive land that supports food production and is a key driver of the economy.

Identifying opportunities to strengthen the agricultural sector (and overcome industry challenges) will help realise economic growth, as well as maintain the Shire's competitive advantages.

The Economic Development Strategy seeks to increase the value of the agriculture and forestry sectors, with nominated priority projects including:

- Agribusiness Branding; and
- Agricultural Strategic Plan.

Rural land in the Shire presents unique and significant challenges and opportunities which require appropriate strategies and management techniques to ensure its continued productivity into the future, and to ensure its potential is not eroded by poor decision making around land use. This includes the potential undermining of agricultural potential which can be caused through the proliferation of non-productive hobby farm type uses.

Moorabool's location as the first municipality to the west of, and a key growth corridor of Metropolitan Melbourne presents unique pressures for the Shire compared with other rural councils across Victoria.

The RLUS can assist with balancing the sometimes competing demands generated by the various pressures affecting rural land such as assisting with the retention of productive agriculture land, providing for new development and rural living opportunities, and supporting tourism endeavours, while also managing the related effects on economic productivity, rural character, and environmental assets. This can be achieved by ensuring clear and appropriate use and development guidance is tailored to the local context.

Purpose

The purpose of this report is to develop a picture of rural land in Moorabool. It seeks to respond to the question: what are the key pressures for change, issues, major constraints, and positive opportunities for rural land in the Shire and what makes it unique? The next stage of the project will be to identify how this land should be managed and determine what the future is for Moorabool's rural land.

The report is structured around the following key sections:

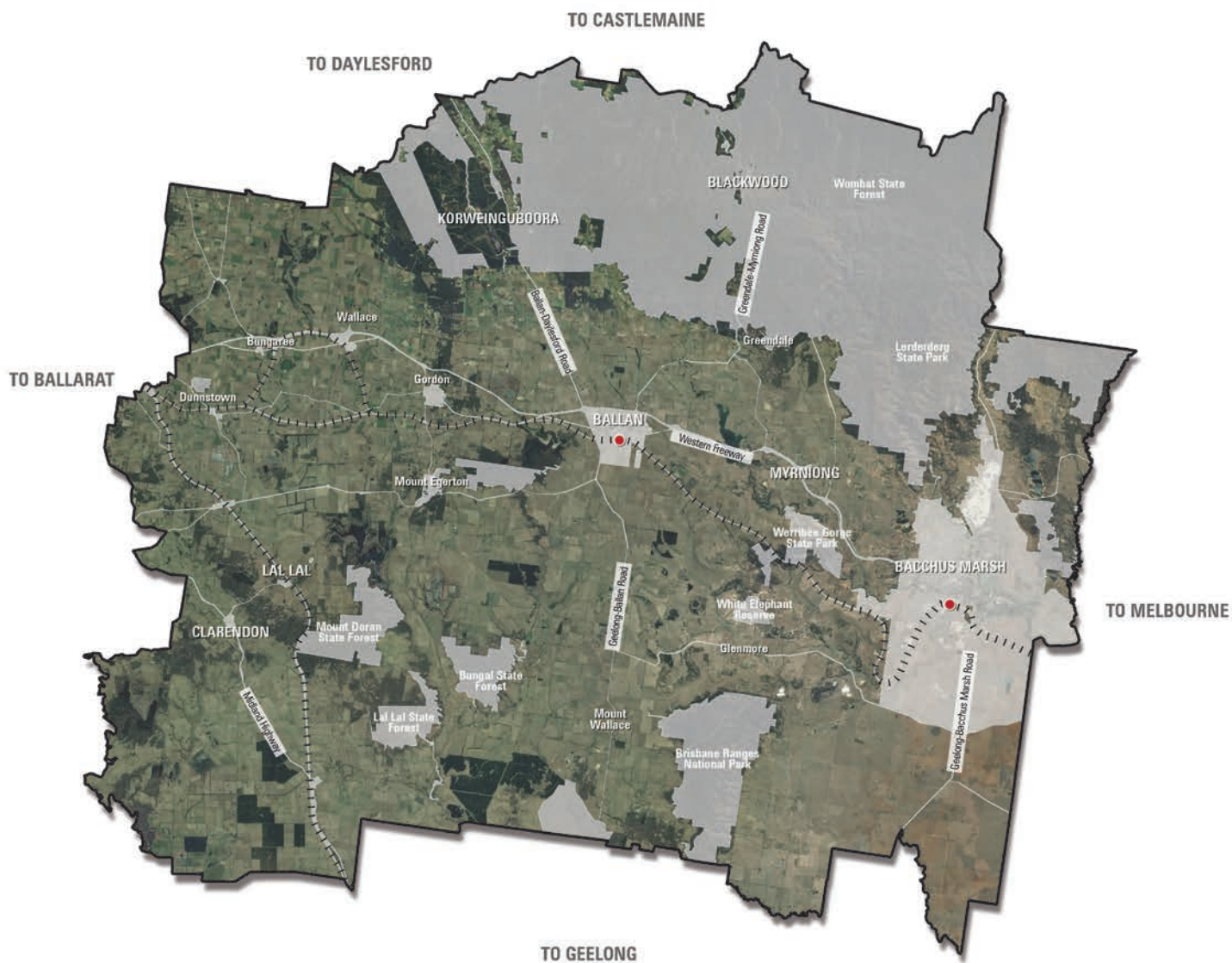
- Moorabool Context - which identifies the known facts about rural land within the Shire including key agricultural activities and emerging trends to help understand the unique pressures.
- Issues & Opportunities - outlines the key pressures for change for rural land in Moorabool and outlines the key issues and opportunities these present.
- Appendices - includes a summary review of relevant background literature and the Moorabool Planning Scheme.

Study Area

The RLUS is broadly focused on land use in the rural areas of Moorabool Shire, that have not been addressed through other recent strategic planning work.

The study area for this project is generally depicted in Figure 1 - Study Area. It captures the entire municipality, but excludes all rural townships, urban settlements, future urban growth areas, and the Public Conservation Resource Zone (PCRZ) which generally applies to National Park, State Forests and State Parks. It also excludes other areas being addressed through other strategic planning work such as the Bacchus Marsh Irrigation District Planning Study.

NOTE: mapped land included/excluded from the focus of the RLUS was defined by a Council provided GIS layers.



Study Area

Trainline | | | | | Excluded From Study Area*

*The study area excludes all rural township, urban settlements, Public Conservation Resource Zone (PCRZ) land which generally applies to National Park, State Forests, and State Parks. It also excludes other areas being addressed through other strategic planning work such as the Bacchus Marsh Irrigation District Planning Study.



Figure 1. Study Area





MOORABOOL CONTEXT



Moorabool Shire

Municipal Overview

Covering 2,110 square kilometres, Moorabool Shire is a fast-growing peri-urban municipality positioned along the major road and rail transport corridors between Melbourne and Adelaide. Its largest town, Bacchus Marsh is located within between 50-60 kms of Melbourne, Geelong and Ballarat central business districts. The population of the municipality is approximately 39,437 (based on 2023 id.Data forecasts). More than half the population lives in Bacchus Marsh and surrounds (25,790). The Shire's second largest population can be found in and around Ballan (2,922).

Due to the proximity of the rural areas of the Shire to Melbourne, Geelong and Ballarat there is strong demand for rural living and rural lifestyle type uses which has not been considered through the urban and township strategies undertaken by Council in recent years, which has included:

- The Bacchus Marsh Urban Growth Framework (2018);
- The Ballan Strategic Direction (2018), and
- The Small Towns and Settlements Strategy (2016).

The current project is not seeking to revisit the focus and recommendations of these strategies, rather seeks to provide a strategy for rural land outside of urban areas and townships of Moorabool.

The Shire is characterised by a diverse range of rural landscapes, including ranges, plains, gorges, and areas of significant agricultural value. A substantial proportion of the Shire comprises of water catchments, State Forests, State Parks, and a National Park, while also accommodating areas of rural living throughout.

Project Overview

Moorabool Shire is one of the fastest growing peri-urban municipalities in Victoria. As a result, the Shire faces a variety of competing challenges for the Shire's rural areas. Primarily, these challenges include land use conflicts, land fragmentation and development pressures.

The Shire receives frequent requests to rezone rural land for residential purposes and planning permits for dwellings, but does not have a clear policy framework to inform decision making, thus generating increasing pressures on farmers from increasing land values, unreliable water supplies,

climate change and changing farming practices, including larger landholdings & commercial large-scale farming, diversification, off-farm incomes and succession planning.

The rural areas of the Shire currently lack clear strategic planning direction, which has exacerbated land use conflicts between farming land and rural residential uses, particularly at the interfaces of towns and urban areas.

A recent review of the Moorabool Shire Planning Scheme identified a number of interrelated rural issues, such as: long-term viability of farming land; a lack of capitalisation of agri-tourism opportunities; increased demand for rural residential living; and a lack of certainty in decision making.

The existing ambiguous and inconsistent local policy framework has only exacerbated the issue, particularly at the interface of Rural Living and Farming Zone (FZ) areas.

2018 Consultation

In November 2018, consultation with Councillors, state departments, staff, water authorities, developers and consultants was undertaken as part of a Planning Scheme review process. The consultation identified a number of emerging themes within the rural areas of the Shire including (amongst other things):

- Uncertainty regarding the suitability of current minimum lot sizes in the Rural Living Zone (RLZ) and Farming Zone (FZ).
- Recognition that housing is increasing in rural areas, but not all land in the Farming Zone (FZ) is good agricultural land or viable farming land.
- The Rural Activity Zone (RAZ) is not utilised within the Planning Scheme.
- Farm dams are disrupting water flow, and rural land use activities need to be reviewed.
- Rural land uses include agriculture (e.g. irrigation, intensive animal husbandry, horticulture, vegetables, turf, stock and pasture, crops), rural living, conservation, agri-tourism (e.g. bed and breakfast accommodation, wineries), rural industry (e.g. bottling plant), water catchment, extractive resource, cultural heritage, transport, and renewable energy projects such as wind and solar farms (to name a few).

State & Regional Context

Moorabool is identified as a Peri Urban Area within Plan *Melbourne 2017 – 2050* with a predominantly rural character located within a 100-kilometre radius of Melbourne.

Peri-urban areas are immensely important to the State's economy, community and environment, and support Melbourne through food production, critical infrastructure (such as water supply catchments and airports), sand and stone supply, biodiversity, recreation and tourism. They provide opportunities for the community to connect with nature, improving health outcomes, as well as maintaining the ecosystem services that underpin Victoria's prosperity, and accommodate businesses that need buffers from residential and incompatible land uses.

Peri-urban areas need to be carefully planned and managed to ensure that non-urban land uses in the peri-urban areas avoid irreversible land-use change, to support their ongoing productivity, and to protect the state's food supply in the face of increasing climate pressures on food production. It is the State Government's goal to double Victoria's agricultural food and fibre production by 2030.

Local Context

Identified as a growth area in the Plan Melbourne and Central Highlands Regional Growth Strategy, the Moorabool municipality is set to undergo significant growth and change. Between 2023 and 2041, the population for Moorabool Shire is forecast to increase by 26,256 persons (66.58% growth), at an average annual change of 2.79%.

The Shire is characterised by its townships in rural settings and its distinctive rural landscapes comprised of ranges, plains, ancient gorges, large grazing and cropping properties, areas of intensive horticulture, wind farms, national and state parks, extractive industry, extensive rural living areas, natural temperate grassland, rivers, creeks and water storages.

The varied and rich topographical features are integral environmental, agricultural, and recreational resources for the Shire. The Brisbane Ranges National Park, the Lerderderg and Werribee Gorge State Parks provide a wide range of outdoor recreation opportunities such as camping, rock climbing, four-wheel driving, bushwalking, horse riding, fishing and mountain bike riding which are appreciated by both residents and visitors to the Shire.

Adjoining Municipalities

Seven municipalities adjoin Moorabool rural areas namely:

- Ballarat to the west.
- Hepburn to the north
- Macedon Ranges to the north east.
- Melton to the east.
- Wyndham to the south east
- Greater Geelong to the south
- Golden Plains to the south west.

The urban areas of Ballarat, along the western boundary, are expanding, with land in the Rural Living Zone (RLZ) and located in the Ballarat City municipality providing a buffer between residential development and existing rural land in Moorabool.

Similarly the urban areas of Melton City Council to the east are expanding, with the majority of land along the boundary in Melton being in the Green Wedge Zone. In Moorabool along the same boundary the existing zones are Low Density Residential Zone (minimum lot size 0.4 ha) and Rural Living (minimum lot size 6ha). The boundary between Melton and Moorabool is mostly defined by Djerriwarrh Creek.

To the north and north east of Moorabool, Hepburn and Macedon Ranges have similar land uses occurring adjacent to the Shire boundary with farming and hobby farms occurring in the areas not protected by Wombat State Forest or Lerderderg State Park. The Rural Conservation Zone (RCZ) land in Macedon adjacent to the boundary functions to protect the water quality in the Merrim and Rosslynne water supply catchments. Goodman Creek forms part of the boundary between Macedon Ranges and Moorabool.

Along the south eastern boundary the majority of land in Wyndham is within the Rural Conservation Zone (RCZ), which forms part of the 15,000ha Western Grassland Reserve. The Reserve, located in both Wyndham and Moorabool municipalities, was identified in the Biodiversity Conservation Strategy 2013 which defines how conservation objectives relating to matters of national environmental significance will be achieved within Melbourne's growth corridors. The Reserve contains the largest and highest-quality example of Natural Temperate Grassland remaining in Victoria and is subject to a Public Acquisition Overlay, as well as an Environmental Significance Overlay. DELWP negotiated voluntary sale agreements with landowners to acquire the land.

The land along the southern Greater Geelong boundary is predominantly within the Farming Zone (FZ), with the Brisbane Ranges National Park being located within both Shires. Balliang Creek and Little River form part of the boundary between the two municipalities.

The Yarowee River forms a physical boundary between Golden Plains and Moorabool's south western boundary. Along this river land in Golden Plains is within the Farm Activity Zone. The Clarendon Plantation is located within Moorabool along this part of the Shire Boundary. Away from the Yarowee River most of the land in the Golden Plains Shire adjacent to Moorabool is in the Farming Zone (FZ).

With the exception of the creeks and rivers mentioned above there are few distinct physical features separating the Moorabool boundary from the surrounding Shire's with roads defining many of the boundaries.

Cultural Heritage

Moorabool Shire is home to considerable cultural heritage assets with First peoples represented by the Dja Dja Wurrung Clans Aboriginal Corporation, Wadawurrung Traditional Owners Aboriginal Corporation and the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation, both are a Registered Aboriginal Party (RAP). Figure 2 depicts the RAP areas for Dja Dja Wurrung, Wadawurrung and Wurundjeri country.

They have lived in the area for more than 60,000 years and thus the landscape holds the imprint of thousands of generations. As a RAP they have responsibilities for the protection and management of Aboriginal Cultural Heritage including the evaluation of Cultural Heritage Management Plans in accordance with the Aboriginal Heritage Act 2006.

The Wadawurrung and Wurundjeri Woi-wurrung peoples have a special interest in preserving not just cultural objects, but the natural landscapes of cultural importance.

Figure 2 also depicts designated areas of Aboriginal Cultural Heritage Sensitivity, which is broadly located along watercourses, as well as applied to larger areas including, Lerderderg State Park, Werribee Gorge State Park, Brisbane Ranges National Park and small targeted sites across the municipality.

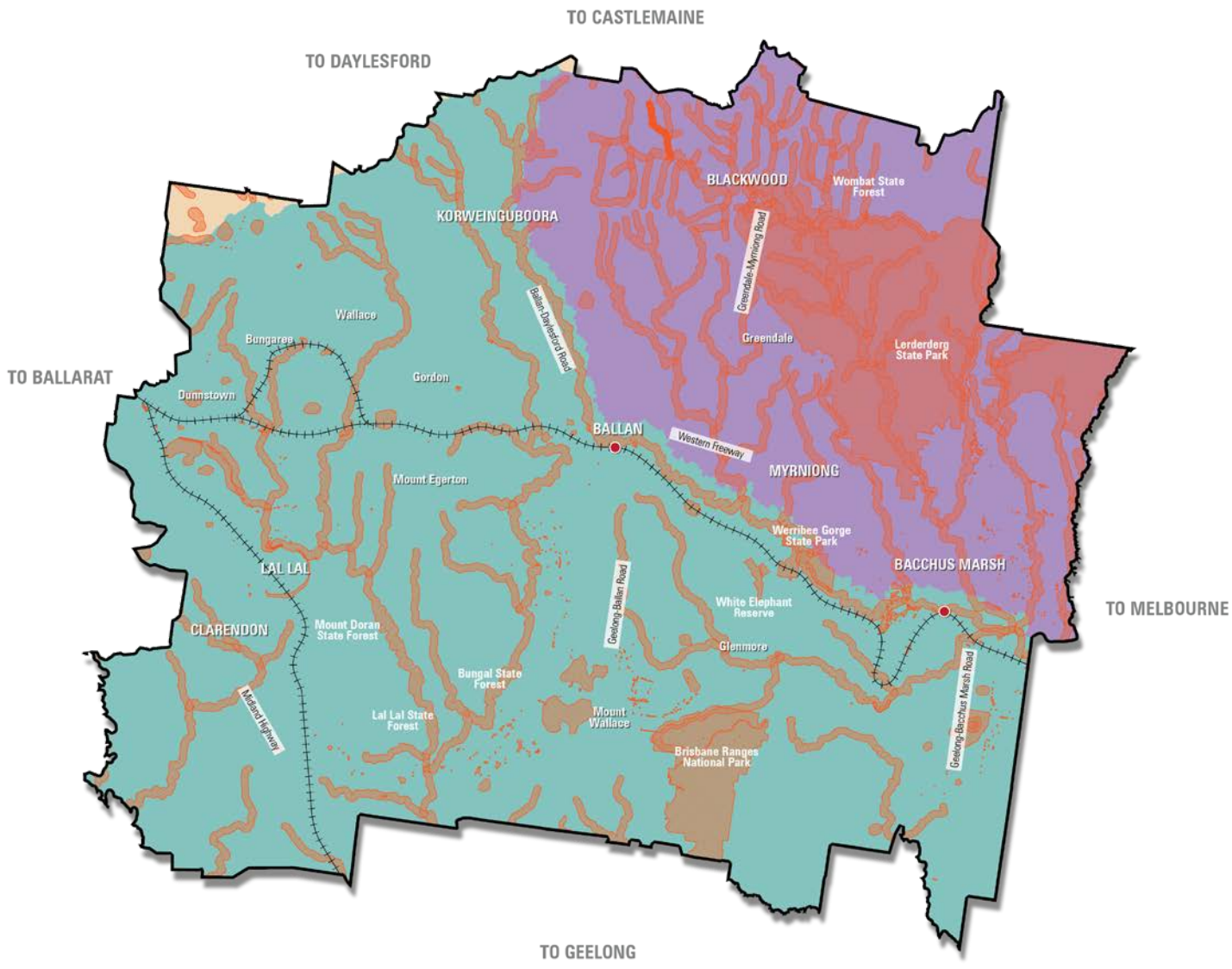
First Peoples places and objects including culturally scarred trees, artefact scatters, earth mounds and burial places can be found all over Victoria including on private property and are often near major food sources such as rivers, lakes, swamps and the coast. Aboriginal Victoria works in partnership with landowners, land managers and First Peoples communities to record, protect and manage these places and objects. Conservation, management and interpretation of these assets are an important part of integrated land use planning.

No specific First Peoples heritage places are listed within the Planning Scheme Heritage Overlay schedule, rather a confidential list of Victorian Aboriginal Cultural Heritage places and sites is maintained by Aboriginal Victoria. The state-wide 'areas of cultural heritage sensitivity' referred to within the Aboriginal Heritage Regulations has given statutory status to recorded First Peoples places and surrounding land and land within 200 metres of named waterways.

It is an objective of the Moorabool Planning Scheme (Clause 15.03-2) to ensure the protection and conservation of places of Aboriginal cultural heritage significance. Strategies include:

- *Identify, assess and document places of Aboriginal cultural heritage significance, in consultation with relevant Registered Aboriginal Parties, as a basis for their inclusion in the planning scheme.*
- *Provide for the protection and conservation of pre-contact and post-contact Aboriginal cultural heritage places.*
- *Ensure that permit approvals align with the recommendations of any relevant Cultural Heritage Management Plan approved under the Aboriginal Heritage Act 2006.*

In addition to items of First Peoples cultural heritage significance, there are numerous post-contact European heritage sites located throughout the rural area of the Shire, and particularly many related to early farming and the gold rush eras. The Heritage Overlay (HO) is used to denote many sites and locations, but may not cover all potential European sites within the municipality.



Areas of Cultural Heritage Sensitivity and Registered Aboriginal Parties

- Trainline
- Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation
- Wadawurrung Traditional Owners Aboriginal Corporation
- Dja Dja Wurrung Clans Aboriginal Corporation
- Areas of Cultural Heritage Sensitivity



Figure 2. Cultural heritage

Geology, Landform & Landscape

Clause 02.01 Context of the Moorabool Planning Scheme makes the following commentary regarding the geology, landform and landscape.

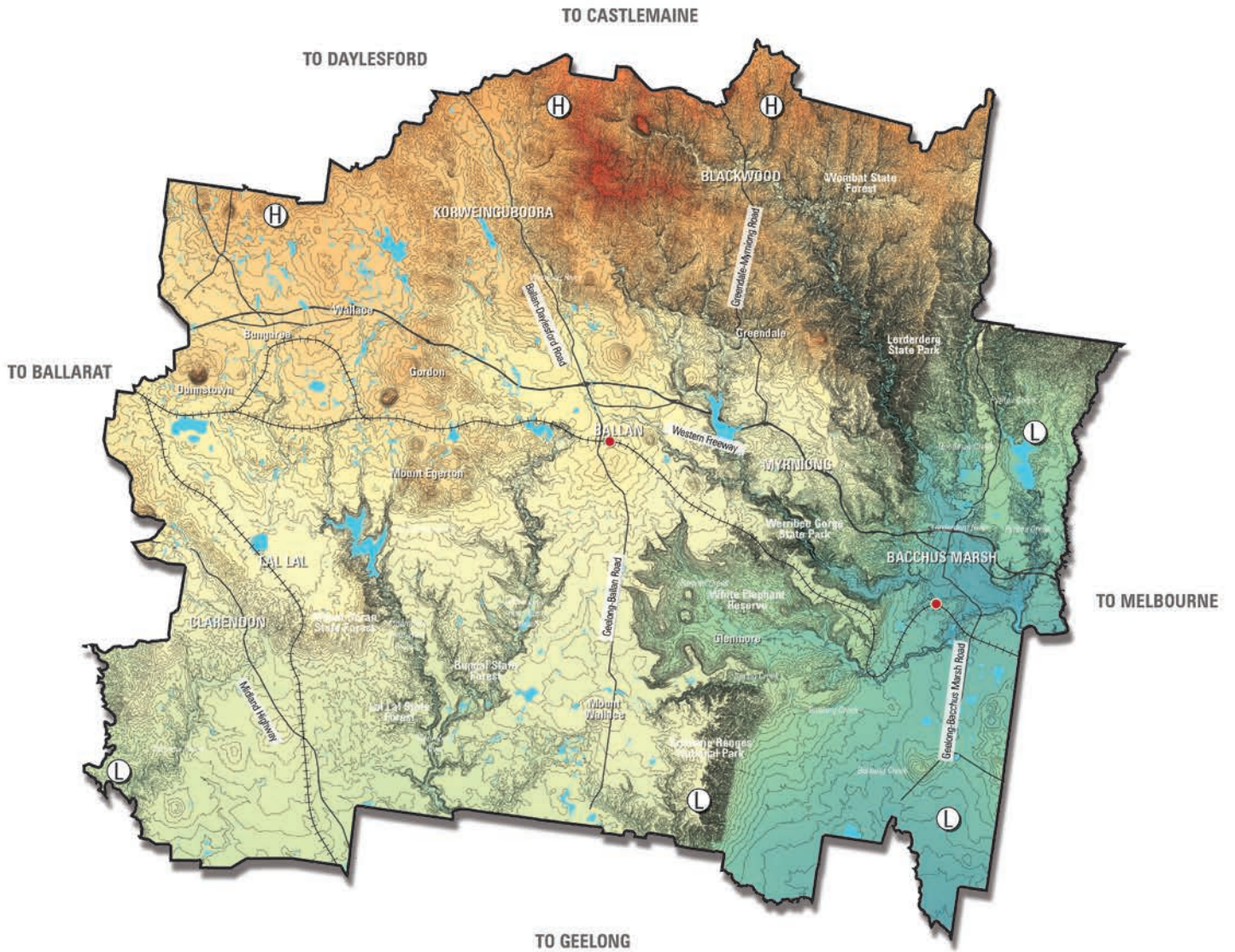
Covering more than 2,110 square kilometres, Moorabool Shire is characterised by small towns and settlements in distinctive rural landscapes which comprise a diversity of vast ranges, plains, ancient gorges, and areas of horticulture. More than 74 per cent of the Shire comprises of water catchments, state forests and national parks.

These environmental assets, as well as existing built form, historic sites and landscapes, contribute to the Shire's numerous places of natural and cultural heritage significance.

Agriculture is a major sector in Moorabool's economy which also contributes to the rural landscape setting that typifies the Shire. Agricultural production is predominantly broad acre cropping and grazing with horticulture on irrigated land around Bacchus Marsh.

Figure 3 - Topography illustrates the plateau landform located to the east of Bacchus Marsh, and the broader rising landforms through the Werribee Gorge State Park (to the west of Bacchus Marsh) and the Lerderderg State Park and Wombat State Forest which spans the entire northern boundary of the municipality.

Landform and topography through the west central and east sections of the municipality is more uniform with broad open landscapes, noting areas of more targeted areas of volcanic cones, and hill ranges at Mount Doran State Forest, Bungal State Park and Brisbane Ranges.



Topography

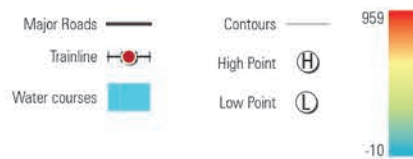


Figure 3. Topography

South West Victoria Landscape Assessment Study (2013)

In 2013 the State Government commissioned an assessment of landscapes across Victoria, which were grouped into large regional assessment areas

The report relevant to Moorabool is the South West Victoria Landscape Assessment Study, noting it extends from the eastern municipal boundary of Moorabool, extending in a large band of land to the western boundary of Victoria.

Commentary regarding existing landscape character which is relevant to rural land within Moorabool is outlined below.

The Character Types and Areas found within the rural areas of the Moorabool Shire have been classified as being within two character types of:

- *The Western Volcanic Plains*
- *The Uplands*

Refer to Figure 4 for a the spatial designation of these character types. The numbers illustrated on the the map correspond to more specifically defined characteristics, as follows:

- *1.3: Volcanic Agriculture*
- *1.9: Vegetated Volcanic Plains*
- *1.11: Winchelsea Western Plains*
- *2.1: Forested Hills*
- *2.2: Residential Forest Edges*
- *2.3: Cleared Pastures*
- *2.5: Plateaus & Gorges*

The study provides a summary statement of the main character types classifications as follows:

1. The Western Volcanic Plain

This extensive Character Type is formed by a flat to undulating basaltic plain scattered with volcanic features including stony rises, old lava flows, numerous volcanic cones and old eruption points which together create a unique visual landscape.

The area is dotted with many beautiful lakes and wetlands that are generally broad and shallow and may contain either saline, brackish or fresh water. Some of the wetlands are RAMSAR listed and of international importance.

2. The Uplands

Defined by topography, this diverse Character Type rises dramatically to the north of the flat volcanic plain, stretching from near the Grampians Ranges in the west to the edge of the study area at Bacchus Marsh in the east.

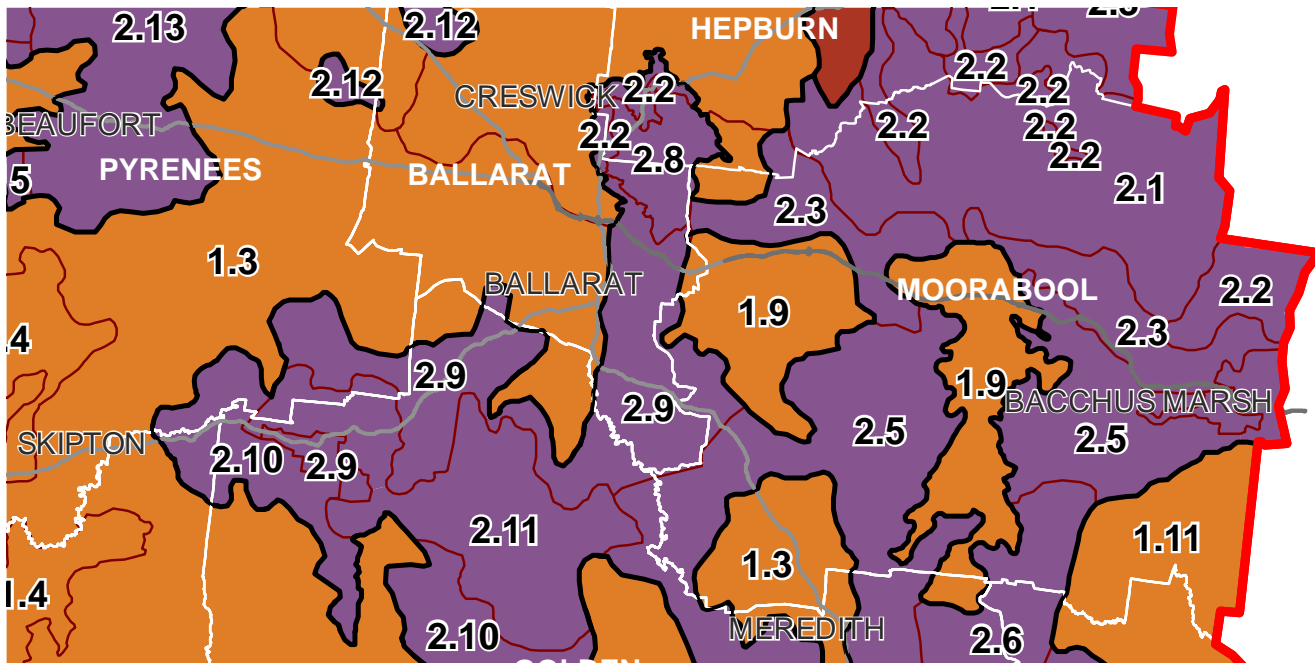
While the Uplands are largely cleared for agriculture they also support numerous large areas of public land, including Parks, Reserves and State Forests which contain a wealth of vegetation including wet and dry forests, Box-Ironbark woodlands and endangered grasslands. This is an area of contrasting topography, picturesque vineyards, lush forests, rolling agriculture and residential enclaves.

The study goes on to define landscapes of state and regional significance. As applicable to Moorabool, this includes various targeted areas within the broader character type of The Uplands, including:

- *2.1: Lerderderg Gorge & State Park: State Significance*
- *2.2: Wombat State Forest: Regional Significance*
- *2.3 Werribee Gorge: State Significance*
- *2.4 Bacchus Marsh Agricultural Valley: Regional Significance*
- *2.5 Parwan Valley: State Significance*
- *2.6 Brisbane Ranges & Rowsley Scarp: State Significance*
- *2.9 Lal Lal Gorge: State Significance*

Refer to Figure 5 for the spatial designation of the above.

The study further defies each of the key elements of existing character classifications of each of these designated landscapes.



CHARACTER TYPES

- 1. The Western Volcanic Plains
- 2. The Uplands

Figure 4. extract of Character Types & Areas - South West Victoria Landscape Assessment Study (2013) (zoomed in on Moorabool Shire)

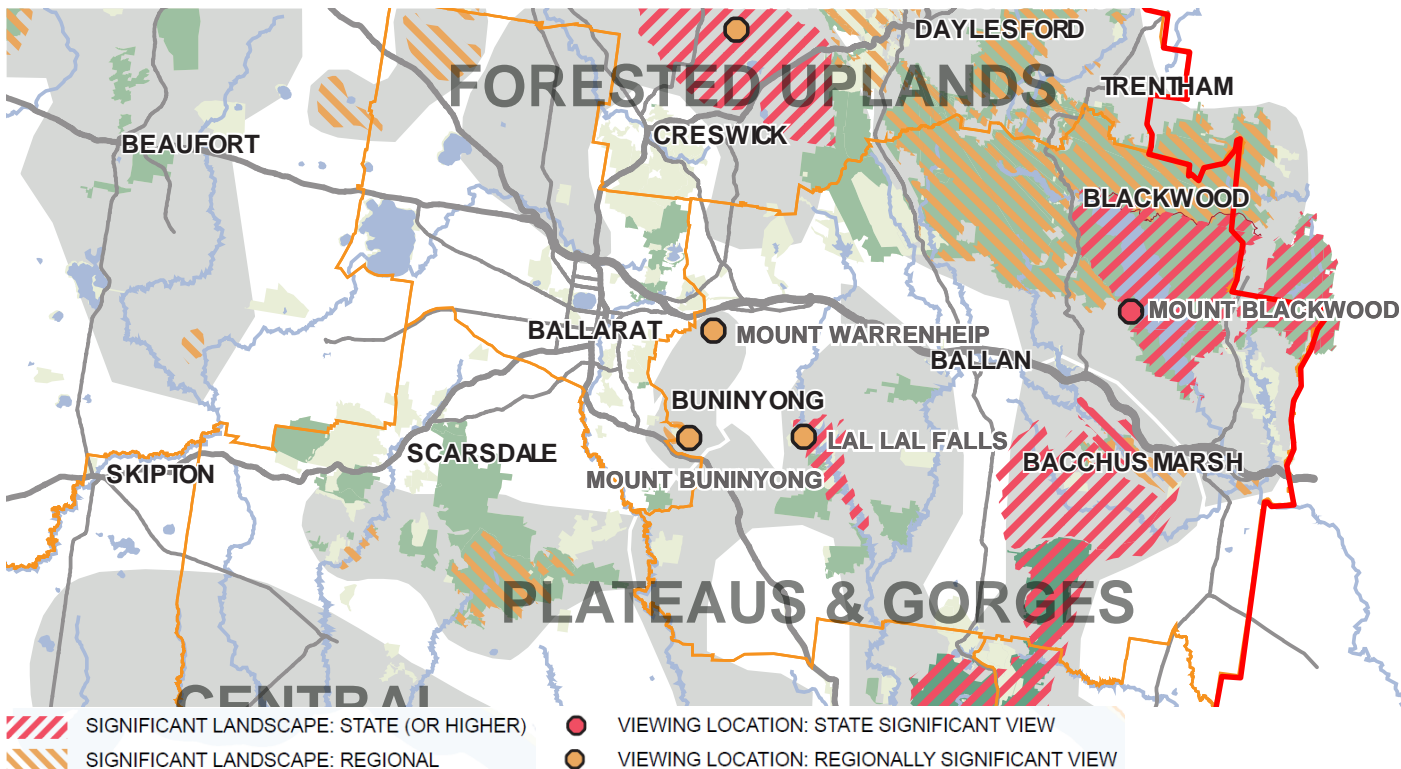
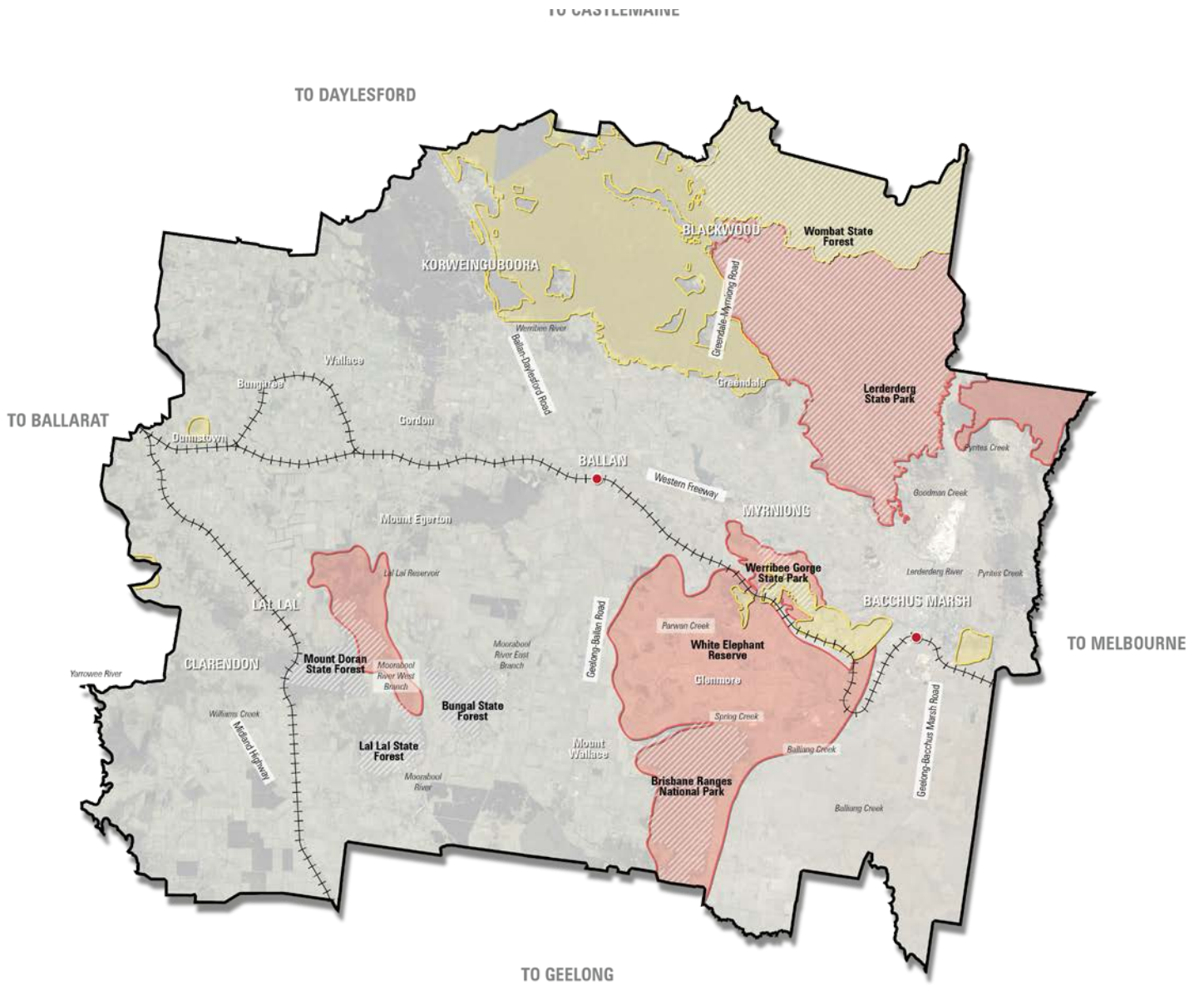


Figure 5. Landscape Character extracts - South West Victoria Landscape Assessment Study (2013) (applicable to Moorabool Shire)



Landscape Characters

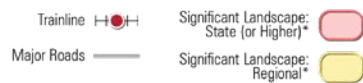


Figure 6. Landscape Character Areas

*Note: Data sourced from "South West Victoria Landscape Assessment Study: Significant Landscapes of South West Victoria (2013)

Conclusion on Landscape Assessment

In building upon the classification and definition of landscape types and significance across South West Victoria, the study made further recommendations regarding the targeted application of Significant Landscape Overlays (SLOs), some of which were proposed to be implemented within Moorabool.

Noting that the South West Landscape Assessment was completed a decade ago now, attempts in other municipalities have since been made through formal planning scheme amendment processes to implement recommendations for the targeted application of Significant Landscape Overlays (SLOs). However, through those formal processes it was revealed the methodology employed for the 'landscape value assessment' was too broad/vague, and the spatial application 'too coarse' to strategically inform and underpin and 'on ground' application of an SLO.

Therefore, for this specific reason, the recommendations of the study relating to the application of SLO's within Moorabool are not referenced or summarised here, nor should they be sought for formal implementation. Despite this, the prepared statements of existing character relating to Moorabool (as outlined through this section) remains as relevant and useful content in defining a broader landscape character, which can be used to inform the broader development of the rural landuse strategy.



Environment

Some of the important ecological and environmental assets of the Shire include:

- Werribee River
- Moorabool River
- Yarowee River
- Little River
- Lerderderg River
- Balling Creek
- Djerriwarrh Creek
- Goodman Creek
- Werribee Gorge State Park
- Lerderderg State Park
- Wombat State Forest
- Mount Dorna State Forest
- Bungal State Park
- Brisbane Ranges.
- Seven water storage reservoirs are located within the Shire and are managed by three different water authorities:
 - Moorabool, Wilsons, Lal Lal Reservoirs, Beals, Colbrook and Pincott's Reservoirs (managed by Central Highlands Water)
 - Bostock and Bolwarrah Reservoirs (managed by Barwon Water)
 - Pykes Creek and Merrimu Reservoirs (managed by Southern Rural Water)

Noting that Moorabool is managed by three different water authorities, these are illustrated on Figure 9.

Bioregions

Due to Moorabool's proximity to Melbourne, connections to regionally significant destinations and the scenic qualities offered by the environmental assets, makes the Shire a desirable location for residents and tourists alike.

Moorabool Shire is covered by two bioregions, including the Central Victorian Highlands and Victorian Volcanic Plains. Each bioregion covers a vastly larger regional area than the Moorabool Shire municipal boundaries. Within Moorabool, the Central Victorian Highlands bioregion is focused mainly on the elevated bushland areas and immediate surrounds, including Wombat State Forest, Lerderderg State Park, Werribee Gorge Park, Brisbane Ranges National Park and Mount Doran State Forest. The Victorian Volcanic Plains bioregion then applies to lower lying land across the balance of the Shire, but does apply to Bungal State Forest.

Refer to Figure 7 for the spatial illustration of the two applicable bioregions for Moorabool. The map represents the current state of these bioregions, showing their more intact quality associated with National Parks, State Forests and reserves, and their varying levels of depletion across the remainder of the Shire. The description for the full extent of each bioregion is quoted below:

Central Victorian Uplands bioregion

Central Victorian Uplands, located in the central Victoria, is dominated by Lower Paleozoic deposits giving rise to dissected uplands at higher elevations, amongst granitic and sedimentary (with Tertiary colluvial aprons) terrain with metamorphic and old volcanic rocks which have formed steeply sloped peaks and ridges. The less fertile hills support Grassy Dry Forest and Heathy Dry Forest ecosystems. Herb-rich Foothill Forest and Shrubby Foothill Forest ecosystems dominate on the more fertile outwash slopes. The granitic and sedimentary (with Tertiary colluvial aprons) terrain is dominated by Grassy Woodlands much of which has been cleared. Lower lying valleys and plains are dominated by Valley Grassy Forest and Plains Grassy Woodland ecosystems.

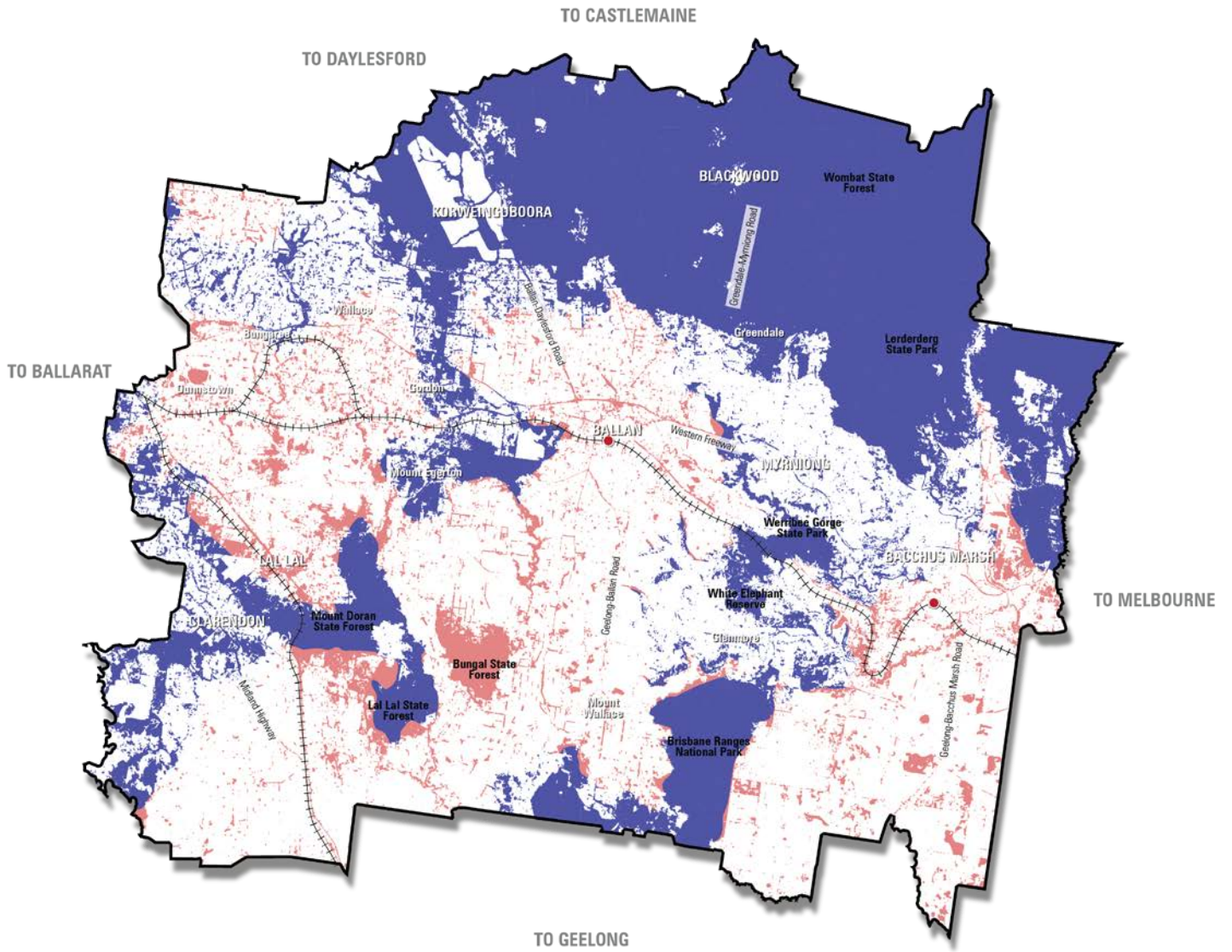
Victorian Volcanic Plain bioregion

Victorian Volcanic Plain, located in west Victoria, is dominated by Cainozoic volcanic deposits. These deposits formed an extensive flat to undulating basaltic plain with stony rises, old lava flows, numerous volcanic cones and old eruption points and is dotted with shallow lakes both salt and freshwater. Numerous volcanic cones dot the landscape with scoria cones being the most common (e.g. Mt Elephant, Mt Napier and Mt Noorat) although some basalt cones are present (e.g. Mt Cottrell).

Soils are generally shallow reddish-brown to black loams and clays. They are fertile and high in available phosphorous. Older flows in the Cressy and Hamilton areas have allowed a greater development of deep soils. Dark saline soils occur around the margins of some lakes.

The soils are variable ranging from red friable earths and acidic texture contrast soils (Ferrosols and Kurosols) on the higher fertile plain to scoraceous material, and support Plains Grassy Woodland and Plains Grassland ecosystems.

Calcareous sodic texture contrast soils grading to yellow acidic earths (Chromosols and Sodosols to Dermosols), on the intermediate plain, and grey cracking clays (Vertosols) on the low plains, support Stony Knoll Shrubland, Plains Grassy Woodland and Plains Grassy Wetland ecosystems.



Ecological Vegetation Classes (EVC) - 2005 Bioregions

Trainline  Central Victorian Uplands  Victorian Volcanic Plain 



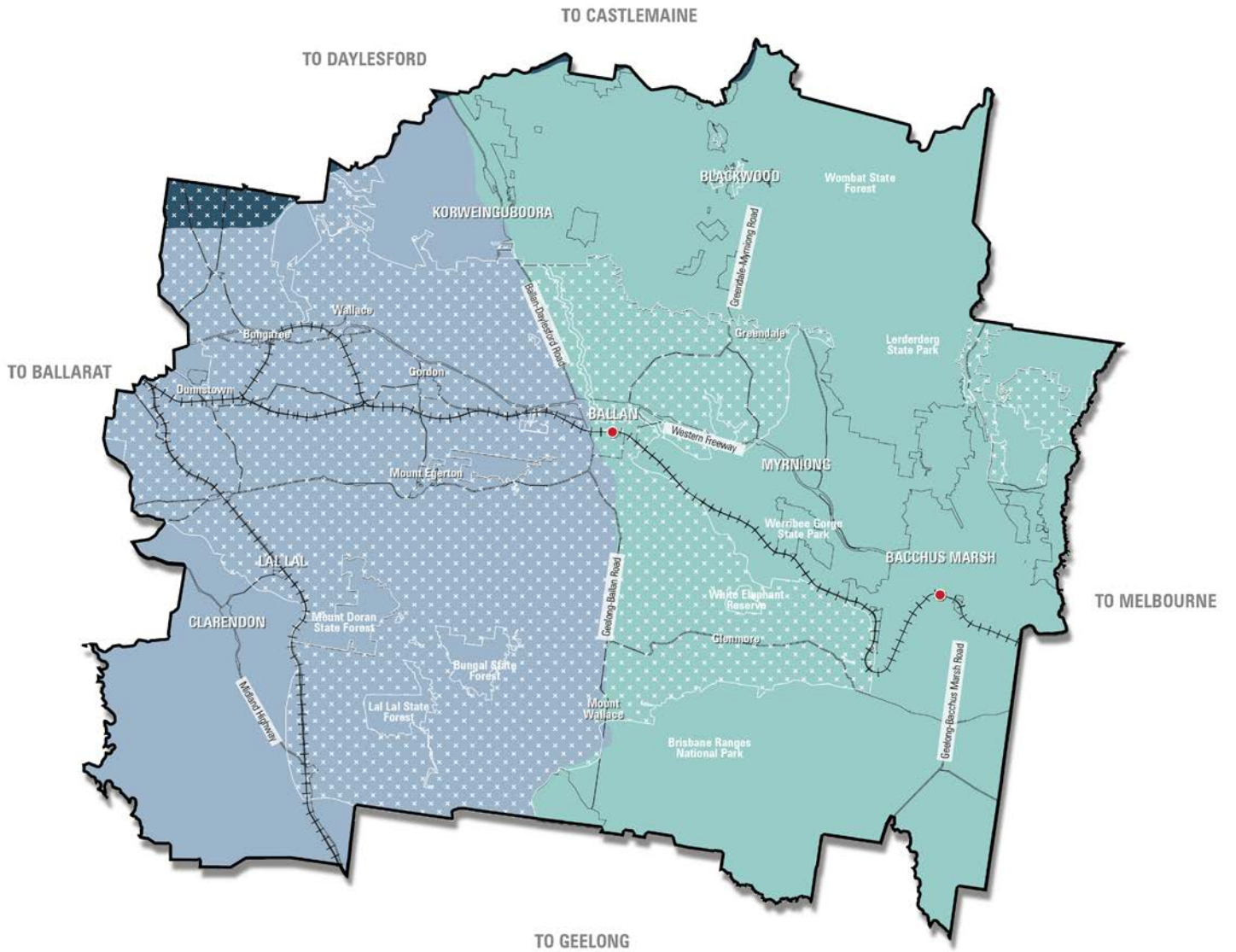
Figure 7. Current Bioregions

Catchment Management Authorities

Melbourne Water, North Central and Corangamite Catchment Management Authorities (CMA), manage a range of environmental projects focused on delivering large scale natural environment improvements to landscapes throughout the region in partnership with investors, the local community, farmers, business groups, local government, government agencies, educational institutions and indigenous communities across the Shire. Figure 8 shows the CMA boundaries while waterways and water storage reservoirs are shown on Figure 10.

The Corangamite CMA also manages three environmental water entitlements held by the Victorian Environmental Water Holder: Moorabool River, Lower Barwon wetlands and Upper Barwon River.





Water Catchments & Catchment Management Authorities

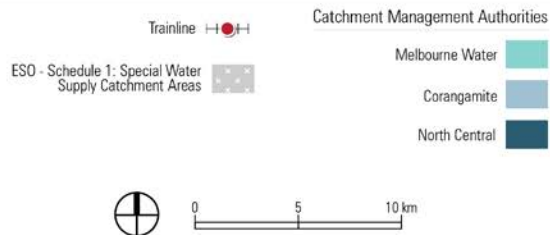


Figure 8. Catchment Management Areas and Waterways Authorities

Water Corporations

Figure 9 illustrates the areas of Moorabool Shire under the management of the Central Highlands Water, Greater Western Water and Barwon Water.

These water authorities are also responsible for the supply of drinking water, sewer, recycled water, provision of irrigation water to farmers, licensing of bore and farm dam construction, and the management and control of licences to take and use of water from rivers, creeks and underground sources. They also harvest and store water in large dams to provide water for a range of customers, such as the Bacchus Marsh Irrigation District and Greater Western Water who provide water, recycled water and sewer to Bacchus Marsh residents. Victorian Water Authorities support community, education and involvement in sustainable water management, with VicWater being their peak industry association.

Southern Rural Water manages rural water across the southern half of Victoria, from the Great Divide to the coast - about 44% of Victoria, and manage the Bacchus Marsh Irrigation District with the amount of water delivered each year dependent on seasonal conditions.

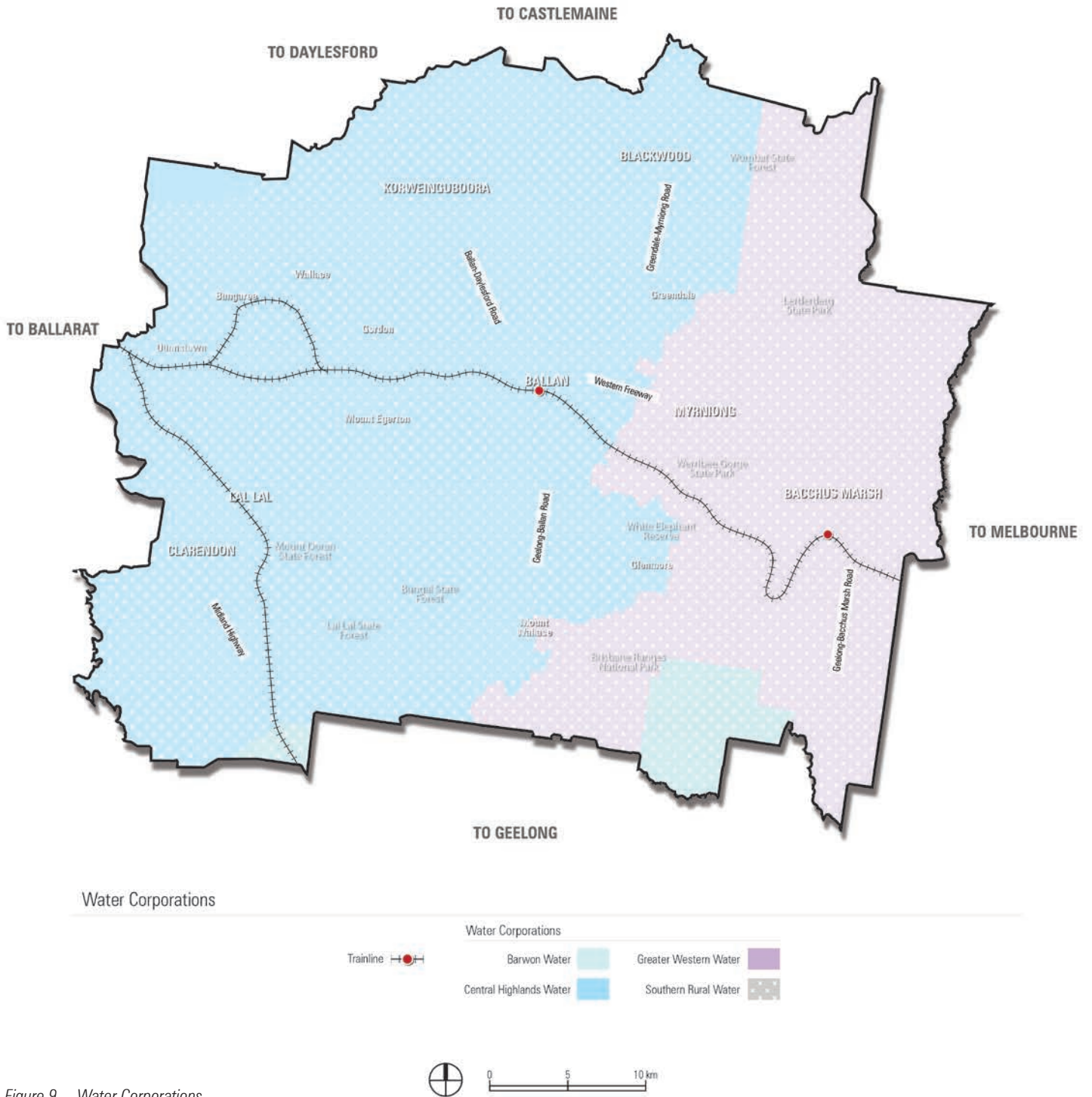


Figure 9. Water Corporations

Special Water Catchment Areas

The Water Act is the legal framework for managing Victoria's water resources. The water supply catchments are protected under the *Catchment and Land Protection Act 1994* whilst the protection of surface waters, groundwater and human health are all requirements of the *Environment Protection Act 1970*.

Figure 10 illustrates that a significant proportion of rural areas within Moorabool Shire have been designated as a Special Water Supply Catchment Area (SWSCA). Within SWSCA where reticulated sewer is not provided the Minister for Water's *Guidelines Planning permit applications in Special Water Supply Catchment Areas: 2024* is applicable. The guidelines stipulate there should not be more than one dwelling per 40 hectares unless a catchment policy has been prepared that provides for a greater density, or a Domestic Wastewater Management Plan (DWMP) has been prepared and a range of other requirements are satisfied. Moorabool has a DWMP and it was updated in 2021.

The key focus of the Moorabool DWMP is to develop and implement strategies that will achieve the objectives of the State Environment Protection Policy (Waters) 2018 (SEPP) and provide for continued growth within the Shire in areas that rely on septic tank systems for sewerage treatment and disposal. The Moorabool DWMP outlines amongst other things that Planning Permit Applications in Special Water Supply Catchment Areas are to be referred to the relevant water authority for consideration.

The Moorabool DWMP supports an increase in the 1 dwelling per 40ha requirement by water authorities if wastewater risks can be effectively managed and new and innovative solutions are applied.

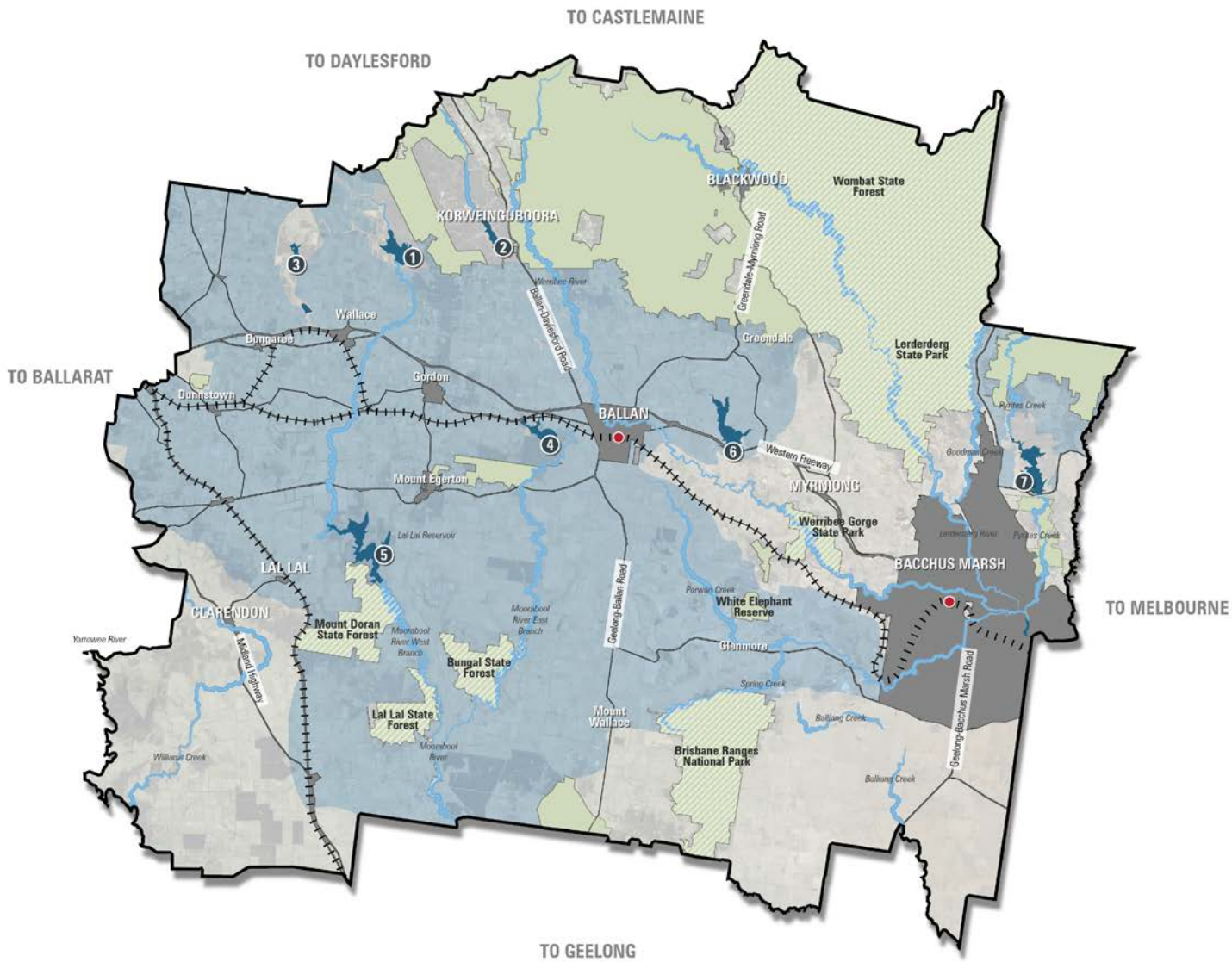
Waterways

Waterways within the Shire are illustrated on Figure 10. The Moorabool River is a tributary of the Barwon River, it flows southward from the Central Highlands between Ballarat and Ballan and joins the Barwon River at Fyansford. The Moorabool River, (Moorabull Yaluk) flows through Wadawurrung Country and has great cultural significance for Wadawurrung Traditional Owners. The Moorabool River is a water supply catchment for Barwon Water and Central Highlands Water. The manager of this waterway is the Corangamite CMA. It is a highly regulated waterway with three major water storages – the Moorabool, Bostock, and Lal Lal Reservoirs.

The river's catchment is heavily farmed, with about 75% of its 1,150sqkm area used for agriculture. It is one of the most stressed rivers in Victoria, and as a water supply catchment with significant environmental values it is listed as a priority waterway in the Corangamite Waterway Strategy 2014-22.

Water for the environment can be released from Lal Lal Reservoir (Moorabool River Environmental Entitlement 2010) as base flow to maintain connectivity and provide fresh water for plants and animals. It can also be released as a 'fresh' or a pulse of water which carefully timed to trigger fish migration and spawning. This entitlement is subject to delivery rules (a maximum of 7,500ML over three years) which effectively provides the environment with an average of 2,500ML per year. No environmental entitlement exists for Bostock or Moorabool reservoirs, however passing flow rules are in place (e.g Cultural water flows is acknowledged as an important part of First Peoples way of reconnecting with their cultural right to manage water systems).

The Werribee River flows south-east from the Wombat State Forest near Ballan, through the Werribee Gorge to Bacchus Marsh and then into Port Phillip Bay at Werribee. The Lerderberg River is a major tributary that joins the river at Bacchus Marsh. The manager of this waterway is Melbourne Water.



Environmental Features



Figure 10. Environmental Features

Renewable Energy

There are three wind farms in Moorabool (located across four sites), which accommodate wind turbines to capture the power of the wind to turn this energy into electricity. Wind power is a clean and renewable energy source, given wind is an abundant and inexhaustible resource, but it also provides electricity without burning any fuel or polluting the air.

Typically, wind energy facilities are located on sites that have steady winds throughout the year, good road access and proximity to the electricity grid where there is capacity to transmit the energy produced. The existing wind farms in Moorabool are each located within rural areas and are illustrated on Figure 12 and further described below.

Yaloak South Wind Farm

The Yaloak South Wind Farm is located in the Parwan Valley, 15km south of Ballan. Construction began in 2016 and was completed in 2018, and comprises 14 turbines, each 126.5m tall.

Lal Lal Wind Farm

The Lal Lal Wind Farm is located at Yendon and Elaine and accommodates 60 turbines, each 161m tall. Construction was completed in 2022 and all turbines are now operational.

Moorabool Wind Farm

The Moorabool Wind Farm is located between Ballan and Mount Wallace, and includes a northern and southern section. Construction started in July 2018 and finished in late 2020. It accommodates 104 turbines, each 169m tall.

With regard to solar farms, there is currently 1x solar application in Elaine and 1x battery application in Elaine/Mt Doran. Both are with the Minister for Planning to assess as the responsible authority. As a broader comment on solar farm potential, Victoria has less solar farm than other States. This is perhaps due to limited availability of suitable locations with plentiful sun. However this may change as solar technology improves in capacity to capture solar energy.

Tree Plantations

Moorabool accommodates a number of active tree plantations which are dispersed across rural areas of the Shire. Such tree plantations are a legitimate landuse to be established in rural areas, and functionally constitute a valuable renewable resource of material for the building and construction industries.

Given Moorabool's close proximity to metropolitan Melbourne, with good transport links, there is strong potential for expanded use of land for this rural industry as a legitimate rural use.

Irrigated Land Use

Although the Bacchus Marsh Irrigation District is outside of designated study area, there is another irrigation project which is within project scope. This is known as the Western Irrigation Network (WIN), a \$116 million project jointly funded by the Australian Government, Greater Western Water and the private agribusinesses who will become the network's foundation customers.

WIN is a major recycled water irrigation scheme for the Parwan-Balliang agricultural district to the west of Melbourne, with the extent of land within this area illustrated on Figure 12.

Specifically, the network will connect dryland farmers in the Parwan-Balliang area, near Bacchus Marsh, with a guaranteed supply of Class C recycled water suitable for irrigation farming.

Based on project details from Greater Western Water, the scheme will initially supply around 2400 million litres of recycled water per year, although volumes supplied will increase as irrigators adapt and expand production. It is anticipated that by 2050, WIN could deliver up to 18,000 million litres of recycled water to farmers annually.

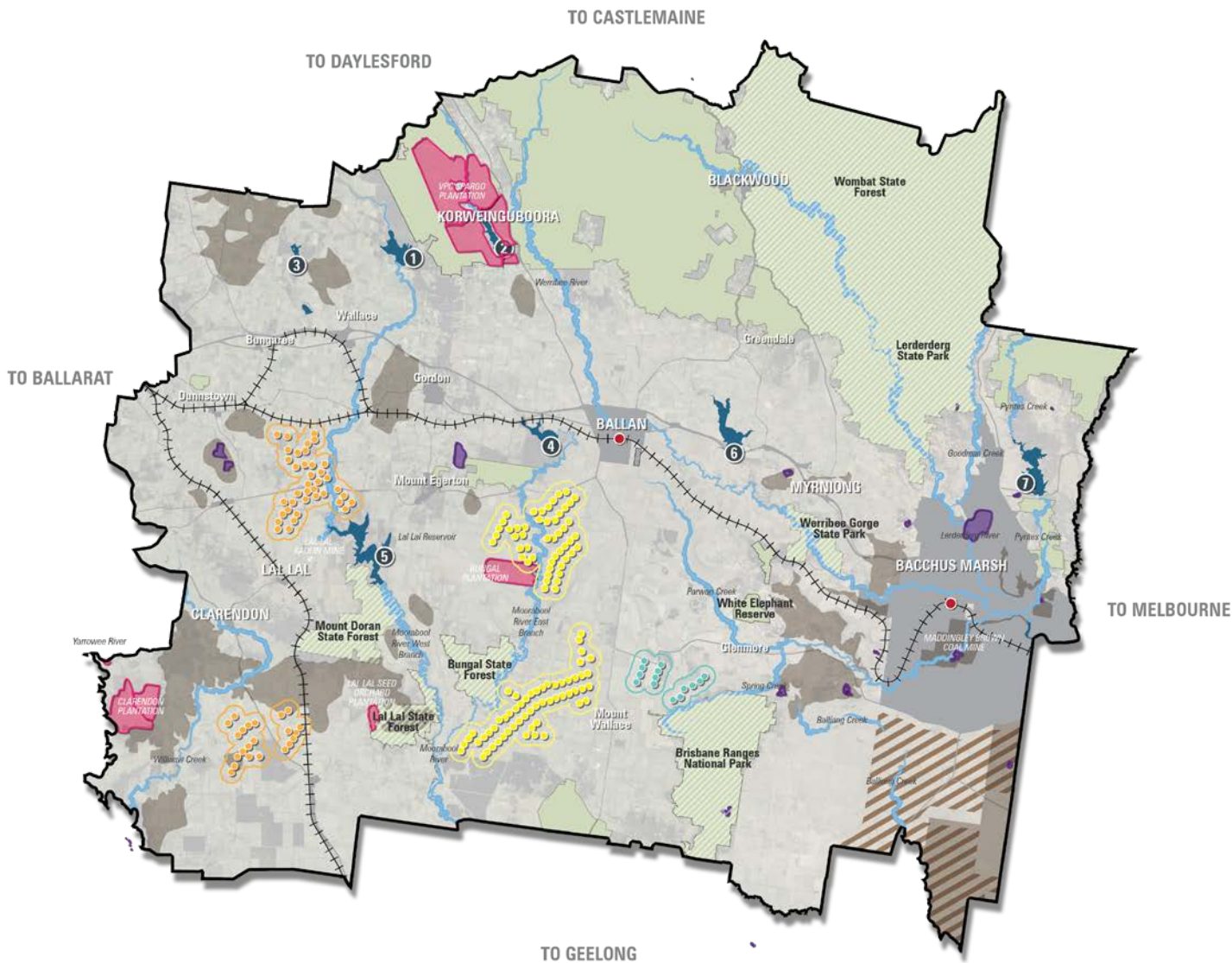
WIN has the potential to transform farms currently dependent on unreliable rainfall by connecting them to a year-round guaranteed water supply. It will also assist Greater Western Water manage the increasing volumes of recycled water being produced by the growing population in the Melton, Sunbury and Bacchus Marsh areas.

Quarries, Mines & Extractive Industry Interest Areas (EIAs)

Moorabool accommodates a number of active quarries and mines which are legitimate landuses for rural location and are important for the supply of various raw material and resources. In addition, various large sections of rural land have been designated by State Government as being Extractive Industry Interest Areas (EIAs).

An EIA is an area identified as containing or potentially containing stone, sand and clay resources of sufficient quantity and quality to support commercial extractive industry operations, in areas with good transport links and relatively few environmental constraints.

In a policy context EIAs are addressed in Clause 52.09 of the planning scheme, noting the use of designated land for an extractive industry would require planning approval. The designation of land as an EIA does not imply that an extractive industry can be established 'as-of-right', rather the merits of it would be assessed through a planning application process.



Renewable Energy & Sustainable Resources



Figure 11. Environmental Features

Rural Land

The Rural Land Use Strategy (RLUS) is broadly focused on land use in the rural areas of Moorabool Shire, that have not been addressed through other recent strategic planning work.

The study area for this project is generally depicted in Figure 1 - Study Area. It captures the entire municipality, but excludes all rural townships, urban settlements, future urban growth areas, and the Public Conservation & Resource Zone (PCRZ) which generally applies to National Park, State Forests and State Parks. It also excludes other areas being addressed through other strategic planning work such as the Bacchus Marsh Irrigation District Planning Study.

NOTE: mapped land included/excluded from the focus RLUS was defined by a Council provided GIS layers.

Rural Land Defined

Rural land, as defined by this review, is land within the study area that is included within one of the Rural Zones of the Moorabool Planning Scheme. In total there are six rural zones within the Victorian Planning Provisions, however only three are used within the Moorabool Planning Scheme.

These zones are:

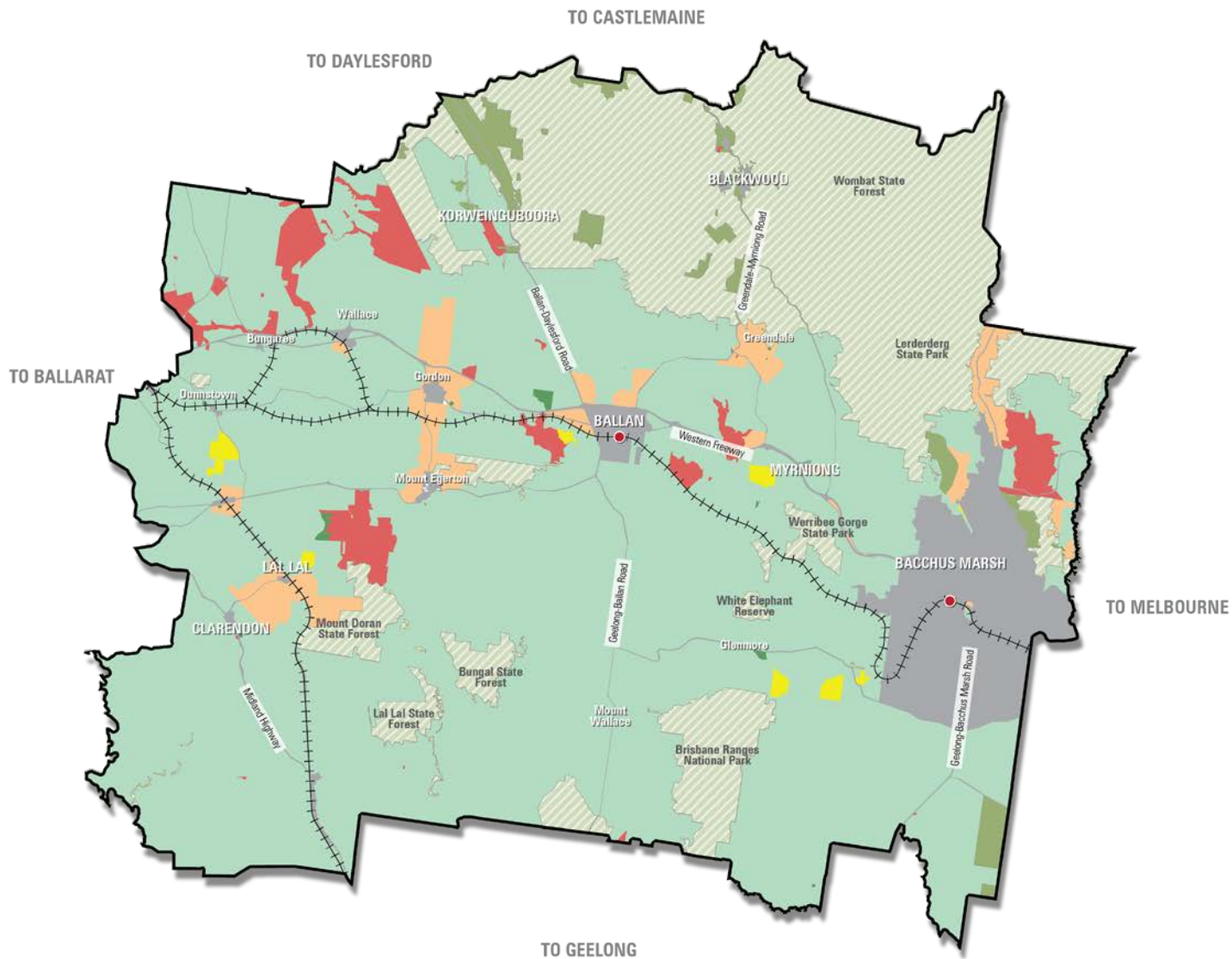
- Farming Zone (FZ)
- Rural Living Zone (RLZ)
- Rural Conservation Zone (RCZ)

While the above zones constitute the predominant rural coverage found within Moorabool, it is noted that there is a couple of other zones present in targeted rural areas, including:

- Industrial 1 Zone (I1Z)
- Public Park & Recreation Zone (PPRZ)
- Special Use Zone (SUZ)
- Public Use Zone (PUZ)

Figure 12 provides a zoning map of rural land within Moorabool. These zones are further outlined regarding role and scope within Appendix 1.





Planning Zones



Figure 12. Rural Zones

Overlays

There are also a range of Overlays relevant to rural land within Moorabool that are mapped on Figure 14. Summary details of the full suite of overlays as illustrated are outlined within Appendix 1.

The two overlays with greater relevance to the RLUS and extent of land coverage in the study area are:

- Bushfire Management Overlay (BMO).
- Environmental Significance Overlay - Schedule 1 (ESO1).

The BMO applies to large areas of the Shire and is particularly focused on bushland, forested and highly vegetated areas, noting that many of these areas are within the Public Conservation & Resource Zone (PCRZ), and technically excluded from the scope of the RLUS.

The ESO1 covers large parts of the rural areas of the Shire and relates to land which has been designated to be within a Special Water Supply Catchment Area (SWSCA). Land designated as a SWSCA has a specific role in the provision of a drinking water supply for Melbourne, Ballarat, Ballan, Gordon and Mt Egerton, where protecting and maintaining water quality is of critical importance.

A guiding principle for the development of land within a SWSCA is to manage the potential cumulative risks of contamination by minimising the number of waste generating uses (such as but not limited to dwellings), within open water supply catchments.

Relevant guidelines for use and development within a SWSCA as a guiding principle seek to limit dwelling to a minimum of 1:40 hectares. This consideration and management of development with a view to maintaining the quality of water supply is separate and in addition to other considerations relating to the landuse and development under the relevant zoning of land.

The guidelines further stipulate there should not be more than one dwelling per 40 hectares unless a catchment policy has been prepared that provides for a greater density, or a Domestic Wastewater Management Plan (DWMP) has been prepared and a range of other requirements are satisfied.

Moorabool has a DWMP (updated in 2021), where the key focus is to develop and implement strategies that will achieve the objectives of the State Environment Protection Policy (Waters) 2018 (SEPP) and provide for continued growth within the Shire in areas that rely on septic tank systems for sewerage treatment and disposal.

The Moorabool DWMP supports an increase in the 1 dwelling per 40ha requirement by water authorities if wastewater risks can be effectively managed and new and innovative solutions are applied.



Planning Overlay

| | | | |
|-------------------------------------|----------------------------------|---|----------------------------------|
| Trainline | Bushire Management Overlay (BMO) | Environmental Significance Overlay (ESO) | Restructure Overlay (RO) |
| Design & Development Overlay (DO) | Heritage Overlay (HO) | Land Subject to Inundation Overlay (LSIO) | Public Acquisition Overlay (PAO) |
| Significant Landscape Overlay (SLO) | Airport Environs Overlay (AEO) | | |

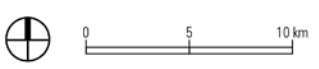


Figure 13. Overlays on rural land

Rural Lots

There are approximately 7,800 rural lots within the three rural zones of the Shire, being the focus of the RLUS. The breakdown of existing rural allotments by zone and size range is documented within Table 1.

Table 1. Rural Lot Sizes within Study Area

| Lot Size | FZ | RCZ | RLZ |
|----------------|-------------|------------|--------------|
| <4ha | 1948 | 149 | 122 |
| >4ha to <10ha | 596 | 168 | 120 |
| >10ha to <20ha | 963 | 120 | 414 |
| >20ha to <40ha | 831 | 59 | 335 |
| >40ha to <80ha | 562 | 111 | 345 |
| >80ha | 615 | 140 | 176 |
| Total | 5515 | 747 | 1,512 |

An analysis of the current lot size characteristics of rural land within the study area indicates that there is a diverse range of lot sizes. For example, lots 4ha and over can accommodate a septic system and lots over 40ha in size do not require a planning permit for a dwelling within the Farming Zone (FZ).

Land within the Rural Conservation Zone (RCZ) and Rural Living Zone (RLZ) are located in relatively confined areas of the Shire, focuses on the edges of existing townships, small standalone settlements and along select main roads.

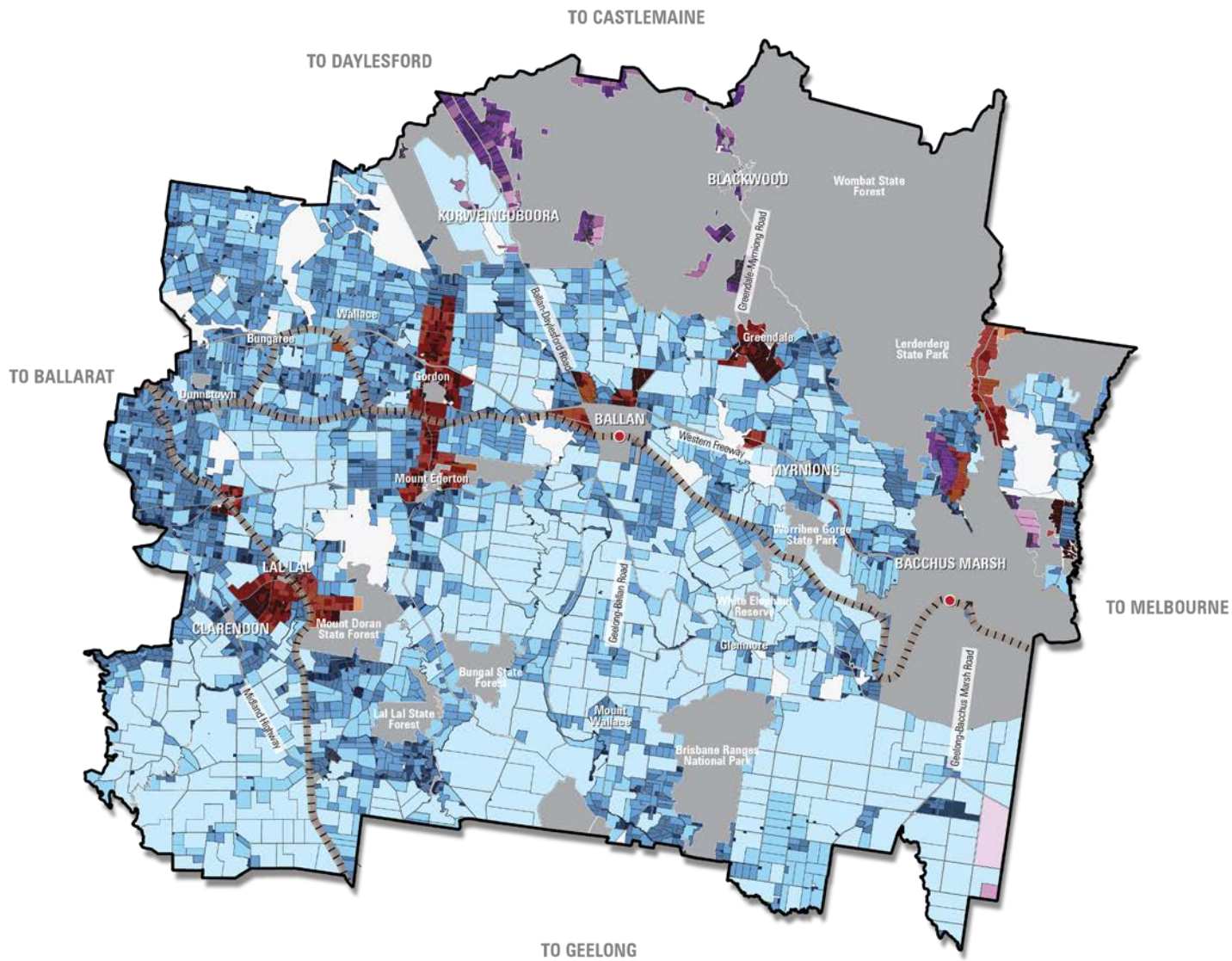
Within the Farming Zone (FZ) larger lots of above 40ha are located through central to southern parts of the Shire. As illustrated on Figure 14, allotment sizes within the balance of the Farming Zone (FZ) are mixed, with the greater extent of smaller allotments found towards the western boundary of the Shire, of which contains some of the most productive land within Moorabool.

Land Holdings

Lot size is not the only indicator of farm size. Larger farms are often comprised of a number of smaller lots under single ownership as part of a larger holding or 'tenement', which is typical of most rural areas in Victoria. When combined, these lots create a large enough area of land to carry out agricultural operations. However, spatially identifying larger holdings or 'tenements' can be complicated, as often individual land parcels are registered under separate business names and/or corporate entities.

With specific reference to Figure 14, it illustrates clusters of smaller allotments in the Farming Zone (FZ) located within western half of the municipality, and particularly towards the municipal boundary. However, this observation is effectively the opposite of on-ground landuse featuring larger existing farms through the same areas, which indicates the likely existence of larger land holdings or 'tenements'. The RLUS Community Survey (2020) revealed that of respondents, those owners generating an income from their rural land were most likely to own land holdings above 6ha up to 500ha (15-100ha being the dominant land holding size range for income generating farming activity).

In recognition of the above, it should not be assumed that all vacant Farming Zone (FZ) land in Moorabool is under separate and individual ownership, as it may form part of a larger land holding under single ownership. Likewise, it is important to ensure that Farming Zone (FZ) land is able to retain a lower agricultural land value, and that land value is not artificially inflated through a residential land value being imposed as a consequence of rural lifestyle dwelling demand. Maintaining an agricultural land value throughout the rural areas of Moorabool will function to maximise opportunity for vacant Farm Zone (FZ) parcels to be used for agricultural activity, and potentially form part of a larger holding of land parcels for broadacre farming activities.



Rural Lot Sizes (FZ, RCZ, RLZ)

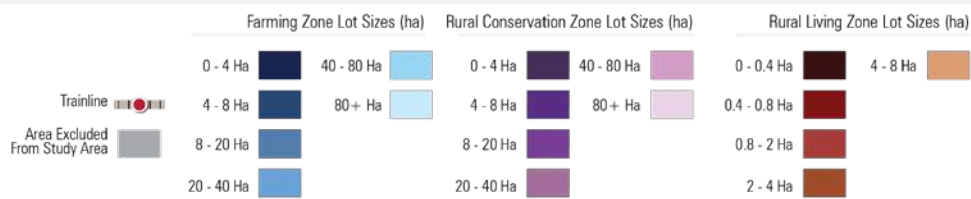


Figure 14. Lot Sizes in Rural Zones

Rural Lots with Dwelling

Figure 16 provides a visual representation of the spatial distribution of dwellings within the study area and specifically the Farming Zone (FZ).

The map illustrates existing dwellings are clustered in pockets across the Shire, notably through the elevated northern areas towards State/National Park interface; towards the municipal boundary with the City of Ballarat; and around existing rural townships and settlements.

Table 2 highlights there is a significant number of vacant allotments within the Farming Zone (FZ) within Moorabool. Numbering a total of approximately 3,400 vacant lots which could theoretically accommodate a dwelling, this is considered to be significant potential issue. Likewise it highlights the need for the RLUS to assist in managing potential dwellings within the rural areas of Moorabool, and to establish a consistent approach to the assessment of rural dwellings.

Table 2. Vacant Lots within Farming Zone (FZ) in the Study Area

| Lot Size | Vacant FZ lots | Percentage |
|----------------|----------------|-------------|
| <4ha | 1423 | 42% |
| >4ha to <10ha | 258 | 8% |
| >10ha to <20ha | 431 | 13% |
| >20ha to <40ha | 437 | 13% |
| >40ha to <80ha | 349 | 10% |
| >80ha | 480 | 14% |
| Total | 3,378 | 100% |

In considering vacant rural lots in greater detail, 24% of vacant lots (829 lots) are above 40 hectares, where a dwelling can be developed 'as of right' without requiring planning approval. That then leaves a remaining 2,549 vacant lots (76%) which would trigger a planning permit for a dwelling.

While it is not to say that there will be demand for every single vacant Farming Zone (FZ) lot to accommodate a dwelling, there is still a significant potential for rural dwelling demand which needs to be appropriately managed. This is informed by the Rural Community Survey which indicated that 48% landowners surveyed have intention to build a dwelling on their land. This RLUS seeks to provide an appropriate strategy to ensure a clear policy framework to guide rural dwellings and their assessment where a planning permit is required.

Rural Population

The total estimated resident population of Moorabool Shire in 2023 was 39,437 according to .id Community demographic analysis for Moorabool Shire (based on 2021 Census data).

Based on the latest Census data of 2021, 10,620 (28%) people live in rural areas compared to 27,270 (72%) in urban areas or townships.

The rural population is further broken down into Rural East with a population of 4,064 (10.7%), and Rural West with a population of 6,556 (17.3%).

Moorabool is experiencing high levels of growth, growing 16% (5,223 persons) over a five year period from 2016 to 2021.

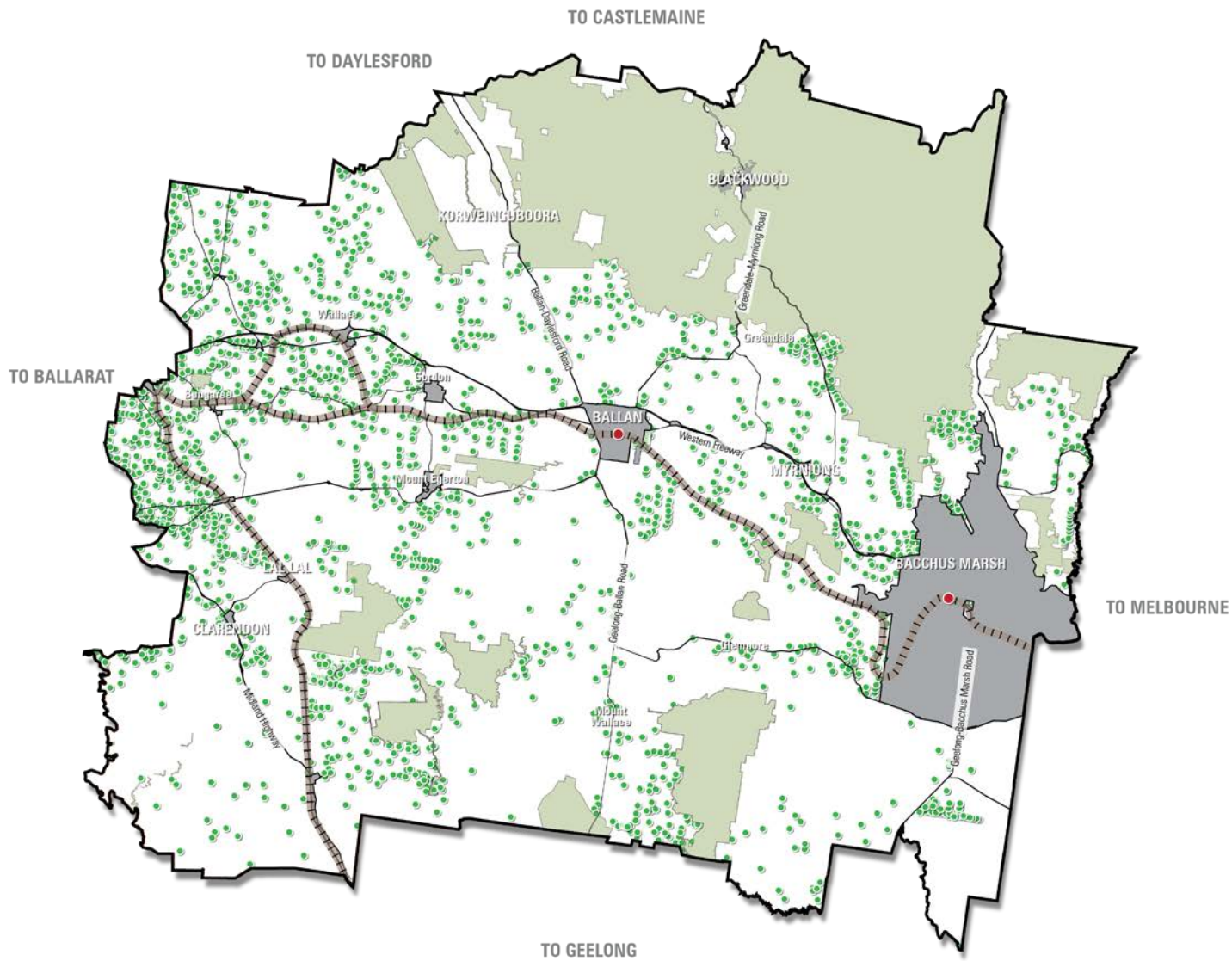
In terms of rural population, the Rural East population was 3,906 in 2017 and grew by 181 people to a total of 4,087 in 2022. The Rural West population experienced a higher rate of growth, with an increase in population of 572 people, increasing to 6,645 (2022) from 6,073 (2017).

The ongoing policy response and management of rural lifestyle types dwellings, and other dwellings which may be specifically justified on the basis of productive agricultural landuse, would be reflected within rural population statistics over coming decades and census statistical periods.



39,500 persons

(2023 estimated population)



Farming Zone - Lots with a Dwelling

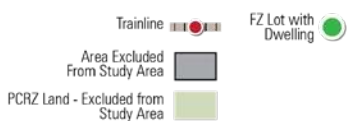


Figure 15. Farming Zone land with a Dwelling

Agricultural Land Class Assessment

Overview

Agricultural Land Quality Classes have been determined after the methodology of Imhof et al (2018) (refer to: Imhof, Rees, Harvey, Gill, and Cherry 2018 *Assessment of Agricultural land capability in Melbourne's Green Wedge and Peri-Urban Areas* Department of Economic Development, Jobs Transport and Resources).

Each mapped area has been delineated from a series of objective measurements and assessments based on inherent land characteristics such as soil type, slope, and site drainage. Where multiple land classes cannot be separated because of the scale of mapping, the dominant Class is represented by the mapping unit.

The methodology underpinning the land class assessment can be further summarised as follows:

- Sourced and reviewed mapping linework for key component land resource surveys (i.e. Maher and Martin (1987), Bungaree, Ballan and Buninyong Land Capability Studies) and associated soil site data for these studies. Assessed the most appropriate 'fit-for-purpose' mapping units to undertake Agricultural Land Quality assessment across Moorabool Shire.
- Provided input into Class definitions (i.e. Class 1, 2, 3, 4 and 5) with a key focus on soil type, landform type and slope attributes.
- Assessed Agricultural Land Quality and provided ratings (i.e. Class 1, 2, 3, 4 and 5) for 60 selected land units (derived from the four component soil/land surveys) across the Moorabool Shire.
- Provided a general overview description of key soil/landscape groups (including relevant images) related to Agricultural Quality Assessment (with key focus on Class 1, 2, and 3 landscapes) across Moorabool Shire.
- Undertook consistency assessment of land unit ratings (including liaison with Tony Pitt) and validation against available soil site data.
- Reviewed all interim products and provided feedback to guide development of final mapping.

Key component studies used in the land class assessment included:

- Maher and Martin (1987). Soils and landforms of south-western Victoria. Part 1. Inventory of soils and their associated landscapes. Research Report No. 40. Department of Agriculture and Rural Affairs.
- Jeffery, Costello and King (1979). A Study of Land Capability in the Shire of Bungaree. Soil Conservation Authority.
- Jeffery and Costello (1979). A Study of Land Capability in the Shire of Ballan. Soil Conservation Authority.
- Jeffery (1980). A Study of Land Capability in the Shire of Buninyong. Soil Conservation Authority.

Determined Land Classes

The assessment of Agricultural Land Quality has mapped agricultural land within the Moorabool Shire into five classes. Classes 1 and 2 are high quality and highly versatile agricultural land, often used intensively for horticultural crops, and generally considered to be strategically significant agricultural land within the peri-urban fringe of Greater Melbourne. Class 3 land tends to be found in larger parcels and may be used for broadacre dryland cropping, or sometimes in smaller parcels where it may be used for perennial horticultural crops which do not require regular cultivation. Class 3 may also be considered as strategically significant land. Class 4 land is mostly used for grazing but is occasionally cropped but with significant management interventions to reduce risk of crop failure. Class 5 land is only suitable for grazing use due to excessive physical restraints. For the Moorabool Shire these classes apply only to freehold agricultural land such that public land and urban areas are excluded from assessment.

- **Class 1 (dark green shading):** Land that is inherently capable for intensive soil-based agriculture, particularly horticulture. This class includes landscapes dominated by Ferrosols (i.e. predominantly friable red gradational soils developed on basalt) on more gentle slopes (i.e. <10% slope) and some alluvial areas with deeper friable medium to coarse textured soils. Access to a constant water supply will generally improve the capability of the land. Some land is included in this category due to improved land management (e.g. significant drainage and irrigation infrastructure). Land management limitations are nil to slight.
- **Class 2 (mid green shading):** Land that is inherently capable for soil-based agriculture, including intensive horticulture. This class largely includes Ferrosols on steeper terrain (i.e. slopes 10-16%) and landscapes where Ferrosols make up about 50% of a mapped area in association with less versatile soil types (i.e. texture-contrast soils with denser subsoils). Land management limitations range from slight to moderate.
- **Class 3 (yellow green shading):** Land that is inherently capable for soil-based agriculture at moderate to high intensity. The potential/capability may vary (e.g. according to slope, inherent fertility and drainage) but could be realised with access to a constant water supply. Landscapes with deeper sandy soils may be represented here, but require additional water resources to support more intensive horticulture (note: areas with deeper sandy surface horizons are not widespread in the Shire). Suitable landscapes with more favourable texture-contrast soils (i.e. with deeper surface horizons overlying relatively friable and stable upper subsoils) are also included, as well as steeper landscapes (i.e. cones with 16-20% slope) dominated by Ferrosols.

Otherwise, a slope of 10% is usually considered the upper slope limit for other non-Ferrosol dominated landscapes in this Class. Some landscapes with established broadacre agriculture (e.g. cereal cropping) have been included (in what would often be rated as Class 4) due to significant limitations having been modified (e.g. rock-picking in stony landscapes) in large areas. Land management limitations are slight to moderate for intensive use.

- Class 4 (olive shading):** Land that is not as inherently capable for intensive soil-based agriculture, without significant land management interventions. Extensive agriculture (including broadacre cropping with suitable land management practices - such as raised beds, rock-picking, subsoil management and appropriate tillage) and non-soil utilisation activities are often most appropriate. More intensive grazing is possible in some higher rainfall areas or where consistent water supplies are available. Due to mapping resolution, some minor exclusion areas (i.e. Class 5) can be present where land attributes (e.g. slope) vary locally. Land management limitations are high to very high for intensive use. In this region, many of the soils are texture-contrast with dense, sodic subsoils (i.e. Sodosols) that can be difficult to manage. There are also likely to be some areas of land within this Class that may have higher capability but that are not able to be identified at this stage due to the broad scale of soil/landscape mapping available across much of the study area. Steep landscapes (i.e. 20-32%) dominated by Ferrosols are also included in Class 4, as well as relevant non-Ferrosol dominated landscapes with slopes of less than 20% (steeper slopes are excluded, as per Class 5). Land with significant surface rock may also be suitable if extensive 'rock picking' has taken place, but this detail has not been mapped within the Shire. Availability of additional secure water supply would also enhance suitability of areas of land in this Class.
- Class 5 (purple shading):** Land that has significant landscape restrictions, including stony rise landscapes with very shallow soils, very steep terrain (i.e. slopes >32% in landscapes with Ferrosols and slopes >20% elsewhere) and poorly drained swampy areas.

Relevance of Slope

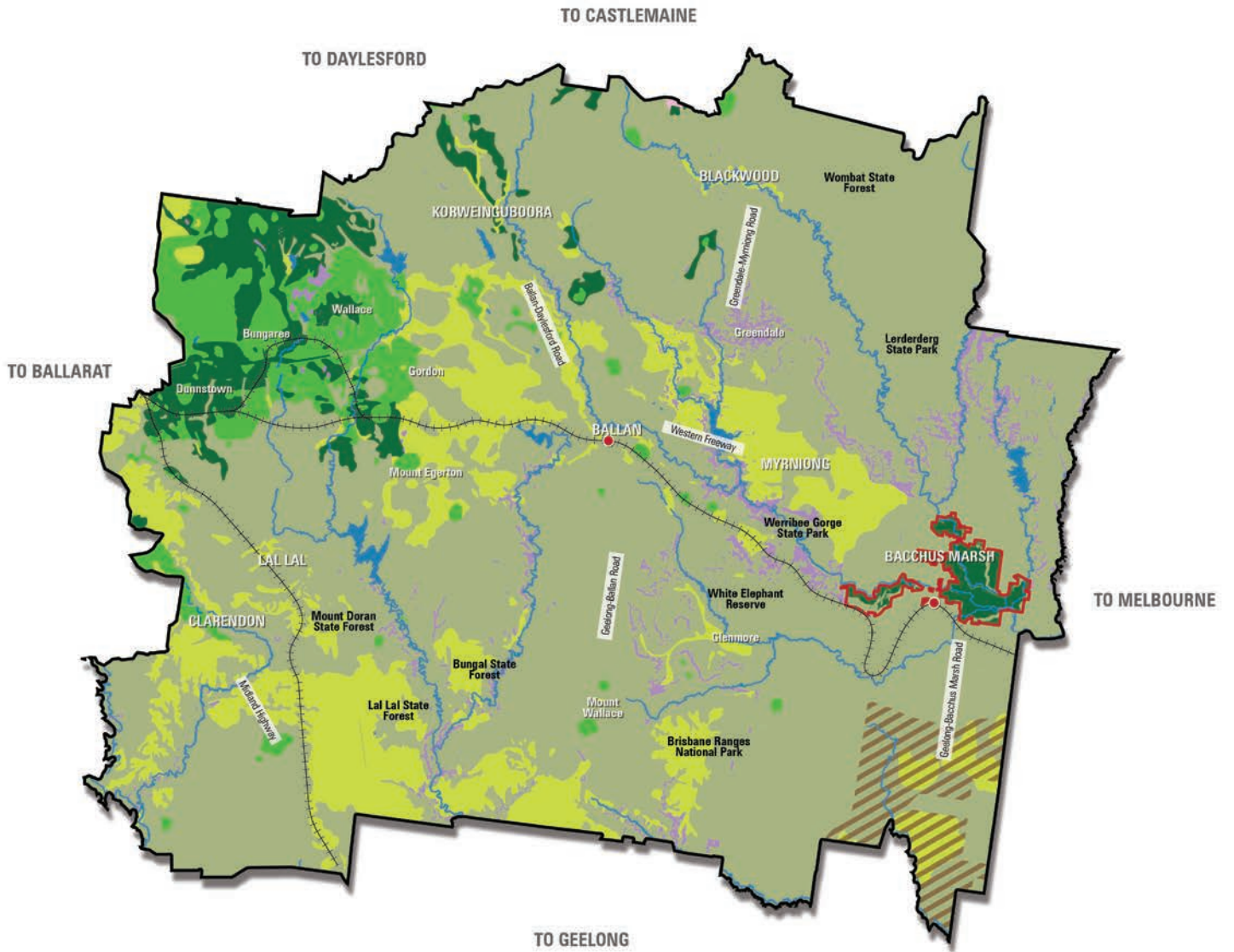
A greater than 20% slope limit has been adopted as a significant landscape restriction limit, apart from a 32% slope limit for landscapes with more stable Ferrosols as the dominant soil type. In Land Capability studies conducted elsewhere, 10% has generally been used as a cut-off slope value for various intensive land use activities. The NSW land capability mapping scheme, for instance, considers that 10% is the average upper limit for cultivation on most soils. On more fertile and stable soils of basaltic origin (i.e. Ferrosols) this may rise to 16%, beyond which vehicle access and turning is restricted (pers. comm. Tony Pitt). For poorer sodic soils (e.g. Sodosols) a suitable slope limit may fall to 5% but these areas are often unlikely to be considered areas of high agricultural land capability and have not been considered in this study. Some landscapes (such as scarps and weakly structured sandy soils on granite slopes) are considered more susceptible to erosion, including tunnelling and/or landslips, so a 10% slope limit is most appropriate. Vegetation cover is a key determinant for assessing erodibility, combined with soil properties and slope. It is, however, a dynamic factor that is largely dependent on management and not practical to consider in this study.

Declared Special Water Supply Catchments & Special Area Plans

Many catchments supplying water for domestic, irrigation or other purposes within Victoria are protected under the *Catchment and Land Protection Act 1994*. These catchments have significant values as a source of potable water supply. Planners and those managing land disturbance or development activities need to consider the special functions of these declared water supply catchments when determining the suitability of proposed activities within these areas. Once a catchment is 'Declared', approvals for activities conducted under other statutes and statutory planning schemes must be referred to the responsible land management authority (CMA or DEECA) for approval.

Special Area Plans (formerly known as Land Use Determinations) have been developed for some Declared Water Supply Catchments. These catchment land use and management plans specify where (location) various land uses may be undertaken and how (conditions of use) they should be undertaken. The objectives are to minimise any adverse effects on water related values. Special Area Plans are developed where catchments are exposed to sufficient development or land use pressure.

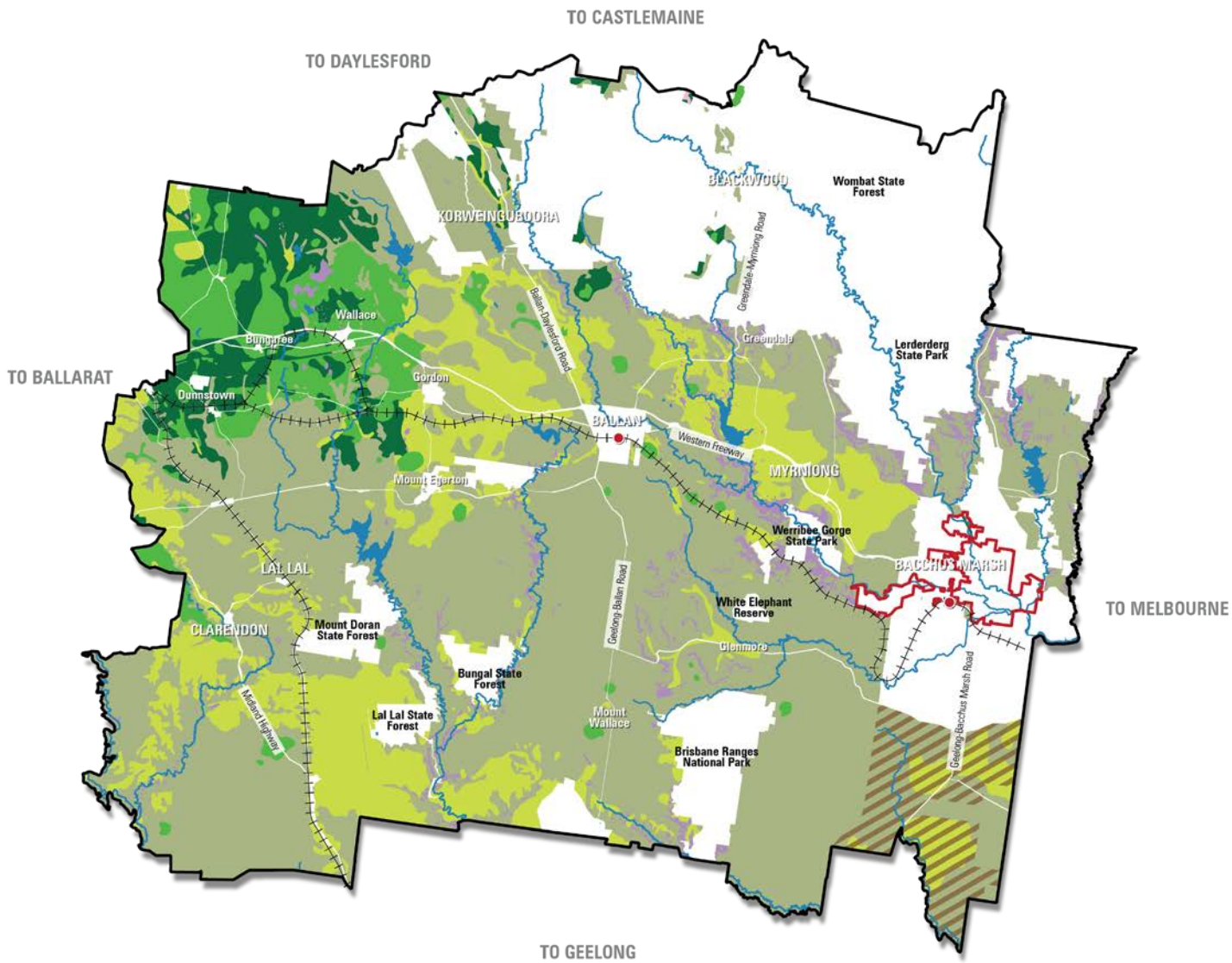
Refer to: <https://www.water.vic.gov.au/catchments/special-water-supply-catchment-areas>



Agricultural Land Quality Class Map



Note: 'Slope assessment has not been undertaken for all areas land in existing urban settlements and State/National Parks areas'



Agricultural Land Quality Class Map



Figure 17. Land Class Map: Rural Land Use Study Area

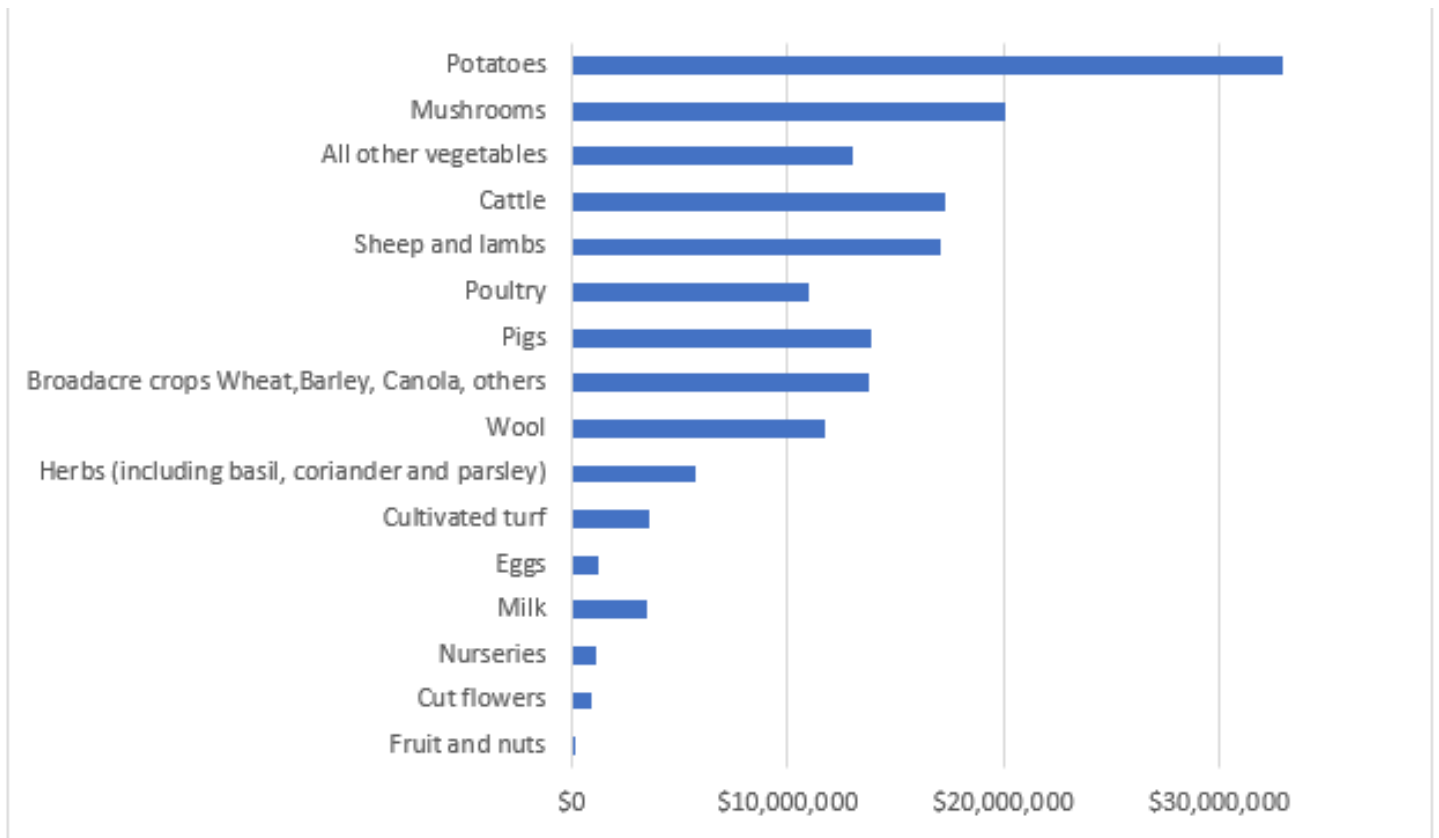
Note: 'Slope assessment of land excluded from study area has not been undertaken for all areas land in existing urban settlements and State/National Parks areas'

Agricultural Activity

Role of Agriculture within the Regional Economy

Productive agricultural land occupies 68,200 ha (ABS 2021), which is 32% of the total land area for the Moorabool Shire (211,000 ha). The balance is comprised of a combination of forested land, urban areas, major water storages, quarry sites and special protected areas. The Moorabool Shire is an important agricultural production area, lying within the peri-urban area of Melbourne and being a critical part of Melbourne’s food bowl. The total value of agricultural production from within the Shire from the 2021 ABS census was \$168m. Agricultural production in the Shire spans a diverse range of industries and enterprises which extend from intensive production systems for fresh market vegetables, turf farming, viticulture, floriculture, intensive animal production, and fruit crops, through to broadacre farming for canola, cereals, fodder crops and grazing.

Value (\$) of agricultural commodities: Moorabool Shire (source ABS 2021)



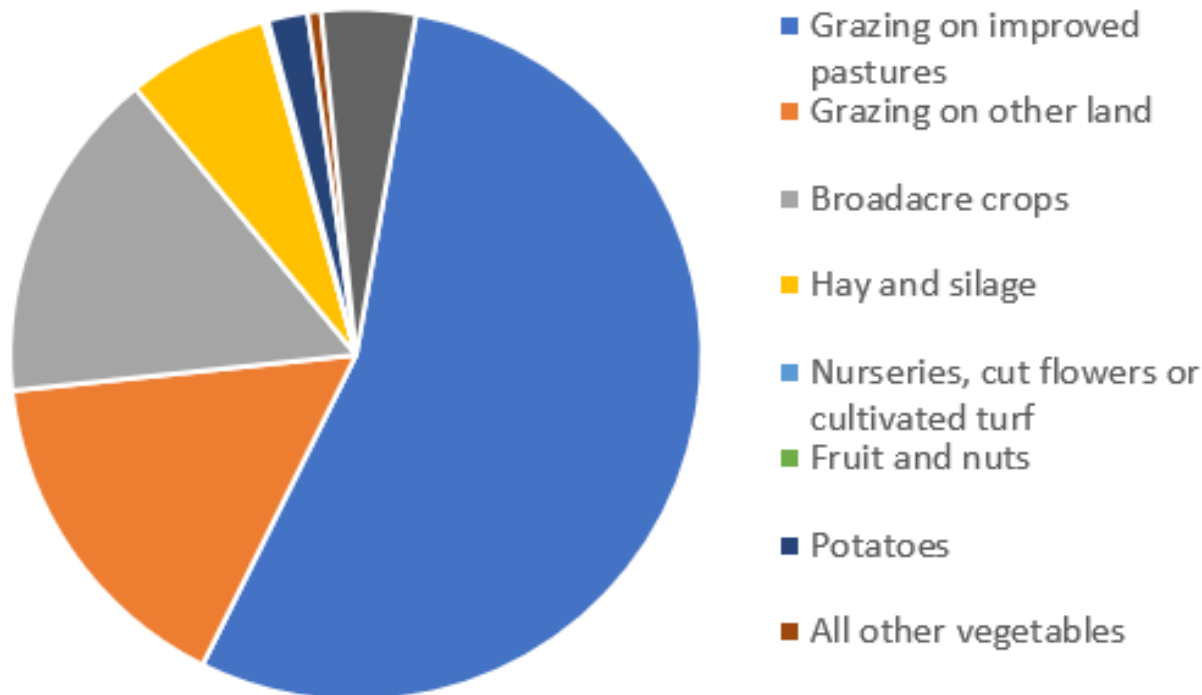
The relative importance of agriculture to the regional economy can be ascertained by the number of individual farming businesses. The 2021 Australian Bureau of Statistics (ABS) census lists the total number of businesses within the Moorabool Shire as 3369, of which 441 or 13% are farm businesses. Agriculture together with forestry and fishing is also responsible for 663 jobs within the Shire. Only the construction industry has more individual businesses in Moorabool Shire than the farm sector. Importantly these farm businesses bring income into the regional economy and then collectively employ a broad range of service providers such as cartage contractors, fertilizer suppliers, earthmoving contractors, machinery dealerships, stock and station agents, general farm suppliers and a network of other services.

Intensive Cropping

Vegetable production is centred in two distinct districts within the Shire which have high quality agricultural land. The Bacchus Irrigation District is one of these districts and is a significant producer of leafy vegetables, particularly leafy salad vegetables, broccoli, cauliflower, and pumpkins and lies wholly within the Moorabool Shire. Most of this produce finds its way into the consumer markets of Melbourne, either by direct sale through major wholesale and retail networks, or through the wholesale market system that operates from the Epping Wholesale Produce Market. It is also a significant turf production area and 12% of the Victoria’s turf production is within the Shire.

The Ballarat district has high quality agricultural land and is an important potato producing region. Potato production within the Moorabool Shire is of State significance with 23% of Victoria’s potato crop originating from within the Shire. Seasonally harvested fresh potatoes from this district are marketed along the eastern seaboard of Australia, but the largest part of the potato crop is processed at the manufacturing plant in Ballarat which produces French fries and other products for the Australian fast food industry. Seed potatoes are also grown in this part of Moorabool Shire, which are sold both domestically and also for export depending on the international supply and demand situation. The Ballarat district also produces other vegetable crops besides potatoes.

Agricultural landuse: Moorabool Shire



Animal Production

The 2021 ABS census lists sheep and lambs as the second most abundant livestock within the Shire, at a total of just over 250,000 head. Only poultry (chicken meat production) were more abundant at 380,000 head. The higher rainfall areas of Ballan to Bungaree, back towards Blackwood and south towards Bungaree are highly regarded for prime lamb production. Seasonal lamb sales begin in mid to late Spring with young sucker lambs and continue right through summer and into autumn with the later sales being heavier lambs that have often been finished on fodder crops. Fine wool production is also significant, being more prevalent in the drier southern and far western parts of the Shire.

Cattle are also significant at almost 22,000 head from the 2021 ABS census, and are spread throughout the agricultural districts of the Shire. The dominance of grazing as a land use is well illustrated in the agricultural land use chart, which shows that grazing land use accounts for 81% of the productive agricultural land within the Shire. Broadacre cropping collectively comprises the next largest area and vegetable cropping accounts for just 3% of the agricultural land area.

Housing based meat production collectively occupies less than 1% of the productive agricultural land in the Shire and yet accounts for a disproportionately high level of agricultural production. Mushroom production is particularly noteworthy at 2.6 million tonnes annually, which is 14% of Victoria's annual mushroom crop.

Meat chickens and pig farming, both fully housed or partially housed in free range establishments are important components in the food production systems that feed the growing population of Melbourne. The land used for these enterprises is highly productive and the land area that they occupy is very small as a percentage of the total area of agricultural land. What this analysis does not show is the reliance of these industries on large tracts of land that provide isolation and separation distances, both from other producers (for disease control) and from housing clusters and rural living land uses (unpleasant odours, truck movements and noise).

The setback distance for broiler farm sheds from a Rural Living Zone (RLZ), for example, is 750 metres, and from an urban zone or future urban zone is 1000 metres. The setback distance for broiler sheds from other broiler farms or nearby dwellings are similarly significant distances and are calculated by formulae depending on the size of the broiler farm operation. Details can be found in the Victorian Code for Broiler Farms (2009) with 2018 amendments which is available on the Agriculture Victoria website (agriculture.vic.gov.au/livestock-and-animals).

Land traditionally used for broadacre cropping is often also suitable for housing based agriculture. It provides the right combination of suitably flat or gently sloping land, well removed from rural living uses, and well removed from other producers. Much of the Agricultural Quality Class 3 land is suitable for these intensive animal production systems and is increasingly being considered to be strategically significant agricultural land because of versatility and adaptability for these high intensity uses. Additionally the Moorabool Shire has good quality rural roads which connect with the population centres of Melbourne and many Melbourne based processing facilities and supply chains for intensive animal industries.

Open range systems for pig meat and chicken meat production also require special mention. They are part of an underlying trend towards de-intensification of these intensive animal production systems. There are several open range/free range producers of both pig and poultry within Moorabool Shire and they require significantly greater land areas for their production systems. The isolation requirement from each other from rural living are similar to fully housed systems.

Equine Industry

Not prevalent in ABS census data is the value of the equine industry, as unlike other agricultural activities it does not derive its farm income by producing commodities for sale. It is nevertheless a significant industry within Moorabool Shire with training and agistment facilities common between Melton and Bacchus Marsh, around Dunnstown and near Buninyong. The income comes from a diverse range including thoroughbred training, riding schools, agistment, and brood mares, and also from service industries for supplying specialty fodder needs, equipment and training facilities.

Further Development of Irrigated Land Use

The growing utilisation of recycled water is a key factor in the future growth of agricultural production in the Moorabool Shire. Greater Western Water recently installed delivery pipelines from the Surbiton Park treatment plant south of Melton that can deliver Class C recycled water to farms in Balliang region south of Bacchus Marsh. This will be supplemented by Class C recycled water from the Bacchus Marsh treatment plant and they have projected an availability of 2300 ML of recycled water per annum with further increases in the future. This is a very significant volume of water available for agricultural use and is likely to be a key driver of irrigated agriculture in this region. In the short term, the water is being used for the production of irrigated fodder crops, but in the longer term it is likely that specialised industries will develop around this water source.

In Summary

- The Moorabool Shire possesses a small but significant area of clearly identifiable highly productive land for the production of vegetable crops and potatoes. This land is strategically significant agricultural land in the broader context of the provision of food for a growing population of Victoria.
- Less obvious highly productive land also exists within the Moorabool Shire that is used for pig and poultry farming. There is potential for further growth of these industries within the Shire.
- Agriculture is important for the Shire as it brings income into the regional economy and supports other businesses, services and regionally based manufacturing.
- The agriculture sector within the Shire is likely to expand and diversify with the advent of a new recycled water irrigation scheme.



Strategic & Policy Context

There are a range of strategies, policies, and other documents relevant to rural land within Moorabool. A detailed review of these documents has been undertaken within Appendix 1.

The key strategies, policies and documents include:

- Plan Melbourne 2017-2050
- Moorabool Rural Land Use Strategy: Landowner and Community Survey (2020)
- Moorabool Shire Economic Development Strategy 2023-2027 (2023)
- Moorabool Shire, Visitor Economy Strategy 2023-2027 (2023)
- Planning for Melbourne's Green Wedges and Agricultural Land Action Plan (2024)
- Central Highlands Regional Growth Plan (2014)
- Domestic Wastewater Management Plan (2021)
- Small Towns & Settlement Strategy (2014)
- Rural Housing Policy (2014)
- Rural Growth Policy (2012)
- Agriculture Victoria Strategy (2020)
- Planning Policy Framework, including relevant State, Regional and Local level policies

This review has informed the issues and opportunities outlined within this report and has also helped to identify any gaps within current policies which will inform the next stage of the project.



Summary of Policy Review

A brief summary of the key findings of this review is outlined below, grouped under relevant headings.

Overarching observations

- State, regional and local policy all emphasise the need to protect productive agricultural land to help secure the economic base of Victoria.
- Moorabool has moderate to good quality agricultural land overall, with targeted areas of higher quality.
- Climate change will increasingly exacerbate extreme weather events and lead to a drier and hotter climate.
- According to 2021 ABS data, agriculture employs around 670 people in the Shire and agricultural production amounts to \$168 million per annum.
- The agricultural production spans a diverse range of enterprises, including intensive production systems for fresh market vegetables, turf farming, viticulture, floriculture, intensive animal production, and fruit crops, through to broadacre farming for canola, cereals, fodder crops and grazing.
- Agriculture, forestry and fishing is a key contributor to the Shire's total output (9%) and employment (9%), as well as generating almost one-third of total export value (23%).
- The peri-urban location of Moorabool in close proximity to Melbourne will place continued pressure on rural land from urban encroachment and rural lifestyle landuse.
- Need for careful management of interface areas between rural and urban land uses.
- The National and State significant transportation linkages of the Shire are a competitive advantage.
- Pressures from rural residential development should be appropriately managed.
- Opportunity for nature based experiences, agritourism and other tourism can be supported within the rural areas but have generally been under-represented within Moorabool.
- Rural subdivisions should not jeopardise the use of productive agricultural land.
- Support for the potential diversification of the agricultural industry away from traditional farming is encouraged where appropriate such as towards more intensive or value-adding industries.

Rural Community Survey

- The survey highlighted a high proportion of rural lifestyle dwellings within the rural areas of Moorabool (30% of respondents, while 56% of respondents did not farm their land).
- A majority of farmers nominated they were interested in expanding landholdings, but nominated that land prices were the key restriction to expansion. This indicates demand for rural lifestyle use may be artificially increasing agricultural land value, where existing farmers noted that high agricultural land price was the key disincentive for expanding farming activities.
- Nearly half of respondents (48%) indicated an intent to build a dwelling, which highlights a large latent ongoing demand for rural dwellings, which if predominantly of a rural lifestyle type has the potential to further undermine agricultural viability through inflating agriculture land value.
- Community members want to see better protection for the Shire's natural landscapes and vegetation from inappropriate developments, mining and energy infrastructure.

Agricultural Production

- The long-term viability of farming land should be protected.
- High quality agricultural land needs to be protected from encroachment by urban development and fragmentation.
- The land most suited for growing vegetables in non-irrigated areas occurred in the north west of the Shire near the townships of Gordon and Bungaree.

Rural Housing

- There is conflict between the need to restrict dwellings in rural areas to protect land for farming and the desire to allow dwellings to enable genuine farmers to age in place or to facilitate family succession of farm ownership.
- There is increasing pressure for dwellings in the Bacchus Marsh Irrigation District.

Rural Living

- There is an increasing demand for rural living opportunities. It is necessary to investigate supply, demand and opportunities for rural residential land uses in proximity to towns within the Shire.
- Expansion of rural living is not supported at Dales Creek due to bushfire risk and lack of infrastructure or Yendon due to it being surrounded by productive agricultural land and lack of availability of services.
- Expansion of rural living is not supported at Greendale, Lal Lal and Mt Egerton due to lack of services / infrastructure and location within a water supply catchment, although some rural living infill at Lal Lal may be possible.
- Future population growth in Dunnstown and Myrniong may be plausible subject to the provision of sewer and water (note rural living is not specifically mentioned).

Biodiversity

- The majority of the Shire has been cleared of vegetation primarily for agricultural purposes.

Natural Hazards including Bushfire and Flooding

- The Bushfire Management Overlay within the Moorabool Planning Scheme applies to areas where there is potential for bushfire. Its key purpose is to identify areas where a planning permit is required to consider bushfire matters prior to development occurring. However the Regional Bushfire Planning Assessment considers broader issues in specific locations eg access constraints, and identifies bushfire hazard areas, and thus assists in determining when bushfire risk should be addressed. Twenty nine areas were identified within Moorabool Shire and will need to be taken into consideration if identifying areas suitable for rural living.
- Land cleared for agriculture is contributing to deterioration in the natural riverine, floodplain and estuarine environments.

Refer to Appendix 1 for further information.

Permit Activity

An analysis of planning permit applications for dwelling within the rural areas of Moorabool has been undertaken between 2016 and 2023. Of relevance, Council typically receives 300 planning permit applications per annum, although 2023 had a significantly reduced number at 187. The intent of the analysis has been to look for any patterns relating to:

- year of application
- zoning of land
- application determination
- location within the Shire

The outputs of this analysis is illustrated within Figure 18 and within Table 5. Based on this analysis, general observations are summarised as follows:

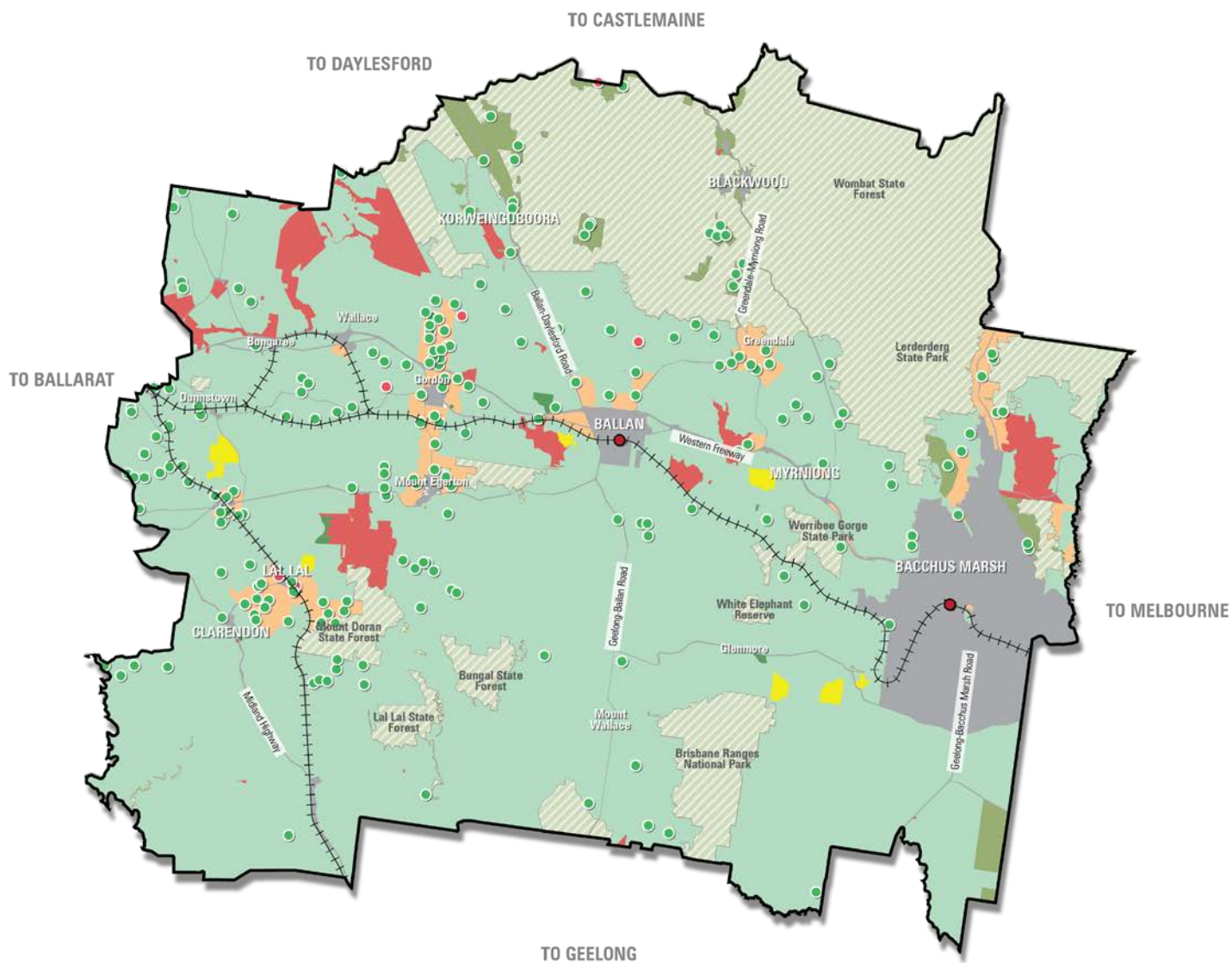
- Rural dwelling applications received range from 29-48 per annum. This amounts to between 10-16% of all planning permit applications received each year.
- The greater majority of rural dwelling applications are approved and result in the issue of a Planning Permit, with very few applications issued with a notice of refusal.
- Rural dwellings within the Rural Living Zone (RLZ) would typically be expected to be approved, given the noted purpose of the zone to provide for residential use in a rural environment.
- Dwellings within the Rural Conservation Zone (RCZ) would typically be expected to be approved, providing the environmental benefits sought by the zone can be achieved through the planning application for a dwelling.
- The largest number of rural dwelling applications involves a proposal for a dwelling on Farming Zone (FZ) land, however this is most likely explained by the extent of coverage this zone has within Moorabool compared to other rural zones.

- A key observations is that only 3% of applications for a dwelling in the Farming Zone (FZ) were refused over the analysed eight year period (i.e. five refusals from 147 dwelling applications spanning 2016-2023).
- Although applications for rural dwellings could be argued as being relatively low per annum for Moorabool, this does not negate the issue of cumulative impacts of rural dwellings over a longer span of time caused by the gradual increase in total number of rural dwellings, which may not be strictly needed relating to the use of land.
- Based on the Community Survey (2020), 56% of rural respondents nominated that land was not farmed. This increased to 58% of respondents in the Farming Zone (FZ) nominating they were not undertaking any farming activity.
- The Community Survey (2020) indicated that rural lifestyle use constitutes a large proportion of rural properties (equalling 30% of all survey respondents).
- Nearly half of respondents (48%) indicated an intent to build a dwelling. This highlights a latent ongoing demand for rural dwellings. If such dwellings are predominantly of a rural lifestyle type, it has the potential to further undermine agricultural viability through artificially inflating agriculture land value.
- The continued growth and demand for rural lifestyle dwelling in Moorabool has the potential to create unintended land use conflict between new dwellings and existing or future agricultural activity, to the potential detriment of the viable use of Farming Zone (FZ) land.
- Rural dwelling applications display some spatial patterns, with the greatest number clustered to the northern and western halves of Moorabool and particularly at the interfaces of state and national parks which span the northern boundary of the Shire.

Figure 18 starts to paint a picture of select areas of Moorabool being more desirable for 'rural lifestyle' dwellings. If this pattern of rural dwelling approvals continue, it risks such areas evolving into quasi 'rural living' cluster settlements over time, which does not align with the nominated purpose of the Farming Zone (FZ).

Table 5. Dwelling applications by year and rural zones

| Year/Zone | FZ approved | FZ refused | RCZ approved | RCZ refused | RLZ approved | RLZ refused | TOTAL |
|---------------|-------------|------------|--------------|-------------|--------------|-------------|------------|
| 2016 | 17 | | 9 | | 19 | | 45 |
| 2017 | 22 | 1 | 6 | | 9 | | 38 |
| 2018 | 20 | | 3 | | 17 | 1 | 41 |
| 2019 | 27 | 1 | 6 | 2 | 12 | | 48 |
| 2020 | 15 | 1 | 5 | | 13 | | 34 |
| 2021 | 17 | 1 | 5 | | 14 | | 37 |
| 2022 | 10 | | 4 | | 14 | 1 | 29 |
| 2023 | 19 | 1 | 7 | | 7 | | 34 |
| TOTALS | 147 | 5 | 45 | 2 | 105 | 2 | 272 |



Planning Permits for dwellings (Applications status 2016-2023)



Figure 18. Planning permits for dwellings 2016-2023)



An aerial photograph of agricultural fields, showing rows of crops and furrows. The sky is filled with soft, white clouds. A semi-transparent green rectangular overlay is positioned in the lower half of the image, containing the text 'ISSUES & OPPORTUNITIES' in white, bold, sans-serif font.

ISSUES & OPPORTUNITIES

Emerging Trends & Key Pressures

Based on a detailed background analysis of relevant documents, strategies, general observations from fieldwork, and available data from a variety of sources, the following key pressures and trends have been identified to help frame the key issues and opportunities associated with rural land in Moorabool.

The pressures for change are discussed in relation to a number of rural land use and development themes within this section of the report. These themes will be used as the basis for and to help develop the Rural Land Use Strategy recommendations.

Population Growth

Moorabool is experiencing and planning for exceptional levels of population growth. Rural population of the Shire is equally experiencing growth pressure, and particularly driven by rural lifestyle options given the peri-urban location of Moorabool and proximity to metropolitan Melbourne.

Agricultural Trends

Agricultural practices are becoming more commercialised through larger economies of scale or diversifying into smaller more intensive or niche activities. Farming activities are also diverging between full time large scale commercial farming and part time family operations who derive secondary incomes from other activities.

Economic Factors

Global economic variables influence the type and form of agriculture that can take place. Economic factors such as the increasing price of land, and changes in commodity prices, can place strain on agricultural expansion and growth when the development value of land outstrips the productive value. Equally, the quality of Moorabool's agricultural land and established transport links to local, regional and international markets is of clear benefit and opportunity.

Food Security

An increasing local and global population, coupled with increasing urban expansion, raises concerns for the ability to maintain food security into the future. Ensuring an adequate supply of productive agricultural land is paramount for ensuring long term food security.

Climate Change

Climate change will continue to have a significant impact on the rural areas of the Shire. A drier and hotter climate that will increase the frequency and severity of extreme weather events and environmental hazards will have significant impacts on agricultural activities and the use and development of rural land. An available supply of recycled water in select areas of Moorabool is of clear benefit in the face of climate change to improve long term water security, although is limited in overall coverage.

Access to Water

As noted, targeted areas of the Shire has access to recycled water, which will have positive implications in future for the potential productive use of agricultural land, given that access to such water supplies can greatly improve yields regardless of land capability class.

Fragmentation

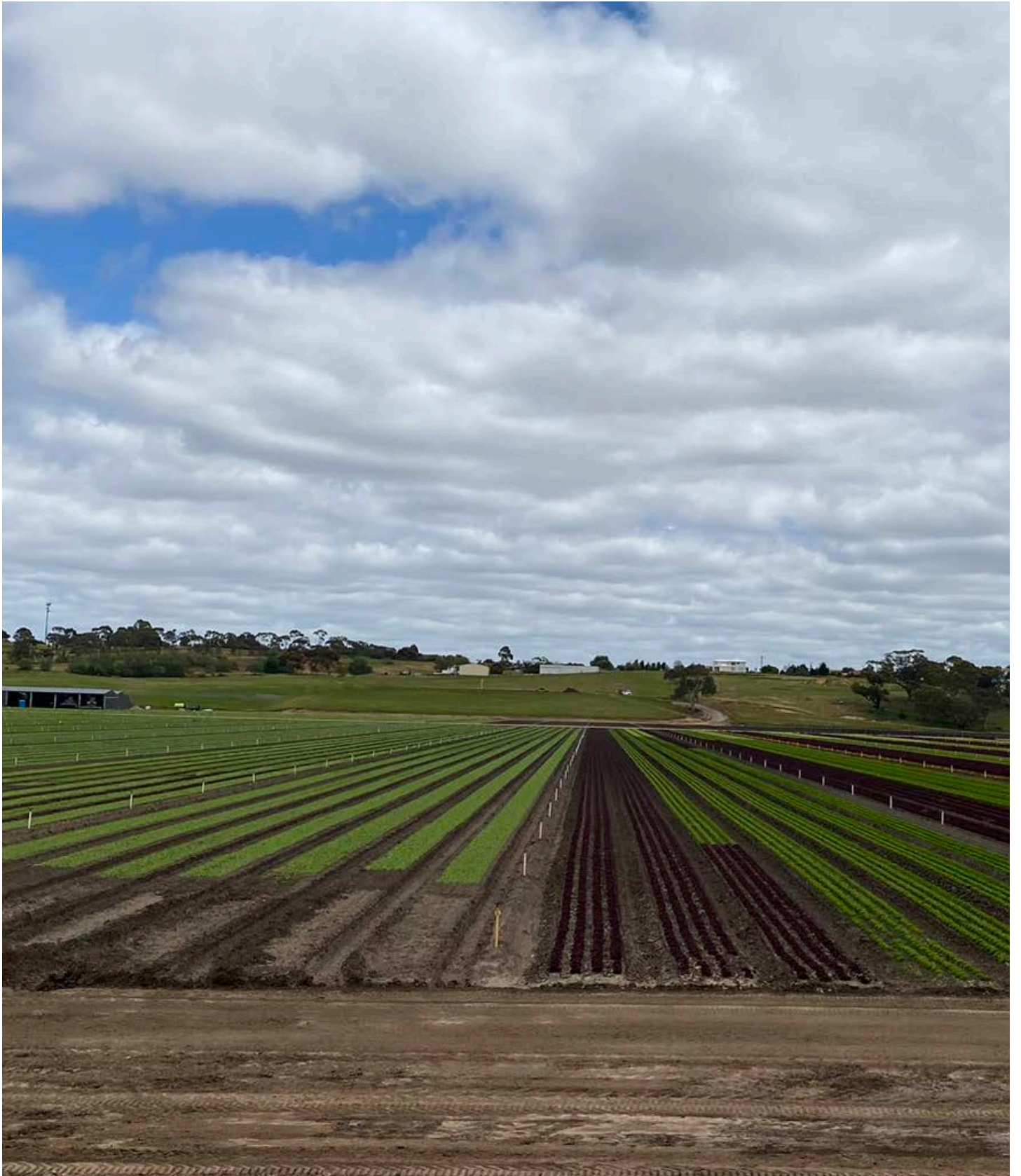
There is a trend across Victoria towards increased fragmentation and increased dwelling approvals within peri-urban areas. Moorabool's rural land already contains a large number of small farming lots and rural based dwellings not specifically associated with the productive use of agricultural land. This can pose a significant threat to the productive use of agricultural land and good management practices.

Urban Interface

Moorabool as a peri-urban Shire with an urban-rural interface with Metropolitan Melbourne and other townships functions to create land competition pressures when development speculation encroaches into productive agricultural land. Additionally the peri-urban location of the Shire close to both the services of Melbourne and attractive landscapes also makes it a desirable location for lifestyle living which can conflict with agricultural activities.

Environmental Degradation

Issues of environmental degradation are requiring more sustainable approaches to the use and development of rural land. This is particularly important for Moorabool which has a range of environmental assets on both public and private land.



Agricultural Productivity

Modern trends in agriculture has seen a move to increased farm size resulting in higher commodity production and economic performance. Such broader scale trends are relevant to the potential for commercial scale agricultural businesses in Moorabool.

Ultimately increased farm size has supported improved productivity through positive economies of scale, which is underpinned by better technology; increased flexibility in labour management (supporting higher labour productivity); improved knowledge management and farm management practices.

The main mechanism available to commercial agricultural businesses to respond to industry decline of trade and to remain viable is to increase scale. If farming businesses cannot expand, then the enterprises must change to generate more income from the same area e.g. change production to higher value crops or livestock or look to value add.

The higher productivity of larger farms highlights the importance of maintaining and fostering opportunities for farms to grow to maintain for industry-level competitiveness.

For full time, commercial agricultural businesses, the opportunity to increase farm scale to maintain productivity to respond to declining terms of trade is critical. This means having access to land in productive sized parcels, priced to reflect the agricultural value and unencumbered by unwanted infrastructure such as dwellings.

However, existing land fragmentation, or the potential for further land fragmentation has the clear potential to undermine current and future potential for agricultural productivity within Moorabool.

In Moorabool, commercial scale agricultural businesses are likely to be concentrated towards areas of higher land class to western areas, as well in the southern half of the Shire where the scale of agricultural holdings suggests commercial scale businesses.

Issues

A number of key issues have been identified in relation to agricultural productivity, including:

- Proximity of metropolitan Melbourne driving pressure for peri-urban 'rural lifestyle' and 'hobby farm' landuse which imposes a residential land value on rural land and negatively impacts investment in agriculture.
- Limited policy context to inform the consideration of rural dwellings.
- Large areas of the Shire are designated as a Special Water Supply Catchment Areas, where there is potential for runoff from agricultural landuse having an impact on water quality.

Opportunities

A number of key opportunities have been identified in relation to agricultural productivity, including:

- Rural land within Moorabool is noted to have moderate to excellent agricultural capability suited to a range of agricultural landuse and agricultural enterprises.
- Targeted parts of the Shire having access to secure supply of recycled water, with the potential expansion of such recycled water networks.
- The Shire is well located and connected to localised metropolitan Melbourne based markets.
- Proximity to Melbourne, residential development and infrastructure (potable water, recycled water and gas) that may facilitate intensive agricultural, particularly protected cropping.
- Excellent transport networks and connections to major capital city markets and processors.
- Large rural land holdings in the southern half the Shire for commercial scale agricultural activity.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the strategy, including:

- Designation of Precinct Policy Areas to better reflect varied rural opportunities of the Shire and preferred land use outcomes and land capability.
- Policy guidance on the specific discouragement of further land fragmentation throughout the rural areas of the Shire.
- Policy guidance for rural dwellings throughout the rural areas of the Shire.

Intensive Agriculture

Intensive agriculture production methods enable producers to better manage and efficiently monitor all aspects of agricultural production for improved yield outputs.

For example large scale glasshouse horticulture that enable full control over crop growing conditions is emerging as the new direction for vegetable and fruit production.

As an industry trend intensive agribusiness has become increasingly 'nimble,' and is able to relocate to or expand in places where the advantages are greatest. Such commercial advantages which are sought include:

- Critical mass of producers to maintain the value chain including feed supplies, processors, freight and logistics.
- Large parcels of undeveloped, relatively flat land with few neighbours.
- Stable and appropriately skilled workforce.
- Infrastructure including efficient transport links, a reliable water supply and competitive 3-phase energy supply, and highly functioning telecommunications.
- Proximity to grain supply for competitively priced sources of protein.
- Some industries may also have specific biophysical requirements e.g. sunshine hours, temperature.

While part of the rural areas of Moorabool meet many of these requirements, supply of high quality water may be a constraint as well as community attitudes to intensive agriculture, particularly intensive animal husbandry.

Intensive agriculture has the potential to adversely impact the environment and neighbours. Adverse impacts of intensive agriculture may include air and water pollution, odour, noise, increased traffic, reduced visual amenity and light spill.

A number of intensive agricultural uses have minimum buffer distances to assist in managing potential impacts. Planning can also help to provide direction on suitable locations for intensive forms of agriculture and help manage any undesirable impacts.

Issues

A number of key issues have been identified in relation to intensive agriculture, including:

- Increasing population and urban development will limit locations for intensive animal husbandry.
- Large areas of Moorabool being within a designated 'open' Special Water Supply Catchment Area.
- Access to water to establish intensive agricultural operations.
- The undulating topography of parts of the Shire which is not readily suited to intensive agricultural operations.

Opportunities

A number of key opportunities have been identified in relation to intensive agriculture, including:

- Close proximity to metropolitan Melbourne, residential development and infrastructure (potable water, recycled water and gas) that may facilitate intensive agricultural, particularly protected cropping.
- Access to important freight and logistics networks.
- Smaller land parcels present opportunities for intensive farming operations

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the review, including:

- Designation of Precinct Policy Areas to better reflect varied rural opportunities of the Shire and preferred land use outcomes and land capability.
- Identification of suitable land for intensive agriculture.

Value Add

There are many activities, processes, and movements that together form an agricultural 'value-chain', and which are responsible for bringing an agricultural product to market.

As a general observation, as agricultural activities change and become more intensive, there is increased need for on farm value-adding processing.

Moorabool has some competitive advantages associated with its immediate proximity to metropolitan Melbourne direct access to significant transportation networks which make it possible for goods to be connected straight to markets.

While primary production is not as significant within Moorabool compared with other surrounding municipalities, there is potential for Moorabool to provide a regional role in value-adding industries such as processing and manufacturing to support agricultural products produced within the region. Farm-gate sales can also add economic value to primary agricultural production conducted on the land.

Issues

A key issue has been identified in relation to value add, which is:

- On farm processing is limited within the Shire with most primary produce sent outside the municipality for processing.

Opportunities

Key opportunities have been identified in relation to value add, which are:

- The Shire has excellent transport networks and connections to major capital city markets and processors.
- Farm-gate sales can add economic value to primary agricultural production conducted on the land.
- Consideration of the supply of available and required industrial land to support rural and agricultural activities.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the review, including:

- Identification of suitable land for value-adding industries.
- Policy guidance on approving and locating value-adding industries.

Non-Agricultural Activities

With regard to the existing non-agricultural activities within Moorabool, this includes:

- Resource extraction: including existing quarries servicing the building and construction industries located at Darley, Coimadai, Dunnstown, Navigators and Wallace.
- The equine industry: while data on the industry is limited, the equine industry is considered to be a significant contributor to the local economy including the related value adding industries.
- Energy Generation: including existing turbine wind farms located at:
 - Yaloak South Wind Farm, Parwan Valley: completed in 2018, it comprises 14 turbines (126.5m tall).
 - Lal Lal Wind Farm, Yendon and Elaine: completed in 2022, it comprises 60 turbines (161m tall)
 - Moorabool Wind Farm, located between Ballan and Mount Wallace: completed 2020, it comprises 104 turbines (169m tall).
- Potential future energy generation in the form of solar farms, and battery energy storage systems, noting the proximity of Moorabool to the main metropolitan Melbourne energy grid.

These industries provide a different and sometimes more productive use of agricultural land, particularly in areas with lower productive soil classes.

There is a need to ensure that the sometimes competing demands of these industries and traditional agricultural activities within the Shire are appropriately managed. If not managed and located appropriately, these uses can result in land use conflicts.

The Farming Zone (FZ) allows for some non-agricultural uses however, generally a permit is required to carry out these activities.

A key and critical question to ask is whether there are other non-agricultural opportunities suited to the Shire on land considered to be inappropriate for traditional agriculture and would it result in a more productive use of land.

Issues

A number of key issues have been identified in relation non-agricultural uses, including:

- Non-agricultural uses can result in land use conflicts.
- The potential loss of prime agricultural land.
- Prevention of innovation opportunities.
- The potential for poor land management outcomes.

Opportunities

A number of key opportunities have been identified in relation non-agricultural uses, including:

- Access to transportation linkages and markets of Melbourne, Geelong and Ballarat.
- Opportunities for tourism including farm stays, festivals,
- Opportunities for renewable energy projects.
- The protection of rural land for conservation / ecosystem.
- Identification of other non-agricultural uses potentially suited to locational and physical attributes of the Shire.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the strategy, including:

- Potential to consider the targeted rezoning of land to Rural Activity Zone (where appropriate and strategically justifiable - but more on a site by site basis than through the lens of the RLUS).
- Provision of local policy guidance on the appropriate location of non-agricultural uses within the Farming Zone (FZ).

Climate Change & Environmental Risks

It is recognised that the climate is changing, in response to warming global climatic conditions, and will continue to change into the future. This will be applicable to Moorabool, where it is projected that the climate will increasingly become drier and hotter, coupled with an increase in the frequency and severity of extreme weather events. This poses significant implications for the use and development of rural land and will fundamentally impact on agricultural production.

Climate Change

Climate change and limited access to reliable water supplies in large parts of the Shire will impact agricultural development. Higher average temperatures and reduced growing season rainfall will be a major impact of climate change. Irrigation of land functions to provide a buffer against unseasonal conditions however the areas with Moorabool with current or future potential for irrigation development is limited. Increased frequency and severity of droughts will be a challenge for dryland livestock and cropping enterprises.

Environmental Risks

Like many rural and peri-urban locations, Moorabool is vulnerable to flooding and bushfires, and consequently is already identified in the planning scheme through the application of overlays.

The alluvial plains of the Werribee River is the main area of the Shire at risk of flooding, although is present in relation to various other waterways which traverse the Shire. The potential for flooding and inundation within Moorabool is recognised by the application of the inundation and flood focused zones and overlays to applicable land. While it is acknowledged that with projected climatic changes conditions will be overall hotter and drier into the future, rainfall intensity and extreme weather events are also expected to increase, creating a greater risk of flooding.

Based on the projected drier and hotter conditions comes longer lasting extreme fire weather. Bushfires are an inherent part of the environment within the Shire and in the past were managed by Traditional Owners through cultural burning, which also assisted with the regeneration of native vegetation. A large portion of Moorabool is covered by the Bushfire Management Overlay (BMO) which is predominantly targeted to cover National and State Parks within the Shire, but also extends to other smaller area of dense vegetation cover. Coupled with this, most of the Shire is identified as being bushfire prone. Risks posed by bushfires have a direct relationship with planning related matters such as patterns of subdivision, vegetation coverage, and the location of sensitive uses and development.

The risks of flooding and bushfire are important considerations when considering rural residential development (existing and proposed) and value-adding infrastructure and facilities such as on-farm processing development.

Issues

A number of key issues have been identified in relation climate change and environmental risks, including:

- An increasingly hotter and drier climate will mean less access to water than what currently exists.
- Threats to traditional agricultural practices and the ability to sustain certain enterprises.

Opportunities

A number of key opportunities have been identified in relation climate change and environmental risks, including:

- Certain forms of agriculture may become available and more suited to the changing climate.
- Targeted parts of the Shire having access to secure supply of recycled water, with the potential expansion of such recycled water networks.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the strategy, including:

- Embed climate change thinking into local policy and decision making about agricultural activities within Moorabool.
- Ensure decision making around all future use and development applies the precautionary principle to avoid and/or manage bushfire and flooding risks.
- Support adaptation of agricultural practices to the impacts of climate change through appropriate local policy that supports such things as crop protection measures and subdivision sizes suited to future agricultural practices.
- Encourage the optimal agricultural use of land which has access to a secured water supply.

Peri-Urban Land

Peri-urban land relates to land located at the peripheral edges of large cities and metropolitan areas, which due to the proximity of urban activities, is subject to pressures for change.

Moorabool Shire does not contain any land within Melbourne's Urban Growth Boundary (UGB), which is located within the City of Melton and surrounding the township of Melton. The UGB provides a clear boundary between metropolitan urban land to the east and peri-urban land to the west through to the township of Bacchus Marsh.

The plateau landforms at Hopetoun Park, elevated landforms of Long Forest Nature Conservation Reserve and lowlands of the Werribee River corridor provides a clear topographic break and sense of separation between the UGB and the Shire.

Despite this topographic physical break with metropolitan Melbourne, the Shire is close in terms of travel time and access with major roadways, which functionally adds pressure for rural lifestyle development within and surrounding various townships which generally retain a country town feel and identity.

Development pressures associated with urban growth, are a common feature of peri-urban areas. In Moorabool this is due to the alternative lifestyle opportunities offered in the varied rural areas of the municipality, which are based on a rural character, but are relatively close to an improving range of urban services and facilities. The rural areas of the Shire have experienced considerable interest for low-density and rural living development in recent years.

Managing ongoing development pressures and pressure for change within the peri-urban areas of the municipality will be a major issue for Council in the future. Such metropolitan related growth pressures have the potential to have significant impact on the Shire. Community involvement in planning decisions in peri-urban areas is important to making balanced planning decisions.

Such decisions can have long term consequences on the landscape character, amenity and environmental values of peri-urban land, and the loss of productive agricultural land.

Issues

A number of key issues have been identified in relation to peri-urban land, including:

- Increased land prices due to competition from development and lifestyle interests can lead to the loss of productive agricultural land.
- Potential lack of appropriate land management and maintenance when land is used for 'rural lifestyle' and 'hobby farm' development purposes rather than productive or environmental uses.

Opportunities

A number of key opportunities have been identified in relation to peri-urban land, including:

- Ability to establish clear strategy/policy and guidance around the use and development of rural land.
- Ensure the zoning regime and planning policy framework is focused on the protection of Farming Zone (FZ) land for the facilitation of productive agricultural use associated with its designated agricultural land class.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the review, including:

- Develop policies to establish clear strategy and policy guidance around the use and development of rural land, with an aim to retain land primarily for agricultural purposes.
- Consider targeted rezoning if strategically justified based on existing and potential future landuse.
- Establish a program to promote existing Council landcare information to new rural landholders.

Rural Subdivision

A key threat to maintaining sustainable agricultural production is the fragmentation of rural land. Typically agriculture generally relies on large tracts of land to carry out agricultural activities, extending to grazing and cropping activity. But agricultural activity is put at risk when farming land is unnecessarily subdivided for reasons unrelated to agriculture, from the perspectives of potentially creating landuse conflict, as well as placing a different value on the land again unrelated to agriculture. Ultimately there is a need to ensure the right balance is achieved between agricultural production and potential rural residential development.

Rural subdivision can take the form of:

- Traditional subdivision – where one lot is divided into two or more lots.
- Consolidation – where multiple existing lots are brought under the one title.
- Excision – which involves portioning off an existing dwelling on a larger lot into its own individual lot.
- Boundary realignment – which involves altering the boundaries of two or more existing lots.

Under all three rural zones within the study area, a planning permit is required to subdivide land. It is highlighted that a schedule to each of the rural zones has altered the default minimum subdivision size allowable. Each zone outlines a mandatory minimum subdivision size as follows:

- Farming Zone (FZ): 15ha in select areas, otherwise 100ha (note: default lot size of zone is 40ha).
- Rural Conservation Zone (RCZ): 0.6 to 6ha in select areas, otherwise 100ha (note: default lot size of zone is 40ha).
- Rural Living Zone (RLZ): 6ha (note: default lot size of zone is 2ha).

Specific commentary is warranted in relation to the minimum subdivision sizes nominated for the Farming Zone (FZ) within Moorabool. Of note, the default minimum subdivision size of the Farming Zone (FZ) is 40ha. However in Moorabool, the Schedule to the Farming Zone (FZ) allows targeted areas to subdivide to 15ha while for the remaining areas the minimum subdivision size has been increased to 100ha. Functionally speaking this increase in minimum subdivision size functions to strongly regulate further potential subdivision and associated potential land fragmentation.

Moorabool is in an enviable position as a peri-urban Council in that it in targeted areas maintains large parcels and properties of land. The largest land parcels are within the southern parts of the Shire. Existing minimum subdivision size in the Farming Zone (FZ) is specifically recognised and should be maintained. Although with that said provisions remains to create smaller lots to excise an existing dwelling, or re-subdivide existing allotments.

Clearly the reasons for subdivision are varied within rural areas but can include:

- When the development value of the land surpasses the productive value of the land, subdivision into smaller lots can be appealing.
- The excision of a house may be undertaken to either onsell or to construct another dwelling on the larger lot.
- For hardship reasons a property owner may seek to subdivide a larger lot to create a smaller lot which can be sold on for a profit to support a farm through a difficult period.
- Ageing farmers are typically asset rich rather than savings rich so the ability to subdivide a portion of their larger property to onsell to provide for retirement or superannuation funds is appealing.
- Succession related farming where the land is subdivided to allow a family member to farm a newly subdivided allotment.

Fragmentation

Land historically designated and used for agricultural production is being impacted by population growth and urbanisation, particularly when agricultural land is viewed as a cheaper option for a 'rural lifestyle' based residential landuse.

However, higher prices of agricultural land make it difficult for farmers to scale up and expand their operations. Demand for rural lifestyle and land speculation is causing fragmentation and increasing the risk of land use conflict with neighbours.

Land fragmentation and high land values commonly results in speculative behaviour and less investment in infrastructure to develop agricultural enterprises as farmers anticipate the future conversion of their land away from commercial agriculture. Likewise higher capitalisation of smaller farms, makes them a less attractive purchase for larger scale farm expansion in line with current farming trends towards increased farm size.

Whilst small lot subdivision can be a threat to legitimate farming practices, ensuring that subdivision patterns and subdivision processes are conducive to supporting and encouraging changes in agricultural practices is also important. As an example, modern intensive forms of agriculture do not require the same amount of land as traditional forms of agriculture. Therefore ensuring that there is access to a range of inexpensive lot sizes for all types of farming is essential for supporting these forms of agricultural endeavours.

Diversity in lot sizes helps support a range of agricultural uses such as grazing, cropping, and intensive agriculture as well as more small scale innovative, boutique or niche operations.

The analysis of lot size characteristics within earlier report sections indicates that there is a diverse range of lot sizes within the municipality with most of the larger farms within the study area comprising of a number of smaller lots in a single ownership. When combined, these lots create a large enough area of land to carry out agricultural operations.

The key questions for this planning strategy and planning overall is to determine where, when, and if the further subdivision of rural land is necessary and justified or should even be allowed, meaning it should not be simply assumed that some form of rural subdivision is possible to be justified. In most instances, the further subdivision of rural land is not required, unless it is located within the Rural Living Zone (RLZ) and is to be developed for lifestyle, rather than, purely agricultural reasons.

Issues

A number of key issues have been identified in relation to rural subdivision, including:

- Fragmentation can lead to the loss of productive agricultural land, increase land prices, and deter investment in agricultural growth.
- Current local planning policy contains minimal guidance on when and where rural subdivision should or should not be approved.
- Farming land is already highly fragmented within the Shire due to old subdivisions particularly land to the western parts of the shire and surrounding townships.

Opportunities

A number of key opportunities have been identified in relation to rural subdivision, including:

- Maintain the minimum 100ha subdivision size of the Farming Zone (FZ) (as a noted increase over the default 40ha minimum), which appears to have tempered and reduced subdivision potential and demand.
- There is already a diverse range of lots sizes throughout the municipality to accommodate differing forms of agriculture to negate the need for further subdivision.
- Pressure for the subdivision within the Farming Zone (FZ) does not appear to be growing with permit activity remaining steady over the last five years.
- Implement new/updated Local Planning Policy for rural subdivision.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the review, including:

- Draft and implement a new/updated Local Planning Policy for rural subdivision to provide guidance and clarity on when rural subdivision is acceptable.

Rural Dwellings

Rural dwellings within the Farming Zone (FZ) have been defined separately as part of this review, in order to differentiate dwellings associated with rural residential development, typically in the Rural Living Zone (RLZ). Rural dwellings are dwellings predominantly located within the Farming Zone (FZ) that should be required and/or justified in order to conduct agricultural activities on the site, as the farms are also the place of residence of the farm operator.

However if rural dwellings are not managed correctly, their proliferation on small rural lots can lead to the loss of productive agricultural land and conflict with surrounding farming activities. The pressure for rural dwellings in Moorabool has been increasing in the study area in recent years, and is expected to continue if a suitable planning policy framework is not devised and implemented to inform decision making regarding the use of Farming Zone (FZ) lots for quasi-rural residential purposes. These types of dwellings are not commonly associated with agricultural practices, but for lifestyle purposes, and have the ability to increase the price of land and conflict with agricultural uses, which can be a prohibitive factor when establishing or expanding farming enterprises.

Planning can only control the construction of new rural dwellings if a planning permit is triggered. Rural zones contain minimum lot sizes on which dwellings can be constructed without requiring a planning permit. For instance, the Farming Zone (FZ), defines a minimum lot size of 40ha unless varied by a local schedule. The zone also limits the number of dwellings that can be constructed on a lot to one.

For many rural properties, farmers often have a number of lots in the one ownership, but where a dwelling is not typically located on each lot. This can result in a large number of vacant lots. Within Moorabool, approximately 61% of all Farming Zone (FZ) lots are vacant. 24% of these lots are currently over 40ha in size (Table 9). This means there are 829 lots that can accommodate a new dwelling potentially without requiring a planning permit.

This leaves 2,549 vacant rural lots in the Farming Zone (FZ) under 40 hectares in size which could theoretically accommodate a rural dwelling, but would trigger a planning permit application for assessment.

Size Distribution of Vacant Lots of Land within the Farming Zone (FZ)

| Lot Size | FZ (no.) | FZ (%) |
|----------------|--------------|-------------|
| <4ha | 1,423 | 42% |
| >4ha to <10ha | 258 | 8% |
| >10ha to <20ha | 431 | 13% |
| >20ha to <40ha | 437 | 13% |
| >40ha to <80ha | 349 | 10% |
| >80ha | 480 | 14% |
| TOTAL | 3,378 | 100% |

Dwellings on Lots <40ha

A key threat to farming land is the expectation that every lot or parcel of land within the Farming Zone (FZ) can accommodate a dwelling. Planning can temper these expectations through appropriately considered rural policies to help guide decisions on when it is or is not appropriate to approve rural dwellings. While a permit may be granted, there is no automatic right to attain a planning permit for a dwelling on a lot less than 40ha (or otherwise any variation implemented through the zone schedule).

As noted, the analysis of vacant lots within the study area indicates that there is approximately 2,500 lots under 40ha within the Farming Zone (FZ) that would require a planning permit for the construction of a dwelling. If a dwelling were constructed on each of these vacant lots, this could lead to significant impacts on:

- The agricultural productivity of the land and surrounding land.
- The character and landscape of the rural surrounds.
- The sustainable management of the land.
- The ability of Council to service such a dispersed population.
- The price of land.
- Land use conflicts with legitimate agricultural activities.

In acknowledging the significant threats posed by inappropriately located rural dwellings, farming practices are changing and do not necessarily require large swathes of land. The planning system needs to be sufficiently flexible to allow for dwellings on smaller lots when it is for legitimate agricultural pursuits.

There are times where it may be appropriate to construct a dwelling on a lot less than 40ha, including:

- When it is associated with a legitimate intensive agricultural use.
- Where a positive environmental outcome will be achieved.
- When in a location close to an existing settlement, consistent with State and local policy.

Without appropriate planning controls and policies in place, these factors are difficult to control, and as a consequence, can result in poor outcomes. Currently there is limited policy direction within the Moorabool Planning Scheme for guiding the development of rural dwellings on Farming Zone (FZ) land apart from generally discouraging them for rural living purposes and unless associated with a legitimate farming operation. This Strategy will seek to provide clear direction on when and where approval (or not) should be granted for dwellings on smaller lots.

Issues

A number of key issues have been identified in relation to rural dwellings, including:

- Current local planning policy contains minimal guidance on when and where rural dwellings should or should not be approved on small lots.
- There are a significant number of small Farming Zone (FZ) lots that could potentially house a dwelling.
- Inappropriately located housing can impact on the activities of legitimate agricultural enterprises.

Opportunities

A number of key opportunities have been identified in relation to rural dwellings, including:

- Maintain the strategic focus on population growth being generally focused and redirected within existing settlements particularly in Bacchus Marsh and Ballan.
- Develop the RLUS to provide a clear policy position and direction on when approval (or not) should be granted for dwellings within the rural areas of Moorabool and particularly in relation to smaller lots.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the strategy, including:

- Changes to rural zone schedules to increase or decrease the minimum lot size requirement for requiring a permit to construct a dwelling.
- The development of local policy guidance on when and where to allow for the construction of a dwelling within the Farming Zone based on certain guiding principles such as, agricultural productivity, proximity to existing settlements, the ability for it to be serviced etc.
- Require the preparation of a Land Management as part of information requirement for all application for rural dwelling.

Rural Living

The peri-urban location of Moorabool makes it a desirable location for 'rural living' due to its rural and environmental amenity coupled with its close proximity to Melbourne. The concept of 'rural living' or 'rural residential' development relates to a type of development motivated by the lifestyle benefits of rural areas such as the amenity, tranquillity and landscape. It has little to do with earning a living from agricultural production, but may involve engaging in rural activities as an interest or form of recreation such as 'hobby farming'.

The impacts and potential benefits of the demand for this type of development are mixed. If not managed correctly, rural residential development can lead to the loss of productive agricultural land, disperse populations, increase land clearing, cause biodiversity and environmental impacts, lead to land use conflicts, and impact on rural character.

In some circumstances the subdivision and development of rural residential opportunities can have positive environmental and landscape outcomes. Such benefits include decreasing the extent of overly grazed land and lead to natural regeneration through intensive management by environmentally conscious residents who may increase tree planting with a view to rehabilitate the land.

The population of Moorabool is projected to increase by around 26,250 over the next 20 years to 2041 (.idForecast), which will likely require in the order of 10,000 dwellings. This growth is expected to predominantly occur within existing settlements and designated growth areas, including Bacchus Marsh and Ballan. However a portion of this housing growth is likely to consist of dwellings within rural areas, which depending on the rural zone may not require planning approval to be developed. In acknowledgement of the growing population of the Shire, it will likely increase rural dwelling demand over coming years, particularly as RLZ land is developed to exhaustion.

Although it is beyond the scope of the RLUS, depending on availability and projected exhaustion of existing Rural Living land supply, it may necessitate Council undertaking a rural living land supply and demand analysis to determine the approach to the potential provision of additional rural living land within the Shire. An important consideration regarding the question of whether additional RLZ land should be provided, and in what location, is whether it may negative impact on productive farming land.

Issues

A number of key issues have been identified in relation to rural living development, including:

- Inappropriately located RLZ land can impact on the productive quality of agricultural land as well as the character and amenity of rural areas.
- The demand for rural living and/or 'rural lifestyle' dwellings across the Shire appears to be increasing and is likely to gain pace as the population grows.

Opportunities

A number of key opportunities have been identified in relation to rural living development, including:

- Rural living is a desirable form of development that can increase and diversify the housing offering within the Shire if it can be appropriately located and managed.
- When located correctly, rural living opportunities can increase the population of small rural communities which is important for justifying service and infrastructure delivery.
- Rural living can increase the environmental credentials of over-grazed ex-farming land when carried out properly.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of a separate review, including:

- Identify areas for further investigation into the suitability for accommodating rural residential development.
- Provide policy guidance on identifying and approving rural residential development.
- Establish principles for the rezoning of Rural Living Zone (RLZ) land.

Rural Tourism

Rural tourism within Moorabool is typically focused on people who are visiting specific towns such as Bacchus Marsh and Ballan as well as a range of natural attractions, including Lederberg and Werribee Gorges, Wombat Forest, Lal Lal Falls and other nature based attractions.

There is opportunity to build on the Shire's strengths particularly within the attractive rural areas and small towns by increasing the number and scale of nature-based experiences/attractions, agri-tourism such as farm stays, farm gate sales emphasising local produce and boutique enterprises, and accommodation opportunities within Moorabool's rural areas.

Supporting and encouraging investment in these activities adds value to farming activities in providing 'off farm' income for farming families, diversifying the tourism offering of the Shire, and increasing the productivity of the land.

The planning system can sometimes present barriers to encouraging tourism supporting facilities. It is important however that the competing demands of tourism development and ensuring the productivity of agricultural land are balanced appropriately through the planning scheme.

In specific recognition of rural tourism, it is highlighted that varied opportunities for rural focused tourism within the RLUS study area are already addressed in detail by current strategic work being undertaken by Council. To that end, the Moorabool Shire Visitor Economy Strategy (2023-2027) is a current and highly relevant strategic study which has a central focus on regional tourism.

Issues

A number of key issues have been identified in relation to rural tourism, including:

- The Farming Zone (FZ) places some restrictions on tourism related uses such as retail sales and certain forms of accommodation.
- Potential incompatibility of existing or proposed tourism uses with surrounding agricultural land and the potential use of productive agricultural land for tourism development.

Opportunities

A number of key opportunities have been identified in relation to rural tourism, including:

- The Shire generates significant through traffic between Melbourne to Ballarat northwest Victoria which could be taken advantage of.
- The ability to support nature-based visitation to the Shire through supporting facilities and attractions related to this market such as agri-tourism, farm stays, glamping, bed and breakfasts, and large-scale accommodation opportunities.
- The townships of the Shire, including Bacchus Marsh and Ballan, which have growing reputations and ideal access from Melbourne, have emerging tourism roles.
- Growing number of farm-gate sales and destination food and beverage such as wineries.
- The potential to encourage the establishment of music festivals within the Shire.
- Existing off road trail networks provide opportunities for complementary tourism uses.
- Moorabool's natural landscapes, views, vistas and rolling hills are a key asset and opportunity for rural tourism.
- Implement various initiatives and recommendations outlined within the Moorabool Shire, Visitor Economy Strategy (2023-27).

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the review, including:

- Develop local policies to reflect key directions and recommendations within the Moorabool Shire, Visitor Economy Strategy (2023-27), including outlining principles and a framework for guiding the location and scale of appropriate rural tourism opportunities and encouraging agri-tourism and nature-based tourism in appropriate locations that avoids conflict with agricultural land uses.
- Implement various initiatives and recommendations outlined within the Moorabool Shire, Visitor Economy Strategy (2023-27)
- Increase appropriate rural signage through the development of a signage strategy.
- Increase the extent of off road trail networks within the rural areas of the Shire.

Environment and Landscape Values

Rural land within Moorabool contains significant features of environmental, ecological and biodiversity value. Such qualities also have associated cultural heritage values and function to define attractive landscapes which is a key contributor to the amenity of the area.

Moorabool benefits from numerous National and State Parks, although private rural land provides an important environmental role in supporting ecological processes and biodiversity overall. However the poor management of rural land can exacerbate issues of environmental degradation, the loss of native vegetation and reduced land and water quality. Planning for rural areas can help protect and enhance important environmental and natural assets to ensure sustainable land management.

Environmental Significance Overlays (ESO) are extensively used across the Shire, each with a particular focus, including:

- ESO1: Special Water Catchment Areas
- ESO2: Waterway Protection
- ESO3: Long Forest and Werribee Gorge
- ESO4: Wetland Areas
- ESO5: Ballan Sewage Treatment Plant Buffer Area
- ESO6: Western Grassland Reserves
- ESO7: Grasslands within the Werribee Plains Hinterland
- ESO8: River Red Gums in the Bacchus Marsh Valley

These areas are also important areas of aboriginal cultural heritage significance.

Landscapes

Moorabool Shire is defined by diverse landscapes ranging from volcanic cones, undulating plains and ancient gorges. Landforms include plateau landforms located to the east of Bacchus Marsh, and the broader rising landforms through the Werribee Gorge State Park (to the west of Bacchus Marsh) and the Lerderderg State Park and Wombat State Forest which spans the entire northern boundary of the municipality. Landform and topography through the west central and east sections of the municipality is more uniform with broad open landscapes, noting areas of more targeted areas of volcanic cones, and hill ranges at Mount Dorna State Forest, Bungal State Park and Brisbane Ranges.

Although the Significant Landscape Overlay (SLO) is used within the Moorabool Planning Scheme, it is only employed in small targeted locations at the northern and eastern edges of Bacchus Marsh and around the township of Gordon. However, the SLOs do not reflect the landscapes designated to be of significance as part of the South West Victoria Landscape Assessment Study (2013) (refer to earlier sections of the report for a more detailed summary of this study as relevant to Moorabool).

Issues

A number of key issues have been identified in relation to the environment, landscape and heritage, including:

- Loss of native vegetation and habitat.
- Rural Conservation Zone (RCZ) not currently extensively used within Moorabool, but there may be locations where it should be applied to facilitate improved environmental outcomes.
- Limited identification and protection of significant landscapes within the planning scheme.

Opportunities

A number of key opportunities have been identified in relation to the environment, landscape and heritage, including:

- Undertaking further analysis to identify the key areas of environmental significance and high biodiversity requiring protection.
- Landscape assessment can raise the profile of landscapes and recommend areas for protection from inappropriate development.
- Rural land uses that promote sustainable land management and conservation.

Potential Strategies

There are a number of possible strategies available that could potentially be looked into as part of the review, including:

- Identify whether additional environmental controls should be investigated to inform rezoning to Rural Conservation Zone (RCZ).
- Support revegetation and natural regeneration as part of new development.
- Investigate rate rebate or reduction for properties that demonstrate environmental benefit.
- Prepare a landscape assessment.







APPENDIX ONE

Literature and Planning Scheme Review

Literature Review

Plan Melbourne 2017-2050

The refreshed *Plan Melbourne 2017-2050* outlines the strategic direction for the growth and development of Metropolitan Melbourne out to 2050. It seeks to integrate long-term land use, infrastructure and transport planning, and meet the city's future environmental, population, housing and employment needs.

Responding to Melbourne's significant population growth is highlighted as one of the key challenges facing the city. While a focus is placed on increasing urban consolidation in established suburbs, growth areas are identified as having a significant role to play in how Melbourne's growth will be managed into the future.

The importance of encouraging growth and employment in Regional Victoria is highlighted, with Bacchus Marsh, Kilmore, Broadford and Seymour identified as peri-urban towns that could accommodate potential further growth. The establishment of urban growth boundaries around townships to lessen impact on the character, amenity, and environmental and agricultural assets of these locations is highlighted as an important management tool.

The Plan integrates long-term land use, infrastructure and transport planning, and sets out the strategy for supporting jobs and growth, while building on Melbourne's legacy of distinctiveness, liveability and sustainability. Plan Melbourne also contributes to the overall vision for the state, includes links with regional Victoria.

The Plan identifies Moorabool as a peri-urban area with a predominantly rural character, located all or partially within a 100-kilometre radius of Melbourne and overlaps with parts of Geelong's peri-urban area.

Moorabool is part of the Peri Urban Councils of Victoria which includes the Bass Coast, Baw Baw, Golden Plains, Moorabool, and Surf Coast Shire councils. This group of Councils has led research into planning issues affecting peri-urban areas and, as a consequence of population growth, has advocated for better planning and infrastructure development. The Plan outlines that Melbourne's peri-urban areas:

- are immensely important to the State's economy, community and environment
- support Melbourne through food production, critical infrastructure (such as water supply catchments and airports), sand and stone supply, biodiversity, recreation and tourism
- provide opportunities for the community to connect with nature, improving health outcomes, as well as maintaining the ecosystem services that underpin Victoria's prosperity
- accommodate businesses that need buffers from residential

and incompatible land uses

- need to be carefully planned and managed to ensure that non-urban land uses in the peri-urban areas avoid irreversible land-use change and to support their ongoing productivity
- need to be protected to make the state's food supply more secure in the face of increasing climate pressures on food production.

The Plan also contains two key directions and associated policies, outlined below, that are pertinent to the planning for Moorabool's rural land:

Direction 1.4 Support the productive use of land and resources in Melbourne's non-urban areas

Policy 1.4.1 Protect agricultural land and support agricultural production

Policy 1.4.2 Identify and protect extractive resources (such as stone and sand) important for Melbourne's future needs

Direction 4.5 Plan for Melbourne's green wedges and peri-urban areas

Policy 4.5.2 Protect and enhance valued attributes of distinctive areas and landscapes

Moorabool Rural Land Use Strategy: Landowner and Community Survey (2020)

Moorabool Shire Council conducted a Landowner and Community Survey as part of background work to inform the preparation of the RLUS.

The survey offered community members opportunity to share their experiences and perspectives on challenges, opportunities and expectations on the use and development of rural land in the Shire.

Survey invitation letters were sent to all landowners in the study area, including public land managers. Council sent 4,347 letters inviting landowners in rural areas to complete a survey online and publicised the survey in the Moorabool News and through social media. Paper surveys were available on request.

The survey lasted 4 weeks. Council received 810 responses to the survey, equalling a 16% response rate. Of the 810 survey respondents, 684 were from the rural areas of Moorabool; 12 were from within the Bacchus Marsh Irrigation District; 94 were from urban areas of the shire including Bacchus Marsh, Ballan, Gordon and other small towns; and 20 were from areas outside the Shire. The highest number of responses came from Ballan, Gordon, Greendale, Lal Lal, and Mount Egerton.

Key observations from the survey are noted as following:

- Rural lifestyle use constitutes a large proportion of rural properties (equally 30% of all survey respondents).
- 56% of rural respondents nominated that land was not farmed, but maintained by themselves.
- Farming occupies a large amount of land area, although only 58% of respondents in the Farming Zone (FZ) nominated they were undertaking farming activity.
- Survey results indicated that 20% of respondents in each of the Rural Living Zone (RLZ) and Rural Conservation Zone (RCZ) were undertaking farming activity.
- Rural lifestyle owners and farmers appeared to be in agreement about many aspects of land management and environmental management.
- Existing rural lifestyle residents also were comfortable with amenity impacts from farming operations, suggesting that fears of low density residential development driving out farmers through complaints may be overstated, or localised (although new owners may have a different view of amenity impacts from agricultural activity).

- The dominant reason for not farming was the property was a rural lifestyle property (46%), while the second reason being the property being too small to be viable for agriculture (15%).
- A majority of farmers were interested in expanding landholdings but nominated that land prices were the key restriction to expansion.
- The main reason given for limiting and/or not expanding farming operations as the high cost of land and Council rates.
- Lifestyle property demand was noted as being likely to have the highest impact on farmland values within the Shire.
- Owners generating an income from their rural land were most likely to own holdings above 6ha up to 500ha (15-100ha being the dominant land holding size range for income generating farming activity).
- The natural environment was a key high valued area for most respondents, and many landowners were undertaking works to improve native vegetation quality and support wildlife.
- 48% of respondents indicated an intent to build a dwelling on the property (24% answered no, and 28% did not know).

The above summary of key observations from the survey highlights a high proportion of rural lifestyle dwellings within the rural areas of Moorabool (30% of respondents, while 56% of respondents did not farm their land).

It would then appear that this demand for rural lifestyle use may be artificially increasing agricultural land value, where existing farmers noted that high agricultural land price was the key disincentive for expanding farming activities.

Likewise nearly half of respondents (48%) indicated an intent to build a dwelling, which highlights a large latent ongoing demand for rural dwellings, which if predominantly of a rural lifestyle type has the potential to further undermine agricultural viability through inflating agriculture land value.

Moorabool Shire Economic Development Strategy 2023-2027 (2023)

The Moorabool Shire Economic Development Strategy 2023-2027, outlines the importance of rural land and associated rural based economic activity. The report makes the following key observations regarding the economic drivers of Agriculture (page 20):

- *Agriculture, forestry and fishing is a key contributor to the Shire's total output (9%) and employment (9%), as well as generating almost one-third of total export value (23%). The region is a vital food bowl for Victoria, driven by horticultural production (particularly fruit and flowers), as well as sheep and cattle farming.*
- *The role of agriculture is critical to the Shire, particularly as it supports transport and distribution of production to export markets, as well as manufacturing raw materials (particularly downstream food processing).*
- *There is also a strong mining sector in Moorabool Shire, which contributes to regional exports (10%), including production of rock materials and brown coal. This is a unique strength for the Shire which could drive future economic growth.*

The report highlights further strategic considerations relating to agriculture, including (page 25):

Support a strong and productive agricultural sector.

Moorabool Shire has a competitive advantage in agriculture, with well-irrigated and productive land that supports food production and is a key driver of the economy.

Identifying opportunities to strengthen the agricultural sector (and overcome industry challenges) will help realise economic growth, as well as maintain the Shire's competitive advantages.

The Strategy seeks to increase the value of the agriculture and forestry sectors, with nominated priority projects include the preparation of:

- Agribusiness Branding; and
- Agricultural Strategic Plan.

The Strategy provides further commentary these priority projects as follows:

Agribusiness Branding priority project (page 39):

Build a local produce brand to increase industry and consumer awareness of local agricultural output, capitalising on the high quality produce originating from Moorabool Shire.

Further investigation should be undertaken on the focus of this initiative, which could range from a Shire-wide corporate brand to a more localised version (e.g. Bacchus Marsh fruit and vegetable production).

Having a well-established brand will support businesses in the region through enhanced marketing of the produce, expanding its market appeal and subsequently increasing the volume of sales and reach to domestic and international export markets.

Successful agribusiness branding could subsequently be leveraged to support 'food-based tourism'.

Agricultural Strategic Plan (page 40):

An Agricultural Strategic Plan is vital for the agriculture and forestry sectors to provide strategic direction and identify opportunities to facilitate growth.

This will support the Rural Land Use Strategy developed by Council, which will provide a vision for future rural land use and support best practices in land use management.

The Agricultural Strategic Plan should be a broad strategy that involves extensive consultation with industry to increase the value and volume of production, support local agricultural businesses as well as complementary industries.

Moorabool Shire Visitor Economy Strategy 2023-2027 (2023)

It is highlighted that varied opportunities for rural focused tourism within the RLUS study area are already addressed in detail by current strategic work being undertaken by Council.

To that end, the Moorabool Shire Visitor Economy Strategy (2023-2027) is a current and highly relevant strategic study which has a central focus on regional tourism.

The summary report makes the following observation regarding the role and context of Moorabool:

‘Located as the gateway to western regional Victoria, Moorabool Shire is perfectly positioned to grow its visitor economy, leveraging an abundance of nature, quality produce, and quaint towns to fulfill its potential’.

The main document makes further key observation regarding existing levels of tourism:

Whilst Moorabool Shire has a small tourism offering at present, the region has untapped potential that can be realised with investment in motivating products, experiences, and events.

The summary report further notes a range of strategic considerations (page 9). Identified strategic considerations which are particularly relevant to the RLUS are:

‘Leveraging proximity to and awareness of Ballarat and Daylesford will support visitation growth to Moorabool Shire.

Lack of motivating products and experiences influences the low market interest and awareness of Moorabool Shire towns.

Leverage the Shire’s comparative advantage of a ‘rural escape in proximity to Melbourne’ by maintaining local character, rural amenity and utilising heritage buildings.

Development and promotion of hero attractions is critical to driving demand and awareness. Nature-based attractions and First Nations experiences provide this opportunity.

Agritourism, food and wine, nature, and arts, culture and heritage, have opportunity to be developed as the Shire’s product pillars, and have strong strategic alignment to the broader region.

Events and Festivals are a vehicle to drive demand and awareness in the market, and would motivate 48% of the Victorian market to visit a new destination.

Development of high quality, contemporary accommodation is critical for Moorabool Shire. Comparable destinations, such as Yarra Valley, attract high levels of overnight visitation due to having a quality accommodation supply, as well as having a compelling product offer’.

A further key observation of the Visitor Economy Strategy is its strong focus on the opportunities presented by the predominantly rural context of Moorabool. This is further enshrined via the vision statement which is:

‘Moorabool Shire will establish itself as a thriving destination by embracing strengths in agritourism and nature, developing compelling new experiences, and building a strong identity.

The Visitor Economy Strategy is further framed around a number of themes, with those specifically relevant to the RLUS, includes

- Theme 3 Food, Farmgate and Ferments
- Theme 4 Nature and Outdoors
- Theme 5 Events

Theme 3 seeks to: *‘Leverage the region’s high quality agricultural produce to develop a motivational and contemporary agritourism and foodie scene with Moorabool Shire to own the ‘pick your own’ experience’.*

Initiatives relating to Theme 3 includes: agribusinesses branding; development and enhancement of farmgate experiences; marketing campaigns for local produce; develop a seasonal Shire-wide farmers market, rotating across key towns.

Theme 4 seeks to: *‘Activate and celebrate the natural environment through investment in infrastructure, trails and interpretation’.*

Initiatives relating to Theme 4 includes: preparation of a natural attractions masterplan; trails investment masterplan; develop mineral springs precinct plan and activation strategy; and develop First Nations Experience and Interpretation Action Plan.

Theme 5 seeks to: *‘Utilise events as a destination awareness driver by building a strong events calendar, events infrastructure and enhancing resourcing and internal processes’.*

Initiatives relating to Theme 5 includes: Identify and attract 3 signature events; review and enhance internal process to support tourism events development; undertake an events venue feasibility study to identify the type and scale of indoor and outdoor events facilities that could be supported.

Although the Visitor Economy Strategy goes into a much greater level of detail on various considerations, the above provides an overview summary of elements most relevant to the RLUS.

Planning for Melbourne's Green Wedges and Agricultural Land Action Plan (2024)

In 2018 DELWP (now DTP) carried out a technical assessment of green wedge and peri-urban areas within a 100-kilometre radius of Melbourne, which notably covers almost all of the Moorabool Shire.

The technical assessment identified that the peri-urban area within 100 km of central Melbourne is home to some of Victoria's most fertile soil and productive agricultural land. This land produces enough food to meet 41 per cent of Metropolitan Melbourne's food needs, including 80 per cent of its vegetables.

In 2020, a consultation paper outlining 41 planning reform options designed to protect agricultural land and guide decision making in green wedge and peri-urban areas was released for consultation.

In 2024 an Action Plan was released outlining 20 specific actions to be implemented in the next three years.

The 2024 Action Plan strongly highlights the benefits of having agricultural land near the city as Melbourne grows, given this land which is close to consumers, workers, and food manufacturers. It also has good access to water and transport, and has high quality soils.

The 2024 Action Plan further highlights peri-urban areas such as rural land in Moorabool Shire is facing increasing pressure from over-development, as well as landuse change which is not agricultural based, such as rural lifestyle dwellings.

Key Actions outlined within the report which are relevant to the development of the RLUS are outlined below:

- Action 1: Introduce a new planning scheme overlay to protect key irrigated agricultural areas in Werribee and Bacchus Marsh
- Action 3: Explore opportunities for water authorities' views to be considered in the assessment of planning permits for Melbourne's peri-urban areas where there is current or planned recycled water supply
- Action 4: Develop a new regional policy to preserve future opportunities for irrigated agriculture around Melbourne
- Action 5: Update agricultural planning policy to better protect agricultural land within 100 kilometres of Melbourne and make the best use of our fertile soils
- Action 6: Contribute to better decisions by providing more guidance for local government planners in assessing planning permit applications within agricultural areas through the development of a Planning Practice Note

- Action 5: Update agricultural planning policy to better protect agricultural land within 100 kilometres of Melbourne and make the best use of our fertile soils
- Action 6: Contribute to better decisions by providing more guidance for local government planners in assessing planning permit applications within agricultural areas through the development of a Planning Practice Note
- Action 11: Develop a new Planning Practice Note for urban-rural interface areas that manages land use pressures and supports a permanent edge to growth
- Action 14: Increase flexibility for primary produce/farm gate sales
- Action 15: Prohibit new data centres in the Green Wedge Zone, Green Wedge A Zone and the Rural Conservation Zone
- Action 16: Prohibit subdivision of small lots below the minimum lot size in some zones (i.e FZ & RAZ) within 100 kilometres of Melbourne
- Action 18: Strengthen the link between host farm accommodation and operating agricultural properties
- Action 19: Introduce a new permit trigger for soil dumping (clean fill)

Action 16 is particularly relevant to the RLUS. When its recommendation is implemented it will prevent the dwelling excisions on allotments below the minimum lot sizes of the Farming Zone (FZ) (note: the Rural Activity Zone (RAZ) is not found within Moorabool).

Within Moorabool, the schedule to the Farming Zone (FZ) allows a minimum subdivision size of 15 hectares in some specific locations, but otherwise sets a 100 hectare minimum for all other Farming Zone (FZ) land, noting also that the 100 hectare minimum is significantly larger than the default 40 hectare minimum.

Once Action 16 is implemented by the State Government, it will impact landowners wanting to subdivide or 'excise' an existing dwelling from a larger allotment onto a smaller allotment, if the excised allotment cannot meet the zone's allotment minimum size. While Action 16 relates specifically to dwelling excisions, notably it would not have any influence over the ability to construct a dwelling 'as of right' in the Farming Zone (FZ) if the existing allotment is over 40 hectares, or otherwise apply for a dwelling if the allotment is below 40 hectares in size.

As a broader comment in relation to Action Plan, the State Government has advised an intent to implement the 20 outlined actions in the next three years. Therefore it is important the RLUS is informed by relevant actions and that the strategic objectives and strategies of the RLUS broadly align.

Central Highlands Regional Growth Plan (2014)

Regional Growth Plans (RGPs) provide broad direction for land use and development across eight regional areas of Victoria. Moorabool Council is located within the Central Highlands region which incorporates the municipalities of Ararat, Ballarat, Golden Plains, Hepburn, Moorabool and Pyrenees.

The Central Highlands Regional Growth Plan 2014 (CHRGP) identifies opportunities to encourage and accommodate growth and manage change within the region over the next 30 years. The plan provides direction on common issues in rural and urban areas across the Central Highlands region but does not replace local planning. The plan highlights the need to protect and enhance state-significant assets relating to extractive resources, forestry, productive agriculture, water catchments, transport, utilities, biodiversity, landscapes, parks and reserves, waterways, heritage and tourism.

The vision for the Central Highlands region towards 2030 and beyond is to provide a productive, sustainable and liveable region for its people.

Principles to achieve the vision are:

- Population growth should be planned in sustainable locations throughout the region
- The region's economy should be strengthened so that it is more diversified and resilient
- The region should capitalise on its close links with other regions and cities
- The development of sustainable and vibrant communities should be supported by enhancing the level of access to key services
- Land use patterns, developments and infrastructure should make the region more self-reliant and sustainable
- Planning for growth should be integrated with the provision of infrastructure
- The region's land, soil, water and biodiversity should be managed, protected and enhanced
- Long-term agricultural productivity should be supported
- The importance of cultural heritage and landscapes as economic and community assets should be recognised.

The Central Highlands Regional Growth Plan (CHRGP) provides direction on common issues in rural and urban areas across the Central Highlands region but does not replace local planning. The CHRGP identifies:

- where future development will be supported and assessed at a regional scale
- environmental (biodiversity, landscapes, parks and reserves, and waterways), economic, community and cultural (heritage and tourism) assets, infrastructure (utilities and transport) and resources (extractive, forestry, productive agricultural, water catchments) of regional significance that should be preserved, maintained or developed
- how the region can respond to opportunities, challenges and long-term drivers of change
- key regional priorities for future infrastructure planning and investment to support growth.

Implementation of the CHRGP has been occurring in a number of ways such as amendments to planning schemes, preparation of infrastructure plans, land supply monitoring and other projects. Specifically relevant to rural land use planning are the CHRGP comments on agriculture and rural residential growth.

The CHRGP recognises that agriculture remains a key economic driver across the region with considerable potential for further investment, is coming under pressure, particularly in the Melbourne peri urban region and Ballarat hinterland, and that it is the State Government's goal to double Victoria's agricultural food and fibre production by 2030.

The CHRGP outlines that given changing climatic and economic conditions, there is a need to support ongoing investment in farming by pursuing a flexible approach to rural land use. This will be assisted by providing certainty around the encroachment of incompatible uses and discouraging permanent loss of agricultural land to housing. Key agricultural assets should be developed to encourage economic growth and protect food security.

The CHRGP highlights the need to apply the guidance set out in Planning Practice Note 37 – Rural residential development, and to incorporate regional considerations to ensure this kind of development benefits the regional economy and avoids detrimental impacts on regional assets.

Relevant regional considerations are listed as:

- natural hazards at the broad landscape level, including bushfire and flood
- whether residents are likely to orientate strongly to local settlements for employment and services, thus contributing to the region's growth, or will orientate more towards larger centres such as Melbourne
- proximity and access to employment and higher order services located within the region

- the location of declared water supply catchments and any potential impacts on water quality or yield
- consistency with the objectives identified in this plan for regionally significant areas of agricultural production, tourism, landscape and environmental assets
- the existing supply of, and demand for, rural residential lots in the area, including in neighbouring municipalities.

The CHRGP also emphasises the need to manage, protect and enhance the region's land, soil, water and biodiversity and supports new forms of energy generation where impact upon the amenity of residents, landscapes and environmental assets are minimised.

Agriculture

The land use policies, strategies and actions for rural land relating to agriculture include:

- Review planning schemes to recognise the need to support investment in agriculture by providing:
 - more clarity about the long-term designation of land for primary production
 - flexibility in terms of the types of rural activities that can occur on rural land to support its ongoing viability
- Undertake further investigations into the region's strategic agricultural land assets to ensure a consistent approach across the region
- Identify important agricultural areas and the need to protect them in planning schemes from unplanned loss due to permanent changes of land use
- Recognise the contribution that rural areas make to the landscape values and amenity of the region including as green breaks between settlements in planning schemes
- Provide policy support and direction in planning schemes on appropriate locations for intensive agricultural activities, including in the areas identified by this plan
- Provide policy support in planning schemes for infrastructure projects that will benefit agriculture such as improved transport routes to markets and the supply of reticulated services such as water to intensive agriculture facilities to enable further growth
- Identify locations where changes in land use controls would help facilitate economic development opportunities or better protect existing rural land use assets

A key principle is that long-term agricultural productivity should be supported with three key directions identified:

- Promote the growth of the agricultural sector as a regionally important economic activity
- Support change and transition to maintain the viability and productivity of agricultural land
- Encourage investment in agriculture by providing certainty regarding future land use within rural areas

The actions listed within the CHRGP to protect agriculture are:

- Protect regionally significant agricultural assets and encourage ongoing investment and infrastructure to support their growth
- Allow for a flexible approach to rural production activities in rural areas
- Recognise primary production as a priority in farming areas and avoid the permanent loss of productive agricultural land
- Locate rural residential development to minimise conflict with agricultural activities

Rural Living

The land use policies, strategies and actions for rural residential development are:

- Planning schemes recognise regional considerations in planning for rural residential development
- Direct rural residential development to areas where it will minimise exposure to natural hazards, protect regionally significant assets, support existing settlements and make best use of infrastructure and services
- Monitor the supply and demand for rural residential land within the region.
- Locate rural residential development to minimise impact on environmental assets and exposure to natural hazards

Future directions for rural residential development are:

- Plan for rural residential development on a regional basis to ensure it is directed to locations where it will most benefit the region
- Continue to provide areas for rural residential development in appropriate locations to offer residents lifestyle choice and attract new residents to the region
- Consolidate rural residential development in well-planned locations that support existing settlements, provide investment in infrastructure and services, are safe for residents and are consistent with the environmental, social and economic directions of this plan
- Ensure that new houses in farming areas support agricultural activities and do not impact on farming practices in the future or lead to the permanent loss of land from agricultural production

Domestic Wastewater Management Plan (2021)

The protection of surface waters, groundwater and human health are all requirements of the *Environment Protection Act 1970*. The State Environment Protection Policy (Waters) 2018 (SEPP) requires all Councils with onsite domestic wastewater management systems to develop and implement a Domestic Wastewater Management Plan (DWMP) that:

- Identifies the public health and environmental risks associated with the onsite domestic wastewater management systems; and
- Sets out strategies to minimise those risks

Key stakeholders who provided input into the Moorabool DWMP were:

- Water Authorities (Central Highlands Water, Barwon Water, Greater Western Water, Southern Rural Water and Melbourne Water);
- Environment Protection Authority Victoria (EPA);
- Department of Environment, Land, Water and Planning (DELWP); and
- Catchment Management Authorities (CMA): Corangamite, Port Phillip and Westernport, and North Central CMAs.

The key focus of the Moorabool DWMP is to develop and implement strategies that will achieve the objectives of the SEPP and provide for continued growth within the Shire of areas that rely on septic tank systems for sewerage treatment and disposal. The strategies include:

- Prioritisation of areas where the risk to public and environmental health or community amenity is currently adversely impacted by existing DWM systems and to recommend actions;
- Identification of properties that are subject to inundation (pooling of surface water as distinct from land that is in a defined flood plain) that could adversely impact on the operation of a septic tank system drainage field;
- Connection of properties that have reticulated sewerage service available;
- Identification of properties that are being occupied illegally and discharging domestic wastewater without the necessary approvals;
- Implementation of a compliance monitoring program;
- Implementation of an awareness program.

Section 2.4.1 of the Moorabool DWMP outlines:

- the Ministerial Guidelines for Planning Permit Applications in Special Water Supply Catchment Areas are to be referred to the relevant water authority for consideration.
- in non-sewered areas dwelling density must be no greater than one dwelling per 40 hectares unless an exemption is granted by Agreement with the water authority.

The Ministerial Guidelines allow this requirement to be relaxed where the following conditions are met.

- the minimum lot size area specified in the zone for subdivision is met in respect of each lot;
- the water corporation is satisfied that the relevant Council has prepared, adopted and is implementing a Domestic Wastewater Management Plan (DWMP) in accordance with the DWMP Requirements; and
- the proposal does not present an unacceptable risk to the catchment having regard to:
 - the proximity and connectivity of the proposal site to a waterway or a potable water supply source (including reservoir);
 - the existing condition of the catchment and evidence of unacceptable water quality impacts
 - the quality of the soil; » the slope of the land;
 - the link between the proposal and the use of the land for a productive agricultural purpose;
 - the existing lot and dwelling pattern in the vicinity of site;
 - any site remediation and/or improvement works that form part of the application; and
 - the intensity or size of the development or use proposed and the amount of run-off that is likely to be generated.

The Moorabool DWMP supports an increase in the 1 dwelling per 40ha requirement by water authorities if wastewater risks can be effectively managed and new and innovative solutions are applied.

Small Towns & Settlement Strategy (2014)

This strategy was adopted in 2014, and while specifically focuses on the small towns within Moorabool Shire, it provides useful commentary regarding dwelling pressure and demand within the rural areas of the municipality. Relevant commentary relating to agricultural use and activity is outlined below:

- *The STS seeks a balance between accommodating future growth, while maintaining the unique amenity of the Shire. This balance will not be achieved through ad hoc residential development extending into high quality agricultural land (page 7).*
- *Moorabool Shire is predominantly a rural landscape, and has substantial forests, waterways (including water catchments and storages) and rural residential areas. Most of the northern area is rural, with a large portion being forest. Approximately 74 per cent of the Shire consists of water supply catchments, State Forest, or National Park. Some of the many reservoirs in the Shire are Lal Lal, Bostock, Pykes Creek, Moorabool and Korweinguboora. In addition, three major rivers, the Werribee, Lerderderg and Moorabool, flow through the Shire (page 15).*
- *Much of the rural area in the Shire is used for agricultural purposes, including horticulture, sheep and beef farming, timber production and more recently, viticulture. In addition, mining and quarrying occurs in some areas (page 15).*
- *Moorabool is increasingly becoming a lifestyle destination. Many people (especially from Melbourne's west) are relocating to Moorabool Shire to experience a more relaxed, country style of living. Moorabool offers easy access to Melbourne, Geelong and Ballarat with affordable housing and a growing business sector (page 15).*
- *A key corridor for development and the focus of the State Government has been the Western Freeway corridor connecting Western Melbourne with Ballarat and beyond. Controlling and yet encouraging growth within this corridor is critical to State Government planning initiatives for Melbourne. These policy settings and housing affordability pressures have created demand for housing within areas of Moorabool Shire, which are remote from settlements, more suitable for productive agricultural purposes, and or endowed with environmental assets or otherwise located in areas that should not be compromised by subdivision and development (page 17).*
- *Agriculture and primary production are important drivers of the local economy and will remain significant into the future (page 62).*

Rural Housing Policy (2014)

This policy adopted by Council in 2014, focuses on the assessment of applications for single dwellings in the Farming Zone (FZ). The aim of the document is stated as being to allow each lot within the Farming Zone (FZ) to have a dwelling on it, which does not align with the nominated purpose of the zone.

The policy encourages dwellings in the areas nominated in the Council 2012 Rural Growth Policy (described below) and the assessment principles attached to the policy ensure the siting of any dwelling has minimal impact on agricultural activities either on or adjoining the land. Two sets of assessment principles are provided one for lots between 8 and 20ha, and one for lots less than 8ha.

Rural Growth Policy (2012)

This policy adopted by Council in 2012 provides direction on Council's preferred approach to rural planning within Moorabool Shire for the next 30 years. It outlines support for resilient and integrated rural communities and agricultural enterprises. The policy indicates that the State Government Planning Policy Framework does not adequately recognise or support agricultural trends (increasing importance of off farm income and more intensive agriculture enterprises) and rural settlements in Moorabool.

The policy recognises that smaller farms are a fact of life in Moorabool and unlikely to increase in size as it is not cost effective for farmers to acquire additional land to increase the scale of farm operations, and that planning policies should recognise this component of the existing land use pattern.

It provides direction for how non-farm rural dwellings should be considered and, more broadly, rural settlement patterns, specifically:

- On-farm living will be supported if the dwelling is within the Ballarat Corridor area and the development supports identified rural communities and settlements;
- Land parcels for on farm living dwellings are to have a minimum lot size of 8ha and be located within the areas identified on the attached map – refer to attachment A – so as to retain population within rural communities
- Encourage development that assists in retaining increased accommodation opportunities for the existing rural population and as appropriate in the areas local circumstances
- Support developments that increase accommodation opportunities for the existing rural populations, including young residents and housing opportunities for older persons
- Supports developments that are part of a wider opportunity to increase investment within the agricultural enterprise.

The policy identified the need for a Small Towns and Settlement Strategy which has since been completed.

Planning Policy Review

Planning Policy Framework

The following clauses of the Planning Policy Framework are considered relevant.

Clause 11: Settlement

Clause 11 seeks to ensure the sustainable development of Victoria through appropriately planned settlements and the provision of a sufficient supply of land for use and development purposes. At a regional level, growth and development is to be supported in existing urban settlements to foster sustainable rural communities.

Key observations include:

- *Clause 11.01-1S Settlement* requires the Central Highlands Regional Growth Plan (2014) to be considered as relevant.
- *Clause 11.01-1L-01 Settlement in Moorabool* includes a number of relevant strategies, including:
 - *Limit urban development where it is likely to impact on highly productive agricultural land, environmental values and the long-term sustainability of natural resources.*
 - *Direct rural residential and rural living development to strategic growth areas where they will not impact on agricultural and horticultural production.*
 - *Discourage development in settlements where reticulated sewerage systems are not available and onsite treatment of effluent cannot be provided.*
- *Clause 11.03-3S Peri-urban areas* seeks to ensure that growth in peri-urban areas is appropriately managed by ensuring that growth is focused within settlements, urban sprawl avoided, agricultural land protected, and environmental and natural assets enhanced. Growth boundaries for peri-urban towns and non-urban breaks between settlements are to be established.
- *Clause 11.03-5S Distinctive areas and landscapes* seeks to recognise the importance of distinctive areas and landscapes to the people of Victoria and protect and enhance the valued attributes of identified or declared distinctive areas and landscapes.

Clause 12 Environmental and Landscape Values

Clause 12 seeks to ensure planning protects and enhances ecological systems, biodiversity, and areas of environmental and landscape value through the implementation of ecologically sustainable development. The quality of native vegetation and waterbodies, in particular, is to be maintained. Significant landscapes that contribute to character, identity, and sustainable environments are to be protected and enhanced.

Clause 13: Environmental Risks and Amenity

Clause 13 seeks to ensure that planning identifies and manages environmental risks and seeks to avoid and minimise their impact on the economic, social and environmental wellbeing of society. Climate change impacts and natural hazards associated with flooding and bushfire are to be minimised and adapted to through risk-based planning.

Clause 14: Natural Resource Management

Clause 14 seeks to ensure planning recognises the conservation and wise use of natural resources including agricultural land. Productive agricultural land is to be preserved and protected for its economic benefits by amongst other things identifying areas for significant primary production, avoiding fragmentation and the encroachment of residential development, and discouraging the siting of incompatible uses within proximity of agricultural activities. The loss of agricultural land within peri-urban locations is to be avoided. The clause supports sustainable and innovative forms of agriculture that are flexible to market fluctuations and climate change and more intensive forms of agriculture.

Further key observations include:

- *Clause 14.01-1S Protection of agricultural land* seeks: *to protect the state's agricultural base by preserving productive farmland*, including a range of strategies including:
 - *Identify areas of productive agricultural land, including land for primary production and intensive agriculture.*
 - *Consider state, regional and local, issues and characteristics when assessing agricultural quality and productivity.*
 - *Avoid permanent removal of productive agricultural land from the state's agricultural base without consideration of the economic importance of the land for the agricultural production and processing sectors.*
 - *Protect productive farmland that is of strategic significance in the local or regional context.*
 - *Protect productive agricultural land from unplanned loss due to permanent changes in land use.*
 - *Prevent inappropriately dispersed urban activities in rural areas.*
 - *Protect strategically important agricultural and primary production land from incompatible uses.*
 - *Limit new housing development in rural areas by:*
 - *Directing housing growth into existing settlements.*
 - *Discouraging development of isolated small lots in the rural zones from use for dwellings or other incompatible uses.*
 - *Encouraging consolidation of existing isolated small lots in rural zones.*

- *Identify areas of productive agricultural land by consulting with the Department of Energy, Environment and Climate Action and using available information.*
- *In considering a proposal to use, subdivide or develop agricultural land, consider the:*
 - *Desirability and impacts of removing the land from primary production, given its agricultural productivity.*
 - *Impacts on the continuation of primary production on adjacent land, with particular regard to land values and the viability of infrastructure for such production.*
 - *Compatibility between the proposed or likely development and the existing use of the surrounding land.*
 - *The potential impacts of land use and development on the spread of plant and animal pests from areas of known infestation into agricultural areas.*
 - *Land capability.*
- *Avoid the subdivision of productive agricultural land from diminishing the long-term productive capacity of the land.*
- *Give priority to the re-structure of inappropriate subdivisions where they exist on productive agricultural land.*
- *Balance the potential off-site effects of a use or development proposal (such as degradation of soil or water quality and land salinisation) against the benefits of the proposal.*
- *Clause 14.01-1L Agriculture, rural dwellings and subdivision, includes a range of strategies including:*
 - *Discourage subdivision and dwellings unless they are directly related to the agricultural use of land.*
 - *Avoid the development of dwellings that may adversely affect or constrain existing farms and their operations.*
 - *Allow the excision of a lot for a dwelling where it would facilitate the ongoing agricultural use of the remaining land.*
 - *Maintain productive farm sizes by discouraging fragmentation of land for non-rural use and development.*
 - *Ensure that incompatible land use and development does not encroach upon productive agricultural land, particularly the Bacchus Marsh Irrigation District.*
- *Clause 14.01-2S Sustainable agricultural land use contains an objective to encourage sustainable agricultural land use, and includes the following strategies:*
 - *Ensure agricultural and productive rural land use activities are managed to maintain the long-term sustainable use and management of existing natural resources.*
 - *Support the development of innovative and sustainable approaches to agricultural and associated rural land use practices.*
- *Support adaptation of the agricultural sector to respond to the potential risks arising from climate change.*
- *Encourage diversification and value-adding of agriculture through effective agricultural production and processing, rural industry and farm-related retailing.*
- *Assist genuine farming enterprises to embrace opportunities and adjust flexibly to market changes.*
- *Support agricultural investment through the protection and enhancement of appropriate infrastructure.*
- *Facilitate ongoing productivity and investment in high value agriculture.*
- *Facilitate the establishment and expansion of cattle feedlots, pig farms, poultry farms and other intensive animal industries in a manner consistent with orderly and proper planning and protection of the environment.*
- *Ensure that the use and development of land for animal keeping or training is appropriately located and does not detrimentally impact the environment, the operation of surrounding land uses and the amenity of the surrounding area.*
- *Clause 14.01-2L-02 Sustainable agricultural land use, includes the following strategies:*
 - *Facilitate value-adding enterprises associated with the Bacchus Marsh Irrigation District by working with landowners to achieve vertical or horizontal integration.*
 - *Facilitate an increase in sustainable rural land management practices (in particular weed and pest management) when supporting land use change or development within rural areas.*
- *Clause 14.02 Water contains a range of policies relevant to the context of Moorabool, including:*
 - *Clause 14.02-1S Catchment planning and management including the protection and restoration of catchments, waterways, water bodies and groundwater.*
 - *Clause 14.02-1L Declared special water supply catchments, which is a policy targeted to land covered by ESO1 which relates to Declared Special Water Supply Catchment areas. It seeks to avoid subdivision of such land; locate septic tanks away from waterways, wetlands and dams and discourages land use and development with potential to reduce water quality.*
 - *Clause 14.02-2S Water quality seeks to protect water quality, and includes the following relevant strategies*
 - *Protect reservoirs, water mains and local storage facilities from potential contamination.*
 - *Ensure that land use activities potentially discharging contaminated runoff or wastes to waterways are sited and*

managed to minimise such discharges and to protect the quality of surface water and groundwater resources, rivers, streams, wetlands, estuaries and marine environments.

- Discourage incompatible land use activities in areas subject to flooding, severe soil degradation, groundwater salinity or geotechnical hazards where the land cannot be sustainably managed to ensure minimum impact on downstream water quality or flow volumes.
- Prevent the establishment of incompatible land uses in aquifer recharge or saline discharge areas and in potable water catchments.
- Encourage the siting, design, operation and rehabilitation of landfills to reduce impact on groundwater and surface water.
- Use the mapped information available from the Department of Energy, Environment and Climate Action to identify the beneficial uses of groundwater resources and have regard to potential impacts on these resources from proposed land use or development.
- Clause 14.02-3S Protection of declared irrigation districts seeks to plan and manage such declared area, which includes the Bacchus marsh irrigation district. Strategies include the need to plan for communities to adapt to strategic land use change; seek to either or ensure non-agricultural use does not undermine the integrity of declared irrigation districts.

Clause 15: Built Environment and Heritage

Clause 15 seeks amongst other things to ensure areas of aboriginal cultural heritage are protected and conserved.

Clause 16: Housing

Clause 16 seeks to ensure that a range of housing types with good access to jobs and services in established areas is provided for. Clause 16.01-5S specifically focuses on rural residential development where it is noted that suitable land in appropriately serviced locations should be identified for this type of development to ensure that agriculture is not impacted on, high quality productive land avoided, and landscape and environmental values protected.

Clause 17: Economic Development

Clause 17 encourages the provision of a strong and innovative economy by providing land for industry, facilitating decisions, and resolving land use conflicts. Within the Hume region, new and developing forms of industry, agriculture, tourism and alternative energy production is encouraged.

Clause 18: Transport

Clause 18 seeks to ensure planning can facilitate efficient transport networks for the reliable movement of people and goods, for overall economic prosperity.

Municipal planning strategy

The following clauses of the Local Planning Policy Framework are considered relevant.

Clause 02.01: Context

This Clause sets the scene for the context of Moorabool as follows:

Moorabool Shire is a fast-growing peri-urban municipality located along the major road and rail transport corridors between Melbourne and Ballarat (and ultimately Adelaide).

Identified as a growth area in Plan Melbourne and the Central Highlands Regional Growth Strategy, the municipality is set to undergo significant growth and change, particularly in Bacchus Marsh and Ballan. There are opportunities for further growth in Gordon, and some small towns and settlements, including Bungaree and Wallace. The population of the Shire is estimated to increase by 76 per cent between 2021 and 2041, from 36,344 to 63,831.

Covering more than 2,110 square kilometres, Moorabool Shire is characterised by small towns and settlements in distinctive rural landscapes which comprise a diversity of vast ranges, plains, ancient gorges, and areas of horticulture. More than 74 per cent of the Shire comprises of water catchments, state forests and national parks.

These environmental assets, as well as existing built form, historic sites and landscapes, contribute to the Shire's numerous places of natural and cultural heritage significance.

Agriculture is a major sector in Moorabool's economy which also contributes to the rural landscape setting that typifies the Shire. Agricultural production is predominantly broad acre cropping and grazing with horticulture on irrigated land around Bacchus Marsh.

Residential, construction, retail and service industries, light manufacturing and tourism are emerging areas of growth.

Clause 02.03: Strategic directions

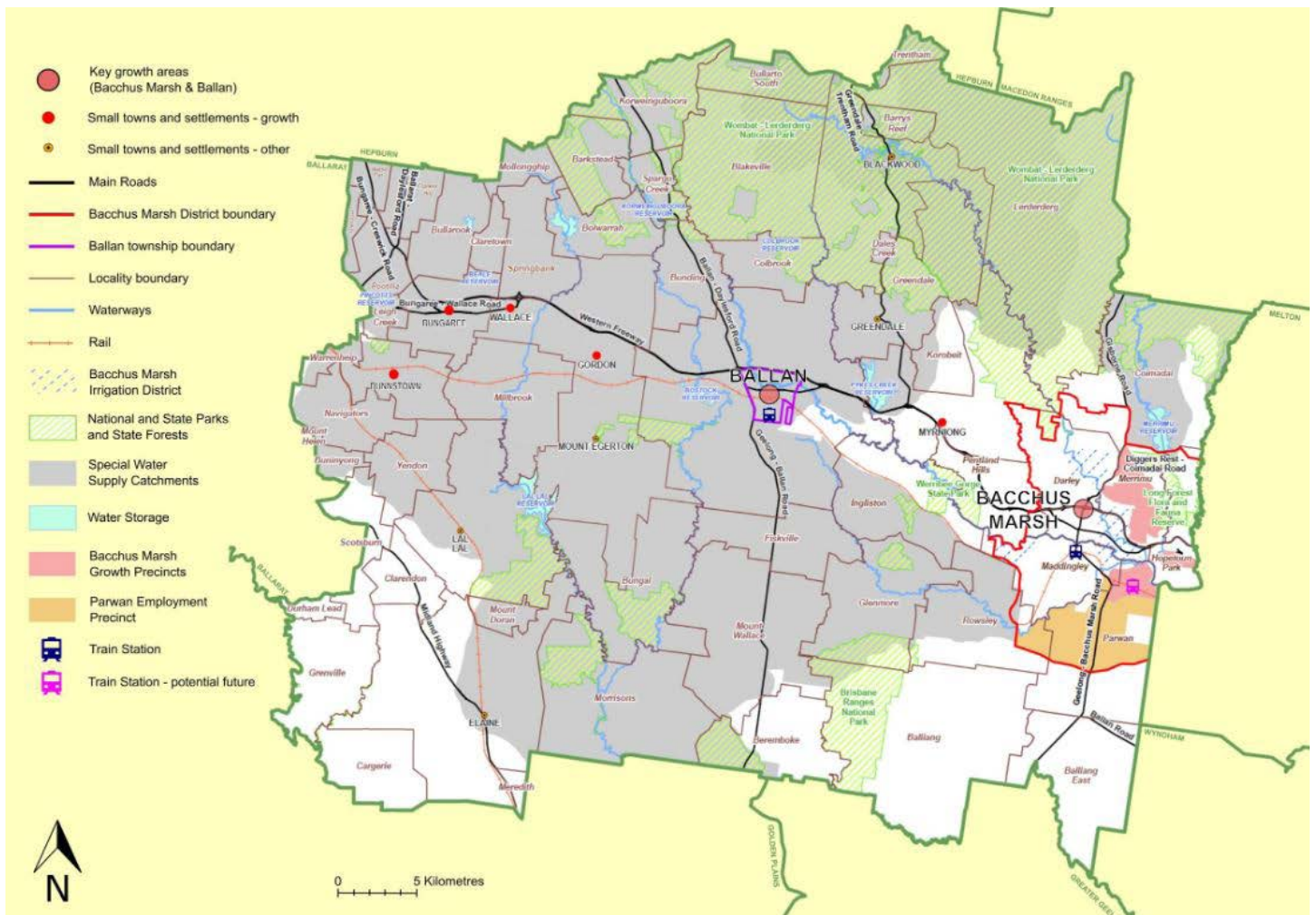
This Clause outlines a wide range of strategic directions, with elements of various sub-clauses relevant to the current project including:

- *Clause 02.03-1 Settlement* includes the following relevant statements:
 - *Outward pressure from the Melbourne metropolitan area, the location of the Shire on one of the State's major regional transport corridors and proximity to the regional centres of Ballarat and Geelong will continue to reinforce the advantages of the Shire as a place to live and invest.*
 - *Future population growth needs to be balanced with protection and sustainable use of the Shire's environmental assets which contribute significantly to the lifestyle and attraction of Moorabool Shire as a place to live, invest and visit.*
 - *Approximately two-thirds of the Shire is located in Declared Special Water Supply Catchments, including privately owned land, mainly used for agricultural purposes, or National or State Park or State Forest. Steep land, areas subject to flooding or bushfire, isolation, lack of services, and resources capable of economic extraction are also significant development constraints. In the absence of reticulated sewer, the development of the Shire's small towns and settlements is limited.*
- *Clause 02.03-2 Environmental and landscape values* includes the following relevant statements:
 - *Moorabool Shire's natural environment, towns, rural landscapes and forested areas are important elements of the Shire's character.*
 - *The varied and rich topographical features of Moorabool Shire (including ranges, plains, and gorges) need to be conserved not only for their intrinsic environmental and landscape values but also as a recreational and tourism resource to the Shire.*
 - *The small towns and settlements of Moorabool Shire have a very strong rural setting and character that is defined by the local agricultural base, spectacular scenic landscapes and diverse vegetation. There is a need to ensure that these values, which draw people to the area, are protected.*
 - *Moorabool River, Werribee River and Lerderberg River supply water for domestic and agricultural purposes. Inappropriate development, land clearing and sediment deposition from erosion can threaten riparian environments and water quality within the catchments.*
- *Clause 02.03-4 Natural resource management* includes the following relevant statements:
 - *Agriculture is the major land use in the Shire and a significant component of the economy. The Shire is committed to facilitating sustainable agriculture and protecting the long-term supply of productive agricultural and horticultural land. Where irrigation water or higher rainfall combines with highly productive soil types, the Shire supports horticultural pursuits.*
 - *The Shire's horticultural land resources are important economically in supporting tourism and the lifestyle appeal of the area. The Bacchus Marsh Irrigation District and other highly productive areas in the west of the Shire need to be protected from the encroachment of residential development.*
 - *There is need to avoid fragmentation of land suitable for rural production by discouraging subdivision and houses that are unrelated to the rural use of the land. It is also important to ensure that farm production is not compromised or adversely affected by residents living in rural areas.*
 - *The Shire's agricultural base and attractive rural setting are important drivers in attracting people to live in Moorabool. Council supports rural living development where it does not compromise the long term productive use of rural land for agriculture, enhances environmental outcomes and provides services and infrastructure to support such development.*
 - *Council seeks to:*
 - *Protect good quality agricultural land and support the productivity and sustainability of existing and future agricultural and horticultural activities.*
 - *Increase productivity and investment associated with the Bacchus Marsh Irrigation District.*
 - *Ensure that subdivision and dwellings in rural areas will result in increased agricultural productivity.*
 - *Minimise the potential for farm production to be adversely impacted by land use conflicts.*
 - *Large areas of Moorabool Shire are in Declared Special Water Supply Catchments providing potable water for local and regional populations.*
 - *For public health reasons, prospects for population growth and investment are minimal for small towns and settlements that reside within a Declared Special Water Supply Catchment and lack reticulated sewerage.*
 - *Inappropriate land use and development within Declared Special Water Supply Catchment areas will compromise the ability to supply water of appropriate quality. In particular, it is critical that appropriate effluent disposal systems are use.*

- Council seeks to protect the quality and quantity of water produced within Declared Special Water Supply Catchments.
- Clause 02.03-8 Transport includes the following relevant statements:
 - Improved vehicle and freight links are required between destinations within and beyond the Shire, and to address the physical division created by the Western Freeway and Ballarat Rail line, particularly in Bacchus Marsh.
 - An efficient road network for the Bacchus Marsh district would facilitate east-west and north-south connections.
 - Council seeks to facilitate a high quality, sustainable and connected transport network within Moorabool Shire including roads, rail and air.

Clause 02.04: Strategic Framework Plan

This Clause includes a strategic framework plan to be read in conjunction with the strategic directions contained in Clause 02.03. The strategic framework plan contained in Clause 02.04 is reproduced below.



Zones

The following table provides a summary of all relevant zones within the study area.

| Zone | Purpose | Schedules and Application |
|--------------------------------------|--|--|
| Farming Zone (FZ) | To identify and protect productive farming land and to limit uses that would conflict with or limit agricultural activities and expansion. | <p>Applied to the majority of rural land within the Shire.</p> <p>Minimum subdivision areas outlined within schedule:</p> <ul style="list-style-type: none"> 15ha - as shown on maps attached to the schedule. 100ha - to all other land. <p>Minimum area for which no permit is required to use land for a dwelling</p> <ul style="list-style-type: none"> 15ha - as shown on maps attached to the schedule. 40ha - to all other land (State standard). |
| Rural Conservation Zone (RCZ) | To protect and conserve rural land with significant environmental features or attributes which could be based on historic, archaeological, landscape, ecological, cultural or scientific values. | <p>Applies to a number of targeted area, with some listed in RCZ schedules as follows:</p> <p>RCZ Schedule 1 - minimum subdivision area</p> <ul style="list-style-type: none"> Map 1 Bences Road: 0.75ha with average of 1ha Map 2 Dale's Creek: 0.6ha Map 3 Korweinguboora: 6ha Map 4 Blakeville: 6ha Map 5 Barkstead: 6ha Map 6 Bullarto South: 6ha Map 7 Newbury: 6ha Map 8 Barry's Reef: 6ha All other land: 100ha <p>RCZ - Schedule 2 - minimum subdivision area</p> <ul style="list-style-type: none"> Map 1 Camerons Road Area: 6ha <p>Beyond the RCZ areas listed above, and although not specifically named in RCZ schedules, there is RCZ land within the general settlements of: Spargo Creek, Blackwood, Coimadai, Quandong.</p> |
| Rural Living Zone (RLZ) | To allow for residential uses within a rural setting and farming activities not necessarily related to household income. | <p>Applies to various existing settlements throughout Moorabool Shire, including: land peripherally surrounding Ballan and Gordon, as well as at Yendon, Lal Lal, Greendale and Coimadai.</p> <p>Minimum subdivision size:</p> <ul style="list-style-type: none"> 6ha (all land within study area). <p>Minimum lot size to use land for a dwelling without a permit:</p> <ul style="list-style-type: none"> 6ha |
| Public Park & Recreation Zone (PPRZ) | To recognise areas for public recreation and open space. To protect and conserve areas of significance where appropriate. To provide for commercial uses where appropriate. | Applies to a number of selected parkland reserves located throughout the rural areas of Moorabool. |

| Zone | Purpose | Schedules and Application |
|------------------------|--|---|
| Special Use Zone (SUZ) | To provide for a use and development as specified within a schedule to the zone. | <p>Schedule 1 - Coal Mining applies to quarry located south of Bacchus Marsh.</p> <p>Schedule 2 - Earth and Energy Resources Industry applies to a number of selected sites within the rural areas of Moorabool.</p> <p>Schedule 5 - Shaws Road Tourism Precinct, applies to a specific area south west of the Ballan township.</p> |
| Public Use Zone (PUZ) | <p>To recognise public land use for public utility and community services and facilities.</p> <p>To provide for associated uses that are consistent with the intent of the public land reservation or purpose.</p> | Schedule 1- Service & Utility applies to a number of selected sites within the rural areas of Moorabool and typically water catchment reservoirs. |

Overlays

The following table provides a summary of all relevant overlays within the study area.

| Overlay | Purpose | Schedules and Application |
|---|--|--|
| Bushfire Management Overlay (BMO) | To identify land that may be significantly at risk of bushfire and ensure development seeks to prioritise the protection of human life and strengthens community resilience. | Applies to large portions of the Shire near forested or heavily vegetated areas. |
| Special Building Overlay (SBO) | To identify land affected by inundation by overland flows from the urban drainage system as determined by, or in consultation with, the floodplain management authority. | Applies to targeted land within the Werribee River and Lerderderg River catchments. |
| Land Subject to Inundation Overlay (LSIO) | To identify land affected by flooding associated with waterways and open drainage systems and to ensure development minimises flood damage. | Applies to targeted land within the Werribee River and Lerderderg River catchments. |
| Design & Development Overlay (DDO) | To identify areas which are affected by specific requirements relating to the design and built form of new development. | Applies to targeted precincts and/or land parcels throughout the Shire and outlines site specific design and built form outcomes which are sought to be facilitated. |
| Development Plan Overlay (DPO) | To identify areas which require the form and conditions of future use and development to be shown on a development plan before a permit can be granted to use or develop the land. | Applies to targeted land parcels mainly in Bacchus Marsh and required the preparation of a detailed Development Plan to be prepared and endorsed before development can be facilitated. |
| Environmental Audit Overlay (EAO) | To ensure that potentially contaminated land is suitable for a use which could be significantly adversely affected by any contamination. | Applies to discrete locations mainly in Bacchus Marsh. |
| Environmental Significance Overlay (ESO) | To identify land where development may be affected by environmental constraints or may be incompatible with identified environmental values. | <p>ESOs apply in targeted areas across Moorabool Shire, as denoted by a number of specific overlay schedules, including:</p> <ul style="list-style-type: none"> ▪ ESO Schedule 1 (ESO1) applies to Special Water Supply Catchment Areas, which covers large parts of the rural areas of the Moorabool, and particularly to the west, south west and north of Bacchus Marsh. ▪ ESO Schedule 2 (ESO2), applies to wetlands, waterways within Moorabool, and is part of the broader protection of Special Water Supply Catchment Areas ▪ ESO Schedule 3 (ESO3) applies to Long Forest and Werribee Gorge and seeks to protect these environmental areas. ▪ ESO Schedule 4 (ESO4) applies to a number of wetland areas within Moorabool, with a function to protect these environmental elements. ▪ ESO Schedule 5 (ESO5) applies to the Ballan sewerage treatment plant and seeks to apply a buffer to prevent the establishment of habitable buildings. ▪ ESO Schedule 6 (ESO6) applies to the Western Grassland Reserves with a function to protect these environmental elements. ▪ ESO Schedule 7 (ESO7) applies to the Grasslands with the Werribee Plains hinterland with a function to protect these environmental elements. ▪ ESO Schedule 8 (ESO8) applies to river red gums in the Bacchus marsh Valley with a function to protect these environmental elements. |

| Overlay | Purpose | Schedules and Application |
|-------------------------------------|--|---|
| Significant Landscape Overlay (SLO) | To identify, conserve and enhance significant landscapes. | <p>SLOs apply in targeted areas across Moorabool Shire, as denoted by a number of specific overlay schedules, including:</p> <ul style="list-style-type: none"> ▪ SLO Schedule 1 (SLO1) applies to scenic hilltops and ridge line areas around Bacchus Marsh and seeks to minimise the visual impact of development. ▪ SLO Schedule 2 (SLO2) applies to Gordon town centre, township and surrounds, and seeks to protect significant trees and vegetation. ▪ SLO Schedule 3 (SLO3) applies to the Rivers of the Barwon: Yarrowee River (Yarrowee) corridor environs and seeks to enhance a continuous riparian corridor landscape, retain vegetation, minimise earthworks and visual impact of development. ▪ SLO Schedule 4 (SLO4) applies to the Rivers of the Barwon: Moorabool River (Mooroobull) corridor environs and seeks to enhance a continuous riparian corridor landscape, retain vegetation, minimise earthworks and visual impact of development. |
| Airport Environs Overlay (AEO) | To identify areas subject to aircraft noise, and to ensure landuse and development is compatible with airport operations. It also seeks to limit the number of people residing in an area subject to aircraft nose. | <ul style="list-style-type: none"> ▪ This overlay applies to land around Bacchus Marsh airport. |
| Heritage Overlay (HO) | To conserve and enhance places of natural or cultural significance. | Applies to a range of specific sites and precincts. |
| Restructure Overlay (RO) | To identify old and inappropriate subdivisions which are to be restructured, and to preserve and enhance the amenity of the area and reduce the environmental impacts of dwellings and other development. | <p>The Restructure Overlay (RO) applies to four specific areas, including:</p> <ul style="list-style-type: none"> • RO2: Wallace Crown township except Freeway and Crown Allotment A3, Old Wallace • RO3: Elaine North Crown Township (except CA's 1&2, Section 16), Elaine North • RO4: Rowsley Crown Township, Rowsley |
| Specific Control Overlay (SCO) | To apply specific controls designed to achieve a particular land use and development outcome in extraordinary circumstances. | <p>The Specific Control Overlay (SCO) applies to two specific areas, including:</p> <ul style="list-style-type: none"> • SCO1: Maddingley Spoil Processing Facility October 2020 • SCO2: Hospital Emergency Medical Services - Helicopter Flight Path Protection Areas Incorporated Document, June 2017 |
| Public Acquisition Overlay (PAO) | To identify land which is proposed to be acquired by a Minister, public authority or municipal council, and to reserve land for that purpose, as well as designate a Minister, public authority or municipal council as an acquiring authority for land reserved for a public purpose. | <p>PAOs apply in targeted areas across Moorabool Shire, as denoted by a number of specific overlay schedules, including:</p> <ul style="list-style-type: none"> ▪ PAO1: VicRoad - Western Freeway, Realignment ▪ PAO2: VicRoads - Grant Street, Bacchus Marsh, Widening ▪ PAO3: VicRoads - Gisborne Road, Realignment ▪ PAO5: The Minister responsible for administering Part 2 of the Crown Land (Reserves) Act 1978 Western Grassland Reserve |

