

**The City of Greater Bendigo
will creatively lead and
support our growing
community and businesses
to realise their potential.**

Rural Areas Strategy *September 2009*

Adopted by Council 16 September 2009

Abbreviations

DSE	Department of Sustainability and Environment
DPCD	Department of Planning and Community Development
DPI	Department of Primary Industries
FSL	Full Supply Level
FZ	Farming Zone
G-MW	Goulburn Murray Water
LPPF	Local Planning Policy Framework
MSS	Municipal Strategic Statement
RCZ	Rural Conservation Zone
RLZ	Rural Living Zone
SAP	Special Area Plan
SPPF	State Planning Policy Framework
MoU	Memorandum of Understanding
NCCMA	North Central Catchment Management Authority

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SUMMARY

This report outlines the challenges, changes and planning issues throughout the municipality and provides the strategic direction for future planning, current and future use and development of agricultural land within the City of Greater Bendigo.

The municipality has many unique features (both natural and built) and significant history of settlement, and the rural areas form part of the character that makes up the City of Greater Bendigo.

During the last ten to twelve years, there have been significant challenges with the drought and the impacts of climate change. The rural sector has had to deal with this and work through these hard times.

This document aims to provide certainty to the farming sector, protecting valuable agricultural land, providing direction for intensive animal industries, supporting townships in rural areas, assisting with the region's water issues and outlining rural living land supply.

The table below is a summary of the key recommendations outlined in this document.

Table 1: Summary of Key Recommendations

Issue	Policy direction/statement
Fragmentation of agricultural land	Subdivision minimum should be increased to 100 ha (F1Z), 40 ha (F2Z) and 8 ha (F3Z) to improve the viability of commercial agriculture and maintain farm valuations.
Conflicts between agricultural and residential use	Provide certainty and protect the 'the right to farm' by discouraging new houses in rural areas, unless they support agricultural use of the land. Strengthen the Rural Dwellings Policy (22.02), to discourage new houses in rural areas. Include the "Guidelines for Rural Houses - 2006" as a Reference Document in the planning scheme (21.10).
Land-use conflicts	Acknowledge 'the right to farm' in the MSS.
Protection of intensive agriculture	Reinforce MSS Clause 21.07-Economic development. Use Figure 6 <i>Proposed Farming Zones</i> as the basis for decisions. Update map in MSS- <i>Intensive Rural Industries</i> to reflect existing and new developments and provide planning/protection boundaries. A study on intensive animal industries within the Rural Living Zone should be undertaken to establish appropriate zoning for the protection of the industry and neighbouring properties.

Over-supply of land for rural living	The supply of rural living land far exceeds the minimum threshold of 10 years and does not require further review in the short to medium term.
West side of the municipality	Retain Farm zoning and actively discourage new houses.
Site specific issues	Provide for a modest in-fill of rural living at Youngs Lane, Heathcote, subject to strategic justification.
Zoning around Lake Eppalock	Maintain current zoning of the Lake Eppalock catchment as Rural Conservation with a possible Rural Activity Zone around parts of the Eppalock foreshore.
Small dams (3ML and under)	Support the Lake Eppalock Special Area Plan (SAP) and the Draft Sustainable Water Strategy-Northern Region policy documents in addressing small dams within the Lake Eppalock catchment.
Rural road network	Implementing the Bendigo Transport Strategy recommendations (B-Double restrictions, impact of roads and access for communities).
Water	Work with the North Central Catchment Management Authority and water authorities to identify strategies and implementation plans, such as Coliban Water's <i>Waterplan 2055, Special Area Plan and Northern Water Strategy</i> as a means of securing the region's water future.
Biodiversity	Continue to work with Natural Resource Management agencies to identify strategies, plans and policies that will protect and enhance our environmental assets. (eg, National and State parks and reserves).
Climate change	Investigate the future implications of climate change on the rural sector within the municipality.
Small townships	<p>Rezone parts of Neilborough and Ravenswood to Rural Living to better reflect current land use and development.</p> <p>Prepare restructure overlays for Myers Flat, Lockwood, Redesdale and Mia Mia.</p> <p>Prepare township structure plans for Heathcote, Elmore, Redesdale and Goornong.</p>
Wildfire	<p>Structure planning for emerging development areas should integrate suitable buffer areas at the interface between the forests and new neighbourhoods.</p> <p>Support the Royal Commission into the Black Saturday fires and subsequent policy direction of the State Government.</p>

INTRODUCTION

The City of Greater Bendigo is one of the major regional centres of Victoria. It has a population of 100,000 and serves a regional population of approximately 200,000. As well as its significant urban area, Greater Bendigo includes a diverse range of agricultural industries from poultry, piggeries, vineyards and olives, to traditional broad-acre cropping and grazing. Greater Bendigo also attracts people interested in living in a rural environment and many new residents have moved for a 'tree change' experience.

The City of Greater Bendigo has undertaken a review of the rural land within the municipality with the aim of securing the long term management of this key element of the municipality. Given the role of Bendigo as a regional city, the significance of the rural areas cannot be overlooked. The City recognises that the rural areas play a fundamental role in the City's economy, through agriculture, liveability, through providing a unique setting for the City and its community, and through contributing to the diversity of lifestyle opportunities of the municipality.

The key purpose of the *Rural Areas Strategy* is to review the municipality's rural areas. This has not happened since amalgamation and will provide the basis for the strategic application of the new Rural Zones. This strategy will also provide for a review of the planning controls within the Greater Bendigo Planning Scheme as they apply to rural land within the municipality. The current regime that applies to the rural areas arose from the former municipalities that preceded Greater Bendigo, and are not considered to be responsive to the current needs of agriculture, the environment and residents. Further, it is considered that the strategy may highlight other opportunities for improved management of rural areas by Government and the community.

In 2006, Coomes Consulting were commissioned by the City of Greater Bendigo to prepare a Rural Areas Strategy. They produced two documents: Greater Bendigo – Rural Areas Strategy Technical Report, January 2008; and the Draft Greater Bendigo Rural Areas Strategy 2008-2018

This work addressed the key themes of:

- Demographics;
- Environment and Culture;
- Agriculture and Economic Development; and
- Infrastructure.

The work resulted in a draft strategy for the rural areas of Bendigo.

On review of this work, it was considered that a number of areas would benefit from further research and review. This document builds on the Coomes work to refine it in some key areas, to better support the current needs of agriculture, the environment and the community.

I. CHARACTER, CHALLENGES AND CHANGE

Character

I Introduction

The rural areas of Bendigo are significant in that they are fundamental to the character of the municipality. Character is important as it contributes to the liveability of the area and the ability to grow through attracting residents, business and investment. Character is also important as it contributes to the sense of place the community feels, and the character and presentation of the municipality is vital to the tourism economy. Managing land use and development within the rural areas of the City must be done within the context of understanding the impact on the character of the rural areas.

The care with which we manage our natural resources – land, water, biodiversity and climate – ultimately sustains our social and economic wellbeing¹.

I.1 The Natural Setting

Greater Bendigo has a diverse range of natural features which contribute to the character of the municipality, especially as a large regional city almost surrounded by high value native vegetation.

I.1.1 Geology

The underlying geology can be classified into discrete types. In the southern part of the municipality, undulating Ordovician Age sedimentary hills give way to granite hills in the west and Cambrian Age volcanic plains in the east. In the northern areas sandstone rises give way to riverine plains. Being of marine origins, salting in the soils and groundwater is increasing with disturbance to the vegetation and subsequent changes in groundwater levels. Generally the soils are moderately acidic ranging in pH 4.8 – 6.

I.1.2 Habitat

The Box-Ironbark forests and woodlands which dominated Bendigo's landscape prior to European settlement are a unique and diverse ecosystem that supported a large proportion of Australia's land based plant and animal species. Today there are still in excess of 750 species of native plants and over 200 species of native birds, mammals and reptiles recorded in the local forests, many of which do not occur elsewhere.

Greater Bendigo has an extensive network of National and Regional Parks and reserves which protect a range of vulnerable ecosystems and natural areas which are highly valued by the community. The reservation of the Box-Ironbark parks and reserves in 2002 has increased

¹ North Central Regional Catchment Strategy 2003-2007

awareness of the importance of the forests surrounding Bendigo and Heathcote. These parks provide readily accessible opportunities for the City's residents to experience the natural, cultural and recreational values. While the majority of remnant vegetation is located on public land and is protected, there are some significant areas on privately owned land.

Native vegetation has been cleared or altered as a result of past and present land use such as settlement and urbanisation, mining, agriculture, and forestry. Only 23% of the area covered by native vegetation remains in the Greater Bendigo area since European settlement. This is represented in a mosaic of vegetation across the landscape consisting of patches, linear corridors (along roadsides and streams) and scattered remnants. The native vegetation associated with the more fertile soils of lower elevations has been predominantly cleared for agriculture and settlement. It continues to be subjected to fragmentation and degradation due to further clearance for development, the presence of stock, pest plants and animals, alteration to hydrology, altered soil fertility, and various human activities. Currently within Greater Bendigo there are 26 Ecological Vegetation Classes, over 100 species of flora and around 90 species of fauna that are threatened. In some cases, the last remaining population of the species occur within Greater Bendigo.

1.1.3 Waterways

European settlement in Greater Bendigo was based upon the discovery of gold rather than proximity to a main watercourse as is usually the case for determining the location of a township. With no major rivers and low average rainfall, water supply in Greater Bendigo continues to be of concern and the management of the quality and quantity of such a limited resource is a critical issue.

The highly erosive nature of the soils in Bendigo and the low rainfall gives a distinguishing character to the waterways. They are numerous, mostly small ephemeral waterways with the largest stream, the Campaspe River being narrow and deeply incised into the surrounding country. Dams in the upper catchment and stormwater from the urban centre have considerable impacts on the health and productivity of these water systems.

Considering the impacts of climate change, the average rainfall of the Bendigo region is predicted to decline, which will threaten the ability of both surface and underground water systems to recharge. This will affect the health of natural ecosystems, and could lead to a decline in agricultural productivity, community health and wellbeing.

1.2 Agricultural Land

Agriculture in the City of Greater Bendigo varies across the municipality with industries such as broad-acre cropping, grazing, intensive animal production (poultry and pigs), viticulture and olives. Although not the largest industry in the municipality, agriculture plays a significant role within the region ranging from exports (\$111.968 million in 2006) and value-adding industries (regional output \$241.079 million, 2006), to employment (952, 2006). These figures are based on ABS statistics supplied by Compelling Economics for the City of Greater Bendigo. It is important to note, that these figures are based on the overall Agriculture Forestry and Fishing sector.

Dry-land farming is the dominant agricultural land-use within the municipality covering 80% of the industry's collective land mass. Traditional (cropping) agricultural industries are located in the

north, where there is a higher agricultural versatility class and ease of access to infrastructure (silos and other storage facilities) and historically consistent rainfall of around 500 mm per year. Grazing (and other modified pastures) and industries such as viticulture and olives are spread throughout the region, with viticulture becoming more prominent.

Irrigated farming plays a small, but important role within the agricultural industry and is concentrated along the Campaspe River, particularly south of Elmore.

Traditional farming is not only seen as a business, in some cases it's also a lifestyle choice. However, incremental development has the potential to increase pressures on agricultural activities and the natural environment. Development associated with the construction of dams, sheds, houses, septic tanks, roads and electricity, and the impacts from poorly managed rural living can be seen in the form of erosion, native vegetation losses, salinity, increases in pest plants and feral animals and water quality issues. The cumulative effects can result in a significant reduction in available land for commercial agriculture. Therefore, use and development of the land for agricultural purposes needs to be based on factors such as land capability and agricultural versatility classes, which outline suitable uses based on several factors including topography, drainage, permeability and soil classification.

1.3 Rural Living

Rural living can be defined as 'residential use within a rural setting'. The desire to live in a rural setting has many drivers, including the lure of open spaces, a quiet environment, privacy, aesthetics and the desire to farm on a small scale. The demand for rural living is anchored by the amenity and attraction of appealing landscapes within farmland or privately vegetated areas and the proximity to urban centres offering services, employment and education. Within the City of Greater Bendigo there are several rural living areas including Heathcote, Strathfieldsaye, Huntly, Maiden Gully and Marong. However, other areas are remote from urban settlements and do not have the necessary community and utility infrastructure to support such populations, which may generate pressures on real estate values, farming activities and the environment.

Previous studies suggest that there is up to 80 years supply of land zoned for rural living. Such sites vary from Heathcote (lowest supply) to districts near Bendigo (Sedgwick-Strathfieldsaye), which have high capacity for infill and turnover. By any measure, the conclusion is that there is a gross over supply of land for rural living purposes within the municipality, which far exceeds the 10-year benchmark set by State policy.

1.4 District Planning in Rural Areas

The Greater Bendigo +25 Community Plan (www.bendigo.vic.gov.au) was launched in November 2005. A critical part of this plan was to engage with the small towns and rural areas of the municipality in order for them to develop their own community visions and plans for their own districts. This was called the Greater Bendigo +25 District Planning Process.

An extensive community planning program has been undertaken with the small towns and rural areas of the Greater Bendigo municipality. This process has taken 2 – 3 years with workshops held in each district.

The districts are made up of the following townships and their surrounding rural areas; Raywood, Neilborough, Elmore, Heathcote, Lockwood, Redesdale-Mia Mia, Axedale, Marong, Goornong, Woodvale, and Sebastian.

Community members from the small towns and rural areas have worked to collect the ideas and aspirations from their community. After public workshops and surveys, community plans were developed. The communities were assisted and supported by the Bendigo +25 Coordinator and other people as required.

The objective achieved community plans that are based on a shared vision for the future and include prioritised actions that the community has agreed to and is prepared to act on².

This Rural Areas Strategy plays a role in the district plans such as promoting town structure plans in small townships and recognising some of the issues that communities have highlighted in regard to agriculture, rural living and rural areas.

Challenges

1.5 Rural road network

The rural sectors of the municipality are experiencing significant growth and structural change which is likely to change the transportation needs of the City. Forecasted growth for the next decade and beyond is set to further increase these pressures.

Public consultation revealed few issues about the operation of the rural road network but concerns expressed by some agricultural producers and Vic Roads need to be addressed.

The heavy vehicle restrictions imposed by the City of Greater Bendigo (using Vic Roads regulations) and enforced by Vic Roads that limit the operation of B-Doubles on some local roads have a significant effect on the regular freight movements for agricultural producers and related rural industry. Given that many transport companies in the municipality operate B-Doubles (or larger heavy vehicles), accessibility on suitable and designated routes is important.

Agricultural producers accepted instances where restrictions had to be imposed such as the presence of a weight restricted bridge, however for the most part operators held that the restrictions were out of proportion to the risk posed by rural freight movements. City of Greater Bendigo Engineers confirm that B-Doubles do cause maintenance problems on rural roads which needs to be considered. To date there has been no comprehensive study carried out about these commercial-rural road needs or the establishment of an integrated rural areas access strategy.

Vic Roads are concerned at a broad scale that the ongoing traffic effects of speculative rural living development on the rural road network will continue and worsen in the foreseeable future with population growth. In particular, Vic Roads believe some rural living developments result in poorly planned roads in respect to road connectivity and emergency, public transport and heavy service vehicle access. Development of this nature in the peri-urban area is of particular concern to Vic

² City of Greater Bendigo website 2009

Roads as poor connections with existing local roads tend to place greater pressure on the arterial network that is not designed to substitute the role of local roads.

The issues raised by Vic Roads were identified in a study of the urban and peri urban areas completed in the 1993 Bendigo Transport Study. While transport issues are examined as part of subdivision proposals, no significant guidelines have been adopted into the planning scheme to deal with these matters.

The Bendigo Transportation Strategy (currently under development) will review and replace the original 1993 project.

1.6 Water

The impacts of the drought and low water shortage levels are clearly evident in the region.

There is a growing body of information available about the effects of the drought on personal health, family wellbeing and finances in local communities. Anecdotal evidence from the community has provided specific examples of severe hardship for farmers and rural land holders, arising from the re-allocation of water. The rural community is concerned about the long-term effects on everyone as rural hardship increases.

Unreliable water supply directly affects the long-term viability of both productive agricultural and lifestyle landholdings, requiring ad hoc responses to match needs with available water. Short term responses have included reducing stock and/or the range of crops planted in-season to match available water entitlements. Other measures have included the purchase and carting of water supplies or temporary water rights to meet seasonal demands. Each of these initiatives increases costs and entails an element of inefficiency.

There is a prevailing perception in some parts of the rural community that competition exists between urban and rural water users in regard to water use and management. The conflict is characterised by the existing water controls and entitlement programmes in place for rural water users, and the priority given to urban services and some other land uses.

It is asserted by the rural community that current water provision practices for rural and urban areas provide no certainty for rural water users, particularly those who rely on water entitlements to collect, store and use water for a range of sustainable activities including agricultural production and a farm dwelling.

Irrigators draw attention to the circumstances in which they pay 100% of their water entitlement and may receive 65% of their entitlement because of re-allocation elsewhere or water simply not being available.

In a broader sense, the community has questioned how sustainable it is, in the long-term, to re-allocate water from rural production for non-productive uses, and at the same time encouraging population growth when the existing population demands are difficult to sustain. There is a strong sense of lack of integrated management in the community when it comes to water use, supply and demand.

Every effort should be made to manage and enhance the sustainable use of water. This requires a holistic approach by all levels of government and the community. As a planning authority, Greater Bendigo has a responsibility to work with the water authorities to identify strategies and implementation plans, such as Coliban Water's *Waterplan 2055*, *Special Area Plan* and *Northern Water Strategy* as a means of securing the region's water future.

1.7 Climate Change

The Department of Sustainability and Environment has forecast the implications of climate change for the North Central region:

- Changes in rainfall and evaporation by 2030 will result in decreases in runoff of between 3% and 35% to the Campaspe and Loddon Rivers;
- Rainfall is likely to be less in all seasons with changes of between +3% to 15% by 2030;
- Annual warming of 0.3 to 1.6 degrees Celsius by 2030 and increasing to 0.8 to 5.0 degrees by 2070;
- A 10 to 50% increase in the number of hot summer days (over 35 degrees) by 2030 and a 30 to 300% increase by 2070.

Each of these observations foreshadows a hotter and drier region, where water will be increasingly scarce. These long term patterns of climate change have been reinforced by the extended period of drought which has brought hardship to rural communities, left river systems stressed and a range of other impacts on biodiversity.

Within the changing climate, there is potential for other industries (such as superannuation companies and private firms) to purchase or lease agricultural land for carbon sequestration and vegetation offsets. This may become increasingly more viable if land becomes available and is suitable for the industry.

1.8 Biodiversity

Fragmentation of native vegetation across the landscape since European settlement has had a significant detrimental impact on the value of habitat and its role in a healthy ecosystem. With increasing impacts from urban development and land-use change, and the anticipated effects of climate change, the ability for many species to move throughout the landscape is being severely diminished or completely lost. Linear strips of native vegetation along water courses and roadsides are often the only remnants in an extensively modified landscape providing habitat, and most of these are inadequate to provide for the needs of species either on a permanent or transient basis.

Even with the current protection measures, biodiversity is in decline. The region is home to a range of vulnerable, rare or threatened species of flora and fauna, ecological communities and vegetation classes which need to be proactively enhanced and reconnected if this decline is to be arrested.

Land managers in rural areas are particularly able to undertake a variety of actions to help address this situation using methods that also increase economic sustainability of agricultural pursuits.

1.9 Wildfire

The CFA confirmed that the Wildfire Management Overlay (WMO) controls imposed in the planning scheme adequately meet existing high-risk wildfire concerns as they accord with the Bushfire Prone Areas (BPAs) (defined by the Authority), in both the urban and rural areas of the municipality.

Specifically in respect of rural areas, the CFA flagged that increasing subdivision and development on land adjoining forested areas will potentially increase the number of dwellings, people and assets at risk from wildfire.

In light of the Black Saturday fires and the subsequent Royal Commission, planning for areas in fire prone locations may change. This will depend on the findings from the Royal Commission and State Government policy direction.

Change

1.10 Planning for Change

The versatility of land and the climate around Bendigo supports several agricultural industries. Agricultural based industries have different needs and requirements, including land versatility and a range of lot sizes, which allow for traditional broad-acre cropping down to niche vineyards. Intensive agriculture also requires buffers from other industries and residential development, due mainly to disease control and potential dust and odour issues.

Over the last decade, there has been significant change in agriculture and rural living issues. The impacts of climate change have played a major role with significantly reduced rainfall, resulting in a reduction in water allocations, increased mean temperatures and soil structure breakdown from decreased moisture all impacting heavily.

This strategy will provide strategic direction for change. Planning for use and development of agricultural land within the City of Greater Bendigo is vital for the municipality to prosper.

1.11 Implementation

The rural areas within the municipality face some significant challenges now and into the future. Rural road networks, availability and quality of water, climate change and fire issues need to be addressed.

The Greater Bendigo Planning Scheme needs to reinforce the primacy of agriculture in farming zones and only consider additional rural living or residential in minor infill areas located close to townships that can capitalise on existing services and infrastructure. There are current pockets of land bordering on the urban fringe which are currently zoned farming and would be better suited for other uses. These areas are either poor in soils structure and health, not practical to farming because of their proximity to residential development, not commercially viable because of their size or have never been farmed. These potential infill locations need to meet the Development Performance Requirements of the Residential Development Strategy 2004 and be strategically aligned with the Growth Area Framework Plans 2006 to be rezoned and developed.



Planning should reinforce the need to protect the viability of commercial agriculture in the municipality. Also of importance, is the need to support smaller townships, address climate change and water issues and work to provide solutions for these challenges. Rural infrastructure, in particular the rural road network needs to be given greater importance, with the increasing traffic and larger trucks on these roads.

Table 2: Strategic Issues

Issue	Policy direction / statement
Conflict between agriculture and other land uses.	Provide appropriate buffers, particularly for intensive animal industries.
Provide for future forms of agriculture.	Specify areas with appropriate zoning for intensive agricultural industries e.g., Huntly North.
Prevent fragmentation of agricultural land.	Prevent subdivision on blocks over 100 hectares.
Increase certainty for continued agriculture.	Protect 'the right to farm' within the planning system.
Provide for diversity in agriculture.	Define appropriate locations and zoning/s for niche / boutique agricultural industries.
Biodiversity	Continue to work with Natural Resource Management agencies to identify strategies, plans and policies that will protect and enhance our environmental assets. (eg, National and State parks and reserves).
Rural road networks	Implement the Bendigo Transport Strategy recommendations (B-Double restrictions, impact of roads and access for communities).
Water	Work with the North Central Catchment Management Authority and water authorities to identify strategies and implementation plans, such as Coliban Water's <i>Waterplan 2055</i> , <i>Special Area Plan</i> and <i>Northern Water Strategy</i> as a means of securing the region's water future.
Climate Change	Investigate the future implications of climate change on the rural sector.
Fire prevention	<p>Structure planning for emerging development areas should integrate suitable buffer areas at the interface between the forests and new neighbourhoods.</p> <p>Support the Royal Commission into the Black Saturday fires and subsequent policy direction of the State Government.</p>

2. AGRICULTURE

2.1 Overview

The City of Greater Bendigo may witness a change in the structure of farming and production in future years. In the plains areas to the north, it is anticipated that the extent and nature of irrigated farming businesses may suffer in the face of reduced security and increased cost of water, and the need to invest in more efficient irrigation systems. Dryland farming will remain the dominant use of land throughout the north and west, but will also adapt to the above influences with a progressive move towards larger holdings and a different regime of crops (eg deep rooted perennials such as dryland lucerne) which is not as water dependant as traditional crops like wheat and barley.

Countering the decline in commercial scale farming is an expected growth in boutique and specialised agricultural practices and production on smaller rural living holdings in the south. Off farm income as a supplement to the household income will continue to be a strong feature of the restructuring process.

Intensive animal husbandry will remain a major feature of the regional economy. Despite the fragmented location of the industry, policy and planning provisions will provide greater protection for the long-term sustainability and growth of the industry. With diversification in agriculture, each industry needs to be protected, allowed to flourish and provided with security. Each has different requirements that need to be planned and protected in a strategic manner e.g., the intensive animal industry needs adequate buffers for disease, odour and dust control.

The main agricultural industries within the City of Greater Bendigo are;

- cropping (cereals and legumes);
- grazing (sheep and cattle);
- poultry; and
- pigs.

Other industries that make up the agricultural sector, which play a vital role within the region, but are smaller in number and outputs are;

- viticulture; and
- horticulture.

Table 3 below, gives an overall agricultural commodities comparison of land holdings, crops and numbers of animals within rural zones in the municipality. These figures show the size of agricultural production and the diversity within each zone. With this diversity, comes issues with protection, expansion, water and future direction.

Table 3: Agricultural Commodities within the City of Greater Bendigo-2006.

Industries	Hectares
Cereals for grain ha	20,426.8
Vegetables for human consumption ha	39.5
Orchard trees (including nuts) ha	112.8
All fruit (excluding grapes) ha	113.8
Non-cereal broadacre crops ha	3,542.0
 Animals	 Numbers
Sheep and lambs	310,569
Milk cattle (excluding house cows)	853
Meat cattle	12,648
Pigs	79,962
Poultry	Meat: 3,150,000 - please note that this is the shed capacity. In some cases there maybe 5.5 batches through sheds, but the 3.15 million is what is on the ground at any one time. This figure includes meat bird breeders as well as broilers Eggs: 350,000 - This figure includes egg bird breeders, pullets as well as layers.

Source: Department of Primary Industries and City of Greater Bendigo, Economic Development Unit.

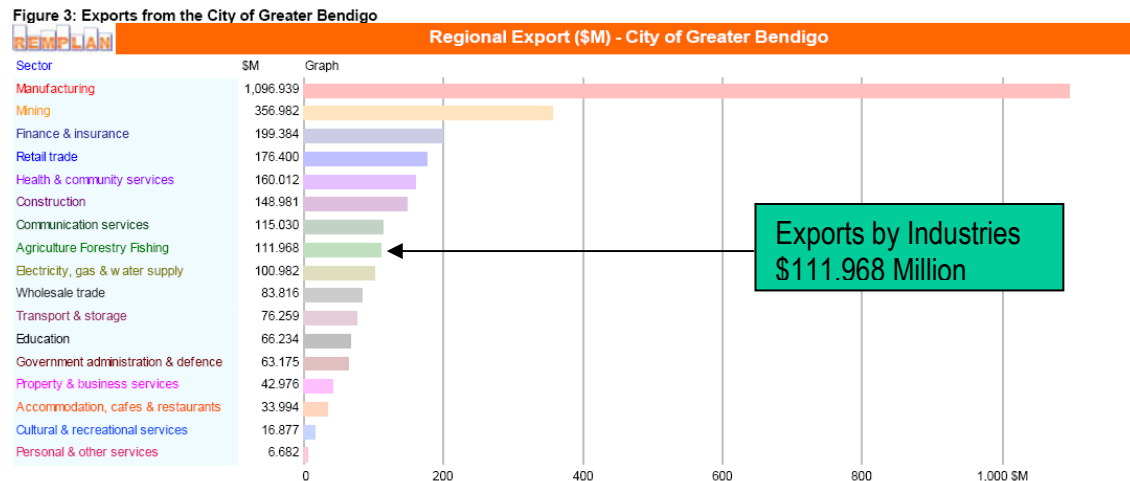
2.2 Intensive Agriculture Industries

The City of Greater Bendigo has an established and ever-increasing intensive animal industry, which is growing at a faster and larger scale than other agricultural industries within the municipality. The intensive animal industry produces large quantities of poultry, with pork on the decline. The poultry industry also supplies materials for vaccine production including avian influenza, which is highly sought after in Australia and overseas. This particular industry is vital for the biosecurity of the regions poultry industry and provides the product which is the front line against a pandemic.

Within the municipality, there are some anomalies with intensive animal industries situated within the Rural Living Zone, which creates problems for that particular industry and for adjoining landholders. Potential rezoning, the use of overlays and local policy may be able to rectify this issue. This issue needs to be addressed for the protection of the industry and for the satisfaction of the neighbouring properties.

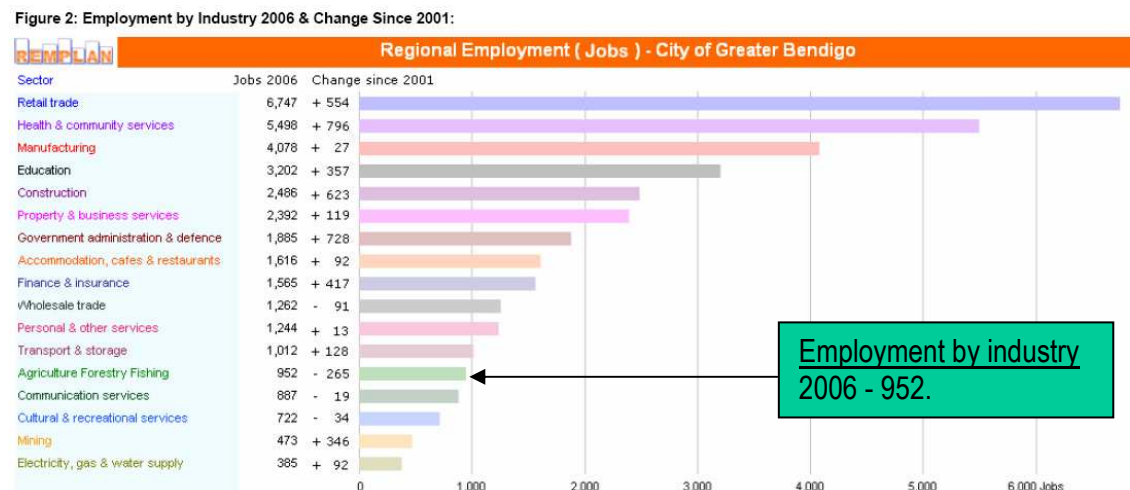
The intensive agriculture industry contributes greatly to the economy of the municipality, with the industries employing many residents. This can be seen in Figure 1 and 2 below, Exports and Employment by Industry (note – there has been a reduction in employment from 2001-2006. The factors for this are unknown). It is important to note that the intensive agricultural industry is placed within the overall agricultural industry in these figures.

Figure 1: Agriculture in the City of Greater Bendigo – Exports by industry



Source: Compelling Economics

Figure 2: Agriculture in the City of Greater Bendigo – Employment by industry



Source: Compelling Economics

The City of Greater Bendigo is strategically placed in relation to key transport corridors for the movement of intensive agricultural related products. The infrastructure assets (eg roads) and land which support these enterprises need to be protected. The environmental impacts of intensive animal industries and the potential for competing land-uses to limit these activities need to be effectively managed.

Within the Greater Bendigo Planning Scheme, the objectives for agriculture are:

- To protect rural industry from residential encroachment;
- To ensure the sustainable development of intensive animal husbandry uses such as broiler and poultry farms and piggeries;
- To minimise noise, odour, effluent and visual impact created by intensive agricultural industries;
- To identify and protect productive agricultural land from competing, inappropriate land uses;
- To ensure protection of productive rural assets including land and water;
- To maintain potential for agricultural production; and
- To minimise the fragmentation of productive agricultural land units³.

Although the local policy to protect rural industries clearly articulates these objectives, there has been an indication from operators, that these provisions are not protecting their industry from encroachment by other conflicting land uses.

In identifying appropriate land for intensive agriculture industries, it's important to remember that the requirements of these industries are water, power, roads and adequate space for buffers. The presence of water is the major factor for these industries. Absence of water from the surrounding areas may be overcome with the provision of piped water from other locations.

2.3 Agricultural Versatility

Agricultural Versatility Classification outlines a method to consider the quality of soils for agriculture potential. The Department of Primary Industries (DPI) *Future Farming Systems Research* has undertaken an agricultural versatility mapping project for the City of Greater Bendigo based on parameters of:

- Slope range (%);
- Surface texture;
- Drainage;
- Soil colour;
- Friability;
- Soil aggregate stability (A horizon);
- Depth to hard rock;
- Base nutrient status;
- Subsurface permeability;
- pH; and
- Soil type.

Based on this data, it is possible to determine the most suitable soils for certain agricultural industries within the municipality and also highlight the areas that are least productive.

³ Greater Bendigo Planning Scheme, MSS, Economic development, Clause 21.07

In Figure 3 below, agricultural versatility is shown to vary from very low to very high across the municipality. These classifications and base parameters are also shown in Table 3, which outline the industries best suited for each versatility unit.

The distribution of versatility classes is generally spread evenly throughout the municipality with the high versatility classes tending towards the north and east. This class is suited to broad-acre cropping, grazing, irrigated agriculture and viticulture. Although this land is suitable for all these activities, in practice, the north and west of the municipality are dominated by cropping and grazing activities. Most of this area is zoned Farming (FZ) with some parts of Rural Conservation (RCZ) and Public Conservation and Recreation Zoning (PCRZ).

The south and south east versatility classes are generally considered very low, with a patch of very high between Heathcote and Strathfieldsaye. This area of the municipality has a mixture of grazing, viticulture, olives and small hobby farming activities. It has a mixture of Farming (FZ), Rural Living (RLZ), Rural Conservation (RCZ) and Public Conservation and Recreation Zones (PCRZ).



Figure 3: City of Greater Bendigo Agricultural Versatility

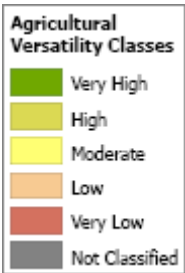
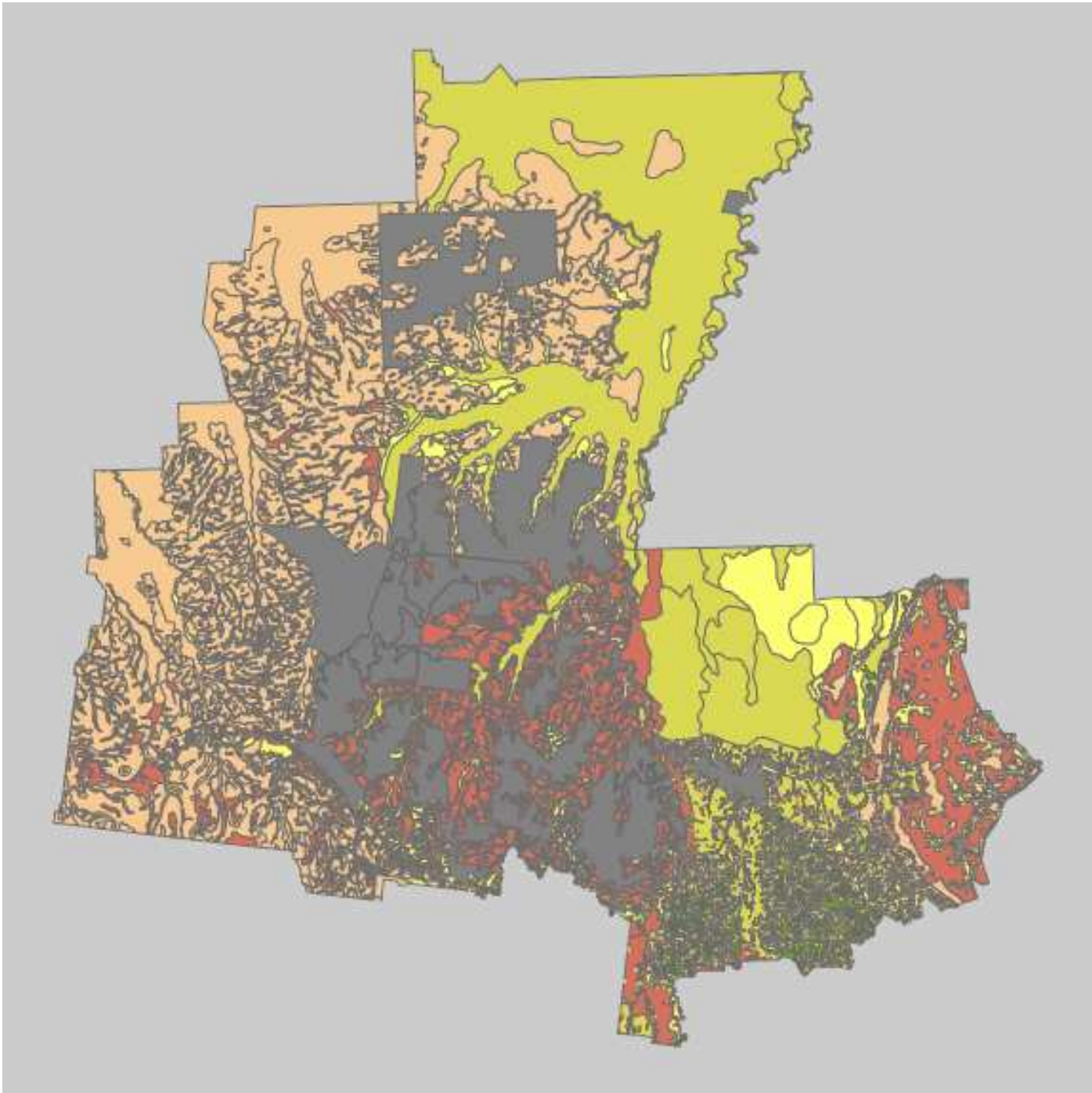


Table 4: Description for Agricultural Versatility Classes

Description for Agricultural Versatility Classes			
Capability class		Description	Enterprise groups
1	Very high	High to very high productivity mostly on alluvial floodplain. Suited to a wide variety of horticultural and cropping applications.	Irrigated horticulture, irrigated broadacre cropping, dairying, broadacre cropping, broadacre grazing, viticulture
		Note: Flooding risk needs to be considered in floodplain areas.	
2	High	Moderate to high productivity on the wider alluvial plain. Generally suited to grazing, viticulture and opportunistic cropping.	Broadacre cropping, broadacre grazing, viticulture, forestry
		Note: Waterlogging is an issue on the wider alluvial plain.	
3	Moderate	Moderate to low productivity on moderate to gentle slopes. Commonly suited to grazing and viticulture.	Broadacre grazing, viticulture, forestry
4	Low	Low to moderate productivity on steep to moderate slopes. Typically utilised for forestry and marginal grazing.	Forestry and marginal grazing
5	Very low	Very low productivity or severe landform constraints exist (e.g. very steep slopes, rock outcrop). Considered unsuitable for agriculture and forestry.	Not suitable for agriculture or forestry production

Source: Department of Primary Industries

2.4 Right to Farm

The expansion of cities and towns brings new problems for farmers and some of the new residents. Residents new to rural areas often do not understand farming activities, and conflicts soon arise as new residential developments encroach upon agricultural land. The new neighbours may object to the animal smells, dust or noises that are part of day-to-day farming practices. Farmers are sometimes forced to justify what they do to make a living.

There are also environmental and economic issues associated with urban sprawl. Agricultural land provides breathing space for cities and towns and there is a strong environmental argument for discouraging the use of farming land for new housing. Similarly, agricultural productivity can be affected if high-quality agricultural land is lost to unchecked urban sprawl. State planning schemes are used to make sure that state wide strategic planning priorities, such as the maintenance of productive agricultural land, are followed and that Victoria's agricultural land base is protected from unplanned loss⁴.

The importance of the right to farm, encompasses more than just rules and regulations, it's also about the product (food and fibre) and the security of that product to the region, state and Australia. "Victoria is at risk of being unable to feed itself if the current drought continues and governments fail to safeguard the state's food chain, a leading group of land managers and conservationists has warned"⁵. Protection of productive farming land within the municipality is necessary to give certainty to farmers and the farming community.

⁴ Rural Law Handbook. A Guide for Primary Producers

⁵ Carmel Egan, The Australian. November 2,2008

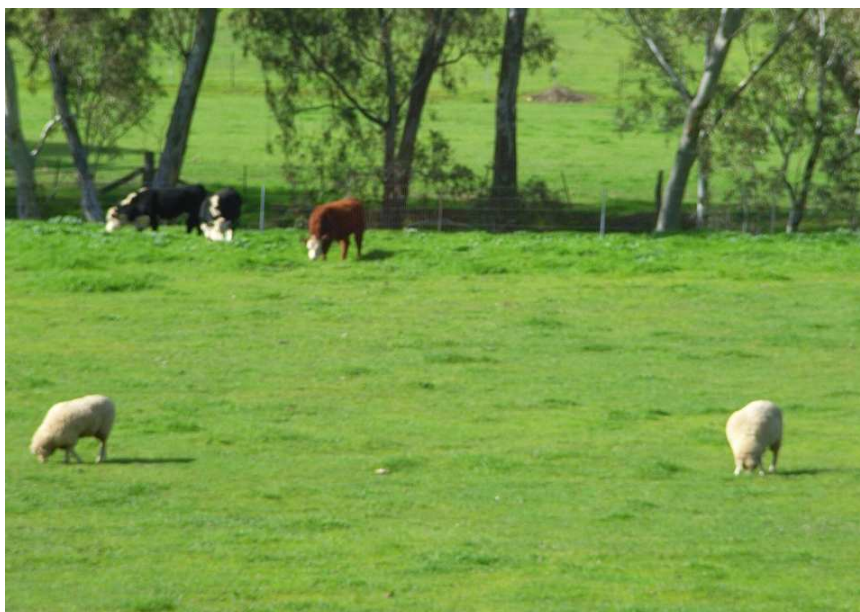
2.5 Property Sizes

The rural lot size plan (Figure 4) below, demonstrates the "rural amenity landscapes" (Barr 2005)⁶ pattern of development across the municipality. Barr describes four social landscapes that influence rural land-use, being "the interaction and relative influences of productivity, amenity, culture and demographic forces". He goes on to state that "the main agricultural advantage is not better soils or better rainfall, but lack of competition from other land purchasers". Further, that the outcome of these competitive pressures works against aggregation in agriculture and decouples the farm sector from small town economies.

This is a significant point, and highlights one of the values of rural land in Bendigo to agriculture. Although it does not have a lot of land that is considered highly valuable in terms of quality, it includes areas that are highly valuable in terms of quantity, ie. large lots and large areas of unencumbered land. Many soil quality issues can be addressed through farming inputs, eg. fertilisers. Land that is held in large lots and is unencumbered by fragmentation and dwellings is valuable agricultural land as it allows for efficiencies in operation, the ability for existing operations to expand to respond to the need for increased economies of scale, and for flexibility to change and adapt the operation, even though soil quality may not be high.

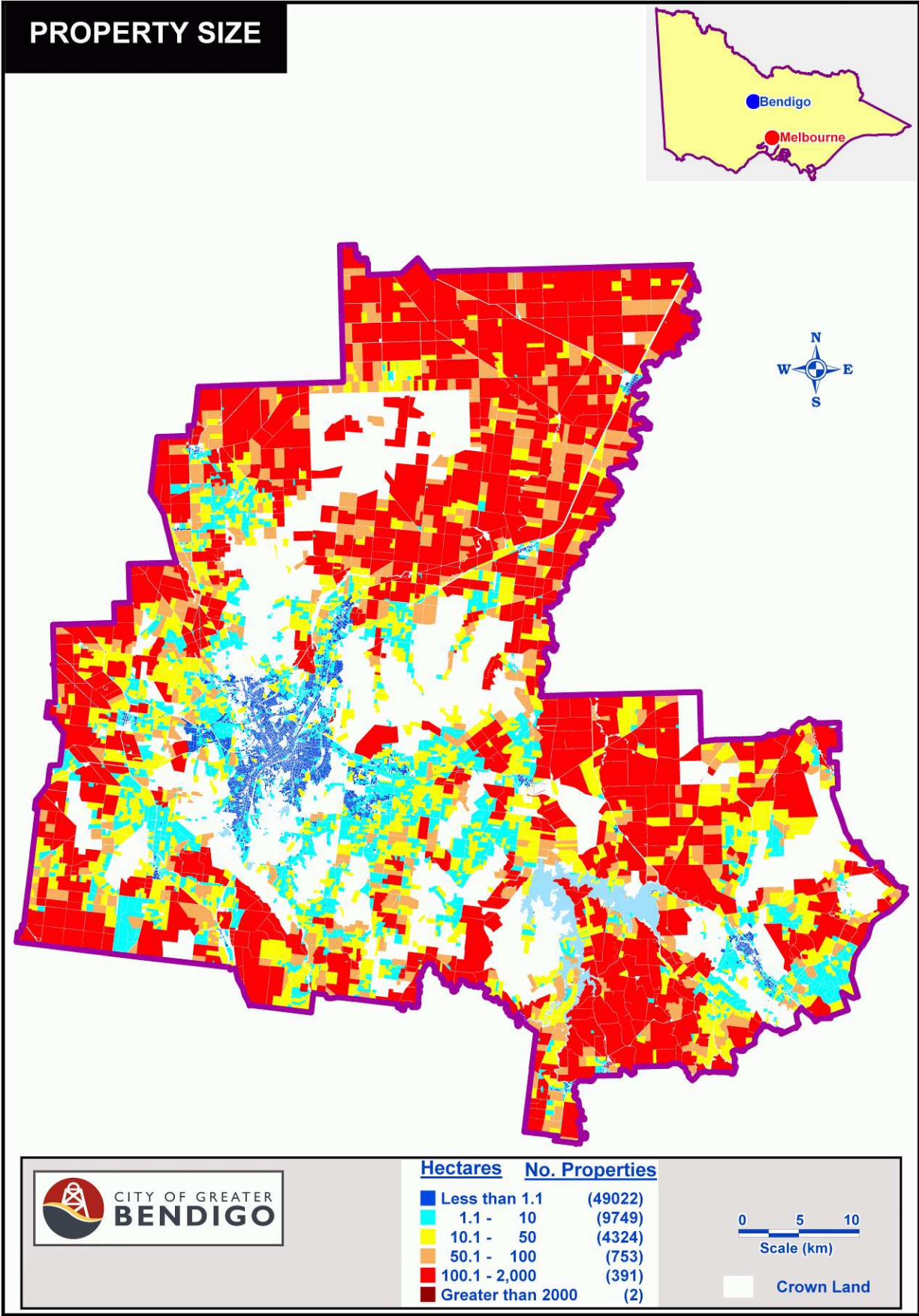
The consequence of the pattern of property sizes for Greater Bendigo is that unless the objectives of planning are strengthened in the Greater Bendigo Planning Scheme, fragmentation and pressures from increasing land values will continue to impinge upon agricultural viability.

Therefore, there must be a clear demarcation between commercial farming land and areas of rural living.



⁶ *The changing social landscape of rural Victoria*, Neil Barr, Department of Primary Industries, 2005

Figure 4: Rural Property Sizes



2.6 Adjoining Municipality and Proposals

Land to the north of the municipality remains in large holdings that are farmed commercially. It is contiguous with part of the Rochester Irrigation District north of Elmore and dry-land farming areas to the north and east of the municipality. The *Campaspe, Greater Shepparton and Moira Rural Land Use Strategy 2008* addresses rural land abutting the northern and eastern boundaries of the municipality. This strategy recognises the diversity of agricultural values and opportunities within the rural areas and in response offers three schedules to the Farming Zone. Farming 1 Zone (Growth) seeks to protect the opportunities offered by the broadacre areas that have been maintained in large lots for traditional cropping and grazing activities where expansion is paramount, as well as the opportunities for greenfield irrigated agricultural development, which also requires larger land holdings. Farming 2 Zone (Consolidation) has been applied to some of the traditional early irrigation areas to support amalgamation of these properties to keep pace with current commercial agricultural needs to ensure that these valuable areas remain in farming use. Farming 3 Zone (Niche) has been developed to provide an opportunity for small scale commercial agriculture, and in recognition that in some areas there is limited opportunity for property amalgamation.

Table 5: Campaspe, Greater Shepparton and Moira Regional Rural Land Use Strategy- Farming Zones

Description	Area (hectares)
Growth (F1Z) of broad-acre farming units in dryland areas depending on the particular farming practice and productivity of the land.	100 ha to 250 ha
Consolidation (F2Z) of smaller farming units in irrigation areas and dryland areas.	40 ha to 160 ha
Niche (F3Z) agricultural activities on smaller allotments	40 ha

Source: Campaspe, Greater Shepparton and Moira Rural Land Use Strategy 2008

NB: 40 ha is the current default in the Farming Zone.
160 ha is the estimate of viable farm size area for 25% growth⁷.

2.7 Subdivision Activity

Within Greater Bendigo there is some subdivision activity within the Farming Zone, however, it is evenly distributed throughout the municipality and fairly incidental, averaging only 3 per annum resulting in 4 lots per annum of minimum 40 ha (see Table 6 below). The purpose/motivation for such subdivisions is unknown, however, an assumption can be made that it is to reconfigure land to improve farm management and agricultural viability; there is no evidence of serial subdivisions or excisions for speculative purposes.

The prevailing agricultural trends of consolidation and growth generally negate the need for subdivision in most farming businesses.

⁷ *Campaspe, Greater Shepparton and Moira - Rural Land Use Strategy*, August 2008, Parsons Brinkerhoff, Table 10-3, page 97.

It could also be assumed that there is limited subdivision activity within the rural areas as there are already a large number of lots in the 8ha – 40ha size, resulting from historical development patterns, and satisfying demand for smaller lots. There is also a large supply of Rural Living Zoned land within Greater Bendigo, easing demand in the Farming Zoned area.

Table 6: Subdivision within the Farming Zone-City of Greater Bendigo 2000-2008

Activity in the Farming Zone (2000-2008)	Number of permits approved	No of new lots created
Subdivisions (40 ha)	13	31
Single lot excisions	1	1

Source: City of Greater Bendigo - U:\Planning\SUBDAT- Unpublished Data

2.8 Lot size justification

The agricultural versatility class mapping (Figure 3) and the rural lot sizes for the municipality (Figure 4), demonstrate the spread of lots larger than 100 ha with high versatility, suitable for broad-acre cropping and broad-acre grazing (Table 3). Generally these areas are located in the north of the municipality and are zoned for agricultural purposes.

The VPP Planning Practice Note for *Applying the rural zones*⁸, outlines the purpose of each zone and states that "the minimum lot size for subdivision may be tailored to suit the farming practices and productivity of the land". However, a default of 40 ha is a State requirement in the Farming Zone.

The purpose of the Farming Zone is strongly focused on protecting and promoting agriculture and while subdivisions in Greater Bendigo have been discrete in creating new lots in traditional farming areas, new housing activity has been fairly strong (Table 8), demonstrating a take-up of existing smaller lots, particularly on the western side of the municipality.

Applying a similar rationale to that applied in Campaspe Shire and based on key rural activities in Greater Bendigo, this strategy proposes a schedule to the Farming Zone to define Growth, Consolidation and Niche sectors.

The purpose of the proposed lot minimums are;

Growth zone (F1Z - 100 ha)

- To arrest the intrusion of new houses into rural areas.
- To protect farming land with high agricultural versatility.
- To promote the continued use of agricultural land for broad-acre farming.
- For consistency with regional farming practices, across municipal boundaries; and
- To hold rural values and promote consolidation and growth of farming units.

Consolidation zone (F2Z - 40 ha)

- To arrest the intrusion of new houses into rural areas;
- To protect farming land with high agricultural versatility;

⁸ *Applying the rural zones*, VPP Practice Note, Department of Sustainability and Environment, March 2007.

- To promote the continued use of agricultural land for broad-acre farming; and
- Promote consolidation and growth of farming units.

The strategy recommends that a new dwelling will not be supported in the Farming Zone, regardless of the lot size, unless it clearly supports continued agricultural use of the land.

Niche zone (FIZ - 8 ha) is site-specific to an area on the Northern Highway at Heathcote in recognition of existing, high quality viticulture.

Table 7: Planning response for key rural activities within the Farming Zone

Planning responses	Subdivision	Single lot excisions	New houses	Ancillary tourism
Farming 1 Zone Growth Broad-acre, dryland farming and Irrigation (along the Campaspe River)	Min. lot size 100 ha. For restructuring and consolidation purposes only. To promote the growth of farming enterprises into larger, economic units.	For an existing house only that is superfluous to farming needs as part of a restructure of the farming enterprise.	To be actively discouraged, unless it clearly supports continued agricultural use of the land and regional farming economies.	To be carefully managed to prevent conflict and impact on agricultural activities; e.g., B&B, host farms.
Farming 2 Zone Consolidation Fragmented land to the west of the municipality	Min. lot size 40 ha. To encourage the consolidation of allotments and prevent the further fragmentation of farming units.	To be actively discouraged.	To be actively discouraged unless it has adequate community and engineering infrastructure i.e., part of an existing rural living community.	To be carefully managed to prevent conflict and impact on agricultural activities; e.g., B&B, host farms.
Farming 3 Zone Niche Area/s of high quality viticulture to the north of Heathcote.	Min. lot size 8 ha. In recognition of existing use for viticulture and ownership pattern.	No. Lots are already small and further fragmentation cannot be justified.	Difficult to justify given the existing small lot configuration and potential loss of high quality land.	To be carefully managed to prevent conflict and impact on agricultural activities; e.g., B&B, cellar door sales.

Note: Remaining Farm Zoned land not in the three proposed Farming Zones (see Figure 6 Proposed Farming Zones) will default to the existing Farm Zone Policy.

Figure 5: Rural Zones

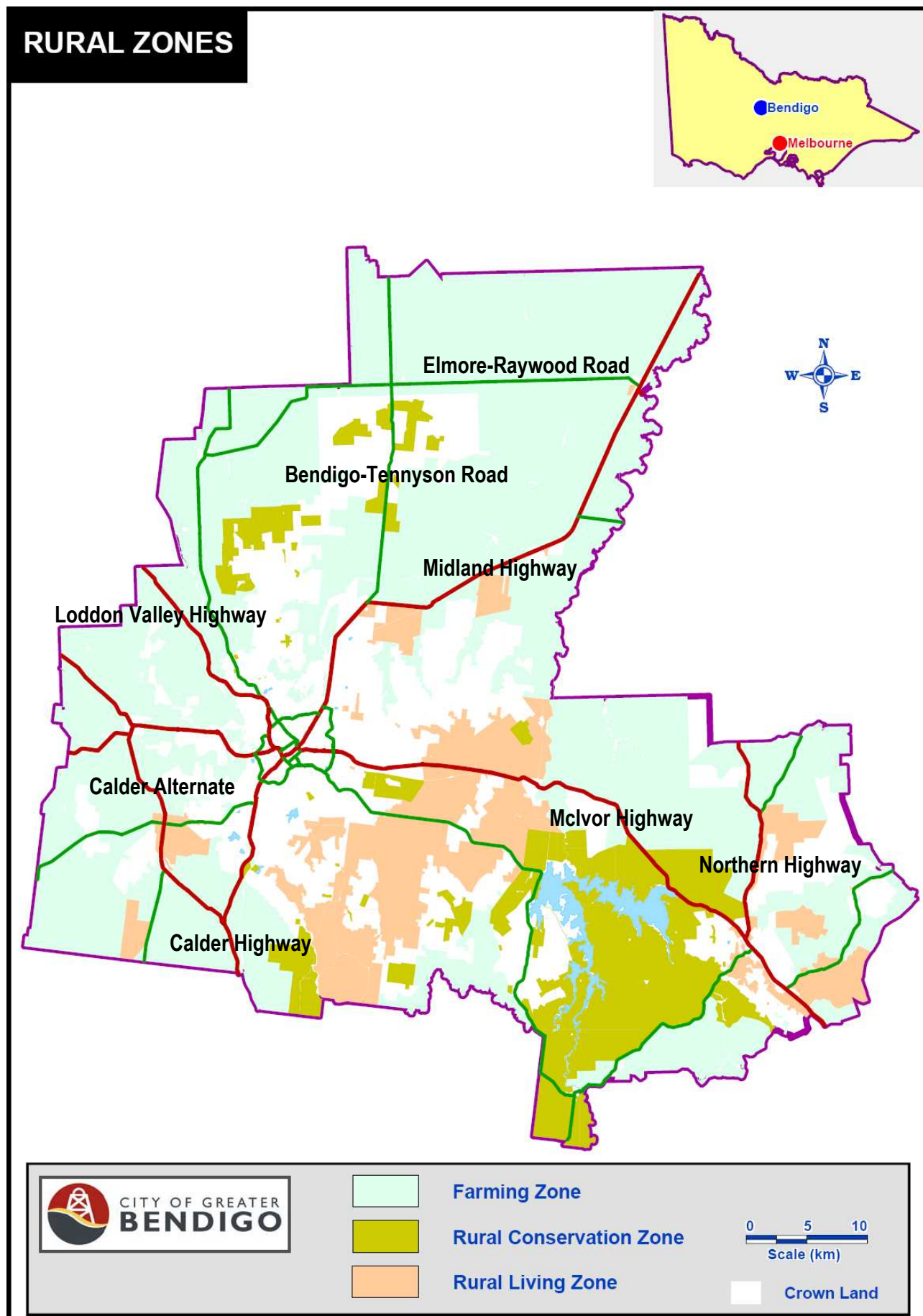
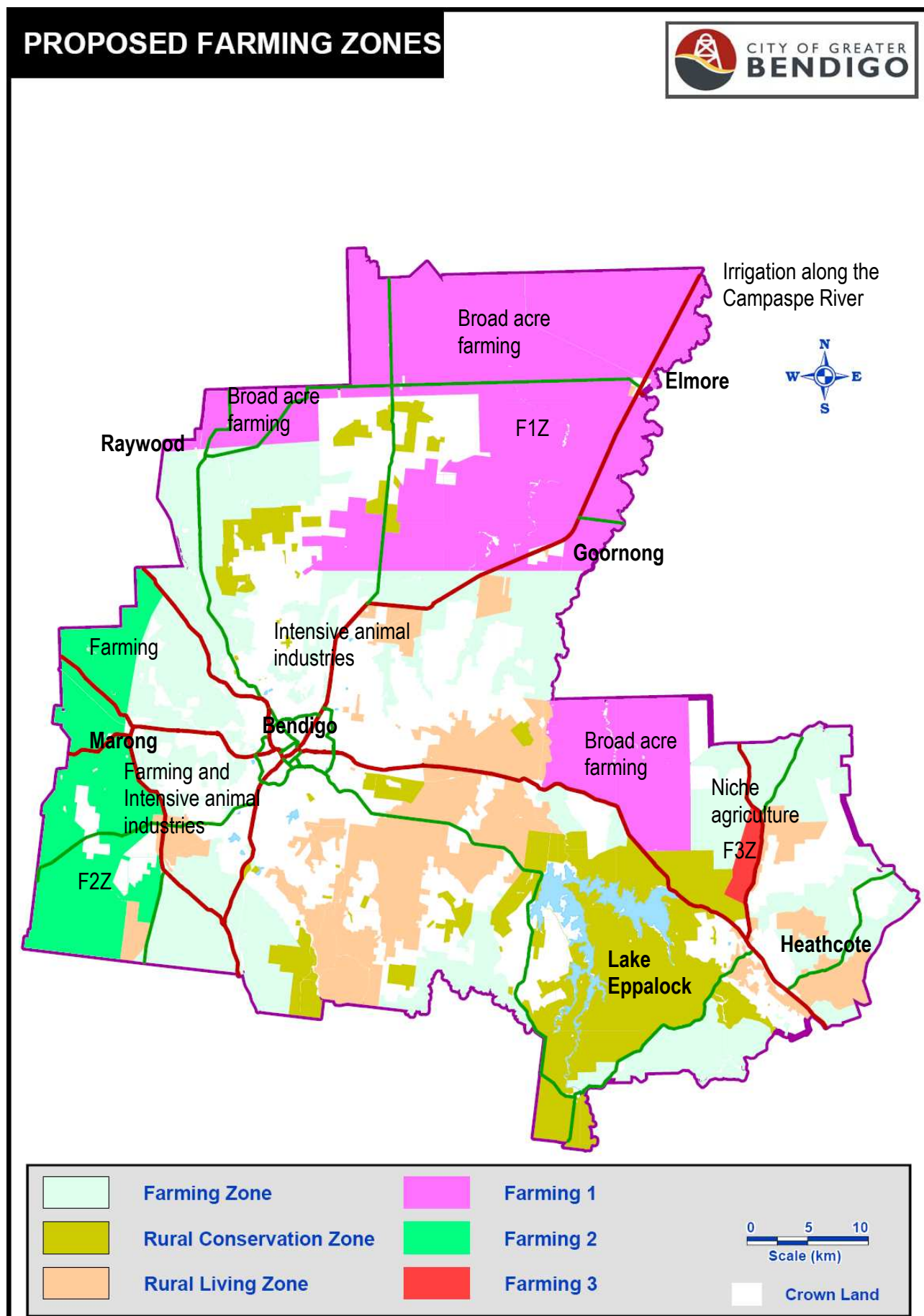


Figure 6: Proposed Farming Zones



The **Growth** (F1Z) farming zone is proposed for broad-acre farming units on the northern plains of the municipality and north of Lake Eppalock for the following reasons:

- To protect the productive capacity of existing commercial agriculture;
- To designate areas of high and moderate Agricultural Versatility Class;
- To provide for growth of agriculture and expansion of rural holdings; and
- Protect parts of the Irrigation District around Elmore, consistent with abutting proposals in the Shire of Campaspe:

The **Consolidation** (F2Z) farming zone is proposed for smaller farming units throughout the balance of the municipality, including:

- Fragmented areas of poor quality Agricultural Versatility Class to the west of the municipality, identified for future intensive agriculture.

Such areas are considered appropriate for consolidation for the following reasons:

- The prevalence of smaller Crown allotments in the areas;
- To protect existing and future poultry clusters including buffers.

The **Niche** (F3Z) farming zone recognises an existing area of high quality viticulture on the Northern Highway at Heathcote, currently listed in the schedule to the Farming Zone. The area is noted for its red soils, rich in minerals known as Cambrian soils. The zone acknowledges the current use, ownership pattern and small lot configuration.

2.9 Planning Scheme provisions

The above farming categories, subdivision sizes and conceptual rural land uses (Figure 6) within the City of Greater Bendigo are proposed to be specified within the schedule to the Farming Zone in the planning scheme. The purpose of the minimum lot sizes is to provide for and support continued commercial farming in the north of the municipality, encourage consolidation of lots, discourage further houses in the west and provide flexibility for future intensive agriculture with suitable buffers, in selected locations. An example of the proposed Farming Zone Schedule can be seen in Appendix 2.

2.10 Dwellings in the Farming Zone

A planning permit is required for a new house in the Farming Zone on a lot less than the minimum of 40 ha. Despite the policy to discourage new houses in the Farming Zone, City of Greater Bendigo records indicate that 404 dwellings have been permitted in rural areas throughout the municipality over the last 8 years, generally to the west of the municipality on existing smaller Crown allotments:

Table 8: Houses in the Farming Zone - City of Greater Bendigo

Decision	Year									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Amended		2								
Approved	22	65	54	63	54	42	45	31	28	404
Lapsed					1		1	1		3
No permit required	2	1				1				4
Notice of Decision				1						1
Refused		1			1	2		1		5
Withdrawn	1	2	3	4	1	4	2	3	1	21
Total	25	71	57	68	57	49	48	36	29	440

Source: City of Greater Bendigo - Planning Register

As opposed to subdivision, dwelling development on Farming (and formally Rural) zoned land in Bendigo clearly indicates land use change, land competition, encroachment and threat to the viability of broad acre agriculture and intensive animal industries. As the primary trend in broad acre agriculture (cropping and grazing) is expansion and growth, very few new dwellings are legitimately required for such properties.

Historically, the subdivision of rural holdings down to 8 ha minimum lots was actively fostered by former municipalities, however the current Rural Dwellings Policy (clause 22.02) discourages dwellings on existing small lots in all rural areas. The use of discretion to approve new houses in rural areas is still being generously applied, despite an over supply of zoned Rural Living land to cater for such demand. This history of adhoc rural subdivision and dwelling development has created a number of areas that are currently zoned Farming but are compromised in terms of their viability for traditional agriculture or intensive animal industries. These areas are highly fragmented in terms of ownership, and there is considerable expectation of being able to live on the property and conduct some form of agriculture, although the size of the property would not support its use for traditional agriculture that could be considered the primary land use.

This Strategy proposes to minimise housing in Farming zoned areas as new housing development is considered the greatest threat to the viability of the local agricultural sector as they compromise the ability of local businesses to grow and operate relatively unhindered.

Current policy has sought to make sure that new housing would only be approved where it supports agriculture, although as the table above has indicated there are still a significant number of new dwellings being approved in the Farming zoned area and this is causing concern for farmers wanting to grow their business.

As such it is recommended that all new dwellings within the Farming Zone be subject to a planning permit, and policy be strengthened to indicate that there is a presumption against granting a planning permit for new dwellings within the Farming Zone as they are considered a threat to the ongoing use of land for agriculture and they are generally not considered necessary to support farming land uses. Any application for planning approval for a dwelling within the Farming Zone should demonstrate:

- Why the proposal should be approved contrary to the City's position of minimising housing in farming areas;
- Why there is a need to live on site and how that would enhance agricultural use;
- That agriculture would remain the primary land use and this should be demonstrated by a business plan showing investment into agriculture on the property, estimated return, the amount of land engaged in farming and the estimated production from the property;
- That it is likely that the land would remain in agricultural use into the future following development of the dwelling; and
- That there would be no impact on the agricultural use of adjoining land.

In addition to a more strongly worded policy on housing development in farming areas, other initiatives should be considered to support those making the decisions and using the controls.

In particular support for planners assessing applications for dwellings on farming properties should be provided as many planners do not have experience in rural matters and therefore lack the skills to assess the legitimacy of the agricultural operation, and the requirement for a dwelling. Such support could include training, a set of guidelines and / or referral to a farming committee.

2.11 Single Lot Excisions

The planning scheme provides that a landowner may apply for a permit to excise a small lot for one existing house, subject to conditions to prevent further excisions. The purpose of the provision is to support the acquisition and consolidation of farming parcels, where the result may produce a dwelling superfluous to needs. However, Greater Bendigo records indicate that the provision is rarely used with only one permit issued since 2000. Therefore, it is recommended that the excision provisions remain as an option, subject to strict adherence to policy that discourages speculative transactions.

2.12 Implementation

This section concludes that agricultural land in the City of Greater Bendigo needs to be supported, protected, promoted and given certainty. The policy directions recommended to strengthen the role of agriculture are as follows:

Table 9: Recommendations

Issue	Policy direction/statement
Fragmentation of agricultural land	Subdivision minimum should be increased to 100 ha (F1Z), 40 ha (F2Z) and 8 ha (F3Z) to improve the viability of commercial agriculture and maintain farm valuations.
Conflicts between agricultural and residential use	Provide certainty and protect the 'the right to farm' by discouraging new houses in rural areas, unless they support agricultural use of the land. Strengthen the Rural Dwellings Policy (22.02), to discourage new houses in rural areas.

	Include the 'Guidelines for Rural Houses - 2006' as a Reference Document in the planning scheme (21.10).
Land-use conflicts	Acknowledge 'the right to farm' in the Municipal Strategic Statement (MSS) in the planning scheme.
Protection of intensive agriculture	<p>Reinforce the MSS Clause 21.07-Economic development. Use Figure 6 Proposed Farming Zones as the basis for decisions.</p> <p>Update map in MSS- <i>Intensive Rural Industries</i> to reflect existing and new developments and provide planning/protection boundaries.</p> <p>A study on intensive animal industries within the Rural Living Zone should be undertaken to establish appropriate zoning for the protection of the industry and neighbouring properties.</p>

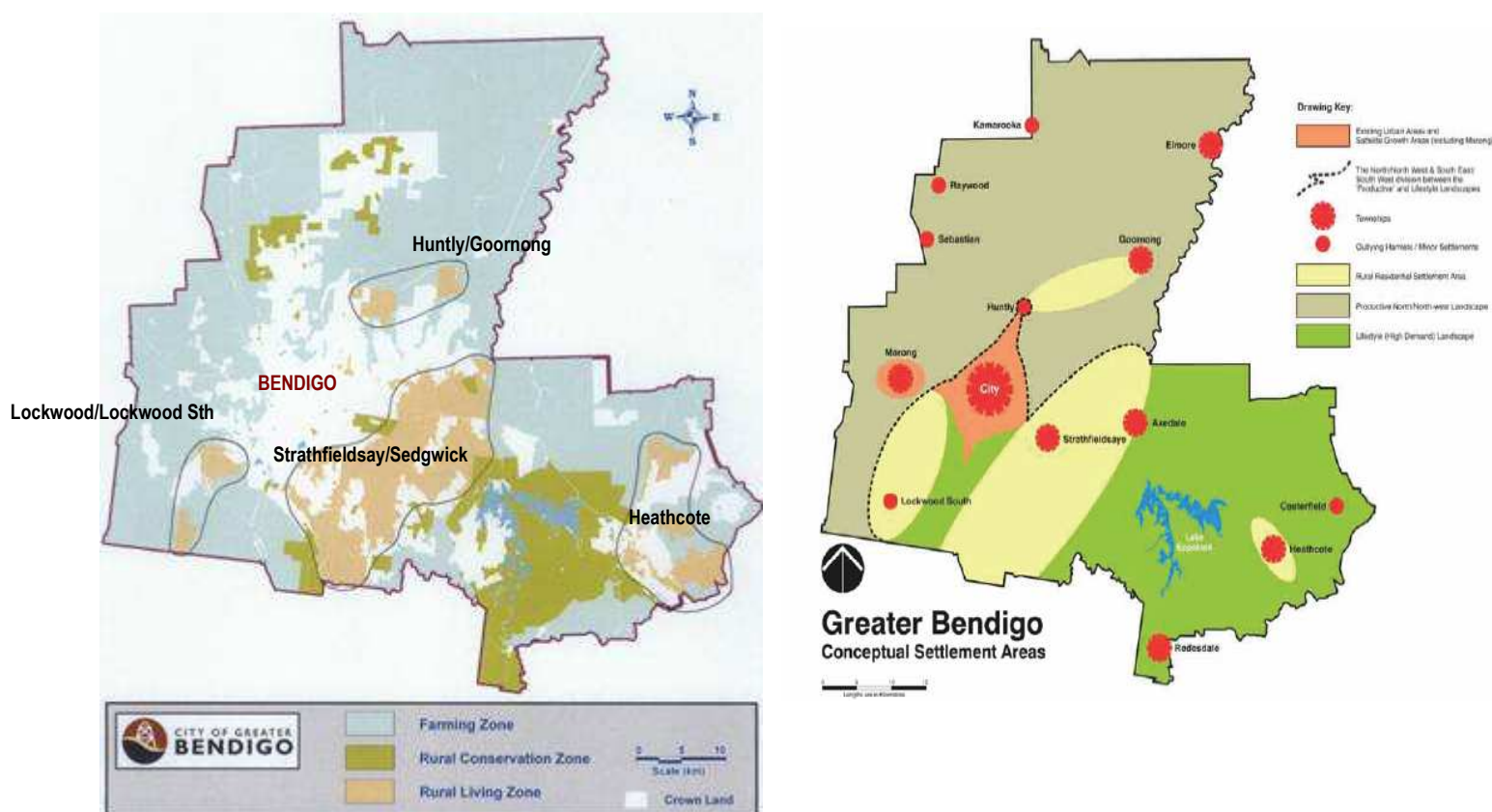


3. RURAL LIVING

3.1 Land Supply in Rural Living Precincts

The four primary concentrations of rural living activity in the municipality are established around Huntly-Goornong, Lockwood-Lockwood South, Strathfieldsay-Sedgwick and Heathcote.

Figure 7: Rural Living Areas



Rural living corridors within the municipality

Conceptual Settlement Areas

The above maps demonstrate that there is a large proportion of the municipality dedicated to rural living with approximately 33,400 hectares set-aside. At an average of 8 hectares for subdivision purposes, this represents a potential of about 4,175 lots (ignoring environmental and other constraints) or about 11% of the total area of Greater Bendigo. This is a large quantity given the amount of the municipality already dedicated to Crown land (National, State and regional parks) and catchment protection around Lake Eppalock.

Table 10: Area of Land Zoned Rural Living

Rural Living Corridor	Sub-district	Area (hectares)
1. Huntly-Goornong	Huntly	840
	Goornong	1,461
		2,301
2. Lockwood-Lockwood South	Lockwood	1,448
	Lockwood South	811
		2,259
3. Strathfieldsaye-Sedgwick	North of Mclvor Highway	9,889
	South of Mclvor Highway	13,120
		23,009
4. Heathcote	Mt. Camel	1,610
	McNutts Lane	870
	Heathcote North	2,079
	Heathcote	1,275
		5,834
Total land zoned Rural Living		33,403
Total area of the municipality		299,500
% of land zoned Rural Living		11%

Source: City of Greater Bendigo, 2009 – Unpublished data

3.2 Huntly-Goornong Corridor

The corridor stretches between Huntly and Goornong and consists of two areas:

Huntly:

The area is located to the east of the township of Huntly and south of the Midland Highway. The area is a logical, long-term extension of the township, which can only grow to the east, because:

- To the west is the flood plain of the Bendigo Creek with high quality alluvial soils traditionally used for market gardens (tomatoes, vegetables and grapes);
- To the north is intensive animal husbandry (pigs and poultry), requiring buffers to reduce possible land-use conflicts, particularly smells and quarantine distances; and
- To the south is the 'green wedge' separating Huntly from urban Bendigo.

The area is bisected by Sandy Creek, which supports remnant, mature native vegetation and is enhanced by the forest backdrop, which provides a visual 'rural amenity landscape'.

The area is supported by social and community infrastructure from the adjoining township.

Goornong:

The area is located between the townships of Huntly and Goornong and has two parts:

North of Pethericks Road - consisting of a series of smaller Crown allotments being the former settlement of Goornong, which was relocated to its present location in the 1880s to be adjacent to the new Melbourne-Murray River railway line and away from flooding. The original site is bisected by Five Mile Creek at its confluence with Crab-hole Creek and is partly subject to inundation.

South of Pethericks Road - consisting of more recent allotments in the Lomas Road/Cashens Road area, created by subdivisions in the 1970s. The area is a rural living enclave in an area of broad-acre grazing, however, residents can access community infrastructure of Goornong.

Generally, the Rural Living Zone in this area exists due to the pre-existing lot and ownership pattern, rather than as a product of strategic analysis.

3.3 Lockwood-Lockwood South Corridor

The corridor stretches along the Calder Alternative Highway at Lockwood with a developing area of farmlets at Spring Creek Estate on the Maldon Road to the south.

Lockwood:

The area is located between the hamlets of Lockwood North and Lockwood South, bounded by Bullock Creek to the west and the toe of Big Hill to the east.

The area is identified as a 'key intensive rural industry area' in the planning scheme (Clause 21.07), in recognition of the importance of the Hazeldene poultry processing plant to the north and associated hatchery and grower units in the vicinity. Buffers and the surrounding National Park limit the potential for expansion in rural living areas.

Lockwood South:

An area off McGlashens Road was rezoned for rural living in 1996 and a master plan approved for 160 lots of minimum 3 hectares and average 4.5 hectares. The last stages of the development have recently been approved and the area has proven popular. However, the area consists of well drained, granitic sands capable of supporting good pasture grasses on the lower slopes and valleys to the west. Further rezoning for hobby farmlets would remove viable agricultural land from production and should not be supported.

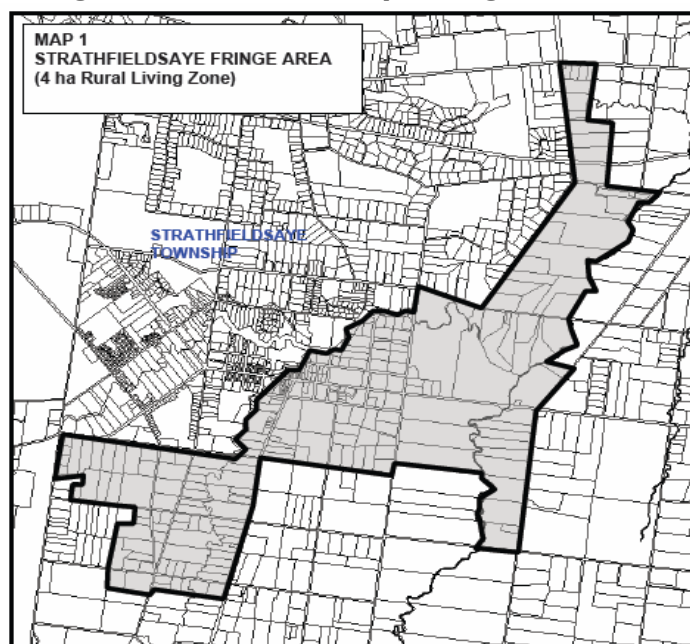
3.4 Strathfieldsaye-Sedgwick Corridor

The corridor bisects the eastern half of the municipality in a massive swathe covering some 230 square kilometres. The arc follows the Axe Creek valley from its source on the slopes of Mt Alexander at Barkers Creek, to its confluence with the Campaspe River north of Axedale.

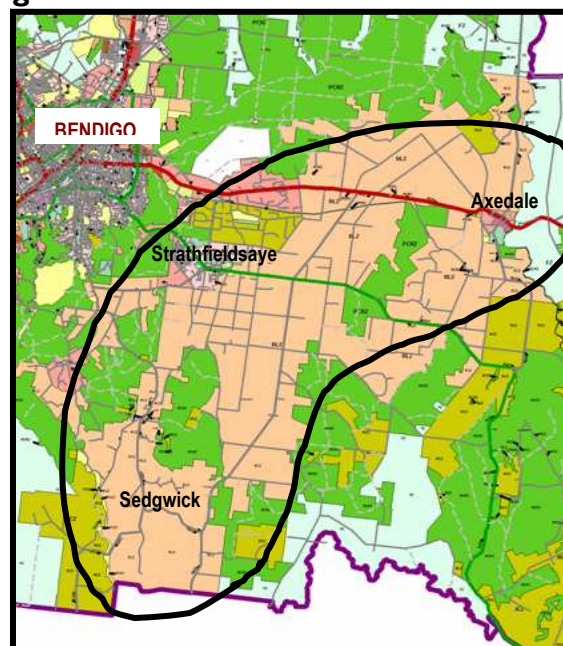
The area represents 8% of the municipality and almost 70% of all land zoned for rural living. The study, *A Strategy for Sustainable Rural Living*, 1999⁹, indicated that the area and zoning provides a 71 year supply of land for rural farmlet use, well in excess of the 10-year horizon recommended by Ministerial Direction No. 6.

⁹ A Strategy for Sustainable Rural Living - A Review of Rural Living Development East of Bendigo, August 1999, RPD Group.

Figure 8: Strathfieldsaye-Sedgwick Rural Living Areas



Strathfieldsaye fringe area - 4 hectares



Rural living zone - 8 hectares

3.5 Heathcote

Land in the Heathcote area is discussed in the *Rural Living Status Report 2006*, presented to Council at its Forum on 14 June 2006¹⁰. The report discusses three areas of rural living to the north of Heathcote at:

Warrowitue Road:

The area has about 600 lots of minimum 2 hectares in close proximity to the township. About 80% of the lots are developed and a recent 21 lot subdivision is in demand.

McNutt's Lane:

The area has about 80 lots of minimum 8 hectares with most developed with a residence and some form of hobby farming. There is no potential for further subdivision in the area.

Dealba Road

The area has about 160 lots of minimum 8 hectares of poor agricultural quality, however, some are used for hobby farmlets e.g., goats, vines, nuts and olives. The area is fairly remote with no school bus and lacks engineering and community infrastructure.

However, Heathcote has a limited supply of vacant land zoned for rural living that is readily available for development:

¹⁰ City of Greater Bendigo, Rural Living Status Report, June 2006

Table 11: Heathcote Rural Living Lots

Existing lots	Vacant lots	Lots created in previous 10 years	Potential new lots	Lots on the market
840	216	71	67	9

Source: City of Greater Bendigo, June 2006

Local sales figures for Heathcote indicate continued demand for larger allotments within a limited market, close to the township:

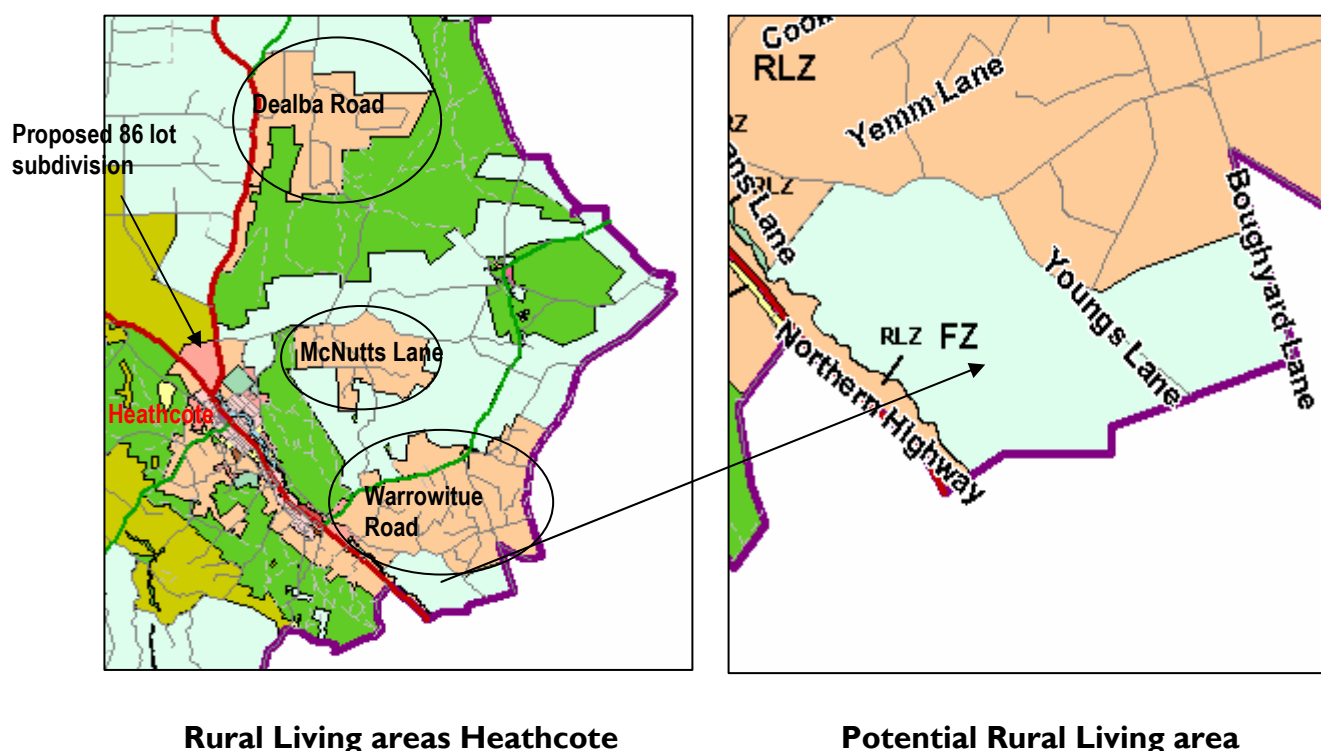
- 61.2% of buyers originated from Melbourne's northern suburbs;
- 45% were retirees;
- 48.7% bought out of town; and
- 25.9% of sales were for 'rural lifestyle properties' (2005)¹¹.

Potential exists for a modest rezoning of land in Youngs Lane from Farming to Rural Living, subject to strategic justification.

An initial letter of request to rezone the land from Farming (FZ) to Rural Living (RLZ) was received on 14 August 2006, including qualified support from the Department of Sustainability and Environment¹², stating that the cleared lower slopes on Youngs Lane section (north) provide some areas suitable for dwelling construction", and that there would need to be "extensive negotiations on allotment size and boundary locations". The balance of the land being the wooded ridges and slopes would be rezoned to Rural Conservation (RCZ).

A formal request for a rezoning was received on the 2 March 2009 and is currently being assessed.

Figure 9: Heathcote Rural Living Areas



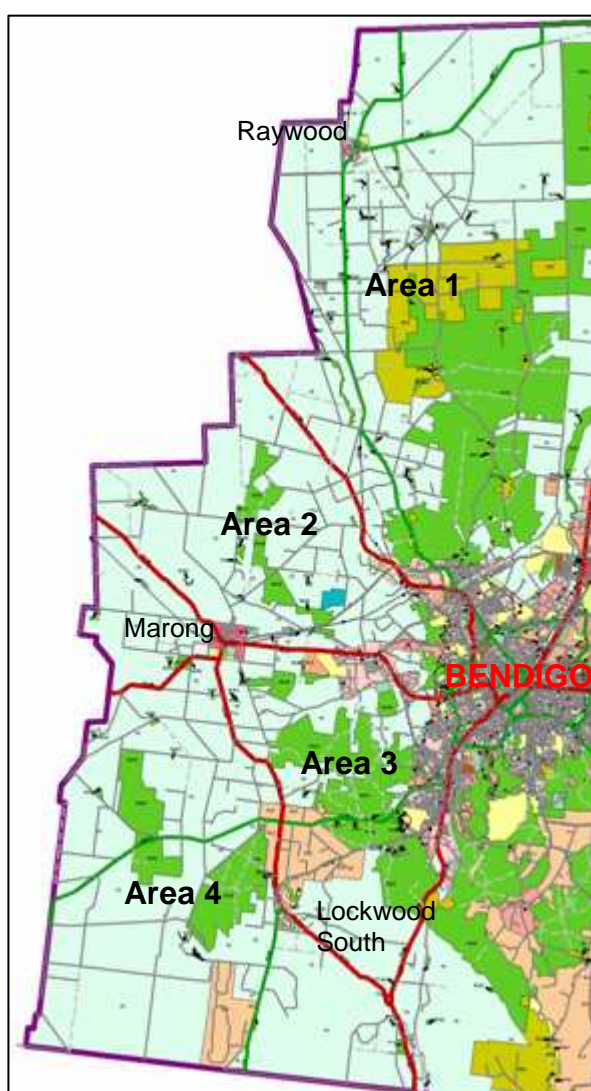
¹¹ Connolly's Real Estate, for 2005.

¹² Letter dated 26 September 2005, Department of Sustainability and Environment

3.6 Western side of the municipality

The western half of the municipality has developed in an ad-hoc manner. Although zoned for farming, applications for dwellings in isolated areas are still being received, increasing the potential for land-use conflicts, particularly the compromising of buffers for existing and future intensive agriculture. The report *A Strategy for Sustainable Rural Living - Western Areas 2000*, investigated four areas and concluded that there should be 'limited use for rural living in the western study area, even though many localities are characterised by smaller lots, hobby farms and rural residential estates' (page 4)¹³:

Figure 10: Key Plan - Western Side of the Municipality



Locality Profiles:

Area 1: Raywood-Sebastian

Predominant use: cropping and grazing.
Topography: relatively flat and poorly drained.
Versatility class: low
Constraints: poorly service, isolated.
Recommendation: support continued use for broad-acre farming, consolidate new houses into existing townships.

Area 2: Myers Flat, Maiden Gully and Marong

Predominant use: cropping, grazing and rural living.
Topography: relatively flat to undulating.
Versatility class: low
Constraints: pockets of native vegetation around Myers Flat and Marong, poor drainage.
Recommendation: support continued use for farming in the west.

Area 3: Lockwood-Lockwood South

Predominant use: cropping, grazing and rural living.
Topography: undulating to hilly, granite outcrops
Versatility class: low
Constraints: pockets of native vegetation and Crown land, poor drainage, fragmented ownership.
Recommendation: leave as Farming zone.

Area 4: Shelbourne

Predominant use: cropping, grazing and rural living.
Topography: relatively flat to undulating.
Versatility class: low to moderate.
Constraints: erosion of granite ridges, poor drainage.
Recommendation: support continued use for farming and discourage use for new houses.

Western half of the municipality

Updated plans of the four areas showing property sizes and the location of existing dwellings are provided in the appendix. The plans illustrate the fragmented nature of the western side of the municipality and the encroachment of houses. Although much of the west has already been

¹³ *A Strategy for Sustainable Rural Living - A Review of Rural Living Development and Planning Responses* - City of Greater Bendigo, Western Areas, 2000, RPD Group.

compromised, there remain areas of commercial farming, which need to be protected, particularly north of Raywood, at Leichardt and Shelbourne. Areas exhibiting rural living characteristics include Area 2 (Maiden Gully-Myers Flat) and Area 3 (Lockwood-Lockwood South).

3.7 Marong Business Park

In 2002 the Bendigo Industrial Land Strategy recommended that the City Of Greater Bendigo identify a large green field site to provide for future industrial needs.

The Future Industrial Land Strategy Stage I was commissioned in August 2005. The purpose of the strategy was to identify Bendigo's industrial land needs for the next 20 years, and the most suitable location(s) for future industrial land development. The investigations revealed that a large area of land west of Marong best met these location criteria, principally due to its topography, access to rail and road infrastructure, limited vegetation and environmental constraints and ability to bypass Bendigo when travelling to and from Melbourne, to and from northern Victoria and to and from southern NSW.

At its meeting on the 19 December 2007, Council endorsed the Marong Business Park Analysis Project report, particularly noting the identification of the site to the west of Marong on the Calder Highway as best suited to meet the future industrial needs of the City of Greater Bendigo, and endorsed the commencement of the implementation process (including rezoning).

It is envisaged that the Marong Business Park will include: manufacturing enterprises,(including nanotechnology), research and development, professional services and a transport hub. There will also be the potential for services that will support the employees (eg child care, café) and complement the expansion of the Marong township.

3.8 Small Townships

There are several smaller townships and settlements throughout the municipality. The MSS recommended the preparation of "restructure plans" for Kamarooka, Ravenswood and Neilborough (clause 21.05-4). These were prepared and adopted in May 2008 under amendment C88 and are now included within the planning scheme. The draft *Rural Areas Strategy Summary Technical Report 2008*, also suggests that "areas that warrant review of subdivision sizes with a view to introducing restructure programs are Myers Flat, Lockwood, Redesdale and Mia Mia" (page 13).

The purpose of the "restructure plans" is to identify old and inappropriate subdivisions or clusters of smaller allotments in rural areas that require restructuring by consolidation into larger parcels. Such locations are usually remote from urban infrastructure and have the potential to skew rural land values and adversely affect farming practice by allowing the encroachment of new dwellings into agricultural areas.

The MSS recommends further strategic work in "developing town structure plans for Heathcote, Elmore, Axedale, Redesdale and Goornong to identify areas of future development" (Clause 21.05-4). A township structure plan has recently been completed for Axedale (Amendment C108), which now provides a template for developing plans for other townships. In addition, Raywood needs to be added to the MSS recommendations for further strategic work in relation to town restructure plans.

Neilborough and Ravenswood

The Restructure Plan for Neilborough (RO3)¹⁴, is included in the schedule to the Restructure Overlay in the planning scheme. It provides for restructuring of smaller lots by way of consolidation into larger parcels and prevents fragmentation of land by subdivision. The boundary of the overlay is consistent with the Crown township boundary and provides for a compact township, capable of providing adequate engineering and community infrastructure.

At present, the township is zoned Farming (FZ), which does not adequately address the current use and subdivision pattern of a smaller, urban settlement. Ravenswood is similarly zoned and Amendment C88 reduced the area covered by the overlay to just the consolidated township area.

3.9 Supply and Demand Assessment

There has been a systematic evaluation of supply/demand and settlement patterns for rural living within the municipality over the past decade¹⁵. These studies reveal that there is an oversupply of rural living land, well in excess of the 10 year supply benchmark set by the State government, particularly to the east of Bendigo in the Strathfieldsaye-Sedgwick corridor, however, there are specific areas of interest that may be investigated further, including:

- At Heathcote, where demand is greater than supply and there is opportunity for limited, rural living infill at Youngs Lane.

3.10 What Changes are Needed?

The *Strategy for Rural Living, 1999* states that "the supply of land dedicated to rural living is extensive and excessive. It includes:

- Land which has been assessed as having low capacity for rural living due to its inherent natural characteristics;
- Land which has flora and fauna qualities;
- Land which has potential for intensive agricultural pursuits;
- Land which is in large tenements and supports significant agricultural pursuits; and
- Land which is isolated and requires significant community and engineering infrastructure." (page 44).

This report acknowledges the same issues and over-supply of land for rural living purposes within the municipality. The conclusion is that, except for minor in-fills and Township rezoning due to restructure plans, which can be strategically justified, no further land should be set-aside for rural living within the City of Greater Bendigo.

¹⁴ Schedule to the Restructure Overlay, clause 45.05, Greater Bendigo Planning Scheme

¹⁵ 1. Greater Bendigo Non-Urban Planning Scheme Review, TBA Planners, August 1997

2. City of Greater Bendigo Performance Criteria for Subdivision Proposals in the Rural Living Zone

3. Review of Rural Living Development East of Bendigo, RPD Group August 1999

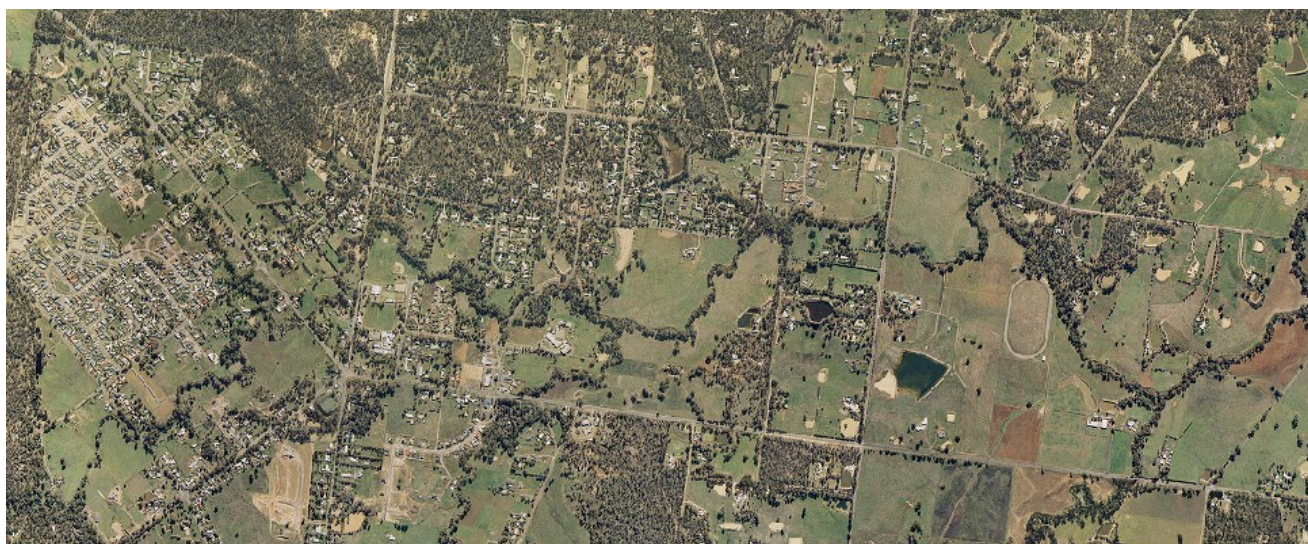
4. Review of Rural Living Development West of Bendigo, RPD Group, date

5. City of Greater Bendigo, Rural Living Status Report, June 2006.

3.11 Implementation

Table 12: Recommendations

Issue	Policy direction/statement
Over-supply of land for rural living	The supply of rural living land far exceeds the minimum threshold of 10 years and does not require further review in the short to medium term.
West side of the municipality	Retain Farm zoning and actively discourage new houses.
Site specific issues	Provide for a modest in-fill of rural living at Youngs Lane, Heathcote, subject to strategic justification.
Small Townships	<p>Rezone parts of Neilborough and Ravenswood to Rural Living to better reflect current land use and development.</p> <p>Prepare restructure overlays for Myers Flat, Lockwood, Redesdale and Mia Mia.</p> <p>Prepare township structure plans for Heathcote, Elmore, Redesdale and Goornong.</p>



4. LAKE EPPALOCK

4.1 Introduction

Lake Eppalock is situated on the Campaspe River upstream of Axedale approximately 26kms south east of Bendigo. Most of the water in Lake Eppalock enters via the Coliban and Campaspe Rivers. Inlet creeks and streams also contribute to the Lake Eppalock supply including Mt Ida Creek, Wild Duck Creek, Meadow Valley Creek and Native Dog Creek.

The Lake supplies downstream users with irrigation, stock and domestic water supplies as well as domestic water to Heathcote. Lake Eppalock also provides a supplementary source for Bendigo's domestic supply.

The capacity (full) of Lake Eppalock is 308,000ML of water and has a water surface area of 3,011ha (at Full Supply Level) an average depth of 9.6m and a maximum depth 37.5m near the outlet (Goulburn-Murray Water, 2004). The catchment extends from Mt Macedon and Trentham and is a proclaimed water supply catchment.

Eppalock is currently at historically low levels in terms of water supply, and management of water quality and quantity in the catchment is a key issue. Land use change within the catchment is considered to be a key contributor to the current situation along with climate change.

4.2 Recreation and Tourism

Prior to the current drought, Lake Eppalock had developed into one of the most popular Victorian inland water bodies for recreation. Of the 108 sites originally set aside around the perimeter of Lake Eppalock, approximately 50 are now occupied under leases ranging up to 25 years. Public areas maintained by Goulburn-Murray Water (G-MW) provide facilities for day visitors such as toilets, boat ramps and picnic barbeque facilities.

Recreational activities permitted on the storage include.

- water skiing;
- wind surfing;
- jet skiing;
- canoeing;
- sail boating;
- swimming; and
- fishing.

In the peak summer (when the Lake was full) period between 10,000 and 20,000 people spend the day at Lake Eppalock with 80% staying overnight and approximately 15% staying for a week. The revenue generated by visitors in the summer period supports local business in the region¹⁶.

There are a number of caravan parks and camping facilities on land leased from G-MW that are privately owned and operated.

In the 1980s up to 150,000 people visited Lake Eppalock annually to sightsee, sail, ski, boat, picnic, fish and swim. This has reduced over the last five to ten years due to the low levels of the storage and the perception that there is insufficient water in store for most recreation activities (Goulburn Murray Water - 2004).

4.3 Special Area Plan

The primary aim of the *Lake Eppalock Special Area Plan (SAP) 2008*, is to protect the long term quality of the water as a resource for local and downstream users, and address issues that are impacting on water yield to Lake Eppalock. More specifically, the plan aims to:

- Identify the issues in the study area that impact on water quality and water yield to Lake Eppalock;
- Identify the existing tools and mechanisms in place, including the planning schemes that currently address these issues;
- Prioritise issues to be incorporated into the plan;
- Confine the SAP to those issues that are not adequately addressed by existing mechanisms and processes; and
- Develop a program of actions to address the issues¹⁷.

The Special Area Plans potential actions have been identified to protect water quality and aquatic habitats from the impact of small catchment dams. These include:

- No New Small Catchment Dams;
- No Expansion of Existing Dams;
- New Small Catchment Dams Limited to IML;
- Reticulated water schemes as an alternative to individual dam construction; and
- Decommissioning of small catchment dams.

An agreed outcome of the Special Area Plan was for the North Central Catchment Management Authority, City of Greater Bendigo, Coliban Water and Goulburn Murray Water to enter in to a Memorandum of Understanding. The purpose of the agreement was to strengthen relationships and provide a coordinated approach to reducing impacts of dams on water yield on the Campaspe River System.

4.4 Draft Sustainable Water Strategy Northern Region, 2008

This State government initiative investigates future water needs for the Victorian northern region (Murray-Darling Basin catchment) with an emphasis on the Campaspe and Loddon systems, which

¹⁶ Lake Eppalock Special Area Plan – Background Report 2009

¹⁷ Lake Eppalock Special Area Plan – Background Report 2009

have been hardest hit by reduced water allocations. The strategy incorporates long term planning (50 years) for a future with less water on the basis of continued drought or climate change. It examines the water needs of towns, industry, agriculture and the environment and considers surface water, groundwater and alternative sources of drainage, recycled water and stormwater.

Lake Eppalock and its catchment are integral to the region and planning needs to reflect the importance of protecting water quality and water resources.

Figure 11: Map of the Northern Region

Figure E.1 Map of the Northern Region



4.5 Threats

Rural living and its associated developments are one of the major threats to Lake Eppalock and the catchment. Small dams (under 3 ML), septic tanks and roads all impact on water yield and quality. The proliferation of small dams has dramatically altered the water-flow into Lake Eppalock and a study undertaken by SKM in 2006 found that only 449 dams out of 12,806 were registered. When volumetrically converted, registered dams made up only 4,474 ML against a total of 39,654 ML or 11.3% of all dams (Lake Eppalock Special Area Plan – Background Report 2009).

4.6 Current Planning Controls

Planning controls have been applied to the catchment to manage land-use and development. These controls and processes were developed in consultation with Goulburn-Murray Water with a clear recognition of the importance of managing the lake environs and the catchment.

Specifically, the following controls have been applied to the catchment:

- Rural Conservation Zone on private property;
- Public Conservation and Recreation Zone to Crown land;
- The Environmental Significance Overlay (ESO3); and
- State and local policies, which are discussed further below.

4.7 Rural Conservation Zone - Lake Eppalock Environs

The Rural Conservation Zone (RCZ) has been applied to the Lake Eppalock environs with the specific objective of protecting the water quality in the catchment. The zone requires planning permission for a large range of activities, including changes in farming systems (e.g. from grazing to vines) as well as prohibiting land uses such as intensive animal husbandry - all new houses also require a permit.

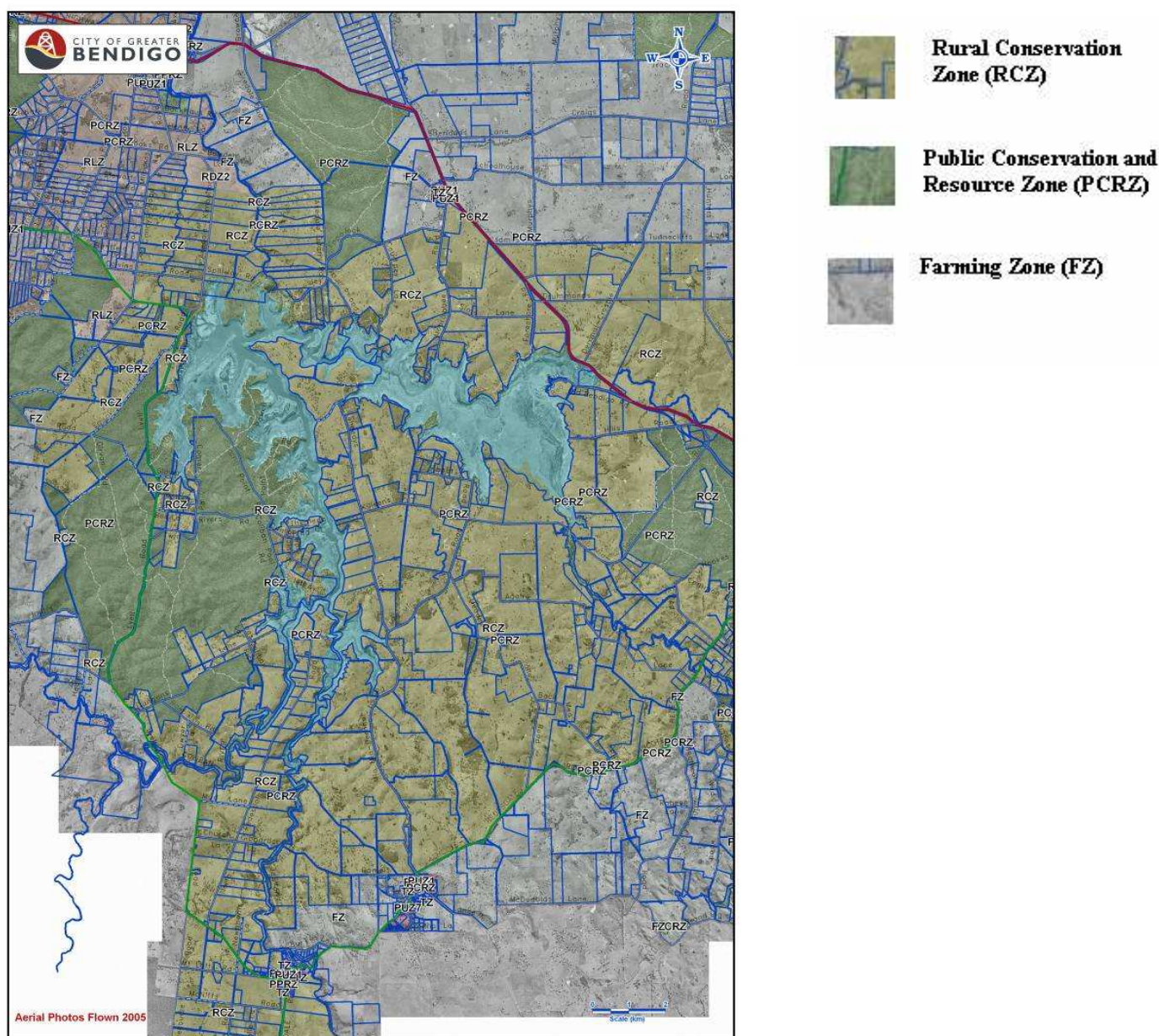
The schedule to the zone requires a minimum subdivision area of 40ha to retain the rural farming character and use.

4.8 Environmental Significance Overlay - Lake Eppalock Catchment

An Environmental Significance Overlay has been applied to the total area of the catchment. It is applied as an overlay schedule (with slight variations) to each of the five municipal Planning Schemes that cover the Eppalock Proclaimed Catchment. The overlay requires a planning permit for a range of developments, particularly those relating to vegetation removal and earthworks.

In municipalities other than Greater Bendigo, these overlays, coupled with broad State and local policies and statements of purpose in the various Municipal Strategic Statements, are the only specific planning controls associated with the Eppalock catchment.

Figure 12: Lake Eppalock and Surrounding Catchment



With respect to the Greater Bendigo Planning Scheme, the Environmental Significance Overlay (ESO3) applies to the Eppalock Proclaimed Catchment within the municipal boundary and provides the following statement of environmental significance:

"Lake Eppalock is a major water storage and recreational facility located within the Campaspe River catchment. It is a major source of water for irrigation, stock and domestic and urban water supply for towns within the municipality. Lake Eppalock supplies 15% of Bendigo's potable water supply"¹⁸.

A permit is required for all buildings and works within 300 metres of the full supply level, and buildings and works that will generate waste-water elsewhere within the catchment

¹⁸ Greater Bendigo Planning Scheme, Schedule to clause 42.01

4.9 Planning for Lake Eppalock

The issues of reduced water yield and poor water quality are the major threats to Lake Eppalock. Development and the construction of smaller dams have significant implications for the lake, the natural environment, down-stream users and recreational users.

When the current rural zones were introduced in 2004, the City of Greater Bendigo agreed to the translation of the new zones on the understanding that the Special Area Plan (SAP) would provide an appropriate strategic direction and planning regime, however, this has not happened to-date.

Current tracking systems have no direct way of monitoring the construction of smaller dams and the SAP was seen as the tool to address these issues. Currently, there is a 'Memorandum of Understanding' between the North Central Catchment Management Authority, Water Authorities and the City of Greater Bendigo to address the issue of small dams and the impacts on Lake Eppalock. The construction of future stock and domestic dams need to be tightly controlled.

4.10 Implementation

Lake Eppalock is of State importance as part of the northern region's sustainable water strategy, and its long-term future must be protected through the planning system, however, the future of the foreshore requires further investigation.

Table 13: Recommendations

Issue	Policy direction/statement
Appropriate zoning	Maintain current zoning of the Lake Eppalock catchment as Rural Conservation with a possible Rural Activity Zone around parts of the Eppalock foreshore.
Small dams (3ML and under)	Support the Lake Eppalock Special Area Plan. Memorandum of understanding and Draft <i>Sustainable Water Strategy-Northern Region</i> 2008,policy documents in addressing small dams within the Lake Eppalock catchment.

5. RECOMMENDATIONS

5.1 Key Challenges

5.1.1. Character

The rural land that surrounds Bendigo plays an important role in why people choose to live here. The rural land is versatile and can accommodate different uses. The landscape incorporates many smaller communities that enjoy the rural lifestyle while also being close to a major regional city.

People have the opportunity to live close to forest, close to the city and close to infrastructure and services, which gives the community opportunities and provides for a pleasant place to live. The municipality is a progressive regional leader and promotes the qualities of the area, while planning responsibly for the future.

Managing land use and development and protecting environmental assets is key to Bendigo's setting, values and overall character. We need to think about future stewardship of the land, securing water for the region, duty of care and responsibilities for landholders, as well as protecting significant landscapes, biodiversity and natural values and planning strategically across rural and urban areas.

5.1.2. Rural road network

With rural parts of the municipality experiencing growth and structural change, transportation and infrastructure capability needs to be addressed.

A detailed review of the rural road network is recommended. This study should follow the Bendigo Transportation Strategy and include the definition of a rural areas access strategy for large vehicles, particularly B-Doubles. Capital works to upgrade the local road network, as appropriate, should be in keeping with the recommendations of the study.

5.1.3. Water

Unreliable water supply directly affects the long-term viability of both productive agricultural and lifestyle landholdings, requiring ad hoc responses to match needs with available water.

Every effort should be made to manage and enhance the sustainable use of water. This requires a holistic approach by all levels of government and the community. As a planning authority, Greater Bendigo has a responsibility to work with the water authorities to identify strategies and implementation plans, such as Coliban Water's *Waterplan 2055*, *Special Area Plan* and *Northern Water Strategy* as a means of securing the region's water future.

5.1.4. Climate change

With predicted hotter and drier conditions across the region, water will be increasingly scarce. These long term patterns of climate change have been reinforced by the extended period of

drought which has brought hardship to rural communities, left river systems stressed and a range of other impacts on flora and fauna.

The full impact of climate change needs to be investigated to ascertain the future implications of climate change on the rural sector.

5.1.5 Biodiversity

Protection of biodiversity is fundamental to creating the natural environment we value. Therefore, we need to continue to work with Natural Resource Management agencies to identify strategies, plans and policies which will protect and enhance our environmental assets.

5.1.6. Wildfire

The Wildfire Management Overlay (WMO) in the planning scheme adequately meets existing high-risk wildfire concerns as they accord with the Bushfire Prone Areas, in both the urban and rural areas of the municipality, according to the CFA.

The CFA has flagged increasing subdivision and development on land adjoining forested areas will potentially increase the number of dwellings, people and assets at risk from wildfire.

In light of the Black Saturdays fires and the subsequent Royal Commission, planning for areas in fire prone locations may change. The Royal Commission findings and subsequent State Government policy direction will provide guidance in regard to planning for fire prone areas.

5.2 How to Protect Agricultural Land?

The rural living evaluation confirms that there is an excessive amount of land designated for hobby farmlet type use within the municipality, which far exceeds any minimum standard. The Rural Living Zone has been applied to rural areas exhibiting lifestyle characteristics or in recognised areas already set aside for bush blocks by previous municipalities. Despite the obvious over supply, the prospect of back zoning of some areas to farming was tested by Amendment C66 (Axe Creek), however, the Independent Panel appointed by the Minister for Planning found that the area was already compromised by housing and committed to rural living. Having confirmed the need to maintain the existing farming zone boundaries in the *Rural Areas Strategy - Technical Report 2008*, it is now necessary to increase the certainty and protection of farm land from residential encroachment by amendments to the Greater Bendigo Planning Scheme.

A discussion on the various planning scheme options is as follows:

5.2.1. Rezoning:

This report recommends that no further land be considered for rezoning to rural living, except for minor in-fills where there is strategic justification (ie Heathcote – see page 39 of this document) and the proposal meets the warrants of Ministerial Direction No. 6. In considering transition areas for long-term planning (beyond 10 years), the criteria for assessment needs to include:

- A revised demand / supply analysis at the time;
- Consideration of environmental values and conservation impacts;
- The capacity for continued viable agricultural use of the land; and
- The level of community and engineering infrastructure available.

5.2.2. Subdivision:

The report recommends the use of three farming zones with minimum lots sizes as follows:

Growth - 100 hectares to protect broad-acre farming and financial viability in rural areas, particularly to the north of the municipality.

Consolidation - 40 hectares to encourage consolidation of farming parcels into larger units, particularly fragmented areas to the west of the municipality; and

Niche - 8 hectares in recognition of high quality viticulture on the Northern Highway at Heathcote.

The report discourages single lot excisions, unless it results in consolidation of the balance of land or provides an existing house for a person directly employed on the property.

5.2.3. New houses:

The clear delineation of rural land uses in Greater Bendigo occurred with the application of the suite of farming zones introduced with the Victoria Planning Provisions (VPPs 2000) and updated by the "New Zones for Rural Victoria" (DSE 2004). Therefore, any use of performance based criteria to justify new dwellings in farm zones needs to be strictly balanced against the need to support the continuance of commercial agriculture.

Such criteria needs to address important questions such as:

- Is there a need for a dwelling to promote the agricultural use?
- Will the dwelling fragment or adversely affect agricultural use of land?
- Will the primary land use remain as agricultural?
- Will it increase the potential for land-use conflicts or compromise 'the right to farm'?
- Will it create a remote enclave of rural residential living? or
- Will residents be adequately supported by existing community and engineering infrastructure?

The performance based approach to individual applications for new dwellings in rural areas, is resulting in incremental decisions which conflict with the planning scheme's Rural Dwellings Policy. Decisions need to be measured against the realities of a gross over-supply of land for rural living, which more than caters for demand, and the need to call a stop to further residential incursions into farming areas.

Council needs to minimise new dwellings in Farming zoned areas by adopting a policy position of no new dwellings in farming areas, except in exceptional circumstances.

Council and the community need to be more realistic about the opportunities for new dwellings to promote agricultural use in farming areas and recognise the risk that new dwellings pose to farming uses. In most cases land can be used for agriculture without a dwelling to support it. Rural living areas offer the opportunity for residents to pursue part time and hobby agricultural enterprises. Such enterprises, that generally do involve the desire to live on site, should be directed away from Farming zoned areas.

5.2.4. The planning scheme:

Tools in the VPPs to control development in farming areas include the use of policies, schedules and overlays in the planning scheme. Potential land management overlays include:

- Design and Development Overlay (DDO) - this may be used to control development within buffers to intensive agriculture;
- Restructure Overlay (RO) - this has already been applied to inappropriate pockets of smaller lots in rural areas with multiple owners at Kamarooka, Neilborough and Ravenswood; and
- Use of various environmental overlays to protect land, native vegetation and water (surface and ground-water).

5.3 Key Recommendations

The report concludes that:

- Protection of the character, biodiversity and natural values of rural areas is important;
- A review of the rural road network needs to be undertaken;
- The City of Greater Bendigo work with the North Central Catchment Management Authority and water authorities to identify strategies and implementation plans, such as Coliban Water's *Waterplan 2055*, *Special Area Plan* and *Northern Water Strategy* as a means of securing the region's water future;
- The City of Greater Bendigo investigate the full impact of climate change on the rural sector within the municipality;
- The City of Greater Bendigo use the Wildfire Management Overlay (WMO) where appropriate and Support the Royal Commission into the Black Saturday fires and subsequent policy direction of the State Government;
- The remaining commercial farming land within the City of Greater Bendigo needs to be protected from fragmentation and residential encroachment;
- Protection of intensive animal industries needs to be reinforced;
- Support small townships and implement changes that have been identified in township plans and the MSS, eg Neilborough and Ravenswood rezoning;
- There is an abundant supply of land already zoned for rural living purposes; enough to satisfy demand;
- No further land should be rezoned for Rural Living except for minor infill in strategic locations;
- The size and flexibility of farm land should be maintained to be able to respond to changing farm practices, particularly in response to water security and climate change;
- Lake Eppalock is of State and regional importance as part of the northern region's strategy for long-term protection of the State's water assets; and
- The Lake Eppalock catchment should remain zoned Rural Conservation, however, the Rural Activity Zone may be applied to part of the foreshore, subject to a detailed assessment.

Table 14: Summary of Key Recommendations

Issue	Policy direction/statement
Fragmentation of agricultural land	Subdivision minimum should be increased to 100 ha (F1Z), 40 ha (F2Z) and 8 ha (F3Z) to improve the viability of commercial agriculture and maintain farm valuations.
Conflicts between agricultural and residential use	<p>Provide certainty and protect the 'the right to farm' by discouraging new houses in rural areas, unless they support agricultural use of the land.</p> <p>Strengthen the Rural Dwellings Policy (22.02), to discourage new houses in rural areas.</p> <p>Include the "Guidelines for Rural Houses - 2006" as a Reference Document in the planning scheme (21.10).</p>
Land-use conflicts	Acknowledge 'the right to farm' in the MSS.
Protection of intensive agriculture	<p>Reinforce MSS Clause 21.07-Economic development. Use Figure 6 <i>Proposed Farming Zones</i> as the basis for decisions.</p> <p>Update map in MSS- <i>Intensive Rural Industries</i> to reflect existing and new developments and provide planning/protection boundaries.</p> <p>A study on intensive animal industries within the Rural Living Zone should be undertaken to establish appropriate zoning for the protection of the industry and neighbouring properties.</p>
Over-supply of land for rural living	The supply of rural living land far exceeds the minimum threshold of 10 years and does not require further review in the short to medium term.
West side of the municipality	Retain Farm zoning and actively discourage new houses.
Site specific issues	Provide for a modest in-fill of rural living at Youngs Lane, Heathcote, subject to strategic justification.
Zoning around Lake Eppalock	Maintain current zoning of the Lake Eppalock catchment as Rural Conservation with a possible Rural Activity Zone around parts of the Eppalock foreshore
Small dams (3ML and under)	Support the Lake Eppalock SAP and the Draft Sustainable Water Strategy-Northern Region policy documents in addressing small dams within the Lake Eppalock catchment.
Rural road network	Implementing the Bendigo Transport Strategy recommendations (B-Double restrictions, impact of roads and access for communities).
Biodiversity	Continue to work with Natural Resource Management agencies to identify strategies, plans and policies that will protect and enhance our environmental assets. (eg, National and State parks and reserves).
Water	Work with the North Central Catchment Management Authority and water authorities to identify strategies and

	implementation plans, such as Coliban Water's <i>Waterplan 2055, Special Area Plan and Northern Water Strategy</i> as a means of securing the region's water future
Climate change	Investigate the future implications of climate change on the rural sector within the municipality
Small townships	<p>Rezone parts of Neilborough and Ravenswood to Rural Living to better reflect current land use and development.</p> <p>Prepare restructure overlays for Myers Flat, Lockwood, Redesdale and Mia Mia.</p> <p>Prepare township structure plans for Heathcote, Elmore, Redesdale, Raywood and Goornong.</p>
Wildfire	<p>Structure planning for emerging development areas should integrate suitable buffer areas at the interface between the forests and new neighbourhoods.</p> <p>Support the Royal Commission into the Black Saturday fires and subsequent policy direction of the State Government.</p>

5.4 Planning Scheme Changes

1. Municipal Strategic Statement (MSS):

The MSS needs to be updated to reflect the importance of protecting agricultural land from potential land use conflicts, such as new houses in farming areas and land for rural living purposes.

Recommended changes include:

- In the Settlement section, include a sub-section on 'Farming', which reflects its importance and need for long-term viability and articulates planning objectives and strategies for protection and growth;
- In Settlement under 'Rural Living', confirm the excessive over-supply and Council's commitment not to create any more land for rural living without strategic justification;
- Review the 'Rural industries strategic framework plan' to reflect the key recommendations and define the boundaries of the F1Z, F2Z & F3Z zones;
- Include the *Greater Bendigo Rural Areas Strategy – Technical Report 2008-2018* and the *Greater Bendigo Rural Areas Strategy May 2009* as Reference Documents; and
- Include the *Guidelines for houses in Rural Zones* and the *Guidelines for dwellings in Rural Zones (Officers check-list)* as Reference Documents.

2. Policies:

Review the *Rural Dwelling Policy* and *Rural Subdivisions Policy* in the Greater Bendigo Planning Scheme and change to accord with the key recommendations.

3. Farming zone:

In the schedule to the zone (clause 35.07), include the 3 variations to the farming zone:

Table 15: Proposed Farming Zones - City of Greater Bendigo

	Land	Area/Dimensions/Distance
Minimum subdivision area (hectares)	Farming (F1Z) Farming (F2Z) Farming (F3Z)	100 hectares 40 hectares 8 hectares

5.5 Monitoring

It is recommended that the City continue to monitor new housing approvals in the Farming Zone and the Rural Living Zone, review the need to apply the Rural Activity Zone as required and continue to apply the Rural Conservation Zone to the Lake Eppalock catchment, in accordance with recommendations of the Special Area Plan.



6. IMPLEMENTATION

Table 16: Implementation of Strategy

Action	Responsible Manager	Timeframe	Partners
Subdivision minimum should be increased to 100 ha (F1Z), 40 ha (F2Z) and 8 ha (F3Z) to improve the viability of commercial agriculture and maintain farm valuations.	Strategy Unit	6-12 months MSS review	Statutory Planning
Provide certainty and protect the "the right to farm" by discouraging new houses in rural areas, unless they support agricultural use of the land. Strengthen the Rural Dwellings Policy (22.02), to discourage new houses in rural areas. Include the "Guidelines for Rural Houses - 2006" as a Reference Document in the planning scheme (21.10).	Strategy Unit	6-12 months MSS review	Statutory Planning
Acknowledge 'the right to farm' in the MSS.	Strategy Unit	6-12 months MSS review	Statutory Planning
Reinforce MSS Clause 21.07-Economic development. Use Figure 6 Proposed Farming Zones as the basis for decisions. Update map in MSS- Intensive Rural Industries to reflect existing and new developments and provide planning/protection boundaries.	Strategy Unit	6-12 months MSS review	Statutory Planning
The supply of rural living land far exceeds the minimum threshold of 10 years and does not require further review in the short to medium term.	Strategy Unit	6-12 months MSS review	Statutory Planning

Retain Farm Zoning and actively discourage new houses.	Strategy Unit	Ongoing	Statutory Planning
Provide for a modest in-fill of rural living at Youngs Lane, Heathcote, subject to strategic justification.	Statutory Planning	Ongoing	Strategy Unit
Maintain current zoning of the Lake Eppalock catchment as Rural Conservation with a possible Rural Activity Zone around parts of the Eppalock foreshore.	Strategy Unit	6-12 months MSS review	Statutory Planning, NCCMA and water authorities
Support the Special Area Plan and the Draft Sustainable Water Strategy-Northern Region policy documents in addressing small dams within the Lake Eppalock catchment.	Strategy Unit	Ongoing	NCCMA, DSE and water authorities
A detailed review of the rural road network is undertaken. This study should follow the Bendigo Transportation Strategy and include the definition of a rural areas access strategy for large vehicles, particularly B-Doubles.	Asset Planning and Design	12-18 months	Statutory Planning and Strategy Unit
Work with the North Central Catchment Management Authority and water authorities to identify strategies and implementation plans, such as Coliban Water's <i>Waterplan 2055</i> , <i>Special Area Plan</i> and <i>Northern Water Strategy</i> as a means of securing the region's water future.	Strategy Unit	Ongoing	Statutory Planning
Continue to work with Natural Resource Management agencies to identify strategies, plans and policies that will protect and enhance our environmental assets. (eg, National and State parks and reserves).	Strategy Unit and Environment Unit	Ongoing	Statutory Planning
Investigate the future implications of climate change on the rural sector.	Strategy Unit	Ongoing	Statutory Planning, DPI, DSE, DPCD, NCCMA
Rezone parts of Neilborough and Ravenswood to Rural Living to better reflect current land use and development.	Statutory Planning	6-12 months MSS review	Strategy Unit

<p>Prepare restructure overlays for Myers Flat, Lockwood, Redesdale and Mia Mia; and</p> <p>Prepare township structure plans for Heathcote, Elmore, Redesdale, Raywood and Goornong.</p>			
<p>Structure planning for emerging development areas should integrate suitable buffer areas at the interface between the forests and new neighbourhoods.</p> <p>Support the Royal Commission into the Black Saturday fires and subsequent policy direction of the State Government.</p>	Statutory Planning	Ongoing	Strategy Unit



7. OTHER RELEVANT STRATEGIES AND POLICIES

Much of the regulatory environment for managing rural areas is provided by State and Local Government. Below is a list of strategies and policies that provide guidance and a regulatory background to some of the information in this document.

- North Central Catchment Management Authority – Lake Eppalock Special Area Plan 2009
- Bendigo Transportation Study 2007
- Bendigo Residential Strategy 2004
- Draft Sustainable Water Strategy Northern Region 2008
- North Central Catchment Management Authority – North Central Regional Catchment Strategy 2003
- Victorian Planning Provisions (VPP)
- Greater Bendigo Planning Scheme
- Victoria's Native Vegetation: A Framework for Management 2003
- Environment Conservation Council Box-Ironbark Forests and Woodlands Investigation 2001
- Natural Environment Strategy 2007-2010
- Our Water our Future Regional Action Plan 2005
- Climate Change in the North Central Region 2004
- Bendigo +25 Community Plans
- Council Plan 2005-2009

8. FUTURE STRATEGIC WORK

The draft Rural Areas Strategy Technical Report, January 2008 outlined strategic work that needs to be undertaken in the future. Although, this strategy focuses on some main issues, there are several pieces of work that need to be investigated in the future. They include:

- Significant Landscape Overlay – A study for the Big Hill escarpment, parts of the Mandurang Valley and areas of the Campaspe/Axe Creek (using C108 as an example).
- Land Stewardship study - In conjunction with DSE and DPI, establish a program of protecting and enhancing vacant and degraded rural land that meets the needs of the municipality.
- Rural Activity Zone for Lake Eppalock Foreshore – In partnership with GMW, investigate the possible zoning of suitable foreshore areas of Lake Eppalock to Rural Activity Zone.
- Climate Change Implications – Work with key agencies to investigate the future implications of climate change on the rural sector within the municipality.
- A study on intensive animal industries within the Rural Living Zone should be undertaken to establish appropriate zoning for the protection of the industry and neighbouring properties. This may include the possibility of rezoning, overlays and use of local policy.

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Rural Areas Strategy - Technical Report, Coomes Consulting Group Pty Ltd, January 2008

Rural Land Use Strategy. Public Discussion Draft, Parsons Brinckerhoff, November 2006

Rural Law Handbook. A Guide for Primary Producers. Goulding. Frank, Smith. Tony, Bowen. Jan, 2002.

The changing social landscape of rural Victoria, Neil Barr, Department of Primary Industries, 2005.

The Australian Newspaper. Egan, Carmel. November 2, 2008.

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Victorian Code for Cattle Feedlots, August 1995.

APPENDIX I - WESTERN SIDE OF MUNICIPALITY

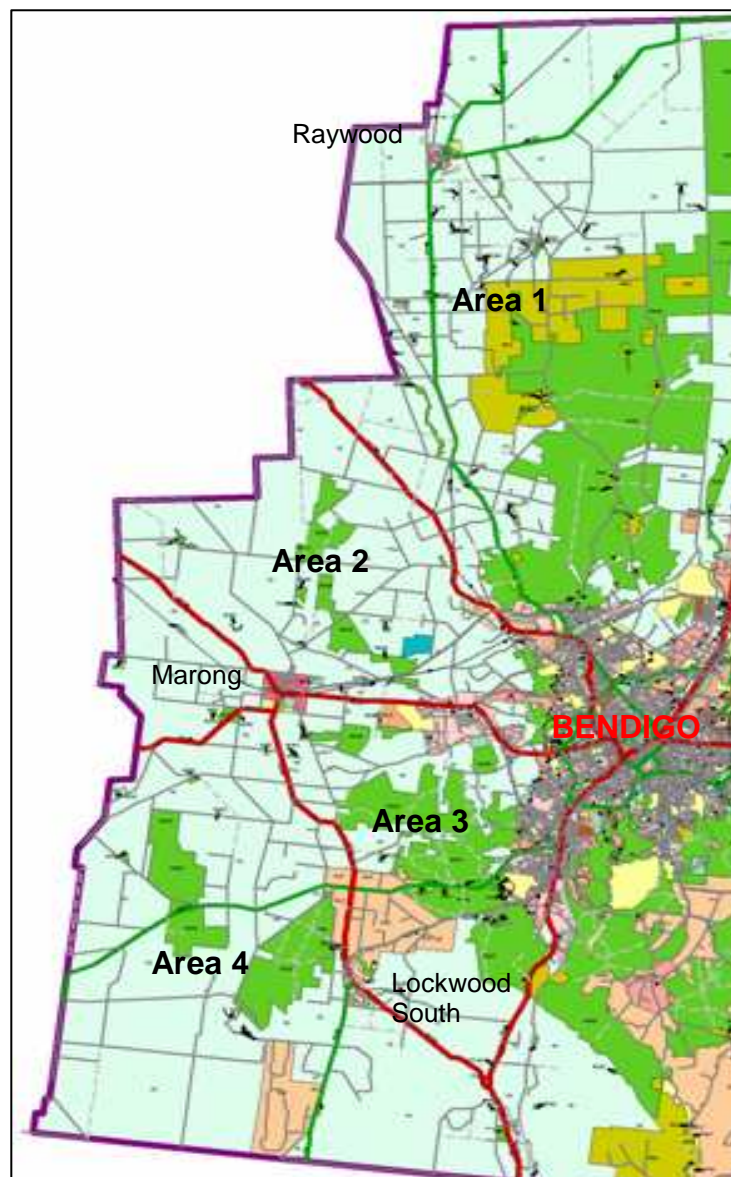
Western Side of the Municipality:

The attached plans are of the western side of the municipality, divided into 4 areas for comparison of:

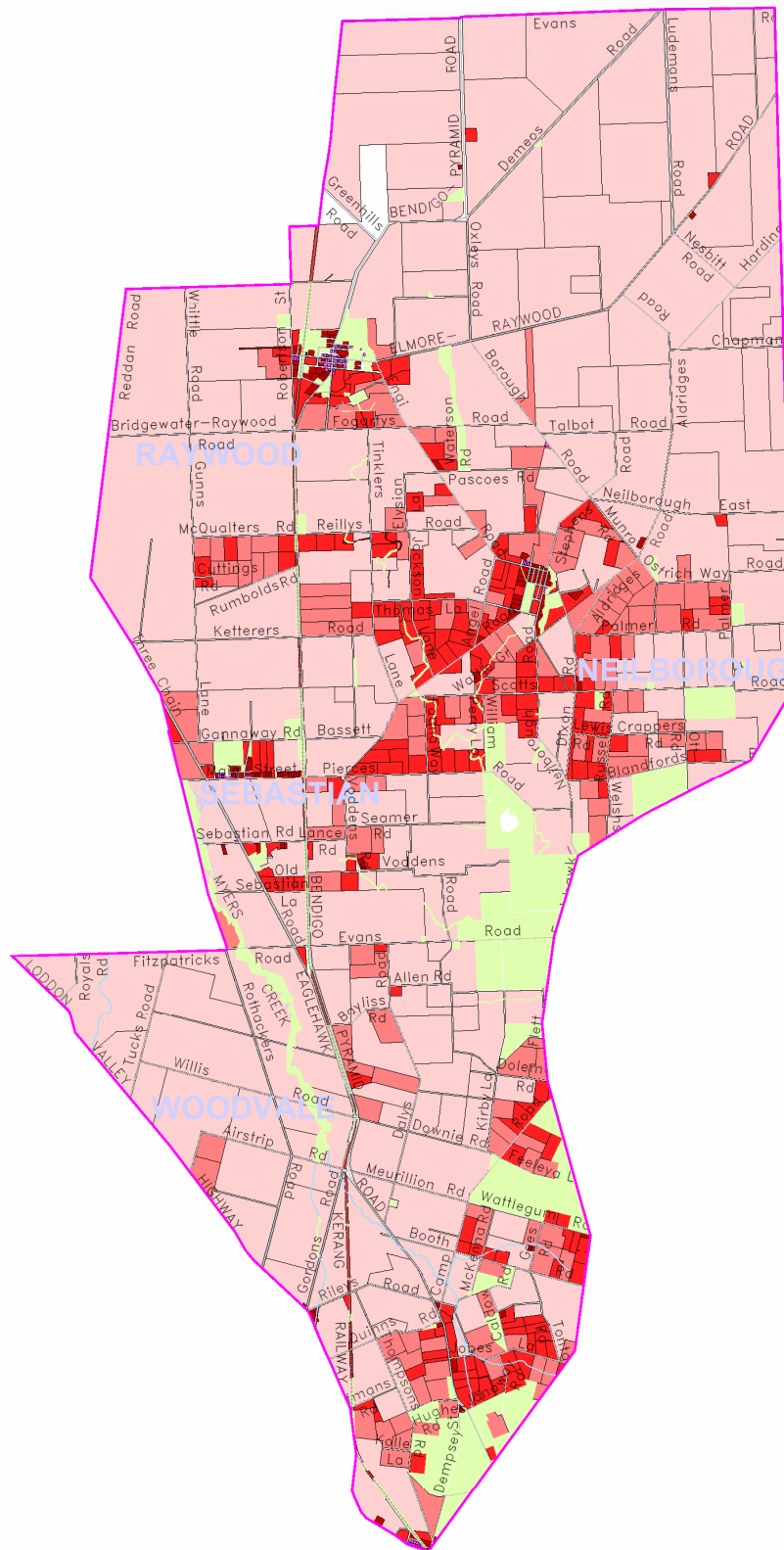
- Property size distribution; and
- Location of existing dwellings.

The purpose of the plans is to demonstrate the degree of fragmentation and intrusion of houses into rural land on the western side of the municipality.

Key Plan

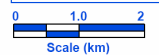


PROPERTY SIZE DISTRIBUTION : AREA 1



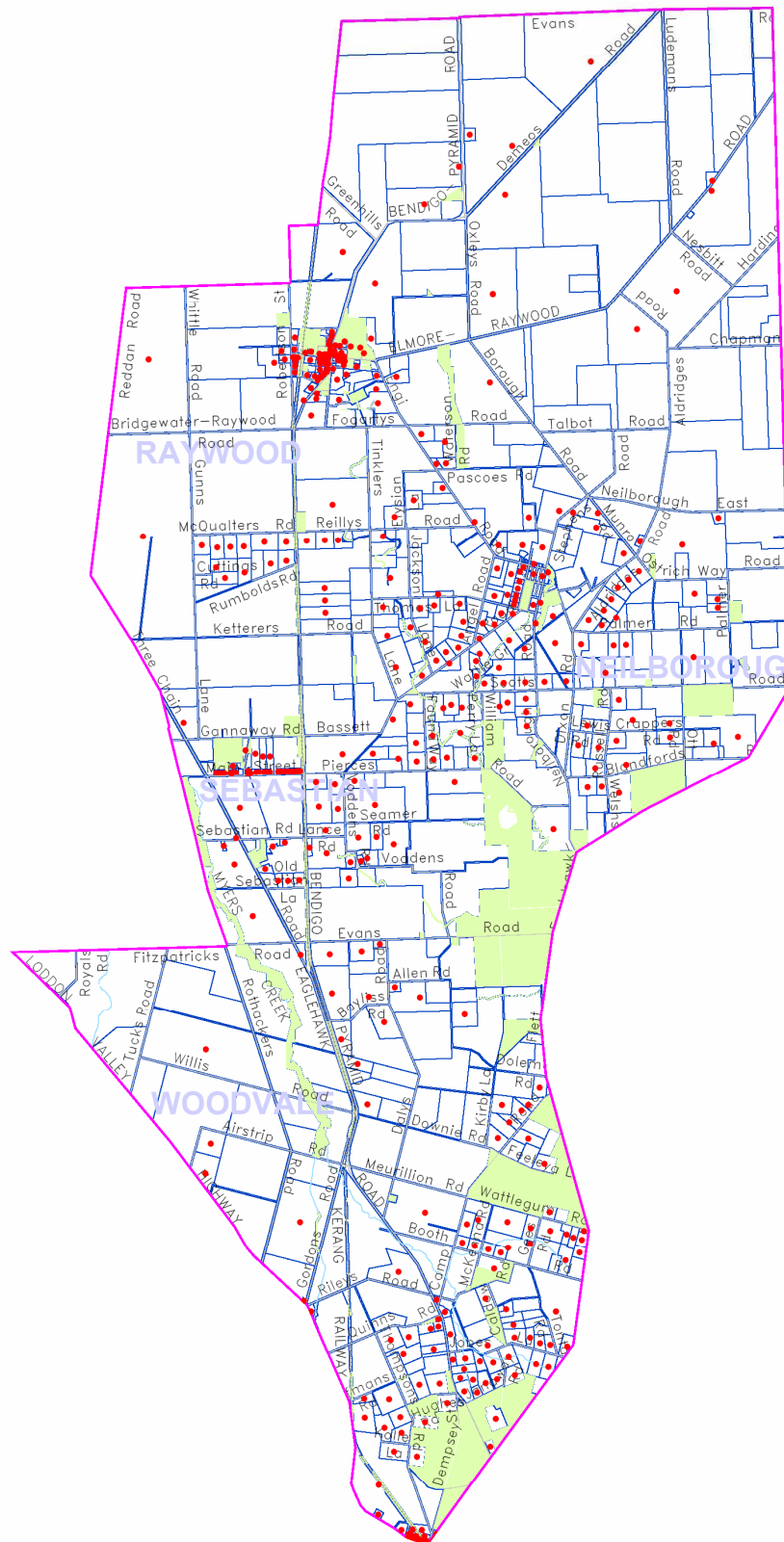
LEGEND

Area (ha)	
0 to 0.4	(711)
0.4 to 2	(881)
2 to 8	(1049)
8 to 20	(608)
20 to 2,000	(463)
Crown Land	



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DWELLINGS : AREA 1



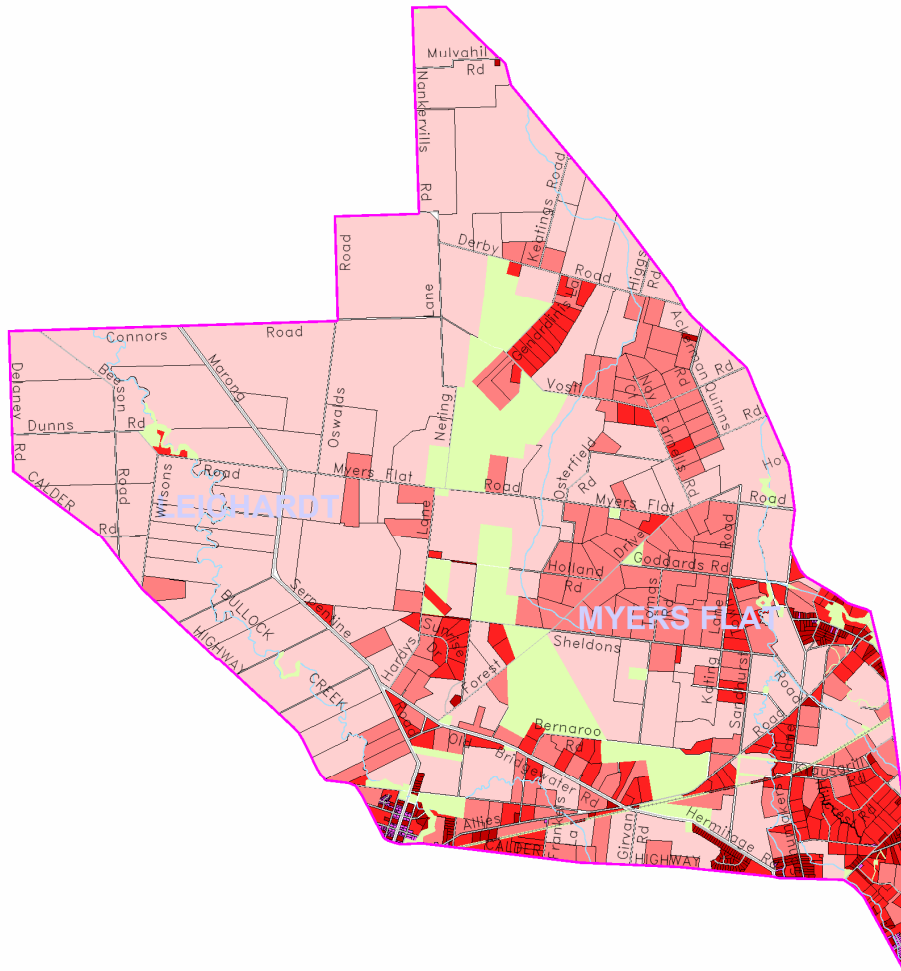
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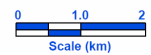
FEBRUARY 2009

PROPERTY SIZE DISTRIBUTION : AREA 2



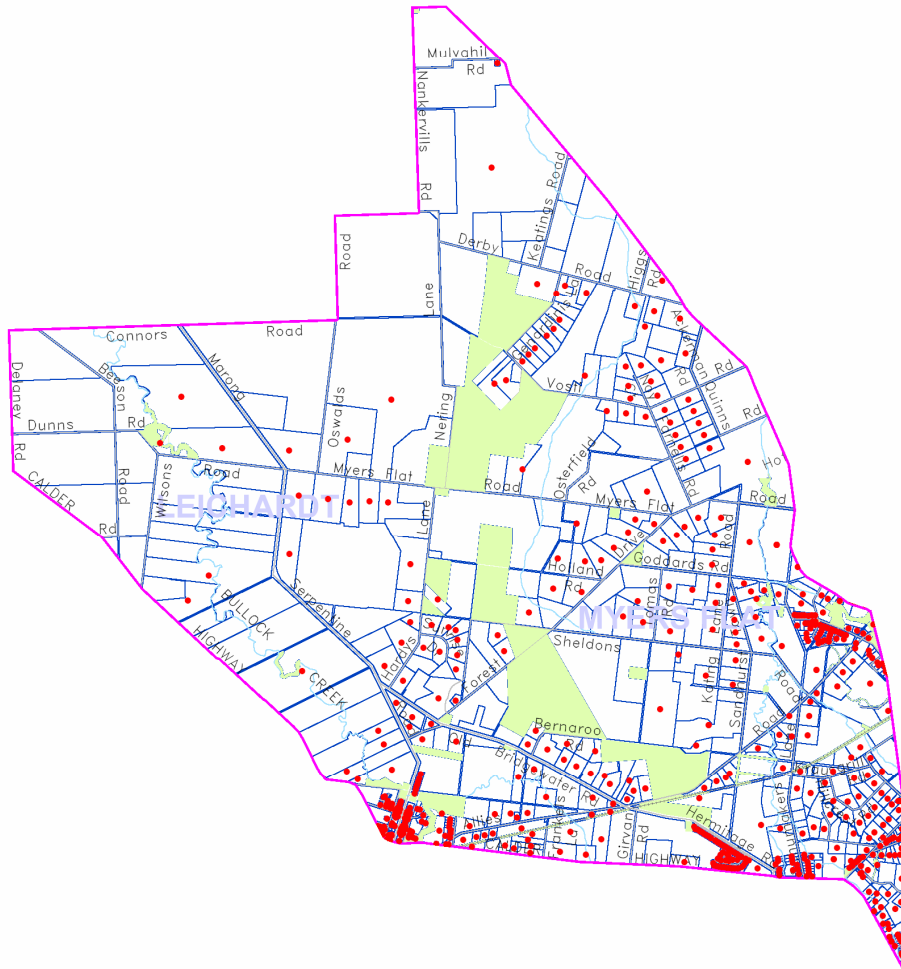
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Area (ha)	
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8 to 20	(608)
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Crown Land	



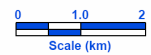
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DWELLINGS : AREA 2



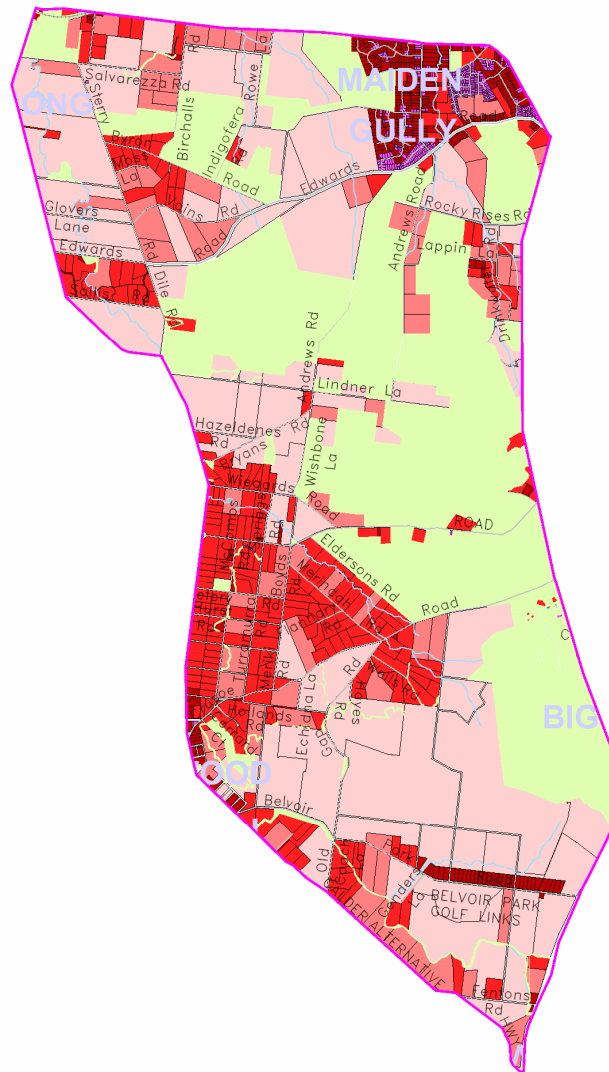
LEGEND

- Dwelling
- Property Boundary
- Crown Land



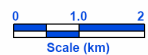
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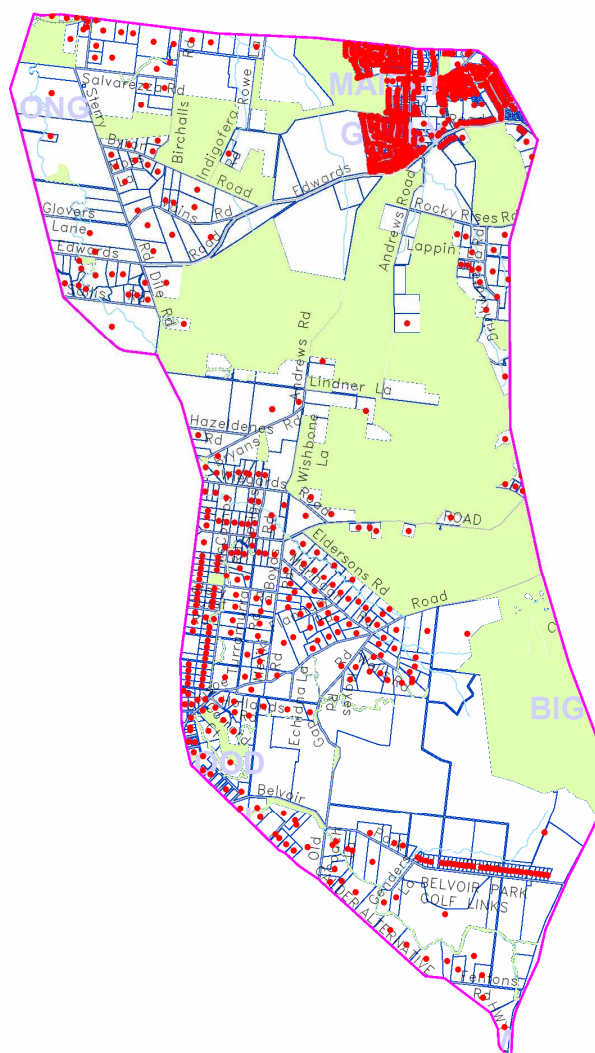
LEGEND

Area (ha)	
0 to 0.4	(711)
0.4 to 2	(881)
2 to 8	(1049)
8 to 20	(608)
20 to 2,000	(463)
Crown Land	

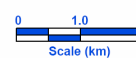


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DWELLINGS : AREA 3



LEGEND

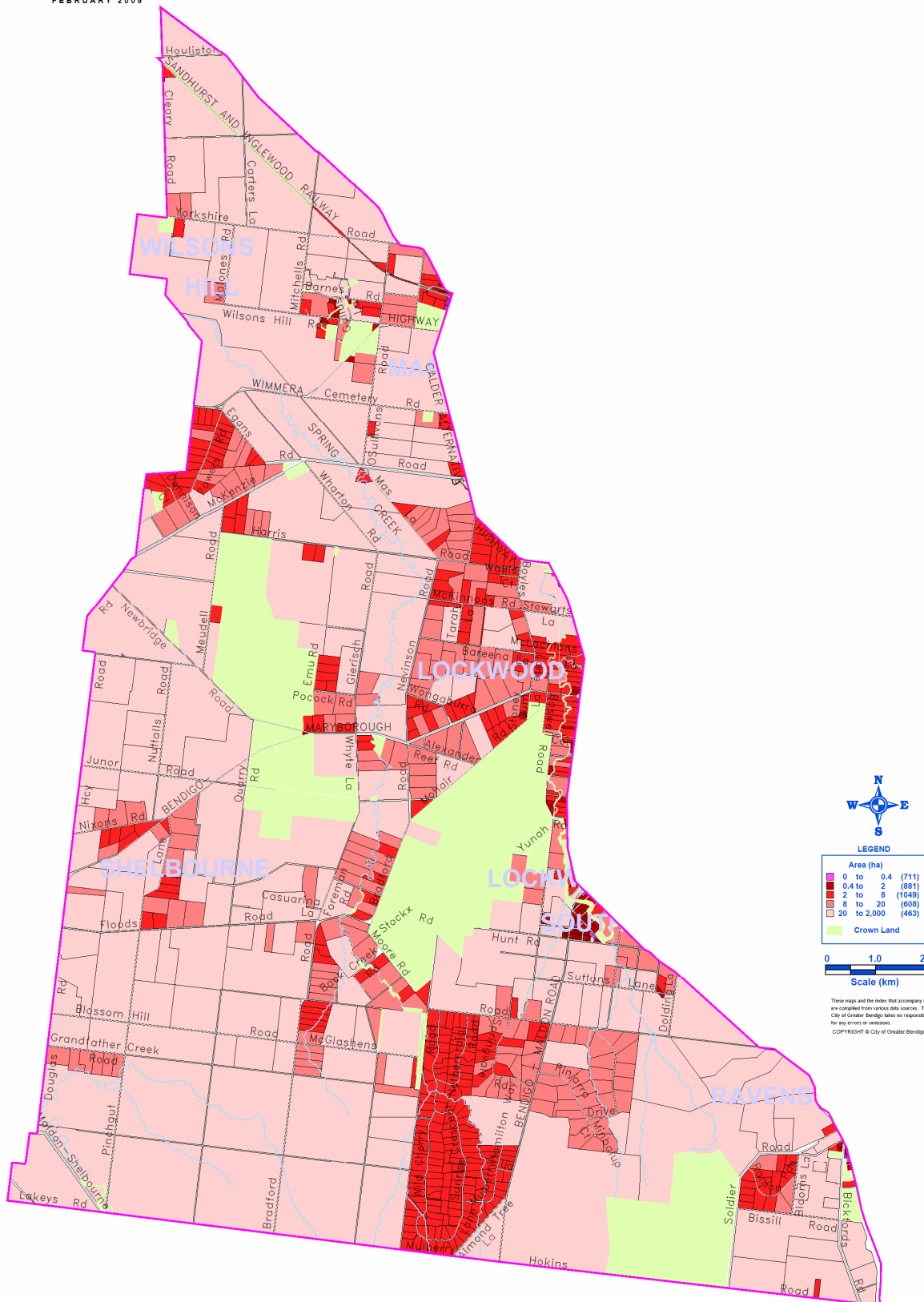


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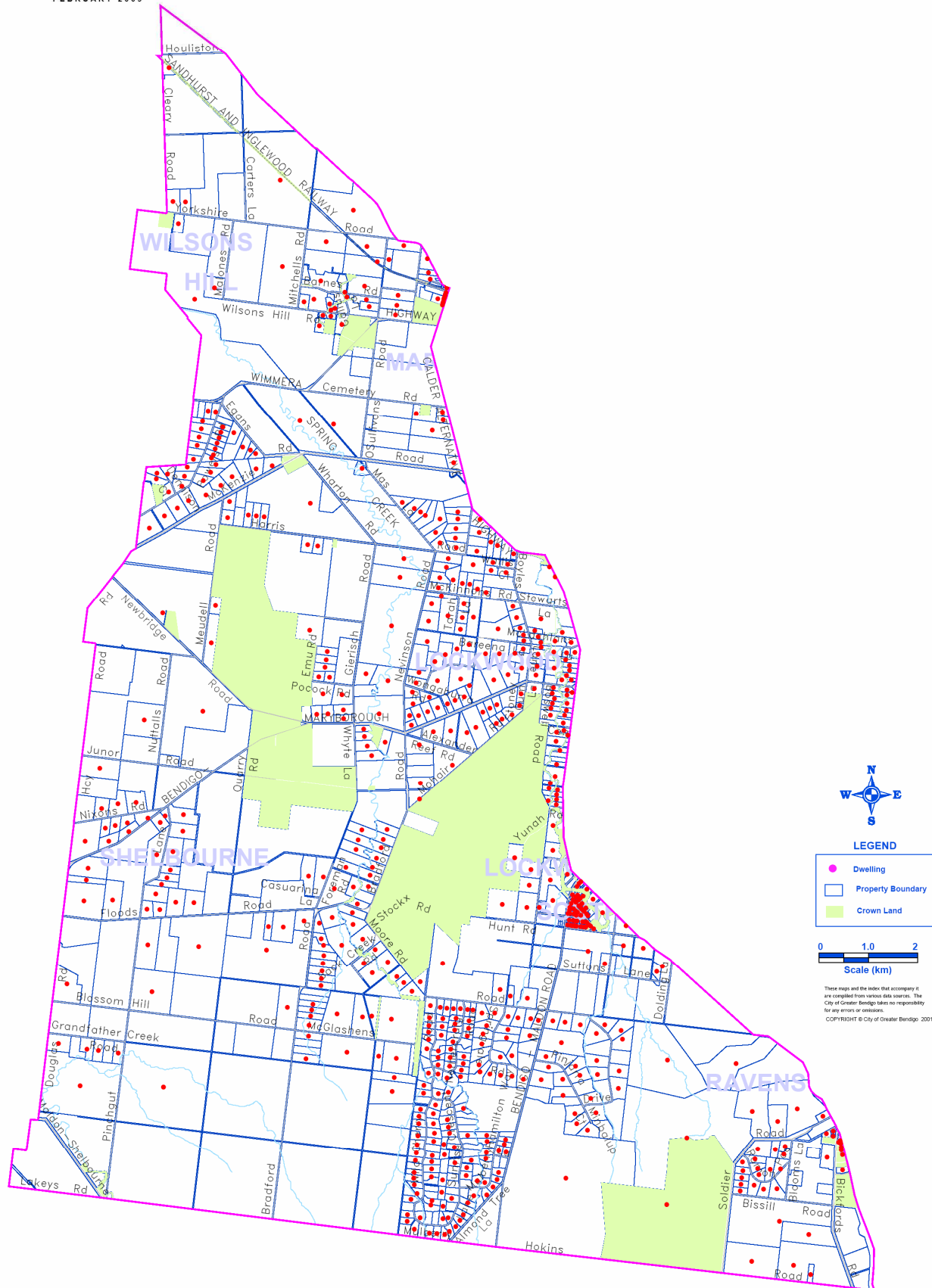


FEBRUARY 2009

PROPERTY SIZE DISTRIBUTION : AREA 4



DWELLINGS : AREA 4



APPENDIX 2 – EXAMPLE OF FARM ZONE SCHEDULE

Example of the Farm Zones

SCHEDULE TO THE FARMING ZONE

Shown on the planning scheme maps as **FIZ, F2Z & F3Z**

	Land	Area/Dimensions/Distance
Minimum subdivision area (hectares).	<p>Growth (FIZ):</p> <p>Applies to broad-acre farming units in dryland areas in the northern areas of the municipality, north of Lake Eppalock and irrigated areas adjacent to the Campaspe River and</p> <p>Consolidation (F2Z):</p> <p>Applies to fragmented dryland particularly areas in the western areas of the municipality.</p> <p>Niche (F3Z):</p> <p>Northern Highway – Heathcote (as shown on Map 1 of this Schedule)</p>	<p>100 hectares</p> <p>40 hectares</p> <p>8 hectares</p>
Minimum area for which no permit is required to use land for a dwelling (hectares).	<p>Growth (FIZ):</p> <p>Applies to broad-acre farming units in dryland areas in the northern areas of the municipality, north of Lake Eppalock (as shown on Map 1 of this schedule) and irrigated areas adjacent to the Campaspe River.</p> <p>Consolidation (F2Z):</p> <p>Applies to fragmented dryland particularly areas in the western areas of the municipality (as shown on Map 2 of this Schedule).</p> <p>Niche (F3Z):</p> <p>Northern Highway – Heathcote (as shown on Map 3 of this Schedule)</p>	<p>100 hectares</p> <p>40 hectares</p> <p>8 hectares</p>
Maximum area for which no permit is required to use land for timber production	All land	40 hectares

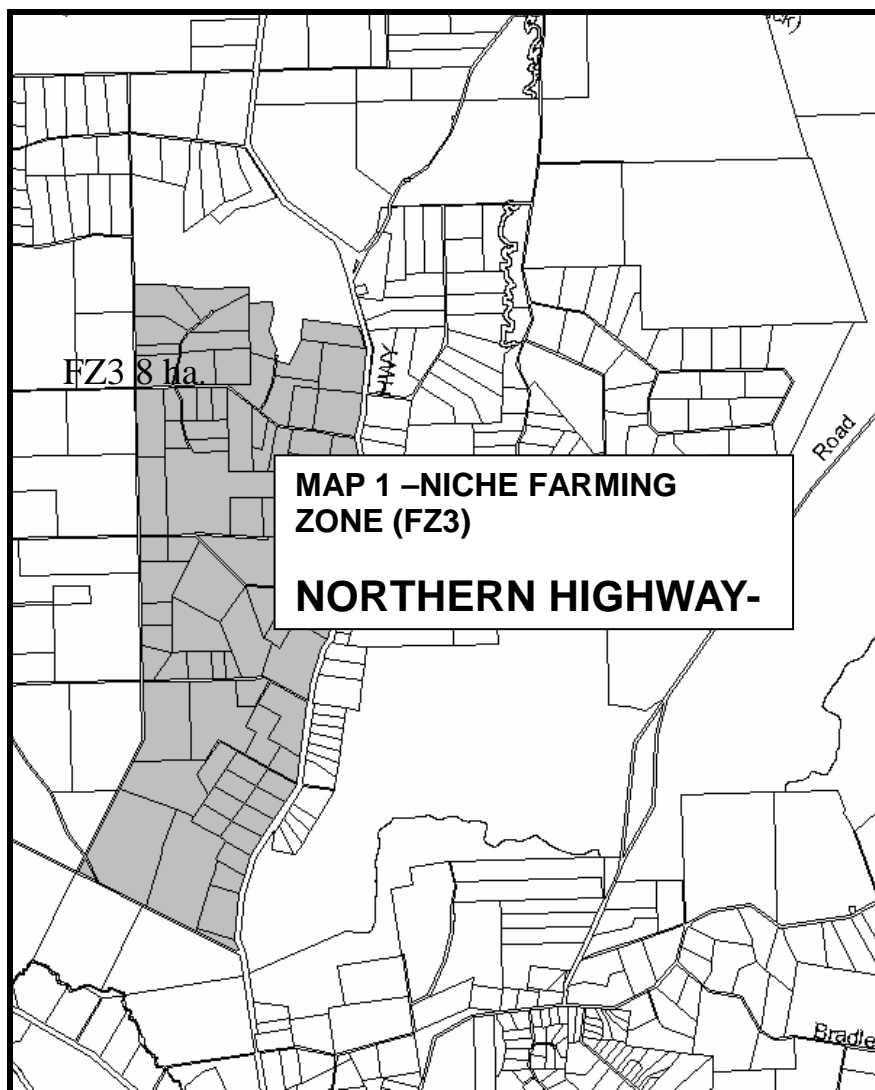
(hectares).		
Minimum area for which no permit is required to alter or extend an existing dwelling (square metres).	100 square metres	
Minimum area for which no permit is required to alter or extend an existing building used for agriculture (square metres).	100 square metres	
Minimum setback from a road (metres).	A Road Zone Category 1 or land in a Public Acquisition Overlay to be acquired for a road, Category 1	100 metres
	A Road Zone Category 2 or land in a Public Acquisition Overlay to be acquired for a road, Category 2	40 metres
	Any other road	20 metres
Minimum setback from a boundary (metres).	Any other boundary	5 metres
Minimum setback from a dwelling not in the same ownership (metres).	Any dwelling not in the same ownership	100 metres

**Permit requirement for
earthworks**

Land

Earthworks which change the rate of flow or the discharge point of water across a property boundary.

Earthworks which increase the discharge of saline groundwater.



APPENDIX 3 – AGRICULTURE VERSILITY PARAMETERS

Table 3: Agricultural Versatility Classes

	Agricultural Versatility Classes				
	1	2	3	4	5
Slope range (%)	0-3	3-10	10-20	20-32	>32
Surface texture	Loams, Sandy Loams	Silty Loams, Sandy Clay Loams, Clay Loam	Clay Loam, Fine Sandy Loams	Light Clays	Heavy Clays, Sands
Drainage	Well	Moderately Well	Rapid, Moderately Well	Imperfect	Poor
Soil colour	Red, Brown	Red, Brown	Brown, Grey, Yellow		
Friability	Yes	Partial	No	No	No
Soil aggregate stability (A horizon)	Highly stable (E6-8)	Stable (E4-5)	Mod stable (E3)	Unstable (E2)	Very Unstable (E1)
Depth to hard rock	>100	>100	>50	>50	<50
Base nutrient status	Eutrophic	Mesotrophic	Mesotrophic	Dystrophic	Dystrophic
	(>15)	(5-15)	(5-15)	(<5)	(<5)
Subsurface permeability	Moderate	High to slow	High to slow	High to slow	Very High to very Slow
pH	>6	5-Jun	<5		
Soil type *	DE AA, KA AA, CH AA	DE AA/AB, KA AA/AB, CH AA/AB, SO AA, VE, TE, KU AA. OR	DE AB, AD, KA AB, AD, CH AB, AD,SO AB, AD/AE	DE AC/AD, KA AC/AD, CH AC/AD, SO AB/AC/AD	RU, SO,TE, HY, SO AB/AC/AD
	DE/KA/CH AB where friable				

APPENDIX 4 – GLOSSARY

Glossary

Agricultural land	Land used for primary production purposes.
Development	Includes the construction, alteration or demolition of a building or works, and the subdivision or consolidation of land.
Hobby farms, part-time farms, lifestyle farms	Sub-commercial farms engaged in agricultural production where most of the household income is derived off farm. These may be small or large in land area.
Niche agricultural industry	Production to meet demand for a specific product. The industry may/may not be significant in size and is generally part of a larger established industry e.g. production of durum wheat for manufacturing pasta, organic vegetables, green tea.
Overlay	Planning scheme provision that indicates the land has some special feature, such as a heritage building. It affects how land can be developed.
Planning scheme	Controls land use and development within a municipality. It contains state and local planning policies, zones, overlays, particular provisions, general provisions, definitions and maps.
Rural	Those parts of Victoria that are not urban or zoned for commercial, residential or industrial land uses.
Use	Refers to using land for a particular purpose (such as a dwelling or a shop) and may not involve a building
Zone	Planning scheme provision that controls land use and development based on the primary character of the land eg. residential, commercial or farming.
Rural Living Zone (RLZ)	The main zone for rural residential areas.
Rural Activity Zone (RAZ)	This zone provides for flexibility between

	agricultural and other land uses to co-exist.
Rural Conservation Zone (RCZ)	The main zone for areas with significant environmental issues.
Farming Zone (FZ)	The main zone for agricultural uses.
Biodiversity	Biodiversity is the variety of life: the different plants, animals and micro-organisms, their genes and the ecosystems of which they are a part

