

# PLANNING REPORT

August 2019



## Buloke Shire Rural Land Use & Settlements Strategy



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*PHILLIPS*  
*AGRIBUSINESS*

## TABLE OF CONTENTS

<b>1. INTRODUCTION</b>	<b>1</b>
<b>2. REGIONAL CONTEXT</b>	<b>3</b>
<b>PART A – RURAL LAND USE</b>	<b>5</b>
<b>3. PLANNING POLICY RELEVANT TO RURAL LAND USE</b>	<b>6</b>
3.1 GENERAL	6
3.2 STATE PLANNING POLICY RELEVANT TO RURAL LAND USE	6
3.3 WHAT THE MSS HAS TO SAY ABOUT AGRICULTURE	7
3.4 LOCAL PLANNING POLICIES	9
<b>4. PARTICULAR PROVISIONS IN PLANNING SCHEME</b>	<b>12</b>
4.1 CLAUSE 53.08 – CATTLE FEEDLOT	12
4.2 CLAUSE 53.09 – POULTRY FARM	12
4.3 CLAUSE 53.16 – PIG FARM	13
<b>5. BULOKE INTENSIVE LIVESTOCK INVESTMENT GUIDES</b>	<b>14</b>
<b>6. RURAL NATURAL RESOURCES</b>	<b>15</b>
6.1 CLIMATE	15
6.2 LANDFORM	20
6.3 SOILS	20
6.4 WATER	26
6.5 VEGETATION	27
6.6 LAND CAPABILITY	28
6.7 LAND QUALITY	28
<b>7. RURAL ACTIVITY AND TRENDS</b>	<b>31</b>
7.1 LAND USE PATTERNS	31
7.2 CROPPING	31
7.3 GRAZING	33
7.4 REGIONAL VALUE	35
7.5 AGRICULTURAL TRENDS	36
<b>8. PLANNING IMPLICATIONS OF THE RURAL ANALYSIS</b>	<b>37</b>
8.1 PROTECTION OF AREAS OF STRATEGIC SIGNIFICANCE FOR AGRICULTURE	37
8.2 THE NEED TO UPDATE THE MSS COMMENTARY ABOUT AGRICULTURE	37
8.3 APPROPRIATENESS OF THE EXISTING FARMING ZONE AND SCHEDULED CONTROLS	37
8.4 OPPORTUNITIES FOR ECONOMIC DIVERSIFICATION	39
8.5 INTENSIVE FARMING	39
8.6 RURAL DEPENDENT ENTERPRISES	40
8.7 RURAL DWELLING EXCISIONS	40

8.8	RENEWABLE ENERGY FACILITIES.....	41
<b>PART B – SETTLEMENTS.....</b>		<b>43</b>
<b>9.</b>	<b>PLANNING POLICY RELEVANT TO THE SHIRE’S SETTLEMENTS.....</b>	<b>44</b>
9.1	GENERAL.....	44
9.2	STATE PLANNING POLICY RELEVANT TO SETTLEMENT PLANNING .....	44
<b>10.</b>	<b>PREVIOUS RESIDENTIAL STUDIES BY COUNCIL.....</b>	<b>45</b>
10.1	RESIDENTIAL LAND USE REVIEW 2009.....	45
10.2	DRAFT RURAL LIVING DEVELOPMENT STUDY 2009 .....	45
<b>11.</b>	<b>POPULATION CHARACTERISTICS .....</b>	<b>47</b>
11.1	THE SHIRE’S DECLINING POPULATION .....	47
11.2	REASONS FOR THE DECLINING POPULATION .....	48
11.3	IMPLICATIONS OF THE DECLINING POPULATION.....	48
<b>12.</b>	<b>TOWNSHIP STRATEGIES .....</b>	<b>50</b>
12.1	BIRCHIP.....	51
12.2	CHARLTON.....	52
12.3	DONALD.....	54
12.4	SEA LAKE.....	55
12.5	WYCHEPROOF.....	56
<b>13.</b>	<b>RURAL LIVING OPPORTUNITIES .....</b>	<b>58</b>
13.1	RURAL RESIDENTIAL DEVELOPMENT CONSIDERATIONS.....	58
13.2	BIRCHIP RLZ OPPORTUNITIES .....	59
13.3	DONALD RLZ OPPORTUNITIES.....	61
13.4	WYCHEPROOF RLZ OPPORTUNITIES.....	61
<b>PART C – FUTURE DIRECTIONS.....</b>		<b>66</b>
<b>14.</b>	<b>FINDINGS OF THIS STUDY .....</b>	<b>67</b>
14.1	RURAL LAND USE.....	67
14.2	SETTLEMENTS.....	68
<b>15.</b>	<b>RECOMMENDED CHANGES TO PLANNING CONTROLS.....</b>	<b>69</b>
<b>APPENDICES .....</b>		<b>70</b>
<b>APPENDIX A:</b>	<b>CLAUSE 21.03-1 ‘AGRICULTURE’ .....</b>	<b>71</b>
<b>APPENDIX B:</b>	<b>CLAUSE 22.02 ‘RURAL LAND AND SUSTAINABLE AGRICULTURE’ .....</b>	<b>73</b>
<b>APPENDIX C:</b>	<b>VICTORIA IN FUTURE PROJECTIONS FOR BULOKE SHIRE, DELWP .....</b>	<b>76</b>

## TABLES

TABLE 1: MEAN ANNUAL RAINFALL SUMMARY ACROSS SHIRE OF BULOKE.....	15
TABLE 2: RAINFALL SUMMARY BIRCHIP CROPPING GROUP 1972 -2019 .....	17
TABLE 3: CHANGES IN ANNUAL AND GROWING SEASON .....	17
TABLE 4: MEAN MONTHLY TEMPERATURES SWAN HILL (AS REPRESENTATIVE OF THE NORTHERN PART OF THE SHIRE), BIRCHIP AND DONALD .....	18
TABLE 5: CLIMATE PROJECTIONS FOR NORTH CENTRAL REGION (CSIRO AND BOM JANUARY 2015) ....	19
TABLE 6: CRITERIA AND PERFORMANCE LEVELS TO MEASURE AGRICULTURAL LAND QUALITY .....	30
TABLE 7: LAND USE BY AREA AND HOLDING NUMBERS, 2010-11.....	31
TABLE 8: BROADACRE CROPS 2015-16.....	32
TABLE 9: LIVESTOCK NUMBERS 2015-16.....	33
TABLE 10: PIGS AND POULTRY 2015-16 .....	34
TABLE 11: GROSS VALUE ALL AGRICULTURE: 2015-16.....	35
TABLE 12: BULOKE SHIRE POPULATION DATA PAST (ABS 1991 – 2006) AND PROJECTED (VIF 2019).....	47
TABLE 13: HOUSEHOLD AND HOUSEHOLD SIZE PAST (ABS 1991 – 2016) AND PROJECTED (VIF 2019) ..	47
TABLE 14: POPULATION CHANGE IN THE SHIRE’S TOWNS OVER THE PERIOD 1981 - 2016 .....	48
TABLE 15: DWELLING APPROVALS BY TOWN (COMPILED FROM BULOKE SHIRE COUNCIL REGISTER) ...	49

## FIGURES

FIGURE 1: LODDON MALLEE NORTH REGIONAL GROWTH PLAN (RGP).....	3
FIGURE 2: RAINFALL GRADIENT FROM SOUTH TO NORTH .....	16
FIGURE 3:SOIL ASSOCIATIONS OF THE BULOKE REGION.....	21
FIGURE 4: SERVICE AREA GRAMPIANS WIMMERA MALLEE WATER.....	26
FIGURE 5: REGIONAL LANDCOVER.....	27
FIGURE 6: LAND IN THE NORTHERN PART OF BIRCHIP SUITABLE FOR REZONING TO RLZ .....	59
FIGURE 7: LAND ALONG WEST SIDE OF SUNRAYSIA HIGHWAY SUITABLE FOR REZONING TO RLZ.....	60
FIGURE 8: LAND AT THE EASTERN EDGE OF DONALD RECOMMENDED FOR REZONING TO RLZ.....	61
FIGURE 9: LAND IN WYCHEPROOF SUITABLE FOR RURAL LIVING .....	62

# 1. INTRODUCTION

Buloke Shire Council engaged PLN Planning in conjunction with Phillips Agribusiness to undertake this Rural Land Use and Settlements Strategy.

Agriculture is the backbone of the Buloke Shire and makes a significant contribution to the State's agricultural output (a gross value in the order of \$225 million according to 2012 ABS data).

Given the importance of agriculture, the preparation of a Rural Land Use Strategy is identified in the current [Council Plan](#)<sup>1</sup> as something that is needed to “*set out the long term vision for the municipality's rural areas*”.

Rural land use strategies are typically used to inform decisions about which rural zones should be applied to particular areas and to matters such as what the minimum lot sizes should be for subdivision and dwellings. They are also used to address other municipality-specific rural issues which in the case of Buloke Shire include rural dwelling excisions and a desire to encourage intensive types of agricultural enterprise and rural dependent enterprises to broaden the economic base.

Because the future of the Shire's main population centres (Birchip, Charlton, Donald, Sea Lake and Wycheproof) are so intrinsically linked to the fortunes of the agricultural sector, Council agreed that the scope of this study should be widened to become a Rural Land Use and Settlements Strategy.

This study has therefore been divided into two parts:

## **Part A**

This part of the study relates to rural land use.

It commences with an acknowledgement of the policies relevant to agriculture as set out in the Buloke Planning Scheme under the Planning Policy Framework (PPF) and the local planning policy framework (LPPF).

Acknowledging the policies in the PPF (which include giving effect to regional policies) is important because it is required under the Planning and Environment Act 1987 that all local planning policies and strategies must be consistent with the higher-order policies set out in the PPF.

The Shire's ‘*rural natural resources*’ are then described. These natural resources include the Shire's climate, soils, water availability, vegetation and land capability and quality. In this section of the report, comment is made on the way the Shire's farmers have responded to climate change, and on the management implications of the different soil types.

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<sup>1</sup> Buloke Shire Council Plan 2017-2021

The rural activity and trends within the Shire are then discussed, including land use patterns (cropping and grazing), the contribution of different types of agriculture to the regional economy, and agricultural trends.

Various other rural issues identified in the LPPF and/or during consultations with Council officers and key stakeholders are then addressed. These issues include rural dwelling excisions, the desire to encourage value-adding and supporting enterprises (rural dependent enterprises), intensive animal industries, alternative energy opportunities and tourism-related opportunities.

Part A concludes with a discussion on the planning implications of the findings, followed by specific recommendations.

It should be noted that because the agricultural land in Buloke Shire is more uniform than in most other rural municipalities, the findings and recommendations are relatively straightforward. For instance, the finding in this study that the existing Farming Zone and its scheduled requirements is appropriate for the whole of the Shire and that there is no need for other zones or scheduled controls to be introduced is an unusual outcome in a rural land strategy.

## **Part B**

This part of the study relates to the five townships and other settlement related matters.

The PPF and LPPF policies relevant to settlement are first acknowledged.

The population changes that have been occurring in the Shire, largely as a result of changes occurring in the agricultural sector, are then discussed. These structural changes have resulted in the Shire experiencing a net loss of population over recent decades. Many young people are leaving due to a lack of job opportunities and the population as a whole is aging compared to the rest of Victoria. The Shire's townships and settlements are experiencing static or negative growth as a consequence.

It is apparent in light of the population changes over the past 10 years that there is a need to reconsider some of the findings and recommendations in Council's adopted *Residential Land Use Review 2009*<sup>2</sup> and *Draft Rural Living Development Study 2009*<sup>3</sup>.

This part of the study concludes with a discussion on the planning implications of our findings, followed by specific recommendations.

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<sup>2</sup> Residential Land Use review 2009 (TGM Group Pty Ltd)

<sup>3</sup> Draft Rural Living Development Study (Examining future rural residential land requirements for the Shire of Buloke), February 2009

## 2. REGIONAL CONTEXT

Buloke Shire, Campaspe Shire, Gannawarra Shire, Mildura Rural City and Swan Hill Rural City make up the Loddon Mallee North Region. Figure 1 below is extracted from the [Loddon Mallee North Regional Growth Plan](#)<sup>4</sup> and shows the strategic directions for the Region.

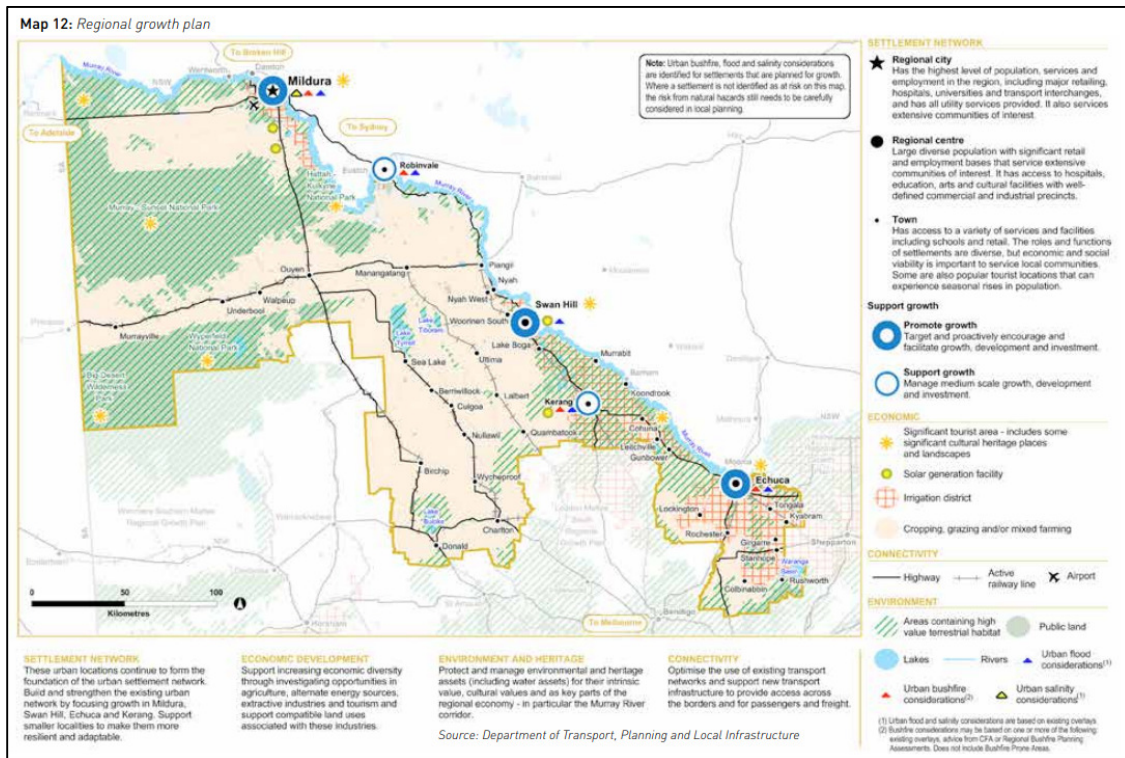


Figure 1: Loddon Mallee North Regional Growth Plan (RGP)

The Loddon Mallee North Regional Growth Plan (RGP) identifies Buloke Shire as part of the regional cropping, grazing and/or mixed use farming area in which Mildura is the focus for regional growth.

The towns in Buloke Shire are identified in the RGP as being important service centres for their local communities, but not as towns earmarked for growth. In this regard, the RGP strategies<sup>5</sup> include:

- *Recognise and support the roles of Donald, Charlton, Wycheproof and Birchip as towns providing services to isolated and dispersed rural settlements and regionally important rural industries.*
- *Support settlements to adjust to ongoing population decrease.*

<sup>4</sup> Map is extracted from the Loddon Mallee North Regional Growth Plan – Part D

<sup>5</sup> Loddon Mallee North Regional Growth Plan – Part C

The RGP supports increasing economic diversity in the region through investigating opportunities in agriculture, alternate energy sources, extractive industries and tourism. Compatible land uses associated with these industries are supported.

The RGP also sets out the future directions and strategies for regional growth, together with implementation measures to deliver that growth including the following actions which are considered relevant to this Rural Land Use and Settlements Strategy:

- *“Identifying and protecting areas of strategic significance for agriculture”<sup>6</sup>*
- *“Encouraging emerging agribusiness and location clusters, including intensive animal industries.”*
- *“Ensuring there is an adequate supply of commercial and industrial land for employment across the region*
- *“Recognising and supporting the roles of Donald, Charlton, Wycheproof and Birchip as towns providing services to isolated and dispersed rural settlements and regionally important rural industries.”<sup>7</sup>*
- *“Supporting settlements to adjust to ongoing population decrease”.<sup>8</sup>*

As far as the major townships in the Shire are concerned, it should be noted that Buloke Shire Council considers Sea Lake to be just as much a service centre as Donald, Charlton, Wycheproof and Birchip. There is therefore a discrepancy in terms of how the Council views Sea Lake compared with how that town is treated in the RGP. In this regard, Council is unaware of any reason why the RGP strategies only identify Donald, Charlton, Wycheproof and Birchip as towns which are to be recognized and supported as towns which provide services to isolated and dispersed rural settlements and regionally important rural industries. Council considers that such a role is also performed by Sea Lake.

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<sup>6</sup> Loddon Mallee North Regional Growth Plan, section 11.2 ‘Agriculture’

<sup>7</sup> Loddon Mallee North Regional Growth Plan, section 13.6 ‘Buloke community of interest’

<sup>8</sup> Loddon Mallee North Regional Growth Plan, section 13.6 ‘Buloke community of interest’



# PART A – RURAL LAND USE

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## 3. PLANNING POLICY RELEVANT TO RURAL LAND USE

### 3.1 General

The Buloke Planning Scheme includes a Planning Policy Framework (PPF) which sets out the State planning policy directions applicable to all of Victoria and the regional policy directions set out in the Loddon Mallee North Regional Growth Plan (Victorian Government, 2014).

The Buloke Planning Scheme also includes a Local Planning Policy Framework (LPPF) comprising a Municipal Strategic Statement (MSS) and local planning policies. The LPPF must be consistent with the PPF.

The Minister for Planning is currently in the process of amending all Planning Schemes in the State to integrate the local policy content into the new Planning Policy Framework (PPF) as part of its Smart Planning reform agenda. The resultant PPFs will result in better alignment of state policy with local policy, less duplication, stronger policy overall and simpler and more succinct planning schemes. As the changes will be policy neutral, this means the full content of the existing MSS and local policies will be carried across into the new PPF unless they are inconsistent with State policies (in which case they will be removed).

Any recommendations in this report regarding amendments to the existing MSS and local policies will therefore ultimately have to be made to the new PPF.

### 3.2 State planning policy relevant to rural land use

#### 3.2.1 Protection of agricultural land

[Clause 14.01-1S 'Protection of agricultural land'](#) goes to the heart of what this Rural Land Use and Settlements Strategy is all about.

The Objective is *'To protect the state's agricultural base by preserving productive farmland'*.

There is an extensive list of strategies to achieve this objective and some of the strategies are repetitive. However the main strategic directions of relevance as far as Buloke Shire is concerned can be summarised as follows:

- Identify areas of productive agricultural land and avoid the permanent removal of such land from the state's agricultural base including by containing new housing growth into existing settlements and discouraging the development of dwellings on isolated small lots in the rural zones (and by encouraging the consolidation of such small lots).
- That for applications for use, subdivision or development of agricultural land, consideration be given to matters such as the desirability and impacts of removing the

land from primary production, the impacts on primary production on adjacent land, the compatibility between the proposed or likely development and the existing use of the surrounding land, the potential for spread of plant and animal pests, and land capability.

- Avoiding the subdivision of productive agricultural land from diminishing the long-term productive capacity of the land.

These matters are all considered in this Rural Land Use and Settlements Strategy.

### 3.2.2 Agricultural productivity – Loddon Mallee North

[Clause 14.01-2R 'Agricultural productivity – Loddon Mallee North'](#) introduces the following additional strategies:

- Support emerging agribusinesses and location clusters, including intensive animal industries.
- Protect and maintain productive irrigation assets necessary to help grow the region as an important food bowl for domestic and international exports.

These matters are also considered in this Rural Land Use and Settlements Strategy, although it should be noted that there are no emerging agribusiness and location clusters in Buloke Shire, and that irrigation is not part of the Shire's agricultural base.

## 3.3 What the MSS has to say about agriculture

The MSS includes a 'snapshot' of the Shire<sup>9</sup> which describes the geography and agricultural attributes of the Shire:

*Buloke Shire is a rural municipality located in the north-west Victoria. The municipality has an area of approximately 8,000km<sup>2</sup> and its economy is largely based on broadacre, dryland agricultural production. In 2012 the ABS estimated the municipality had a total population of 6,364 people.*

*Buloke Shire is located in the riverine plains and Murray-Mallee region of Victoria, approximately 300km north-west of Melbourne and approximately 180km south-east of Mildura. The municipality is characterised by vast agricultural plains extending from the sedimentary hills south of Charlton, north to the Mallee dunes and into the Wimmera region, interspersed by small settlements acting as service centres to the surrounding farming districts.*

<sup>9</sup> Buloke Planning Scheme, Clause 21.01-1 'Snapshot of Buloke Shire'. (as at 23/04/2015)

*Buloke Shire plays a valuable role in the production of the State's agricultural output. The gross value of agricultural production according to the 2012 ABS data was \$225 million.*

The Strategic Vision<sup>10</sup> for the Shire includes supporting current and long term sustainable agriculture. Working with local farming and agricultural groups to encourage sustainable farming practices is also identified as a priority action.

[Clause 21.03-1 'Agriculture'](#) lists two objectives and associated strategies and implementation measures. The objectives are:

- *To protect productive farming land and maintain land use patterns of large viable lots for broad acre cropping.*
- *To support, promote and facilitate sustainable, diverse and viable agriculture to provide for the long-term economic, social and environmental health of the municipality.*

The MSS was reviewed last year (2018) as part of a review of the LPPF and needs to be updated in accordance with the recommendations of that review. Such update will need to be made by way of a planning scheme amendment. However the existing policies and strategies relating to agriculture (Clause 21.03-1) were not recommended to be changed as a result of the review, although some minor changes are recommended as a result of this present review.

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<sup>10</sup> Buolke Planning Scheme, Clause 21.01-4 'Strategic vision'. (as at 23/04/2015)

## 3.4 Local Planning Policies

### 3.4.1 Rural land and sustainable agriculture

Buloke Planning Scheme [Clause 22.02 'Rural land and sustainable agriculture'](#) is a policy which applies to all land in the Farming Zone.

Under the heading 'policy basis', it is stated that agriculture is the most significant industry in the municipality, and is reliant on a land resource that needs to be sustainably managed and protected from conversion to non-soil based use and development.

However, most of the commentary under the 'policy basis' heading is about the opportunities and requirements for Rural Dependent Enterprises (RDEs) in the Shire's rural areas. RDE's are promoted as important to the economy of the Shire, subject to them not being located on prime agricultural land or in a manner which is unsympathetic to the surrounding agricultural uses. RDE's are addressed later in this report.

The objectives under Clause 22.02 are:

- To protect high quality agricultural land because of its versatility, productivity and ability to sustain a wide range of agricultural uses without significant degradation.
- To prevent the unsustainable use of agricultural land which results in the loss of the quantity or quality of the natural resources and limits the realisation of the land's full productive potential.
- To prevent land use conflicts between agricultural uses and sensitive uses to ensure that use and development are not prejudicial to agricultural industries or the productive capacity of the land.
- To ensure that the subdivision of land for the establishment of Rural Dependent Enterprises does not compromise the viability of the remaining rural holding.
- To support the diversification of agriculture, the development of agroforestry and the processing of agricultural products grown within the municipality.

The policy pronouncements under Clause 22.02 are extensive and in many respects are common sense and matters which would be given effect to anyway having regard to the purpose of the Farming Zone (and any other of the available rural zones were these to be applied in the Shire) and having regard to the decision guidelines under the Farming Zone.

In summary, the policies relating to use and development require:

- Consideration to be given to the capability and suitability of agricultural land when assessing use and development proposals, including the need to ensure the siting of buildings and works avoids or minimise the loss of good quality agricultural land.
- Protection of agricultural land as an economic and environmentally valuable resource.
- The conversion of land to non-soil based use and development will be strongly discouraged unless there is no other suitable site for the proposed use and development and significant public benefit is demonstrated.
- Retention of agricultural land in productive units, with fragmentation of land being strongly discouraged.
- Encouragement of use and development proposals which are consistent with a whole farm plan.
- Discouragement of use and development proposals which are incompatible with agriculture.
- Encouraging permit conditions which require mitigation of environmental impacts.
- When considering applications for buildings in the Farming Zone, to consider the impact on views and vistas and ways to screen the development (e.g. by use of natural topographical features).

In relation to subdivision, Clause 22.02 states that it is policy that the responsible authority may consider applications for subdivision of rural land to create lots less than 100 ha where the following situations apply:

- Where an agricultural activity could viably take place on a small lot, because of its intensive nature; and
- Where a rural dependent enterprise is proposed and cannot be located outside the Farming Zone.

In considering applications to subdivide land to create lots less than 100 ha, it is also policy that:

- Subdivisions which are likely to lead to a concentration of lots altering the general use and character of the area and which are inconsistent with the purposes of the zone will be discouraged.
- Subdivision creating lots of a size greater than that required to undertake the operations of the Rural Dependent Enterprise and to provide any necessary buffer areas will be discouraged. In other words, if a lot smaller than 100 ha needs to be created for the purpose of accommodating a RDE, it should not be any larger than it needs to be.

- An application for the subdivision and use and development of land in the Farming Zone must be accompanied by a report that addresses a range of considerations which are set out in the policy under the headings General considerations, Agricultural considerations, Site constraints, Economic considerations and Environmental considerations.

Finally, the policies at Clause 22.02 include a policy relating to small lot excision in the Farming Zone. This clarifies the small lot subdivision provision in the Farming Zone by stating (among other things) that lots created under this provision should have a maximum size of 2 hectares, contain a dwelling which is in a habitable condition, and not result in restrictions on agricultural production on adjacent land.

### **3.4.2 Intensive animal industries**

Buloke Planning Scheme [Clause 22.03 'Intensive animal industries'](#) is a policy which applies to all land in the Farming Zone.

The policy applies to applications for the use and development of land for intensive animal industry, except for cattle feedlots, piggeries or broiler farms. However given these exclusions (all of which are subject to particular provisions in the Planning Scheme), it is difficult to think of an intensive animal industry that would be subject to this policy. Indeed, egg production may well be the only form of intensive industry that this policy would apply to, and even that is doubtful if egg production is considered as a 'broiler farm'. For this reason, it is considered that Clause 22.03 adds little value.

For the above reasons, it is recommended that Clause 22.03 be deleted from the Planning Scheme by way of a Planning Scheme amendment.

## 4. PARTICULAR PROVISIONS IN PLANNING SCHEME

The particular provisions of the Buloke Planning Scheme include requirements relating to cattle feedlots, poultry farms and pig farms. These are the intensive animal industries which are specifically excluded by Council's policy for intensive animal industries (Clause 22.03), which makes that policy redundant.

### 4.1 Clause 53.08 – Cattle Feedlot

The purpose of [Clause 53.08](#) is *"To facilitate the establishment and expansion of cattle feedlots in Victoria in a manner which is consistent with orderly and proper planning and the protection of the environment"*.

It is required that all use and development of cattle feedlots must comply with the *Victorian Code for Cattle Feedlots - August 1995*, to the satisfaction of the responsible authority.

### 4.2 Clause 53.09 – Poultry Farm

The purpose of [Clause 53.09](#) is 'To facilitate the establishment and expansion of poultry farms, including broiler farms, in a manner that is consistent with orderly and proper planning and the protection of the environment'.

The Clause applies to permit applications to use land or construct a building or construct or carry out works for a poultry farm, including increasing the farm capacity of an existing poultry farm.

Unless there is an overlay which states otherwise, and subject to certain requirements regarding the numbers of chickens (no more than 150,000), this Clause does not apply to the use and development of land for an outdoor range area in association with an existing broiler farm

It is required that applications to use land or to construct a building or construct or carry out works for a broiler farm must comply with the Victorian Code for Broiler Farms 2009 (plus 2018 amendments). This does not apply however if there are no more than 10,000 chickens permitted on the land at any time, or the number of chickens on the land is not increased.

The Clause specifies various exemptions from the giving of notice of an application and from review rights, including where an application meets the requirements of a "Class A Broiler Farm", as specified in the Victorian Code for Broiler Farms 2009 (plus 2018 amendments).

The Clause sets out various decision guidelines to be considered in assessing applications. Most of these relate to amenity considerations.



### 4.3 Clause 53.16 – Pig Farm

The purpose of [Clause 53.16](#) is *“To facilitate the establishment and expansion of pig farms in a manner that is consistent with orderly and proper planning and the protection of the environment”*.

This Clause applies to permit applications to use land or to construct a building or construct or carry out works for a pig farm, including increasing the farm capacity of an existing pig farm.

The Clause specifies various exemptions from the giving of notice of an application and from review rights. These exemptions apply if the number of pigs and the outdoor stocking densities specified in the Clause are not exceeded, where there is a Nutrient Management Plan which satisfies certain requirements specified in the Clause, and where an area used as a pig range is more than 100 metres removed from a sensitive use and more than 400 metres removed from a residential zone.

The Clause sets out various decision guidelines to be considered in assessing applications. Most of these relate to amenity considerations.

## 5. BULOKE INTENSIVE LIVESTOCK INVESTMENT GUIDES

Buloke Shire Council is actively seeking to attract investment in intensive agriculture and related business activities as a way of driving the local economy, adding to local diversity and increasing local jobs. To this end, it has made available the following [investment guides to potential investors](#):

- Vol. 1 – Poultry Meat
- Vol. 2 – Egg Production
- Vol. 3 – Pig Meat
- Vol. 4 – Lot Feeding

The investment guides provide a lot of information about the respective industries, site and infrastructure requirements, the logistics associated with getting product to processors and markets, financial aspects, and statutory planning requirements.

Various actual and hypothetical local case studies are also provided:

- The poultry meat guide includes a case study of a broiler chicken operation by a farming couple at Watchem, who entered the industry to better manage the risks associated with their dryland cropping enterprise. A second case study for a proposed broiler farm north of Charlton is also detailed.
- The egg production guide includes a case study of an egg production enterprise operated by a farming couple on the outskirts of Donald, which complements their dryland cropping and intensive pig enterprise.
- The pig meat guide includes a case study of a piggery which covers a land area of only 4 hectares and runs 4,500 pigs as standard practice but with capacity of up to 7,500 pigs. However the guide notes there are currently no businesses or facilities in the district for value-adding beyond the farm gate, and that the major processing plants are in Melbourne, Echuca, Murray Bridge, Corowa and Port Wakefield.
- The lot feeding guide includes case study of a lamb finishing enterprise conducted as part of an 1,100 ha barley cropping and sheep grazing operation. The lot feeding yards cover an area of 2 hectares and is used to finish the farmer's own stock and as a finishing facility for other local farmers on a contract basis. A second case study for a proposed 15,000 head cattle-feedlot is also referenced in the lot feeding guide.

The investment guides provide a useful resource, but need to be read in conjunction with the planning scheme requirements relating to these particular industries.

## 6. RURAL NATURAL RESOURCES

### 6.1 Climate

The Shire has a climate that is hot and mainly dry in the summer and winters that are mild and usually moist. This is similar to the Mediterranean type climate, differing only through the occasional significant falls of summer rain. Usually the wettest months are from May to October where the rainfall is not only low but also unreliable. This results in a growing season of 5 to 6 months with a greater reliability in the south. Climatic records from weather stations across the shire are limited and lack continuity of data.

Agriculture is based on annual cereals and pastures which are grown during the cooler and wetter part of the year. Climate change impacts significantly on the agricultural sector, potentially changing the mix of agricultural enterprises in the region. Rainfall has been below average across much of southeast Australia since 1997. Temperatures in Australia have risen by 0.9 °C since 1910.

#### 6.1.1 Rainfall

Across the Shire mean annual rainfall declines from south to north. Annual rainfall is 388 mm at Donald in the south and 318mm at Sea Lake in the north. Rainfall is also variable from year to year and within seasons. Dryland cropping is the major agricultural enterprise throughout the shire and the timing of the autumn break is critical to successful plant establishment and growth.

Table 1 is a summary of the mean monthly rainfall across the Shire while Figure 2 shows the rainfall gradient from south to north.

#### Swan Hill

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean rainfall (mm)	22.0	25.0	19.9	21.7	32.3	30.5	30.7	31.8	32.1	32.8	26.2	22.8	328.0

#### Birchip

Mean rainfall (mm)	20.5	24.7	22.9	25.2	38.5	38.1	38.1	38.5	39.2	38.2	26.5	23.6	374.0
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#### Donald

Mean rainfall (mm)	28.9	22.4	21.3	23.4	38.4	35.5	38.5	41.9	39.1	35.8	29.9	27.3	388.3
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Table 1: Mean annual rainfall summary across Shire of Buloke

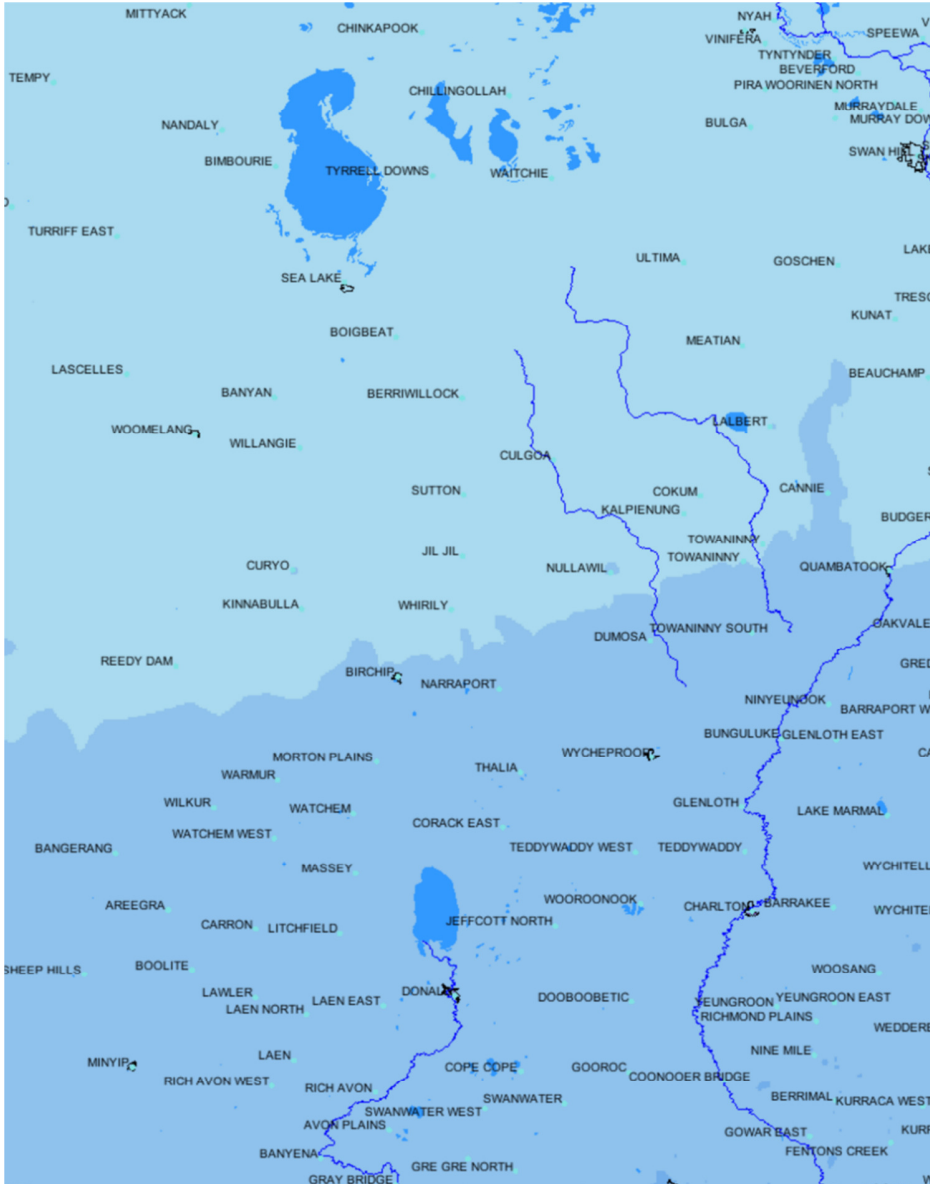
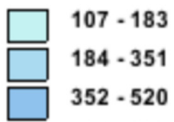


Figure 2: Rainfall gradient from south to north

Rainfall mm



The Birchip Cropping Group has measured rainfall change over the period 1961-2019 using Bureau of Meteorology data. The results are referenced in Tables 2 and 3 and show the following:

- *The strong rainfall variability that occurs between years (Table 2); and*
- *The decline in annual average rainfall and the plant growing season between the periods of 1961-2000 and 2001-2019 (Table 3).*

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
<b>Mean</b>	23.8	18.6	17.1	22.0	35.3	31.1	33.7	34.7	35.9	33.7	26.5	22.7	355.2
<b>Lowest</b>	0.0	0.0	0.0	0.0	1.8	2.6	4.6	2.8	3.8	0.0	1.0	0.8	106.1
<b>Highest</b>	107.8	181.7	85.5	81.3	93.0	76.8	66.6	80.0	106.6	155.0	68.3	190.0	677.2

Table 2: Rainfall summary Birchip Cropping Group 1972 -2019

1961 -2000 rainfall mm		2001-2018 rainfall mm	
Annual	Growing Season	Annual	Growing Season
367	249	287	168

Table 3: Changes in annual and growing season

### 6.1.2 Temperature

Anecdotal evidence indicates that temperatures are increasing in the region, but the fragmented nature of records from weather stations across the Shire makes it difficult to establish a trend. Inadequate weather data has been an issue in the area for many years and the Birchip Cropping Group is moving to increase the extent and detail of the climatic information across the region through the establishment of weather stations and participation in the data farmer network<sup>11</sup>.

Temperature variability is less accentuated than rainfall although there has been a notable increase in the number of days with a maximum above 40C from 15 in the period 1961-1990 to 20 in the period 2000-2010.

<sup>11</sup> <https://www.datafarmer.com.au/Dashboard.aspx?view=y>

Plant growth is sensitive to temperature with minor changes resulting in noticeable changes in growth rate. Frosts or hot weather (above 30C) during September is damaging to crops yield as it impacts on flowering or grain fill. Pulse crops are vulnerable to frost for longer periods than cereals. However, cereals are more susceptible to damage during their shorter period of flowering.

Table 4 shows mean maximum and mean minimum temperature data for three locations. Swan Hill measurements are used to represent the northern part of the shire due to better quality data.

**Swan Hill**

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean maximum temperature (°C)	33.4	32.4	28.7	23.9	18.8	15.3	14.8	16.7	20.3	24.4	28.3	30.6	24.0
Mean minimum temperature (°C)	16.3	16.0	13.0	9.1	6.4	4.3	3.6	4.0	5.8	8.0	11.8	13.8	9.3

**Birchip**

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean maximum temperature (°C)	30.7	30.4	27.2	22.0	17.6	14.2	13.7	15.4	18.7	22.0	25.8	29.2	22.2
Mean minimum temperature (°C)	14.0	14.3	12.1	8.7	6.3	4.1	3.6	4.3	5.9	7.8	10.2	12.4	8.6

**Donald**

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean maximum temperature (°C)	29.6	29.8	26.2	21.7	17.2	14.0	13.3	14.8	17.1	20.8	24.3	27.3	21.3
Mean minimum temperature (°C)	14.0	14.4	12.3	9.0	6.8	4.6	3.9	4.7	6.1	7.9	9.9	12.3	8.8

Table 4: Mean Monthly Temperatures Swan Hill (as representative of the northern part of the Shire), Birchip and Donald

### 6.1.3 Climate change

Predictions for the region include a reduction and increased variability in the amount of rainfall incidence, a greater frequency of intense rainfall events, increased temperatures and days of extreme heat, greater frequency and intensity of wild fires and fewer but potentially more damaging frosts during winter and spring.

Table 5 is a projection of climate changes for the North Central region of Victoria.

Climate projections for North Central Region	Level of confidence
Average temperatures will continue to increase in all seasons	Very high
More hot days and warm spells	Very high
Fewer but possibly damaging frosts	High
By late century, less rainfall in the cool season	High
Rainfall will remain unchanged in the warm season	Medium
Even though mean annual rainfall is projected to decline, heavy rainfall intensity is projected to increase	High
A harsher fire-weather climate in the future	High

Table 5: Climate Projections for North Central Region (CSIRO and BoM January 2015)

The changing climate has had a major impact on farming systems in the Shire. Many farmers are reviewing their farming operations to identify agronomic and technological innovations that can be implemented to maintain or increase productivity levels and better manage risk. Some of the more recent adaptations include:

- The adoption of minimum tillage, stubble retention and controlled traffic techniques. The effect is to reduce soil compaction, provide greater soil protection through maintaining soil organic matter levels, lower moisture loss and reduce erosion risk.
- Other techniques to better utilise soil moisture include extending fallows, planting later in the season, widening row spacing, lower plant densities and staggering planting times;
- Increased diversification of crop types to improve rotation effectiveness in managing weeds and soil fertility levels;

- Adoption of precision farming using GPS to allow the precise placing of crop seeds and fertilizer, measure variations in crop yield across individual paddocks and more precise targeting of herbicides application;
- Progressive adoption of computer modelling to optimise crop yield particularly in relation to crop water use efficiency.

## 6.2 Landform

The landscape of much of the shire is made up of flat open plains with low rolling hills along the southern and south eastern boundary.

Dunes and lunettes occur on the sandy soils in the north west of the Shire.

A number of streams flow across the plains towards the North. These include the Avon -Richardson River that terminates at Lake Buloke in the South west of the Shire, Tyrell Creek which terminates at Lake Tyrell in the North and the Avoca river which flows into the Kerang Lakes forming a portion of the eastern boundary of the Shire.

## 6.3 Soils

A map derived from Australian Soil Resource Information System<sup>12</sup> is presented in Figure 3 which provides an overview of the soils of the Shire. The map shows four Soil Orders from the Australian Soil Classification<sup>13</sup>, these being Calcarosols, Sodosols, Vertosols and Dermosol soils. These are broad classifications and represent an association of the diverse range of soil types that occur across the shire.

The index in Figure 3 provides a brief description of each soil association. However the soil profile characteristics are better described by soil pit information collected by the Mallee Catchment Management Authority<sup>14</sup> and North Central Catchment Management Authority<sup>15</sup>. The description is of an individual soil type that is characteristic of the soil association to which it belongs.

<sup>12</sup> Australian Soil Resource Information System at: <http://www.asris.csiro.au>

<sup>13</sup> [http://www.clw.csiro.au/aclep/asc\\_re\\_on\\_line/soilhome.htm](http://www.clw.csiro.au/aclep/asc_re_on_line/soilhome.htm)

<sup>14</sup> [http://vro.agriculture.vic.gov.au/dpi/vro/malregn.nsf/0d08cd6930912d1e4a2567d2002579cb/mallee\\_soil\\_pit\\_sites](http://vro.agriculture.vic.gov.au/dpi/vro/malregn.nsf/0d08cd6930912d1e4a2567d2002579cb/mallee_soil_pit_sites)

<sup>15</sup> [http://vro.agriculture.vic.gov.au/dpi/vro/nthcenregn.nsf/pages/nthcen\\_soil\\_pit\\_sites](http://vro.agriculture.vic.gov.au/dpi/vro/nthcenregn.nsf/pages/nthcen_soil_pit_sites)



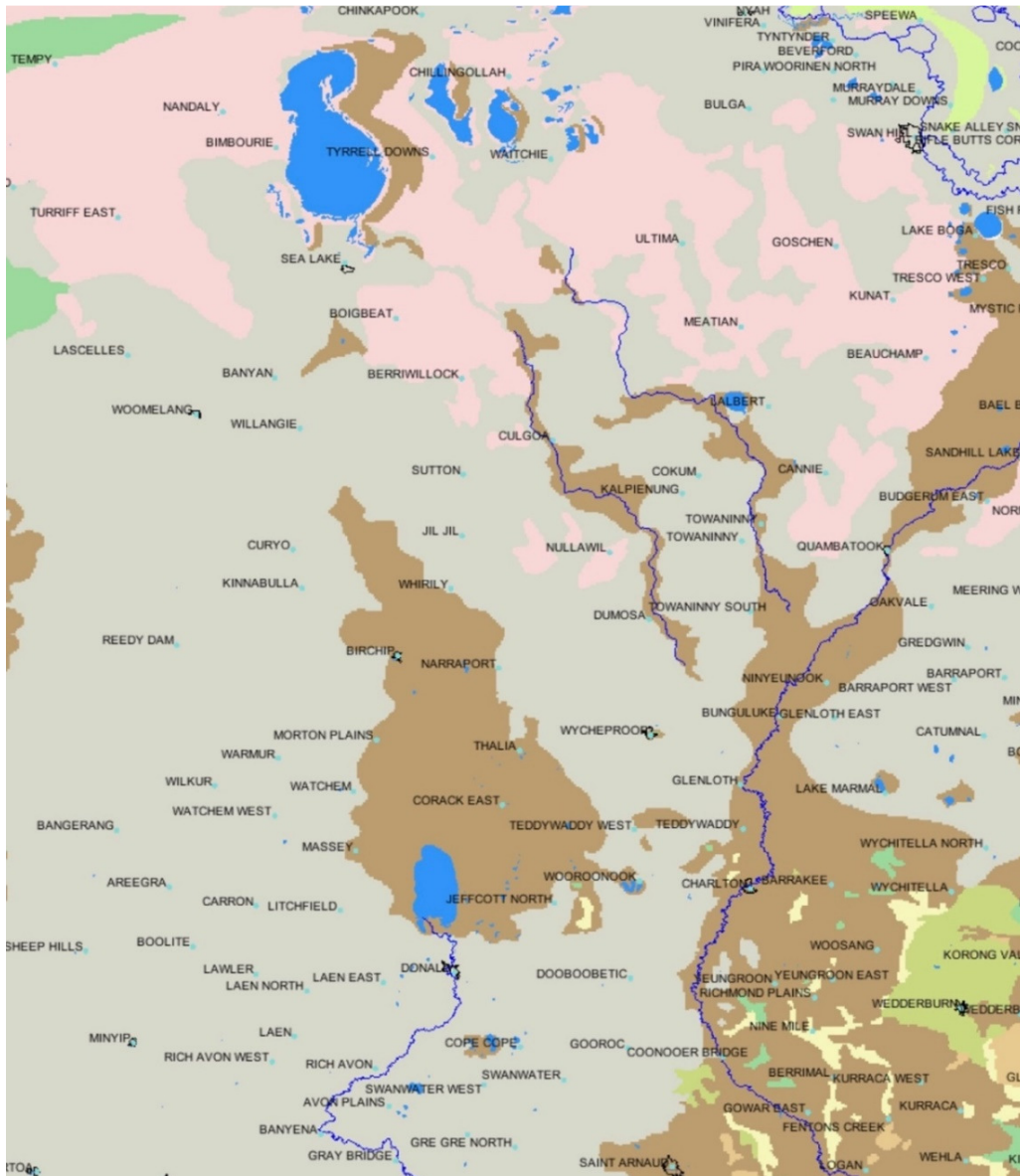


Figure 3: Soil Associations of the Buloke Region

- Calcarosols: Calcareous within the A1 horizon showing no abrupt textural change to the B horizon
- Dermosols: Well developed B horizon with a clay content >15%, showing no textural contrast
- Sodosols: Show a clear or abrupt change to a sodic B horizon
- Vertosols: Cracking clays with high shrink-swell and side slick characteristics

### 6.3.1 Calcarosol<sup>16</sup>

#### Soil Profile Characteristics



0-12 cm: Brown; *heavy clay loam*; soft surface condition; weakly structured; moderately calcareous; pH 8.8;

12-35 cm: Yellowish red; *light medium clay*; few (5-10%) soft calcium carbonate segregations; highly calcareous; pH 9.3;

35-60 cm: Pinkish brown *medium clay* with yellowish red mottles; few (5%) fine earth carbonate segregations; highly calcareous; strong consistence (dry); pH 9.7;

60-85 cm: Very pale brown *medium clay*; trace of fine earth carbonate segregations; flecks of manganese in 70-80 cm zone, pH 9.4; non-calcareous;

85-130 cm: Very pale brown *medium heavy clay*; pH 5.2

#### Soil management

This soil profile comprises a shallow brown heavy clay loam that transitions to a light medium clay with depth.

The soil is strongly alkaline throughout its profile with expected nutrient deficiencies in phosphorous and some trace elements. Surface conditions are sodic<sup>17</sup> which results in poor soil structure increasing the susceptibility to surface sealing, crusting and cloddiness. Gypsum is required to improve soil structure.

Cultural techniques such as minimum tillage, stubble retention and pasture rotation can be used to improve organic matter levels.

<sup>16</sup> Soil pit ORZC12 (Curyo)

<sup>17</sup> Sodic soils contain excessive amounts of sodium on the cation exchange sites which disperses soil particles leading to poor physical properties.

### 6.3.2 Dermosol<sup>18</sup>

#### Soil Profile Characteristics



0-12 cm: Dark greyish brown; *light clay*; moderate coarse to medium blocky structure; hard setting surface; no surface cracking evident; non-calcareous; pH 7.6;

12-40 cm: Dark grey; *medium clay*; non-calcareous; pH 8.4;

40-90 cm: Dark grey; *fine sandy light clay*; moderately calcareous; pH 9.1;

90-130 cm: Light yellowish brown; *light clay*; few (5-10%) soft and semi-hard carbonate segregations; moderately calcareous; pH 9.3.

#### Soil management

This soil profile comprises a grey-brown light clay loam that increases to a medium clay before lightening off with depth. The soil becomes more alkaline with profile depth and expected nutrient deficiencies are phosphorous and some trace elements.

The soil surface is non sodic and provides good seedbed conditions. Salinity and sodicity increase with depth which causes a deterioration in soil structure.

The requirements of good soil management are to raise organic matter levels, break up hardpans and avoiding cultivation when the soil is wet. Significant shrinking and swelling occurs in the subsoil during drying and wetting cycles.

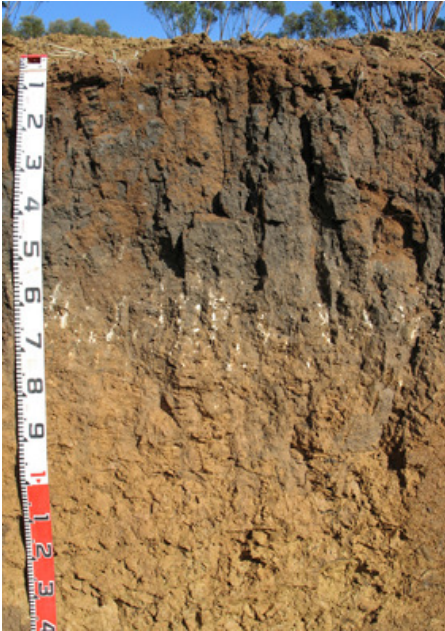
Surface cover needs to be maintained to avoid surface sealing through raindrop action.

Cultural techniques such as minimum tillage, stubble retention and pasture rotation are used to improve organic matter levels and provide erosion control.

<sup>18</sup> Soil pit ORZC14 (Birchip)

### 6.3.3 Sodosol<sup>19</sup>

#### Soil Profile Characteristics:



0-10 cm: Dark brown; *heavy fine sandy clay* loam to light clay; pH 8.3;

10-40 cm: Dark grey; *heavy clay*; pH 9;

40-70 cm: Dark greyish brown *heavy clay* with diffuse reddish yellow mottles; soft and semi-hard calcareous segregations and some nodules pH 9.4;

70-100 cm: Reddish yellow *heavy clay* with diffuse pale yellow and reddish yellow mottles; highly calcareous; pH 9.

100-150+ cm: Reddish yellow with diffuse pale yellow and reddish yellow *heavy clay* mottles, pH9

#### Soil management

This soil profile comprises a shallow sandy clay topsoil overlying a dark grey clay subsoil.

The soil is alkaline throughout its profile with soluble salts and sodicity levels becoming high in the subsoil. Nutrient deficiencies include phosphorous and some trace elements.

Soil management strategies include raising organic matter levels, breaking up hardpans and avoiding cultivation when the soil is wet. Surface cover needs to be maintained to avoid surface sealing through raindrop action.

Cultural techniques such as minimum tillage, stubble retention and pasture rotation can be used to improve organic matter levels. Gypsum is used to improve soil structure.

<sup>19</sup> Soil pit LWA17 (Birchip)

### 6.3.4 Vertosol<sup>20</sup>

#### Soil Profile Characteristics:



0-12 cm: Dark greyish brown; *light clay*; slightly calcareous; pH 7.9;

12-20 cm: Dark grey; *medium clay*; moderately calcareous; pH 8.3;

20-35 cm: Grey; *medium heavy clay*; very few (2%) fine calcareous nodules; pH 8.7;

35-60 cm: Pale brown; *medium heavy clay*; few (2-5%) fine earth carbonates and fine nodules; pH 9.3;

60-100 cm: Pale brown; *light medium clay*; some ferruginous sandstone; few (10%) fine earth carbonates (and some fine nodules); pH 9.7;

100-140 cm: Pale brown with grey mottles; *light medium clay*; few (2-5%) calcareous segregations (some fine nodules); moderately calcareous; pH 9.7.

#### Soil management

This soil profile comprises a grey-brown light clay loam that increases to a medium clay with depth. The soil is strongly alkaline throughout its profile with expected nutrient deficiencies in phosphorous and some trace elements.

The soil surface is non sodic and provides good seedbed conditions. However, it is shallow in depth and good soil management includes raising organic matter levels, breaking up hardpans and avoiding cultivation when the soil is wet. Surface cover needs to be maintained to avoid surface sealing through raindrop action.

Cultural techniques such as minimum tillage, stubble retention and pasture rotation can be used to improve organic matter levels.

<sup>20</sup> Soil pit ORZC5 (Reedy Dam)

## 6.4 Water

The Wimmera Mallee channel system provided stock and domestic water from the late nineteenth century until it was replaced by the Wimmera Mallee Pipeline in 2010.

The pipeline provides a more reliable and secure water supply as it has eliminated the losses due to seepage and evaporation from the channel system. Water is sourced from reservoirs in the Grampians to the south and from the Murray system.

The service area for Grampians Wimmera Mallee Water is shown in Figure 4. There is no irrigation capability.

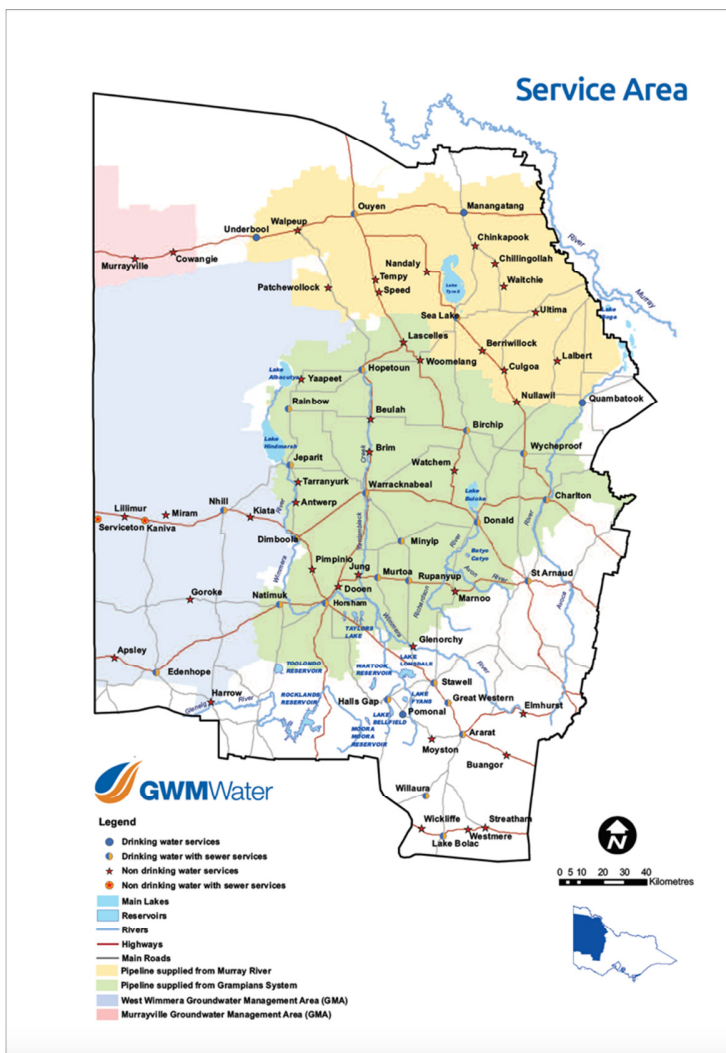


Figure 4: Service area Grampians Wimmera Mallee Water

## 6.5 Vegetation

A broad view of regional landcover is presented in Figure 5 from the Australian Soil Resource Information System (ASRIS)<sup>21</sup> database.

Broadacre cropping is by far the main activity across the region with patches of native grasslands.

Native tree cover is concentrated along the water courses with significant wetlands at Lake Buloke and Lake Tyrell.

The wetlands, native grassland and trees have high biodiversity values given the widespread areas that are directed to broadacre cropping.

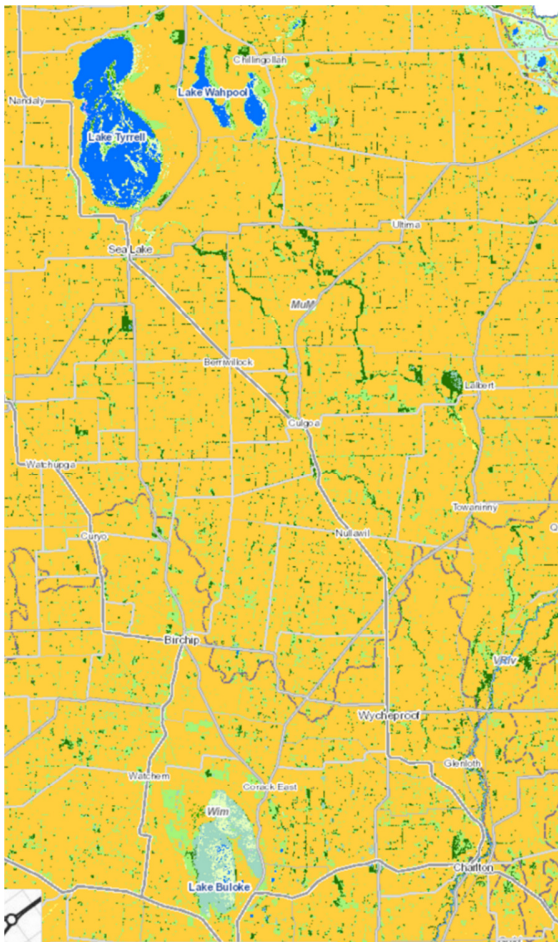


Figure 5: Regional Landcover

<sup>21</sup> [www.asris.csiro.au](http://www.asris.csiro.au)

## 6.6 Land Capability

Land capability is a measure of the agricultural quality and productive potential of the farming environment.

In the Buloke Shire the natural resource characteristics of climate, landform and soils are the significant features in establishing land use potential.

The climate is considered Mediterranean where summers are hot and mainly dry while the winters are mild and usually moist. However, the rainfall is low and unreliable and there is a decrease in rainfall from south to north. The wettest months are usually from May to October which results in a 5 to 6 months growing season, suitable to annual cropping.

The landform of much of the shire is made up of flat open plains with low rolling hills along the southern and south eastern boundary, with dunes and lunettes occur on the sandy soils in the north west.

The soil associations map prepared by the CSIRO (Figure 3 on page 21) identifies and defines the soil associations within the Shire. Due to the number of soil types within each soil association, the boundaries are often diffuse.

## 6.7 Land quality

Table 6 below was developed by the Soil Conservation Authority to provide an objective assessment of land quality. It considers different soil features and measures them on a five point scale.

The table is closely aligned with the Land Unit classification method used by Agriculture Victoria in their recent technical report *“Assessment of Agricultural Land Capability in Melbourne’s Green Wedge and Peri-urban Areas<sup>22</sup>”*. The four soil associations were compared using the same method of soil quality assessment.

Each soil association was ranked 3-4 or “Average to Poor” due to the combined features of climate, soil type and constraints. Within each soil association there are a diversity of soil types which can mean significant differences between farms or even paddocks, however some of the key distinguishing features are:

- The profile of all associations is calcareous and generally deficient in phosphorous and some trace elements. Clay content generally increases with depth.

<sup>22</sup> ‘Assessment of Agricultural Land Capability in Melbourne’s Green Wedge and Peri-urban Areas Victoria’, Agriculture Victoria Research Final Technical Report, Updated October 2018



- The A horizon of two of the four soil associations are friable and non-sodic which assists in seedbed preparation. All four soils however have increasing sodicity with depth which results in poor soil structure that requires gypsum as a soil ameliorant.
- The A1 horizon is shallow in depth and good soil management is directed at raising organic matter levels, breaking up hardpans and avoiding cultivation when the soil is wet. Surface cover needs to be maintained to avoid surface sealing through raindrop action. Cultural techniques such as minimum tillage, stubble retention and pasture rotation can be used to improve organic matter levels;
- Land use is principally broadacre cropping using minimum tillage techniques

Land Classes						Soil Types			
Rating	1	2	3	4	5				
<b>Feature</b>	Very High	High	Average	Poor	Very poor	Calcarosols	Dermosols	Sodosols	Vertosols
<b>Length of growing season (months)</b>	11 – 12	9 – 11	8 – 9	7 – 8	< 7	<7	<7	<7	<7
<b>Availability of supplementary water</b>	Yes	Yes	No	No	No	No	No	No	No
<b>Slope %</b>	0 – 5	3 – 6	6 – 12	12 – 20	20 – 30	0-5	0-5	0-5	0-5
<b>Drainage</b>	Good	Moderate - easily drained	Moderate difficult draining	Poor	Very poor	Moderate	Moderate	Poor, low permeability	Poor, low permeability
<b>Soil</b>	Friable loams	Friable loams	Clay Loams	Sands & clay	Sands & clay	Heavy clay loam	Light clay loam	Fine sandy clay loam	Light clay loam
<b>Profile permeability</b>	High	Moderate	Mod/low	Low	Low	Mod/low	Low	Low	Low
<b>Depth of friable soil</b>	50 cm	20 - 30cm	10 - 25cm	5-10cm	< 5 cm	5-15cm	5-15cm	5-10cm	10 - 25cm
<b>Soil fertility</b>	High	Mod/high	Moderate	Low	Low	Low	Low	Low	Low
<b>Depth to rock</b>	1 m	1 - 0.5 m	0.5 m	0.5-0.1m	< 0.1 m	>1 m	>1 m	1 - 0.5 m	>1 m`
<b>Constraints</b>	Low	Low	Moderate	High	Very high	Low OM Sodic subsoil	Low OM Sodic-saline subsoil	Hard pans Sodic-saline subsoil	Low OM Sodic-saline subsoil
<b>Flooding frequency (years)</b>	None	1 in 15	1 in 10	Annual	Annual	None	None	None	Ponding`
<b>Arability</b>	Excellent	Good	Moderate	Poor	Nil	Moderate	Moderate	Moderate	Moderate
<b>Overall land capability</b>						3-4	3-4	3-4	3-4

Table 6: Criteria and Performance Levels to Measure Agricultural Land Quality

## 7. RURAL ACTIVITY AND TRENDS

### 7.1 Land use patterns

The broad patterns of rural land use within the shire are shown in Table 7. The data is dated (2010-11) but provides a useful summary of land use by holding area.

Rural land use	Ha	%	No
Cropping	405,100	55.37	606
Fallow	94,907	12.97	287
Grazing	201,366	27.52	487
Forestry	4,249	0.58	17
Conservation	9,788	1.34	240
Unproductive	6,297	0.86	22
Balance	9,961	1.36	
<b>Total holding</b>	<b>731,668</b>	<b>100</b>	<b>686</b>

Table 7: Land Use by Area and holding numbers, 2010-11

Approximately 68% of total holding area is directed to crop production (includes fallowing). Grazing is the next most significant use with other uses being relatively minor in incidence.

The following sections summarise the cropping and grazing patterns of land use using 2015-2016 ABS data.

### 7.2 Cropping

Crop production is broadacre in nature due to climate, landform and soil type. The absence of irrigation capability eliminates soil based intensive agriculture farming systems such as fruit, nuts, vegetables and grape production as viable enterprises.

Broadacre cropping is under dryland conditions.

Cereals are the major crops grown and comprise wheat, barley, oats and triticale.

Within the cropping rotation, legumes are the next most important (lentils, field peas, chickpeas, vetch) followed by oilseeds (canola, safflower).

The different crop types are used in various rotations which aim at reducing disease risk, maintaining or enhancing soil fertility and optimizing yield. Table 8 shows the relative areas of the different broadacre crops.

Crop type	Ha	%	Tonnes
Wheat	158,919	43	116,935
Barley	146,767	39	131,899
Oats	11,713	3	6,677
Other cereal	2,503	1	255
Oilseeds	11,610	3	3,868
Legumes	42,372	11	13,002
	373,884	100	

Table 8: Broadacre crops 2015-16

The total number of agricultural businesses engaged in cropping is estimated at 382 and represents most landholders within the shire.

Wheat and barley are the main crops followed by lesser areas of legumes and oilseeds.

Legume grain crops continue to grow in importance through being an extra crop in the rotation to achieve better disease control and add soil nitrogen.

Cereal yields are only moderate at current levels. Yield expectations for cereals under average conditions is 2.5t/ha with the potential for 3.5-4t/ha under Best Management Practice and good seasonal conditions.

The production data in Table 8 represents a poor year for the Shire due to adverse seasonal conditions. Drought continues to be a major hazard while climate change is likely to increase the variability of seasonal performance.

### 7.3 Grazing

Sheep and beef cattle are farmed in association with crop production. Table 9 shows the livestock numbers and their relative proportions on a dry sheep equivalent<sup>23</sup> (dse) basis.

	Number	dse	% dse	Holding no
All cattle	134,72	134,720	35	35
All sheep	187,582	225,098	65	229

Table 9: Livestock numbers 2015-16

#### Sheep

Sheep production is based on the merino breed for wool and meat production.

The merino breed represents about 65% of the dry sheep equivalents, with cattle accounting for the remainder.

A significant proportion (75%) of the breeding flock is mated to other sires for either meat or ewe replacement stock to the prime lamb industry. Average flock size per holding is small and subservient to the cropping enterprise.

Sheep production is associated with the pasture phase of the crop rotation cycle and to utilise crop stubble. The pasture phase is used as a break in the disease cycle for crops and to improve soil fertility and soil structure. Legume pasture species are often used.

The principal breed type is merino, but the mating patterns are variable depending upon the intended end use. Approximately 25% of merino ewes are mated to merino sires to produce ewe replacements for the regional wool flock while the majority of ewes (75%) are mated to meat or crossbred sires (Dorset Horn, Border Leicester) to produce either prime lambs for meat production or crossbred ewe weaners as replacements for prime lamb flocks.

The output of the regional flock is wool, meat and replacement ewes. Total flock size is approximately 200,000 sheep with an annual commodity value for wool, meat and other disposals estimated to be \$27.5m (2015-16).

<sup>23</sup> Dry sheep equivalent is that amount of dry matter required by one mature wether per annum

## Cattle

The cattle herd totals about 13,500 head. The breeding herd is less than 20% of total herd numbers while the remainder are dry stock for growing out and sale.

Cattle slaughtered and other disposals totalled \$8.5m for the 2015-16 season.

The regional cattle herd is only marginally suited to the district due to the district's cropping specialisation, short pasture and crop growing season and long, dry summers that impose a high feeding demand.

## Other livestock

The pig and poultry industries are capital intensive in that they have specialised buildings and a high input requirement, particularly purchased feed. The asset requirements include a good water supply, availability of power, adequate land area for waste treatment and to maintain the necessary buffer requirements.

Table 10 shows the size of the industry. Most operations are small in number and scale. Their location is spread across the Shire rather than in a defined location.

	No	Holding No
<b>Pigs</b>	16,228	18
<b>Poultry</b>	92,600	7
<b>Meat chickens</b>	34,537	1

Table 10: Pigs and Poultry 2015-16

## 7.4 Regional value

The estimate of regional value from ABS 2015-16 data is summarised in Table 11.

Item	Gross value \$
<b>Crops</b>	92,022,223
<b>Hay</b>	8,633,728
<b>Vegetables</b>	580,750
<b>Wool</b>	10,785,574
<b>Eggs</b>	16,192,437
<b>Sheep disposals</b>	16,775,179
Cattle disposals	8,505,291
Pigs	9,183,438
Poultry	7,731,351
<b>Total agriculture</b>	<b>170,409,971</b>

Table 11: Gross value all agriculture: 2015-16

The main observations that arise out of Table 5 are that:

- Broadacre crop production has the highest gross value of all commodities; and
- Wool, sheep and cattle disposals are the next most significant followed by the intensive animal industries, comprising eggs, pigs and poultry.

Value adding provides considerable flow on effects to the regional economy. Value adding multipliers in the rural sector differ according to commodity but generally range between 2-3. The WA Department of Agriculture in 2010<sup>24</sup> estimated a mean rating for agricultural commodities at 2.37 but with a range of 1.7 to 3.

<sup>24</sup> Multipliers: Western Australian Agriculture and Food Industries August 2010

## 7.5 Agricultural Trends

The agricultural industry in Buloke Shire has demonstrated resilience and a capacity to adapt to climatic, economic and policy challenges.

Water supply infrastructure renewal and modernisation have been completed and the region has sought to increase agricultural productivity while enhancing environmental sustainability.

However, while agriculture continues to be the backbone of the region's economy, new technologies have reduced jobs in the sector. Local jobs need to come from the growth of labour intensive sectors and economic diversification<sup>25</sup>.

Other changes that are inherent to maintaining or increasing the viability of the cropping industries include:

- Farm consolidation into larger units as a means of lowering production costs and increasing productivity. This is associated with increased capital requirements for land and equipment.
- Reduced management risk and benefit from product diversity through farming across different environmental zones.
- Increased cropping specialization which may reduce or eliminate livestock from the farming system.
- The move from rail to road transport where flexibility of pick-up and delivery and regional storage depots are offered;
- Adoption of a more diverse and sophisticated range of marketing options to optimise price and reduce risk;
- Within this environment state government services have been progressively reduced and replaced by private and service company consultants. Cropping groups have developed with an increased use of electronic information services for weather, market intelligence, technical services and product purchases.

<sup>25</sup> Loddon Mallee North Regional Growth Plan at [www.dtpli.vic.gov.au/regionalgrowthplans](http://www.dtpli.vic.gov.au/regionalgrowthplans)



## 8. PLANNING IMPLICATIONS OF THE RURAL ANALYSIS

### 8.1 Protection of areas of strategic significance for agriculture

The Planning Policy Framework requires that areas of strategic significance for agriculture be identified and protected.

The land capability assessment in this report has identified that there is no high quality agricultural land in the Shire. On the contrary, the quality of each of the soil associations is assessed as being moderate to low. That said, agriculture is the main driver of the Shire's economy, and the protection of the Shire's farming land is important.

### 8.2 The need to update the MSS commentary about agriculture

The agricultural attributes of the Shire as stated in the MSS "snapshot" of the Shire needs to be updated to reflect the latest ABS data.

In addition, there is a need to refresh Clause 21.03-1 'Agriculture'. The two objectives in this Clause remain valid, but several of the strategies could be better worded. A number of the strategies are rather obscure and could be deleted, whilst in other cases the strategies are listed under the wrong objective. The strategy of developing a rural land use strategy can be deleted because that has now been achieved through the completion of this report.

A revised version of Clause 21.03-1 has been prepared and is included at Appendix 1.

### 8.3 Appropriateness of the existing Farming Zone and scheduled controls

While there are some differences in features between the soil associations, from a planning perspective the rural land can be regarded as fairly uniform across the Shire.

The Farming Zone and existing scheduled controls is considered to be the appropriate zone for all of the rural land in the Shire given the uniformity of the land and the fact that the principal agriculture activity is broad-acre cropping where cropping paddocks need to be large in area and usually greater than 100 hectares to facilitate the use of large equipment used for cultivation, crop spraying and harvesting.

The scheduled controls do however allow for applications to be made for subdivision to create a lot smaller than 100 hectares for a rural dependent enterprise or for intensive agriculture, subject to such applications meeting the requirements of the Local Planning Policy relating to 'Rural land and sustainable agriculture' (which the schedule incorrectly references as Clause 22.03, when it is actually Clause 22.02). The incorrect reference in the Schedule to the Farming Zone to Clause 22.03 needs to be corrected.

As far as new dwellings are concerned, the 40 ha minimum area for which no permit is required for a dwelling is considered to be a reasonable compromise between the need on the one hand to ensure farming land is maintained in larger holdings, while on the other hand providing opportunities for children of farming families and/or farm workers to utilise some of the smaller lots found throughout the Farming Zone for the purpose of a dwelling. However it is considered desirable to limit the opportunity for dwellings to be built without a permit to lots of not less than 40 ha as a means of discouraging more widespread rural living throughout the Farming Zone, noting that people seeking a rural living lifestyle are likely to be more attracted to a smaller lot than 40 ha (and which is close to one of the townships).

As far as the excision of existing rural dwellings is concerned, it is considered that the existing policy requirement at Clause 22.02 that such lots should have a maximum size of 2 ha is also appropriate as a means of lessening the likelihood of the balance of a farming property being lost to agriculture.

In summary, it is considered that the Farming Zone and Schedule 1 controls are well suited to maintaining sustainable agriculture across all of the Shire's rural lands and that (with the exception of those areas recommended in Part B of this report for possible rezoning to the Rural Living Zone) there is no justification or need for applying a different rural zone to any of the land in the Shire or for introducing a different set of schedule controls for any particular area. In this regard:

- The 100 ha minimum lot size is appropriate for broadacre crop production following Best Management Practice. BMP implies using modern equipment, following minimum till techniques and a crop rotation including cereals, oilseeds and legumes.
- The Farming Zone and scheduled controls allows applications for smaller lots to be created to accommodate intensive farming and rural dependent enterprises. Such subdivision is guided by the considerations under the policy relating to 'subdivision, use and development' at Clause 22.02.
- The Farming Zone subdivision controls (at Clause 35.07-3) allow an application to be made for a subdivision which is to create a lot for an existing dwelling (rural dwelling excision), subject to the small lot excision policy at Clause 22.02 which (among other things) provides that such lots should have a maximum size of 2 ha and that the dwelling to be excised should be in a habitable condition.
- There is sufficient flexibility for new dwellings in the Farming Zone given the following:
  - The fact that no permit is required for a dwelling on a lot which satisfies the 40 ha minimum lot size, subject to the dwelling being the only dwelling on the lot.
  - The fact that an application can be made for a dwelling on a lot which is smaller than the 40 ha minimum lot size, subject to meeting the requirements of Clause 35.07-2 regarding access, waste water, water supply and power, and subject to the responsible authority being satisfied this is appropriate having regard to the extensive decision guidelines at Clause 35.07-6. These decision guidelines include a consideration of a range of matters such as whether the use and development will support and enhance agricultural production or result in the loss or fragmentation of agricultural land. It is beholden upon a permit applicant to provide a sufficient level of information with the application to satisfy the

responsible authority that the issue of a permit is justified having regard to the decision guidelines.

## 8.4 Opportunities for economic diversification

The Regional Growth Plan supports increasing economic diversity in the region including through investigating opportunities in agriculture, and this is reinforced by Council's own policies. However this study confirms that broadacre cropping is far and away the most important agricultural activity in the Shire and will remain so into the future. Intensive animal industries are important however as a means of diversification, but are likely to remain very much a secondary enterprise, with the main constraints being the lack of processing facilities and distance from markets.

Whilst there are opportunities for other agricultural enterprise including intensive animal industries, there is no need for specific zoning or controls to facilitate the establishment of these industries. In this regard, there is nothing to prevent any of those types of industries from establishing within the Shire, with the Farming Zone and its scheduled provisions being sufficiently flexible to accommodate such industries.

It is noted that Council's existing policies (Clause 22.02 'Rural land and sustainable agriculture') includes the development of agroforestry as an objective. It is unclear how this came to be included in the policy as obviously the land in Buloke Shire is not tree growing country. In addition, agroforestry could even cause conflict with the cropping industry. It is therefore recommended that this reference to agroforestry should be removed from the policy.

It is important that the planning policies and controls continue to be directed towards the maintenance of the Shire's main economic activity, which is broadacre cropping and to a lesser extent grazing.

## 8.5 Intensive farming

The intensive animal industries are a minor use within the shire. They comprise piggeries, poultry units (cage and free range), broiler farms and feedlots.

These activities are subject to particular provisions in the Planning Scheme which are discussed in section 4 of this report, in which the planning requirements include the setting of buffer distances and controls relating to waste management, odour, noise and dust.

All are subject to Codes of Practice and Design Guidelines to determine location, design and operation.

Although the Loddon Mallee North Regional Growth Plan (RGP) encourages emerging agribusiness and location clusters, including intensive animal industries, the lack of scale and industry presence within Buloke Shire makes it unlikely that there will be a significant clustering of these industries. It is more likely such enterprises will be undertaken as a means of adding some diversity to broadacre

cropping operations similar to the examples given in the investment guides that are made available by Council to potential investors.

## 8.6 Rural dependent enterprises

Council's 'Rural land and sustainable agriculture' policy (Clause 22.02) includes considerable reference to the establishment of rural dependent enterprises (RDEs).

'Rural dependent enterprise' is not defined, but is presumably any type of value-adding to an agricultural enterprise. This could include specialised infrastructure, processing and transport. It could also include associated farm enterprises such as tourism.

Whilst it is desirable that Clause 22.02 should continue to acknowledge the importance of RDEs to the Shire's economy, it is considered that the detailed requirements relating to the location of RDEs are unnecessary on the basis that the decision guidelines under the Farming Zone are sufficiently robust to enable proper assessment of any application for a RDE.

It is therefore recommended that Clause 22.02 be amended by deleting the detailed requirements relating to RDEs. As noted above, the Clause should continue however to acknowledge the importance of RDEs to the Shire's economy. A definition of RDEs should also be introduced.

## 8.7 Rural dwelling excisions

The subdivision provisions under the Farming Zone (Clause 35.07-3) provide that a permit may be granted to create a smaller lot if the subdivision is to create a lot for an existing dwelling, provided the subdivision must be a two lot subdivision. Council's consideration of such applications is guided by a small lot excision policy which is contained at Clause 22.02 which provides as follows:

- *Lots created under the excisions provisions of the Farming Zone should have a maximum size of 2 hectares, except as otherwise required by a provision of this planning scheme.*
- *Dwellings excised under the provisions of Farming Zone should be in a habitable condition and able to comply with the Building Code of Australia to this extent.*
- *The excision of dwellings will take place in a manner that will ensure the dwelling does not have the potential to restrict agricultural production on adjacent land.*
- *An adequate distance should be maintained within the excised lot around the dwelling to reasonably limit any likely impacts of adjacent agricultural activity. The permit may require the planting of vegetation within the excised lot to reduce any potential impacts.*
- *Subdivision likely to lead to concentration of lots as to change the general use and character of the rural area will be discouraged unless it can be shown that the clustering of lots will not limit the productive use and development of the larger lots in the subdivision or that surrounding.*
- *Excision of more than one house lot from a rural property will generally not be supported.*

Further to the above, it is a practice of Council when it issues a permit allowing subdivision to create an excision lot to include a condition in the permit which requires the applicant to enter into an agreement with Council pursuant to Section 173 of the Planning and Environment Act 1987 in which the owner of the excision lot acknowledges that the lot is in the Farming Zone and that agricultural activities may result in adverse amenity impacts.

Generally, rural dwelling excisions have been justified historically as a means of assisting retirement after selling the farm by enabling the capitalisation of a surplus asset. However the creation of such lots does not represent good land management, particularly in municipalities where demand for small lifestyle lots often removes land from agricultural production. A proliferation of small lots in rural areas can also lead to excessive costs for Councils in terms of the provision of services (e.g. garbage collection), as well as for the future occupiers of such dwellings (e.g. the need for regular trips to the nearest town to access schools, shopping and other services). Whilst these costs are justifiable when a dwelling is occupied in conjunction with agriculture, there is less justification when excision dwellings are occupied by people seeking a rural living type lifestyle. In the case of Buloke Shire where Council is keen to attract new residents to the Shire, it is far better that new residents be attracted to the townships.

Despite our misgivings about rural dwelling excisions, the reality is that the Council only receives a small number of applications for rural lot excisions and dwellings in the Farming Zone.

In the interests of maintaining land in agricultural production, it is considered that the existing policy guidance relating to rural dwelling excision should be maintained. In particular, it is considered that the requirement that such lots should have a maximum size of 2 ha is appropriate as a means of lessening the likelihood of the balance of a farming property being lost to agriculture.

We also consider that Council's practice of requiring a Section 173 Agreement should be maintained to ensure that all future owners of an excision lot are aware that they live in a farming area where normal expectations of residential amenity do not apply.

## 8.8 Renewable energy facilities

The Planning Policy Framework provides support for the development of renewable energy facilities which are permit required use in the Farming Zone.

A 'Wind energy facility' must meet the requirements of [Clause 52.32](#) of the Buloke Planning Scheme. These include locational requirements relating to the proximity of the facility to a dwelling.

Although the schedule to Clause 52.32 can be used to identify land where a wind facility is prohibited, there are no exclusions identified for Buloke Shire.

Renewable energy facilities (other than a wind energy facility and geothermal energy extraction) must meet the requirements of Clause 52.13 of the Buloke Planning Scheme. The purpose of this Clause is to facilitate the establishment and expansion of renewable energy facilities in appropriate locations.

Solar energy facilities are the most likely type of renewable energy facility to be contemplated in Buloke Shire. The assessment of any such application would be guided by the State Government's [Solar Energy Facilities Design Guidelines \(DELWP 2019\)](#).

The main factors against solar energy facilities in Buloke Shire are the absence of a sizeable population centre and energy supply infrastructure (transmission line limitations).

# PART B – SETTLEMENTS

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## 9. PLANNING POLICY RELEVANT TO THE SHIRE'S SETTLEMENTS

### 9.1 General

The Buloke Planning Scheme includes a Planning Policy Framework which sets out the State planning policy directions applicable to all of Victoria and the regional policy directions set out in the Loddon Mallee North Regional Growth Plan (Victorian Government, 2014).

The Planning Scheme also includes a Local Planning Policy Framework (LPPF) comprising a Municipal Strategic Statement (MSS) and local planning policies. The LPPF must be consistent with the PPF.

### 9.2 State planning policy relevant to settlement planning

[Clause 11.02-15 'Supply of urban land'](#) seeks to ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses.

The strategies of relevance to settlement planning in this Shire include:

- *Ensuring sufficient land is available to meet forecast demand.*
- *Plan to accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur. Residential land supply will be considered on a municipal basis, rather than a town-by-town basis.*
- *Planning for urban growth should consider (among other things) the opportunities for the consolidation, redevelopment and intensification of existing urban areas; the limits of land capability and natural hazards and environmental quality; service limitations and the costs of providing infrastructure.*
- *Monitor development trends and land supply and demand for housing and industry.*
- *Restrict rural residential development that would compromise future development at higher densities.*

The policy guidelines provide that consideration should be given as relevant to the Victorian Government population projections and land supply estimates.



## 10. PREVIOUS RESIDENTIAL STUDIES BY COUNCIL

In 2009, the Shire reviewed residential land use and undertook a study of rural living development opportunities.

### 10.1 Residential Land Use Review 2009

*Council's Residential Land Use Review 2009*<sup>26</sup> examined the future residential land use requirements in Birchip, Donald, Charlton, Sea Lake and Wycheproof. It found there was sufficient zoned land (Township Zone) in each of these towns to cater for expected demand in the short term (10 years) and even beyond.

However the review also recommended consideration be given in the medium to long term to rezoning additional land at the edge of Birchip, Charlton, Donald and Wycheproof to accommodate long term growth.

The review recommendations for each town are discussed in more detail in the next section headed "Township Strategies".

### 10.2 Draft Rural Living Development Study 2009

This study reviewed the provision of rural residential lots within the municipality in order to determine whether there was a need to set aside or rezone additional land for rural residential development.

The study objectives were:

- *To provide opportunity for rural residential living in appropriate locations having regard to land capability, locational sustainability, existing and likely future demand/supply, and the necessary services and infrastructure.*
- *To prevent the uncontrolled spread of rural residential land use and development into agricultural areas.*
- *To ensure that rural residential land development does not preclude opportunities to accommodate future growth of the Buloke Shire urban area.*

A difficulty for this study was that it had to quantify the demand for rural residential lots in accordance with a ministerial direction<sup>27</sup> which was in force at the time. This required future demand for rural residential lots to be quantified based on past trends for this type of approval, which was difficult given the housing market in Buloke Shire had not previously catered for this form of development. Therefore the study had to make assumptions based on empirical evidence

<sup>26</sup> 'Residential Land Use Review 2009 – Examining Present and Future Residential Land Requirements for the Shire of Buloke', TGM Group Pty Ltd, January 2009

<sup>27</sup> Ministerial Direction No. 6 'Rural Residential Development' (revoked 17 May 2012)

provided by local real estate agents and having regard to available land. It was assumed that demand would increase substantially in the future if this form of residential development opportunity was made available. It was considered that the best way to bring such land to the market was through the subdivision of small lots in the rural (Farming) zone, although it was noted that the use of the Township Zone also provided some scope for rural residential development.

The study examined the supply and demand aspects relating to rural residential land in the five major townships and identified various strategic options. It recommended that Council adopt an option whereby:

1. The Rural Living Zone would be introduced into the Planning Scheme with two schedules:
  - Schedule 1 which would allow for smaller lots of 2 ha to 8 ha
  - Schedule 2 which would allow for lots up to 20 ha.
2. A Rural Residential Land Use Policy would also be introduced. The various elements of that policy are unclear and somewhat contradictory, but what is clear is that it would seek to encourage rural residential development as a means of attracting residents.
3. Suitable land for rural residential development would be identified in each of the Shire's five major towns.

The rural living development study recommendations are discussed in more detail in the section headed "Rural Living Opportunities".

## 11. POPULATION CHARACTERISTICS

### 11.1 The Shire's declining population

Buloke Shire recorded a population of 6,280 persons at the 2016 census. About 60% of these people lived in the towns of Birchip, Charlton, Donald, Sea Lake and Wycheproof.

The Shire's population has generally been in steady decline between 1991 and 2016 (ABS census 1991-2006), as shown in Table 12, with Government projections (Victoria in Future 2019) indicating the population will continue to decline to 2036. A copy of the Victoria in Future projections 2019 is included at Appendix C.

1991	1996	2001	2006	2011	2016	2021	2026	2031	2036
7,920	7,229	7,331	7,102	6,465	6,280	6,070	5,740	5,390	5,020

Table 12: Buloke Shire population data past (ABS 1991 – 2006) and projected (VIF 2019)

As would be expected with a population decline of this magnitude, there has been a corresponding decrease in the number of households, with this also being projected to continue into the future. In addition, household size has also been falling and is projected to continue to fall into the future, as illustrated in Table 13:

	2016	2021	2026	2031	2036
<b>Total Population</b>	6,280	6,070	5,740	5,390	5,020
<b>Households</b>	3,190	2,770	2,660	2,560	2,420
<b>Household size</b>	2.17	2.14	2.10	2.04	2.00

Table 13: Household and household size past (ABS 1991 – 2016) and projected (VIF 2019)

The population is also characterised by a smaller proportion of younger people (aged < 35 years) and a greater proportion of older people (aged 65 years and above) than for Victoria as a whole.

The overall population decline is reflected in the main towns, which have experienced steady population decline since 1981 as illustrated in Table 14.

	1981	1986	1991	1996	2001	2006	2011	2016
<b>Birchip</b>	895	845	827	800	698	687	641	676
<b>Charlton</b>	1,377	1,341	1,182	1,096	1,026	1,052	943	960
<b>Donald</b>	1,609	1,465	1,505	1,383	1,327	1,367	1,310	1,374
<b>Sea Lake</b>	943	847	798	694	638	612	616	563
<b>Wycheproof</b>	938	854	777	733	695	686	635	585

Table 14: Population change in the Shire's towns over the period 1981 - 2016

The populations of Birchip, Charlton and Donald appear to have stabilised as at the 2016 census, but Sea Lake and Wycheproof are experiencing ongoing population decline.

## 11.2 Reasons for the declining population

The main reason for the decline in Buloke Shire's population is the trend towards larger farms and mechanisation which has resulted in loss of farm employment opportunities and an associated loss of employment opportunities in townships.

The Shire's landscape, environmental conditions and the distance to services are also factors when people consider a move into the Shire.

## 11.3 Implications of the declining population

The declining population has significant implications in terms of settlement planning.

Council's Residential Land Use Review 2009 examined the future residential land use requirements in Birchip, Donald, Charlton, Sea Lake and Wycheproof. It found there was sufficient zoned land (Township Zone) in each of these towns to cater for expected demand in the short term (10 years) and even beyond.

Since nothing has really changed population-wise since 2009, this means the zoned areas within each town still retain a capacity to meet future demands. This is reinforced by Council's building permit statistics (dwellings) for the period since the 2009 review (Table 15 below):

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Totals
<b>Birchip</b>	1	1	1	5	3	5	2		2	20
<b>Charlton</b>	2	7	3	5	1		3		3	24
<b>Donald</b>	2	2	1	2	1	3		3		14
<b>Sea Lake</b>	4	3		2			1			10
<b>Wycheproof</b>	1		2	1			1	1		6
<b>Totals</b>	10	13	7	15	5	8	7	4	5	

Table 15: Dwelling approvals by town (compiled from Buloke Shire Council register)

The total dwelling approvals in the five towns over the past eight years is insignificant. They also need to be considered in the light of the demolition permits which have been issued over the same period (4 in Birchip, 8 in Charlton, 3 in Donald, 4 in Sea Lake and 1 in Wycheproof).

These statistics reinforce that the existing township boundaries for all five towns are more than adequate to accommodate growth into the foreseeable future.

However, despite the 2009 review finding there was sufficient land supply to meet short term demands, areas at the edge of each town were identified for possible rezoning from Farming Zone to Township Zone to meet the anticipated demands in the longer term.

Some of these areas are in fact better suited for development than the existing Township Zone areas. For instance, an area at the edge of Charlton that was recommended for possible future rezoning comprises higher ground which, unlike much of the Township Zone land in Charlton, is unaffected by inundation or flooding. However there is no imperative at present to rezone additional land in any of the towns.

A “no further zoning for the time being” option is consistent with the strategic directions in the Loddon Mallee North Regional Growth Plan which does not identify any of the Shire’s towns for growth.

Confining future development within the existing town boundaries is also consistent with State planning policy relating to the supply of urban land (Clause 11.02-1S), which includes strategies which encourage consolidation and redevelopment and intensification of existing urban areas.

## 12. TOWNSHIP STRATEGIES

The ongoing decline in the Shire's population means the findings of the Residential Land Use Review 2009 that the Shire's five towns each contain sufficient zoned land to meet short-term housing needs remains current today. There is no imperative at this time to rezone any further land from Farming Zone to Township Zone.

It is also considered that each of the Shire's towns contain sufficient land specifically zoned for commercial, retail, industrial, recreational, institutional and other uses. In addition however, even though the Township Zone in each of the towns is treated as a de-facto residential zone, there is considerable scope with this zone for a range of non-residential uses.

Although the 2009 review recommended consideration be given in the medium to long term to rezoning additional land at the edge of Birchip, Charlton, Donald and Wycheproof to accommodate long term growth, this should be reconsidered in light of the ongoing population loss in all of these towns since 2009. Also of relevance is that the current Planning Policy Framework and the Loddon Mallee North RGP strategies provide that these towns need to adjust to ongoing population decline. In addition, some of the areas recommended for consideration have environmental issues (primarily flooding) which make them unsuitable in any event.

As there is presently no land in Buloke Shire specifically zoned for Rural Living, we consider rezoning land adjacent to some of the townships to allow for rural residential living may be justified. The rural living opportunities are addressed in the following chapter.

In planning for future residential requirements (both township living and rural residential living where appropriate), it is important to ensure that the amount of land available for development exceeds what is required solely to accommodate the expected number of additional households. The reasons for this include:

- The existence of suitable vacant land does not mean it will be made available for development as not all landowners will want to subdivide or develop. In addition, the low land values in Buloke Shire can act as a disincentive to development and may encourage some owners to use multiple lots for a single dwelling.
- The future development opportunities in the towns should not all be channeled into one area. There is a need to offer choice in the housing market and to avoid situations where future development opportunities are dependent on a single land owner or a small number of owners taking steps to subdivide and develop their land.
- There must be a sufficient "bank" of zoned land, which can be developed in the event that future demand is in excess of present expectations.

The following sections comment on the main findings of the 2009 review for each town, and makes recommendations in light of the present day realities.

## 12.1 Birchip

Birchip's population has stabilised at slightly less than 700 people, having experienced a small increase since the 2011 census.

Given the declining population prior to the 2009 review, it is unsurprising the review found the existing zoned areas in Birchip could accommodate short term demand (10 years) for new dwellings. That finding remains valid today.

In fact Birchip's Township Zone has the potential to accommodate demand for well beyond 10 years, with the review noting that a potential longer term demand for 140 new lots (based on a lot take-up of 4 lots per year being extrapolated out for 25 years) could be met by a combination of subdivision and redevelopment of existing lots (which have an average lot size of 1500 m<sup>2</sup>) and infill development.

The review predicted there could be an increased demand for 1 and 2 bedroom dwellings due to the aging population and the high proportion of single person households. Some of this demand could be met by subdivision and redevelopment of the existing lots, many of which contain aging housing stock.

The review identified the following infill development opportunities:

- In the area south of Morrison Street between King and Union Streets; and
- The old convent area between Corack Road, Campbell Street and the railway line.

The review estimated these two areas could yield around 30 lots of about 1000 m<sup>2</sup>, although obviously a higher yield could be achieved if the lot sizes were smaller.

The 2009 Review findings for Birchip can be summarised as follows:

1. There is no need to extend the current residential land supply (i.e. through rezoning) on the basis that the existing supply can accommodate the short term (10 years) demand.
2. Although it found that further subdivision of land for residential development would be required beyond 10 years, the infill opportunities identified above are already in the Township Zone. It is noted that the first of these areas has in fact since been subdivided and developed with 29 lots (being lots on both sides of Stevens Street).
3. It was recommended that land close to the main shopping area and hospital should be encouraged to be redeveloped at higher densities with one to two bedroom dwellings.

These findings are considered to still be relevant given that in the 10 years since the 2009 review only 20 building permits have been issued for new dwellings (which need to be offset against the fact that 4 demolition permits were issued over the same period). This reinforces that there is limited demand for new lots in the town.

As far as future redevelopment opportunities are concerned, it is considered that in addition to the two areas identified in the 2009 Review report, the following areas which are also in the Township Zone are very suitable for more intensive subdivision and development:

- The larger lots along the north side of the Sunraysia Highway between the Golf Course and the Motel / caravan park.
- The area between the Sunraysia Highway and the PUZ1 (GMW Water Supply).
- The area between Watchem Road and the railway in the southern part of the town.

## 12.2 Charlton

Charlton's population has stabilised at around 950 people. However in common with the Shire's other towns, there have been dramatic falls in the under 35 age groups, while the older age groups are growing as a percentage of the total population.

Given the declining population prior to the 2009 review, it is unsurprising it found the existing zoned areas could accommodate short term (10 years) demand for new dwellings. It also observed that the average lot size of 2200 m<sup>2</sup> meant there was considerable potential for infill subdivision and development which would make for more efficient use of space and infrastructure.

The review also predicted there could be an increased demand for one and two bedroom dwellings due to the aging population and the high proportion of single person households.

The review identified that some longer term demand could be met by infill development within the following areas which are already in the Township Zone:

- Land to the north of the railway line, east of Ellenwood Avenue. It was estimated this area could produce 150 lots of 1000 m<sup>2</sup>. It should be noted however that the Land Subject to Inundation Overlay (LSIO) applies over the whole of this area and that part of the area is also covered by ESO1 (Waterway Protection).
- Land to the north of Watson Street and west of Back St Arnaud Road. It should be noted however that this area is severely affected by the Floodway Overlay and LSIO.
- Land bounded by the Charlton-St Arnaud Road (Armstrong St), Wright Street and the Avoca River. It was estimated this area could produce around 185 lots of 1000 m<sup>2</sup>. However the southern edge of this area is affected by the Floodway Overlay and the LSIO along the river.



In addition to the above areas, the report also identified an area of farmland to the north of Windsor Avenue on the west side of the river as land suitable for future development. The land was noted as being relatively central with good access to the town centre and easily accessed from the Calder Highway, and that it comprises higher ground above the 100 year flood level unlike the majority of land in Charlton. It was estimated that around 75 lots could be produced from this area. With an area of about 7.5 ha it was estimated that this area would yield at least 60 lots of approx. 1000 m<sup>2</sup>.

The 2009 Review findings for Charlton can be summarised as follows:

1. The existing zoned land was sufficient to meet short term needs (10 years).
2. Land close to the main shopping area should be encouraged to be redeveloped at higher densities with one to two bedroom dwellings.
3. Further subdivision of land would be required beyond 10 years. The areas identified for this are noted above and include the farmland north of Windsor Avenue (which would need to be rezoned to Township Zone).

In the 10 years since the 2009 Review, only 24 building permits have been issued for new dwellings in Charlton, and only 8 demolition permits. Charlton has been the most popular of the Shire's towns accounting for 32% of all new dwellings that have been built in the Shire's towns over this period. All of this new development has occurred within the existing zoned areas.

It is considered that Charlton is one of the towns in the Shire which could well succeed in attracting newcomers, being a sizeable and well-resourced town that also has a strong employment base and which is in relative close proximity to Bendigo (only 1.25 hours away by road). The 2009 Review noted the proximity to Bendigo as being a factor that could help retain younger people in the town.

It is apparent that there is considerably more scope for infill development within the Charlton's existing Township Zone areas than was expected, but that at some stage there may be a need to consider how additional subdivision and development can be facilitated. Given the extent to which the existing Township Zone areas on the east side of the river are affected by the Floodway Overlay and LSIO, the findings of the 2009 review regarding the suitability of the land east of Ellenwood Avenue (to the north of the railway) and the land north of Watson Street (in the eastern part of the Township Zone) should be reconsidered. In this regard, it should be noted that the provisions of the Floodway Overlay prevent subdivision which would result in the creation of lots which are wholly contained within the Floodway Overlay.

As far as long term development is concerned, most of the residential area in the northern area of the town (including the Clifton Hill Precinct) together with the farming land to the north of this area is free of flooding. This therefore is the area where future growth should be directed. We therefore concur with the 2009 Review findings that the farmland to the north of Windsor Avenue is the best area for future subdivision and development at some stage in the future, but note that this area is

currently used by Grain Corp. It is appropriate for this to be acknowledged on a framework plan in the MSS.

We also note that some of the larger lots fronting the Calder Highway in the western half of the town also offer scope for more intensive development. The advantage here is that this area is also unaffected by flooding.

### 12.3 Donald

Donald's population has sat somewhere between 1300 and 1400 persons since 1996.

However in common with the Shire's other towns, there have been dramatic falls in the younger age groups to age 35, while the older groups are growing as a percentage of the total population.

The 2009 review noted that of the five towns in the Shire, Donald had the strongest history of residential building permit growth. In fact, Donald accounted for half of the Shire's building approvals in the 11 years prior to 2009, with its best year being 2004 when 7 building permits were approved. However since then, it has been marginally overtaken in the dwelling approvals stakes by Charlton.

The 2009 report identified that Donald had 32 lots available at that time for residential development. Based on past patterns of development, it was considered that those lots would be taken up over a period of 5 to 6 years, but that in the longer term there would be a need for at least 75 lots over a 10 year period based on that same rate of demand.

The report identified the following areas where future residential demand could be met:

- In the short term, the vacant Township Zone land bounded by the railway line and the rear of residential lots fronting Woods Street and Alfred Street. This land was identified as one of the most practical areas available for development, being unaffected by flooding and with good accessibility to the town centre. It was estimated this area could yield about 50 lots with an average area of about 950 m<sup>2</sup>. It was noted however that the owner of the land at that time was not interested in subdividing or selling (which may still be the case).
- In the short term, to rezone land to the south of Donald High School and Goodwin Village and extending to the Donald-Stawell Road. It was estimated this area could be developed with another 35 lots of about 950 m<sup>2</sup>, together with group housing comprising about 50 high density lots of about 300 m<sup>2</sup> each. This land is not affected by flooding.
- In the medium term, to rezone land bounded by the railway line and the rear of the residential lots fronting the Sunraysia Highway and Avon Place and the PUZ6 site in Sproats Lane.
- In the long term, to rezone land behind the existing residential lots fronting the west side of the Donald-Stawell Road and bounded by Sheep Hills Road. It was estimated this area could be subdivided into 80-90 larger lots.

It was estimated that the land identified for rezoning from Farming Zone to Township Zone (being the last three of the areas noted above) could produce between 150-200 lots, after allowing for exclusion of areas affected by flooding. The report considered that rezoning of some of this land would need to occur by 2011. However this has not been the case.

The 2009 Review findings for Donald can be summarised as follows:

1. That the available residential lots would (based on a continuation of the existing building trends) only cater for about 3 year's development.
2. That land identified in the report would need to be rezoned to cater for longer term demand.
3. That land close to the main shopping area should be encouraged to be redeveloped at higher densities with one to two bedroom dwellings.

In the 10 years since the 2009 Review, only 14 building permits have been issued for new dwellings in Donald, and only 3 demolition permits. The anticipated demand for new lots has simply not eventuated, and all new development has occurred within the existing zoned areas. The area bounded by the railway, Woods Street and Alfred Street remains undeveloped. None of the other areas identified as future areas for subdivision subject to rezoning from Farming Zone to Township zone have been needed. The reality is there is ample scope for further development within the existing town boundaries, particularly if higher densities are encouraged.

## 12.4 Sea Lake

Sea Lake's population has been in steady decline since 1981, with the latest census (2016) recording the population at 563 persons. Sea Lake's population loss has been the highest of all the Shire's towns.

In common with the other towns in the Shire, there have been dramatic falls in the younger age groups to age 35, while the older groups are growing as a percentage of the total population.

Given the decline in Sea Lake's population, it is unsurprising the 2009 Review found the existing zoned areas could accommodate the short term (10 year) demand. It noted there were 71 lots available at the time for residential development, of which 32 were in areas which were likely to be attractive for new residential development. However the report also noted that with residential lot sales for the previous 7 years averaging only one per year, the attractive lots on their own would take around 30 years to be consumed. On this basis, the report found there was little need to rezone additional land. It also observed that lot sizes in Sea Lake are quite large and that this made for inefficient use of the land.

Despite the report's conclusions, three parcels were identified as candidates for future development over the long term, namely:

- Land to the east of Edgecombe Street, south of the Sea Lake-Swan Hill Road (Best St). It was estimated this area could produce 96 lots of 1000 m<sup>2</sup>.
- Land south of the PPRZ off Wilkinson and George Streets. It was estimated this land could produce 125 lots of 1000 m<sup>2</sup>.
- The old tennis courts and adjacent land on Tyrell Street, east of the Calder Highway (this land being within the Township Zone), along with neighbouring Farming Zone land further to the east on Tyrell St and the beginning of McClelland Avenue.

The 2009 Review findings for Sea Lake can be summarised as follows:

1. There was no need to extend the current residential land supply, which is more than adequate to accommodate short term (10 years) demand.
2. That within 5 years of the review report being adopted, the land along the north side of Tyrell Street (east of Calder Highway) should be developed for residential purposes. The land concerned is 23 Tyrell Street (Lot 1 TP245827) and is about 1 ha in area. The land is already in the Township Zone.
3. That the land to the north of McClelland Avenue be considered for rezoning from Farming Zone to Township Zone given it is adjacent to an Aged Care Facility. The report considered this land as being best suited to provide for more retirement units.

There is nothing to prevent any of the existing Township Zone land being residentially subdivided and developed, and it is not clear why the review report made recommendations at all in relation to such land. As far as rezoning any additional land is concerned, this is unnecessary and the recommendations to this effect need to be reconsidered because there is ample capacity within the existing Township Zone to accommodate all future demand for new dwellings.

## 12.5 Wycheproof

Wycheproof's population has been in steady decline since 1981, with the latest census (2016) recording the population at 585 persons.

In common with the other towns in the Shire, there have been dramatic falls in the younger age groups to age 35, while the older groups are growing as a percentage of the total population.

The 2009 Review findings for Wycheproof can be summarised as follows:

1. There was no need to extend the current residential land supply, which is more than adequate to accommodate short term (10 years) demand.
2. Within 5 years of the review report being adopted, the land to the south of the railway line be considered for rezoning for residential development.

The first of the above findings is still considered to be relevant given the capacity of the existing areas in the Township Zone to accommodate further development. The review report raised the possibility of houses of declining quality on some of the larger blocks being demolished and replaced with units or newer housing.

We consider the second of the above findings to be unnecessary in light of our comment above.

## 13. RURAL LIVING OPPORTUNITIES

### 13.1 Rural residential development considerations

During consultation for this study, it was suggested that there is a need to make provision for rural living opportunities around some of the Shire's towns. It was considered that there is buyer interest in lots ranging between 2 to 4 ha (5 to 10 acres), and that the absence of this kind of property is deterring potential residents from moving to the Shire.

In a consultation at Wycheproof we were given an example of young people who grew up in the town and who are interested in returning to settle with their families on a few acres at the edge of the township rather than within the township itself. However there is an absence of suitable lots for those people to purchase.

Another example given to us was the case of a young couple who wished to purchase a rural living property in Donald. However the absence of any RLZ lots meant they were limited in choice to a lot in the Farming Zone which contained an existing dwelling which did not suit their needs. They were therefore forced to buy a vacant Farming Zone lot in the hope they could obtain a planning permit for a dwelling. It was suggested that a choice of RLZ lots would cater for this type of buyer and help to attract more people to Donald.

The Draft Rural Living Development Study 2009 recommended extensive areas around all five of the Shire's towns be rezoned from the Farming Zone to the Rural Living Zone (RLZ) with two sets of scheduled controls allowing smaller lots ranging between 2 ha to 8 ha (Schedule 1) or lots up to 20 ha (Schedule 2). In summary, the areas recommended for rezoning were as follows:

- Birchip – 26 ha recommended for rezoning to RLZ (Schedule 1) and 60 ha for rezoning to RLZ (Schedule 2).
- Charlton – 68 ha recommended for rezoning to RLZ (Schedule 1) and 80 ha for rezoning to RLZ (Schedule 2).
- Donald – 68 ha recommended for rezoning to RLZ (Schedule 1) and 80 ha for rezoning to RLZ (Schedule 2).
- Sea Lake – 22 ha recommended for rezoning to RLZ (Schedule 1) and 60 ha for rezoning to RLZ (Schedule 2).
- Wycheproof – 42 ha recommended for rezoning to RLZ (Schedule 1) and 60 ha for rezoning to RLZ (Schedule 2).

However the mapping in the study identified far more extensive areas than this for rezoning.

As Council did not finalise the Rural Living Development Study, the recommendations were never implemented. In any event, it is considered that an amendment to rezone the land recommended in the draft report would never have been authorised by the Minister for Planning because of the

sheer extent of the land involved and the ongoing population loss that has been occurring within the Shire.

Despite our criticisms of the 2009 study, we agree with the sentiments expressed during the consultation about the need to make provision for rural residential living in some of the Shire’s towns. The towns where we consider this to be desirable are Birchip, Donald and Wycheproof. As far as Charlton is concerned, we consider there is no need for a designated RLZ area due to there being scope for rural living in the existing Township Zone areas, particularly in the southern part of the town. In the case of Sea Lake, we consider that there is already scope for this type of lifestyle choice within the existing Township Zone and that there is no need to identify additional land for this purpose.

The areas around Birchip, Donald and Wycheproof which were identified during the consultations as candidates for rezoning to RLZ are described in the following sections, followed by a combined assessment of these areas against the considerations under Planning Practice Note 37 ‘Rural Residential Development.’<sup>28</sup>

### 13.2 Birchip RLZ opportunities

Two areas with a combined area of approximately 53 hectares have been identified at Birchip as being suitable for rezoning to RLZ.

Area 1 is shown in Figure 6 and comprises approximately 29 ha at the northern edge of the town, while Area 2 is shown in Figure 7 and comprises approximately 24 ha along the west side of the Sunraysia Highway at the southern edge of the town.



Figure 6: Land in the northern part of Birchip suitable for rezoning to RLZ

<sup>28</sup> PPN37 - Rural Residential Development, DELWP, June 2015

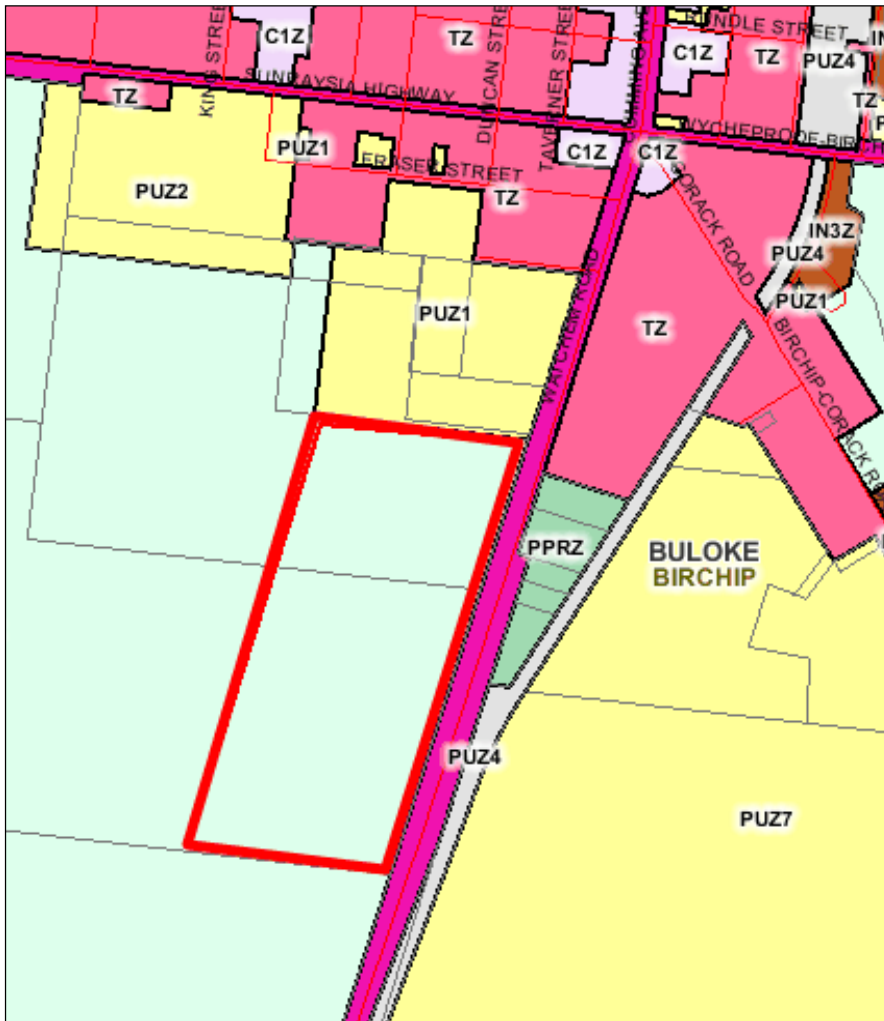


Figure 7: Land along west side of Sunraysia Highway suitable for rezoning to RLZ



### 13.3 Donald RLZ opportunities

An area at Donald (refer Figure 8) with an area of approximately 66 hectares has been identified as being suitable for rezoning to RLZ. The area concerned is to the east of the Donald Industrial Estate and is bounded by Tower Road, Tower Hill Road and Bunker Road. This area is in multiple ownerships and is the subject of many enquiries regarding rural living.



Figure 8: Land at the eastern edge of Donald recommended for rezoning to RLZ

During the consultation it was also suggested to us that in the long term land along the Richardson River to the north and south of the town could also be suitable for rural living development. However rezoning this land now, in addition to the land to the east of the industrial estate, would be excessive.

### 13.4 Wycheproof RLZ opportunities

An area of approximately 11.5 ha on the north side of Corack Road is considered to be suitable for rezoning to RLZ. This area is shown on Figure 9.

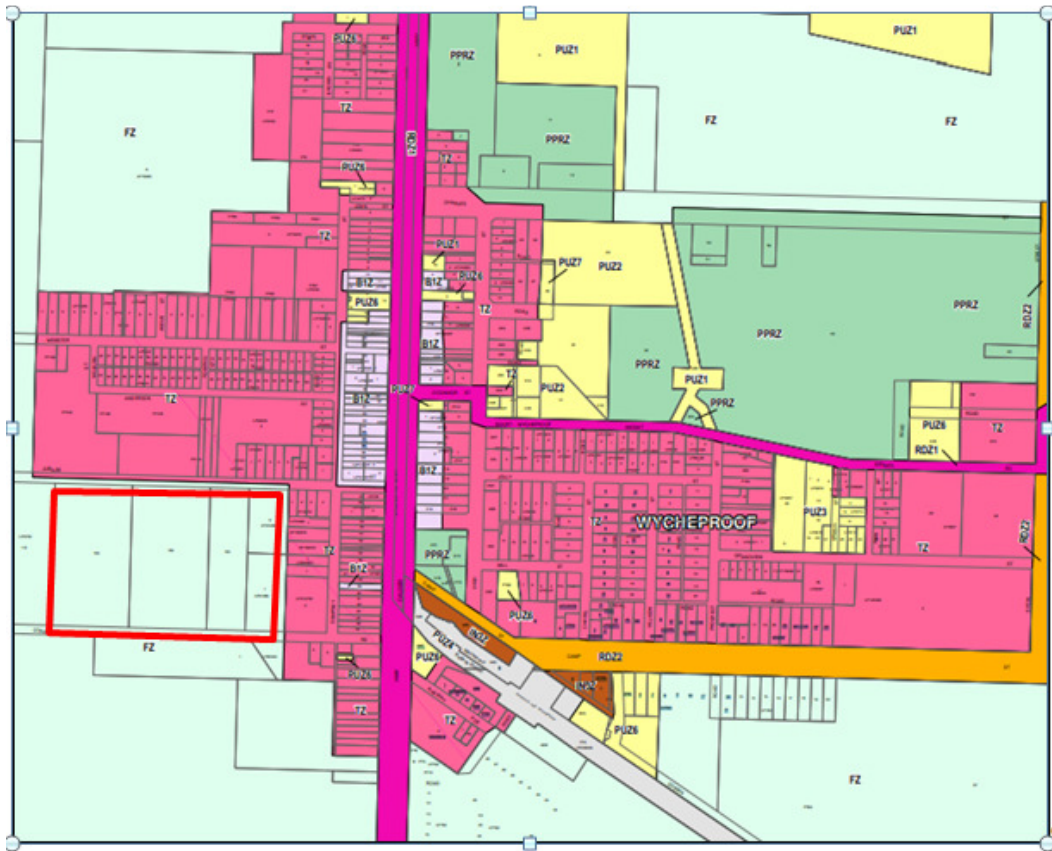


Figure 9: Land in Wycheproof suitable for rural living

### 13.5.1 Assessment against PN 37 ‘Rural Residential Development’

The following assesses the areas at Birchip, Donald and Wycheproof which have been identified for possible rezoning to RLZ against the considerations set out in Planning Practice Note 37 relating to rural residential development.

### 13.5.2 Strategy considerations

It is considered that rezoning to RLZ of the above identified areas at Birchip, Donald and Wycheproof is consistent with the State planning policy relevant to settlement planning which is noted earlier in this report.

Although the existing Township Zones in each of these towns is large enough to accommodate the likely demand for new residential lots over the next 10-15 years, there is no provision currently made in these towns for rural living despite empirical evidence that there is a demand for lots of this type.

Directing rural living opportunities to the townships is also consistent with the State planning policies relating to protection of agricultural land. It is better to consolidate the rural living opportunities at the edges of towns and direct people desirous of this kind of lifestyle to those locations than to have them living on small lots in rural areas.

The “edge of town” locations of the areas identified for rezoning to RLZ will ensure that future development opportunities within the towns will not be compromised, particularly having regard to the projected continued population decline for the Shire as a whole, the low growth rates in these towns, and the capacity within the existing Township Zone areas to accommodate new subdivision and development.

### **13.5.3 Housing need considerations**

As already noted, it is hard to quantify the demand which might exist for rural living lots when this kind of residential opportunity has not previously been catered for. In this regard, whilst there has been only a small number of dwelling approvals each year in the Shire’s towns, we have been told during community consultations that a demand for rural living lots does exist and that the absence of such lots has resulted in the loss of potential residents. Examples of lost opportunities to attract new residents due to the absence of rural living lots were noted above.

The provision of rural living lots in designated RLZ areas is not expected to significantly change the growth dynamics of the towns concerned, but is considered important as a means of providing additional housing choice and diversity.

The combined area of all the areas recommended for rezoning to RLZ is about 130 hectares. With the allowable lot sizes being between 2 ha and 4 ha, then this would allow for in the order of up to about 50 new lots assuming all the land was subdivided and developed.

### **13.5.4 Locational considerations**

All of the land identified for possible rezoning to RLZ is appropriately located.

At Birchip, the northern area identified for rezoning to RLZ abuts an existing residential area and represents a natural extension of the township, while the southern area is separated from the Township Zone by the GMW water supply site (PUZ1) but is within the general township environs (and opposite a public recreation reserve and the Birchip airport).

At Donald, the area identified for rezoning to RLZ is separated from the Township Zoned areas by the Donald Industrial Park (which is zoned Industrial 3). The industrial park however turns its back on the land concerned and is also screened by vegetation along the boundary of the park. The proposed RLZ area in fact represents a logical eastward extension of the Donald township and is contained within the general environs of the township by Tower Road, Tower Hill Road and Bunker Road.

At Wycheproof, the area identified for rezoning to RLZ is located on Corack Road and abuts the existing Township Zone to the north and east. The development of this area for rural living represents a logical extension to the township.

### **13.5.5 Protection of natural resources**

While all the land identified for rezoning to RLZ can be regarded as productive agricultural land, it is not high quality agricultural land.

The loss of the land to agricultural productivity is not an issue and is justified given the desirability of providing some rural living opportunities for the townships concerned.

There is no reason why development of any of these areas for rural living should be incompatible with ongoing agricultural use on adjacent land. In fact, having rural living lots between the Township Zone and the Farming Zone should ensure a more compatible interface with agricultural land.

### **13.5.6 Protection of environmental areas and biodiversity**

The land identified for rezoning to RLZ is all farmland. None of the land is subject to any environmental significance, vegetation protection or land management overlay.

### **13.5.7 Landscape and heritage values**

None of the land identified for rezoning to RLZ is affected by a significant landscape overlay.

In relation to heritage values, a heritage listed (HO66) tree reserve exists within the Sunraysia Highway reserve adjacent to the southernmost of the recommended RLZ areas at Donald. However the heritage asset in that instance is within the road reserve and not within the land recommended for rezoning.

### **13.5.8 Provision of social and physical infrastructure**

Because all the areas recommended for rezoning to RLZ are adjacent to a township, residents in these areas will have access to the full range of social and community facilities that are available within those townships.

### **13.5.9 Land use compatibility**

The future residential use of the land which has been recommended for rezoning to RLZ will be compatible with the adjacent and nearby land uses.

While the land at Donald which has been recommended for rezoning to RLZ adjoins the Donald Industrial Park, that park is zoned Industrial 3 Zone (IN3Z) which is an industrial zone which is used (among other things) to provide for industries and associated uses which will not affect the safety and amenity of adjacent, more sensitive land uses.

### **13.5.10 Land servicing capability**

All of the land recommended for rezoning to RLZ can be relatively easily provided with reticulated services, given their location close to the respective townships. Details of servicing (to be provided at the developer's cost) will need to be provided at the application stage.

### **13.5.11 Subdivision and design considerations**

Subdivision and lot design is a matter will be determined at the application for permit stage. Applications would be expected to address the information requirements set out in the Practice Note which are also duplicated to a large extent by the objectives and standards at Clause 56 of the Buloke Planning Scheme.

# PART C – FUTURE DIRECTIONS

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## 14. FINDINGS OF THIS STUDY

Our findings in respect of rural land use and settlements are summarised below, followed by our recommendations for changes to the Buloke Planning Scheme.

### 14.1 Rural Land Use

Agriculture is the backbone of the Buloke Shire and makes a significant contribution to the State's agricultural output. It is broadacre cropping that makes the biggest contribution, accounting for about 55% of the gross value of all commodities produced in the Shire. Wool, sheep and cattle disposals are the next most significant industries accounting for about 21% of gross commodity values, followed by intensive animal industries (eggs, pigs and poultry) which account for about 19% of gross commodity value.

One of the main purposes of a rural land use strategy is to inform decision making about the application of rural zones to particular areas and what the minimum lot sizes should be for subdivisions and dwellings. In many rural municipalities different zoning and controls is justified because variations in climate, landform, soils, water and vegetation result in significant variations in land capability and quality. For Buloke Shire however, this study has found that whilst there are variations in all of these matters, from a planning perspective the rural land in the Shire can be regarded as fairly uniform.

Given the uniformity of the land and the fact that the principal agriculture activity is broad-acre cropping where cropping paddocks need to be large in area and usually greater than 100 ha to facilitate the use of large equipment used for cultivation, crop spraying and harvesting, it is considered that the existing Farming Zone and scheduled controls (as set out in Schedule 1 to the Farming Zone) is appropriate to be applied to all of the rural land in the Shire.

Whilst it is appreciated that the Shire is proactively encouraging agricultural diversification and value-adding, including intensive animal industries, these activities can be accommodated under the Farming Zone and its scheduled controls. In this regard, the subdivision controls under the Farming Zone allow applications to be made for the creation of smaller lots to accommodate intensive farming and rural dependent enterprises, and there is also policy support for this.

For the above reasons, we therefore recommend maintenance of the status quo as far as zoning is concerned.

We consider however that there is a case for making some minor amendments to the existing local planning policy relating to rural land and sustainable agriculture (Clause 22.02). The main change is to remove some of the locational requirements relating to Rural Dependent Enterprises which we consider are unnecessary and restrictive, particularly given they are matters which are considered anyway under the Farming Zone decision guidelines.

We also consider there is no need for the policy relating to intensive animal industries (Clause 22.03), which is largely rendered irrelevant by the particular provision Clauses in the Planning Scheme relating to cattle feedlots (Clause 53.08), poultry farms (Clause 53.09) and pig farms (Clause 53.16) and the industry codes of practice that are referenced in these Clauses.

## 14.2 Settlements

In relation to the five main townships in Buloke Shire, this study finds in the context of the changes occurring in the agricultural sector and the net loss of population which has resulted from this, that the existing Township Zones in Birchip, Charlton, Donald, Sea Lake and Wycheproof contain ample capacity to accommodate any foreseeable urban residential growth. There is no need to expand the Township Zone in any of these townships.

We note that the residential land use review undertaken for Council in 2009 also found there was sufficient zoned land in each of the townships to meet short-term housing needs, but recommended that consideration be given in the medium to longer term to rezoning additional land at the edge of each township to accommodate long term growth. However we consider this to be unnecessary given the ongoing loss of population and the potential within the Township Zones of each township to accommodate infill development. This is consistent with the Loddon Mallee North Regional Growth Plan strategies that the settlements in Buloke Shire, whilst performing an important service centre role for the rural areas, need to adjust to ongoing population decline.

In addition to its residential land use review, a draft rural living development study was also undertaken for Council in 2009. That study recommended Council consider rezoning extensive areas around the edges of each township to Rural Living to allow for residential development on lots of 2 ha to 8 ha (Rural Living Zone, Schedule 1) and on lots up to 20 ha (Rural Living Zone, Schedule 2). However having reviewed these recommendations, we consider there is merit in Council pursuing a rezoning of some land at the edge of Birchip, Donald and Wycheproof to allow for the creation of rural living lots in the 2 ha to 4 ha range, and have recommended some suitable areas that could be rezoned to the Rural Living Zone and which would cater for potential residents who may be seeking an alternative to township living. However we do not support the creation of rural living lots larger than 4 ha given the management implications associated with such lots.



## 15. RECOMMENDED CHANGES TO PLANNING CONTROLS

In the introduction to this study, we noted that Victorian planning schemes are currently being amended so the local policy content of each planning scheme is integrated into a new Planning Policy Framework (PPF). This is part of a Smart Planning reform agenda which will result in better alignment of state policy with local policy, less duplication, stronger policy overall and simpler and more succinct planning schemes. As the changes will be policy neutral, this means the full content of the existing MSS and local policies will be carried across into the new PPF unless they are inconsistent with State policies (in which case they will be removed).

The PPF of the Buloke Planning Scheme will be in place before the amendments recommended in this rural land use and settlements strategy can be initiated. Therefore the changes to the MSS and local policies recommended in this study will ultimately need to be redrafted so that they become amendments to the new PPF.

With the above in mind, the following changes (amendments) to the Buloke Planning Scheme are recommended:

1. In Clause 21.03 'Environment and natural resources', update sub-section 21.03-1 relating to Agriculture in accordance with the changes recommended in this study (refer section 8.2). A recommended revised version of this Clause is included at Appendix 1.
2. Amend Clause 22.02 'Rural land and sustainable agriculture' in accordance with the changes recommended in this report (refer section 8.4). These changes include simplifying the references to Rural Dependent Enterprises, so that the Clause continues to acknowledge the importance of RDEs to the Shire's economy, while at the same time deleting the references to matters which are addressed under the decision guidelines in the Farming Zone. The Clause should continue however to acknowledge the importance of RDEs to the Shire's economy. A definition of RDEs should also be introduced. Also in Clause 22.02, the reference in the objectives to agroforestry is recommended to be deleted. A recommended revised version of this Clause is included at Appendix 2.
3. Deletion of Clause 22.03 'Intensive animal industries'.
4. In the Schedule to the Farming Zone at Clause 35.07, replace the words "Clause 22.03" where they appear in the third column opposite the reference to minimum subdivision areas with the words "Clause 22.02".
5. Rezone the areas identified in this study at the edge of Birchip, Charlton and Wycheproof to Rural Living Zone.
6. In due course, prepare the local component of a settlements policy for inclusion in the Planning Policy Framework, setting out the strategic directions for the Shire's five townships.

# APPENDICES

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## APPENDIX A: Clause 21.03-1 'Agriculture'

### **PROPOSED NEW CLAUSE 21.03-1 Agriculture**

#### **Objective**

1. To protect productive farming land and maintain land use patterns of large, viable lots for broad acre cropping.

#### **Strategies**

- 1.1 Encourage farmers to create farm plans to support sustainable farming outcomes integrating natural resource management, production objectives and economics.
- 1.2 Encourage the use of sustainable farming techniques such as crop rotation.
- 1.3 Consider surrounding land use patterns before removing land from agricultural use.
- 1.4 Limit the fragmentation of productive agricultural land to maintain sustainable holdings.

#### **Objective**

2. To support, promote and facilitate sustainable, diverse and viable agriculture to provide for the long-term economic, social and environmental health of the municipality.

#### **Strategies**

- 2.1 Encourage agriculture in the Shire to continue in accordance with the Rural Land Use & Settlements Strategy 2019.
- 2.2 Support research into farming efficiency and diversification, particularly by the Birchip Cropping Group and other agricultural research and development enterprises
- 2.3 Encourage and support innovative agricultural opportunities arising from the Wimmera Mallee Pipeline water supply.
- 2.4 Encourage and support innovative agriculture that aims to respond and adapt to climate change.
- 2.5 Encourage the revegetation of areas that are vulnerable to wind erosion.
- 2.6 Investigate where soil structure decline is significant within the municipality.
- 2.7 Actively encourage track rationalisation for hoofed animals in areas of soil structure decline.
- 2.8 Encourage and support agricultural diversification and sustainable farm practices.

#### **Implementation**

The strategies in relation to agriculture will be implemented through the planning scheme by:

#### **Policy guidelines**

- When deciding on applications in the Farming Zone, consider, as appropriate:
- The policy guidance set out in this planning scheme.

- The use of any relevant Catchment Management Strategy to promote integrated farm management and environmental protection.
- The need for land management, vegetation and habitat enhancement, appropriate water use and the protection of waterways.
- .The need to require a detailed site analysis to assess environmental impacts and land suitability.

**Application of zones and overlays**

- Applying the Farming Zone (FZ) to all agricultural land in the Shire.
- Applying the Environmental Significance Overlay (Schedule 1) to protect the environmental values of waterways.

## **APPENDIX B: Clause 22.02 ‘Rural Land and Sustainable Agriculture’**

### **PROPOSED NEW CLAUSE 22.02 Rural Land and Sustainable Agriculture**

#### **22.02 Rural Land and Sustainable Agriculture**

This policy applies to all land in the Farming Zone.

#### **Policy Basis**

Agriculture is the most significant industry in the municipality. This industry is reliant on a land resource that needs to be sustainably managed and protected from conversion to non-soil based use and development. The protection and enhancement of agriculture is linked to the environmental and economic well-being of the municipality.

While rural areas in Buloke Shire predominantly support broadacre agriculture, opportunities and requirements exist for the establishment of Rural Dependent Enterprises in these areas. These enterprises can include uses and developments such as fertiliser processing facilities, transport depots and storage facilities as well as intensive agriculture.

Rural Dependent Enterprises are important to the Shire’s economy, particularly for value adding industries associated with cropping and grazing.

The construction of dams is often necessary to support the agricultural and/or residential use of land. The siting, design, and construction of dams should be undertaken to minimise the impact on land and water-ways, with a particular emphasis on maintaining environmental flows in rivers and streams of the catchment.

#### **Objectives**

- To protect the Shire’s agricultural land because of its versatility, productivity and ability to sustain a wide range of agricultural uses without significant degradation.
- To prevent the unsustainable use of agricultural land which results in the loss of the quantity or quality of the natural resources and limits the realisation of the land’s full productive potential.
- To prevent land use conflicts between agricultural uses and sensitive uses to ensure that use and development are not prejudicial to agricultural industries or the productive capacity of the land.
- To ensure that the subdivision of land for the establishment of Rural Dependent Enterprises does not compromise the viability of the remaining rural holding.
- To support the diversification of agriculture and the processing of agricultural products grown within the municipality.

## Policy

It is policy that:

- The capability and suitability of agricultural land will be considered in the assessment of use and development proposals. Use and development of land should make optimum use of its productive potential and, where buildings or works are essential, they should be sited so as to avoid or minimise loss of good quality agricultural land.
- Agricultural land should be protected as an economic and environmentally valuable resource. Conversion of land to non-soil based use and development will be strongly discouraged unless there is no other suitable site for the proposed use and development and significant public benefit is demonstrated.
- Retention of agricultural land in productive units will be preferred and fragmentation of land will be strongly discouraged.
- Use and development proposals that are consistent with, and seek to implement, a whole farm plan will be encouraged. A whole farm plan demonstrates how the enterprise will be developed and operated. The whole farm plan must be of a high standard.
- Use and development will be discouraged in the Farming Zone which:
  - Alienates agricultural resources,
  - Is sensitive to off-site effects from agriculture such as sprays and odour,
  - Lessens the capacity of essential infrastructure
  - May prejudice agricultural resources and agricultural production.
- When considering applications for proposals potentially sensitive to normal activities in agricultural areas, consideration will be given to the need for buffers on the subject land.
- Use and development, including subdivision, which is in support of and incorporates best management practice will be strongly supported.
- Approvals for land use or development in rural areas may include permit conditions requiring works to mitigate potential environmental impact or repair existing environmental impact, for example, fencing remnant vegetation or replanting indigenous native vegetation.
- When considering an application for construction of a building in the Farming zone the responsible authority may consider, as appropriate:
  - the use of the natural topographical features to screen the proposed development,
  - the effect on attractive views of the natural landscape, and
  - the importance of the undeveloped natural vistas along the major highways.

### **Subdivision, Use and Development**

It is policy that the responsible authority may consider applications for subdivision of rural land to create lots less than 100ha where the following situations apply:

- Where an agricultural activity could viably take place on a small lot, because of its intensive nature; and
- Where a rural dependent enterprise is proposed and cannot be located outside the Farming Zone.

It is policy that, in considering applications to subdivide land to create lots less than 100 ha:

- Subdivisions which are likely to lead to a concentration of lots altering the general use and character of the area and which are inconsistent with the purposes of the zone will be discouraged.
- Subdivision creating lots of a size greater than that required to undertake the operations of the Rural Dependent Enterprise and to provide any necessary buffer areas will be discouraged.
- An application for the subdivision and use and development of land in the Farming Zone must be accompanied by a report that responds to the relevant Farming Zone decision guidelines (Clause 35.07-6).

### **Small Lot Excision in the Farming Zone**

- Lots created under the excisions provisions of the Farming Zone should have a maximum size of 2 hectares, except as otherwise required by a provision of this planning scheme.
- Dwellings excised under the provisions of Farming Zone should be in a habitable condition and able to comply with the Building Code of Australia to this extent.
- The excision of dwellings will take place in a manner that will ensure the dwelling does not have the potential to restrict agricultural production on adjacent land.
- An adequate distance should be maintained within the excised lot around the dwelling to reasonably limit any likely impacts of adjacent agricultural activity. The permit may require the planting of vegetation within the excised lot to reduce any potential impacts.
- Subdivision likely to lead to concentration of lots as to change the general use and character of the rural area will be discouraged unless it can be shown that the clustering of lots will not limit the productive use and development of the larger lots in the subdivision or that surrounding.
- Excision of more than one house lot from a rural property will generally not be supported.

## APPENDIX C: Victoria in Future Projections for Buloke Shire, DELWP

### VIFSA Buloke Shire

Source: Victoria in Future 2019

Contact: David Sykes (DELWP) 03 8683 0936 | david.sykes@delwp.vic.gov.au



#### Key Indicators: Population, Households and Dwellings

	2016	2018*	2021	2026	2031	2036
Total Population	6,280	6,180	6,070	5,740	5,390	5,020
Total Households	2,830		2,770	2,660	2,560	2,420
Household size**	2.17		2.14	2.10	2.04	2.00
Total dwellings	3,190		3,200	3,210	3,230	3,240
Occupancy ***	88.7%		86.5%	82.9%	79.3%	74.5%

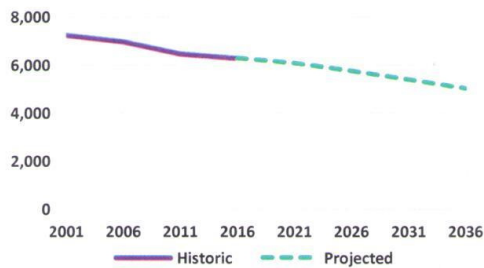
\* Population data only for 2018 \*\* Average persons/household \*\*\* Proportion of total dwellings occupied

#### Population change

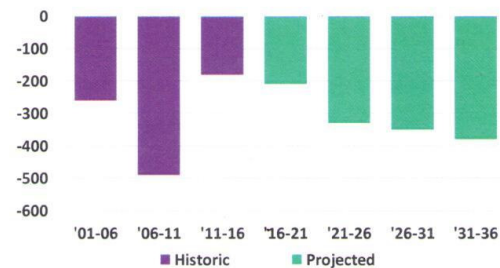
	2001-06	2006-11	2011-16	2016-21	2021-26	2026-31	2031-36
Absolute change	-260	-490	-180	-210	-330	-350	-380
Annual average rate	-0.7%	-1.5%	-0.6%	-0.7%	-1.1%	-1.2%	-1.4%
Natural Increase*	-80	-140	-140	-180	-230	-270	-290
Net Migration**	-180	-350	-40	-40	-100	-80	-90

\* Historical based on calendar year births and deaths \*\* Implied net (change not explained by natural increase)

#### Historic and projected population

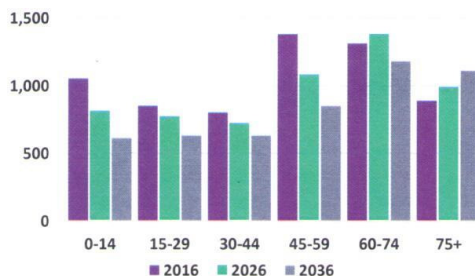


#### Population change



#### Population by age

	2016	2026	2036
0-14	1,050	810	610
15-29	850	770	630
30-44	800	720	630
45-59	1,380	1,080	850
60-74	1,310	1,380	1,180
75+	890	990	1,110



#### Households by type

	2016	2026	2036
Family with children*	840	710	610
Couple-only	910	890	800
Lone person	970	950	910
Group and other	110	110	90
Total	2,830	2,660	2,410

\* Includes couples with children & single parent households

