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**Lake Mokoan Land Use
Discussion Paper**

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Prepared for

Department of Sustainability and
Environment

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1 Introduction

Beca has been commissioned by the Department of Sustainability and Environment (DSE) and the Goulburn Broken Catchment Management Authority (CMA) as part of the Lake Mokoan Future Land Use Strategy (LMFLUS) to develop a range of potential land use scenarios for Lake Mokoan and to assist a community-based Steering Committee to compare and evaluate those scenarios, leading to a recommendation of a preferred land use strategy to the Victorian Government.

This document is in draft form and will be updated as more information becomes available.

Lake Mokoan is located in NE Victoria between the regional townships of Benalla and Wangaratta, west of the Hume Highway. The site is located within the Benalla Rural City.

The lake is located in the upper reaches of the Murray Valley, between the Broken River (at Benalla) and the Ovens River (at Wangaratta). The lake lies within the undulating uplands between the Benalla Plain to the west and the Warby Ranges to the east.

The lake covers an area of 7880 ha, with a perimeter of approximately 45 km. The tourist centre of Glenrowan, the Warby Ranges and local wineries are attractions close to Lake Mokoan. Since formation, the Lake has been used for a numerous business and community purposes, particularly for irrigation supply and recreation pursuits.

2 Objectives

The objective of this discussion paper is to provide the “Lake Mokoan Land Use Strategy” project team with contextual background information regarding the following issues:

- The legislative and policy framework affecting planning in the Study Area and wider Benalla Municipality;
- Land use, zoning and settlement patterns in the study area, and the impact that these may have on the future land use options;
- Existing agricultural land and practices within the Study Area.
- Land use capabilities within the Study Area, and the impact that these may have on the future land use options;

Due to the considerable overlap between the above issues, particularly in relation to the legislative and policy context, they have been presented in one discussion paper.

This discussion paper will inform the development of assessment criteria against which land use options can be evaluated.

3 Scope of Work

The Lake Mokoan Future Land Use Strategy (LMFLUS) consists of three discreet stages. This discussion paper has been prepared as part of Stage 1 of the Land Use Strategy Development, which relates to the review of background information and the identification of further work required.

The paper will form part of an overall issues paper for the site. A series of discussion papers have been prepared for specific issues to inform the initial stage of the development of the LMFLUS.

The study area for the LMFLUS encompasses the lake and all of the land currently owned and/or managed by Goulburn Murray Water (GMW), which extends up to and in some cases beyond full supply level. It also includes the inlet and outlet channels and their associated buffer strips owned by GMW. The study area falls wholly within Benalla Rural City.

This discussion paper is a review of the directly relevant strategy, policy and legislative context for the project, as it relates to land use, zoning and settlement patterns in the study area. Relevant considerations include state planning policy, the local planning scheme, and previous land use studies. The discussion paper also pulls together existing information regarding land use, agricultural land and practices and land use capabilities for the Study Area. This review will provide specific guidance for the development of land use options, and in particular, identify any specific opportunities or constraints imposed on the development of future land use options.

4 Methodology

This paper has been developed by reviewing:

- Relevant State and Local Government legislation and policy, including the White Paper - Our Water Our Future ... and Benalla Rural City Planning Scheme.
- Various reports completed for the Lake Mokoan Restoration Project to identify any relevant land use information.
- Maps, data and information currently published and available on the Department of Primary Industry website- www.dpi.vic.gov.au and the Department of Sustainability and Environment website- www.dse.vic.gov.au
- Information regarding land use and settlement patterns that has been obtained during community consultation for the project.

5 Legislation and Policy – The Planning Context

This section summaries the key legislation and policy prepared at the state, regional and local level which has either given rise to the Lake Mokoan Future Land Use Study or will influence future land use and settlement patterns in the Study Area. The legislative context is discussed in more detail in the summary discussion paper and appendix A of this report.

5.1 State and Regional Policy Framework:

5.1.1 The White Paper - Our Water Our Future (2004)

Section 3.9 of the *Action Plan* states that the Government will *begin meeting its commitments to the Snowy and Living Murray projects by decommissioning Lake Mokoan, delivering 44,000 megalitres in water savings annually to improve environmental flows for the Snowy and Murray Rivers whilst maintaining irrigators' reliability of supply and delivering increased efficiencies for water supply by undertaking a range of works.*

5.1.2 Growing Victoria Together

The Government of Victoria through *Growing Victoria Together* puts a high priority on halting degradation and restoring our natural resources. Some of the key aims of *Growing Victoria Together* are to promote sustainable development, build cohesive communities and protect the environment for future generations.

The key goal of land and water management in Victoria is sustainable development, which requires the complex integration of ecological, economic and social objectives. *Growing Victoria Together* confirms that in Victoria, the concept of integrated catchment management (ICM) underpins sustainable management of land and water resources and contributes to biodiversity management.

5.1.3 Catchment and Land Protection Act 1994

Under the *Catchment and Land Protection Act 1994* (the CaLP Act) Victoria is divided into ten catchment regions and a Catchment Management Authority (CMA) is established for each region. The CMAs were established on 1 July 1997 with the aim of creating a whole of catchment approach to natural resource management in the state. The primary goal of each CMA is to ensure the protection and restoration of land and water resources, the sustainable development of natural resources-based industries and the conservation of our natural and cultural heritage.

The study area is located within the Goulburn Broken Catchment. It comprises the catchments of the Goulburn and Broken Rivers and part of the Murray River valley. It includes the municipalities of Moira, Campaspe, Mitchell, Murrindindi, Mansfield and Strathbogie Shires, Benalla Rural City and the City of Greater Shepparton. The Goulburn Broken Regional Catchments Strategy Plan is the strategic document for this catchment and is discussed below.

5.1.4 Our Environment Our Future: Victoria’s Environmental Sustainability Framework (April 2005)

Following *Growing Victoria Together*, in April 2005 the Victorian Government released *Our Environment Our Future*, containing the environmental sustainability framework for the State. The framework provides direction for government, business and the community on building environmental considerations into the way Victorians work and live.

The Framework:

5.1.5 Goulburn Broken Regional Catchment Strategy Plan (2003)

The Goulburn Broken catchment is in central northern Victoria and comprises the catchments of the Goulburn and Broken Rivers and a small part of the Murray Valley, upstream of Echuca. It stretches from near the outskirts of Melbourne to the Murray River and includes the municipalities of Moira, Delatite, Mitchell, Murrindindi, Strathbogie and the City of Greater Shepparton.

5.1.6 Victoria Planning & Environment Act 1987 & Benalla Planning Scheme

Planning schemes contain goals, actions, policies and other provisions designed to bring about the planning outcomes outlined in Section 4(1) of the Victorian *Planning & Environment Act 1987* (P&E Act).

5.1.7 State Planning Policy Framework

The State Planning Policy Framework contains the strategic issues of State importance, which must be considered when decisions are made. The following State policies within the SPPF are particularly relevant to the study of land use and settlement in the Study Area.

5.2 Local Planning Policy Framework

The Study Area is located within the Benalla Municipality. The municipality covers an area of 2,353 square kilometres and extends from Devenish in the north to Lake Nillahcootie in the south, and from Baddaginnie in the west to Glenrowan in the east. The local planning context is provided in the Local Planning Policy Framework (LPPF) of the Benalla Planning Scheme. The LPPF consists of both the Municipal Strategic Statement (MSS) and all Local Policies. Appendix B of this report provides more detail assessment of the local planning policy framework.

The following table outlines the purposes or the zones relevant to the study area .

Zone	Purpose of the Zone
Rural Use Zone (RUZ)	<ul style="list-style-type: none"> ■ To provide for the sustainable use of land for Extensive animal husbandry (including dairying and grazing) and Crop raising (including Horticulture and Timber production). ■ To encourage: <ul style="list-style-type: none"> – An integrated approach to land management. – Protection and creation of an effective rural infrastructure and land resource. – Improvement of existing agricultural techniques. – Protection and enhancement of the bio-diversity of the area.

Zone	Purpose of the Zone
	<ul style="list-style-type: none"> - Value adding to agricultural products at source. - Promotion of economic development compatible with rural activities. - Development of new sustainable rural enterprises. ■ To ensure that subdivision promotes effective land management practices and infrastructure provision.
Rural Living Zone (RLZ)	<ul style="list-style-type: none"> ■ To provide for residential use in a rural environment. ■ To encourage: <ul style="list-style-type: none"> - An integrated approach to land management. - Protection and creation of an effective rural infrastructure and land resource. - Improvement of existing agricultural techniques. - Protection of the bio-diversity of the area. - Value adding to agricultural products at source. - Promotion of economic development compatible with rural living activities. - Development of new sustainable rural living enterprises. ■ To ensure that subdivision promotes effective land management practices and infrastructure provision.
Public Use Zone (PUZ1 – Service & Utility)	<ul style="list-style-type: none"> ■ To recognise public land use for public utility and community services and facilities. ■ To provide for associated uses that are consistent with the intent of the public land reservation or purpose.
Public Park and Recreation Zone (PPRZ)	<ul style="list-style-type: none"> ■ To recognise areas for public recreation and open space. ■ To protect and conserve areas of significance where appropriate. ■ To provide for commercial uses where appropriate.

6 Historical Settlement Patterns¹

6.1 Aboriginal

According to Clark (1990: Fig 13), the Lake Mokoan subject area probably falls within the known traditional boundaries of the Daung wurrung language group, whose territory extended from north of Healesville in the south to North of Benalla.

Following Clark (1990), the specific clan that occupied the land closest to the subject land was called the Yeerun-illam balug, whose approximate identified location was at Benalla (Clark 1990: Table 17, 366). Their location is given as the 'head of the Broken River, Benalla', the 'Broken River above and below Benalla, by swamp below Benalla: site of April 1838 'Faithfull Massacre', locality named 'Maragan' in some local histories (Barwick 1984: 128, cited in Clark 1990: 375). They were of the Bunjil moiety.

Chapter 4 of the Lake Mokoan Study – Final Report (August 2003) details the known sites and places of historic significance for the area and should be referred to for a detailed discussion. In summary there are presently a relatively large number of sites registered in the area surrounding Lake Mokoan. These sites represent a large range of site types,

¹ Sourced from Chapter 4 of the Lake Mokoan Study – Final Report, Volume 1, August 2003.

consistent with the varied terrain within this region and indicate historical aboriginal occupation of the study area.

The Heritage discussion paper provides a more rigorous assessment of the information available regarding heritage issues affecting the Study Area.

6.2 European

A brief account of the European history of the area is contained in the Land Conservation Council's review of the North-eastern area (Benalla-Upper Murray) (LCC 1984, 14-16).

The direct European history of the area began in 1824 when Hume and Hovell crossed the Murray River at Wodonga, and later crossed the Ovens River near present-day Wangaratta. (LCC 14-16). 1838 saw the first mail run between Melbourne and Sydney - along the present route of the Hume Highway.

The first European to settle in the Benalla area was George Faithfull, in 1837. There are Aboriginal post-contact sites relating to this early settlement (see Section 5.2.2). By 1840 land had been taken up along the Broken River.

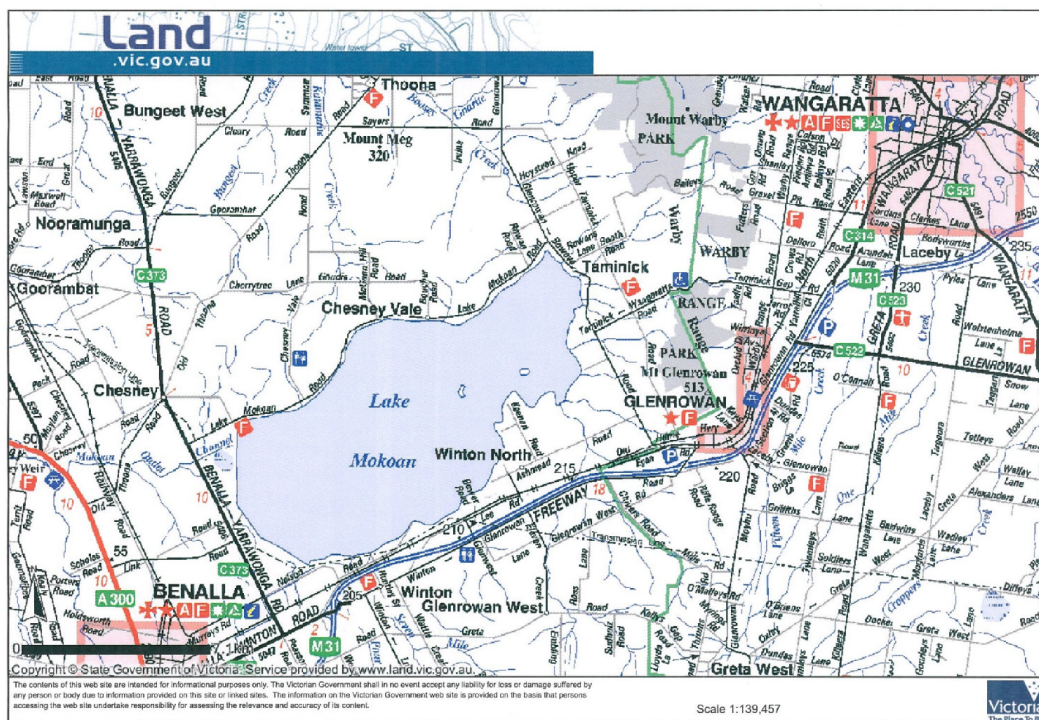
The settlement of the properties containing sections of Lake Mokoan began in 1847 with NSW issued licences, which were gazetted the following year. Land records for this period indicate rapid changes in land ownership following European settlement in the area. This could indicate a mixture of land speculation, particularly with the earliest settlers, to a difficulty in making a good living from the land. The first European occupation of the area was based on cattle grazing, which was followed by sheep, then a wider diversity of agriculture then forestry industries. In 1852, following the discovery of gold, the focus of the area's industries changed yet again to supply goods to the goldfields. The area also has strong ties with Victoria's bushranging history, in particular with the Kelly's.

7 Current Urban Land Uses and Issues

This section summarises the key features of the Study Area and the predominant urban land uses and settlement patterns- mainly in relation to nearby regional centres, towns, small towns, industrial and rural living environments.

Lake Mokoan is located in NE Victoria between the regional townships of Benalla and Wangaratta just west of the Hume Highway. The smaller townships of Glenrowan and Winton are located southeast and south of the lake respectively.

Figure 1: Map of Study area.



7.1 Regional Urban Uses

The regional centre of Benalla dominates the urban context of the study area, as do a number of smaller townships of Glenrowan to the southeast, Winton to the south and Thooona to the north. The Hume Highway runs along the southern side of the lake and is a significant regional transport network linking Melbourne and Sydney.

Benalla is a well-established regional city of some 9,000 (using 2001 Census data) and is the third largest centre in the Goulburn-North East region. Benalla is an established rural city that provides for a wide range of services for its residents and the surrounding area. Within Benalla area, a number of significant industries have established in the last 30 years or so providing a robust industrial base that accounts for a significant proportion of employment in the municipality.

Approximately 15km north of the lake lies the regional centre of Wangaratta- a centre widely recognised as the major regional centre for the north-east of Victoria. Wangaratta has strong tourism links with local King Valley wineries to the east and the snowfields to the north-east. The centre is well served by primary schools, secondary schools, a TAFE Institute and many childcare and kindergarten facilities.

The Rural City of Wangaratta describes Wangaratta as:

“..providing strong recreational, commercial, educational, tourism and health facilities, including a modern private hospital. It has diverse industry and economic stability and is the regional headquarters for several state government agencies.

7.2 Rural Living

Dotted around the perimeter of the Lake are a series of smaller rural townships that provide rural lifestyle blocks. Most of these blocks are located between Chesney Vale Road and McGann Hill Road, adjoining Lake Mokoan Road on land zoned as Rural living Land. These smaller settlements provide alternative living environments for some, as well as minor support roles for the surrounding communities in terms of goods and services. Hume Highway is located between the lake and Wilton Township. The townships of Glenrowan and Winton are located to the south of the lake.

7.3 Role of different townships

The following table outlines the different roles each urban area.

Township	Land Area	Population (2001)	Land Uses
Wangaratta	31.1 sq km	16,342 people	Regional centre for NE- higher order infrastructure- hospital. library, schools, recreation facilities, diversity of housing types and employment opportunities.
Benalla	16.2 sq km	9000 people	Regional centre for NE- higher order infrastructure- hospital. Library, schools, recreation facilities, diversity of housing types and employment opportunities.
Glenrowan	1.3 sq km	348 people	Smaller township, supports role of wine tourism and different agricultural land uses in area. A popular destination for commuters along the Hume Highway.
Winton	unknown	Less than 200 people	Smaller township, limited infrastructure. Caravan Park and tourism infrastructure to support Winton Racing Circuit.

The Population and Employment Discussion Paper developed by *Essential Economics* provide an assessment of the information available regarding population and employment issues affecting the Study Area. The paper identifies:

For this report, the Study Region comprises the Rural City of Benalla and the Rural City of Wangaratta. Combined, the study region covers an area of 2,340 km², and has an estimated resident population of 40,720 people in 2004. The study region has an estimated population of 40,720 people, 64% of whom live in the urban areas of Wangaratta and Benalla. Over the last decade or so, the study region has experienced relatively slow population growth. From 1991 to 2004 the resident population increased from 39,640 to 40,720, representing an average annual growth of 0.2% pa, which was lower than the average for regional Victoria (0.6% pa). During this time the majority of population growth (93%) occurred in the northern parts of Wangaratta municipality, and largely associated with the residential development occurring on the Wangaratta –Yarrowonga Road and College Street, as well as an increase in rural residential living.

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8 Current Rural Uses and Environmental Issues

This section summarises the key features of the Study Area and the predominant rural land uses and environment issues -mainly in relation to agricultural uses, environmental features and public land.

8.1 Existing Rural Uses.

The lake is located in the upper reaches of the Murray Valley, between the Broken River (at Benalla) and the Ovens River (at Wangaratta). The lake lies within the undulating uplands between the Benalla Plain to the west and the Warby Ranges to the east.

The lake covers an area of 7880 ha, with a perimeter of approximately 45 km. Sections of the former swamps, particularly along the northern boundaries, are quite steeply banked, as is the bank separating Winton and Green swamps, at the southern end. The Lake is located within the Goulburn Broken Catchment. The lake can be viewed from the Hume Freeway that flanks the east side of the lake. The tourist centre of Glenrowan, the Warby Ranges and local wineries are attractions close to Lake Mokoan. Since formation, the Lake has been used for a numerous business and community purposes, particularly for irrigation supply and recreation pursuits.

The land surrounding Lake Mokoan is currently used for a range of agricultural uses- predominately viticulture, orchards and dry land stock grazing – largely sheep and beef.

When looking at the wider region, the predominate agricultural land uses are broad acre cropping and crop pasture, and pasture dry land.

The Ecological Discussion Paper provides an assessment of the information available regarding ecological issues affecting the Study Area.

The hinterland surrounding Benalla is one of the most productive and diverse areas of rural Victoria, the predominant enterprises being prime beef and broad acre cropping. The land uses within the catchment are summarised in Figure 1 below.

Figure 2: Land use in the Goulburn Broken Catchment²

Land Use Type (Land Manager)	Hectares
Public Land	
State Forrest (forest management, commercial forests, NRE)	439,445
Victorian Plantations Corporations (VPC)	17,352
Gazetted Reserve	18,792
Public Land and water frontage reserve licensed by Land Victoria	22,107
Proposed Gazzetted Reserve	51,827
National Park Act Reserve (Parks Victoria)	94,421
Proposed National Parks Act Reserve (Parks Victoria)	87

² Land use in the Goulburn Broken Catchment Strategy- Data derived from data generated by GIS Unit, NRE Tatura 1998 (from Draft NVMS 1999).

Land Use Type (Land Manager)	Hectares
Alpine Resort Management Boards	5,049
Commonwealth Land (Ministry of Defence)	41,454
Freehold- vested with Government Bodies	69
Total Public Land	69,0603
Private Land	
Intensive Agriculture	270,655
General agriculture	139,7130
Urban/ other private land	73,266
Total private Land	174,051
Total Land	2431654

Source: Goulburn Valley Catchment Strategy (2003)

The wider region is one of the few non coastal rural areas in Victoria that continues to grow. Land uses within the catchment are changing. Agricultural industries are becoming more efficient, with the level of production doubling every 10 years and land used for agriculture decreasing. The Catchment's agricultural output - estimated to be worth over \$1.3 billion a year- supports a regional economy that has an annual economic output of \$7.8 billion and employs about 77,000 people³.

Land within the wider area is moving from agricultural use to rural living uses, particularly in the areas with easy access to Melbourne.

Land use in the area surrounding Lake Mokoan is mainly grazing with some improved pasture and minor cereal cropping.

The Warby Range to the east is managed as a State Park with some vineyards and orchards adjacent to it on the more fertile, well-drained soils.

8.2 Geology – A Brief Description

The geology and geomorphology of the area is complex and variable. The northern Victorian alluvial plain consists of a series of gently sloping alluvial fans and floodplains (Rosengren 1992). The alluvial fans consist of sediment derived from erodible sedimentary and igneous rocks of the Victorian Highlands and spread by rivers down the mountain flanks (Rosengren 1992). In the Shepparton area (including Lake Mokoan), the soils were formed by the deposition of alluvial sediments into a depression formed by massive land subsidence in the Tertiary. The dominant sediments in the area were deposited by an older river system (referred to as the 'prior stream' system) in the Quaternary period (1.6 million years ago to the present). The prior stream landscape is a complex array of relict channels intersecting more recent and currently active channels (NRE 2002). Consequently the soil types in the area are highly variable.

The catchment consists of three major land systems:

- Warby- north and east of the lake -consisting of granitic ranges with generally gradational soils.

³ Goulburn Broken Catchment Strategy

- Mokoan – immediately adjacent and to the south of the lake – plains with duplex soils with slow internal drainage.
- Lurg – the upper catchment to the south – consisting of sedimentary hills (up to 250m above the lake) with a mixture of reddish duplex soils (often stony) and paler gradational soils.

8.3 Soils

As this stage of the research, there is little information about the exact soil classification of the lake area, although broad soils information for the region provides some guidance as to likely soil conditions. Soil maps are provided in the appendices.

As the land use options develop, soil testing may need to take place to ensure that the recommended land uses are possible given the soil composition. In addition, there are a number of uncertainties about the nature of soils following decommissioning of the lake. The Department of Primary Industry (DPI) website provides a broad review of soils information available for the region, which is sufficient for this stage of the project.

Figure 3: Soils of the Goulburn Broken Region.

Dominant soil orders	Land area (ha)	%
Calcarosols	1407	0.1
Chromosols	352,545	14.8
Dermosols	510,732	21.5
Ferrosols	30,840	1.3
Hydrosols	7,904	0.3
Kandosols	211,000	8.9
Kurosols	94,671	4.1
Rudocols	18,054	0.8
Sodosols	983,808	40.8
Tenosols	72,120	3.0
Vertosols	105,463	4.4
Totals	2,391,544	100.0

The region has a range of soils with strong texture contrast between the surface and subsoil horizons. The soils are referred to as:

- Sodosols
- Demosols
- Kurosols or Chromosols

The DPI website states that

“Kurosols have clay subsoils which are strongly acid (i.e. pH <5.5 in water), whereas Chromosols have non-strongly acid subsoils (i.e. pH >5.5 in water). Sodosols have non-strongly acid subsoils that are also sodic.

Kurosols occur predominantly in the uplands where the rainfall is higher. Sodosols are widespread throughout the lower rainfall areas of the region and are commonly found throughout the Riverine Plains and in the low hills and rises to the east of Heathcote. Chromosols occur throughout the region."

Given the Lake Mokoan area was previously a wetland and water catchment area, the presence of Sodosols is unsurprising. The region also has Cracking Clay Soils, which are also referred to as Vertosols. These are clay soils that shrink and swell and crack as the soil dries. They are most common in the northern plains area in the north of the region. Small areas of Grey Vertosols are located around Lake Mokoan.

Goulburn Murray Water have undertaken some preliminary silt survey investigations. The investigation compares the silt sections of 1970 vs 2005. The preliminary results show that the lakebed has had little disturbance. The western end of the lake remains almost unchanged with some small changes being recorded toward the eastern end of the lake.

8.4 Flooding Issues

The Study Area is located within the Goulburn Broken catchment. The catchment covers a total of 2 391 544 ha, or 10.5% of Victoria's total land area. It provides 11% of the Murray Darling Basin's stream flow, although it occupies just 2% of the basin.

Lake Mokoan is filled primarily by diversion from the Broken River and Hollands Creek. The lake also receives inputs from rainfall over its surface and from its catchment. The catchment area is relatively small (330km²) with the main tributaries being Seven Mile Creek, Winton Creek, Eleven Mile Creek and Show Creek. These tributaries drain the Victorian Uplands to the south including the local region known as the Lurg Hills.

The lake and its surrounding land is part of the extensive northern Victorian alluvial plain, itself part of the larger Riverine Plain of the Murray-Darling Basin. The northern Victorian alluvial plain consists of a series of gently sloping alluvial fans and floodplains (Rosengren 1992). The prior stream landscape is a complex array of relict channels intersecting more recent and currently active channels (NRE 2002).

Based on observations of local drainage lines, the Mokoan area appears to be a low-gradient floodplain consisting of material deposited from the Warby Ranges to the east, the Victorian Uplands to the south and the Goorambat Hills to the north. It is likely that this small local catchment has lacked streams with sufficient force to move the sediments further down the floodplain. As a result shallow depressions in the floodplain have formed wetlands of various depths and varying degrees of permanency. The construction of the wall to the southwest of these wetlands has allowed their drainage to be regulated and, along with the diversion of water from the Broken River, has led to the formation of the present day Lake Mokoan. The Benalla Rural City Planning Scheme does not indicate and flooding overlay for land within the Study Area.

8.5 Rainfall

Rainfall within the Lake catchment area is approximately 600-800mm per year. It is noted however that there has been a number of years of 'drought' in the region, in some areas for the past 7-8 years..

Figure 4: Average Annual Rainfall

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9 Key Issues and Conclusions

9.1 Land Use and Settlement

The Benalla Planning Scheme provides the local planning framework for the study area. A review of the scheme's relevant policies, zones, ordinances and overlays for the Study Area has not identified any significant restrictions for the area.

A key policy of the scheme is the application of the Rural Housing policy to restrict the ad hoc use of rural allotments for housing. The Rural Housing Policy requires Council to protect high quality agricultural land and the development or subdivision of houses for non-agricultural purposes is discouraged.

9.1.1 Rural Living

The *Benalla Rural Living Strategic Study* recommends changes to the Chesney Vale rural living area, a 131 ha area located to the north of Lake Mokoan. This will see the existing RLZ land transferred to RLZ1 and a Development Plan Overlay (DPO) applied to the area. To date no changes to the Planning Scheme have been

In addition the Study provides an assessment of the demand and supply of land for rural living in Benalla. Long-term demand is estimated at approximately 15 lots per annum, with the rider that current demand appears to be significantly higher at 27 lots per annum. Based on demand of 15 lots per annum, the study concludes that the supply of vacant rural living lots would be exhausted in around six years. However, if potential subdivisions are taken into account, supply of vacant lots is around 60 years. It is estimated that the actual supply of rural living land is around 20 years.

The *Your Town Your Future Strategy* identifies that the supply of land for rural living development within the Benalla Municipality should generally not exceed 20 years. The strategy identifies that the rezoning of further land for development near the Benalla urban area may be required when less than 20 years supply of land is available.

The above strategy also advocates an average lot size of 2.0ha in areas where rural living policy objectives can still be met, within a 1 to 4ha range.

9.1.2 New Rural Zones

New zones have been proposed (and some already introduced) as part of the New Zones for Rural Victoria Study. This proposes 3 new zones (the Farming Zone, the Rural Conservation Zone and the Rural Activity Zone), and changes to the Rural Living Zone. The Benalla Planning Scheme has yet to be amended to apply the Farming Zone, Rural Conservation Zone and Rural Activity Zone to land. Therefore these three zones will not apply to any land. The process for amending planning schemes includes consultation with landowners.

The Lake Mokoan Future Land Use Study will need to take cognisance of the new zones and their purpose and application when selected preferred zones for land within the Study Area.

Changes to the State Planning Policy Framework have removed reference to 'high quality' agriculture and to focus on the protection of productive agricultural land. This should be reflected in the Study.

The Low Density Residential Zone has been amended so that a minimum lot size for subdivision greater than 0.4 hectares can be scheduled. This will enable the broader application of the zone so long as the Minister's Direction No. 6, Rural Residential Development and the normal strategic considerations are met.

9.1.3 Industrial Land Use near the Study Area

The Benalla 2015 Integrated Planning Strategy identified an area of land located to the east of the urban area, extending from the Hume Highway to the ADI Site and westward to the Midland Highway as appropriate for high quality industrial development. The Strategy recommended designating this area as a Future Employment Based Area by bringing this area within an Urban Development Zone through an amendment to the City and Shire's Planning Schemes, which set it aside for large scale industrial uses.

The presence of an area of large scale industrial uses within close proximity to the Study Area would influence the choice of future land uses to the west of Lake Mokoan. Conflicts between existing industrial uses and any new land uses would need to be considered.

It is unknown whether the proposed amendments to the Scheme to facilitate this development were undertaken and whether the area has been taken up for this intended use. Further investigation should be undertaken to confirm these issues.

9.2 Agriculture

The *Your Town Your Future Strategy* identifies the conflict between agricultural properties and rural living and housing development. The Strategy identifies that this can be minimised through the development of Codes of Practice and conditions to ensure compatibility between agricultural land and other uses, and investigate and where appropriate facilitate initiatives that protect a landowner's "right to farm".

To ensure that unnecessary constraints to the expansion of the agricultural sector do not exist, the strategy recommends reinforcing the minimum subdivision of 40ha on a Shire wide basis.

The land surrounding Lake Mokoan is currently used for a range of agricultural uses- predominately viticulture, orchards and dry land stock grazing - largely sheep and beef; any new agricultural uses should support these existing uses and building on the infrastructure already available.

9.3 Land Capability

Further analysis needs to be undertaken to determine the land capabilities of the land within the study area. At this stage only regional analysis has been undertaken. As the options develop, further assessment of soil types and suitability of land uses needs to be considered in greater detail. The community consultations session showed there was varying opinion of the land capability within the community. Further discussions needs to

take place with the Department of Primary Industry and Department of Sustainability and Environment to resolve this issue.

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10 References

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- Appendix A

Relevant Strategic Planning Policy

Legislation and Policy – The Planning Context

This section summaries the key legislation and policy prepared at the state, regional and local level which has either given rise to the Lake Mokoan Future Land use Study or will influence future land use and settlement patterns in the Study Area.

State Legislation and Policy

The White Paper - Our Water Our Future (2004)

This document and the discussions leading to its formulation have been one of the key drivers for the Lake Mokoan Study. *Our Water Our Future* followed on from the State Government's Green Paper on water reform, released in 2003, which contained 80 proposals designed to help all Victorians play their part in conserving water. The *Our Water Our Future Action Plan* to secure water for homes, farms, businesses and the environment. *Our Water Our Future* sets out 110 new initiatives for water conservation aimed at every sector of the community. It examines household use, industrial and agricultural use, recreation and tourism, environmental impacts, pricing, population increases and climate change to ensure there is plenty of water to sustain growth over the next 50 years.

As part of the action plan, the Victorian Government has specifically identified the need to restore the River Murray and the Snowy River. This will be achieved by⁴:

- Delivering an average of 120,000 megalitres of lower security water and 25,000 megalitres of high security water to the River Murray, in the Living Murray initiative; and
- Water savings from returning Lake Mokoan to a wetland.

Section 3.9 of the *Action Plan* states that the Government will *begin meeting its commitments to the Snowy and Living Murray projects by decommissioning Lake Mokoan, delivering 44,000 megalitres in water savings annually to improve environmental flows for the Snowy and Murray Rivers whilst maintaining irrigators' reliability of supply and delivering increased efficiencies for water supply by undertaking a range of works.*

The Action Plan identifies that decommissioning Lake Mokoan should be undertaken because of the following issues:

- *As a water storage reservoir, Lake Mokoan is inefficient. It loses 50,000 megalitres per year through evaporation, which is a result of its large surface area (approx 7,800 ha) and warm climatic conditions in the north of the State. Lake Mokoan is inherently inefficient given the high volume of water diversions required from the Broken River simply to replace water lost through evaporation.*
- *Since the mid-1980s, in most years the Lake has been affected by toxic blue-green algal blooms and high levels of turbidity have increased water treatment costs for Shepparton. The Lake's annual operating costs of more than \$600,000 are largely paid by irrigators outside the region who derive little benefit from it.*

The benefits of decommissioning the lake are set out in Table 3.4 of the Action Plan.

Growing Victoria Together

The Government of Victoria through *Growing Victoria Together* puts a high priority on halting degradation and restoring our natural resources. Some of the key aims of *Growing Victoria Together*

⁴ [http://www.dse.vic.gov.au/CA256F310024B628/0/95B345EEB1E7F88CCA256FFE0007C92B/\\$File/Chptr3.pdf](http://www.dse.vic.gov.au/CA256F310024B628/0/95B345EEB1E7F88CCA256FFE0007C92B/$File/Chptr3.pdf)

are to promote sustainable development, build cohesive communities and protect the environment for future generations.

The key goal of land and water management in Victoria is sustainable development, which requires the complex integration of ecological, economic and social objectives. *Growing Victoria Together* confirms that in Victoria, the concept of integrated catchment management (ICM) underpins sustainable management of land and water resources and contributes to biodiversity management.

Under the *Catchment and Land Protection Act 1994* (the CaLP Act) Victoria is divided into ten catchment regions and a Catchment Management Authority (CMA) is established for each region. The CMAs were established on 1 July 1997 with the aim of creating a whole of catchment approach to natural resource management in the state. The primary goal of each CMA is to ensure the protection and restoration of land and water resources, the sustainable development of natural resources-based industries and the conservation of our natural and cultural heritage.

The study area is located within the Goulburn Broken Catchment. It comprises the catchments of the Goulburn and Broken Rivers and part of the Murray River valley. It includes the municipalities of Moira, Campaspe, Mitchell, Murrindindi, Mansfield and Strathbogie Shires, Benalla Rural City and the City of Greater Shepparton. The Goulburn Broken Regional Catchments Strategy Plan is the strategic document for this catchment and is discussed below.

Our Environment Our Future: Victoria's Environmental Sustainability Framework (April 2005)

Following *Growing Victoria Together*, in April 2005 the Victorian Government released *Our Environment Our Future*, containing the environmental sustainability framework for the State. The framework provides direction for government, business and the community on building environmental considerations into the way Victorians work and live.

The Framework:

- outlines the key environmental challenges Victoria faces;
- explains what 'environmental sustainability' is and why it is important;
- identifies the strategic directions we must pursue to become environmentally sustainable;
- sets out objectives to be achieved and interim targets for measuring progress towards the objectives; and
- identifies some important steps for putting the Framework into action.

A key objective set by the framework is to seek a significant improvement in the health of Victoria's rivers and high quality drinking water. Interim targets to achieve these objectives include:

- Significantly improve the health of Victoria's rivers by 2010; and
- Recover 500gl of water over 5 years to improve the environmental flows at 6 icon sites along the Murray River.

The above sustainability framework and objectives provide the broad strategic context within which this Study has been prepared.

Goulburn Broken Regional Catchment Strategy Plan (2003)

The Goulburn Broken catchment is in central northern Victoria and comprises the catchments of the Goulburn and Broken Rivers and a small part of the Murray Valley, upstream of Echuca. It stretches from near the outskirts of Melbourne to the Murray River and includes the municipalities of Moira, Delatite, Mitchell, Murrindindi, Strathbogie and the City of Greater Shepparton. The catchment

boundaries are contained in Appendix X. The Study Area is located within the Mid Goulburn Subcatchment.

The Goulburn Broken Regional Catchment Strategy Plan is the blueprint for integrated natural resource management across the catchment. The original Regional Catchment Strategy was completed in 1996 following widespread consultation. The most recent Strategy was released in 2003 and provides an overall vision for the catchment and assesses the catchment's natural assets and current and emerging threats such as salinity and declining water quality.

The RCS draws together the key elements of a raft of sub-strategies and papers and recognises the fundamental role partnerships between agencies and the catchment community play in achieving environmental goals. The key issues addressed by the Strategy are; riverine health, salinity, biodiversity, plant and animal pest and other issues such as climate change and soil health.

The sub-strategies produced in the Goulburn Broken Catchment include:

- Goulburn Broken Regional Catchment Strategy 1995;
- Shepparton Region Land and Water Management Plan 1990;
- Goulburn Broken Dryland Salinity Management Plan 1990;
- Goulburn Broken Water Quality Strategy 1996;
- Goulburn Broken Native Vegetation Management Strategy 2000;
- Goulburn Broken Weeds Action Plan 2000; and
- Goulburn Broken Rabbit Action Plan 2000.

The RCS prioritises the actions and works that must occur to address the threats in the catchment so that effort and funding can be directed where they are most needed.

The Strategy acknowledges that the need for water savings to meet the Snowy River commitments (ie. The Our Water Our Future Action Plan), and the increased interest in establishing environmental flows for the Murray River as well as the region's rivers and streams will put pressure on water assets within the catchment. The Strategy does not specifically identify the decommissioning of Lake Mokoan as a means of achieving these key objectives.

In relation to landuse the Strategy identifies that land use patterns are changing within the region, driven by factors such as water markets, commodity prices, and demographics. A new 'mosaic' of land use pattern is emerging within the catchment that is likely to see:

- An intensive agricultural zone with a smaller ecological footprint.
- An increased 'conservation' zone where the land previously used for traditional agriculture is managed for nature conservation and ecosystem services.
- Rural living areas where land, particularly near urban centres, is converted to hobby farms and smaller farms.

The Strategy also identifies that historical settlement patterns within the catchment have resulted in conversion of floodplains to agricultural land. This is primarily an issue in the Lower Goulburn River Floodplain, the 156 km stretch of the Goulburn River between Shepparton and Kanyapella. The Strategy is supported in part by the Regional Floodplain Strategy which expands on the above issues.

Benalla 2015 Integrated Planning Study (December 2004)

In November 1994 the City and Shire of Benalla were restructured with local government reform to form part of the Shire of Delatite. The Benalla 2015 Planning Study was completed in December 2004

and examined the future needs of the Benalla urban area and surrounding areas to the year 2015 and devise an overall strategy which sought to integrate economic, social, physical and environmental planning. The investigation area does not cover Lake Mokoan, however it does include areas of land to the east of the town which will affect the Study Area.

The Study is presented as three separate volumes: Executive summary and consolidated recommendations; Analysis and Assessment and Appendices and background data. It provides a wealth of background information for the town and surrounding area, some of which is directly relevant to the Lake Mokoan Future Land Use Study.

During the Study consultation was undertaken with councillors, council staff, government departments, interest groups, general public and specific landowners.

The strategy plan proposes and details eight action areas and how these will be undertaken. Those of relevance to the Study Area include:

- A single consolidated land use strategy implemented through a common set of planning provisions – one planning scheme for the whole area with simplified procedures for development in accord with the strategy; and
- Support for the development of an Enterprise Park as a ‘world best practice’ employment area and provision of new large industrial sites which enable Benalla to provide large sites for major new enterprises.

In relation to the second bullet point, the area of land located to the east of the urban area, and closest to Lake Mokoan is identified within the Strategy as Investigation Area 5 (See the Plan on Page 2 of Volume 2). The strategy notes that a 100 ha area of land in this vicinity was recently purchased by the City of Benalla as a future ‘enterprise park’ for high quality industrial development. The Strategy recommends designating an area extending from the Hume Highway to the Australian Defence Industries Site and westward to the Midland Highway as a Future Employment Based Area where land should be held in large parcels, residential development limited and the land held in suitable zoning to provide for potential longer-term uses. It is proposed to bring this area within an Urban Development Zone through an amendment to the City and Shire’s Planning Schemes which set it aside for large scale industrial uses.

Your Town – Your Future Strategy Plan (May 2001)

The former Delatite Shire Council undertook the preparation of an Integrated Planning Strategy known as “Your Town – Your Future” Strategy Plan (YTYF) which was adopted by the former Delatite Council in December 2001. YTYF addressed a range of key issues relating to the future development and planning of the former Delatite Shire including plans and policies. These include settlement strategies for the following:

- Agribusiness and rural land
- Small settlements and communities; and
- Rural living.

The specific strategies for these sectors are outlined below.

Agribusiness and rural land

The strategic aim for agribusiness and rural land is to facilitate and encourage agribusiness activities. YTYF seeks to safeguard the natural resource base by encouraging sustainable farm management

practice, involving land capability and best management practices; and encouraging appropriate land use and development.

YTYF identifies the conflict between agricultural properties and rural living and housing development. The Strategy identifies the need to develop Codes of Practice and conditions to ensure compatibility between agricultural land and other uses, and investigate and where appropriate facilitate initiatives that protect a landowner's "right to farm".

The Council needs to ensure that unnecessary constraints to the expansion of the agricultural sector do not exist. This can be achieved by reinforcing the minimum subdivision of 40ha on a Shire wide basis.

Settlement Strategy

The strategic aim for small settlements and communities is for Council to work in partnership with local communities to strengthen community networks and improve their quality of life through community projects. The strategy seeks to support the survival and growth of small towns in the municipality. In addition the intent is to guide future planning and decision regarding distribution of resources. Within the context of the Study, small settlements include the township of Winton, located to the South of Lake Mokoan, and adjacent to the Study Area. A structure plan has been prepared for Winton to provide for the future development of the town and provide for anticipated land use requirements. A copy of the structure plan is contained within the *Your Town Your Future Background Report*. The Strategy identifies that a key improvement for the town is to develop it as a Motor Sports Centre.

Rural Living

The strategic aim for rural living in YTYF is to provide a planned response to the demand for lifestyle properties. The term 'rural living' refers to low density residential properties in a rural setting. The strategy seeks to recognise the strong lifestyle appeal of rural living development, and to ensure provision of land for development is compatible with other land uses and natural resource issues. YTYF identifies rural living as a legitimate land use and an important economic component for the municipality. The strategy reiterates state policies for rural living land in that good quality agricultural land should be protected from rural living, as should areas that may create conflicts between residents and agriculturalists. A community focus is recognised as an important re-requisite for rural living and isolated rural living areas should be avoided.

YTYF recommends the following objectives for rural living development:

- That the preferred location for such development be in proximity to urban areas where services and a community focus are readily available to residents.
- That development be guided to areas where infrastructure such as roads, telecommunications, electricity and water are readily available.
- That such development be directed towards areas where such development would be compatible with surrounding land uses. This can best be achieved by limiting the dispersal of rural living development through the rural areas.
- That such development does not occur in areas of environmental significance or areas of high quality agricultural land.
- That Council should review the supply and location of land zoned for rural living purposes having regard to the above criteria to ensure that the zoning structure reflects the strategy of Council and ensure there is an adequate supply of affordable allotments available within these preferred areas.

The Strategy identifies that the supply of land for rural living development should generally not exceed 20 years. YTYF advocates an average lot size of 2.0ha in areas where rural living policy objectives can still be met, within a 1 to 4ha range. In addition the strategy identifies that the rezoning of further land for development near Benalla may be required when less than 20 years supply of land is available.

Rural Living, Rural Housing & Subdivision Study (2000)

The *Rural Living, Rural Housing & Subdivision Study* was undertaken in 2000 in response to the “*Your Town – Your Future*” Strategy Plan. This study reviewed agricultural land use in the former Shire of Delatite and made recommendations relating to policy that will direct Council on rural land use, including rural living. This study acknowledges rural living as a legitimate land use and concludes that arrangements need to be established to address the interface between agriculture and rural living development. The study also advocates the use of the LDRZ as a means to “*relieve the pressure and slow the loss of rural land to meet the market demand for this type of lifestyle development.*” This study recommends that Council acknowledge rural living development as an opportunity but for development to be undertaken “*in a sustainable and environmentally acceptable manner.*” There are no Design and Development Overlays (DDO) covering Goulburn-Murray land on and around Lake Mokoan.

- Appendix B

Benalla Rural City Planning Scheme

Victoria Planning & Environment Act 1987 Benalla Planning Scheme

Planning schemes contain goals, actions, policies and other provisions designed to bring about the planning outcomes outlined in Section 4(1) of the Victorian *Planning & Environment Act 1987* (P&E Act).

Objectives

Of the seven P&E Act objectives the four most relevant to land use planning within the Lake Mokoan Study Area are as follows:

- To provide for the fair, orderly, economic and sustainable use and development of land.
- To conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value.
- To facilitate development in accordance with the objectives set out in the points above.
- To balance the present and future interests of all Victorians.

State Planning Policy Framework

The State Planning Policy Framework contains the strategic issues of State importance which must be considered when decisions are made. The following State policies within the SPPF are particularly relevant to the study of land use and settlement in the Study Area (references in brackets are to clauses in the Benalla Planning Scheme).

Protection of catchments, waterways & groundwater (Clause 15.01) The objective of this policy is *“to assist the protection and, where possible, restoration of catchments, waterways, water bodies, groundwater, and the marine environment.”* The policy is generally implemented by drawing reference to catchment management strategies and requiring Councils to consider the impact of development on watercourses and water quality.

Floodplain Management (Clause 15.02) The objective of this policy is *“To assist the protection of...the natural flood carrying capacity of rivers, streams and floodways; and the flood storage function of floodplains and waterways.”* For this to be achieved, flood risk must be considered in the preparation of planning schemes and land use planning decisions to avoid intensifying the impacts of flooding through inappropriately located uses and developments.

Open Space (Clause 15.10) The objective of this policy is *“to assist creation of a diverse and integrated network of public open space commensurate with the needs of urban communities and rural areas.”* This is achieved by responsible authorities planning for regional open space networks to be used for recreation and conservation of natural and cultural environments.

Residential development for single dwellings (Clause 16.01) The objective of this policy is *“to encourage subdivisions in locations with access to physical and community infrastructure and providing a range of lot sizes, a convenient and safe road network, appropriate pedestrian and cycle paths, sufficient useable public open space and low vulnerability to fire.”* This will be achieved by authorities making maximum use of **Clause 56** to plan subdivision for development of single houses.

Medium-density housing (Clause 16.02) The objective of this policy is *“To encourage the development of well-designed medium-density housing”.* To achieve this, responsible authorities should use **Clause 54** and **Clause 55** in considering applications for medium-density housing.

Rural living and rural residential development (clause 16.03) The objective of this policy is *“to identify land suitable for rural living and rural residential development”.* The policy is generally

implemented by the application of Ministerial Direction No. 6 for Rural Residential Development to proposals for this type of residential development.

The policy states that land should only be zoned for rural living or rural residential development where it:

- Is located close to existing towns and urban centres, but not in areas that will be required for fully serviced urban development.
- Can be supplied with electricity and water and good quality road access.
- Does not encroach on high quality productive agricultural land or adversely impact on waterways or other natural resources.

The provisions of Ministerial Direction No 6 are detailed later in this report.

Agriculture (clause 17.05) The objective of this policy is “to ensure that the State’s agricultural base is protected from the unplanned loss of high quality productive agricultural land due to permanent changes of land use and to enable protection of productive farmland which is of high quality and strategic significance in the local or regional context”. The policy is generally implemented by taking account of the quality of agricultural land in making planning decisions and protecting land of high quality from being removed from agricultural production.

Declared highways, railways and tramways (Clause 18.01). The objective of this policy is “to integrate land use and transport planning around existing and planned declared highways, railways, principal bus routes and tram lines.” This is achieved by new uses or development of land near an existing or proposed transport route being planned or regulated to avoid detriment to, and where possible enhance, the service, safety and amenity desirable for that transport route in the short and long terms.

Water supply, sewerage and drainage (Clause 18.09) The objective of this policy is “to plan for the provision of water supply, sewerage and drainage services that efficiently and effectively meet State and community needs and protect the environment.” This is implemented by planning and responsible authorities ensuring that water quality in water supply catchments is protected from possible contamination by urban, industrial and agricultural land uses.

Developer contributions to infrastructure (clause 18.12) The objective of this policy is “to provide for partial funding of physical and community infrastructure by use of development contributions.” The policy allows Council to seek monetary contributions for new specified development in accordance with a Contributions Plan prepared in accordance with DSE guidelines.

Ministerial Direction No 6, Rural Residential Development

Minister’s Direction No 6, Rural Residential Development, is intended to give clear and consistent guidance for planning authorities preparing Planning Scheme amendments to allow rural residential development. It is noted that the Direction currently does not strictly apply to rural living land zoned RLZ as ‘rural residential’ is defined as subdivision and development relating to lots in the 0.4ha to 2.0ha size range. However, despite this, DSE have maintained it is also the intention of the Direction to apply to rural living (i.e. rezoning land to RLZ).

In the context of this study, the Direction requires Council to consider a number of matters if it is to contemplate any Planning Scheme amendment relating to rural living.

These matters include the following:

Strategic and spatial considerations such as:
State policies

- Regional and local policies and plans
- Urban area integration
- Supply and demand
- Agency comments

Local and site considerations and constraints including:

- Land use compatibility
- Resources protection
- Landscape and heritage values
- Health and hazards
- Infrastructure and social services

Regional Planning Policy Framework

Melbourne 2030 - Planning for Sustainable Growth (October 2002)

Melbourne 2030 is a 30-year plan to manage growth and change across metropolitan Melbourne and the surrounding region. It emphasises the state capital's interdependence with regional Victoria, to provide maximum benefit to the whole state.

Whilst the strategy focuses primarily on the metropolitan Melbourne urban area and the nearby non-urban areas, it also deals more broadly with the wider region where, increasingly, development is linked to and affected by metropolitan Melbourne in terms of commuting, business and recreation. Therefore, Melbourne 2030 also considers the area between metropolitan Melbourne and the regional centres of Geelong, Ballarat, Bendigo, and the Latrobe Valley.

The Study Area is located adjacent to the Humes Highway which is identified in the document as a major road network. The Plan identifies the linkages that this transport corridor provides within the region.

Local Planning Policy Framework

The Study Area is located within the Benalla Municipality. The municipality covers an area of 2,353 square kilometres and extends from Devenish in the north to Lake Nillahcootie in the south, and from Baddaginnie in the west to Glenrowan in the east. The local planning context is provided in the Local Planning Policy Framework (LPPF) of the Benalla Planning Scheme. The LPPF consists of both the Municipal Strategic Statement (MSS) and all Local Policies.

Municipal Strategic Statement

Clause 21.05 of the MSS sets out the issues, strategies and objectives and implementation plan for settlement in Benalla. The issues that are relevant to Lake Mokoan are, among others:

- Continued demand for Rural Living development particularly in the Benalla area.
- Potential impact of rural housing being developed on rural allotments, without due regard to orderly planning, services, environmental impacts and the loss of land from rural production
- Potential environmental impact of building on old crown town subdivisions.
- The need to consider development contributions for subdivision in rural areas.
- The need to develop a strategic approach and structure plans for settlements.

- Potential pressure on natural environment through use and development of land in smaller unsewered settlements.

In response to these issues (and opportunities), the MSS sets out the following strategies:

- Implement the *Benalla 2015 Planning Study* for the future planning of Benalla.
- Use structure plans to guide the layout and provision of infrastructure in Benalla, and other townships within the municipality, when they become available.
- Ensure that use and development does not have an adverse effect on natural features.
- Recognise the role of townships and their competitive strengths.
- Support the ongoing existence of townships when possible.
- Service townships prior to allowing further expansion.
- Initiatives to enhance the viability of townships will be encouraged.
- Townships will be promoted as an alternative living environment.
- Townships with growth potential will be identified.

These strategies will be implemented through application of the following:

- Application of the Rural Housing policy to restrict the ad hoc use of rural allotments for housing
- Complete an integrated strategy for the municipality, implement findings of the strategy and amend the scheme as appropriate.
- Investigate a development contributions plan and Development Contribution Plan Overlay to offset costs of infrastructure.
- Develop local structure plans for townships.
- Identify and map flood hazard areas for all major watercourses in the municipality in conjunction with the Goulburn Broken Catchment Management Authority.

In addition to the settlement statements above, the MSS also contains issues, strategies and objectives relating to the environment (**clause 21.05**), housing strategy (**clause 21.06**), economic development (**clause 21.07**) and infrastructure (**clause 21.08**) that will be relevant to the future use of the Study Area. These statements reiterate the need for any settlement in the municipality to be planned and appropriately serviced.

10.1.1 Local Planning Policies

The following local policies are relevant to the consideration of land use and settlement in the Study Area (references in brackets are to clauses in the Benalla Planning Scheme).

Townships policy (clause 22.01)

The overall objective of this policy is to recognise and support the role of townships in the municipality and ensure any development has minimal impact on the environment by requiring infrastructure provision with development where necessary. This policy allows Council to develop local structure plans for townships.

Land degradation policy (clause 22.02)

The overall objective of this policy is to protect land from degradation and to encourage its rehabilitation. The policy enables Council to request a site assessment plan and report on land

management to accompany a planning permit application if deemed necessary. These requirements for an application are considered essential for rural living development.

Water quality policy (clause 22.03)

The overall objective of this policy is to improve the water quality of streams and storages within the municipality. The policy allows Council to require the implementation of measures in association with development that will achieve the objective such as buffers and re-vegetation. Land rehabilitation and re-vegetation works should be imposed as requirements for subdivision where either land degradation is evident or rural living development has the potential to cause land degradation.

Flooding policy (clause 22.04)

The overall objective of this policy is to minimise damage caused by flooding. The policy requires Council to consider the impacts of any proposed development on flooding.

Flooding information in the municipality is good following a major flood in 1993, the preparation of flood maps by the GBCMA in 2003 (to be the subject of a future Planning Scheme Amendment), and a flood mitigation report entitled Benalla Floodplain Management Study, Final Report, October 2002.

Native flora & fauna policy (clause 22.05)

The overall objective of this policy is to protect areas of remnant native vegetation and habitat for native animals. The policy requires Council to address the impact of development on native species habitat, and supports weed eradication and revegetation. Some rural living areas contain significant stands of remnant native vegetation and need to be protected from development that may result in its decline or removal.

Low density residential policy (clause 22.10)

The overall objective of this policy is to allow for low-density residential development only in a strictly controlled environment and in accordance with a strategy plan that provides for a 10-year supply of land for this purpose. The policy requires Council to consider Minister's Direction No 6 and regards this type of development as 'urban' and therefore to be located in proximity to an urban area providing urban infrastructure and services. All land zoned LDRZ in the municipality is within the city of Benalla (with the exception of Baddaginnie), which is consistent with this policy.

Rural living policy (clause 22.11)

The overall objective of this policy is to ensure an adequate supply of land for rural living and that this type of development is provided with adequate infrastructure and services as well as protecting the environment. The policy requires Council to allow development for rural living only within a 10-15 year supply time frame and where "provided with high quality road access". Council must also take into account environmental constraints and protection of natural features in its assessment of applications.

Rural housing and subdivision in rural areas policy (clause 22.12)

The overall objective of this policy is to maintain the sustainable use and productive potential of rural land by ensuring that rural production is not compromised by non agricultural development and minimising the potential conflict between residential and rural land uses. This policy requires Council to protect high quality agricultural land and that development or

subdivision of houses for non-agricultural purposes is discouraged. Any application for subdivision needs to satisfy the requirements listed in the policy.

Zoning

The majority of land surrounding Lake Mokoan is zoned Rural Use Zone (RUZ). (See Figure Scheme Maps 8 and 12 contained in Appendix).

The Lake surface, inlet and outlet channels are zoned Public Use Zone (PUZ1 – Service & Utility), and the perimeter of the lake has a discontinuous band which is zoned Public Park and Recreation Zone (PPRZ)

Between Chesney Vale Road and McGann Hill Road, adjoining Lake Mokoan Road, a small area is zoned Rural Living Zone (RLZ), and directly abuts another small area zoned Public Conservation and Resource Zone (PCRZ).

The township of Winton (See Scheme Map 11 in Appendix) is located to the south of the lake. The township comprises an area of land zoned Township Zone (TZ) immediately adjacent to Hume Highway (High Street), a large area of land south of High Street zoned Special Use Zone 2 (SUZ2), and a smaller area of land zoned Public Use Zone Health and Community (PUZ5) located to the west of the township. The remainder of the township is zoned RUZ.

Hume Highway is located between the lake and Wilton Township and is zoned Road Zone Category 1 (RDZ1).

The zone ordinances for the Study Area are outlined below.

Zone Ordinances

The specific zone ordinances for the land within, or directly adjoining the Study Area are outlined below. The full ordinances are contained in Appendix . The zone ordinances for the Winton Township are not detailed.

The general purpose for each of the zones is to implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies and council needs to have regard to these matters when considering any application.

Proposed New Zones for Rural Victoria (June 2004)

In March 2002, the Minister for Planning appointed a reference group to analyse specific issues and provide advice about improvements to the rural zones in the Victoria Planning Provisions. The final package including recommendations was released in June 2004.

As a result, changes to the existing rural zones are proposed to:

- Recognise the State, regional and local importance of agriculture as an industry and provide greater protection for productive agricultural land.
- Provide a wider choice of zones with clear purposes and controls to match.
- Discourage ad hoc and incompatible use and development.
- Recognise the changing nature of agricultural activities and reduce the potential for conflict between agricultural and other, more sensitive, land uses.
- Recognise that rural areas are places where people live and work.

- Recognise and protect rural areas that are environmentally sensitive.
- Remove the need for permits for minor matters.

The document proposes the following four new rural zones:

- The new **Farming Zone** unambiguously caters for agriculture as an industry and encourages the use of land for a range of agricultural activities. Discouraging uses that could undermine agriculture is a key purpose of this zone. A limited range of non-agricultural uses that support and improve agricultural activities may be considered, but the controls on use and development in this zone are much tighter than those in the existing Rural Zone and the new Rural Activity Zone.

This zone will **replace the existing Rural Zone**.

- The new **Rural Activity Zone** is designed to be applied to selected areas where agricultural activities and other land uses can co-exist. A wider range of tourism, commercial and retail uses can be considered in this zone. Agriculture has primacy in this zone, but other uses may be established if they are compatible with the agricultural, environmental and landscape qualities of the area.

Councils will need to consider where this zone can appropriately be applied.

- The revised **Rural Living Zone** provides for residential use in a rural environment. This zone applies to rural areas in selected locations where residential use is specifically encouraged.

- The new **Rural Conservation Zone** will protect and enhance the natural environment and its historic, archaeological, scientific, landscape, faunal habitat and cultural values. Agriculture is allowed in the zone, provided it is consistent with the environmental and landscape values of the area. A schedule to the zone requires the specific conservation values of the land to be clearly stated.

This zone is already in the Victoria Planning Provisions, introduced as part of Amendment VC22, and will replace the existing Environmental Rural Zone.

The two new zones – the Farming Zone and the Rural Activity Zone – were introduced into the Victoria Planning Provisions by Amendment VC24. The changes to the Rural Living Zone and Low Density Residential Zone came into effect with Amendment VC24. The Farming Zone, the Rural Conservation Zone and the Rural Activity Zone are now available in the VPP.

Councils will need to amend their planning schemes to apply the Farming Zone, Rural Conservation Zone and Rural Activity Zone to land. These three zones will not apply to any land until local planning schemes are amended. The process for amending planning schemes includes consultation with landowners.

In addition to the zones, Clause 17.05 of the State Planning Policy Framework has been amended to remove reference to ‘high quality’ agriculture and to focus on the protection of productive agricultural land.

The Low Density Residential Zone has been amended so that a minimum lot size for subdivision greater than 0.4 hectares can be scheduled. This will enable the broader application of the zone so long as the Minister’s Direction No. 6, Rural Residential Development and the normal strategic considerations are met.

Benalla Rural Living Strategic Study (June 2004)

The Benalla Rural Living Strategic Study was a study of rural living development in the Rural City of Benalla. It was commissioned by the former Delatite Shire in response to the perceived lack of a strategic framework for rural living in the municipality.

The study provides the planning context in the municipality, outlining the relevant planning policies found at state, regional and local level. The study focuses on the rural living zones within the municipality. Rural living was identified as lots ranging from 0.4 hectares (the minimum lot size in the Low Density Residential (LDRZ)) through to 8 hectares (the default minimum lot size in the Rural Living (RLZ) and beyond. The purpose of the study was:

- to review the land currently zoned RLZ and LDRZ within the new municipal area of Benalla Rural City to determine the appropriateness of the zoning of this land;
- to determine the future needs for semi-rural and rural residential land in various locations in the municipality; and
- to identify any necessary changes to the Benalla Planning Scheme to address the findings of the study.

The report analyses the supply situation by area and provides specific recommendations for each of the areas. Seven rural living areas are identified. Within the Study Area, the Study examines the Rural Living Zone located to the north-west of Lake Mokoan, accessed from Chesney Vale Road. The area consists of 131ha subdivided into 32 rural living lots ranging in size from 3,000m² to a large balance lot of 75ha. Most of the lots are in the range of 0.3-0.6ha and located along Lake Mokoan Drive. Of the 32 lots, more than 50% (19) are vacant. The current 8ha minimum lot size for subdivision would only allow for the large balance lot to be subdivided into eight additional lots.

The pre-Delatite Shire planning scheme (Shire of Benalla) had this land zoned "Rural Residential" that allowed for a minimum lot size of 0.4ha (or an acre). The existing Lake Mokoan Estate (that includes the 75ha balance lot) was commenced under these provisions, including a substantial investment in infrastructure to service the development.

The land was 'back-zoned' as part of the preparation of the Delatite Planning Scheme allegedly unbeknown to the developer. An amendment to the Delatite Planning Scheme (supported by Council) was subsequently instigated to reinstate at least some of the development potential initially afforded the land by increasing the current default density provisions of the RLZ (8ha minimum lot size) to lots ranging from 2 to 4.6ha (shown on plan of subdivision). This was seen as a compromise somewhere between the provisions applicable at the time the estate was commenced (0.4ha minimum) and the default RLZ provisions (8ha minimum) applied at the time the VPP-based planning scheme was prepared for the former Delatite Shire. The amendment was subsequently deferred pending the outcome of this study and was never approved.

The Benalla Rural Living Strategic Study recommended the following changes for the Chesney Vale rural living area:

- Existing RLZ land to be transferred to RLZ1 to recognise the original intended and supported development of the land, and to which some commitment by way of infrastructure investment has already been made by the developer. This recommendation will depend on what weight Council gives to the development history of this land.
- Apply a Development Plan Overlay (DPO) for rural living.

As well as examining this specific area, the study also assessed the demand and supply of land for rural living in Benalla. Estimates of demand are based on subdivision approvals, dwelling approvals, sales and anecdotal evidence from real estate agents. Long term demand is estimated at approximately 15 lots per annum, with the rider that current demand appears to be significantly higher at 27 lots per annum.

Estimates of supply are based on existing vacant lots, future potential vacant lots, and consideration of the possibility for subdividing some existing lots in rural residential zones. Based on demand of 15 lots per annum, supply of vacant rural living lots would be exhausted in around six years. However the Study concludes that if potential subdivisions are taken into account, supply of vacant lots is around 60 years. It is estimated that the actual supply of rural living land is around 20 years.

Environmental Significance Overlay (ESO) and Vegetation Protection Overlay (Map 12 VPO)

As noted in the Ecological Conditions Discussion Paper prepared by Ecology Australia, there are no environmental significance (ESO) or vegetation protection (VPO) overlays covering Goulburn-Murray land on and around Lake Mokoan, although land around the town of Winton on the east side of the Hume Freeway and stretching the length of the Lake is covered by a VPO. Schedule 3 is applicable to this area. The area is identified as regent honeyeater habitat/lurg ironbark vegetation protection area, and the area maintains vegetative links between the Warby Range and the Great Dividing Range used as habitat and migratory routes by the indigenous fauna species. Vegetation removal within this area is restricted to protect and stop the removal of native vegetation in areas that support Regent honeyeater.

Land Subject to Inundation Overlay – Rural Floodway Overlay (LSIO-RFO)

A Rural Flooding Overlay (RFO) exists for an area of land located to the west of Lake Mokoan. This land is located outside the Study Area.

Heritage Overlay (Map 12 HO)

No heritage sites are noted within the Study Area.

Significant Landscape Overlay (Map 12 SLO)

An area of land located west of the Study area, identified as Warby Range Park, is noted as a significant landscape. The area is located outside the Study Area.

10.1.2 Particular Provisions

The Planning Scheme notes additional requirements for specific uses and developments. This section of the Scheme includes restrictions relating to Single and multiple dwellings.

Development within the Study Area will need to comply with Clauses 54, 55, 56 and 65.

One Dwelling on a Lot (clause 54)

The provisions in this clause apply to an application to construct a building or construct or carry out works associated with one dwelling on a lot under the provisions of:

- A Residential 1 Zone, Residential 2 Zone, Mixed Use Zone or Township Zone.
- A Heritage Overlay or Neighbourhood Character Overlay if the land is in a Residential 1 Zone, Residential 2 Zone, Mixed Use Zone or Township Zone.

This clause is not considered relevant to the land within the Study Area, with none of the land identified as being within the above zones.

Two or more dwellings on a lot and residential development (clause 55)

These provisions apply to an application to:

- Construct a dwelling if there is at least one dwelling existing on the lot,
- Construct two or more dwellings on a lot,
- Extend a dwelling if there are two or more dwellings on the lot,
- Construct or extend a dwelling on common property, or
- Construct or extend a residential building,

in the Residential 1 Zone, Residential 2 Zone, Mixed Use Zone and Township Zone. This clause is not considered relevant to the land within the Study Area, with none of the land identified as being within the above zones.

Residential Subdivision (clause 56)

These provisions apply to an application to subdivide land in the Residential 1 Zone, Residential 2 Zone, Mixed Use Zone or Township Zone. This clause is not considered relevant to the land within the Study Area, with none of the land identified as being within the above zones.

Decision Guidelines (clause 65)

This guideline outlines the specific matters that an authority must consider before deciding on an application, approval of a plan, or subdivision of land.

Benalla 2015 Integrated Planning Study (December 2004)

In November 1994 the City and Shire of Benalla were restructured with local government reform to form part of the Shire of Delatite. The Benalla 2015 Planning Study was completed in December 2004 and examined the future needs of the Benalla urban area and surrounding areas to the year 2015 and devise an overall strategy which sought to integrate economic, social, physical and environmental planning. The investigation area does not cover Lake Mokoan, however it does include areas of land to the east of the town which will affect the Study Area.

The Study is presented as three separate volumes: Executive summary and consolidated recommendations; Analysis and Assessment and Appendices and background data. It provides a wealth of background information for the town and surrounding area, some of which is directly relevant to the Lake Mokoan Future Land Use Study.

During the Study consultation was undertaken with councillors, council staff, government departments, interest groups, general public and specific landowners.

The strategy plan proposes and details eight action areas and how these will be undertaken. Those of relevance to the Study Area include:

- A single consolidated land use strategy implemented through a common set of planning provisions - one planning scheme for the whole area with simplified procedures for development in accord with the strategy; and
- Support for the development of an Enterprise Park as a 'world best practice' employment area and provision of new large industrial sites which enable Benalla to provide large sites for major new enterprises.

In relation to the second bullet point, the area of land located to the east of the urban area, and closest to Lake Mokoan is identified within the Strategy as Investigation Area 5 (See the Plan on Page 2 of Volume 2). The strategy notes that a 100 ha area of land in this vicinity was recently purchased by the City of Benalla as a future 'enterprise park' for high quality industrial development. The Strategy recommends designating an area extending from the Hume Highway to the Australian Defence Industries Site and westward to the Midland Highway as a Future Employment Based Area where land should be held in large parcels, residential development limited and the land held in suitable zoning to provide for potential longer-term uses. It is proposed to bring this area within an Urban Development Zone through an amendment to the City and Shire's Planning Schemes which set it aside for large scale industrial uses.

Your Town – Your Future Strategy Plan (May 2001)

The former Delatite Shire Council undertook the preparation of an Integrated Planning Strategy known as "Your Town – Your Future" Strategy Plan (YTYF) which was adopted by the former Delatite Council in December 2001. YTYF addressed a range of key issues relating to the future development and planning of the former Delatite Shire including plans and policies. These include settlement strategies for the following:

- Agribusiness and rural land
- Small settlements and communities; and
- Rural living.

The specific strategies for these sectors are outlined below.

Agribusiness and rural land

The strategic aim for agribusiness and rural land is to facilitate and encourage agribusiness activities. YTYF seeks to safeguard the natural resource base by encouraging sustainable farm management practice, involving land capability and best management practices; and encouraging appropriate land use and development.

YTYF identifies the conflict between agricultural properties and rural living and housing development. The Strategy identifies the need to develop Codes of Practice and conditions to ensure compatibility between agricultural land and other uses, and investigate and where appropriate facilitate initiatives that protect a landowner's "right to farm".

The Council needs to ensure that unnecessary constraints to the expansion of the agricultural sector do not exist. This can be achieved by reinforcing the minimum subdivision of 40ha on a Shire wide basis.

Settlement Strategy

The strategic aim for small settlements and communities is for Council to work in partnership with local communities to strengthen community networks and improve their quality of life through community projects. The strategy seeks to support the survival and growth of small towns in the municipality. In addition the intent is to guide future planning and decision regarding distribution of resources. Within the context of the Study, small settlements include the township of Winton, located to the South of Lake Mokoan, and adjacent to the Study Area. A structure plan has been prepared for Winton to provide for the future development of the town and provide for anticipated land use requirements. A copy of the structure plan is

contained within the *Your Town Your Future Background Report*. The Strategy identifies that a key improvement for the town is to develop it as a Motor Sports Centre.

Rural Living

The strategic aim for rural living in YTYF is to provide a planned response to the demand for lifestyle properties. The term 'rural living' refers to low density residential properties in a rural setting. The strategy seeks to recognise the strong lifestyle appeal of rural living development, and to ensure provision of land for development is compatible with other land uses and natural resource issues. YTYF identifies rural living as a legitimate land use and an important economic component for the municipality. The strategy reiterates state policies for rural living land in that good quality agricultural land should be protected from rural living, as should areas that may create conflicts between residents and agriculturalists. A community focus is recognised as an important re-requisite for rural living and isolated rural living areas should be avoided.

YTYF recommends the following objectives for rural living development:

- That the preferred location for such development be in proximity to urban areas where services and a community focus are readily available to residents.
- That development be guided to areas where infrastructure such as roads, telecommunications, electricity and water are readily available.
- That such development be directed towards areas where such development would be compatible with surrounding land uses. This can best be achieved by limiting the dispersal of rural living development through the rural areas.
- That such development not occur in areas of environmental significance or areas of high quality agricultural land.
- That Council should review the supply and location of land zoned for rural living purposes having regard to the above criteria to ensure that the zoning structure reflects the strategy of Council and ensure there is an adequate supply of affordable allotments available within these preferred areas.

The Strategy identifies that the supply of land for rural living development should generally not exceed 20 years. YTYF advocates an average lot size of 2.0ha in areas where rural living policy objectives can still be met, within a 1 to 4ha range. In addition the strategy identifies that the rezoning of further land for development near Benalla may be required when less than 20 years supply of land is available.

Rural Living, Rural Housing & Subdivision Study (2000)

The *Rural Living, Rural Housing & Subdivision Study* was undertaken in 2000 in response to the "*Your Town – Your Future*" Strategy Plan. This study reviewed agricultural land use in the former Shire of Delatite and made recommendations relating to policy that will direct Council on rural land use, including rural living. This study acknowledges rural living as a legitimate land use and concludes that arrangements need to be established to address the interface between agriculture and rural living development. The study also advocates the use of the LDRZ as a means to "*relieve the pressure and slow the loss of rural land to meet the market demand for this type of lifestyle development.*" This study recommends that Council acknowledge rural living development as an opportunity but for development to be undertaken "*in a sustainable and environmentally acceptable manner.*"

- Appendix C

Maps of different soil types in region

Figure 2: Soils Maps - Sodosols

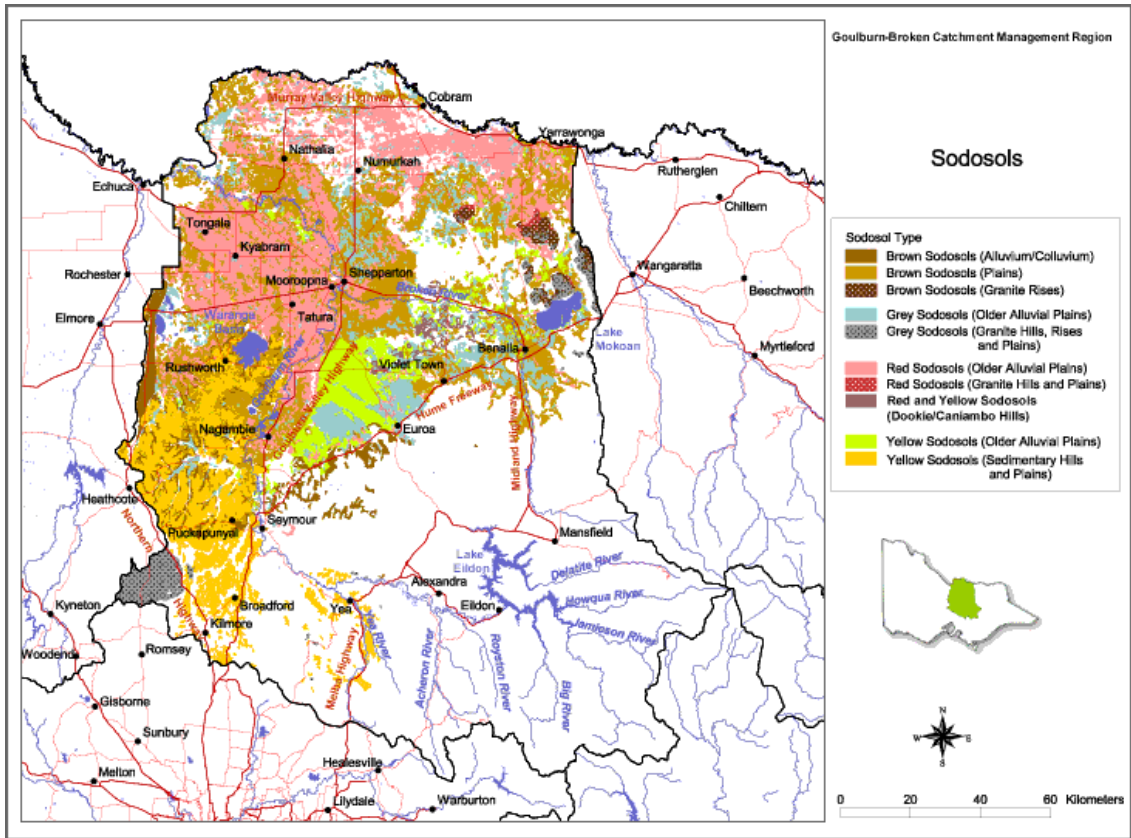


Figure 3: Soils Maps - Chromosols

Figure 4: Soils Maps - Vertosols

- Appendix D

Population forecasts

Population Trends and Forecasts, 1991 to 2031

Year	Benalla (S) - Benalla	Benalla (S) - Bal	Wangaratta (RC) - Central	Wangaratta (RC) - North	Wangaratta (RC) - South	Total Study Region	Regional Victoria
Estimated Resident Population							
1991	8,950	4,710	16,360	3,560	6,060	39,640	1,264,800
1996	9,030	4,770	16,240	3,900	5,900	39,840	1,276,880
2001	9,180	4,838	16,410	4,460	5,800	40,688	1,333,100
2004	9,210	4,860	16,350	4,560	5,740	40,720	1,372,700
2011	9,510	4,990	16,750	5,070	5,520	41,840	1,458,880
2021	9,510	4,990	17,200	5,810	5,130	42,640	1,576,810
2031	10,290	5,310	17,710	6,490	4,730	44,530	1,689,590
Average Annual Growth Rates							
1991-2001	0.3%	0.3%	0.0%	2.3%	-0.4%	0.3%	0.5%
2001-2004	0.1%	0.2%	-0.1%	0.7%	-0.3%	0.0%	1.0%
2004-2011	0.5%	0.4%	0.3%	1.5%	-0.6%	0.4%	0.9%
2011-2031	0.4%	0.3%	0.3%	1.2%	-0.8%	0.3%	0.7%

Source: ABS Regional Population Growth (Cat no. 3218.0), Department of Sustainability and Environment "Victoria in Future 2004" and Essential Economics Pty Ltd

Note: The Statistical Local Areas (SLAs) of Benalla (S) - Benalla and Benalla (S) - Bal changed in 2004, as a result the ERPs recorded in ABS publications for each SLA changed (Benalla (S) - Benalla grew by approximately 370, and Benalla (S) - Bal fell by 370). The figures in the above table are based on the original boundaries for the purpose of continuity.