



Edward River Council

Deniliquin Large Lot Residential Strategy

September 2019

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1. Introduction

The Deniliquin Large Lot Residential Land Use Strategy has been prepared to guide decisions on the future development of land for large lot residential purposes within Deniliquin, as part of the broader Edward River Council area. This strategy is the result of collaboration between GHD Pty Ltd and Edward River Council.

Deniliquin is the key regional centre within Edward River Council. The centre offers unique riverside lifestyle opportunities alongside excellent health, education, recreation, retail and community facilities. Deniliquin is also the major service centre for nearby villages in Conargo and the northern Murray region, and the surrounding agricultural production and industry sectors.

Given the regional role and lifestyle attributes of Deniliquin, there is significant demand for large lot residential living opportunities. In particular demand exists for land within close proximity to the Edward River foreshore, and the services and infrastructure provided by the town centre.

In order to appropriately manage future demand and community expectations around land release, Council has identified the need for an integrated long term plan to manage large lot residential land use within Deniliquin.

The strategy was initially prepared for the former Deniliquin Council prior to its merger with Conargo Shire Council to form Edward River Council on 12 May 2016. The new Edward River local government area (LGA) now encompasses the former Deniliquin and Conargo LGAs. References throughout this strategy are still made to the former Deniliquin and Conargo LGAs given land use and development matters are still guided by three separate Local Environmental Plans. The strategy is however limited to the consideration of supply and demand of large lot residential land within the former Deniliquin LGA to ensure any future land identified for development is located in close proximity to existing settlements, services and infrastructure.



(Source: Visit Deni)

1.1 What is a Strategy?

The Oxford Dictionary (2012) defines a strategy as:

'A plan of action designed to achieve a long-term or overall aim'

In terms of land use planning it is a framework for what Council wishes to achieve in relation to key planning issues and how these might be achieved. This strategy is a plan for a desired future for large lot residential land use at Deniliquin on behalf of Edward River Council.

1.2 Purpose of this Strategy

The purpose of this strategy is to provide a land use framework to guide the development of large lot residential opportunities as well as recommend an appropriate planning policy. Planning for growth and change requires understanding the capabilities of the land. It also means understanding the factors which shape the characteristics, attitudes and values of communities, and the systems which drive land use development.

Through the *Riverina Murray Regional Plan 2036*, the Department of Planning and Environment (now Department of Planning, Industry and Environment) (DPI&E) requires Council to consider various criteria when selecting land for large lot residential development. The criteria can best be addressed by a large lot residential strategy as undertaken prior to permitting large lot residential development through a Local Environmental Plan (LEP).

However, as experienced by many Councils, the community may prefer locations for large lot residential development that are remote from settlements and difficult to service; more suitable for productive agricultural purposes or endowed with environmental assets that could be compromised by subdivision and development. These conflicts with sustainable living, agricultural activity and environmental values need to be minimised. This strategy aims to establish clear priorities and criteria based upon settlement patterns, access to services, the suitability and capability of land and the protection of significant environmental areas.

This strategy also aims to identify drivers for growth. The legitimate and sustainable demand for large lot residential development will be identified. This needs to be balanced against the existing supply and the possible future supply of large lot residential land.

This strategy also seeks to consider the community's needs and balance these interests against broader policy and regulatory considerations. A good strategy identifies opportunities for new development and will increase the attraction of Deniliquin as a place to live and invest in.

This strategy is intended to provide certainty in large lot residential land use decision making and provides leadership to integrate and manage large lot residential issues in a collaborative way between Council, state government and the community.

1.3 What is Large Lot Residential Development?

Rural or large lot residential areas are unique from other types of living environments in towns or villages as they are essentially residential development in a rural setting. These areas commonly have larger sized properties and are not associated with agriculture. Some agriculture may take place on the land; however, it is likely to be carried on for 'lifestyle' reasons and is unlikely to provide a significant source of household income. Large lot residential development usually does not have Council services - such as stormwater and reticulated water and sewerage infrastructure. Because of its primarily residential function, large lot residential development still requires reasonable access to most of the normal services and infrastructure provided in urban settlements such as roads, electricity, telecommunications, schools, healthcare, employment and shops. reasonable access to most of the normal services and infrastructure provided in urban settlements such as roads, electricity, telecommunications, schools, healthcare, employment and shops.

1.4 Planning Period

This strategy provides the framework for managing growth, change and development for large lot residential land use at Deniliquin to the year 2036 (17 year plan) to align with the planning period of the Riverina Murray Regional Plan. Most of the base data was sourced from the 2011 and 2016 Census where available.

Figure 1-1 Representative Large Lot Residential Development in Deniliquin (Source: GHD)



2. Understanding Edward River Council and Deniliquin

Deniliquin is the major regional centre located within the Edward River local government area which was formed on 12 May 2016 by the amalgamation of the former Deniliquin Council and Conargo Shire Council.

Edward River Council is located within the Riverina Murray Region, approximately 700km south of Sydney and 300km north of Melbourne. The Edward River is an anabranch of the Murray River and part of the Murray Darling Basin. The Edward River LGA covers a total of 8,881 square kilometres and comprises six rural villages and productive agricultural land comprising both dryland and irrigated agriculture. The area supports significant production of rice, wheat and canola and pastoral activities.

The former Deniliquin LGA is located on the southern boundary of Edward River LGA and covered an area of approximately 143.2 square kilometres. The former LGA is positioned on the banks of the Edward River at the intersection of the Riverina and Cobb Highway.

The Wamba Wamba and Perrepa Perrepa Aboriginal people are the original inhabitants and the town is said to take its name from the local Aboriginal leader 'Denilakoon'.

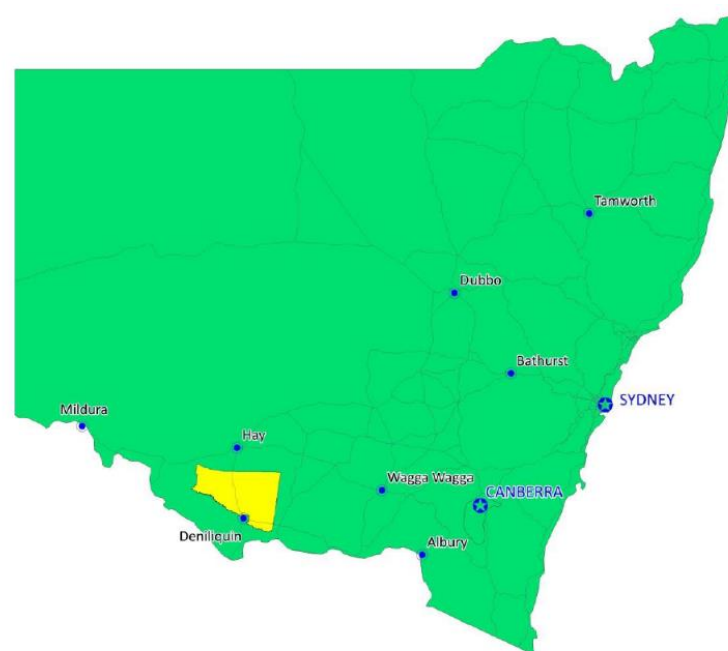


Figure 2-1 Location of Edward River Council in NSW

The region contains both dry-land and irrigated land, providing valuable farming land and has some of the most successful agricultural areas in NSW. Rice has proven to be one of the more lucrative irrigation crops grown locally. The largest rice mill in the southern hemisphere operates at Deniliquin, and is the fourth largest rice mill in the world.

The region was in severe drought or marginal drought between 2000 and 2010 which has had significant impacts on agricultural production. Since this time however the region has bounced back and has experienced positive growth in both industry and population.



Figure 2-2 Location of Former Deniliquin LGA



Figure 2-3 Agricultural land (Source: GHD)



Figure 2-4 Irrigation Channel (Source: GHD)

2.1 Acknowledging External Growth Drivers

The former Deniliquin LGA is a relatively small LGA comprised of a traditional central business district with surrounding residential development and some local industrial areas with a relatively small proportion of agricultural land uses. The Murray River Council and former Conargo LGA's surround the former Deniliquin LGA.

The former Conargo Shire (now part of Edward River LGA) comprises the townships of Conargo, Blighty, Mayrung, Pretty Pine, and Wanganella villages. The villages are located in close proximity to Deniliquin as follows:

- The village of Conargo is the largest town and is located approximately 30 km north east of Deniliquin.
- Blighty is located 29 km east of Deniliquin.
- Mayrung is located 37 km north east of Deniliquin.
- Pretty Pine is located 16 km north west of Deniliquin.
- Wanganella is located 39 km north west of Deniliquin.

Given the close proximity of these villages to Deniliquin, there would be a significant amount of external influence and demand from the former Conargo Shire from people looking to move from small villages closer to essential services available in Deniliquin. This would include farmers wanting to retire on large lot residential land in close proximity to Deniliquin. This phenomenon is not new to the region but must be considered as part of the demand drivers for large lot residential land in the LGA.

Murray River LGA also contains villages in close proximity to Deniliquin. This Council is also newly formed and comprises the former Murray and Wakool Shire Councils. The closest village is Mathoura which is located 30 km south of Deniliquin. It is likely there will be demand drivers from this village as well as a significant proportion of the northern rural areas of the Murray River LGA given increased affordability, available services and infrastructure and amenity benefits of Deniliquin,

Notwithstanding for the majority of the southern portion of the Murray River LGA is likely to provide the demand for residential dwellings in Moama, 70 km south of Deniliquin. Moama is located on the Murray River, adjacent to the NSW and Victorian border and is the largest centre within the within the Murray River LGA.

3. Riverina Murray Regional Plan

The Riverina Murray Regional Plan was finalised by DPE in 2017 and outlines the NSW Government's Strategy for the growth and development of the Riverina Murray Region to 2036.

Alongside Edward River Council, the Riverina Murray Region is comprised of the following local government areas: Albury, Berrigan, Bland, Carrathool, Coolamon, Cootamundra-Gundagai, Federation, Greater Hume, Griffith, Hay, Junee, Leeton, Lockhart, Murray River, Murrumbidgee, Narrandera, Snowy Valleys, Temora and Wagga Wagga.

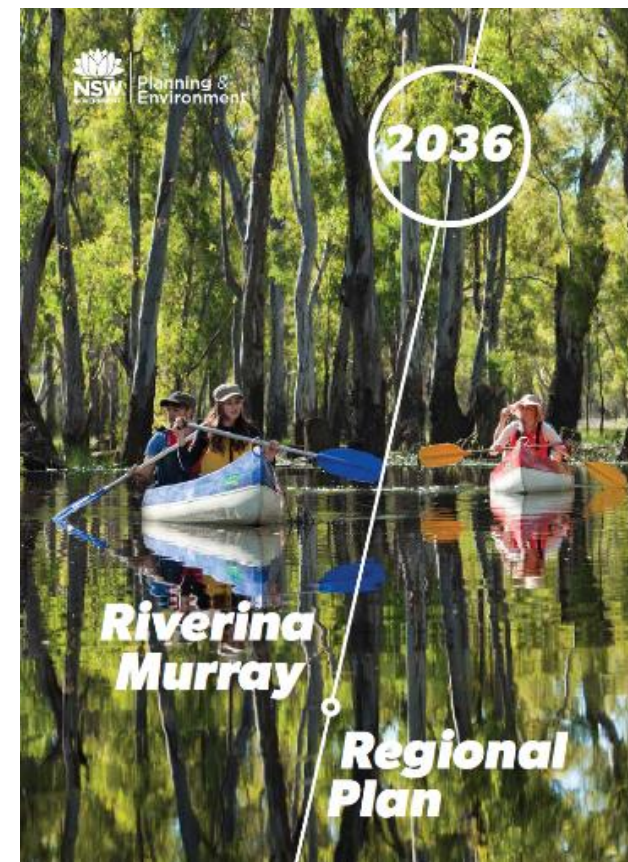
The Regional Plan is an important policy consideration given the Strategy is legally required to be compliant with the vision, land use strategy, goals, directions and actions contained within the Regional Plan.

The Regional Plan sets three key goals for the Riverina Murray Region being:

- A growing and diverse economy
- A healthy environment with pristine waterways
- Efficient transport and infrastructure networks
- Strong, connected and healthy communities

The Regional Plan also sets out the following priorities for the Edward River LGA:

- Develop Deniliquin into a thriving local centre through industry development and job creation to promote population growth
- Ensure that irrigated land is appropriately zoned and protected from inappropriate development
- Double the size of the visitor economy through new product development and promotion
- Improve the council area's liveability and lifestyle opportunities



3.1 Direction 27 - Manage Rural Residential Development

Within the Regional Plan, specific principles and criteria relating to large lot residential development are addressed in **Direction 27 - Manage Rural Residential Development**.

The plan highlights that rural or large lot residential housing is a popular lifestyle option within the region. The plan also recognises that large lot residential development has the potential to create land use conflicts with productive agricultural and industrial land uses or land with mineral or renewable energy potential. Given these issues, the plan sets out that management of this development type and cumulative impacts will become increasingly important as the regional economy diversifies and as development pressures for large lot residential housing increases.

To address the issues, the Direction identifies the need for a consistent planning approach to identify suitable locations for new large lot residential development. This is to avoid fragmentation of productive agricultural land, protect high environmental value assets, cultural and heritage assets, or areas with important rural landscape values.

The plan also sets out large lot residential development should not increase pressure on infrastructure and services and should be located on land free from natural hazards.

In this regard, the plan identifies the following actions under Direction 27:

Table 3-1 Direction 27 - Manage Rural Residential Development

Action	Detail
27.1	Enable new rural residential development only where it has been identified in a local housing strategy prepared by council and approved by the DPI&E.
27.2	Ensure the design of rural residential areas respects the semi-rural character of the area.
27.3	Locate rural residential areas: <ul style="list-style-type: none">• Close to existing urban settlements to maximise the efficient use of existing infrastructure and services, including roads, water, sewer and waste services, and social and community infrastructure;• To avoid and minimise the potential for land use conflicts with productive, zoned agricultural land and natural resources; and• To avoid areas of high environmental, cultural and heritage significance, important agricultural land or areas affected by natural hazards.
27.4	Manage land use conflict that can result from cumulative impacts of successive rural residential development decisions

Other key actions of the Regional Plan that are relevant considerations for this strategy are:

Table 3-2 Riverina Murray Regional Plan - Other Relevant Actions

1	Direction 1: Protect the region's diverse and production agricultural land
	Action
1.2	Protect important agricultural land identified in the regional agricultural development strategy from land use conflict and fragmentation, and manage the interface between important agricultural lands and other land uses.
1.3	Minimise biosecurity risks by undertaking risk assessments, taking into account biosecurity plans and applying appropriate buffer areas.
2	Direction 2: Promote and grow the agribusiness sector
	Action
2.3	Facilitate investment in the agricultural supply chain by protecting assets, including freight and logistics facilities, from land use conflict arising from the encroachment of incompatible land uses.
12	Direction 12: Sustainably manage mineral resources
	Action
12.2	Protect areas of mineral and energy resources potential in the region through local land use strategies and local plans.
12.3	Protect infrastructure that facilitates mining industries from development that could affect current or future extraction.
13	Direction 13: Manage and conserve water resources for the environment
	Action
13.1	Locate, design, construct and manage new developments to minimise impacts on water catchments, including downstream and groundwater sources.
13.2	Minimise the impacts of development on fish habitat, aquaculture and waterways (including watercourses, wetlands and riparian lands) and meet the Water Quality and River Flow Objectives.
14	Direction 14: Manage land uses along key river corridors
	Action
14.2	Retain riverfront setback provisions in local plans and limit ribbon development along the Murray River.
14.3	Consider and assess the potential impacts of new development on biodiversity along river corridors, including the Murray and Murrumbidgee Rivers, and manage offsets.

15	Direction 15: Protect and manage the region's many environmental assets
	Action
15.2	Minimise potential impacts arising from development in areas of high environmental value, and consider offsets or other mitigation mechanisms for unavoidable impacts.
16	Direction 16: Increase resilience to natural hazards and climate change
	Action
16.1	Locate developments, including new urban release areas, away from areas of known high biodiversity value, high bushfire and flooding hazards, contaminated land, and designated waterways, to reduce the community's exposure to natural hazards.
16.5	Implement the requirements of the NSW Floodplain Development Manual by updating flood studies and floodplain risk management plans.
16.6	Incorporate the best available hazard information in local plans, consistent with, current flood studies, flood planning levels, modelling and floodplain risk management plans.
19	Direction 19: Support and protect ongoing access to air travel
	Action
19.1	Protect airports from the encroachment of incompatible development, including airports in Wagga Wagga, Albury, Griffith and Narrandera
21	Direction 21: Align and protect utility infrastructure investment
	Action
21.1	Monitor development and ensure that infrastructure is responsive to investment opportunities.
22	Direction 22: Promote the growth of regional cities and local centres
	Action
22.1	Coordinate infrastructure delivery across residential and industrial land in the regional cities.
22.2	Consider the role, function and relationship between regional cities and centres in local land use strategies.
25	Direction 25: Build housing capacity to meet demand
	Action
25.1	Prepare local housing strategies that provide housing choice and affordable housing.
25.3	Align infrastructure planning with land release areas to provide adequate infrastructure.

27	Direction 27: Manage rural residential development
	Action
27.1	Enable new rural residential development where it has been identified in a local housing strategy prepared by council and approved by the DPI&E.
28	Direction 28: Deliver healthy built environments and improved urban design
	Action
28.3	Reflect local built form, heritage and character in new housing developments.
28.4	Incorporate water sensitive urban design in new development.
29	Direction 29: Protect the region's Aboriginal and historic heritage
	Action
29.1	Undertake and implement heritage studies, including regional aboriginal Cultural heritage studies, to inform local land use strategies.
29.2	Consult with Aboriginal people and the broader community to identify the heritage values at the strategic planning stage.

4. Criteria for Large Lot Residential Land

The main objective of this strategy is to identify **sustainable and liveable** large lot residential development areas. The criteria for large lot residential land are explained in further detail below:

Sustainable

The Brundtland Report (WCED; *Our common future*. Oxford: Oxford University Press, 1987 p. 43) identified sustainable development as:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Sustainable development in terms of this strategy is the shared responsibility for the orderly use and development of large lot residential land. This strategy aims to incorporate the goal of sustainability to direct positive changes in the environmental, economic and social development of Deniliquin. Rural residential land is an economic resource, an environmental resource and a social resource. There is a need to balance all three of these components in planning for and managing large lot residential lands in a sustainable manner so that primary production, the natural environment and land as a place to live are given equal weight in decision-making.

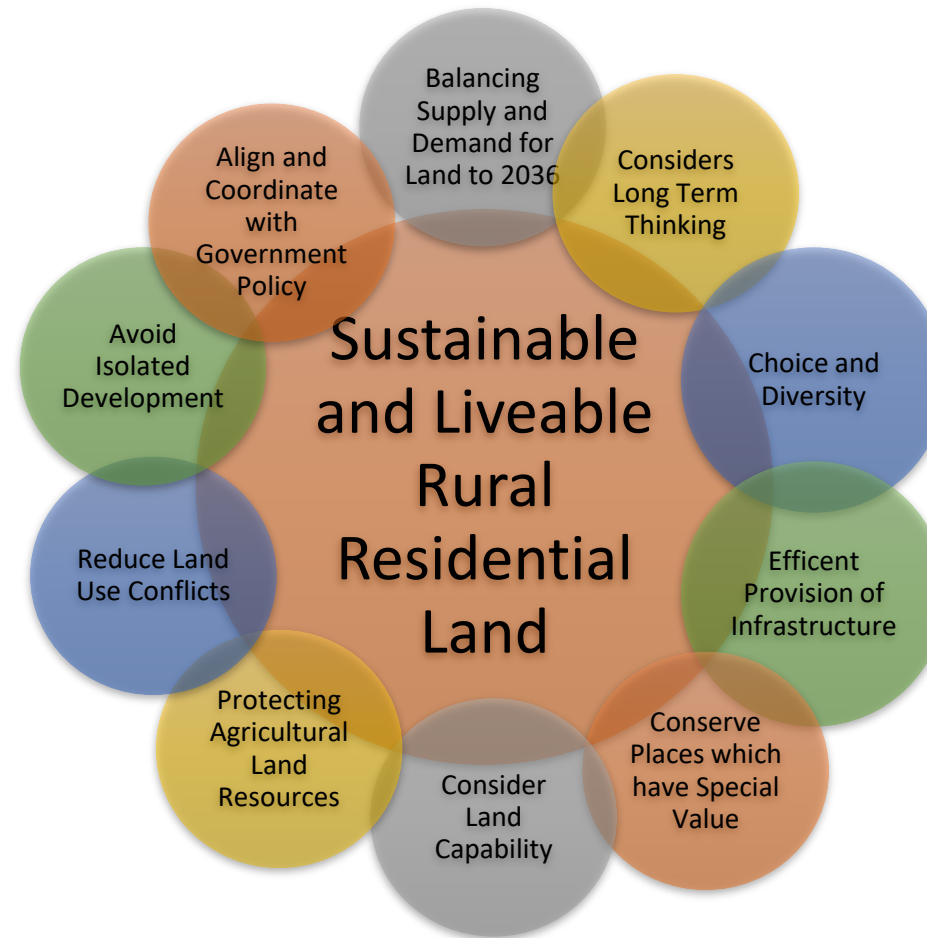
Liveable

The concept of “liveability” is increasingly used to describe a place which supports the attraction of a place through its ability to support the health, social well-being and economic prosperity of communities. Liveability is a key factor in location decision making (State of Australian Cities, 2011).

In terms of large lot residential development liveable elements may include access to employment, transport links, health services, schools and shops, as well as, affordability and diversity of choice for housing and lot size. It would also include a healthy natural environment, and access to views and a pleasant outlook. At a broader level it includes, management of population growth and demographic change, social health, and the level of equity, leadership and community participation in decision making. It also includes addressing changes and deterioration in the natural environment.

This strategy has a significant role in making large lot residential development liveable and sustainable. The following criteria have been developed for Deniliquin to guide future large lot residential land use on the basis of the above and in consideration of the relevant goals, actions and directions of the *Riverina Murray Regional Plan 2036* as set out in Section 3

Figure 4-1 Criteria for the Deniliquin Large Lot Residential Land Use Strategy



The criteria demonstrated graphically above will be used in identifying land suitable for sustainable and liveable large lot residential development including the following:

Considers long term thinking:

Identify the ability to accommodate forecast housing demand for a minimum future period of 18 years.

Choice and diversity:

Facilitate choice and diversity in location, lot size, form and type of housing to meet the economic, social, health and well-being requirements and preferences of all people.

Efficient provision of infrastructure:

Rationalise large lot residential development to avoid locations where access, servicing, safety or impact are unacceptable or too costly.

Conserve places which have special value and consider land capability:

There should be no adverse effect on key natural resource values, including areas of biodiversity significance and other areas that have special value. This requires considering the capability of the land to accommodate large lot residential development.

Protecting agricultural land resources:

There should be no adverse effect on high quality agricultural land.

Reduce land use conflicts:

Provide land for large lot residential housing which does not result in land use conflicts.

Avoid isolated development:

Provide land that is in close proximity to Deniliquin town centre and encourage development that is adjacent to existing large lot residential zones.

Align and coordinate with government policy:

Consider State legislation and align with State policy and practice.

5. Planning Policy

5.1 Role of Government and Private Sector

5.1.1 State Government

At the state and regional level the NSW Government provides the strategic planning basis for infrastructure, housing needs, jobs and the environment. This is through regional strategic planning such as the Riverina Murray Regional Plan, legislative acts and regulations, State Environmental Planning Policies and the establishment of standard land use zones via the standard LEP template utilised across the state.

5.1.2 Local Government

Local Government has a significant role in large lot residential lands as they can build on existing strengths of a region through detailed community and planning policy. This can provide opportunities for appropriate growth and recognise the need for local employment in order to sustain settlement populations and ensure their wellbeing (GHD, 2009). In performing this role, Local Government has the ability to:

- Prepare a Community Strategic Plan to identify a strategic vision and plan for their area in consultation with the community.
- Identify future large lot residential land through detailed strategic planning and ongoing supply and demand monitoring and analysis.

- Zone land through LEP's to ensure it is protected and available for use and is market ready.
- Facilitate the required infrastructure to ensure land is ready for use.
- Respond to locational requirements such as lot size, etc.



Figure 5-1 Summary of State Interests, Regional Coordination and Local Delivery

Council's capacity to promote development opportunities and diversification of activities can be inhibited by a lack of available and appropriately located land. A scarcity of land available for development could deter investment in local areas, which may stifle economic growth and employment opportunities. Council's planning controls should ensure that land is available for development and is adequately served by infrastructure, and should be responsive to trends. It should provide for different land uses to cater for different needs.

5.1.3 Private Sector

The private sector is involved in the large lot residential land market by:

- Purchasing, developing and selling land.
- Developing or upgrading infrastructure.
- Providing advice to land owners, developers, governments and industrialists.
- Property and tenant management.

Industry input includes the sharing of information and providing a business perspective to policy proposals. It also includes public / private partnership approaches to land and infrastructure development, and strategic planning activities (Property Oz, 2007).



5.2 Planning Documents

There is a hierarchy of legislation, statutory planning instruments and policies affecting large lot residential development in Deniliquin, including:

- Environmental Planning and Assessment Act, 1979 (EP&A Act)
- Rural Fires Act 1997
- Native Vegetation Act 2003
- Water Management Act 2000
- National Parks and Wildlife Act 1974
- Threatened Species Conservation Act 1995
- Biodiversity Conservation Act 2016
- State Environmental Planning Policies (SEPPs) including
 - *State Environmental Planning Policy (Primary Production and Rural Development) 2019*
 - *State Environmental Planning Policy (Infrastructure) 2007*
 - *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*
- Murray Regional Environmental Plan No- 2 - Riverine Land
- Deniliquin Local Environmental Plan 2013
- Deniliquin Local Environmental Plan 1997 (applying to land deferred from the Deniliquin LEP 2013. Not related to the regulation of large lot residential land).

- Deniliquin Development Control Plan 2016
- Section 9.1 Ministerial Directions from the Minister of Planning

The strategic planning framework affecting large lot residential development in Deniliquin includes:

- Riverina Murray Regional Plan 2036
- Riverina Murray Implementation Plan
- Policy for Sustainable Agriculture in New South Wales (1998)
- Deniliquin Flood Plain Management Study (1984)
- Edward River at Deniliquin Flood Study (2014)

These are described in detail in Appendix A.

5.2.1 Deniliquin Local Environmental Plan 2013

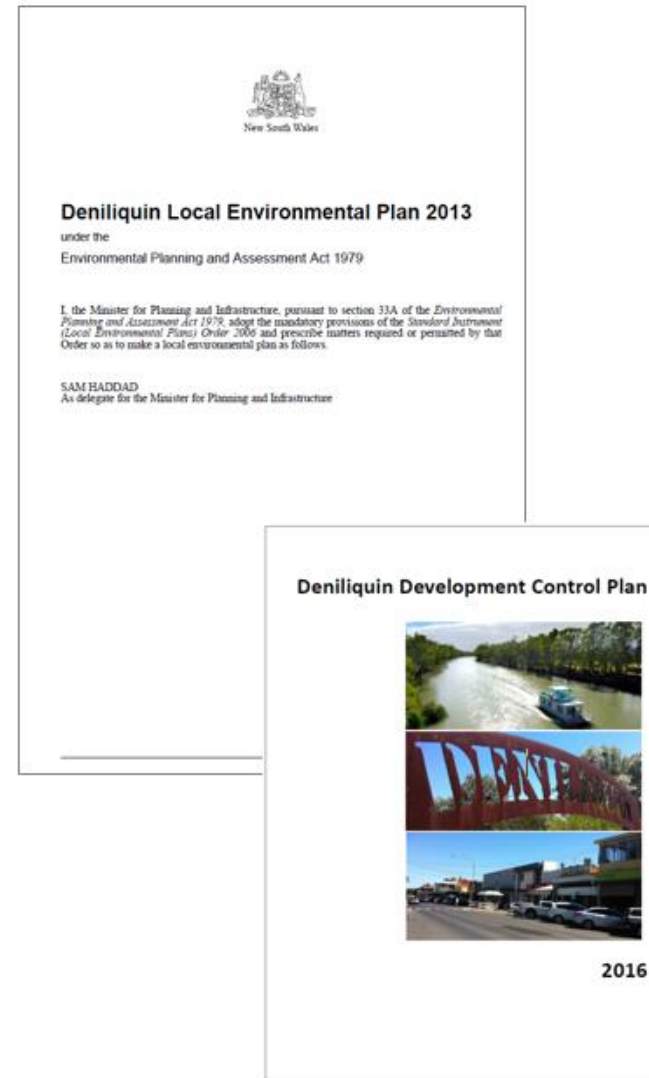
The main document which regulates large lot residential development in Deniliquin is the *Deniliquin Local Environmental Plan (LEP) 2013*. The R5 Large Lot Residential zone has been included in the LEP to accommodate large lot residential development in the LGA.

The objectives of R5 Large Lot Residential zone under Deniliquin LEP 2013 include the following:

- *To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality.*
- *To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.*
- *To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

Standard Minimum Lot Size

The minimum lot size in the R5 Large Lot Residential zone under Deniliquin LEP 2013 where on-site disposal of sewage is required is 1 ha. However the LEP has adopted an additional clause (Clause 4.1(4A), whereby certain land can be subdivided down to 5,000 m² if the lots are connected to reticulated sewer.



6. People and Housing

6.1 Edward River Local Government Area (LGA)

In 2016, Edward River Council was proclaimed, following the amalgamation of the former Conargo Shire Council and Deniliquin Council. The Edward River (LGA) is located a short drive from the Murray River approximately 700km south west of Sydney and 300km north of Melbourne. The municipality covers an area of approximately 8,881 square kilometres and includes the regional centre of Deniliquin and the six rural villages of Blighty, Boorooban, Conargo, Mayrung, Pretty Pine and Wanganella.

The following demographic and housing profile of the Edward River (LGA) shown in Table 6-1 provides an analysis of the area's population, housing and employment trends. Demographic and housing trends are a key consideration in determining demand and land suitability for large lot residential development within Edward River (LGA).

Table 6-1 Edward River (LGA) Key Characteristics

	2016
Total Area (km ²)	8,881
Population	8,851
Median Age	45
Indigenous Person (%)	4.0
Indigenous Median Age	21
Dwellings	3,850
Occupancy Rate persons per dwelling	2.3
Median household income \$/weekly	1,080
Indigenous Persons Median household income	791
Median rent (\$/weekly)	190
Country of Birth – Australia (%)	82.4



8,851 Persons



Median Age: 45



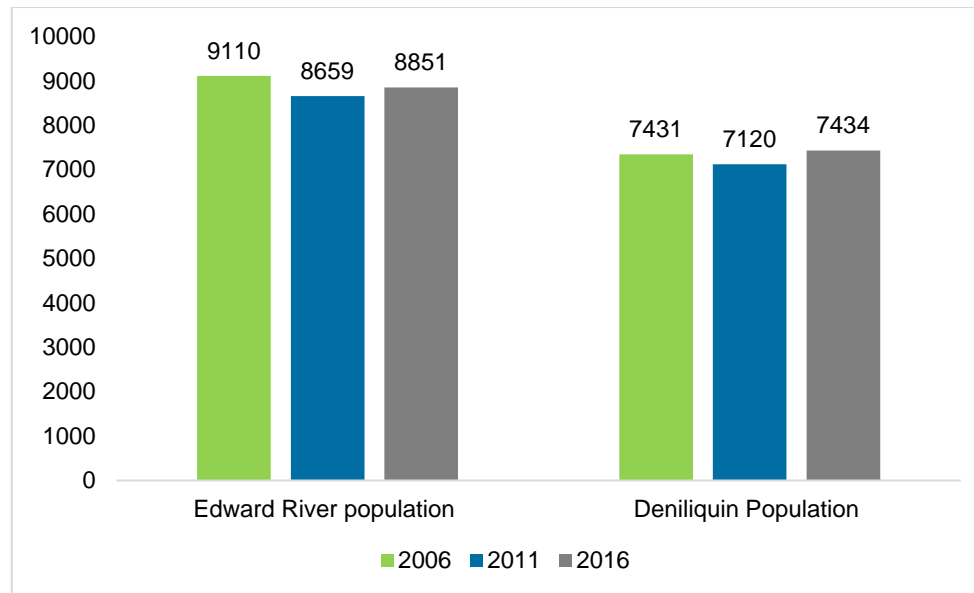
Dwellings: 3,850

Source: Edward River (A) NSW (LGA), ABS Census 2016

6.1.1 Population

ABS Census data indicates that in 2016 Edward River LGA had a total population of 8,851 persons (refer Figure 6-1). Deniliquin is the key regional centre within the LGA and in 2016 had a total population of 7,434 persons, which is approximately 83.9% of the Edward River LGA population.

Figure 6-1 Population snapshot 2006 - 2016



Source: Edward River (A) NSW (LGA) Time Series Profile (2006 – 2016), ABS Census 2016. Deniliquin (A) NSW (LGA) (2006 – 2011) ABS Census 2016. Deniliquin NSW (SA2) (2016), ABS Census 2016.

Growth within Deniliquin can be attributed to the lifestyle, investment and employment opportunities available within the town.

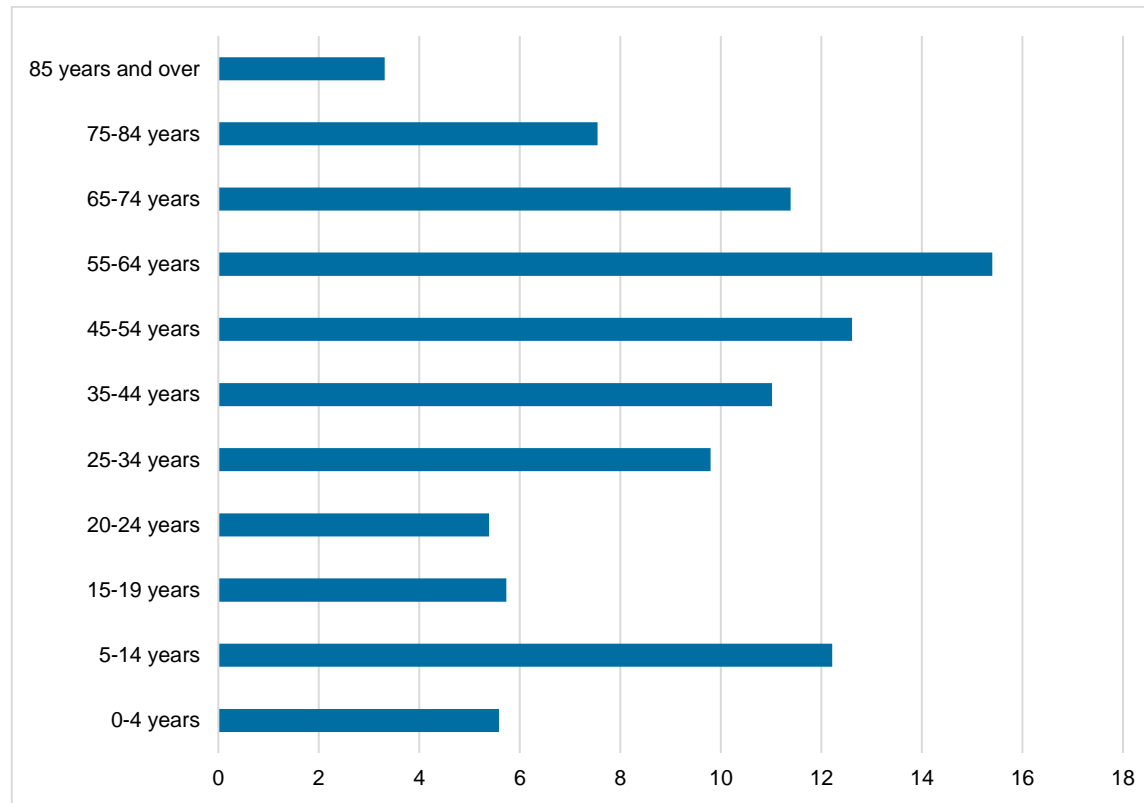
6.1.2 Occupancy rate

The occupancy rate within the Edward River LGA is relatively stable at 2.3 persons per household, which is 0.3 less than the average NSW occupancy rate.

6.1.3 Age distribution

The age distribution of the Edward River LGA is consistent with trends across Australia (refer Figure 6-2). The median age of persons living in the LGA is 45 years which is significantly higher than the median age of people in NSW and Australia being 38. The most notable feature of the Edward River LGA is the large proportion of 5 to 14 year olds, comprising 12.3% of the total population and the lower proportion of persons between the ages of 15 and 24 and persons 85 years and over. The population profile is consistent with national trends in other regional areas being characterised by a loss of the 'working age' cohort combined with an ageing population.

Figure 6-2 Age Profile

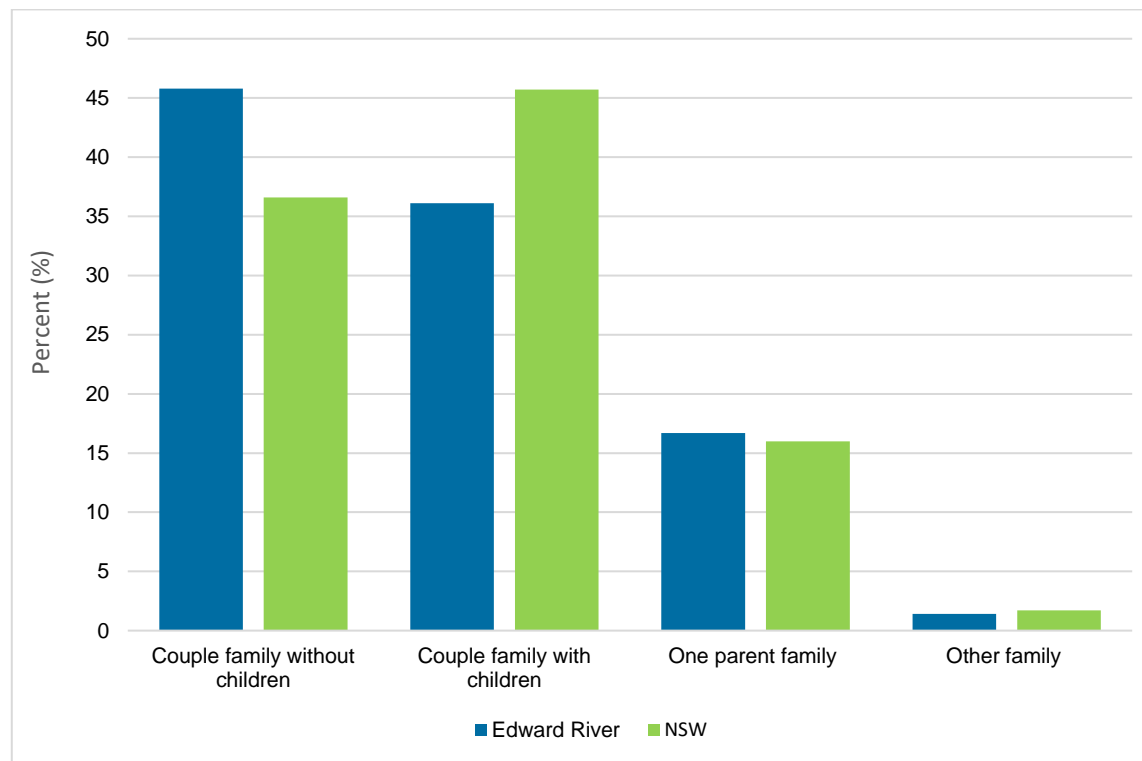


Source: Edward River (A) NSW (LGA), ABS Census 2016.

6.1.4 Family composition

In 2016, the most common type of family composition within the Edward River LGA was couple family without children (refer Figure 6-3.). This type represented 45.8% of all families within the LGA. This is reflective of the ageing population as baby boomers move into the 'empty nester' phase of their lives. The second highest was couple family with children at 36.1% followed by one parent families at 16.7%. Couple family with children and one parent family statistics are significantly higher when compared to NSW figures.

Figure 6-3 Family composition

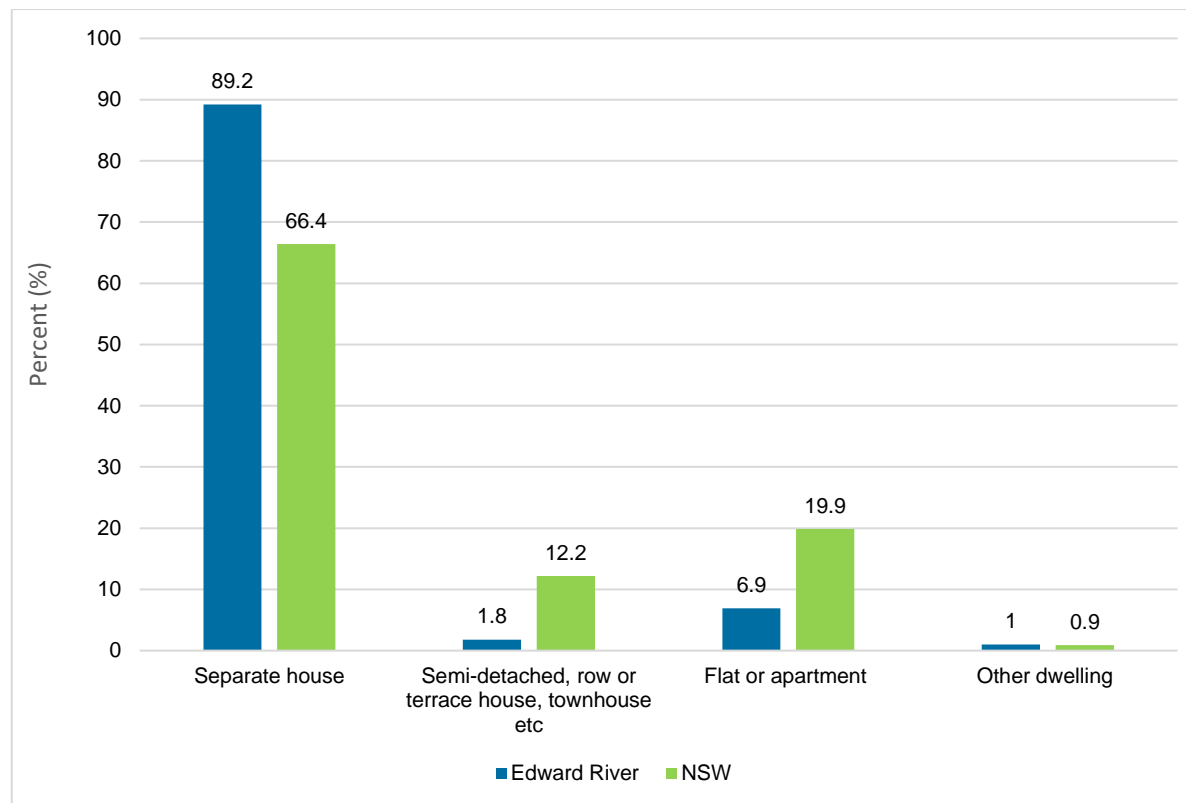


Source: Edward River (A) NSW (LGA), ABS Census 2016.

6.1.5 Housing

Separate houses is the most popular type of housing in the Edward River LGA (refer Figure 6-4) and at the 2016 census the ABS reported 3,850 private dwelling in the Edward River LGA. The number of semi-detached, row or terrace house, townhouse etc. and flat or apartment living options in Edward River are limited when compared to NSW figures.

Figure 6-4 Housing composition



Source: Edward River (A) NSW (LGA), ABS Census 2016.

6.1.6 Employment

In 2016, there were 4,012 persons in the labour force in Edward River LGA, of these persons 57.5% of people were employed full-time, 31.7% were employed part-time and 5.0% were unemployed. The number of persons working full-time in the region is slightly less than the NSW average of 59.2%, however, the number of persons employed part-time and unemployed were noticeably lower than NSW averages indicating that there are employment opportunities within the Edward River LGA, and that a majority of employment opportunities are part-time or casual rather than full-time.

The agriculture, forestry and fishing sector was the largest employer in the Edward River LGA in 2016, employing approximately 633 persons (16.6%) the second highest employer in the LGA was health care and social assistance employing 496 persons (13%) (Edward River (A) NSW LGA General Community Profile, ABS Census 2016). Conargo provides a high proportion of agriculture services including wheat, rice, canola and cereals which employ a large number of persons within the LGA whilst Deniliquin provides a high proportion of health services and retail services to the LGA and surrounding rural villages within northern portion of the adjoining Murray River Council area.

6.2 Former Deniliquin LGA

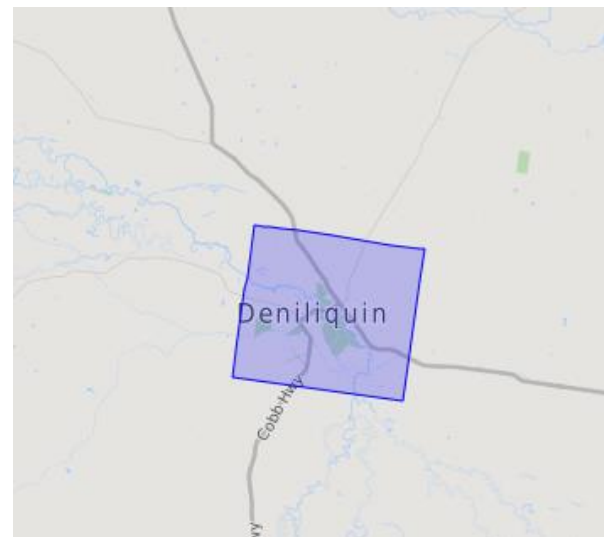
The statistics in Table 6-2 reflect the findings of ABS Census data from 1976 to 2016 for the former Deniliquin LGA. As previously mentioned, in 2016 Edward River Council was proclaimed, following the amalgamation of the former Conargo Shire Council and Deniliquin Councils.

The 2016 ABS Census data for the previous Deniliquin LGA area is now available at the 'Statistical Area Level 2 (SA2)' level which utilises the former Deniliquin LGA boundary (ABS, 2018) as shown in the image below. Therefore, the data should be an accurate reflection of changes since the 2011 ABS Census for the former Deniliquin LGA. The following statistics reflect the findings of the 2016 Census carried out by the ABS and compares 2011 data to 2016.

Table 6-2 Demographic and Housing Profile 2011- 2016

Former Deniliquin LGA	2011	2016
Total Area (km ²)	143.2	143.2
Population	7,120	7,434
Median Age	44	45
Indigenous Person (%)	3.6	4.6
Indigenous Median Age	17	22
Dwellings	3,361	3,237
Occupancy Rate persons per dwelling	2.2	2.2
Median individual income \$/weekly	479	583
Indigenous Persons Median household income	551	776
Median rent (\$/weekly)	150	195
Country of Birth – Australia (%)	86.8	82.3

Source: Deniliquin NSW (SA2), ABS Census 2016.



Deniliquin SA2 boundary

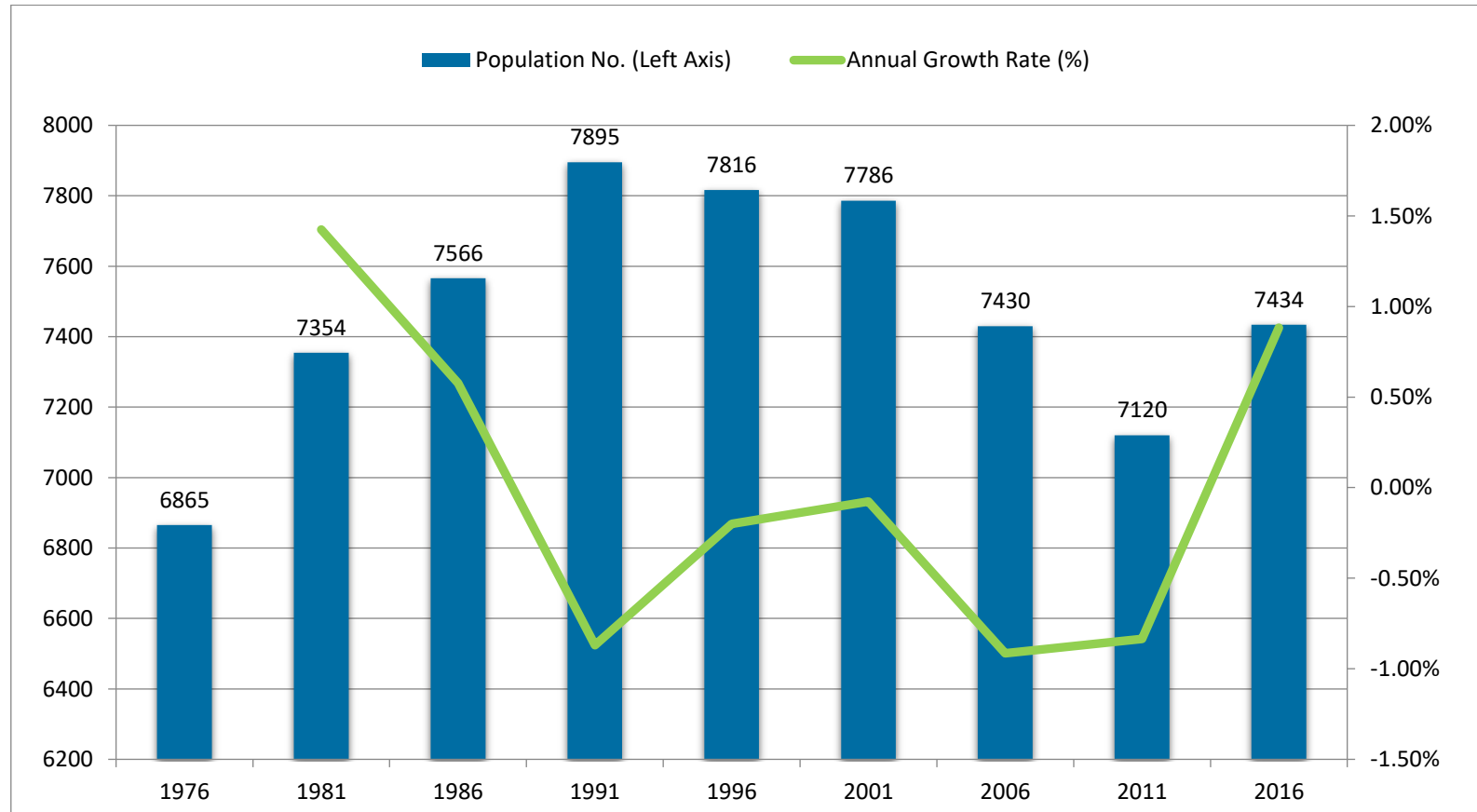
6.2.1 Population

Population trends and changes in the former Deniliquin LGA share the characteristics of many other areas outside of the major cities in Australia. These characteristics include an ageing population, lifestyle driven growth coupled with decline in the proportion and number of young adults, changing household structures which mirror changes in the broader Australian population, and growth beyond the fringes of established urban areas into rural landscapes.

ABS 2016 data records show a fluctuating population over time. From 1976 to 1991 the population increased by 15%. It then stayed relatively stable for the period 1991 to 2001. Between 2001 and 2011 the population suffered from a decline of almost 700 persons, which represented almost 9% of the population. This decline which can be attributed to the severe drought affecting agricultural conditions as well as the rice factory closure. Between 2011 and 2016 the decline reversed and population grew by 314 persons or 4.4%.

Overall, during the 40 year period (from 1976 to 2016) the population has benefitted from an increase of 8.2% (or an average of 0.26% growth per annum) (refer Figure 6-5). This growth is despite significant population losses due to drought and adverse economic incidents indicating that Deniliquin has significant lifestyle attractors and opportunity for further population growth when this is supported by positive agricultural, macro and micro economic conditions.

Figure 6-5 Former Deniliquin LGA - Population and Average Annual Growth Rate



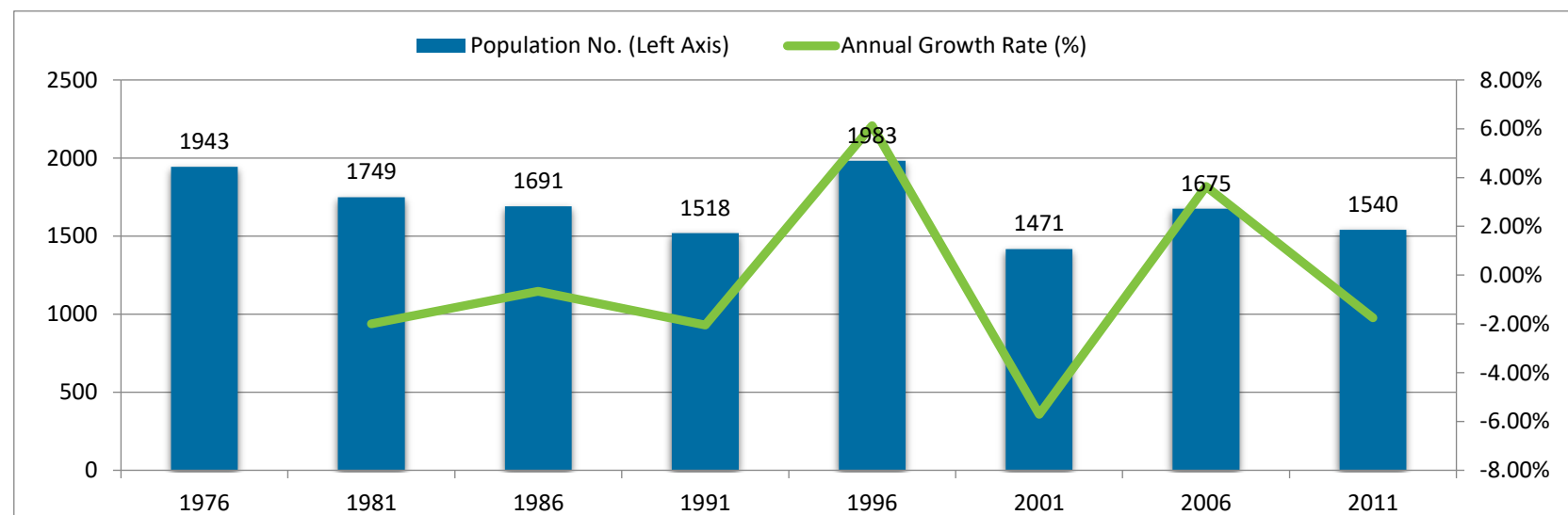
Source: ABS Census 1971- 2016

6.2.2 Surrounding areas

Given the small size and typical land use within the former Deniliquin LGA, there are a significant number of external drivers for large lot residential development outside the LGA boundaries. This includes the former Conargo LGA (now part of Edward River) as well as portions of the former Murray LGA. Hence, the population and housing of both the former Conargo LGA and the Murray LGA will be examined for the purposes of this strategy (refer Figure 6-6 and Figure 6-7). Given the Council amalgamations, the data available is limited to ABS Census 2011.

Former Conargo LGA

Figure 6-6 Conargo - Population and Average Annual Growth Rate



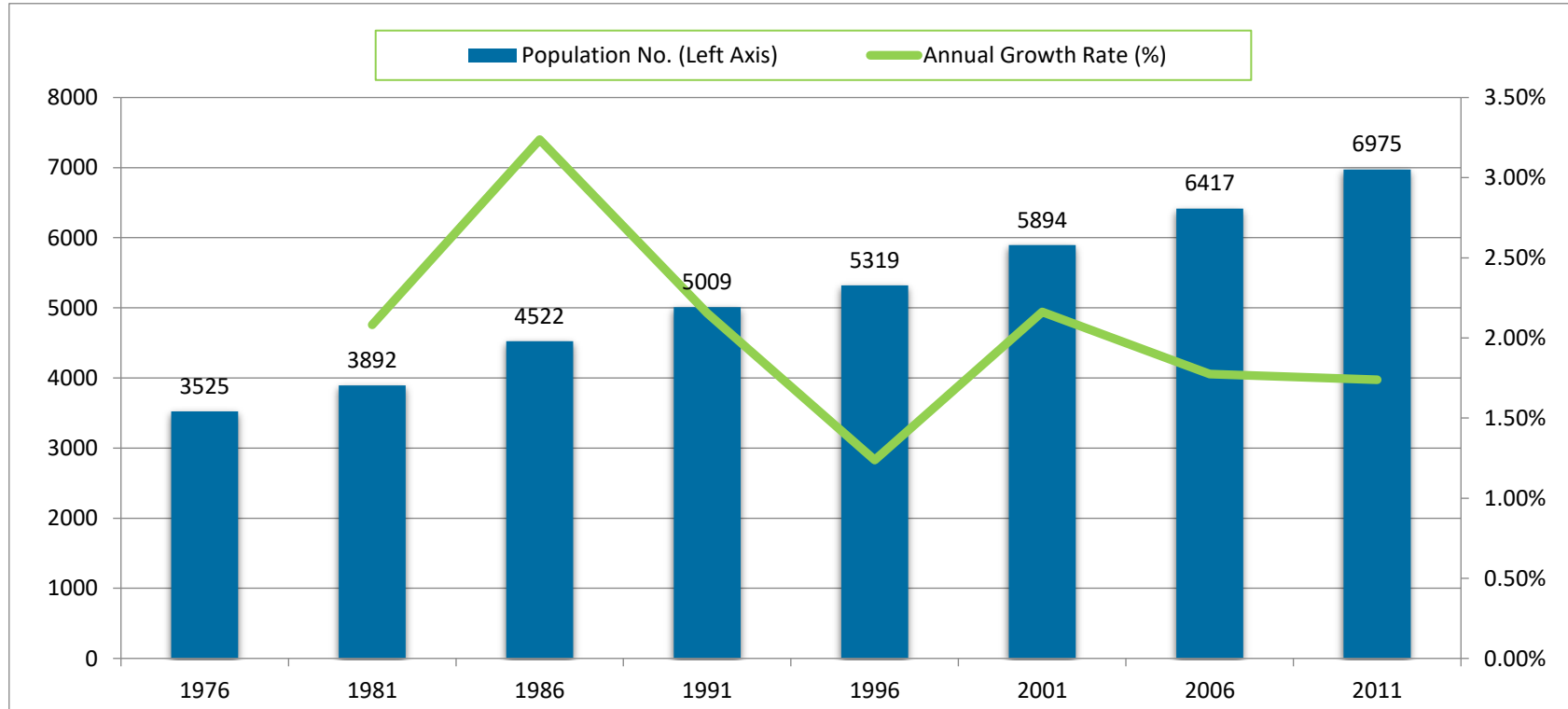
Source: ABS Census 1976- 2011

The population of the former Conargo LGA fluctuates in a similar way to that of Deniliquin. The population of the former Conargo LGA has been declining slowly since the start of the drought in 2000 (declined by 22% from 1996 to 2011).

However, from 1981 to 1996 (during a non-drought period) the population of the former Conargo LGA increased by 13%. The difference between the different decades shows the dramatic effect agricultural conditions have on the population within these LGA's.

Murray LGA

Figure 6-7 Murray - Population and Average Annual Growth Rate



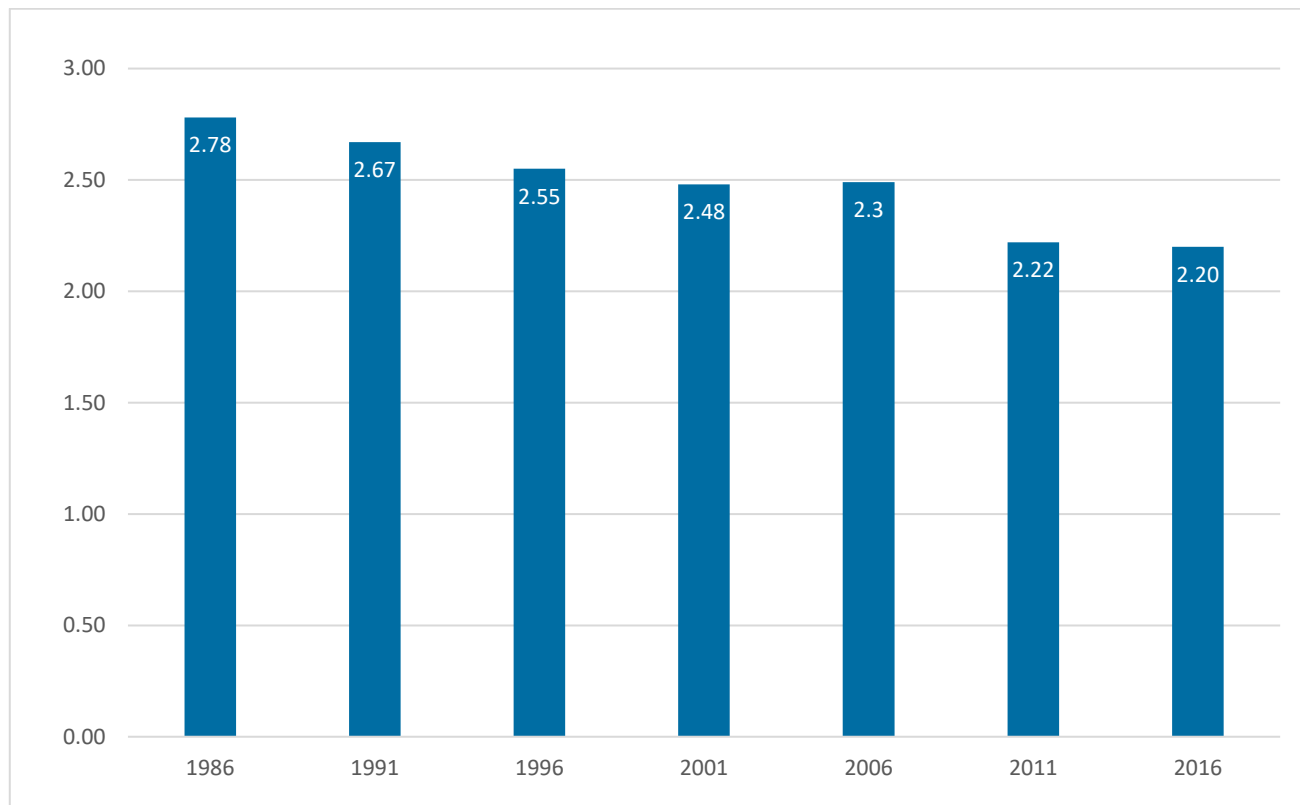
Source: Murray (A) NSW Local Government Area (LGA), ABS Census 1976- 2011

Between 1981 and 1986 the population of the former Murray LGA has been slowly increasing at an annual average growth rate of between 1.2% to 2.0%. The largest population increase was between 1981 and 1986 with the annual average population increase at 3.2%. Even during the drought period the population increased by approximately 2%. The Murray River LGA economy has distinct differences to the former Conargo and Deniliquin economies (now Edward River). The Murray River LGA has a large tourism sector. It also includes Moama which is adjacent to the Victorian town of Echuca. Echuca includes a large commercial centre. Moama is also close to Melbourne (2 hours). It is therefore likely that during the drought, the Murray River LGA was not as susceptible to population decline as it was also reliant on other economic sectors such as tourism and retail / commercial investment.

6.2.3 Occupancy Rate

The occupancy rate has changed considerably since 1986, reducing in line with state and national trends including lone person households, delayed partnering, divorce and separation, decreases in fertility rate and declines in extended families (refer Figure 6-8).

Figure 6-8 Occupancy Rate, Former Deniliquin LGA 1986 – 2016



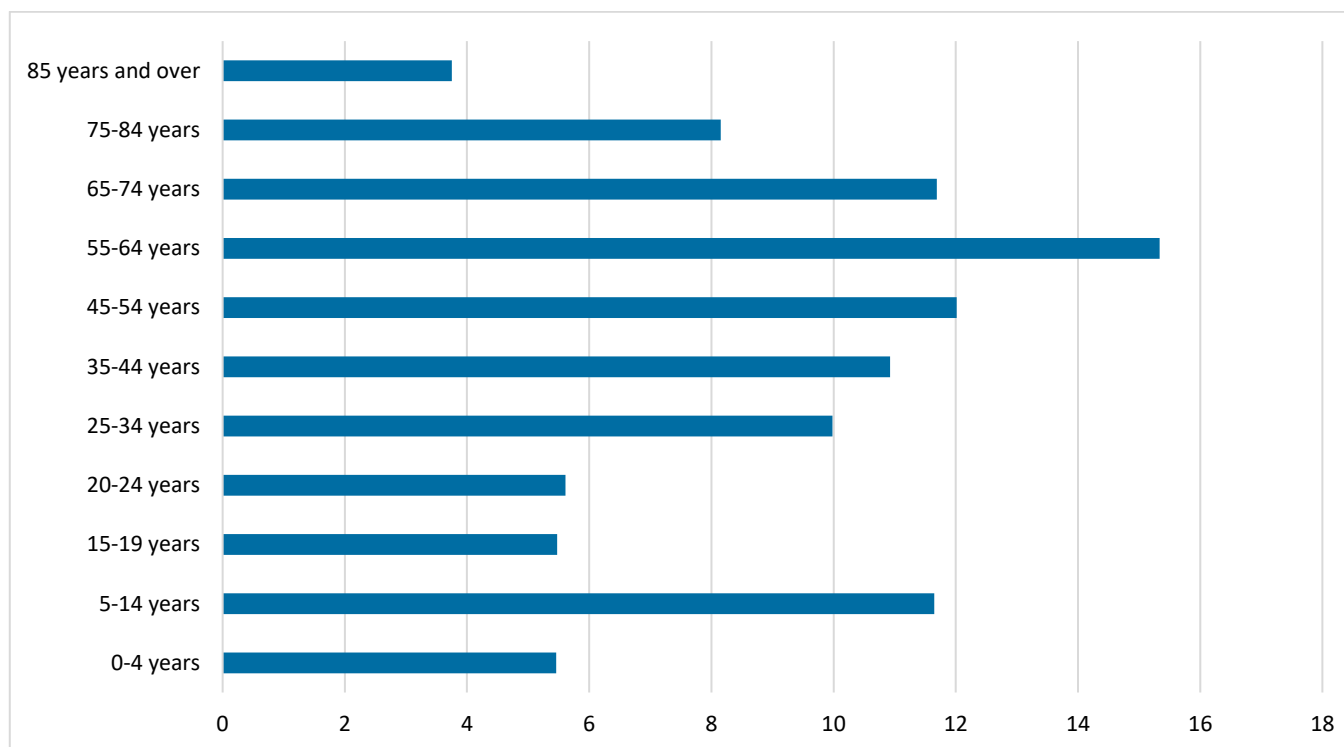
Source: Deniliquin (A) NSW Local Government Area (LGA) (1986 – 2006), Deniliquin (A), NSW Statistical Area Level 2 (SA2), ABS Census (2011 – 2016)

Within Deniliquin the lower occupancy rate is influenced by the high proportion of families without children (for example empty nesters and retirees) and a high proportion of lone person households.

6.2.4 Age Distribution

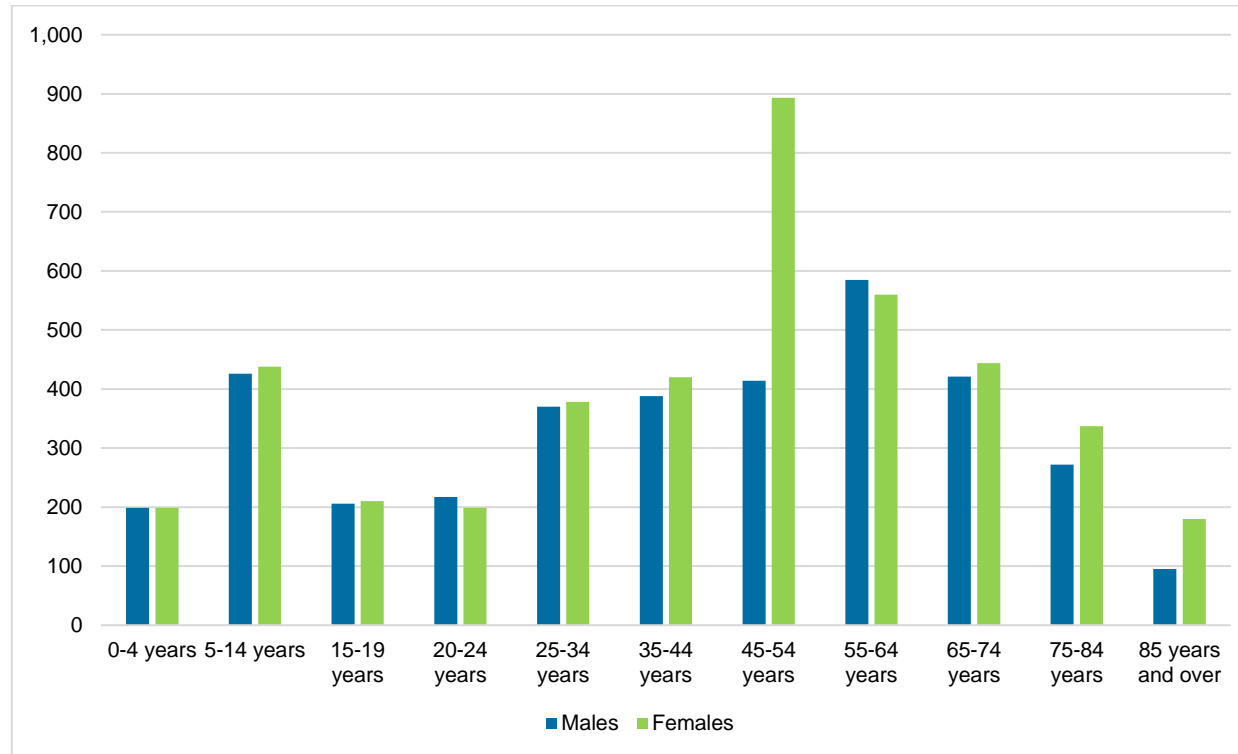
Consistent with trends across Australia, Deniliquin has an ageing population. The medium age in the former Deniliquin LGA has increased from 41 years old in 2006 to 45 year old in 2016. Figure 6-9 shows that the dominant age group is 55-64 years representing 15.3% of the population. This is followed by the 44-54 age group representing 12%, and 65-74 age group representing 11.68%. Interestingly, the next highest age group is 5-14 years representing 11.64% which is representative the high number of families with children (both singles and couples) in Deniliquin, further discussed in Section 6.2.5.

Figure 6-9 Age (% of total population – 2016) former Deniliquin LGA



Source: ABS Census 2016.

Figure 6-10 Age sex graph former Deniliquin LGA 2016 Census



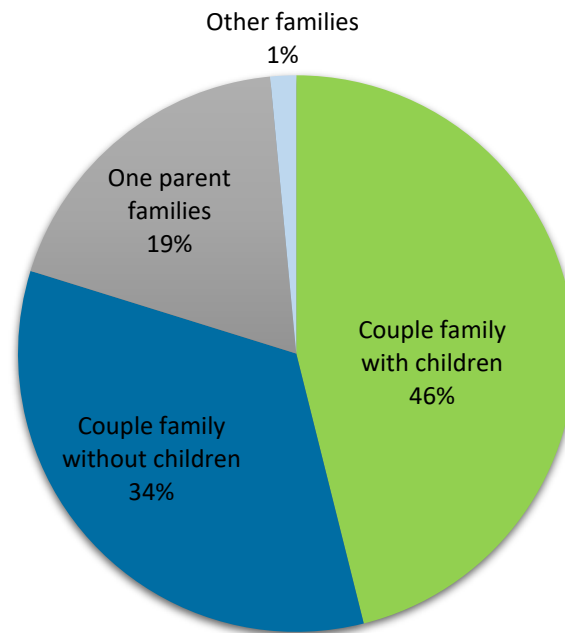
Source: Deniliquin (A), NSW SA2 ABS Census 2016.

The age sex graph in Figure 6-10 highlights some differences between the sexes. The most notable feature is the higher proportion of females than males in the population aged between 45 and 54 years as well as 75 years and over. The difference is most marked among the population aged 85 years and over and is attributable to the longer life expectancies of females. The graph demonstrated the large proportion of 55 to 64 year olds comprising 15% of the total population, and a lower proportion of persons aged 0 to 4 years and 15 to 24 year olds indicating that young people are leaving the area to seek out further education or work opportunities. In NSW in 2016, 14.2% of the population was aged between 25 and 34 year, whilst in Deniliquin only 9.9% of the population were aged between 25 and 34 years.

6.2.5 Family composition

In 2016, the most common type of family composition was 'couple family without children (refer to Figure 6-11).' This type represented 46% of all families within Deniliquin. This is reflective of the ageing population as baby boomers move into the 'empty nester' phase of their lives. The second highest was couple family with children at 34% followed by one parent families at 19%. The figures have changed significantly since 2011 when the dominant family type was couple family without children representing 44.4% of the population, a drop of 10.4% from 2011 to 2016.

Figure 6-11 Family composition



Source: Deniliquin (A), NSW SA2 ABS Census 2016.

6.2.6 Housing

Separate houses remain the most popular type of housing in Deniliquin and at the 2016 Deniliquin SA2 ABS census data reported a total of 3,237 occupied and unoccupied private dwellings in Deniliquin.

The number of 'semi-detached, row or terrace houses, townhouses etc.' and 'other dwellings' both declined within the 10 year period between 2006 and 2016. Table 6-3 below demonstrates that the number of separate houses between 1996 and 2011 has been slowly decreasing over time with a 5.3% decrease in separate housing between 1996 and 2016 representing a 1.06% decrease over 5 years.

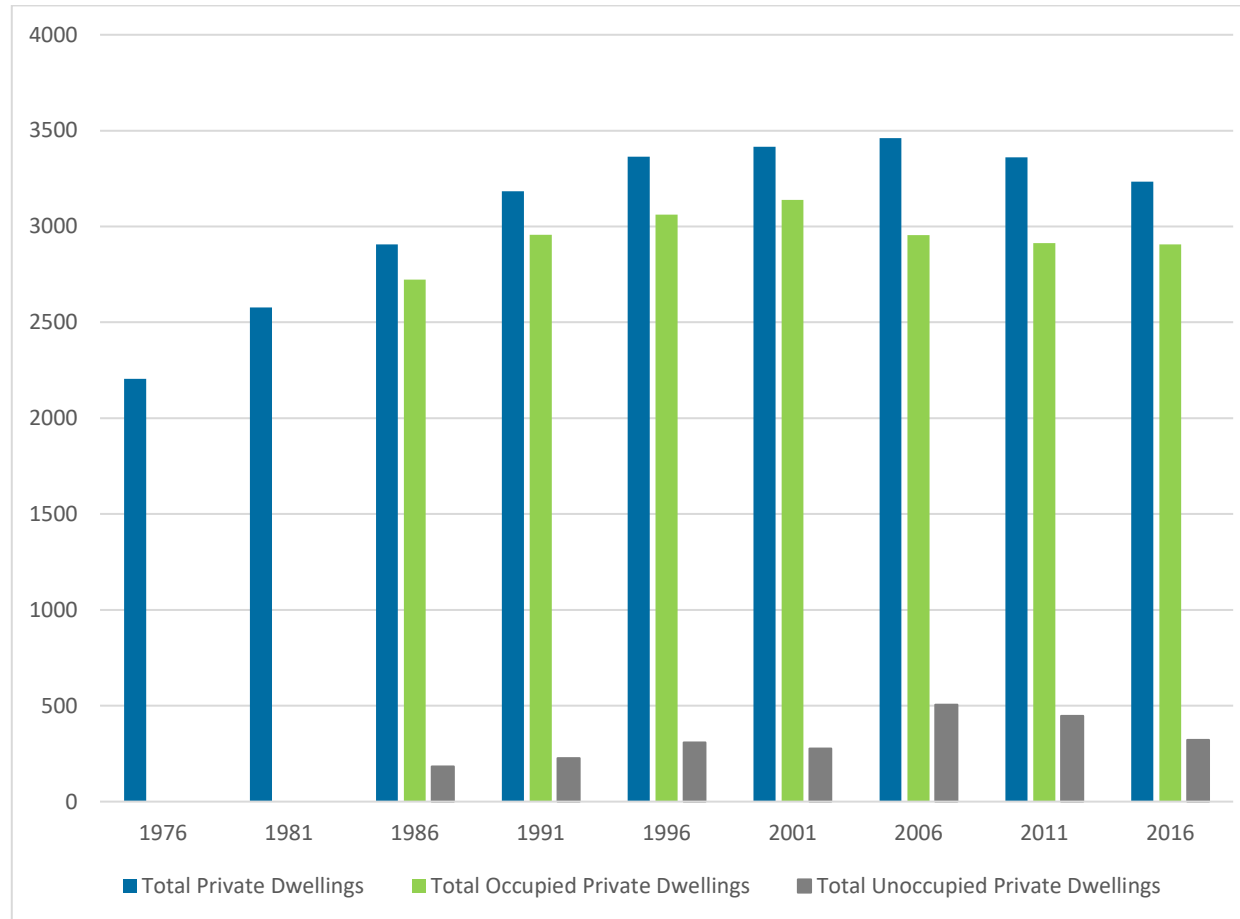
Table 6-3 Occupied Dwelling Characteristics, 1996 to 2016

Dwelling types	1996	2001	2006	2011	2016	% of total Occupied Private dwellings	Change 1996 to 2016 (No.)	% Change - 1996 to 2016
	No.	No.	No.	No.	No.	2016	No.	%
Separate house	2,698	2,567	2,575	2,567	2,555	87.7	-131	-5.3
Semi-detached, row or terrace house, townhouse	134	36	86	161	62	2.1	-72	-53.7
Flat, unit or apartment	360	429	334	128	232	8.0	-128	-35.5
Other dwellings	117	90	68	54	33	1.1	-84	-53.8
Dwelling type not stated	55	13	n/a	4	33	n/a	n/a	n/a

Source: Deniliquin (A), NSW SA2 ABS Census 2016.

At the 2016 Census, there were 2,915 occupied private dwellings in Deniliquin, of which 9.9% were unoccupied. ABS figures suggests that between 2011 and 2016 the number of separate house dwellings decreased from 2,567 to 2,555 whilst the number flat or apartment living options increased, with a corresponding increase in the number of 'lone persons' and 'couple family without children' suggesting that these family compositions are creating demand for smaller housing options within the Deniliquin area.

Figure 6-12 Total Number of Private Dwellings (occupied and unoccupied) from 1976 to 2016



Source: Deniliquin (A), NSW SA2 ABS Census 2016.

During 2011 to 2016 there was a significant decline in the number of semi-detached, row or terrace house, townhouse available representing a 60% decrease over 5 years. Both the number of occupied and unoccupied private dwellings have also declined since 2006 which is evident in Figure 6-12 above.

ABS figures suggest that between 2011 and 2016, the number of 'other dwellings' reported decreased almost half from 54 to 33, with a corresponding increase in the number of 'flat, unit or apartment' dwelling types in 2016, suggesting a change in descriptors in ABS data.

Table 6-4 demonstrates that Deniliquin has had a steady increase in the number of dwellings between 1976 and 2006. According to ABS data since 2011 there has been a decline in the number of dwellings available.

The number of unoccupied private dwellings between 2006 and 2016 has decreased indicating that the availability of housing within the area has decreased, with a corresponding increase in the number of persons moving to the region. Reasons for the reduction of unoccupied dwellings over a 10 year period may be due to a lack of rental properties available or a lack of available housing.

Table 6-4 Increase in Dwelling from 1976 to 2016

Year	Number of Dwellings (occupied and unoccupied)	Average Annual Increase (per census period) (%)	Increase in Number of Dwellings Per Year (per census period)
1976	2,206		
1981	2,577	3.36	74.2
1986	2,906	2.55	65.8
1991	3,183	1.91	55.4
1996	3,364	1.14	36.2
2001	3,415	0.30	10.2
2006	3,461	0.27	9.2
2011	3,361	-0.58	-20.0
2016	3,233	-0.007	-128

6.2.7 Employment

In 2016, there were 3,278 persons employed in the Deniliquin region, of these persons 56.3% were employed full-time, 32.6% were employed part-time and 5.6% were unemployed. The full-time and part-time employment figures for Deniliquin when compared to 2011 employment figures show a slight increase, there has also been a slight increase in the number of unemployed persons within the region with 5.6% of the population being unemployed in 2016 compared to 4.4% in 2011. However, the unemployment rate in Deniliquin remained significantly lower than the NSW and Australian unemployment figures of 6.3% and 6.9% during the same year.

As shown in Table 6-5 the health care and social assistance employment sector remained the largest employer in Deniliquin in 2016, employing approximately 14.3% of the population. Between 2011 and 2016 there has been a decline of persons working within retail and wholesale trade, however there has been an increase in the number of persons employed within the agriculture, forestry and fishing sector, which improved by 15.96%, accommodation and food services which improved by 14.15% and construction, which improved by 11.5%.

Increases in the number of persons working within the agriculture, forestry and fishing sectors could largely be due to the re-opening of the Australian Meat Group (AMG) abattoir in 2015 resulting in a corresponding increases in the number of persons working within primary, secondary and quaternary sectors.

Table 6-5 Employment by Industry, Former Deniliquin LGA

Industry	2001	2006	2011	2016	% of Employed Persons (2016)	Change 2001 to 2016 (No.)	Change 2001 to 2006 (%)
Primary (Resource Based)	406	263	196	226	7.3	-180	-44.3
Agriculture, forestry & fishing	406	252	188	218	7.05	-188	-46.3
Mining	0	11	8	8	0.25	8	-
Secondary (Goods Based)	517	575	568	618	19.9	101	19.5
Manufacturing	263	279	250	276	8.92	13	4.9
Electricity, gas, water & waste services	65	102	92	90	2.9	25	38.4
Construction	189	194	226	252	8.15	63	33.3
Tertiary (Commerce Based)	939	739	634	553	17.8	-386	-41.1
Wholesale trade	171	116	92	76	2.4	-95	-55.5
Retail trade	615	463	396	314	10.1	-301	-48.9

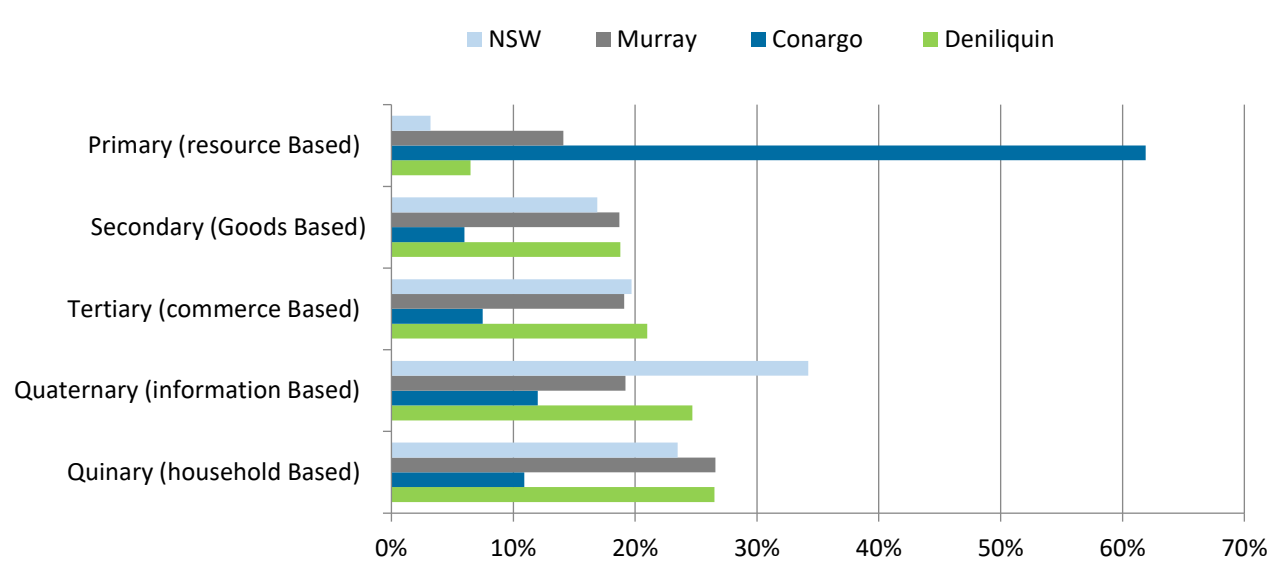
Industry	2001	2006	2011	2016	% of Employed Persons (2016)	Change 2001 to 2016 (No.)	Change 2001 to 2006 (%)
Transport, postal & warehousing	153	160	146	163	5.2	10	6.5
Quaternary (information Based)	1,036	818	746	734	23.7	-302	-29.1
Information media & telecommunications	35	34	29	23	0.74	-12	-34.2
Financial & insurance services	92	85	74	68	2.1	24	-26
Rental, hiring & real estate services	209	41	26	19	0.6	-190	-90.9
Professional, scientific & technical services	-	149	138	141	4.5	-8	-5.3
Administrative & support services	211	59	69	73	2.3	-138	-65.4
Public administration & safety	137	203	198	182	5.8	45	32.8
Education & training	352	247	212	228	7.37	-124	-35.2
Quinary (household Based)	676	750	802	835	27.0	159	23.5
Accommodation & food services	165	241	212	242	7.8	77	46.6
Health care & social assistance	352	366	443	443	14.3	91	25.8
Arts & recreation services	139	20	24	22	0.71	22	-84.1
Other services	20	123	123	128	4.13	108	540%

Source: ABS Census 2016

A comparison of the economic contribution of Deniliquin compared to the surrounding region and NSW is provided in Figure 6-13. As can be seen the primary sector is higher in all LGA's than the state average showing how much the region relies on primary industries for its economy. However, as discussed previously Deniliquin is fairly underrepresented in primary industry due to the size of the former LGA and existing land uses. This is shown in its high secondary, tertiary, quaternary and quinary sectors. Given the small size of the former LGA it is not surprising that industries such as retail trade and public administration are higher than the state average.

Conargo relies almost exclusively on primary industries for its economy as all other sectors are fairly low. Whilst, the Murray LGA has a relevantly high quinary sector, the large number of persons employed in the accommodation and food services reflects the LGA's reliance on tourism.

Figure 6-13 Contribution to the Economy – Employed Persons, Former Deniliquin, Murray, Former Conargo and NSW (2011)



Source ABS 2011.

6.2.8 Development and Property Trends

Table 6-6 below demonstrates the total value of new buildings in Deniliquin has fluctuated significantly over the past 10 years. Values peaked in 2010 and 2015 supported by significant commercial development.

For residential dwellings, (being all types including residential and large lot residential) an average of 13 have been approved between 2006 and 2017, with peaks of 17 in 2006 and 15 in 2007, 2009, 2010 and 2013. The lowest approval years were 2011 with 9 and 2016 with 4. Despite low approvals in 2016, it is noted that a substantial upturn of 13 occurred in the following year.

6.2.9 Building Approvals - ABS

Table 6-6 Building Approvals – Former Deniliquin LGA

Building Approvals - year ended 30 June		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Private sector houses	no.	15	15	16	15	15	9	10	15	11	11	4	13
Total dwelling units	no.	17	15	20	15	15	9	11	15	11	11	4	13
Value of private sector houses	\$m	3.2	3.6	2.9	4	4	9	5	5	4	5	4	5
Value of new residential building	\$m	3.5	3.6	3.5	3	3	2	4	5	4	5	5	5
Value of total residential building	\$m	4.9	4.8	4.8	4	4	3	5	5	4	5	5	5
Value of total non-residential building	\$m	0.2	5.1	4.4	3	9	1	4	2	0	17	0	1
Value of total building	\$m	5.1	9.9	9.2	6	14	4	9	7	4	22	5	7

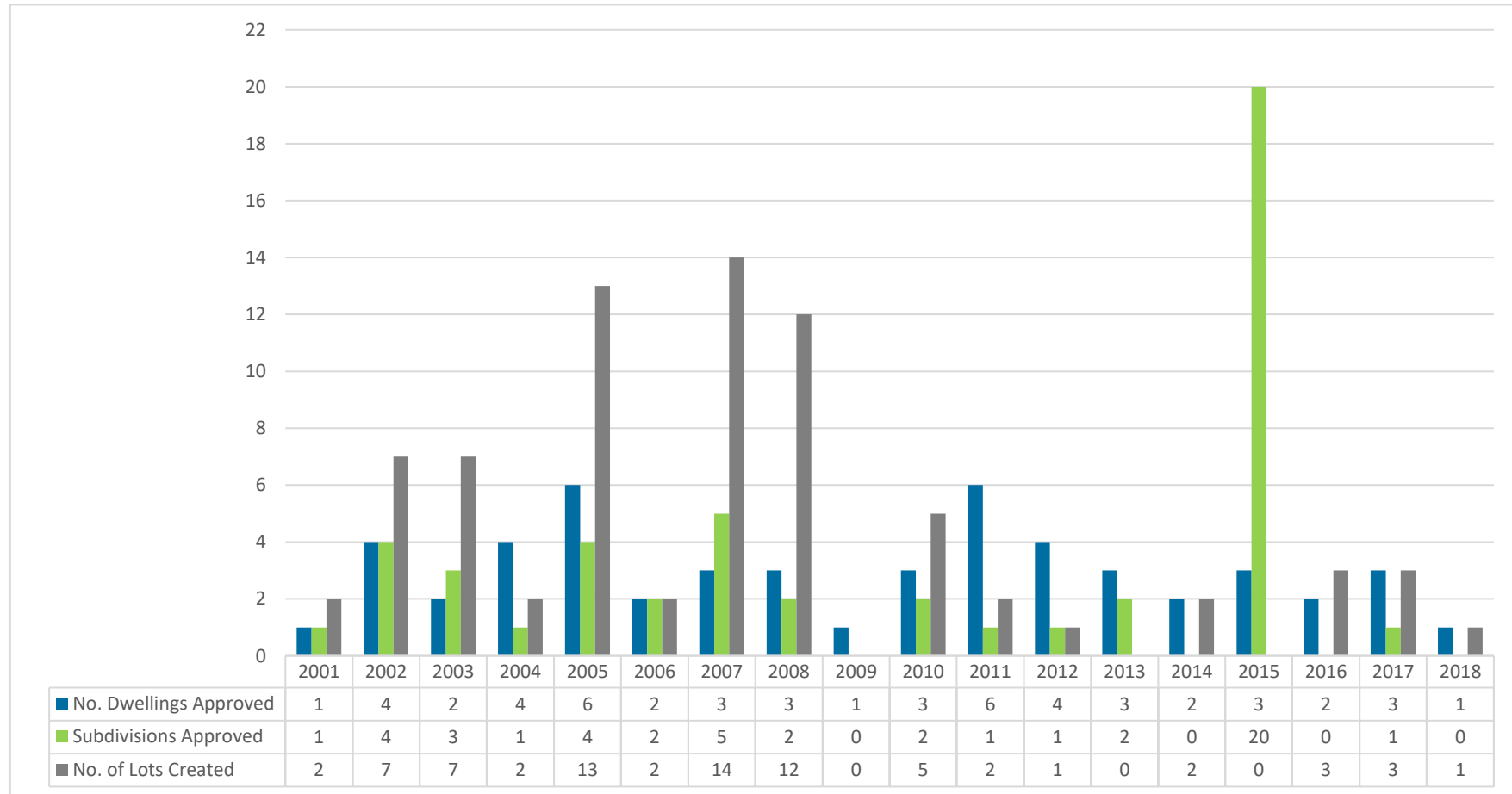
6.2.10 Large Lot Residential Development Approvals

Data on large lot residential dwelling approvals since 2001 is shown in Table 6-7 and Figure 6-14. Over the 16 year period between 2001 and 2017 a total of **53** large lot residential dwellings were approved with an annual average of **3.05** dwellings approved per year. In addition, a total of **76** new lots were created averaging **4.4** lots per year.

Table 6-7 Approvals for Large Lot Residential Development in Deniliquin, 2001 to 2018

Year	No. Dwellings Approved	Subdivisions Approved	No. of Lots Created
2001	1	1	2
2002	4	4	7
2003	2	3	7
2004	4	1	2
2005	6	4	13
2006	2	2	2
2007	3	5	14
2008	3	2	12
2009	1	0	0
2010	3	2	5
2011	6	1	2
2012	4	1	1
2013	3	2	0
2014	2	0	2
2015	3	20	0
2016	2	0	3
2017	3	1	3
2018* (As of 28 August)	1	0	1
Total	53	49	76
Annual Average 2001-2017)	3.05	2.88	4.4

Figure 6-14 Approvals for Large Lot Residential Development in Deniliquin 2001-2018



7. Department of Planning and Environment Population Projections

7.1 Department of Planning and Environment Population Forecasts

Department of Planning and Environment (DPE) now DPI&E provides population and household projections to help plan for service and infrastructure delivery for the community. The projections also provide a framework for assessing future needs for residential and commercial land, housing and public utilities. Projections are prepared for each NSW LGA and consist of three projection series the main projection a high and low growth projection series. The main series is used for official projections and the high and low show the impact on the NSW population when the assumed levels of births, deaths and migration are changed.

The latest projection series is dated 2016 and forecast population, households and implied dwelling requirements to 2036. It is noted the 2016 projections take into account findings from the 2011 Census of Population and Housing, final recast Estimated Resident Populations (ERPs) published by the ABS for the period 1991-2011, and the latest data relating to births, deaths and migration. Assumptions are also made about the geographic distribution of future residential development in selected areas (DPE, 2016).

DPE note that the data has limitations and the projections are not precise predictions of the demographic future given they are based on assumptions around future trends in births, deaths and migration with the data being sourced from 2011 ABS Census data. Whilst the assumptions represent reflect the current outlook regarding these trends, it is quite possible they will not eventuate. Births and migration are influenced by a wide variety of social, economic and political factors, affected by year to year fluctuations and impossible foresee with any degree of precision (DPE 2016).

For example, these limitations are apparent in projections previously released by D in 2014 for the former Deniliquin LGA where there was a projected loss of 400 persons between 2011 and 2016. As set out in Section 6.2.1 there was instead a gain of over 300 persons during this period.

Table 7-1 DPE – Edward River population projections – Main series 2011 – 2036

	2011	2016	2021	2026	2031	2036	Total Change	Total % Change
Total population	8,900	8,650	8,400	8,100	7,800	7,450	-1,450	-16.1
Total households	3,850	3,800	3,750	3,650	3,550	3,400	-450	-11.2
Average household size	2.29	2.24	2.21	2.19	2.17	2.14	-0.15	-6.77
Implied dwellings	4,500	4,450	4,400	4,300	4,150	4,050	450	-10.5

Table 7-2 DPE – Projected change population and households 2011 – 2036

	2011-2016	2016-2021	2021-2026	2026-2031	2031-2036
Total population change	-250	-250	-300	-300	-350
Average annual population growth %	-2.81	-2.89	-3.5	-3.7	-4.2
Total household change	50	50	100	100	150
Average annual household growth %	-1.3	-1.3	-2.6	-2.7	-4.2

Table 7-3 DPE – Projected household types 2011 – 2036

	2011	2016	2021	2026	2031	2036
Couple only	1,100	1,150	1,150	1,150	1,100	1,050
Couple with children	950	900	850	800	750	700
Single parent	400	400	400	350	350	300
Other family h/h	50	50	50	50	0	0
Multiple family h/h	50	50	50	50	50	50
Total family h/h	2,500	2,500	2,400	2,350	2,250	2,150
Lone person	1,250	1,250	1,250	1,200	1,200	1,200
Group	100	100	100	100	100	100
Total non-family h/h	1,300	1,350	1,300	1,300	1,300	1,250
Total	3,850	3,800	3,750	3,650	3,550	3,400

Table 7-4 DPE – Projected age groups 2011 – 2036

Age groups	2011	2016	2021	2026	2031	2036	Change (No.)	Change (%)
0-4	600	550	500	500	450	400	-200	-33.3
5-9	550	600	550	500	500	450	-100	-18.1
10-14	650	550	550	500	500	450	-200	-30.7
15-19	600	500	450	450	400	400	-200	-33.3
20-24	400	400	350	300	250	250	-150	-37.5
25-29	350	450	400	350	300	300	-50	-14.2
30-34	400	400	450	400	350	350	-50	-12.5
35-39	550	450	450	450	400	350	-200	-36.3
40-44	550	550	450	450	450	400	-150	-27.2
45-49	600	550	500	450	450	450	-150	-25
50-54	650	600	500	500	450	450	-200	-30.7
55-59	650	650	550	500	500	450	-200	-30.7
60-64	550	650	600	550	500	500	-50	-9
65-69	450	550	600	600	550	500	50	11.1
70-74	450	450	500	550	550	500	50	11.1
75-79	350	400	400	450	500	500	150	42.8
80-84	250	250	300	300	350	400	150	60
85+	250	300	300	350	400	450	200	80

Commentary on predictions

The projections show a 16% decline in population and an 11% decline in households for the Edward River LGA from 2011 to 2036.

The 2016 projections have been produced at a time of considerable population decline due to poor agricultural conditions, followed by the global financial crisis which has further effects on the agricultural sector. The projections have not considered the latest 2016 census data indicating that the rate of population decline within the Edward River Region has significantly slowed and growth has been evident in Deniliquin between 2011 and 2016. As set out in Section 6.1, the current population as established by the ABS (8,851) is significantly higher than projections for 2016 (8,650) or 2021 (8,400).

The predictions also do not take into account non-demographic factors such as the intent of past land use planning policy that might alter population distribution, infrastructure constraints on growth, potential census undercounts, and overall changes in economic confidence, all of which may influence population trends over time.

Therefore, whilst the DPE predictions are based on the best available data and must therefore be considered valid, the predictions do not take into account non-demographic factors such as an increase in lifestyle, investment and employment opportunities available within Deniliquin. For this reason these population projections have been considered, but not been adopted for the purposes of calculating large lot residential demand within this strategy.

7.2 Growth Drivers

In order to consider large lot residential demand, there are a number of unique growth opportunities occurring in Deniliquin that not captured by ABS or DPE projections. These opportunities provide additional evidence of future growth potential within Deniliquin, and assist in establishing future demand for development including large lot residential housing.

7.2.1 Surrounding Localities Growth Leakage

As demonstrated in section 2.1 the former Deniliquin LGA is a relatively small LGA comprised of a traditional central business district with surrounding urban development and with a relatively small proportion of agricultural and industrial land uses. The Murray and former Conargo LGA's surround Deniliquin. The rural areas and villages of Conargo as well as a significant proportion of the former Murray Shire have a significant influence on the demand for large lot residential land. For example many farmers from these regions may retire in Deniliquin on large lot residential land close to town and the river in order to get closer to health and other services that are required by an ageing population. This is reinforced by the lack of available large lot residential land in these LGA's. This has occurred historically and is likely to continue. This means that the surrounding populations will continue to influence and likely cause strong pressure for rural lifestyle living in Deniliquin.

7.2.2 Agricultural Conditions

Deniliquin is located within one of Australia's premium agricultural areas and benefits from a well connected export conduit to Melbourne and ports in NSW (DPE 2016).

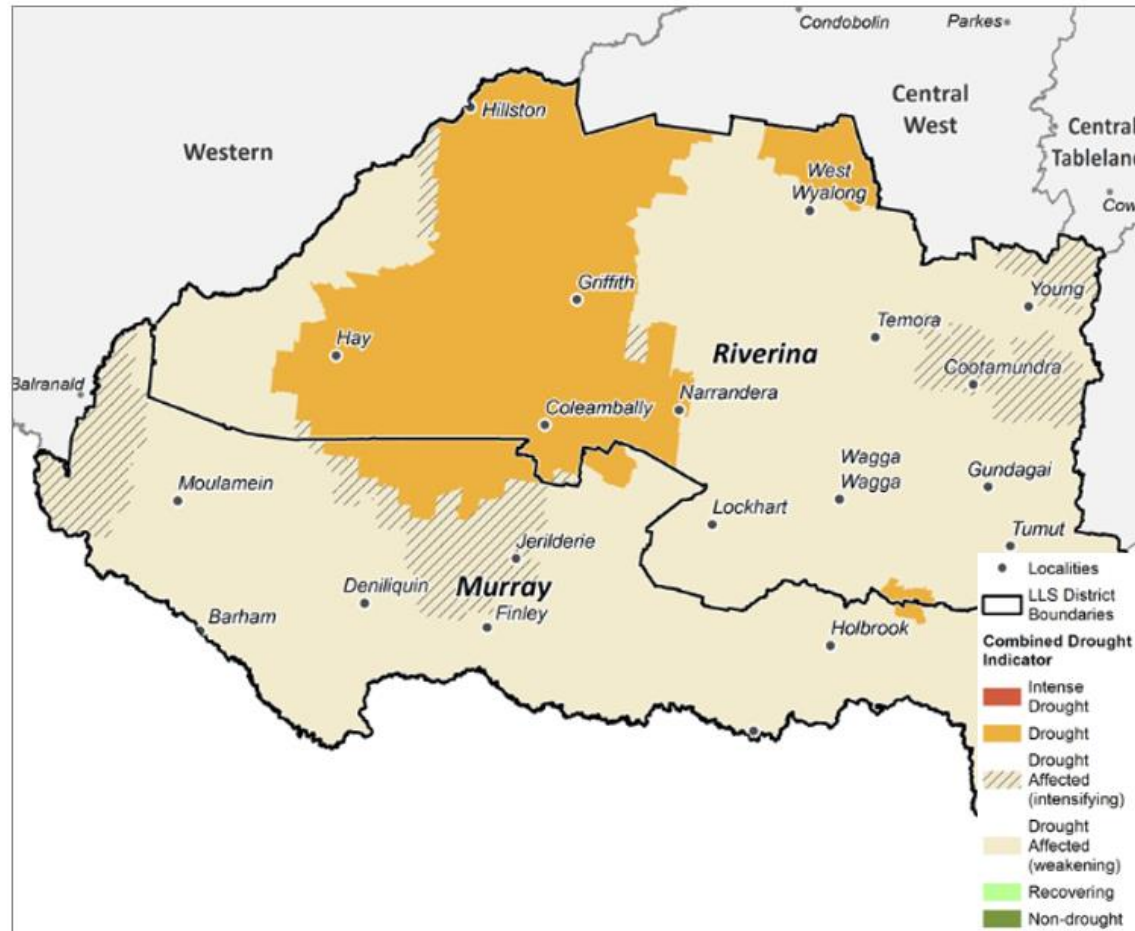
Through strategies within the *Murray Regional Plan 2036* a key goal of the NSW Government is the growth and diversification of the agricultural economy within the region. This includes supporting agricultural innovation, value-adding and the adoption of advanced technologies to maximise productivity.

Agriculture continues to be a strong sector within the Deniliquin economy and declines in some areas from 2006 to date are reflective of overall state wide trends in the gradual decline of agricultural production in many rural areas and in rural based employment arising from the recent extensive drought conditions across the State. The effect that the drought has had on many rural areas is well documented:

'The most recent drought has been one of the most severe on record, with large parts of southern and eastern Australia experiencing dry conditions since 1996. Moreover, "for the agriculturally important Murray-Darling Basin, October 2007 marked the sixth anniversary of lower than average rainfall totals, with the November 2001 to October 2007 period being its equal driest such six-year period on record" (Bureau of Meteorology [BOM], 2007, p. 1). Households adjust to adverse circumstances in drought-affected areas, with some members of households moving (temporarily or otherwise) towards areas with greater economic opportunity.' (Australian Institute of Family Studies, September 2011)

Figure 7-1 below that in July 2018 drought conditions around Deniliquin continued but were 'weakening'. This indicates agricultural conditions remain tight but are benefitting from intermittent rainfall.

Figure 7-1 NSW DPI Murray Riverina State Seasonal Update July 2018



Source: NSW Department of Primary Industries, July 2018

The report for Australian Institute of Family Studies in 2011, *Migration, labour demand, housing markets and the drought in regional Australia*, researched drought and the migration of population in rural areas. The paper supports the idea that the population affects are only short term and people will generally move back due to family orientation etc as conditions improve or become more favourable. This has been evident in the recent increase in employment growth within the agriculture, forestry and fishing sector, which improved by 17.8% between 2011 and 2016 as set out in Section 6.2.7.

Through actions identified within the *Riverina Murray Regional Plan 2036*, the NSW Government is also providing support to rural communities to increase resilience to altered rainfall patterns and environmental conditions.

The NSW Government's *NSW Drought Strategy* (2015) assists rural communities that are vulnerable to climate-related economic downturns by improving their business, reducing risks and building resilience to future droughts. The Strategy delivers a more transparent and targeted system of drought support and will assist in increasing community resilience to drought. In addition a NSW Emergency Drought Relief Package was announced in July 2018 providing farmers significant subsidies and waiver of fees, licences and charges, loans and household allowances.

Given recent upward trends in agricultural employment, government measures and small climatic improvements, the current agricultural conditions are not considered to be an impediment to future growth within Deniliquin.

7.2.3 Reopening of Deniliquin Abattoir

The reopening of the Deniliquin Abattoir will bring significant investment and growth potential to Deniliquin. The purchasers, Tasman Group, are an Australian meat packing and exporting company based in Victoria who have previously operated the Cobram abattoir and once owned a feedlot near Wakool. At full capacity, the abattoir is able to employ at least 80 people.

A working meatworks also has the ability to strengthen and diversify industry, and therefore the improve the local economy.

7.2.4 Proposed Future Ethanol Plant

An ethanol plant has recently been approved by DPE. The plant which will produce fuel and by-products from grain sourced within a 400 kilometre radius of Deniliquin, will have the capacity to produce 110,000 kilolitres of ethanol each year with most of it to be exported back to Korea. The ethanol plant is expected to create up to 350 jobs during construction and more than 50 full-time positions when it is operational.

7.2.5 Manufacturing Changes

Located south of Deniliquin town centre is the fourth largest rice mill in the world. It services the Denimein and Deniboota Irrigation Areas and is part of the vast Riverina Rice Growing Area where over 2 340 farmers produce over 750 000 tonnes of rice. Much of that crop is stored and milled at Deniliquin. However, in 2008 the rice temporarily closed and placed into 'care and maintenance' in 2008 following six years of drought. At the time local rice production had declined from an industry average of one million tonnes per year to a low of just 19,000 tonnes (SunRice Media Release, Nov 2010).

In 2011, SunRice announced it was reopening its mill creating close to 90 additional jobs including millers, packing line operators, electrical and mechanical maintainers and logistics personnel, as well as associated support roles spanning safety, quality and shift leaders. SunRice Chairman, Mr. Gerry Lawson said with a strong crop expected next year, the Board was delighted to recommission the company's Deniliquin base.

"To see this magnificent plant in operation again and employing local people is the outcome that we'd always hoped for when we made the difficult decision to close the mill. This is a wonderful outcome, not only for our industry, but for the people of Deniliquin and the Murray region. The strong crop coupled with the mill reopening will have a positive impact on the region as a whole and bring with it significant economic flow-on effects."

This is a well-founded indication of the likely future demand, thereby Council will need to ensure communities have the required infrastructure for the predicted population growth from this reopening of the plant.

7.2.6 Mineral Resources

Figure 7-2 shows the mineral occurrences, existing mineral tenements as well as title applications and current titles for Deniliquin and surrounds. Figure 7-3 shows the petroleum title applications in the region. There are a significant amount of exploration applications and occurrences within the region surrounding Deniliquin. If a significant mine goes ahead the population will likely increase depending on the size of the mine. This includes coal seam gas exploration as well.

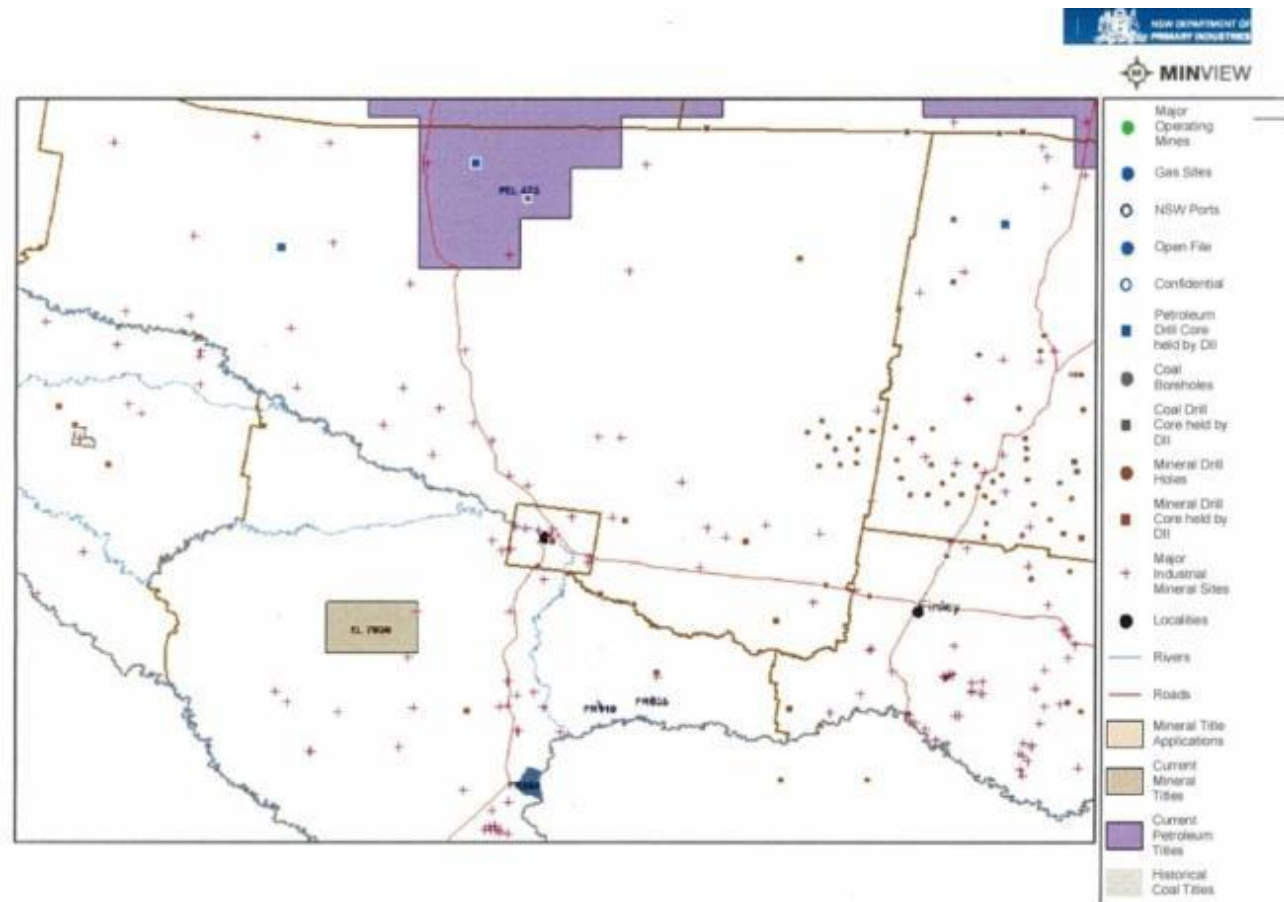
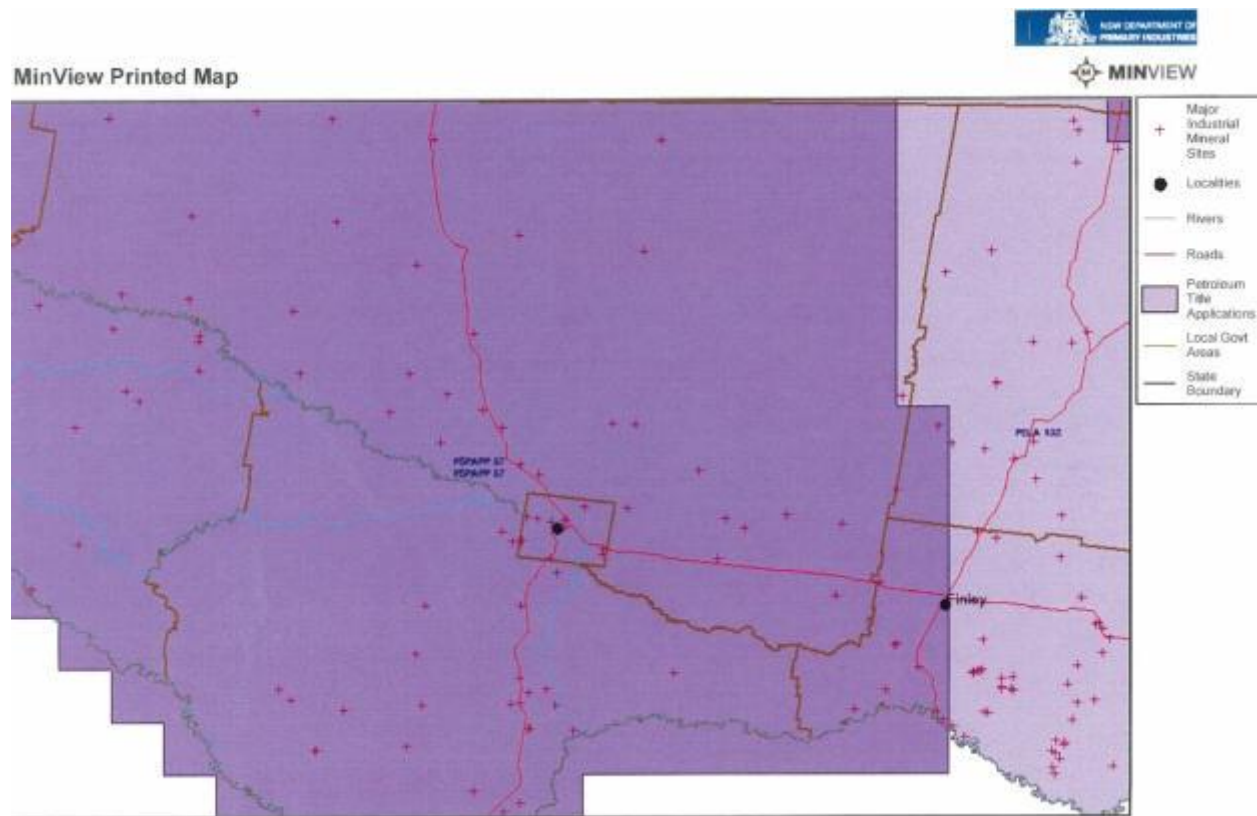


Figure 7-2 Sites, Titles and Mineral Application in Deniliquin and Surrounds



Note: Refer to figure 17 for full map key

Figure 7-3 Petroleum Applications

7.2.7 Deniliquin Airport Precinct

Through the Deniliquin Regional Airport Master Plan, Council is seeking to expand aviation and related uses within the Deniliquin Airport Precinct. The progressive realisation of the masterplan will provide for improved export and air passenger services for the region and positively support economic growth and development within Deniliquin and the broader Edward River LGA.

7.3 Recommended Strategy Population Forecasts

Accurate population projections for Deniliquin are difficult given a small population base and the long term effects of the recent drought. Population forecasting is also complicated by the external influences on economic activity and investment such as the GFC, rates of employment, agricultural commodities pricing, the value of the Australian dollar and water policy and pricing. Another issue in the longer term, is climate change and how it might affect future droughts and floods and the subsequent effects on the population of Deniliquin.

However, assumptions can be made on the characteristics of the future population and how they will change and evolve. Generally and in line with national trends, growth will be driven primarily by a small net gain in inward over outward migration, primarily from other regions surrounding Deniliquin, increased economic activity in the region and by increasing levels of natural growth. Inward migration reflects a balance of age groups with the majority of people in the middle age (45 – 64 years) and older age (65 plus years). The outward migration being primarily in the younger age groups.

As set out in Section 7.1, projections provided by the DPE are have been considered but not been adopted for the purpose of this strategy given considerable anomalies in reflecting past growth situations in Deniliquin and inconsistencies with the current population of the Edward River LGA. Furthermore, as set out in Section 7.2 there are considerable growth opportunities for Deniliquin and the surrounding region that will drive population growth through investment and economic diversification. Deniliquin will also remain a lifestyle orientated area and continue to attract new residents seeking a high level of amenity as well as community infrastructure and facilities.

A reasonable approach to broad scale forecast estimates would be to consider and apply historic growth trends to establish a forecast population to 2036. The previous 40 year Census period has established an average annual population increase of 0.26%. In forecasting growth to 2036 this figure will be adjusted to 0.36% which is considered a realistic yet aspirational growth rate for Deniliquin and appropriately accounts recent growth trends and future population leakage from surrounding Murray River and Conargo agricultural areas.

Additional Assumptions

- *Large Lot Residential Population:* It is assumed 30% of the population lives in large lot residential dwellings.
- *Agricultural conditions:* Agricultural conditions in Deniliquin, Murray and Conargo will continue to be favourable and supported by diversification, investment, technological advances on this trend providing employment opportunities, in migration as well as the family multiplier effect.
- *Manufacturing:* The SunRice factory reopening is likely to sustain and contribute to the rise in population over this period. As stated in section 7.2.1, an additional 90 jobs will be reinstated in the factory which is located to the south of Deniliquin.
- *Occupancy rate:* An occupancy rate of 2.19 will be applied as forecast by DPE for 2036.

- *Base population:* Base 2016 population of 7,434 for Deniliquin consistent with ABS Census 2016
- *Future minimum lot sizes:* A 1 hectare minimum subdivision lot size for future large lot residential development will be applied to calculate future large lot residential dwelling demand.

Table 7-5 Population Projections – Former Deniliquin LGA

Year	Total Population	Large Lot Residential Population	Occupancy Rate - Large Lot Residential	Large Lot Residential Dwellings required
2016	7,434	2,230	2.19	1,018
2021	7,568	2,270	2.19	1,036
2026	7,706	2,311	2.19	1,055
2031	7,845	2,353	2.19	1,074
2036	7,988	2,396	2.19	1,094
Increase from 2016 to 2036	554	166	2.19	76

7.3.1 Forecast Summary

The forecast methodology projects that the population of Deniliquin will increase from 7,434 to 7,988 persons by 2036 which represents an increase of 554. Of this population 166 will reside in large lot residential dwellings. Applying the average occupancy rate of 2.19 persons per dwelling the number of additional large lot residential dwellings required to service the projected population would be **76**.

In light of these projections it is noted that Council has sufficient pipeline of zoned and undeveloped land within the existing R1 General Residential zone in Deniliquin (in excess of 100 hectares) to accommodate the remaining proportion of the population not seeking a large lot residential dwelling.



8. Managing Development and Growth

An important role for this strategy is to provide for and manage growth and development and coordinate the provision of a land supply and infrastructure services that will match present and predictable future needs for large lot residential housing.

A supply and demand analysis does this as it aims to provide an understanding of development trends within Deniliquin over an established period.

The following analysis will:

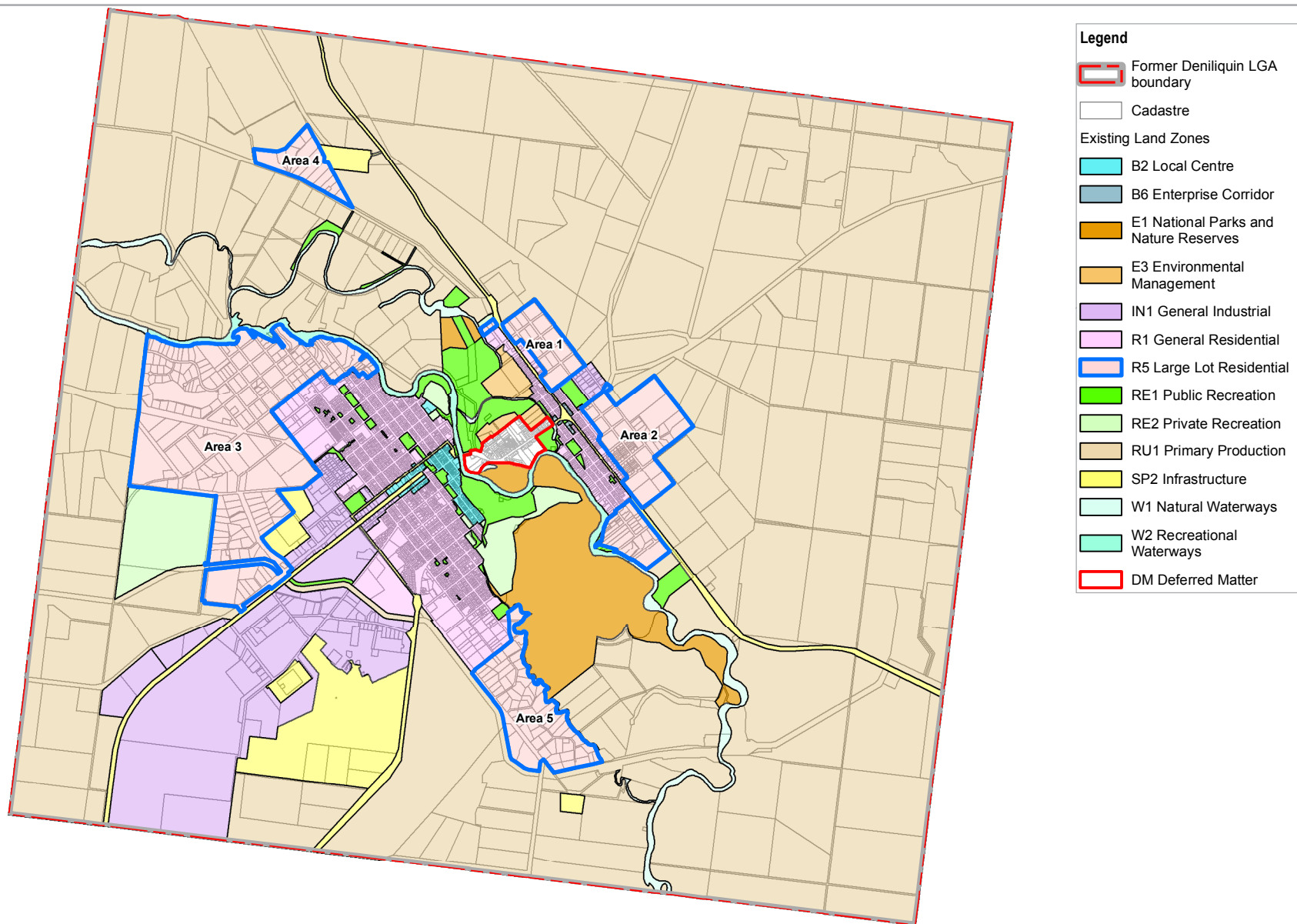
- Establish existing land supply by area.
- Provide quantified supply data.
- Determine future demand using development scenarios and established demand.

8.1 Existing Large Lot Residential Supply

To determine the current large lot residential land supply within Deniliquin, the first step is to assess the level of undeveloped land within existing zoned areas. This has been completed through reviewing aerial photographs and local knowledge and may be subject to some error. This process identified a number of locations where dwellings were present in large lot residential zoned areas, where the lot size indicated the potential for further subdivision. Local knowledge suggests that in many cases further subdivision is unlikely and these lots are not considered as having the potential to supply further land to the market. Therefore the following is intended as a guide to the supply situation.

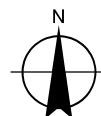
Existing large lot residential areas currently zoned R5 Large Lot Residential under Deniliquin LEP 2013 are shown in Figure 8-1. There are currently five zoned large lot residential areas in Deniliquin under the Deniliquin LEP 2013 covering 947.3ha of developable land (not inclusive of zoned land over roads). The majority of the large lot residential land is located directly adjacent to residential areas and provides an appropriate buffer to agricultural lands.

Figure 8-2 illustrates the existing supply of large lot residential land within Edward River Council. This strategy is limited to consideration of supply and demand within Deniliquin to ensure large lot residential development is appropriately located within close proximity to existing development, services and infrastructure. It is noted that within the former Conargo LGA there is an existing supply of approximately 273 hectares of land within three separate areas being the small villages of Conargo, Pretty Pine and Mulumbah Road. The majority of this land is mostly developed and given the isolated village locations there is unlikely to be additional demand or development interest (LG Valuation Services 2015).



Paper Size ISO A4
0 630 1,260 1,890 2,520
Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

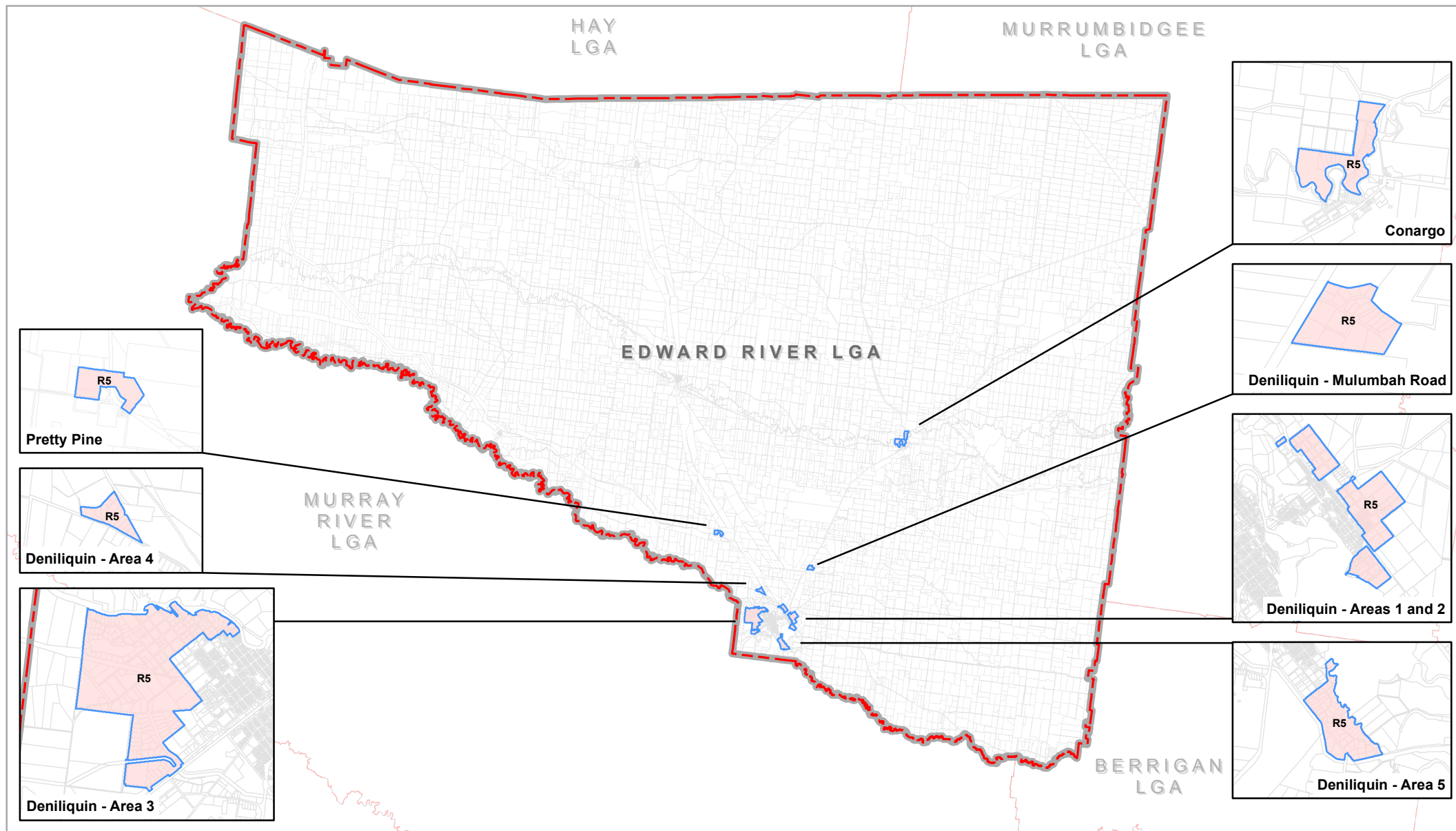


Edward River Council
Deniliquin Rural Residential Strategy

Project No. 22-19608
Revision No. 0
Date 13 Nov 2018

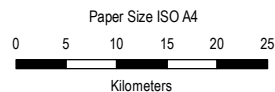
Existing Rural Residential Zoned Land

Figure 8-1

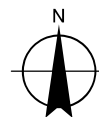


Legend

- Edward River Shire
- Surrounding LGA's
- Cadastre
- Existing Land Zones
- R5 Large Lot Residential



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



Edward River Council
Deniliquin Rural Residential Strategy

**Existing Large Lot Residential
Zoned Land within
Edward River Shire**

Project No. 22-19608
Revision No. 0
Date 13 Nov 2018

Figure 8-2

8.1.1 Area 1: Charles Street, North Deniliquin

Area 1 (Figure 8-3) is located to the north east of Deniliquin town centre and the Edward River and covers 48.4 ha. The area is surrounded to the north and northeast by rural land which is mostly cropping or covered in sparse vegetation. The northern boundary is Augustus Street which is adjacent to the Flanagan Channel. To the south east of the site area are industrial land, public open space and Browning Street. Bounding the area to the south west is residential zoned land and the Cobb Highway. In this location, the large lot residential zoned land acts as a buffer between urban zoned land zoned and land used for primary production.

Through consultation with Council it has been established that this area is not the most desirable land for large lot residential development due to the location being some distance to the town centre and lack of riverfront amenity. There is also anecdotal evidence that the area suffers from some amenity impacts given it is relatively windy.

Approximately 7 hectares of land is mapped with Council's LEP as containing terrestrial biodiversity and a further 18 hectares (approximately) may also be constrained by biodiversity, and has previously been identified by OEH as potentially containing threatened species habitat (Refer Figure 8-4). The lack of current demand and potential biodiversity constraints is reflected in the amount of undeveloped land for this area which is approximately **22.6 ha (46%)**.

For the land that has been developed for large lot residential, it is noted that the approximate lot size is 1.8 hectares. This indicates a market preference for larger lots in this area. On this basis the potential future yield from the undeveloped land would be approximately 12 lots, however it is noted this may be significantly reduced should the identified biodiversity matters constrain future subdivision outcomes. The lack of current demand and potential biodiversity constraints is reflected in the amount of undeveloped land for this area which is approximately **22.6 ha (46%)**.

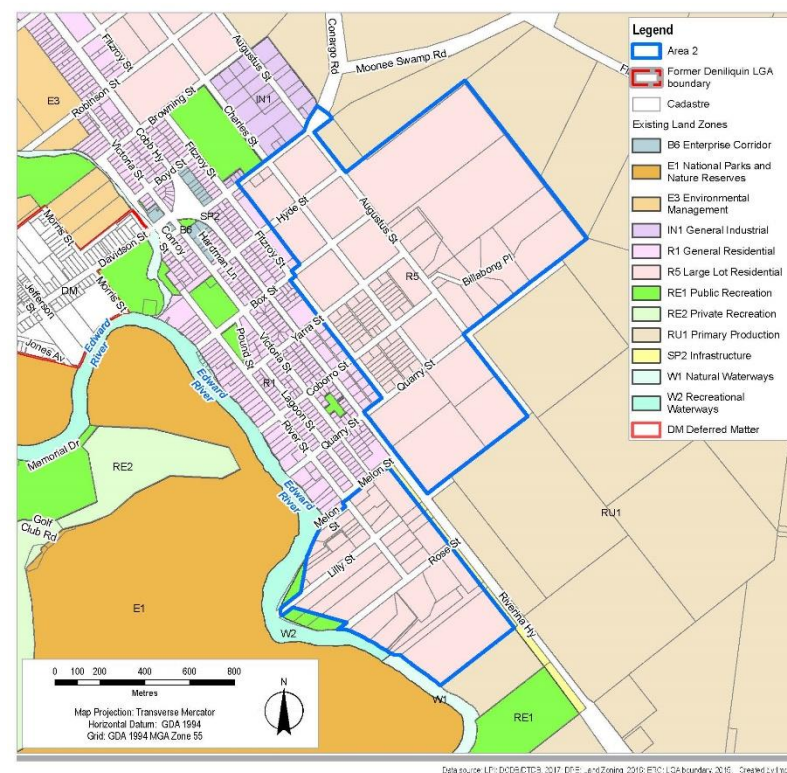
8.1.2 Area 2: Augustus Street, North Deniliquin

Area 2 Figure 8-5 is located to the east of Deniliquin town centre and the Edward River and covers 165.84 ha. The area is surrounded to the north, northeast and south by rural land which consists of mostly cropping or covered in sparse vegetation. Quarry Street bounded the area to the south. To the west of the area is residential zoned land, the Riverina Highway and Edward River. This land also includes approximately 10ha of land known as the Kyalite stables, (refer Figure 8-6) adjacent to the Riverina Highway. This land was recently rezoned from RU1 Primary Production to R5 Large Lot Residential. The site is expected to yield approximately 7 lots.

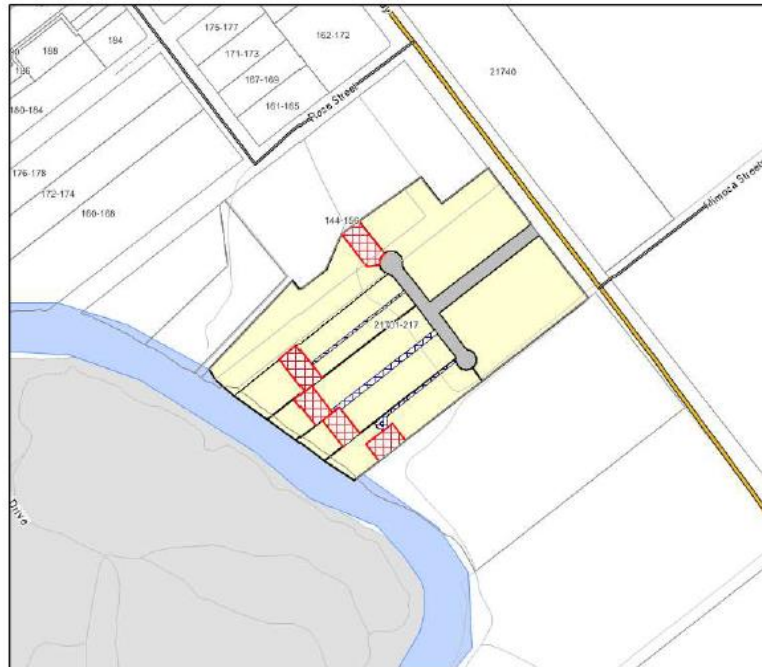
The most desirable location is along the river. The remainder of the area (primarily north east of the Riverina Highway) has been determined as not desirable land due to location; as it is not close to the town centre, away from the river and is known to be relatively windy. Furthermore, approximately 48 hectares within this area is either mapped as Terrestrial Biodiversity under the LEP or has been previously identified by OEH as potentially containing threatened habitat for threatened species as shown in Figure 8-7.

Given current lack of demand and potential ecological constraints approximately **37.5 ha (24%)** remains undeveloped for large residential purposes.

Figure 8-5 Area 2: Augustus Street, North Deniliquin



**Figure 8-6 Kyalite Stables indicative development
(Source: Deniliquin DCP 2016).**



Note: In order to effectively develop the site and minimise additional road access from the Riverina Highway a through road connection from the Kyalite stables land to the site is recommended. This could be achieved by way of an appropriate DCP amendment.

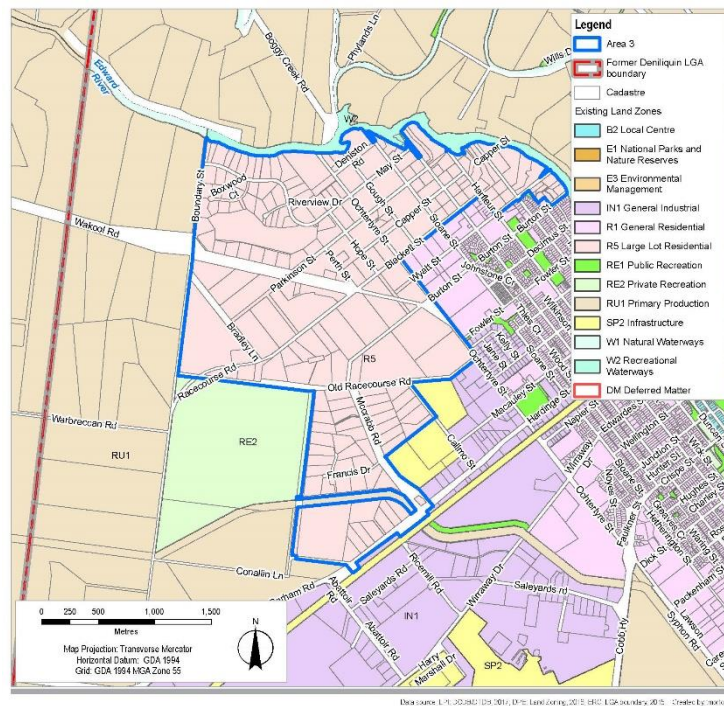
Figure 8-7 Area 2 Land with potential biodiversity constraints



8.1.3 Area 3: Wakool Road, Deniliquin

Area 3 (Figure 8-8) is located to the west and north west of the town centre of Deniliquin. Area 3 is a very large, large lot residential area covering 541.5 ha. The area is bounded to the north by Edward River, to the west by rural land and consists of mostly cropping and grazing land. To the south, the area is bounded by the racecourse and rural land. To the east the area is bounded by urban land such as industrial land uses, an STP, and more intensive residential land. Wakool Road dissects the area into two.

Figure 8-8 Area 3: Wakool Road, Deniliquin

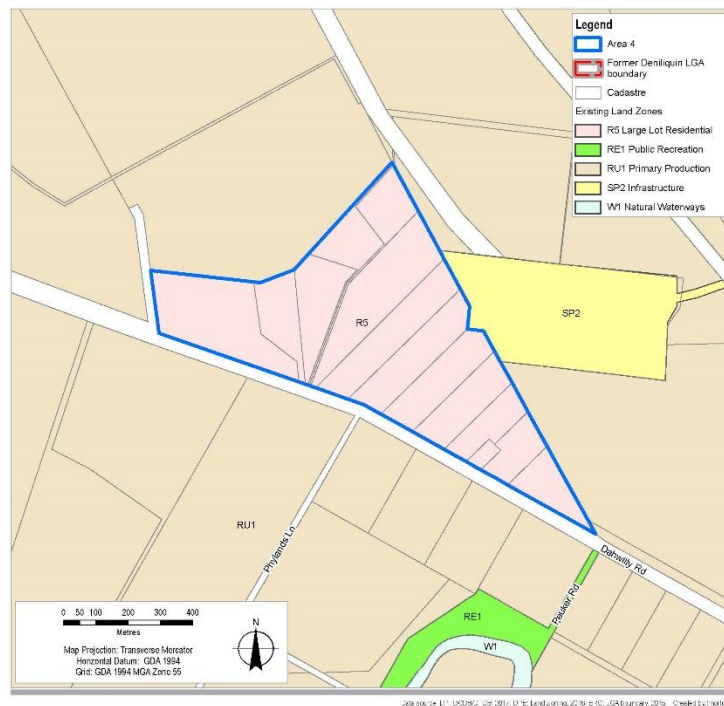


The majority of this area is occupied with dwellings predominantly around the river and the subdivisions close to Barham Road. Undeveloped land occurs mostly adjacent to the rural areas away from the town and river. There is currently 122.9 ha (22%) of land in this area that has the potential for further subdivision. Lot sizes have tended to be larger than the minimum lot size. It is noted that a 12 lot subdivision south of Wakool Road was approved in 2015, covering an area of approximately 65ha. Discounting this land from the current supply, approximately 57 hectares remains undeveloped.

8.1.4 Area 4: Dahwilly Road, Deniliquin

Area 4 (Figure 8-9) is located north of Edward River and the town centre. It consists of 13 lots with a total area of 52.4 ha. There is no undeveloped land. Area 4 is surrounded by rural lands and is approximately 1.5 – 2 km from the Edward River. The area also adjoins a land fill that is still in use.

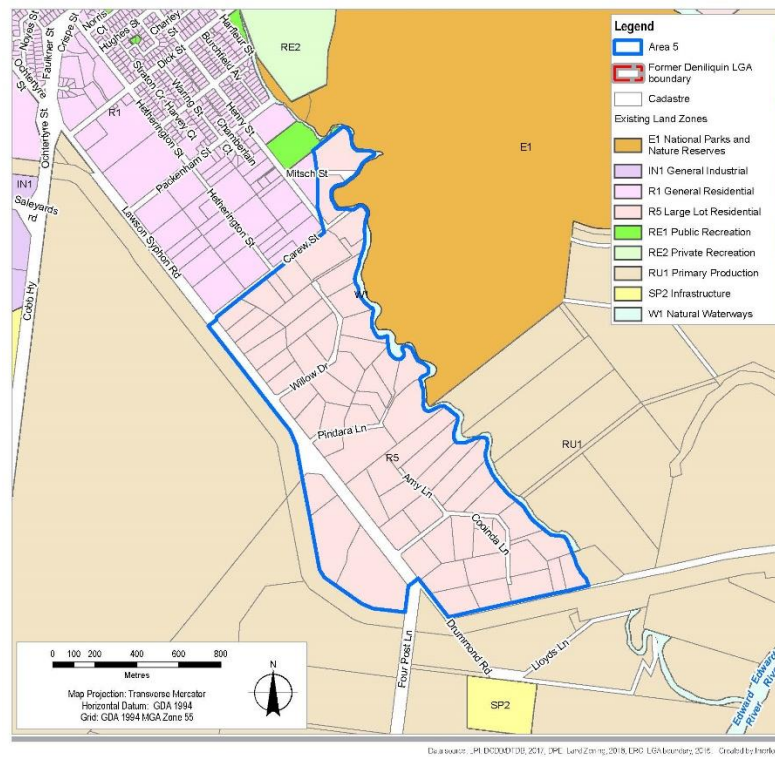
Figure 8-9 Area 4: Dahwilly Road, Deniliquin



8.1.5 Area 5: Lawson Syphon Road, Deniliquin

Area 5 is located to the south east of the town centre and covers an area of 139.2 ha. The area is bounded to the south west by Lawson Syphon Road and rural land. To the north east the area is bounded by Edward River and beyond this is a Regional Park. To the north west the area adjoins residential land uses. This area is highly sought after due to its tree cover, protection from prevailing winds and its proximity to town. No undeveloped land is available.

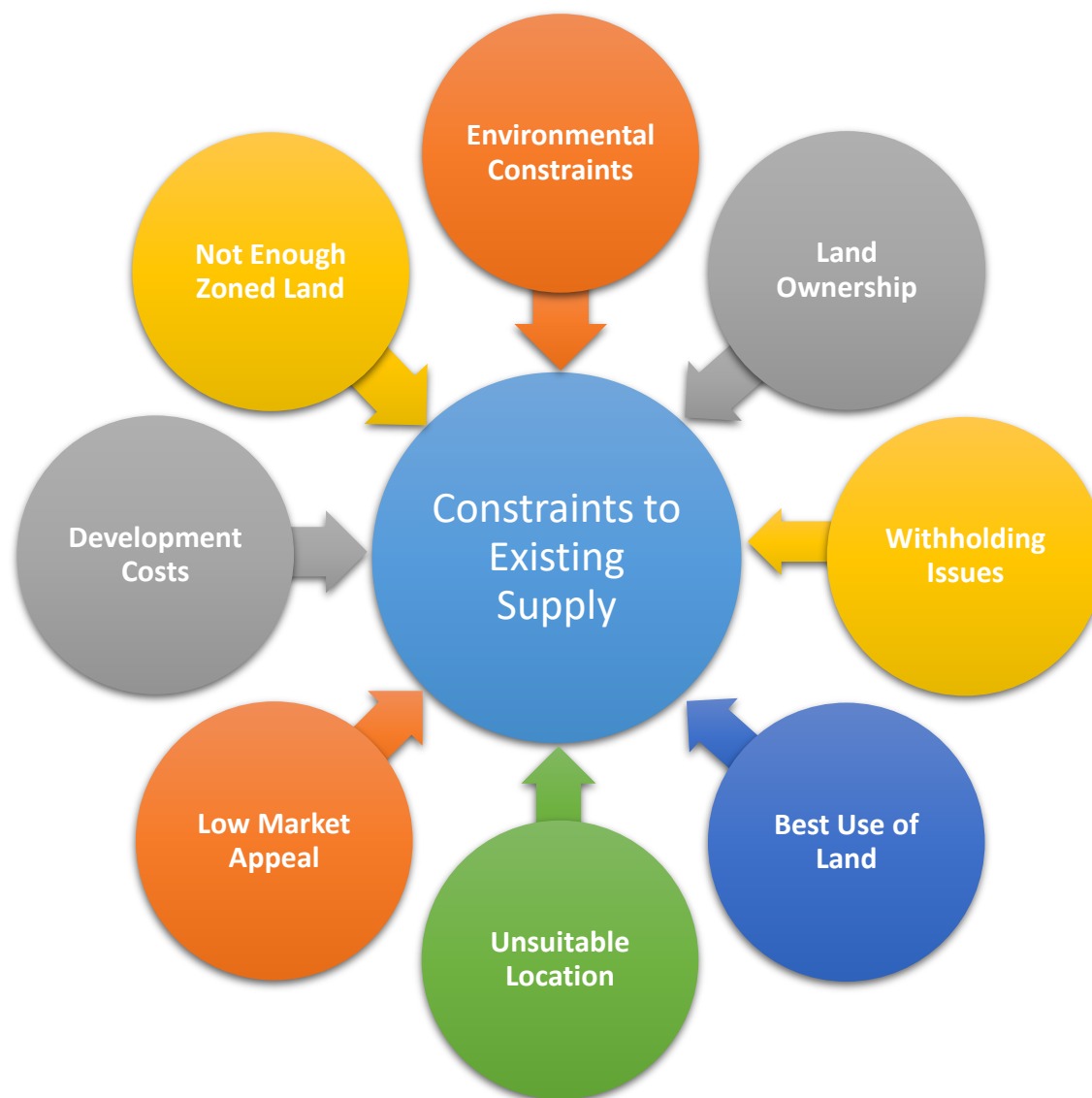
Figure 8-10 Area 5: Lawson Syphon Road, Deniliquin



8.2 Constraints to Existing Supply

The factors that may impact or constrain the supply of large lot residential land in Deniliquin include the following. This is demonstrated in the figure below.

- *Environmental Constraints:* Flora and fauna issues within or in proximity to large lot residential areas.
- *Land Ownership:* Availability of sites in private ownership will largely depend on economic decisions by landowners, not all of whom choose to either sell or develop their land.
- *Withholding Issues:* There are several types of withholding. In some instances, existing industry or rural uses are holding land for future expansion or buffering.
- *Best Use of Land:* A small amount of land uses occurring in large lot residential zones are not large lot residential uses because they currently have an alternative more attractive use.
- *Unsuitable Location:* The site may not be in high demand as it is located a significant distance away from the town, or away from significant environmental attributes such as the Edward River.
- *Low Market Appeal:* Rural residential zoned land which has low market appeal due to issues such as topography, poor access, prevailing winds and proximity to land use interface conflicts.
- *Development Costs:* Topography and site limitations such as providing major utilities, services and adequate transport infrastructure may significantly impact on the feasibility of developing some land.
- *Zoning:* Not enough zoned large lot residential land on the market to meet the demand.



8.2.1 Analysis of Land Available for Development

Some areas in Deniliquin, which have been zoned in the past for large residential development, have not seen their full development potential. There are a number of reasons for this including the desire of landowners to have larger lot sizes to run hobby farms, the land not meeting the expectations of prospective purchasers or the land being constrained by flooding or biodiversity. Each zoned area has been examined below.

Area 1 - Charles Street, North Deniliquin and Area 2 - Augustus Street, North Deniliquin:

Area 1 currently has 22.6 ha of undeveloped land whilst Area 2 has 37.5 ha of undeveloped land (inclusive of the recently rezoned Kyalite stables site). There is limited immediate demand within this area for lots not adjoining the river for the following reasons:

- *Unsuitable location* – perceived to be a significant distance from town centre (across the other side of the river).
- *Low market appeal* – the majority of these lots are not located near the water, generally water front lots in Deniliquin are the only large lot residential lots that have a significant amount of market appeal. This area has limited vegetation, is aesthetically in poor condition and many sites are significantly exposed to wind. The land is not considered suitable for residential purposes and is unlikely to support sustainable primary production.
- *Biodiversity*: There may be constraints to development for land identified as containing potential biodiversity constraints (mapped as terrestrial biodiversity pursuant to the LEP or may be potential habitat for threatened species). Whilst this does not necessarily discount development opportunity it creates additional requirements and costs for obtaining approvals, which may deter landowners or future developer purchases.

The land is located at the interface of the RU1 and R5 zones and the majority is mapped as containing Terrestrial Biodiversity pursuant to Deniliquin LEP 2013 and thus limits the development potential of the land. Given the land is not considered suitable for residential purposes and is unlikely to support sustainable primary production, the R5 zone is considered to be an appropriate zone, albeit with limited development potential.

Area 3 - Wakool Road, Deniliquin

The majority of this area is developed. However there is potentially up to 57 additional lots available in this area (without development approval for large lot residential development). The land occurs mostly adjacent to farming areas away from the town and river. There is limited immediate demand for this area for the following reasons:

- *Best use of land:* Much of the land in this location has been developed for large lot residential development. Land along Conallin Lane (approximately 24 hectares) is currently used for primary production as part of a larger landholding. There is also a desire of landowners in this location to have larger lot sizes to run hobby farms and run a horse or cattle.
- *Low market appeal* – Wakool Road, Old Racecourse Road and Bradley Lane all have some development potential but are less appealing to large lot residential buyers due to the distance away from the river, lack of vegetation, the lack of views and proximity to more traditional agricultural land and as such there is limited market interest to develop these lots.
- *Withholding Issues* - in this area there is evidence of withholding issues from the current owners.

Along the north west section of this area are six undeveloped lots, five of which all have a lot size of 1 ha and one with a lot size of 4 ha. These lots are located in an area which is in high demand – close to the river and close to town. Given the limited potential for additional lots within this area, it is difficult to identify additional potential development in this location.

8.3 Supply Analysis

Table 8-1 identifies the five existing areas zoned for large lot residential purposes under Deniliquin LEP 2013 covering a total of 947.3 ha. Whilst it is recognised that some development potential may exist within the existing zoned land, this potential is negligible when developing a 15- 20 year strategy.

There is 20 ha of undeveloped land that is in a location in high demand within Area 2 (Kyalite stables site) and Area 3 (Wakool Road north) which have capacity for an additional 17 dwellings, subject to consideration of environmental constraints including flooding. Remaining undeveloped land in Area 1 (22 ha) has limited immediate appeal and should it be subdivided is likely to be for lots with a minimum of 2 hectares or greater given market preference in this area, and more importantly potential biodiversity constraints. For these reasons, an estimated yield of 6 - 8 lots is considered appropriate. Given this land forms a buffer to urban zoned land it is not recommended for rezoning to a rural zone at this time. On this basis, it is estimated that the yield from the current immediate supply of undeveloped large lot residential land in Deniliquin is approximately **25 lots**.

Table 8-1 Current Deniliquin Large Lot Residential Supply

Area	Address	Locality	Total Zoned Large Lot Residential Land	Developed Land	Undeveloped Land
			ha	ha	ha
1	Charles Street	North Deniliquin	48.4	25.8	22.6
2	Augustus Street	North Deniliquin	165.8	128.3	37.5
3	Wakool Road	Deniliquin	541.5	484.5	57
4	Dahwilly Road	Deniliquin	52.4	52.4	0
5	Lawson Syphon Road	Deniliquin	139.2	139.2	0
Total Large Lot Residential Land			947.3	830.2	117.1

8.4 Demand Analysis

Population growth is the principal driver of large lot residential demand. However, demand can also be driven by housing market factors such as price and lifestyle preference.

To project demand for large lot residential land up to 2036, several methods can be used including:

- Dwellings approvals
- Lot Approvals
- Land Demand per Capita

These methods are examined in detail below. However, there is also evidence from past sales and discussion with Council officers that potential purchasers of large lot residential allotments are greatly influenced by location, and that generally speaking, demand is area specific. For example, demand for lots directly along the Edward River is high and lots that are isolated generally stay undeveloped. The location of supply has implications regarding the ability to satisfy the demand for large lot residential land.

8.4.1 Dwelling Approvals Method

One approach to defining the demand for large lot residential land and associated dwellings is to assess past approvals over a period of say five or ten years and project this demand forward over a given time frame to give an estimate of future demand. This methodology is based on one for residential development outlined in the State Government's publication, Urban Settlement Strategies – Guidelines for the North Coast (DUAP, 2000).

It is known that the average number of large lot residential dwellings approved by Council over the last 16 years (2001 to 2017) is 3.05 dwelling houses per year (refer to Table 6-7). Projecting this as a constant demand until the year 2036 (17 years) an additional **52** large lot residential dwellings would be required. No allowance has been made for rural dual occupancy, as demand is likely to be negligible.

Deniliquin LEP 2013 prescribes a minimum lot size for large lot residential development of 5000 m² for lots with offsite disposal of sewage and 1 ha for sites with on-site disposal of sewage in the R5 Large Lot Residential zone. For the purpose of this strategy, a 1 ha minimum lot size will be utilised as it is likely the majority of the new sites will not have access to reticulated sewer. Generally to accommodate roads and environmental constraints, an additional 30% of land area is also needed. Based on these densities the area of land required for large lot residential development would be about **68 ha**.

8.4.2 Lot Approvals Method

Another approach to defining the demand for large lot residential land (and therefore large lot residential dwellings) is to assess the past demand for large lot residential land over a period of say ten years and project this demand forward over a given time frame to give an estimate of future demand. This methodology is based on one for residential development outlined in the State Government's publication, Urban Settlement Strategies – Guidelines for the North Coast (DUAP, 2000).

Through previous development applications (from 2001 to 2017) it is known that the production of large lot residential land (number of additional lots approved in the R5 Large Lot Residential Zone only) in Deniliquin is 4.5 lots per year.

Projecting this as a constant demand until the year 2036 (17 years) then Council will need to release **77** large lot residential lots in order to satisfy the current level of demand from the market. Deniliquin LEP 2013 prescribes a minimum lot size for large lot residential development of 1 ha for sites with on-site disposal of sewage in the R5 Large Lot Residential zone. Generally to accommodate roads and account for environmental constraints, an additional 30% of land area is needed. On this basis, this provides a guide to the likely density of large lot residential dwellings in the future. Based on these densities the area of land required would be about **100ha**.

8.4.3 Land Per Capita Methodology

The per capita methodology makes only a few assumptions

- Population projections adopted in section 7.3.
- Assumes that a constant rate of household size to 2036.
- Each household requires a separate lot.

The forecast methodology projects that the population of Deniliquin will increase from 7,434 to 7,988 persons by 2036 which represents an increase of 554 persons. Of this population 166 (or 30% of the population) will reside in large lot residential dwellings. Applying the average projected occupancy rate of 2.19 persons per dwelling, the number of additional large lot residential dwellings required to service the projected population would be about **76**.

Deniliquin LEP 2013 prescribes a minimum lot size for large lot residential development of 1 ha for sites with no offsite disposal of sewage in the R5 Large Lot Residential zone. This provides a guide to the likely density of large lot residential dwellings in the future. Generally to accommodate roads and services an additional 30% of land area is also needed. Based on these densities and assumptions, the area of land required would be about **99 hectares**.

Table 8-2 Summary of Large Lot Residential Demand Options

Demand Method	Dwellings or Lots Required Per Year (No.)	Dwelling or Lots Required to 2036 (No.)	Large Lot Residential Land Required at one dwelling per 1 ha Density (ha)
Dwelling Approvals	3.05	52	68
Lot Approvals	4.5	77	100
Per Capita	4.2	76	99

8.4.4 A Preferred Approach to Estimating Demand

Table 8-2 summarises the range of demand methodologies options considered within this strategy ranging from 68 - 100 hectares of land to achieve between 52 and 77 large lot residential dwellings/ lots to 2036. These options indicate that Deniliquin should have between 68 ha and 100 ha of large lot residential land to satisfy the potential demand for large lot residential development between now and 2036.

This equates to an average of 65 dwellings or 4 per year. On this basis, in order to establish a balanced approach to demand, **85** hectares of unconstrained land would be required to meet the projected demand.

8.5 Balancing Supply and Demand

In preparing a strategy to look at large lot residential areas over a long period of time there is normally a need to look at a range of time periods (short, medium and long) in order to assess how supply will diminish over time based on demand assumptions.

A typical time frame might be:

- 0-10 years (short term)
- 10-20 years (medium term)
- 20 years plus (long term)

A large lot residential balance sheet allows Council to estimate how the supply of large lot residential land will be used up over time and this allows Council the opportunity to take action at the appropriate time to assure long term supply of land to the market. As stated previously there is currently 947.3 ha of large lot residential land of which 117.1 ha has been identified as being undeveloped. Given market and lot size preference and potential land based constraints, a yield of approximately 25 lots is expected.

A large lot residential balance sheet for Deniliquin allows Council to estimate how this supply will be used up over time on the basis of the three demand options and preferred approach, and how many more lots will need to be zoned over the next 17 years to meet projected demand.

8.5.1 Dwelling Approvals

Based on the dwelling approvals demand analysis, 3.05 dwellings is the assumed annual demand over the life of the strategy.

Table 8-3 Dwelling Approvals - Large Lot Residential Balance Sheet

Time Frame	Large Lot Residential land stock at start of period (lots)	Estimate of Demand over period (lots)	Large Lot Residential land stock at end of period (lots)	Estimate of years of supply remaining at end of period
2019-2021	25	9.15	15.85	4.5 years
2021-2026	15.85	15.25	0.60	< 1 year
2026-2031	0.60	15.25	-14.65	0
2031-2036	-14.65	15.25	-29.90	0

The large lot residential balance sheet utilising the lot approvals demand analysis indicates that Council will run out of sufficient supply after 2021. By 2036 this analysis estimates that Deniliquin will be in deficit of **30 lots**.

8.5.2 Lot Approvals

Based on the lot approvals demand analysis, 4.5 lots is the assumed annual demand over the life of the strategy.

Table 8-4 Lot Approvals - Large Lot Residential Balance Sheet

Time Frame	Large Lot Residential land stock at start of period (lots)	Estimate of Demand over period (lots)	Large Lot Residential land stock at end of period (lots)	Estimate of years of supply remaining at end of period
2019-2021	25	13.5	11.5	<3 years
2021-2026	11.5	22.5	-11	0
2026-2031	-11	22.5	-33.5	0
2031-2036	-33.5	22.5	-56	0

The large lot residential balance sheet utilising the lot approvals demand analysis indicates that Council will run out of sufficient supply after 2022. By 2036 this analysis estimates that Deniliquin will be in deficit of **56 lots**.

8.5.3 Per Capita

Based on the per capita demand analysis 4.2 lots is the assumed annual demand over the life of the strategy.

Table 8-5 Per Capita Large Lot Residential Balance Sheet

Time Frame	Large Lot Residential land stock at start of period (lots)	Estimate of Demand over period (lots)	Large Lot Residential land stock at end of period (lots)	Estimate of years of supply remaining at end of period
2019-2021	25	12.6	12.4	<3 years
2021-2026	12.4	21	-8.6	0
2026-2031	-8.6	21	-29.6	0
2031-2036	-29.6	21	-50.6	0

The large lot residential balance sheet utilising the per capita demand analysis indicates that Council will run out of sufficient supply after 2021. By 2036 this analysis estimates that Deniliquin will be in a deficit of **51 lots**.

Table 8-6 Preferred approach Large Lot Residential Balance Sheet

Based on the preferred approach of an annual demand of 4 lots per year over the life of the strategy.

Time Frame	Large Lot Residential land stock at start of period (lots)	Estimate of Demand over period (lots)	Large Lot Residential land stock at end of period (lots)	Estimate of years of supply remaining at end of period
2019-2021	25	12	13	<4 years
2021-2026	13	20	-7	0
2026-2031	-7	20	-27	0
2031-2036	-27	20	-47	0

The large lot residential balance sheet utilising preferred approach indicates that Council will run out of sufficient supply after 2021. By 2036 this analysis estimates that Deniliquin will be in a deficit of **47 lots**.

8.6 Supply Deficiency and Strategy Implications

This strategy forecasts relatively low but steady population growth across the former Deniliquin LGA in all three population scenarios although there has been peaks in land subdivision and dwelling housing construction which doesn't clearly correlate with population growth. It is therefore clear that population growth is not the only driver of demand for new dwellings. In some locations within the former Deniliquin LGA, demand is also driven by the construction of second homes or holiday homes particularly by residents of adjoining LGA's. Across the region another key driver of demand for new dwellings is demographic change. As an ageing population, the region shows strong evidence of decreasing household size that may not yet be apparent in the census data. Other demographic changes may also be evident, such as the breakdown of traditional family structures.

Projecting the potential dwelling forecasts against the supply of residential land is therefore difficult and three potential scenarios proposed within this strategy are relevant based upon different population growth scenarios, projected demographic change and projection of building trends. The preferred approach considers each scenario and has been formed on the basis of an average of the three scenarios which is considered a balanced and realistic approach to projecting large lot residential dwelling demand.

Based on assumptions around the existing land supply and future lot sizes, Deniliquin does not have sufficient appropriately located large lot residential land to last the life of this strategy. The balance sheets indicate that by 2036 there will be a deficit of between 30 and 61 lots. The preferred approach indicates a supply deficit of **47 lots**.

Council should have a goal of maintaining a 'rolling supply' of approximately 25 years supply of land to ensure there is no restriction on supply to meet population demand as well as market demand for second or holiday homes. New large lot residential areas in desirable locations should be considered and it is recommended that green field sites be in more than one location that can support a variety of lot

sizes will stimulate development and the delivery of large lot residential sites to the market. Underlying all of the above scenarios is the assumption that Council will need to proceed soon as the supply is likely to run out in the short term.



9. Constraints Analysis

9.1 Objectives of a Constraints Analysis

A development constraints analysis provides a general picture of the suitability of land for large lot residential development at a broad scale. The resulting mapped and numeric data can be used to guide land use planning and decision-making.

9.2 Methodology

The methodology aims to identify and evaluate a range of constraints, which will impact upon the ability of the former Deniliquin LGA to accommodate further large lot residential development. The identification of a sound methodology will also enable the community and landowners to better understand the process of planning, site selection and development. Ultimately, the application of a sound methodology will help the development industry to invest in and develop appropriate sites within Deniliquin that best serve the needs of the local community and economy.

The methodology for determining appropriate land use focuses on those features of Deniliquin's landscape that pose limitations to development. These constraints will strongly influence the preparation of a 'land constraints map'. Natural features primarily define the environmental limitations. The land constraints map is a composite map containing a number of overlays. These overlays include existing land uses, environmental protection areas, bushfire hazard areas, flood prone land, steep land and prime agricultural land. The integration of the overlays enables the user to recognise areas of varying suitability for different land uses.

Some of the constraints listed below are a prohibition to future development. Other constraints merely require further investigation or mitigation measures that may influence the location, type and density of development. Some constraints such as economic and social limitations don't always lend themselves to being mapped in the same way as natural features. However, once Council has determined areas of low environmental limitations at a broad scale, this information can subsequently be used by investors to target areas for further investigation as part of their risk assessment and decision making process. Rural residential lands have a range of economic and social requirements which include the location of the site, its size, price, commercial attractiveness, accessibility and the availability of infrastructure and services.

In determining land suitable for large lot residential development the following table ranks the constraints which may limit further development. This identifies which constraints are limiting and highlights the constraints that may be overcome through mitigation measures and management.

The constraints ranking system includes the following:

Rank	Key	Explanation
1.	Most suitable	Most suitable for development (relatively unconstrained).
2.	Marginally suitable	Suitable for development with some controls only minor constraints present.
3.	Moderately Constrained	Moderately constrained area may be only slightly suitable for development – may require further investigation and / or specific engineering solution or exclusion of certain areas.
4.	Highly Constrained	Limited or no development – will require further assessment.
5.	Highly Unsuitable	Not suitable for development.

9.2.1 Multi-Criteria Analysis

Multi-Criteria Analysis requires consideration of the relative importance of each criterion compared to other criteria. A paired comparison method was selected for weighting of criteria. This approach required each criterion to be compared to each of the other criteria to determine which of the two (paired) criteria is considered more important, and by how much. By considering the number of times any particular criteria is rated as more important than any other, and the levels of importance, the criteria can then be ranked as a set in terms of importance. For this project, only environmental criteria were compared to each other. Weightings were normalised so that they are between 1 and 100 for each criteria.

9.2.2 GIS Analysis

Once evaluation criteria and weightings were undertaken, a GIS modelling and analysis technique was used to overlay geographic data for each of the evaluation criteria.

The steps involved in the GIS analysis to identify areas that are overall more or less suitable for the large lot residential development are described below:

- Datasets were sourced from the former Deniliquin Council and were imported into an ESRI geodatabase.
- The data applied for each evaluation criterion were compiled and analysed according to the performance ratings on a series of grids across the study area. In general, the grids were in the order of 5 m x 5 m cells, however in some cases the grid size was varied to ensure the data will be properly represented.

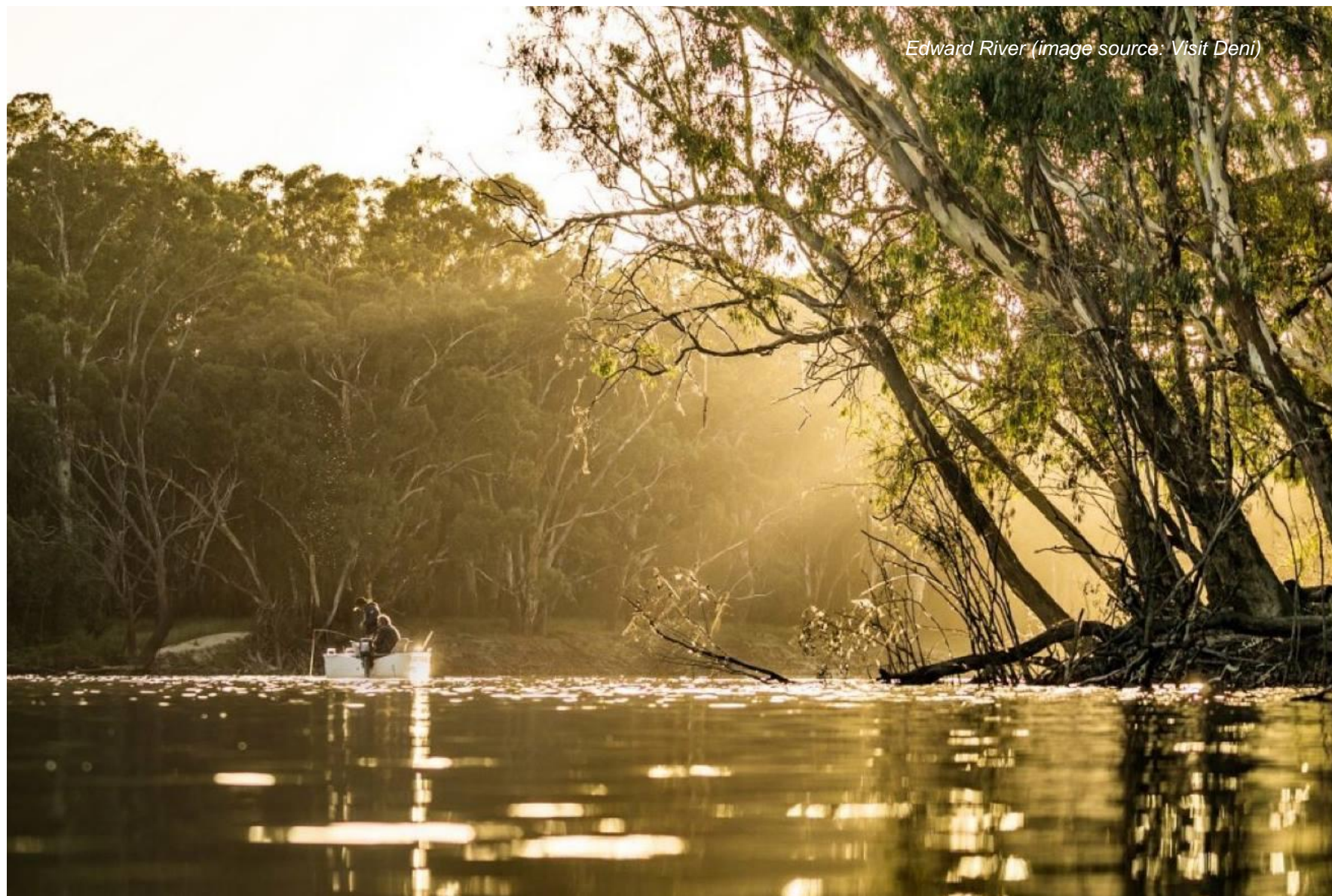
- The weightings were applied to each criterion and the overall score for each evaluation criterion in each grid calculated. The GIS model then compiled scores across all the evaluation criteria for each grid and identified areas that are more or less suitable for large lot residential development. The weighted overlays were added together and multiplied by a specified weighting. As a result, an overall sensitivity map was produced. The lower the score, the more attractive the site for development.
- The Multi-Criteria Analysis was performed using ESRI's ArcGIS.

9.2.3 Limitations

While the constraints analysis technique is a powerful tool for screening broad study areas, it must be noted that there are a number of limitations including:

- Inability to represent all of the critical aspects that determine suitability for development in a geographic format.
- Accuracy and currency of some data.
- Absence of data for some locations (e.g. Threatened Species data not available).

Each of the following constraints have been mapped and are illustrated in Appendix B.



Edward River (image source: Visit Deni)

Table 9-1 Constraints

Constraint	Reason for Unsuitability	Ranking
Settlement		
Existing or Proposed Residential and Urban Areas	Land that is zoned or proposed to be zoned for residential or urban purposes. This land is serviced (or capable of being serviced) and is required for development at higher densities than large lot residential.	5
Environment		
Riparian Areas and Buffer	<p>The sustainability and maintenance of minor waterways (rivers, creeks and drainage lines) within the Deniliquin is paramount in ensuring the ongoing environmental functioning of the estuary and in protecting water quality. Riparian controls are needed to provide channel stability to creeks, drainage lines and waterways essential in maintaining the basic health of the catchment. Riparian habitat in Deniliquin is important to the maintenance of fish populations and communities (including aquatic invertebrate) and has the highest priority for being conserved and protected from potential adverse impacts associated with development.</p> <p>As a buffer from development is encouraged in the Murray REP, this strategy has adopted this buffer.</p>	5
State Forests	Land that is located adjacent to or within 400 m of an existing forestry operation or land owned by Forests NSW. It would not be in the public interest to jeopardize the current or future operation of the local forest industry by creating land use conflicts with rural residents.	5
E1 National Parks	National Parks (Zone E1) areas are not available for development regardless of physical characteristics.	5
E3 Environmental Management zones	<p>The Deniliquin LEP 2013 includes E3 Environmental Management Zone. The objectives of the E3 Environmental Management Zone are to:</p> <ul style="list-style-type: none"> To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values. To provide for a limited range of development that does not have an adverse effect on those values. <p>Even though within this zone development such as dwellings and neighbourhood shops are permissible, new large lot residential development is unlikely to be appropriate.</p>	4
Flood	Deniliquin has experienced irregular flooding over the past 150 years, resulting from high flows in the Edwards River. Major floods occurred in 1870, 1917, 1956 and 1975, inundating large sections of the town and the surrounding area. A levee system has been built in stages in the past 50 years to protect the town from flooding, the most recent stage of which was completed in 2012. Land within the floodway is the most constrained, however flood liable land presents a general constraint to development as it has implications with regard to the provision and cost implications applying to hydraulic infrastructure, roads and services installed within floodplains.	4

Constraint	Reason for Unsuitability	Ranking
Biodiversity	<p>Land that is located within an area of high biodiversity conservation value or an area identified by the state government as an environmentally sensitive area, unless there are extenuating circumstances to justify its development. NSW Office of Environment and Heritage (OEH) have mapped areas of high biodiversity value in western New South Wales. High biodiversity value for this study is area is predicted high conservation value for fauna and flora, and includes large areas of vegetated lands and important vegetation remnants.</p> <p>While the high biodiversity consists mainly of vegetation types of high regional status it is known to be inaccurate at site level. This unreliability means it cannot be given a high ranking.</p>	2
Bushfire	<p>Land that is affected by high bushfire hazard and cannot meet the requirements of 'Planning for Bushfire Protection'. The Rural Fires Act 1997 requires the identification of bushfire-prone land areas based on bushfire hazard mapping and the provision of Asset Protection Zones (APZ's) (NSW Rural Fire Service 2006).</p> <p>Council currently has a Bushfire Plan which has been used for this process as they are the most accurate maps. Council categorises bushfire prone land into Vegetation Category 1 and buffer. Vegetation Category 1 is bushfire prone land is that land within (or within 100 m) of a high bushfire hazard area.</p> <p>Bushfire hazard can be a major development constraint given the likelihood for extreme fire events periodically. The slope of the land, aspect and the vegetation types present, determines the level of bushfire hazard. Opportunities exist to manage the interface between new development and surrounding vegetation, including perimeter roads, fuel reduction and building design. More detailed site based assessment of bushfire hazard needs to be undertaken in conjunction with future development to ensure that development is located and designed having regard to the degree of bushfire hazard. Where adequate fire protection measures cannot be established, development should be prohibited.</p> <p>For this reason Vegetation Category 1 will be ranked as 3 and the buffer will be ranked as 2.</p>	Vegetation Category one- 3 Buffer- 2
Infrastructure Constraints		
Extractive industries and Buffer	<p>Land that is located adjacent to or within 1 km of an existing extractive industry operation. There are currently three small quarries in Deniliquin according to land use data and air photos.</p> <p>It would not be in the public interest to jeopardise the current or future operation of local extractive industries that supply important resources to support local infrastructure projects. Deniliquin has extractive industry sites that should be protected from encroachment by incompatible urban land uses until the resource has been exhausted.</p> <p>Extractive industries should be protected from encroachment by incompatible land uses until the resource has been exhausted as identified in a Section 117 Direction a suitable buffer for each site and these should be regarded as unsuitable for urban development. A buffer area around the extractive industry identifies an area which will be affected by quarrying activities such as noise, dust and visual intrusion. It can also prevent the sterilisation of a future resource from the pressures of land use conflicts.</p>	5

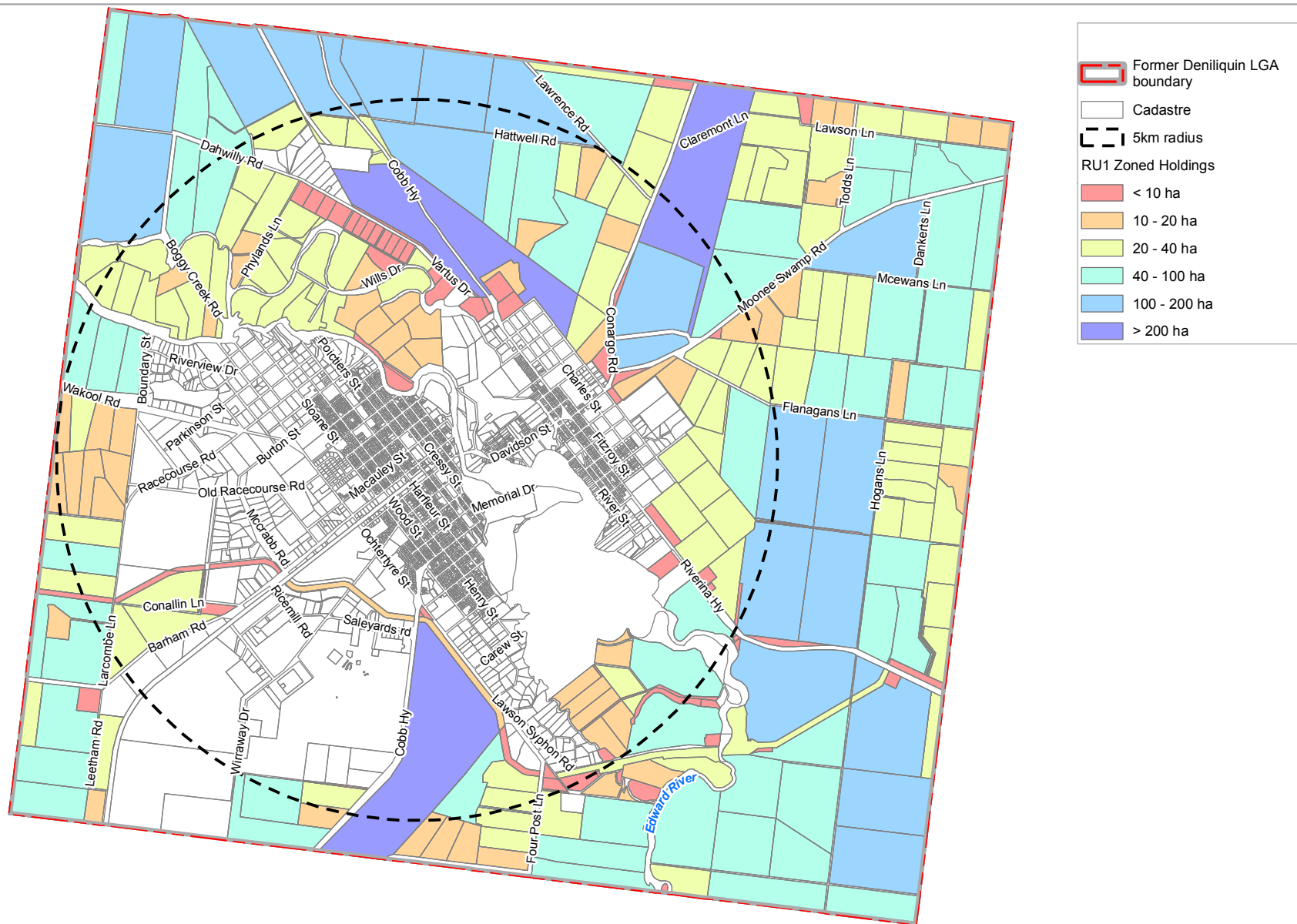
Constraint	Reason for Unsuitability	Ranking
Sewage Treatment Plants	Sewage treatment plant and land within 400 m of a sewage treatment plant. STP's provide sewerage to the Deniliquin communities. Land in proximity to an STP is often affected by odour problems. Living and Working in Rural Areas (NSW DPI 2007) recommends a 400 buffer around STP's from urban or large lot residential development.	STP- 5 Buffer area- 4
Waste facility	Waste facility and land within 300m of a waste facility This land is often affected by odour problems. Living and Working in Rural Areas (NSW DPI 2007) recommends a 300 buffer around waste facilities to separate them from urban or large lot residential development.	Waste facility and buffer area- 5
Aerodrome	Land in the vicinity of a local aerodrome where it may <ul style="list-style-type: none"> Impede the operations and potential growth of the airport. Exceed the obstacle height limitation. Be affected by noise that exceeds an ANEF of 25dB(A).An airport is considered as critical infrastructure that will support future employment growth. It would not be in the public interest to jeopardise the current operation and future growth potential of local aerodromes. These areas are to be considered a hard constraint which creates prohibitions to development.	5
Intensive livestock industry	Land that is located in or within 500 m of an intensive livestock industry Intensive industries traditionally have noise, odour and traffic issues that cause land use conflict with large lot residential development. It is for this reason it would not be appropriate to place large lot residential dwellings in proximity to intensive livestock uses.	5
Rural industry	Land that is located in or within 500 m of an existing or approved rural industry (feed mill, seed cleaners, cotton gin, etc.). It would not be appropriate to place large lot residential dwellings in areas that will be affected by rural industrial uses currently or in the long term.	5
Road frontage	Land located with frontage to a road of poor quality or accessed by a flood affected causeway. New large lot residential development should be located on roads that are properly formed and regularly maintained. It should not be located on roads that require significant upgrading or that involve flood affected causeways that cut residents off in regular rainfall events.	2
Physical Constraints		
Good agricultural land	Land that is located within the land capability classes 1, 2 or 3. In 2008 the State Government adopted a position that good agricultural land (classes 1,2 and 3) should not be regarded as being available for urban or large lot residential. This was then subsequently supported in the SEPP (Rural Lands) (now superseded). The objective of excluding Land Classes 1, 2 and 3 are to ensure that the best agricultural land will be available for current and future generations to grow food and fibre). It would therefore not be appropriate to place large lot residential dwellings on good quality agricultural land (class 1,2,3) unless no reasonable alternative exists.	Class one land – 5 Class two and three land – 3 Flood Irrigated Land - 3

Constraint	Reason for Unsuitability	Ranking
Average agricultural land	Land that is located within land capability classes 4, 5 or 6. These lands are not regarded as being the best agricultural land, although they are often used for grazing purposes. They are not typically affected by steepness or extensive rock outcrops and are not excessively waterlogged. They are typically suited for large lot residential purposes from a land capability perspective.	Class four, five and six - 1
Steep and swamp lands	Land that is located within the land capability 7 or 8. Generally land capability classes 7 or 8 are located on steep or swampy land Steep lands are areas susceptible to soil creep, landslip and rock falls due to steep slope profiles in stratified formations and proximity of land to cliff areas and alluvial deposits. The risks associated with development in these areas are often higher than normal large lot residential should also not be located on steep land or land that is swampy (class 7 or 8).	Class seven and eight land - 3
Slope	Slope is a significant factor influencing soil erosion, drainage and bushfire hazard. Protected lands are listed under the <i>Native Vegetation Conservation Act 1997</i> and represent land that generally has a slope greater than 18 degrees from the horizontal; and land situated in, or within 20 metres of the bed or bank of any specified river or lake or land that is in the opinion of the Minister, environmentally sensitive or effected or liable to be effected by soil erosion. Slopes greater than 15 degrees are likely to have geological constraints and are susceptible to mass movement and high to very high erosion hazard. Within large lot residential precincts slopes greater than 15 degrees present a high bush fire danger for dwellings, footings require a great deal of cut and fill, it can cause installation and management problems for sewerage and water systems. Access is also difficult and they present a greater erosion hazard. In areas with these grades development is more difficult (NSW Rural Fire Service: 2006). Therefore, lands with a slope over 15 degrees have a low probability of being suitable for further development. Slope between 10 degrees and 15 degrees present a high bush fire danger for dwellings, footings require a great deal of cut and fill, access is difficult and they present a greater erosion hazard. In areas with these grades development is more difficult. However, with specific engineering solutions large lot residential development is possible. Relatively flat grades (less than 10 degrees) significantly reduce costs associated with the installation of infrastructure to service proposed development.	Over 15° - 5 10° to 15° - 3 Less than 10° - 1

Constraint	Reason for Unsuitability	Ranking
Social		
Non Indigenous heritage	<p>In 1977, the NSW Heritage Act legislated that councils must identify, protect and manage heritage through local planning regulations. The two levels of statutory listing are:</p> <ul style="list-style-type: none"> the State Heritage Register the heritage schedule in Deniliquin LEP 2013 <p>Under Clause 5.10 of the Deniliquin LEP 2013 the objectives of Heritage Conservation are:</p> <ul style="list-style-type: none"> <i>to conserve the environmental heritage of Deniliquin</i> <i>to conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views</i> <i>to conserve archaeological sites</i> <i>to conserve Aboriginal objects and Aboriginal places of heritage significance</i> <p>The majority of Deniliquin heritage items and heritage conservation areas were identified in previous heritage studies. These are items of significant value and therefore will be ranked 5. No buffer has been allowed for. Should a site be located in what would otherwise be a proposed large lot residential area then a site specific buffer will have to be considered.</p>	5

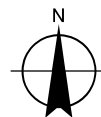
9.3 Constraints Mapping

The above rankings have been used to compile a constraints map for the Deniliquin Large Lot Residential Strategy. In addition to this a lot size analysis has been undertaken. These lot size maps give an indication of the history of land fragmentation in these areas and are provided for discussion purposes.



Paper Size ISO A4
0 630 1,260 1,890 2,520
Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



Edward River Council
Deniliquin Rural Residential Strategy

Project No. 22-19608
Revision No. 0
Date 13 Nov 2018

Holding Size Analysis

Figure 9-2

10. Proposed Large Lot Residential Areas

Land is a limited resource. Any land development should take place in a sustainable, integrated and co-ordinated way. It has been determined in the preceding sections that the existing residential supply is not sufficient to accommodate demand. To meet the outcomes for this strategy Council needs to provide a land release that delivers an equilibrium between land supply and demand. Therefore, Council should identify between 68 ha and 100 ha in the medium to long term.

The reasons and criteria for the proposed large lot residential areas is discussed below.

10.1 Understanding the Market

Understanding the large lot residential market and the attractors for residential demand is critical in proposing further large lot residential development areas.

Key lifestyle attractors provided for large lot residential development are based around amenity values especially in close proximity to Edward River but also within vegetated locations away from rural activities that can create land use conflict. The demand for lifestyle opportunities provided with large lot residential development is also high when there is the ability to live within a reasonable commute to the town centre. Other key attractors for these areas are the lower land values and close proximity to town for employment.

10.2 Agricultural Economy

Preventing ad-hoc large lot residential development is critical when considering the long term opportunities for ongoing agricultural expansion across Deniliquin. This strategy does recognise the strength of demand for large lot residential development and the legitimacy of this land use as a part of the residential opportunities of the LGA. However, this land use should occur where the benefits to potential residents can be maximised, and where the risks to farming minimised.

Rural residential development may or may not include some agricultural activity but the primary land use is residential. As such, residents of these areas expect residential amenity and services. The objective of the Section 9.1 Direction - Rural Land is to manage the provision of sustainable large lot residential development so that it supports sustainable housing and settlements and does not compromise agricultural land uses. Therefore, areas within Deniliquin that are no longer suited to agricultural use will take priority over areas that are currently being used or are suitable for agricultural land use.

Notwithstanding, some of the land along the Edward River which may have agricultural value, is also considered to have significant aesthetic value that may outweigh the agricultural value. The surrounding development also limits expansion opportunities and restricts operating conditions due to amenity complaints.

10.3 Selection Criteria

Given the sustainability and liveability criteria presented in Chapter 4 and the principles developed throughout the document these will guide consideration of all future large lot residential development in terms of the selection of areas for such development.

These include the following in order of preference (Priority 1 being the most critical in identification of future large lot residential land and Priority 10 being the least critical).

Priority 1	Land identified as 'most suitable' (ranked 1) in the land suitability map.
Priority 2	Areas which have high amenity such as close to Edward River without compromising environmental values.
Priority 3	Land Identified as 'marginally suitable' (ranked 2) in the land suitability map.
Priority 4	Areas that are in a close proximity to Deniliquin town centre (defined by an approximate 5km radius) and/or adjacent to an existing large lot residential area in order to avoid isolated development.
Priority 5	Land along the Edward River which may have agricultural value, are also considered to have significant aesthetic value that may outweigh the agricultural value should be considered. The surrounding development also limits expansion opportunities and restricts operating conditions due to amenity complaints.
Priority 6	Include areas where there is no adverse effect on key natural resource values, including areas of biodiversity significance and other areas that have special value.
Priority 7	Include areas which do not unreasonable or unnecessary produce land use conflicts.
Priority 8	Avoid locations where access, servicing, safety or impacts are unacceptable.
Priority 9	The area is freehold land and is an appropriate size, orientation and configuration for large lot residential development.
Priority 10	Identify a choice and diversity in location to meet the economic social, health and well-being requirements and preferences of all people.

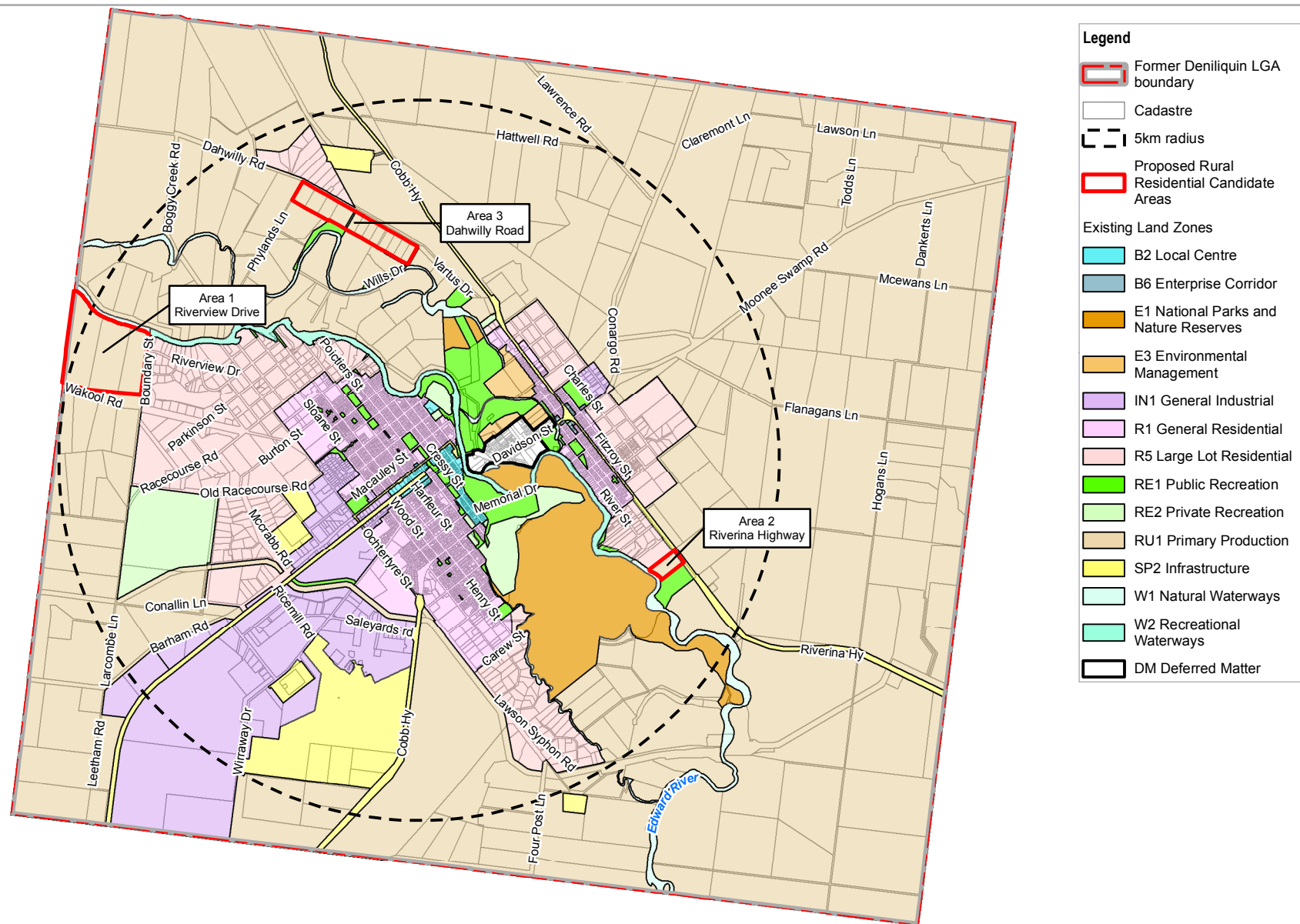
10.4 Candidate Areas

There are a number of areas, subject to further investigation and consultation that may be suitable for rezoning to accommodate future large lot residential development. The location of the proposed candidate areas is provided in Figure 10-1.

In identifying candidate areas consideration has been given to:

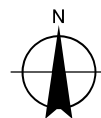
- The land suitability analysis provided in this report
- The sustainability and liveability criteria presented in Chapter 4
- Selection criteria priorities presented above
- Views and considerations of key stakeholders including the community, land holders, development industry, government agencies and Council
- Existing patterns of large lot residential development
- History of subdivision and development of all forms of large lot residential lots
- Assessment of suitable land which meets minimum requirements





Paper Size ISO A4
0 630 1,260 1,890 2,520
Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



Edward River Council
Deniliquin Rural Residential Strategy

Proposed Rural
Residential Candidate Areas

Project No. 22-19608
Revision No. 0
Date 13 Nov 2018

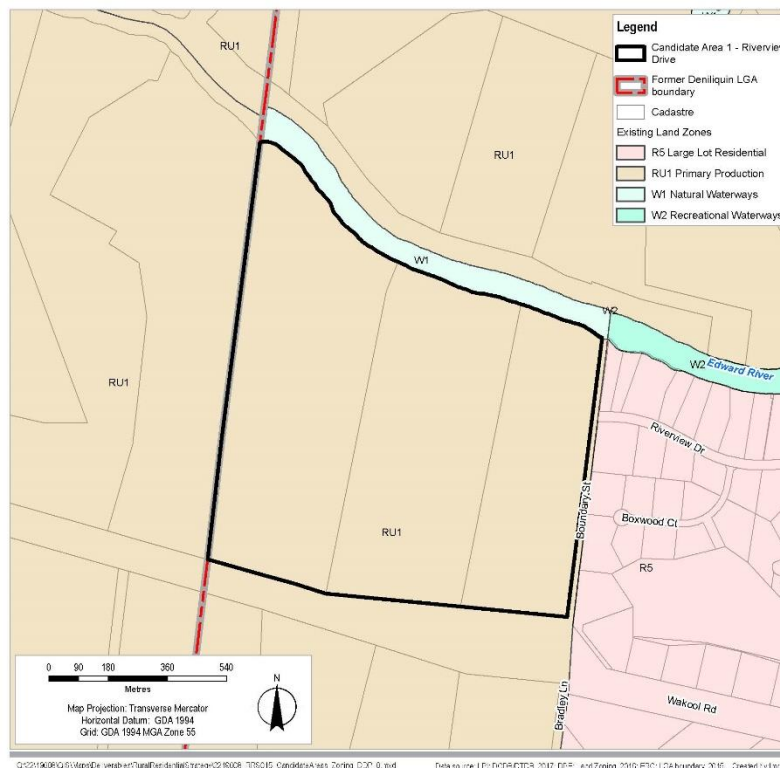
Figure 10-1

10.4.1 Candidate Area 1 – Riverview Drive

Gross Potential Area (ha): 114.62 ha (approximately)

Candidate Area 1 is located to the west and north west of the town centre of Deniliquin (refer Figure 10-2).

Figure 10-2 Candidate Area 1 –Current Zoning



The land is located adjacent to the Edward River which has the greatest demand for large lot residential development.

The area is bounded to the north by Edward River, to the west by rural land within the Murray Shire which consists of mostly cropping and grazing. To the south the area is bounded by Wakool Road and further rural land. To the east is existing large lot residential zoned land. The site would represent a logical extension of a highly desirable large lot residential area.

The land has evidence of prior rice farming, however expressions of interest for large lot residential development have previously been received for some of the land.

The land suitability analysis has identified the majority of this area as 'moderately suitable' for large lot residential development

In analysing site constraints, the key constraints are related to flooding and ecology. It is however considered that these matters could be suitably understood and managed within further detailed technical studies undertaken as part of a planning proposal and managed by future development controls. The constraints are likely to limit potential development yields, particularly for land adjacent to the river.

In terms of policy constraints, the land capability mapping identifies the site is within a flood irrigated area, and the site has been used for rice growing. However, priority 5 establishes that land along the Edward River which may have agricultural value, are also considered to have significant aesthetic value that may outweigh the agricultural value. The surrounding development also limits expansion opportunities and restricts operating conditions due to amenity complaints.

Further analysis against constraint and locational requirements for Candidate Area 1 (refer Figure 10-3) includes the following.

- Currently zoned as RU1 Primary Production under the Deniliquin LEP 2013.
- Is in close proximity to the Deniliquin town centre and forms a logical extension to an existing large lot residential area (via the extension of Riverview Drive).
- Is not constrained by infrastructure such as STP's or rural industrial conflicts. The Deniliquin land fill area is the closest constraint which is over 1 km away from the sites.
- The WMA flood study (refer Figure 10-4) reported the eastern portion of the site as being flood prone in the 1 in 100 year flood event with high hazard and associated flood depth (up to 3 metres) with the northern and southern portions being of shallower depth (refer Figure 10-5).
- The site is flat.
- The site is cleared as it is used for agriculture.
- There are no listed heritage items on the lots however one has a significant homestead which could be retained following future subdivision.

The suggested approach to Candidate Area 1 would need to consider the following.

- An appropriate setback from the river will need to be considered as part of any assessment of this development as a result of flood hazard, associated flood depth and riparian and biodiversity issues. Detailed

development controls identifying setbacks or location of building platforms are recommended.

- Future dwellings in this area will require sufficient freeboard above the flood hazard.
- Ensure flood free access to newly created lots and safe evacuation routes for pedestrians.
- Given the size of this area it is also suggested the lots are staged over the long term.
- Ensure significant riverside biodiversity is retained or appropriately offset.
- Ensure development contributes to the amenity of this area.

Aboriginal cultural heritage.

It is expected that Candidate Area 1 could yield an additional 50 large lot residential lots when taking into account the above considerations. The area is therefore recommended for inclusion in the Strategy.

Figure 10-3 Candidate Area 1 – Suitability

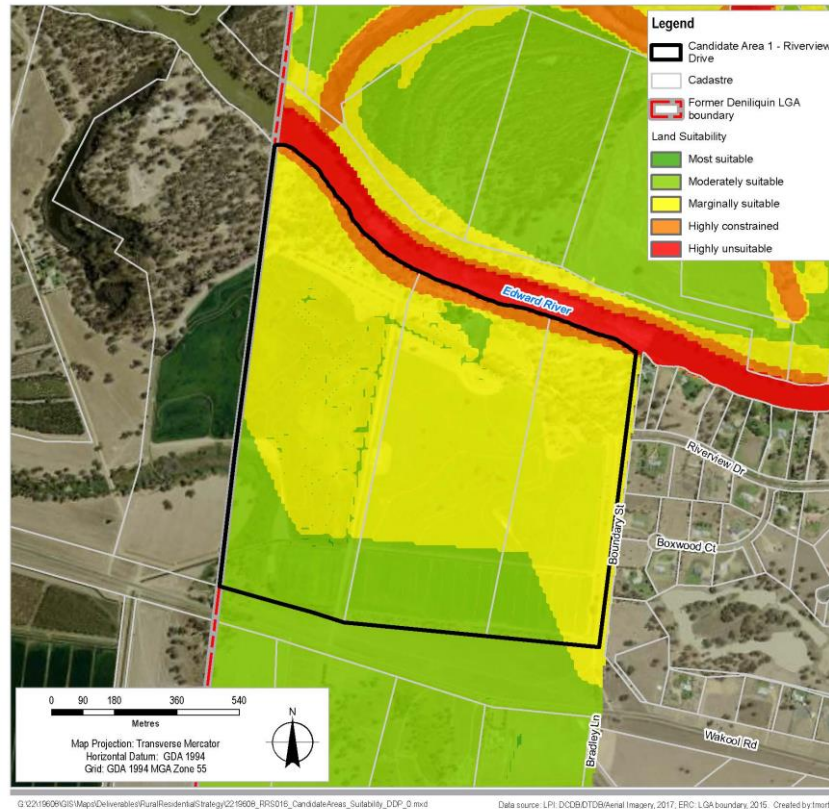


Figure 10-4 Candidate Area 1 Flood Hazard

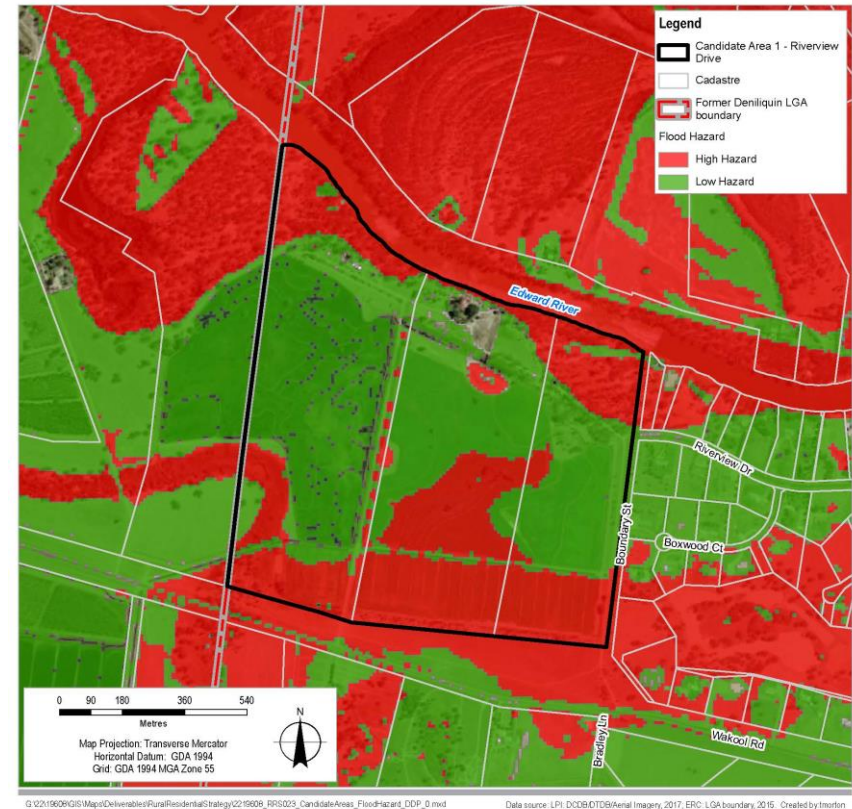
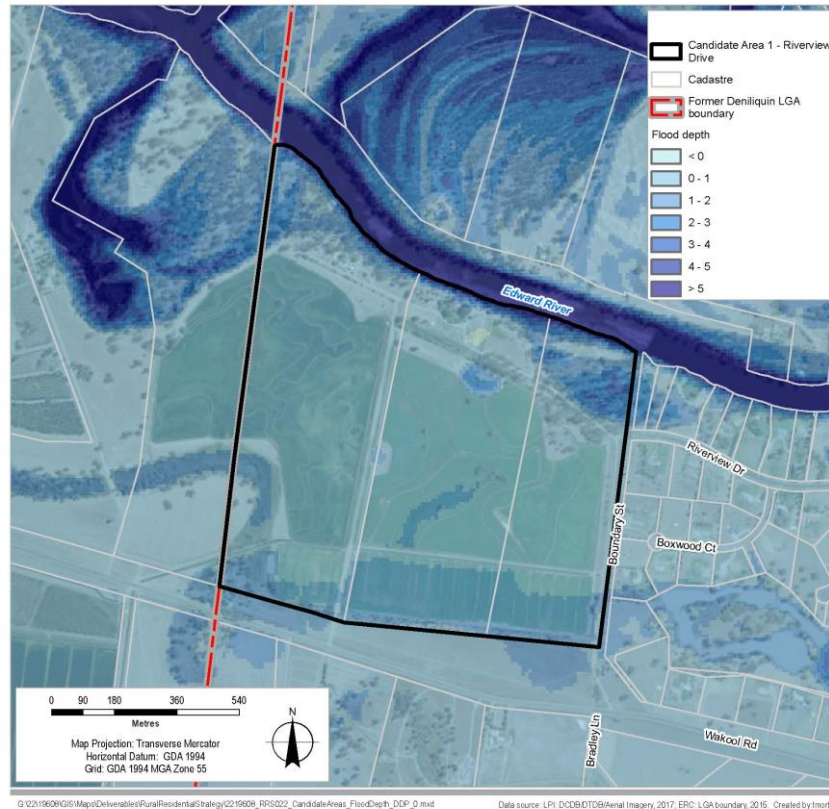


Figure 10-5 Candidate Area 1 – Flood Depth

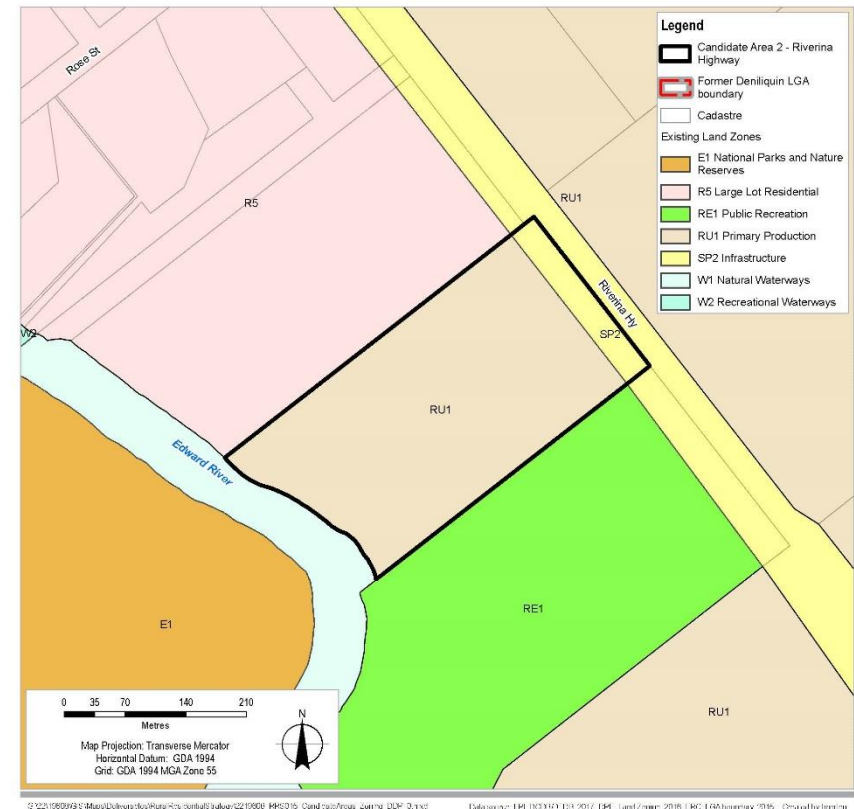


10.4.2 Candidate Area 2 – Riverina Highway

Gross Potential Area (ha): 8.31 ha (approximately)

Candidate Area 2 is located to the south east of Deniliquin town centre and immediately east of the Edward River on the Riverina Highway (refer Figure 10-6). A local riverside park is located to the south of the site.

Figure 10-6 Candidate Area 2 – Current Zoning



Land to the north of the site, known as the Kyalite Stables was recently rezoned for large lot residential development.

The site is surrounded to the, east by rural land which consists of mostly cropping. To the west of the site is the Murray Valley Regional Park.

- As shown in Figure 10-7, the site is considered as partially constrained by the land suitability analysis. The site is partly within the 500m buffer set for an existing piggery which is located to the east. This portion of the land is not suitable for dwelling houses. A Land Use Conflict Risk Assessment would be required in accordance with NSW DPI guidelines as part of any future planning proposal.

The subject site also has the following additional constraints:

- The setback from the river will reduce the developable land available. Biodiversity and riparian land issues will also require consideration.
- The site is flood affected in the 1 in 100 year flood event (refer Figure 10-8) with low and high hazard and associated flood depth (0- 1m) (refer Figure 10-9).
- The site is bushfire prone as it contains the vegetation category 1 and buffer area.
- Road access will be required to be coordinated with the development of the landholding to the north. Access to any future lots from the Riverina Highway is likely to be discouraged by Roads and Maritime Services.
- Potential for Aboriginal cultural heritage will require consideration.

Notwithstanding the identified constraints, the site is an isolated and small rural zoned lot located within a desirable riverfront location. Given the small size, the site is not suitable for most types of extensive agriculture. Zoning for large lot residential development would represent a logical extension to the existing large lot residential zone and could yield up to 6 additional large lot residential lots in an area of high demand. The area is therefore recommended for inclusion in the Strategy.

Figure 10-7 Candidate Area 2 – Suitability

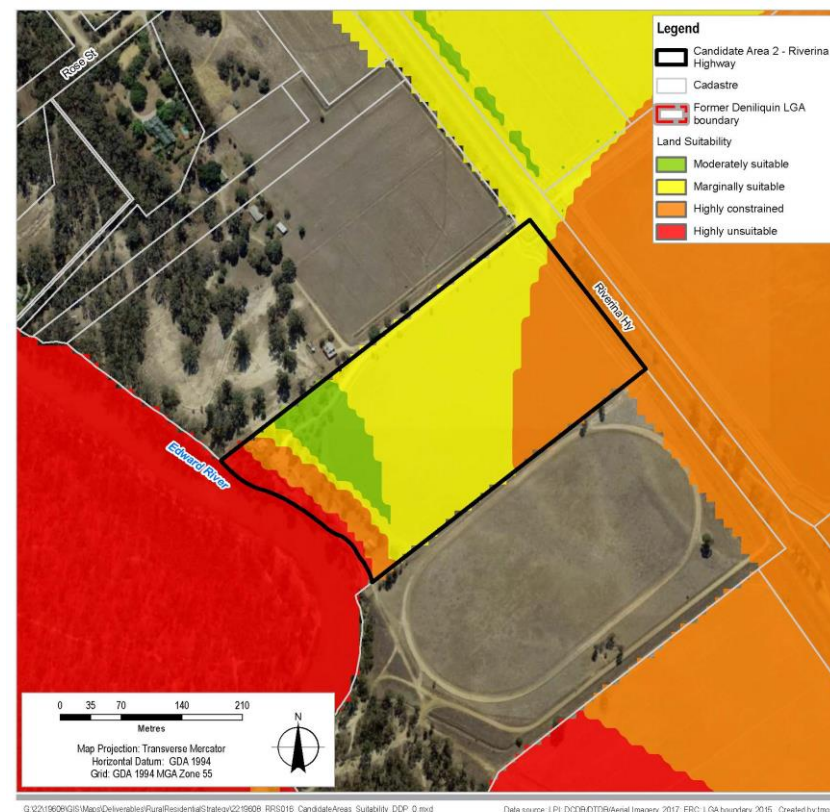


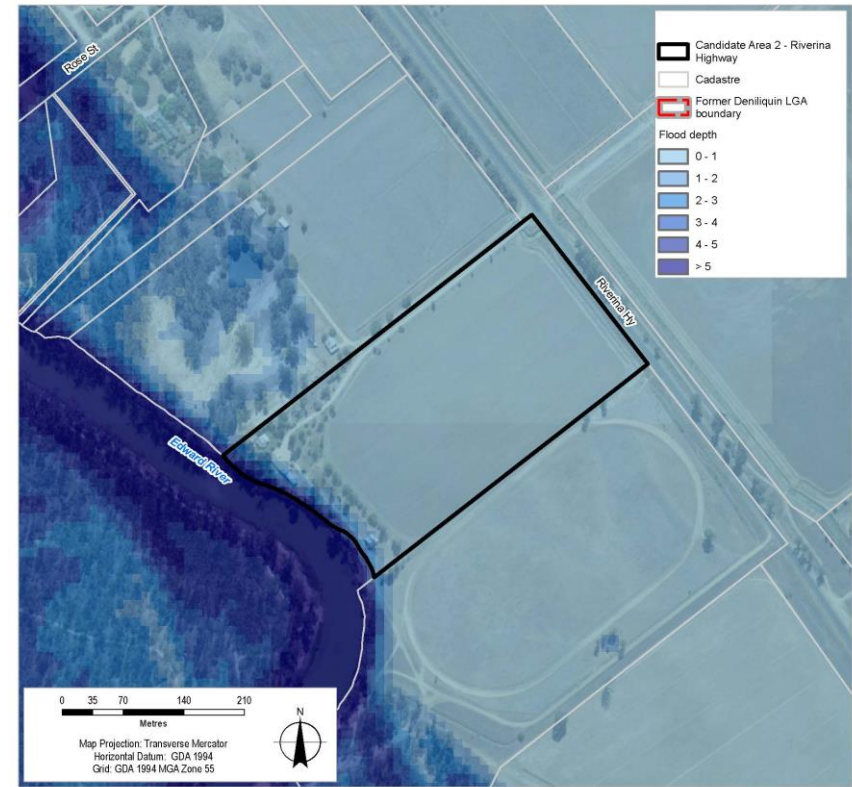
Figure 10-8 Candidate Area 2 – Flood Hazard



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Data source: LPI: DCOB.OTD6\Aerial Imagery, 2017; ERC: LGA boundary, 2016. Created by: tmcroft

Figure 10-9 Candidate Area 2 - Flood Depth



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Data source: LPI: DCOB.OTD6\Aerial Imagery, 2017; ERC: LGA boundary, 2016. Created by: tmcroft

10.4.3 Candidate Area 3 – Dahwilly Road (South).

Gross Potential Area (ha): 64 ha (approximately)

This site is located on the southern side of Dahwilly Road and is partly adjacent to the existing Dahwilly Road large lot residential area (refer Figure 10-10).

Figure 10-10 Candidate Area 3 – Current Zoning



The area contains 12 lots ranging from approximately 3.3 - 6 hectares. The Moulamein No. 2 irrigation channel intersects part of the majority of the smaller lots. Some lots have an existing dwelling house on the land.

Whilst the land is zoned RU1 Primary Production, the predominant use of the land and existing lot sizes and configuration is consistent with large lot residential development.

The land is relatively constraint free and the suitability analysis has identified the land as most, moderately and marginally suitable for large lot residential development (refer Figure 10-11).

Most of the land is identified as being low hazard from the 1 in 100 year flood event (refer Figure 10-12) with relatively low associated flood depth (0- 1m) (refer Figure 10-13).

Given each existing lot exceeds 1 hectare in area there is some capacity for additional subdivision particularly on the larger parcels adjacent to the existing Dahwilly Road area.

The area offers an alternative location, north of Deniliquin, for large lot residential land use in close proximity to town.

Taking into account the existing subdivision pattern and existing development, it is expected that the area could yield an additional 15 lots.

Figure 10-11 Candidate Area 3 – Suitability

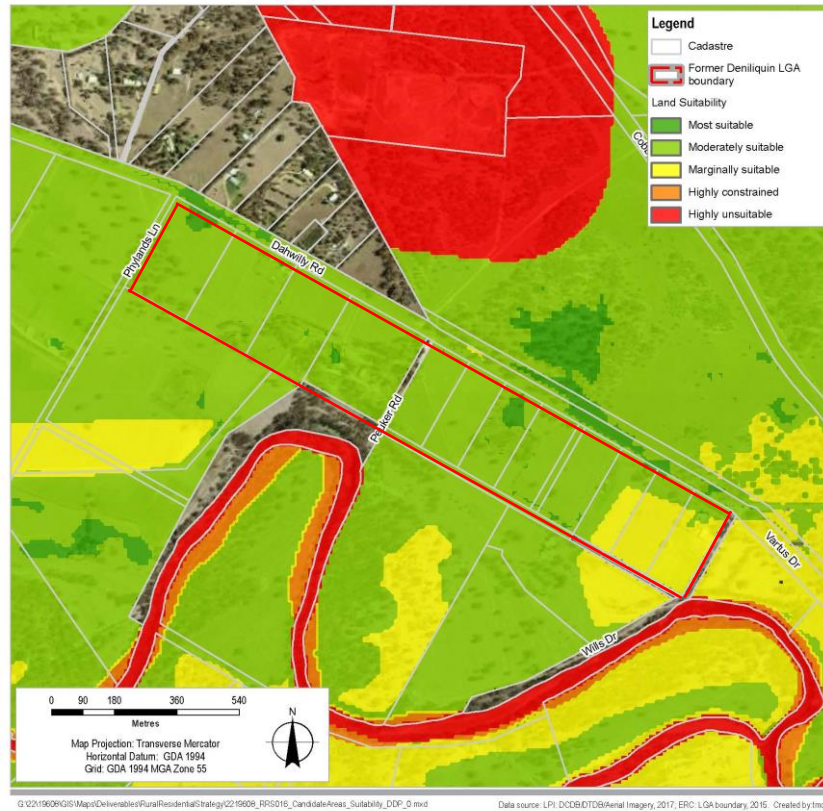


Figure 10-12 Candidate Area 3 - Flood Hazard

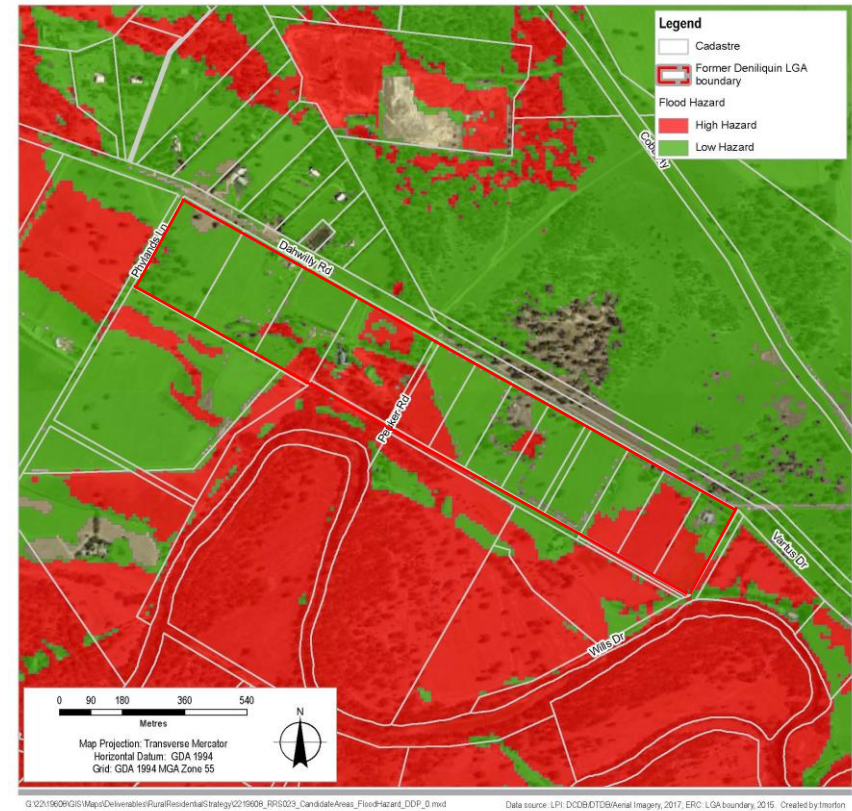
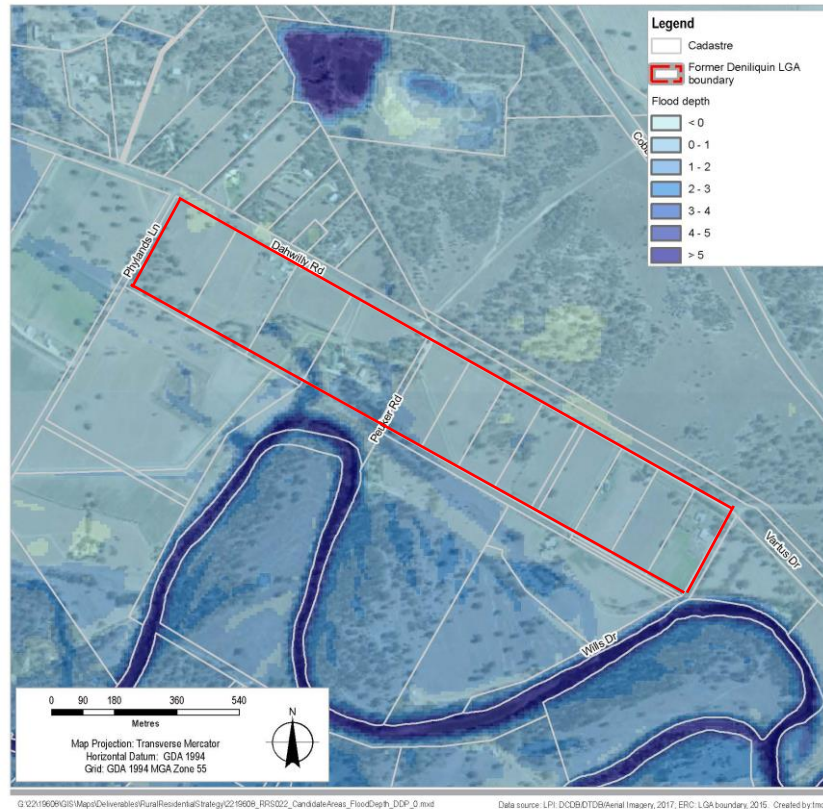


Figure 10-13 Candidate Area 3 – Flood Depth



10.5 Summary of Candidate Areas

The following is a summary of the potential large lot residential areas presented above.

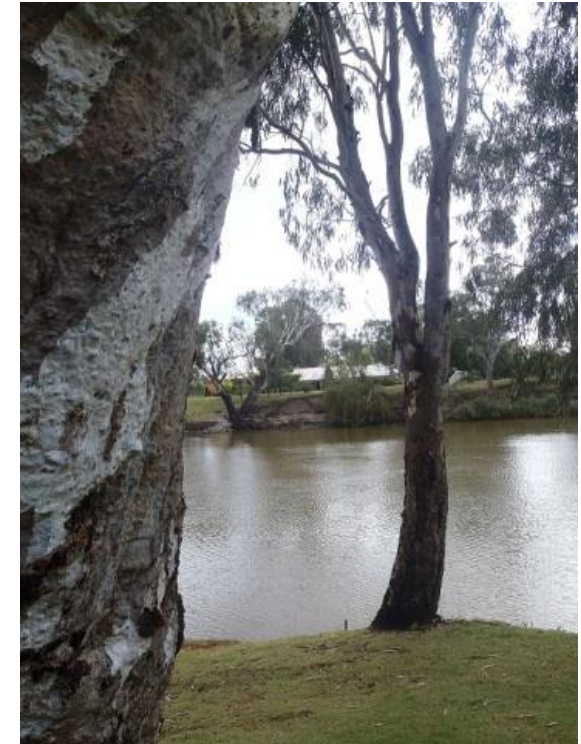
Table 10-1 Summary of Candidate Areas

Candidate Area No.	Location	Gross Area (ha)
1	Riverview Road	114.62
2	Riverina Highway	8.31
3	Dahwilly Road (south)	64
Total		186.93 ha

Table 10-2 Summary of Lot potential*

Candidate Area No.	Location	Estimated lot potential
1	Riverview Road	50
2	Riverina Highway	6
3	Dahwilly Road (south)	15
Total		71

*Note: Figures are estimates only. Accurate yields should be reviewed following the outcomes of further technical studies undertaken at the planning proposal stage. Should the potential yields significantly exceed the above figures a further review should be undertaken to ensure land is rezoned at an appropriate time.



11. Consultation Strategy

The Strategy was placed on public exhibition in early 2019 to allow for community and stakeholder input.

Consultation activities included:

Community and landowners

- Public notification advertisements in local newspaper
- Notification letters to affected and surrounding property owners
- Update Council's website with exhibition material
- Hard copies of the draft Strategy made available at Council's Offices in Deniliquin and the local library.
- Community information sessions/ stakeholder workshops

Government agencies/stakeholders

Comments were also sought from the following relevant government agencies with an interest in large lot residential land development in the Edward River local government area

- NSW Department of Planning and Environment
- NSW Rural Fire Service
- NSW Department of Industry - Lands and Water

- NSW Office of Environment and Heritage
- NSW Roads and Maritime Services
- Transport for NSW
- NSW Local Land Services
- Relevant adjoining local government areas
- Riverina Murray Joint Organisation

Following exhibition, Council reviewed all matters raised in submissions from the community including landowners and government agencies and developed a final draft Strategy, incorporating any changes arising from the consultation period.

The final draft Strategy will then be considered by Edward River Council for adoption.

The adopted Large Lot Residential Strategy will then be forwarded to the NSW Department of Planning, Infrastructure and Environment for endorsement.

12. Land Release Program

12.1 Balancing Supply and Demand for Large Lot Residential Land Use

This section determines whether there is an adequate supply of large lot residential land to meet expected demand over the next 20 years.

As previously outlined in section 8.3 the former Deniliquin LGA has five existing areas zoned for large lot residential under Deniliquin LEP 2013 covering a total of 947.3 ha. Of this, 830.2 ha or 87% has been developed and is being used for large lot residential purposes.

The estimated current immediate supply of large lot residential land in Deniliquin is considered to be approximately 25 lots.

There should be a goal of maintaining a “rolling supply” of at least 20 years supply of land to ensure that there is no restriction on supply, adequate competition between sites and a variety of locations to choose from.

On the demand side, this Strategy has shown that there are several views as to what might be required between now and 2036. On average it is considered that the average demand to 2036 will be 70 dwellings or 4 per year which would require an average of 85 hectares of unconstrained land. The existing supply of large lot residential land available for development would yield up to 25 additional dwellings. Therefore land for approximately 60 large lot residential lots should be identified.

The proposed Candidate Areas have the potential to yield in the order of 71 lots. This figure is not inconsistent with the demand approach methodologies and provides a suitable level of flexibility and opportunity for large lot residential land to be supplied to the market.

12.2 Land Release Program

The purpose of the land release program is to guide the location of future large lot residential lands over the life of the strategy. It includes a time frame of short (0-10 years), medium (10-20 years) and long term (20 years plus) to give an idea when this land should be considered for rezoning. These time frames refer to the period in which rezoning should commence if the land is to supply lots to the market at a future date (GHD, 2007).

It is assumed that land takes up to six years to reach the market from commencement of the rezoning process.

Table 12-1 outlines each of the potential large lot residential land areas and provides an indication of when the rezoning process will need to be considered if these areas are to supply large lot residential land to the market at the appropriate time.

Table 12-1 Land Release Program

Candidate Area No	Locality	Land release timing	Comment
1	Riverview Road	Short Term - Long term	Phased release recommended. Technical studies should commence to establish constraints and recommended phasing
2	Riverina Highway	Medium term	Potentially reliant on development proceeding on Kyalite Stables site. DCP for Kyalite Stable should be amended to include the site and identify potential connecting road.
3	Dahwilly Road (south)	Short term	Release can meet short term demand.

Ideally this strategy should be reviewed every five to seven years to check whether areas were developed as expected and to assess any changes in demand or services and infrastructure. If needed, areas can be brought forward if development exceeds expectation or other areas are withheld from supply. If development falls short of expectation then areas can be deferred to a later time frame.

Readers of this strategy are also cautioned that this document has not been prepared for anyone as a basis for investment or other private decision making in relation to land purchases, sales or other land uses. Edward River Council recommends that it not be used by anyone in this way.

13. Implementation and Recommendations

13.1 Candidate Areas

This Strategy will help guide development in the former Deniliquin LGA into the future up to at least 2036. This strategy does not itself rezone land for development; however, it identifies broad areas for consideration and sets clear principles and outcomes to guide future development.

The potential growth areas need to be considered in conjunction with the State and local policies and the guiding principles presented in this document.

13.2 Implementation

This Large Lot Residential Lands Strategy is a framework to achieve good planning, management and development of the Deniliquin large lot residential lands. Effective implementation requires cooperation by community stakeholders and coordination of State and local government activities and plans. Implementing the strategy involves coordinating and reviewing a range of plans, infrastructure and services.

The following actions have been developed to guide Edward River Council's decision relating to:

- Liaison with external parties to improve land use planning, development and management.
- Councils' ongoing programs relating to infrastructure and service provision, and the delivery of economic and social services.
- Councils' ongoing program of internal strategic planning.
- Councils' ongoing program of introducing or improving specific policies and guidelines.
- Existing statutory responsibilities, including applications for development and subdivision approval.
- Non-statutory support for initiatives undertaken by other organisations and individuals.
- The establishment of formal arrangements, agreements and intergovernmental responsibilities for future decision making.

Strategy Direction 1

Provide a rolling supply of development-ready large lot residential land in Deniliquin for the next 20 years.

- Implement a land use monitor for the local government area to accurately identify large lot residential land supply and demand issues on a regular basis.
- Commence the rezoning process for Candidate Area 3 - Dahwilly Road (south) so this area is market ready for limited further subdivision within the next 3 years.
- Commence investigation of Candidate Area 1 – Riverview Road to assess the viability of this site in satisfying the short/ medium term supply of large lot residential land
- Commence rezoning process for Candidate Area 2 Riverina Highway so this area is market ready for subdivision within 5 years.

Strategy Direction 2

Ensure planning policies facilitate, protect and support large lot residential development

- Facilitate the rezoning process of large lot residential lands growth areas in accordance with this strategy.
- Protect the rural character of Deniliquin by minimising the visual intrusion of new buildings on the natural landscape, particularly from the Edward River.

Strategy Direction 3

Prevent and manage environmental concerns

- Areas already connected to services may be better positioned to accommodate growth.
- Land contamination from past land uses has not been addressed in this strategy and candidate areas will need to meet the requirements of SEPP 55 to be rezoned.
- Ensure that large lot residential land uses are sited and managed so as to ensure that they do not impact detrimentally on the quantity and quality of environmental flows in the Edward River.

13.3 Local Environmental Plan

Large lot residential lands identified for short-medium term release should be zoned R5 Large Lot Residential under Deniliquin LEP 2013 and the lands with significant constraints should be protected by an environmental protection zone or other suitable means under the LEP or Development Control Plan.

The LEP should also include the following for large lot residential land use.

- Minimum lot size of one hectare. This would be consistent with the current LEP and allow for an appropriate level of flexibility in future subdivision design and development delivery. Additional measures within the LEP may be required to facilitate the protection and conservation of environmentally sensitive or flood constrained land and these may include larger minimum lot sizes or site specific provisions.

It is noted an additional local provision applies to the recently zoned land known as the Kyalite Stables development to address flooding and environmental and scenic amenity matters. The clause is set out as follows:

6.9 Kyalite Stables development on Edward River

(1) The objectives of this clause are as follows:

- (a) to minimise the flood risk to life and property associated with the use of land at Deniliquin known as Kyalite Stables,*
- (b) to avoid significant adverse impacts on flood behaviour and support natural riverine processes, including the migration of the Edward River's channels,*
- (c) to protect and improve the bed and bank stability of the Edward River,*
- (d) to maintain and improve the water quality of the Edward River,*
- (e) to protect the amenity and scenic landscape values of the Edward River,*
- (f) to facilitate limited large lot residential development at Kyalite Stables that is compatible with the land's flood hazard, taking into account site-specific flood studies and flood modelling work.*

(2) This clause applies to certain land at 21701–21703 Riverina Highway, Deniliquin, being Lots 2 and 3, DP 562598 and Lot 1, DP 1121183, known as “Kyalite Stables”.

(3) Despite any other provision of this Plan, development consent must not be granted for the erection of a dwelling house on land to which this clause applies unless the consent authority is satisfied that the development:

- (a) is compatible with the flood hazard of the land, and*

(b) takes into account the Edward River at Deniliquin Flood Study 2014 and the Edward River at Deniliquin Floodplain Risk Management Study and Plan 2017, available from the office of the Council, and

(c) takes into account any flood impact assessment or flood modelling work carried out in accordance with the Floodplain Development Manual in relation to land to which this clause applies, available from the office of the Council, and

(d) incorporates appropriate measures to manage risk to life from flood, and

(e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding, and

(f) is not on land in the river front area, and

(g) is likely to cause only minimal visual disturbance to the existing landscape, and

(h) is such that the appearance of the dwelling house from the river front area is compatible with the surrounding area, and

(i) is not likely to cause environmental harm, including (but not limited to) the following:

- (i) pollution or siltation of the Edward River,*
- (ii) any adverse effect on surrounding uses, riverine habitat, wetland areas or flora or fauna habitats,*

(iii) any adverse effect on drainage patterns.

(4) Despite any other provision of this Plan, development consent may be granted to development on land to which this clause applies that is in a river front area only for the following purposes:

(a) boat building and repair facilities, boat launching ramps, boat sheds, charter and tourism boating facilities or marinas,

(b) environmental facilities, recreation areas or recreation facilities (outdoor),

- (c) *environmental protection works,*
- (d) *water recreation structures.*

(5) *A word or expression used in this clause has the same meaning as it has in the Floodplain Development Manual unless it is otherwise defined in this clause.*

(6) *In this clause:*

Floodplain Development Manual means the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.

River front area means the land shown as “river front area” on the River Front Area Map.

The planning proposal also introduced the model clause 7.3 Flood Planning into the Deniliquin LEP and a flood planning map based on the identified flood planning level for the land. Larger minimum subdivision lot sizes of 1.2 and 2 hectares also apply to part of the site. Further controls to manage development outcomes on the site (including nomination of building envelopes) are set out within the Deniliquin Development Control Plan.

13.4 Development Control Plan

The Deniliquin Development Control Plan 2016 came into effect on 6 May 2016 and applies to all land within the Deniliquin Local Government Area. The general aims of the plan are to:

- a. Promote growth and development to support and enhance the vitality of the Central Business District.*
- b. Encourage development that responds to the needs of the community.*
- c. Encourage residential development of a high standard to improve the quality of the urban environment.*
- d. Encourage development that respects and minimises the impacts on surrounding land and the wider environment.*

e. Encourage new development that will enhance streetscapes and vistas.

f. Ensure that development incorporates safe, effective and convenient pedestrian, bicycle and vehicle access, movement and parking areas.

g. Encourage energy efficiency in building design.

h. Provide for effective and well-utilised open space with security and access for the community.

i. Control and minimise the impact of stormwater run-off.

j. Ensure that new development is fully integrated into Council's sewerage system wherever possible.

k. Promote the orderly and efficient development of land to ensure that provision of services to that land is adequate.

Chapter 2 Residential Zones of the DCP applies to development proposed in a residential zone and includes the R5 Large Lot Residential zone.

The key controls applying to R5 land within the DCP are contained within Section 2.2: Residential subdivision. These include.

- Minimum lot width - 25m
- Battleaxe shaped lots may only be permitted where it can be demonstrated that full street frontage for all lots is not achievable due to site constraints.
- A development application for the subdivision of land may only be considered where all allotments are capable of being adequately serviced with electricity supply, water supply, sewerage disposal and telephone.

Note: In accordance with the LEP, allotments in the R5 zone with at least 1 hectare in area do not need connection to a reticulated sewage system. Allotments in the R5 zone with at least 5,000 m² but less than 1 hectare in area require connection to a reticulated sewage system.

It is noted the controls applying to large lot residential development are contained within controls for R1 General Residential zoned land. It is recommended that should the Candidate Areas as proposed within this strategy be pursued, consideration be applied to establishing a separate section for large lot residential development. This section should include specific character, amenity and environmental objectives and controls to appropriately guide large lot residential development.

Within this section, Additional controls recommended for R5 Land could include:

- Effluent disposal reports to accompany any development application demonstrating how water quality objectives are to be met
- Vegetation management plan is to accompany proposals adjacent bushland or within identified wildlife corridors; revegetation is to be imposed by means of a restriction on the title.
- A minimum landscape buffer of 10 m is to be provided along drainage lines.
- Contaminated land assessment is to accompany any application for lands identified as potentially contaminated.

- Dwellings are to be separated by a minimum of 20 m.
- Local access roads are to be provided or extended in accordance with Council's standards; access via access handles/battleaxe arrangements is not permitted.
- A minimum landscape buffer of 10 m is to be provided to screen adjoining dwelling houses.
- A bushfire assessment in accordance with the Rural Fire Service Guidelines is to accompany applications on land mapped as fire prone.
- Riverside lots and dwelling houses are responsive to and enhance scenic landscape values and environmental constraints, ecological and riverine processes.

13.5 Monitoring and Review Recommendations

The Large Lot Residential Strategy will need to be regularly monitored and subsequently modified from time to time to reflect new issues, changing community priorities and policies requiring different emphasis.

The rate of large lot residential development and the underlying population growth and demographic change will however determine how frequently the strategy needs to be reviewed and revised to ensure an adequate supply of large lot residential land. This strategy recommends a maximum revision period of 10 years.

Appendix A – Planning Documents

NSW Legislation

Environmental Planning and Assessment Act, 1979

The Environmental Planning and Assessment Act (EP&A Act) governs development in NSW. One of the objectives of the EP&A Act, among others, is to promote the sharing of the responsibility for environmental planning between the different levels of government in the State. The Large Lot Residential Lands Strategy (The Strategy) will inform the preparation of the LEP. In preparing new LEPs, Council is required to consider the statutory obligations of the EP&A Act. Section 9.1 of the EP&A Act allows the Minister for Planning to give directions to councils in regards to the preparation of draft LEP's and is therefore considered in preparation of this strategy.

Rural Fires Act 1997

The *Rural Fires Act 1997* (RF Act) aims to, among other things, prevent, mitigate and suppress bush fires in local government areas and the State. To achieve bushfire protection in local government areas, it is necessary to consider at the preparation stage of LEPs and DCPs. This would include provisions to consider bushfire management in land use zoning, setbacks, access and subdivision.

Section 63 of the RF Act provides that it is the duty of public authorities, owners or occupiers of land to prevent the occurrence of bush fires on, and to minimise the danger of the spread of a bush fire on any land vested on or under its control or management. Bushfire constraints would be considered for the supply of additional large lot residential land.

Native Vegetation Act 2003

The Native Vegetation Act 2003 was repealed on 25 August 2017, however property vegetation plans (PVPs) approved before the repeal of the Act remain valid and in force and obligations to manage and maintain offset areas continue.

Water Management Act 2000

The objects of the *Water Management Act 2000* (WM Act) are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations. In particular the WM Act aims to:

- Apply the principles of ecologically sustainable development.
- Protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality
- Recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water
- Recognise the role of the community
- Provide for the orderly, efficient and equitable sharing of water from water sources

- Integrate the management of water sources with the management of other aspects of the environment
- Encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users
- Encourage best practice in the management and use of water

Any new large lot residential land would need to consider the protection of water sources; the need to obtain water management licences and approvals and the aims of the WM Act as listed above.

The Water Sharing Plan for the Lower Murray Groundwater Source and the Water Sharing Plan for the Lower Murray Shallow Groundwater Source are given legal effect by the Water Management Act 2000. These plans include rules for environmental protection, and managing extractions, licenses and water trading.

The Murray River is also subject to the Murray Darling Basin Plan. Under the basin plan, a Water Resource Plan has to be developed by the NSW Government by the end of June 2019 to replace the water sharing plans.

National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides the basis for legal protection and management of National Parks estate and Aboriginal sites and objects in NSW. In developing the strategy it is important to locate large lot residential land so that it does not adversely impact on places, objects or sites listed under the NPW Act. Additionally, large lot residential development would not be located within or near a national park.

Fisheries Management Act 1994

The Fisheries Management Act 1994 contains provisions for the identification, conservation and recovery of threatened fish species, aquatic invertebrates and marine vegetation. Threatened species, populations and ecological communities considered by the Fisheries Scientific Committee to be at risk of extinction are listed under schedules in the Act. The Act also identifies key threatening processes and establishes mechanisms by which such processes can be managed, such as recovery and threat abatement plans. The provisions of the Fisheries Management Act 1994 may apply to development within a large lot residential zone.

Murray Regional Environmental Plan No 2 – Riverine Land

The Murray REP No 2 identifies the Murray River as an asset of international, national and state significance. Under the REP, works that can affect the distribution of floodwaters (flood control works) require development consent from the local Council.

The REP ensures the river and its floodplain are able to support a range of productive land uses. The plan coordinating planning along the Murray River and the implementation of planning-related aspects of the Murray Darling Basin Commission strategies. It simplifies the consultation process between agencies and councils established in REP No. 1. It also promotes consistency between NSW and Victoria planning in relation to the river and its floodplain.

The REP contains principles that apply when Council prepares a local environmental plan that address access to riverine land, bank disturbance, flooding, land degradation, landscape, river related uses, settlement, water quality and wetlands. Relevantly, the REP requires that the degree to which access to the river and foreshore is affected, the impacts of uncontrolled access, and disturbance to banks and riparian vegetation are to be taken into account. Any development that intensifies the use of riverside land should provide public access to the foreshore and include measures to protect and enhance vegetation.

On land that is subject to flooding, Council is to consider such matters as hazard risks, pollution threat, redistribution of floodwaters, the availability of other suitable land that is not flood-prone, and flood-free access to essential services.

In relation to the expansion of settlements, including for large lot residential development, the land should be flood-free, located close to existing services and facilities, and not compromise the potential of prime crop and pasture land to produce food or fibre.

State Environmental Planning Policy (Primary Production and Rural Development) 2019

SEPP (Primary Production and Rural Development) came into effect in early 2019. It aims to:

- (a) to facilitate the orderly economic use and development of lands for primary production,*
- (b) to reduce land use conflict and sterilisation of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity and water resources,*
- (c) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations,*
- (d) to simplify the regulatory process for smaller-scale low risk artificial waterbodies, and routine maintenance of artificial water supply or drainage, in irrigation areas and districts, and for routine and emergency work in irrigation areas and districts,*
- (e) to encourage sustainable agriculture, including sustainable aquaculture,*
- (f) to require consideration of the effects of all proposed development in the State on oyster aquaculture,*
- (g) to identify aquaculture that is to be treated as designated development using a well-defined and concise development assessment regime based on environment risks associated with site and operational factors.*

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (SEPP Infrastructure) came into effect in 2007 and aims to facilitate the delivery of infrastructure across the State by improving regulatory certainty and efficiency.

The SEPP outlines, among other things, land use zones where particular types of infrastructure are permissible.

Deniliquin LEP 2013

The Deniliquin Local Environmental Plan 2013 is based on the standard LEP instrument order 2006.

Council has adopted Zone R5 (Large Lot Residential) for its large lot residential areas and is relevant to the Strategy. The other zones within the LEP 2011 are based on the standard LEP instrument order 2006.

R5 (Large Lot Residential)

The objectives of Zone R5 are:

- To provide residential housing in a rural setting while preserving, and minimising impacts on, environmentally sensitive locations and scenic quality
- To ensure that large residential lots do not hinder the proper and orderly development of urban areas in the future.
- To ensure that development in the area does not unreasonably increase the demand for public services or public facilities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

The following developments are permitted without consent in this zone:

- Environmental protection works; Home occupations; Water reticulation systems.

The following developments are permitted with consent in this zone (but is not limited to – refer to land use matrix for more information):

- Bed and breakfast accommodation; Building identification signs; Business identification signs; Dual occupancies; Dwelling houses; Food and drink premises; Garden centres; Group homes; Home industries; Kiosks; Plant nurseries; Roads; Roadside stalls.

There are additional clauses in the LEP that need to be considered when identifying areas for potential large lot residential development. These include the following local and miscellaneous provisions:

- Clause 5.10 Heritage conservation
- Clause 5.11 Bush fire hazard reduction
- Clause 6.2 Flood planning

- Clause 6.3 Terrestrial biodiversity
- Clause 6.4 Riparian Land and Watercourses
- Clause 6.5 Salinity
- Clause 6.6 Airspace operations
- Clause 6.7 Essential services

Minimum Lot Sizes for Subdivision

The Deniliquin Local Environmental Plan (LEP) sets the minimum sizes for allotments in the Deniliquin LGA. The LEP contains a series of 'zones' which outline objectives for preferred development and set minimum lot sizes.

Table A 1 Minimum lot sizes for relevant rural and residential zones

Zone	Minimum Lot Size
RU1 - Primary Production	400 hectare
R5 - Large Lot Residential	1 hectare
R1 – General Residential	400 square metres
R5 - Large Lot Residential	1 hectare or 5,000m ² if connected to a reticulated sewage system

Section 9.1 Directions

Section 9.1 of the EP&A Act provides that any direction of the Minister is to be taken into account in the preparation of a planning proposal. There are a number of Ministerial Directions that would be relevant to rezoning of land for large lot residential purposes and are therefore addressed in this strategy. These include:

Employment and Resources

Rural Zones

The objective of the direction is to protect the agricultural production value of rural land. It applies when a planning authority prepares a planning proposal that will affect land within an existing or proposed rural zone.

The direction requires the planning authority to:

- *Not rezone land from a rural zone to a residential, business, industrial, village or tourist zone.*
- *Not contain provisions that will increase the permissible density of land within a rural zone (other than land within an existing town or village).*

Mining, Petroleum Production and Extractive Industries

The objective of this direction is to ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development.

This direction applies to all relevant planning authorities.

This direction applies when a relevant planning authority prepares a planning proposal that would have the effect of:

- *Prohibiting the mining of coal or other minerals, production of petroleum, or winning or obtaining of extractive materials.*
- *Restricting the potential development of resources of coal, other minerals, petroleum or extractive materials which are of State or regional significance by permitting a land use that is likely to be incompatible with such development.*

Rural Lands

The objectives of this direction are to protect the agricultural production value of rural land and facilitate the orderly and economic development of rural lands for rural and related purposes.

It applies when a planning authority prepares a planning proposal that will affect land within an existing or proposed rural or environment protection zone or that changes the minimum lots size on land within a rural or environment protection zone.

This direction requires the planning proposal to be consistent with twith any applicable strategic plan, including regional and district plans endorsed by the Secretary of the Department of Planning and Environment, and any applicable local strategic planning statement.

Environment and Heritage

Heritage Conservation

The objective of this direction is to conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance.

It applies when a planning authority prepares a planning proposal which must contain provisions that facilitate the conservation of:

- *Items, places, buildings, works, relics, moveable objects or precincts of environmental heritage significance to an area, in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area.*

- *Aboriginal objects or Aboriginal places that are protected under the National Parks and Wildlife Act 1974.*
- *Aboriginal areas, Aboriginal objects, Aboriginal places or landscapes identified by an Aboriginal heritage survey prepared by or on behalf of an Aboriginal Land Council, Aboriginal body or public authority and provided to the relevant planning authority, which identifies the area, object, place or landscape as being of heritage significance to Aboriginal culture and people.*

Housing, Infrastructure and Urban Development

Residential Zones

The objectives of this direction are:

- *to encourage a variety and choice of housing types to provide for existing and future housing needs.*
- *to make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services.*
- *to minimise the impact of residential development on the environment and resource lands.*

It applies when a planning authority prepares a planning proposal that will affect land within an existing or proposed residential zone or any other zone in which significant residential development is permitted or proposed to be permitted.

This direction requires the planning proposal to:

- *include provisions that encourage the provision of housing that will:*
 - *broaden the choice of building types and locations available in the housing market*
 - *make more efficient use of existing infrastructure and services*
 - *reduce the consumption of land for housing and associated urban development on the urban fringe*
 - *be of good design.*
- *in relation to land to which this direction applies:*
 - *contain a requirement that residential development is not permitted until land is adequately serviced (or arrangements satisfactory to the Council, or other appropriate authority, have been made to service it)*
 - *not contain provisions which will reduce the permissible residential density of land.*

Hazard and Risk

Flood Prone Land

The objectives of this direction are:

- *to ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005.*
- *to ensure that the provisions of an LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land.*

This direction applies to all relevant planning authorities that are responsible for flood prone land within their LGA. This direction applies when a relevant planning authority prepares a planning proposal that creates, removes or alters a zone or a provision that affects flood prone land.

Planning for Bushfire Protection

The objectives of this direction are:

- *to protect life, property and the environment from bush fire hazards, by discouraging the establishment of incompatible land uses in bush fire prone areas.*
- *to encourage sound management of bush fire prone areas.*

This direction applies to all LGAs in which the responsible Council is required to prepare a bush fire prone land map under section 146 of the EP&A Act, or, until such a map has been certified by the Commissioner of the NSW Rural Fire Service, a map referred to in Schedule 6 of that Act.

This direction applies when a relevant planning authority prepares a planning proposal that will affect, or is in proximity to land mapped as bushfire prone land.

Deniliquin Development Control Plan 2016

Deniliquin DCP 2016 applies to the former Deniliquin LGA and generally includes provisions relating to residential and commercial development.

Strategic Framework

The Riverina Murray Regional Plan 2036

The Riverine Murray Regional Plan 2036 provides the NSW Government's strategy for growth and development of the Riverine Murray region of NSW for the next 20 years. The Riverine Murray region has been identified as a leading and highly diversified economy, with growing local job opportunities and sustainable communities. The region is acknowledged as one of Australia's premium agricultural areas leading the way in agricultural innovation and value-adding, and is leveraging advanced and automated technologies to maximise agribusiness diversification.

Edward River within the Riverina Murray region is home to approximately 8,962 persons accounting for 3 per cent of the Riverina Murray region. Despite the LGA's small population, the Edward River LGA supports both dryland and irrigated agriculture, with one of the most extensive high water irrigation areas in NSW. Significant production of rice and winter cereals, and sheep farming, as well as contributions from the service sector meant that the council area contributed an estimated \$387 million to the regions gross regional product in 2013.

The local centre of Deniliquin, provides education and health services to the greater council area, including early childhood to high school services, a TAFE campus and a hospital. Deniliquin's economy is underpinned by diverse irrigated and broad acre cropping and grazing and the operation of numerous merino sheep stations which produce fine wool. The Council area is seeking investment in food production, with opportunities to develop additional value-adding operations to maximise job retention and employment.

The plan described the key objectives for the Edward River region as follows:

- Develop Deniliquin into a thriving local centre through industry development and job creation to promote population growth.
- Ensure that irrigated land is appropriately zoned and protected from inappropriate development.
- Double the size of the visitor economy through new product development and promotion.
- Improve the council area's liveability and lifestyle opportunities.

The plan recognises that as the economy and population profile changes, so too will the demand for skilled workers, particularly in agribusiness and values-added manufacturing, and green technologies and products. Emerging industries such as nuts, aquaculture, tourism aviation and defence freight provide more diverse employment opportunities for social participation.

Within the plan, Deniliquin is identified as a strategic centre within the Edward River LGA for continued growth in the agribusiness sector by improving agribusiness (food production) sectors by improving and developing established and new industrial and commercial areas, delivering reliable telecommunications infrastructure to attract jobs, grow business and deliver e-programs for health and education.

For rural residential development the Plan highlights the importance of a consistent planning approach to identify suitable locations for new rural residential development to avoid fragmentation of productive agricultural land and protect high environmental values assets, cultural and heritage assets, or areas with important rural landscape values. Rural residential development should not increase pressure on infrastructure and services and should be located on land free from natural hazards. In this regard the plan identified the following actions under Direction 27:

Direction 27: Manage rural residential development

27.1 Enable new rural residential development only where it has been identified in a local housing strategy prepared by Council and approved by the Department of Planning and Environment.

27.2 Locate new rural residential areas

- In close proximity to existing urban settlements to maximise the efficient use of existing infrastructure and services, including roads, water, sewerage and waste services and social and community infrastructure.
- To avoid or minimise the potential for land use conflicts with productive, zoned agricultural land and natural resources.
- To avoid areas of high environmental, cultural and heritage significant, important agricultural land or areas affected by natural hazards.

27.3 manage land use conflict that can result from cumulative impacts of successive development decisions.

Policy for Sustainable Agriculture in New South Wales (1998)

The purpose of this Policy is to facilitate a coordinated approach to achieving an ecologically and economically sustainable agricultural sector in New South Wales.

One of the key issues that this Policy identifies is in relation to the integrated management and the need to facilitate consultation and cooperative action between industry, government, local authorities and community groups to enable agriculture to operate in an ecologically sustainable manner while meeting economic and social goals.

The objective of integrated management according to the DPI Policy for Sustainable Agriculture in NSW is:

Agricultural industries, communities and governments working together to achieve positive economic, environmental and social outcomes.

Specific strategies identified in relation to integrated management include:

- *Ensure collaboration in the development, implementation and review of plans, policies and legislation relating to agriculture.*
- *Ensure the equitable and efficient allocation of land and other natural resources between agriculture and other sectors of the community.*
- *Ensure land use planning is undertaken, where appropriate, in association with agriculture to avoid conflict that may jeopardise agriculture's sustainability.*

- *Identify land and farming methods best suited to specific agricultural industries and retain production options for those lands in the future.*
- *Adopt appropriate planning mechanisms to avoid future conflict over land use (e.g. competing demands for land for agricultural, residential and recreational uses).*

Deniliquin Flood Plain Management Study (1984)

The Deniliquin Flood Plain Management Study was adopted by the former Deniliquin Council in February 1984. Rankine & Hill Pty Ltd developed the Study which was at the time based on the States flood prone land policy. The policy recommends both structural and non-structural measures. The structural measures included flood mitigation dams, levees and channel improvements. The non-structural included town planning, flood warning and insurance.

A flood study was completed in 2014 for the Deniliquin LGA by WMA consulting.

Edward River at Deniliquin Flood Study (2014)

An updated flood study was completed for the former Deniliquin LGA in November 2014 that was aimed at determining design flood behaviour in the area and assessing the performance of the levee in Deniliquin and identifying flooding issues. Modelling showed that the 1% AEP flood peaks were similar to what was previously estimated but that a 1% AEP flood event would overtop the levee in North Deniliquin at three points. The updated design flood levels produced in this study superseded the previous 1984 assessment.

Assessment against State Environmental Planning Policies

State Environmental Planning Policy	Statement of Consistency
SEPP No. 15 – Rural Land-Sharing Communities	Not applicable.
SEPP No. 19 – Bushland in Urban Areas	Not applicable.
SEPP No 21 – Caravan parks	Caravan parks are a permissible use in Zone R5 Large Lot Residential.
SEPP (Coastal Management) 2018	Not applicable.
SEPP No 30 – Intensive agriculture	Intensive agriculture is a prohibited use in Zone R5 Large Lot Residential.
SEPP No 33 – Hazardous and offensive development	Any hazardous and offensive development in each of the candidate areas would need to be assessed on its planning merits.
SEPP No 36 – Manufactured home estates	Caravan parks are permitted with consent in the R5 zone in the Deniliquin LEP.
SEPP No 44 – Koala habitat protection	Not applicable.
SEPP No 52 – Farm dams and other works in land water management plan areas	There are no provisions in the Deniliquin LEP that contravene this SEPP. As Deniliquin is located within the identified Murray irrigation area this SEPP applies. An assessment of each candidate area potential impacts to the River Murray would be required as part of any planning proposal.
SEPP No 55 – Remediation of land	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP No 60 – Exempt and complying development	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP No 64 – Advertising and signage	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP No 65 – Design quality of residential flat development	Not applicable as flat development is a prohibited use in Zone RU5.
SEPP No 70 – Affordable housing (Revised Scheme)	Not applicable.
SEPP Building Sustainability Index: BASIX 2004	The Deniliquin LEP supports sustainable development and is consistent with this SEPP. Future building in each of the candidate areas could comply with this SEPP.

State Environmental Planning Policy	Statement of Consistency
SEPP Exempt and Complying Development 2008	The exempt and complying tables in the Deniliquin LEP have been carefully developed to be consistent with this SEPP.
SEPP Housing for Seniors and People with a Disability 2004	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP Infrastructure 2007	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP Major Development 2005	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP Mining, Petroleum Production and Extractive Industries 2007	Whilst prohibited in Zone RU5, any proposals for open cut mines or extractive industries would need to be assessed against the provisions of this SEPP.
SEPP Temporary Structures and Places of Public Entertainment 2007	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP Rural Lands 2008	The Strategy has been prepared in accordance with the principles outlined in SEPP Rural Lands.
SEPP Affordable Rental Housing 2009	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP (Educational Establishments and Childcare Facilities) 2017	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP (Vegetation in Non-Rural Areas) 2017)	There are no provisions in the Deniliquin LEP or recommendations from this Strategy that contravene this SEPP.
SEPP (Coastal Management) 2018	Not applicable.

Assessment against Ministerial Directions

Section 9.1(2) Direction		Relevant to Strategy	Consistent with the Direction	Justification
1. Employment and Resources				
1.1	Business and industrial zones	Not applicable		
1.2	Rural Zones	Yes	No – minor significance	Direction 1.2 allows a draft LEP to be inconsistent where inconsistency is of minor significance. This strategy supports the rezoning of rural land around Deniliquin and throughout the Edward River Region for large lot residential purposes.
1.3	Mining, Petroleum Production and Extractive Industries	Yes	Yes	Direction 1.3 applies as there are mineral resources within the Shire. The candidate areas would not impact upon any mineral resources in the Shire.
1.4	Oyster Aquaculture	Not applicable		
1.5	Rural Lands	Yes	Yes	<p>This Strategy supports the rezoning of rural land throughout the Edward River region in particular Deniliquin for large lot residential purposes. The candidate areas have been assessed against the Rural Planning Principles from SEPP Rural Lands 2008.</p> <p><i>Rural Planning Principles</i></p> <p>(a) Promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas.</p> <p>The Deniliquin LEP allows a range of actions to protect sustainable activities in the rural zones of the region. This includes planning controls for intensive agriculture and small holding development in appropriate locations.</p> <p>(b) Recognition of the importance of agriculture and the changing nature of agriculture in the region.</p> <p>The value of agriculture to the Shire and local economies has been recognised in adopting the minimum lot size for the RU1 zone. The Deniliquin LEP promotes flexibility in permitting a wide range of rural land uses that can cater for change and emerging opportunities. This Strategy facilitates large lot residential opportunities on land not considered to be prime crop and pasture land.</p>

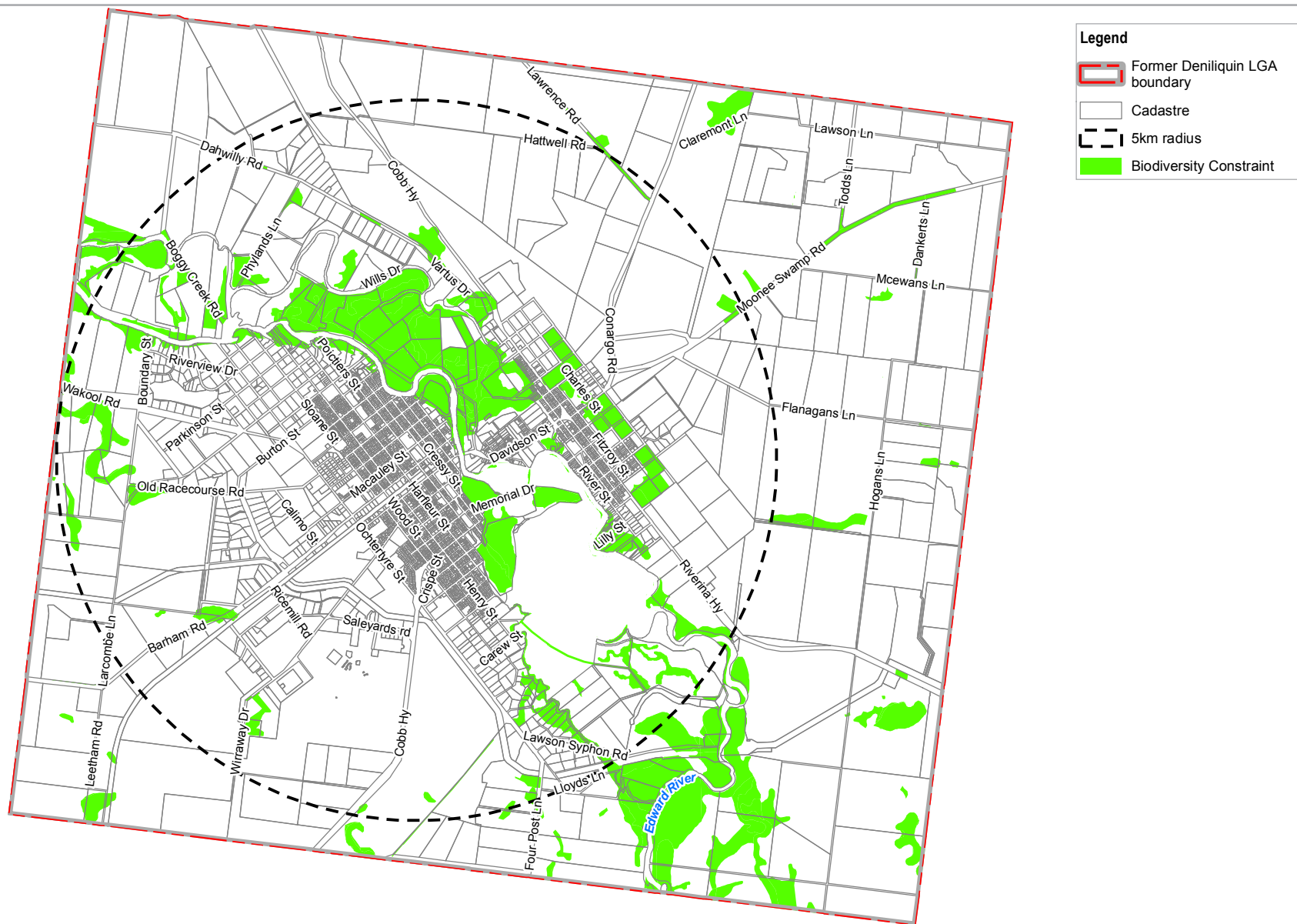
Section 9.1(2) Direction	Relevant to Strategy	Consistent with the Direction	Justification
			<p>(c) Recognition of the significance of rural land uses to the state and rural communities including social and economic benefits.</p> <p>The Deniliquin LEP identifies objectives that make the region distinctive and contribute to its competitive advantage. Rural land has been protected through the application of the RU1 zone and by limiting the encroachment of urban land into adjoining rural lands.</p> <p>(d) Balance the social, economic and environmental interests of the community.</p> <p>The candidate areas would allow for the development of large lot residential housing throughout the Edward River region in particular Deniliquin. These areas have been selected based on the detailed suitability and capability criteria outlined in Section 9.2. The provision of this form of housing provides for alternative lifestyle preferences to traditional residential or rural housing options.</p> <p>(e) Identification and protection of natural resources, maintaining biodiversity, protecting native vegetation and water resources and avoiding constrained land.</p> <p>The Strategy has considered potential impacts on natural resources, biodiversity, surface and ground water, on site waste water disposal in the identification of each candidate area.</p> <p>(f) The provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities.</p> <p>Consideration has been given to the supply and demand for large lot residential land to ensure that realistic stocks are or can be made available to respond to legitimate demand for this land use.</p> <p>(g) Consideration of the impacts on services and infrastructure and appropriate location when providing for rural housing.</p> <p>Consideration has been given to services and infrastructure in the identification of additional land for large lot residential purposes.</p>

Section 9.1(2) Direction		Relevant to Strategy	Consistent with the Direction	Justification
2. Environment and Heritage				
2.1	Environment Protection Zones	Yes	Yes	The candidate areas have been located outside of the environmental protection zones. Sensitive ecologically land identified during the environmental investigations for each candidate area may require the imposition of an environment protection zones as part of any rezoning.
2.2	Coastal Protection	Not Applicable.		
2.3	Heritage Conservation	Yes	Yes	The candidate areas have been located outside of known heritage areas and artefacts.
2.4	Recreation Vehicle Areas	Not applicable		
3. Housing, Infrastructure and Urban Development				
3.1	Residential Zones	Yes	Yes	The candidate areas would allow for the development of large lot residential housing at Deniliquin. These areas have been selected based on the detailed suitability and capability criteria contained in Appendix E. Deniliquin LEP contains provisions compliant with this direction.
3.2	Caravan Parks and Manufactured Housing Estates	Yes	Yes	Caravan parks are permitted with consent in the R5 zone in the Deniliquin LEP.
3.3	Home Occupations	Yes	Yes	Home occupations are permitted without consent in the R5 zone in the Deniliquin LEP.
3.4	Integrated Land Use and Transport	Not Applicable.		
3.5	Development near Licensed Aerodromes	Yes	Yes	Each candidate areas is adequately separated from licenced aerodromes.
3.6	Shooting Ranges	Not Applicable.		
4. Hazard and Risk				
4.1	Acid Sulfate Soils	Not Applicable.		
4.2	Mine Subsidence and Unstable Land	Yes	Yes	The candidate areas have been located outside of known mine developments and mine subsidence can be developed in such a way to comply with this direction.
4.3	Flood Prone Land	Yes	No	The candidate areas can be developed in such a way to comply with this direction.
4.4	Planning for Bushfire Protection	Yes	Yes	The candidate areas can be developed in such a way to comply with this direction.

Section 9.1(2) Direction		Relevant to Strategy	Consistent with the Direction	Justification
5. Regional Planning				
5.1	Implementation of Regional Strategies	Revoked 17 October 2017		
5.2	Sydney Drinking Water Catchments	Not applicable.		
5.3	Farmland of State and Regional Significance on the NSW Far North Coast	Not applicable.		
5.4	Commercial and Retail Development along the Pacific Highway, North Coast	Not applicable.		
5.5	Development in the vicinity of Ellalong, Paxton and Millfield (Cessnock LGA)	Not applicable.		
5.8	Second Sydney Airport: Badgery's Creek	Not applicable.		
5.9	North West Rail Link Corridor Strategy	Not applicable.		

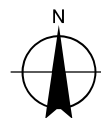
Section 9.1(2) Direction		Relevant to Strategy	Consistent with the Direction	Justification
5.10	Implementation of Regional Plans	Yes	Yes	<p>The objective of this direction is to give legal effect to the vision, land use strategy, goals, direction and actions contained in Regional Plans. The Riverina Murray Regional Plan 2036 applies to the Edward River LGA and specifically Deniliquin. The strategy is consistent with the vision to improve liveability and increase housing choice. The strategy is consistent with Direction 27 – Manage rural residential development, particularly, Action 27.2 – to locate rural residential areas:</p> <p>27.1 Enable new rural residential development only where it has been identified in a local housing strategy prepared by council and approved by the Department of Planning, Industry and Environment.</p> <p>27.2 Locate new rural residential areas:</p> <ul style="list-style-type: none"> • in close proximity to existing urban settlements to maximise the efficient use of existing infrastructure and services, including roads, water, sewerage and waste services and social and community infrastructure; • to avoid or minimise the potential for land use conflicts with productive, zoned agricultural land and natural resources; and • to avoid areas of high environmental, cultural and heritage significance, important agricultural land or areas affected by natural hazards. <p>27.3 Manage land use conflict that can result from cumulative impacts of successive development decisions.</p> <p>The strategy will form part of and inform Council's future local housing strategy. The Strategy proposes an evidence based, planned and methodological approach to future large lot residential development in Deniliquin and has considered and balanced all relevant actions within Direction 27 to identify suitable large lot residential sites that will appropriately meet market demands for this type of housing within Deniliquin.</p>
6. Local Planning Making				
6.1	Approval and Referral Requirements	Not applicable.		
6.2	Reserving Land for Public Purposes	Not applicable.		
6.3	Site Specific Provisions	Yes	Yes	The Strategy is considered consistent with this clause as it does not 'amend' a draft Planning instrument but rather identifies land for LEP amendments for specific sites to be prepared in the future.
7. Local Plan making		None applicable		

Appendix B – Constraint Layers



Paper Size ISO A4
0 630 1,260 1,890 2,520
Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

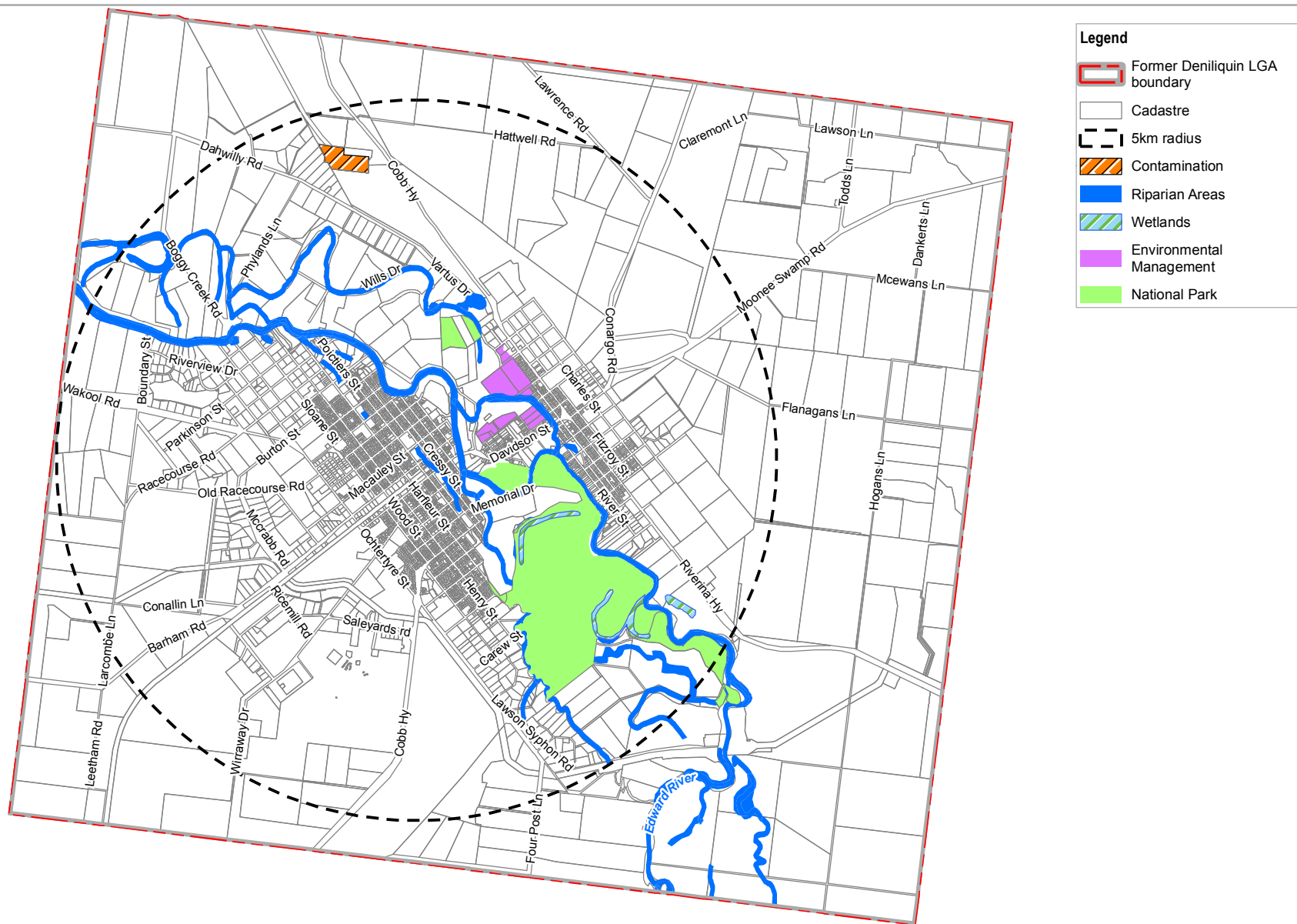


Edward River Council
Deniliquin Rural Residential Strategy

Environment - Biodiversity

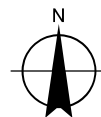
Project No. 22-19608
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Date 13 Nov 2018

Figure B2



Paper Size ISO A4
0 630 1,260 1,890 2,520
Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

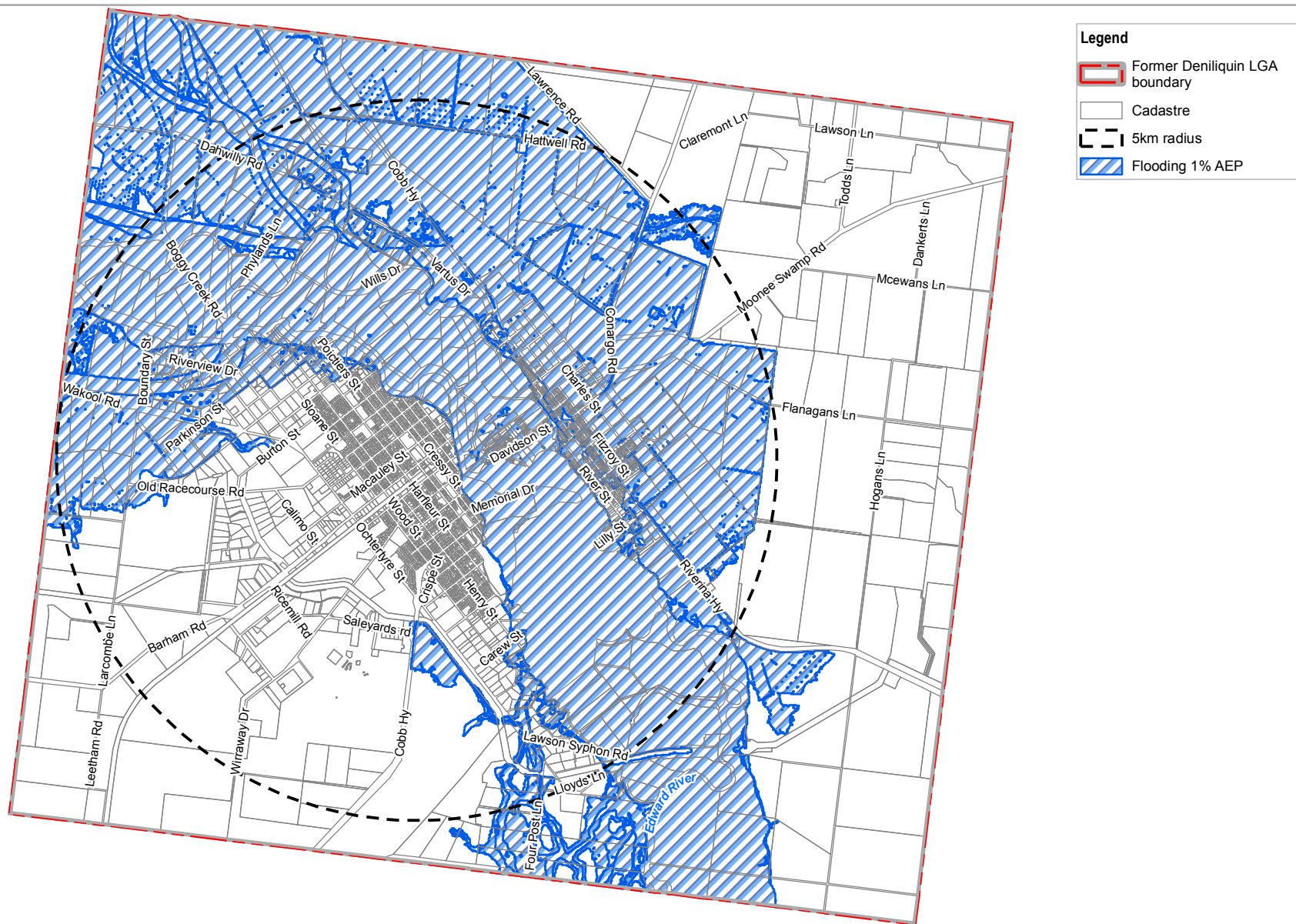


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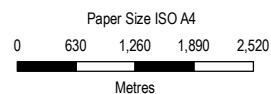
Environment - Conservation Areas

Figure B3

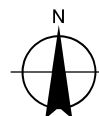


Legend

- Former Deniliquin LGA boundary
- Cadastre
- 5km radius
- Flooding 1% AEP



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

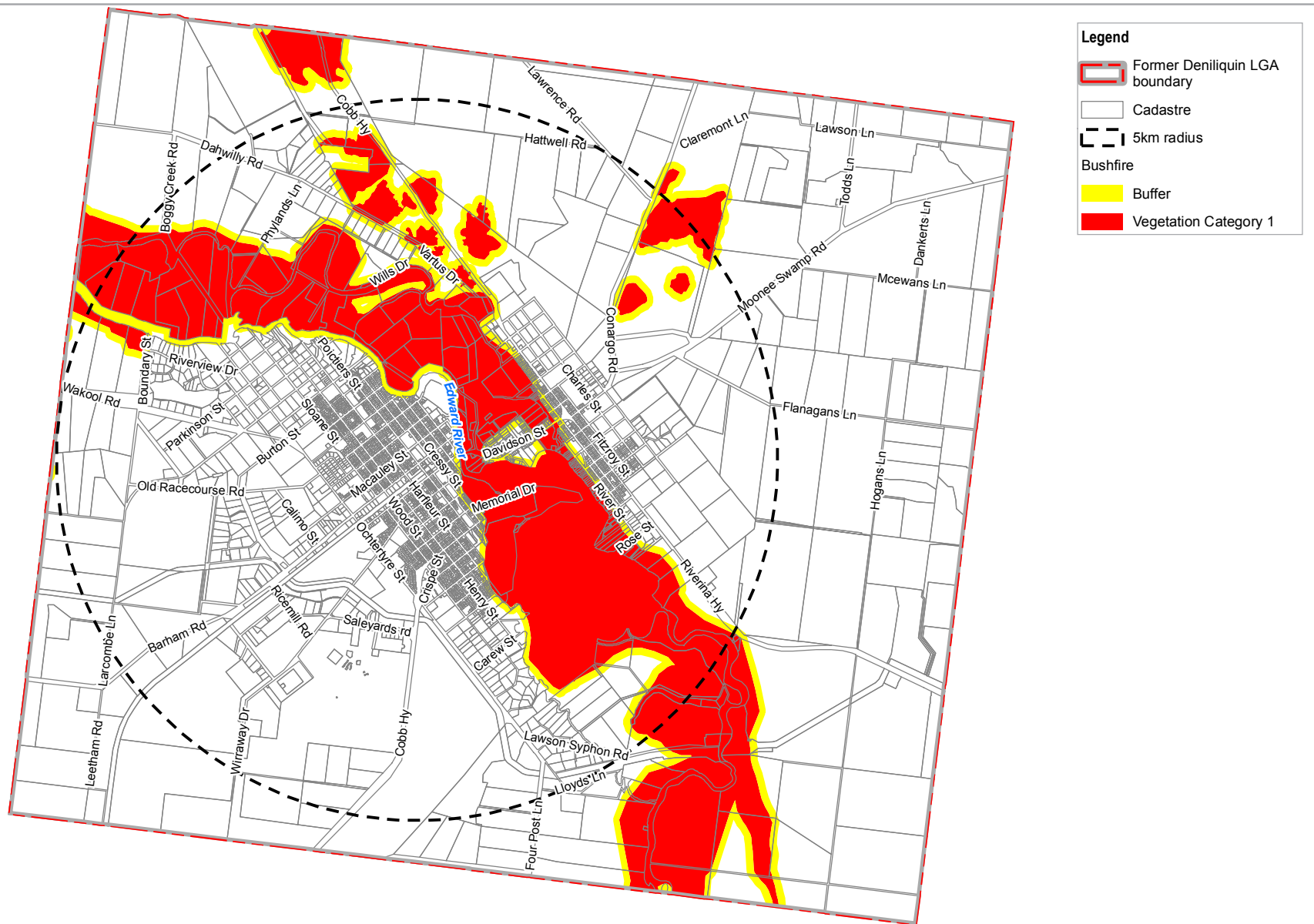


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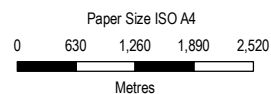
Environment - Flooding 1% AEP

Figure B4

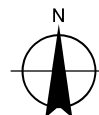


Legend

- Former Deniliquin LGA boundary
- Cadastral
- 5km radius
- Bushfire
- Buffer
- Vegetation Category 1



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

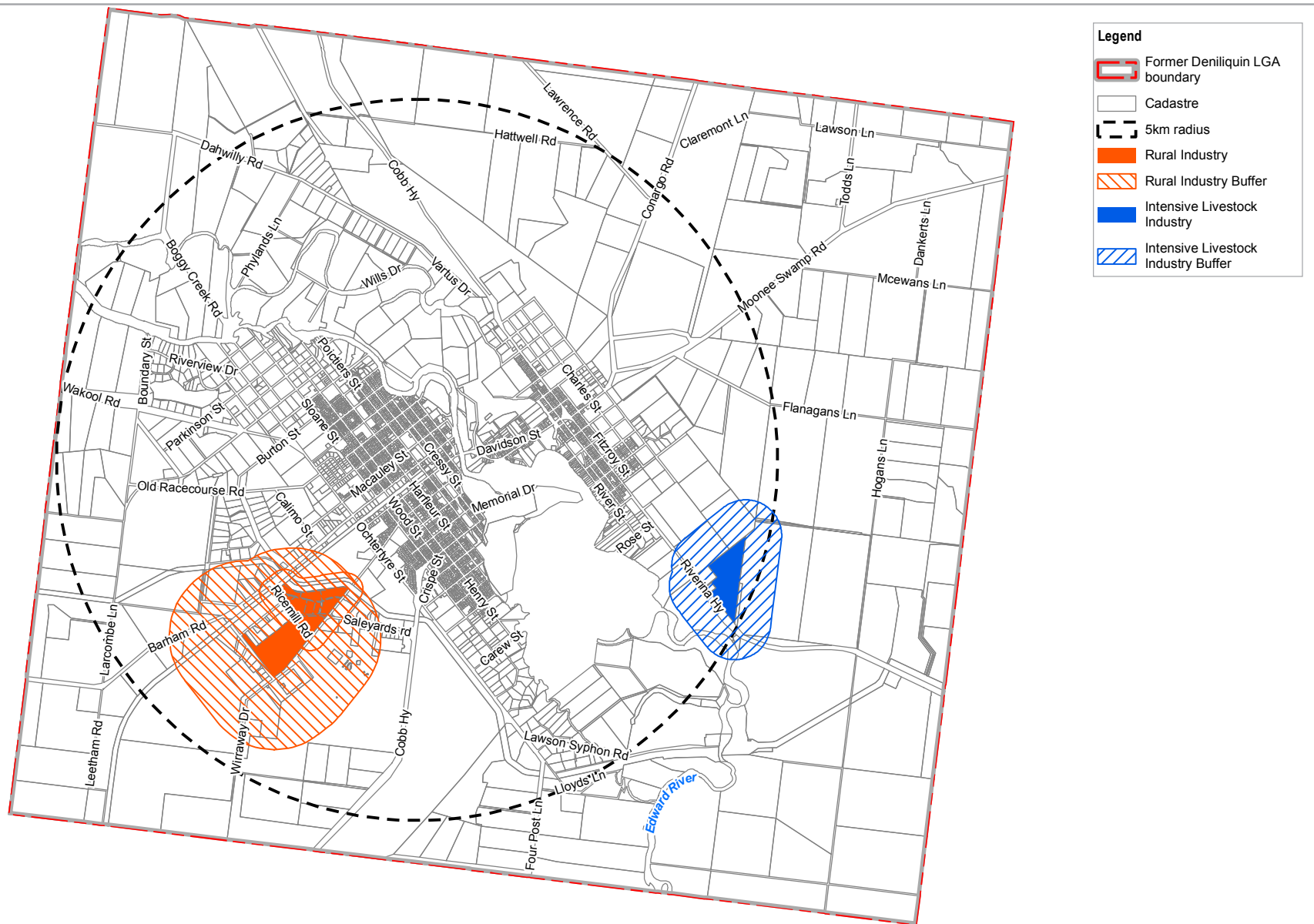


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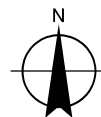
Environment - Bushfire

Figure B5



Paper Size ISO A4
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

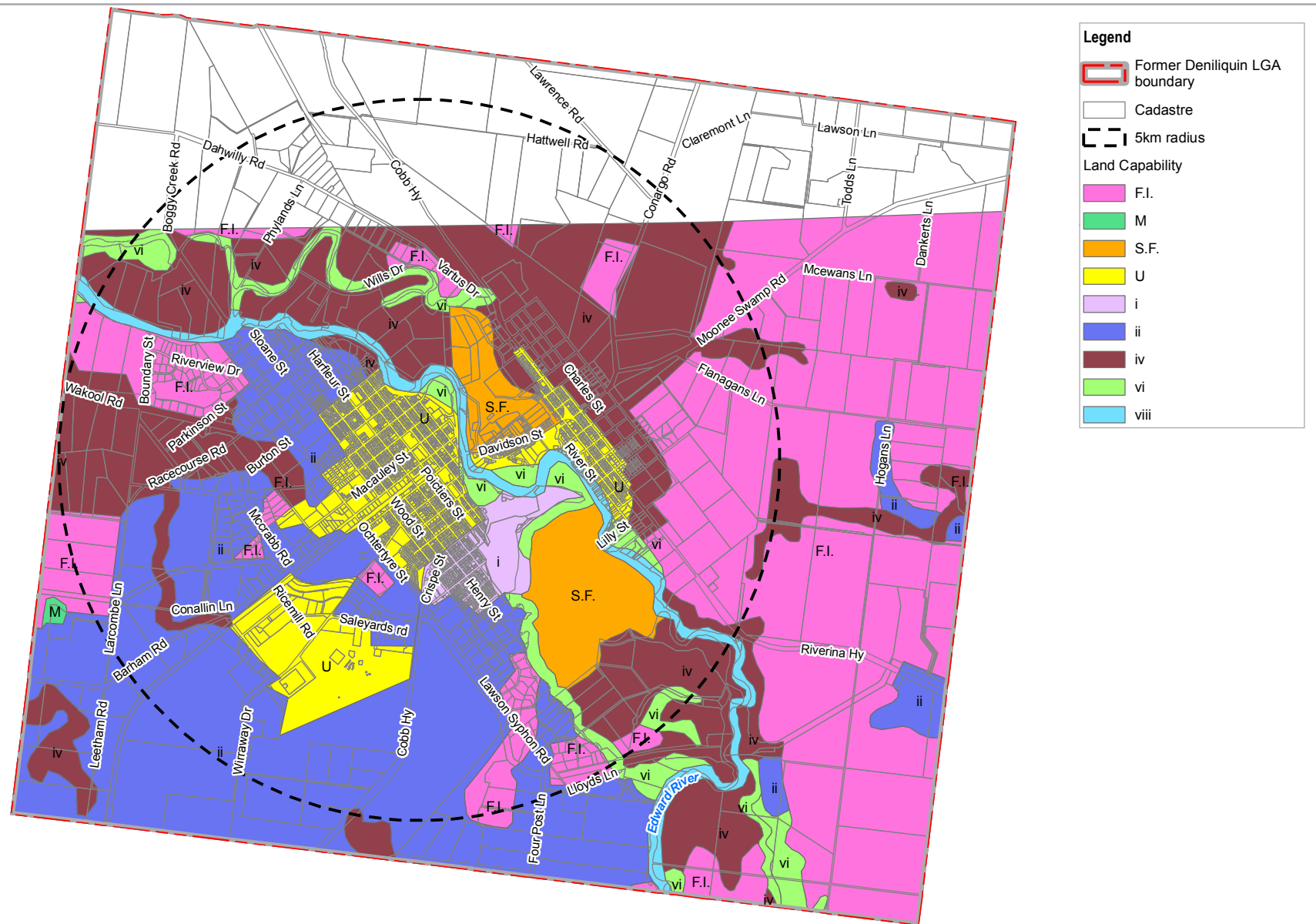


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Rural Industries and
Intensive Livestock Industry

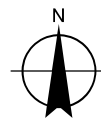
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Figure B7



Paper Size ISO A4
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

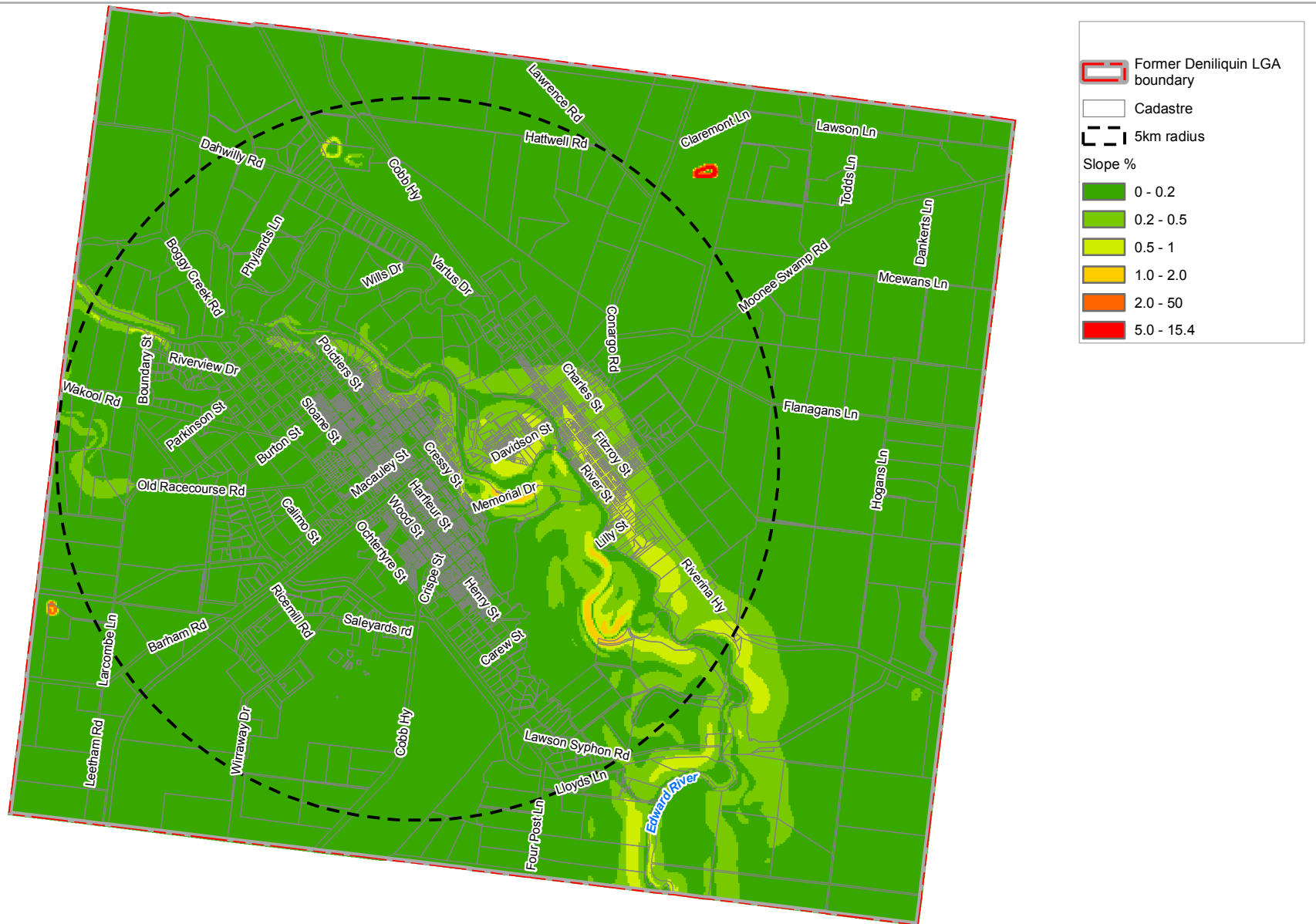


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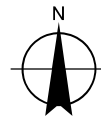
Physical - Land Capability Classes

Figure B8



Paper Size ISO A4
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Metres

Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 55

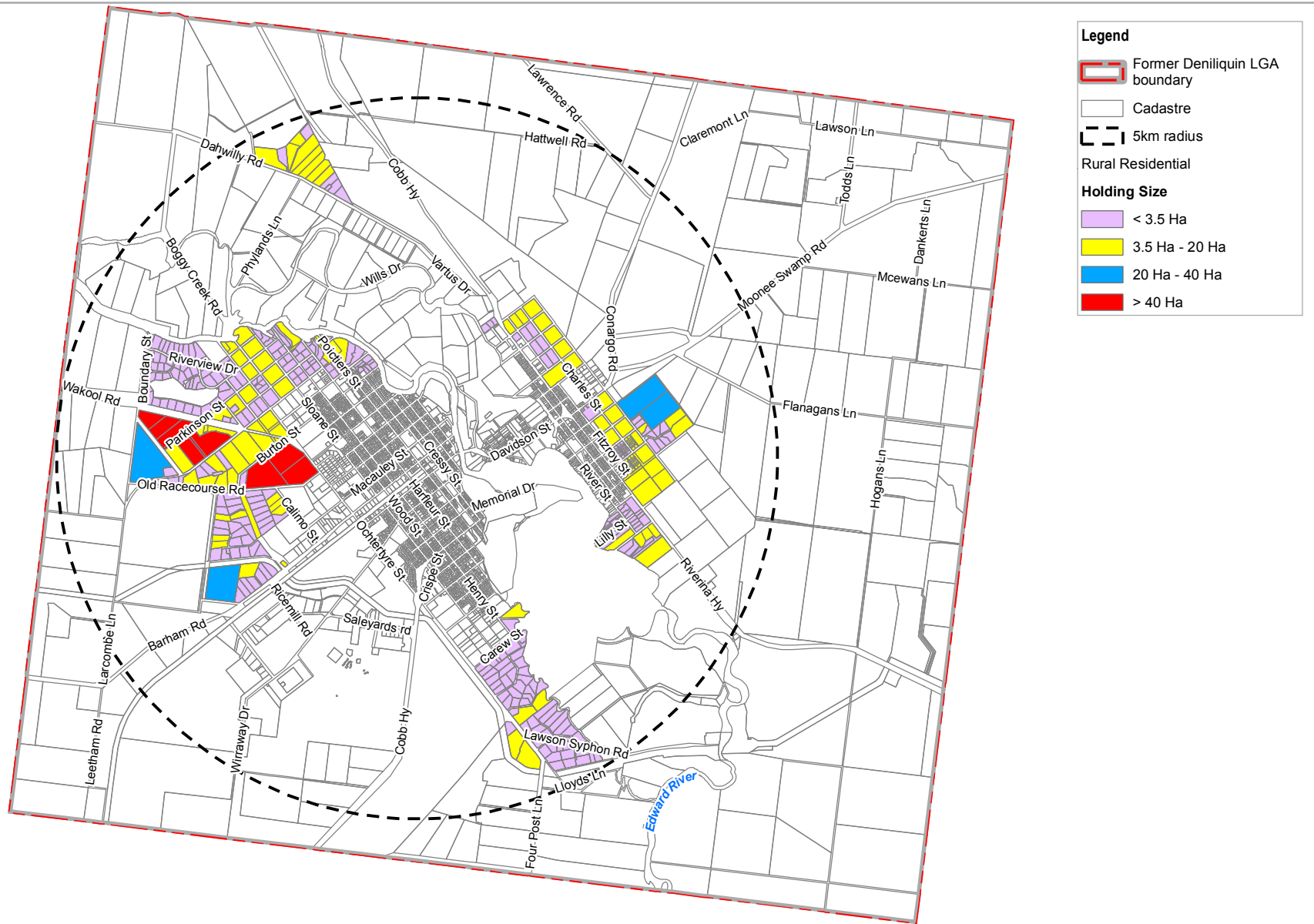


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Physical - Slope

Figure B9



Paper Size ISO A4
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55



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Rural Residential Holdings

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Figure B10

GHD


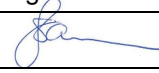
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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	A Tobin, A West	S Lawer		S Lawer		Sep 19

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