

mildura housing and settlement strategy

background report

prepared by hansen partnership Pty Ltd in association with essential economics,
aurecon and sbe

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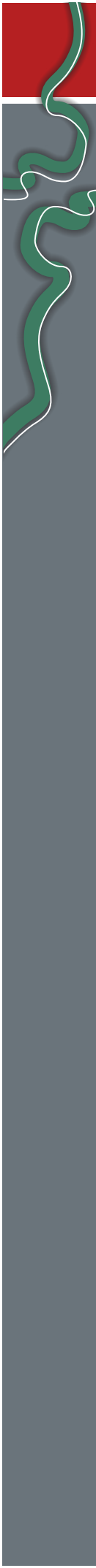


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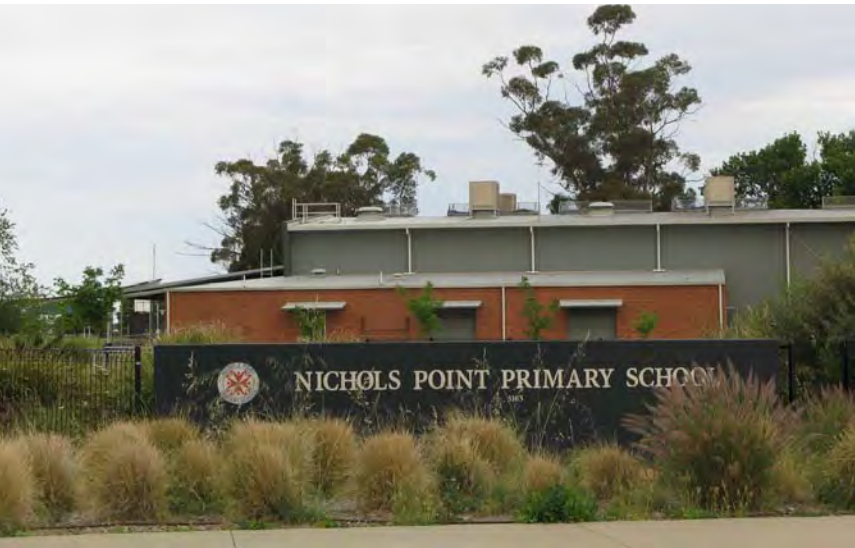
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1 introduction

Mildura Rural City Council appointed hansen partnership to prepare the Mildura Housing and Settlement Strategy.

Overall, the project seeks to put in place a strategic framework and associated guidelines for decision makers to ensure that decisions about where rezoning should occur to provide an appropriate amount of land for development, and to ensure that types of neighbourhoods and housing developed within the municipality will meet the current and future needs of the community. The project is not just looking at where the next rezoning of greenfield land should occur, but more holistically, at how Mildura can be best positioned to meet the challenges and make the most of the opportunities likely to arise in the coming decades.

This background report is presented in two parts. The first part presents ‘facts and figures’ in relation to all aspects that are relevant to the preparation of a housing and settlement strategy for the Rural City of Mildura. The second part of the report provides preliminary recommendations that the consultants team has identified on the basis of the work undertaken to date. The recommendations, as they were presented to the community for consultation and feedback have been finalised, prior to the preparation of the full strategy document as part of the next stage of the project.



A. the facts and figures



2 regional context

The Rural City of Mildura is located in the far north-west of Victoria and is the largest municipality in the state, covering an area of 22,083 km² and is currently home to around 52,000 people. The municipality is bounded by the Murray River to the north and east, and the municipality has a close relationship with NSW, located across the river from the main settlement areas. Not unexpectedly, the Murray River exerts a strong influence on the settlement patterns and development in the wider region with the availability of water resulting in much of the regions settlement occurring in proximity to the river corridor. Beyond the environs of the river the land shifts to Mallee scrub, and then to desert, further emphasising the vital importance of the river corridor.

Mildura is also Victoria's most isolated regional city. The city itself sits at the junction of the Sturt Highway (connecting Sydney and Adelaide) and the Calder Highway (connecting Melbourne and Broken Hill). The geographic position and isolation means that Mildura plays a very different role as a regional city than other major centres such as Ballarat or Bendigo which are located within easy driving distance from Melbourne.

While the role of Mildura within the region may be different to that of other regional centres (including its key role as both a fly-in, fly-out destination and base) the municipality is subject to the same broader growth trends at a regional and municipal scale. Within a Victorian context (according to the Department of Planning and Community Development (DPCD)) in the 10 years to 2011 outside of metro Melbourne, regional cities and their peri-urban areas accommodated 82% of growth. This trend is reflected in Mildura with the main city of Mildura acting as a 'sponge city' for the surrounding region. It acts as the main service centre for a vast area, including for many of the workers involved in industries such as mining in outback New South Wales. The region Mildura services is a large one, with the area of influence stretching up to 250km in some directions. To put matters in perspective the next two cities of a similar size or larger than Mildura are Adelaide to the west and Bendigo to the south-east, both of which are close to 350km away. As such, for the services and facilities that can only be

found in larger urban areas, people living within a substantial part of Victoria rely on Mildura.

As a result of this isolation and the distances involved there are a number of important regional relationships which influence where people choose to live and how they live in the municipality. The relationship to Adelaide is relatively strong, with many younger people attending boarding school or university in Adelaide rather than in Melbourne. This is particularly the case in more southern parts of the municipality where the connections to South Australia are much more pronounced. Residents in Murrayville, for example, access many of the daily services they require, including some health services in nearby Pinnaroo. While Pinnaroo may be in South Australia and has a population not dissimilar to that of Murrayville, it has a larger supermarket and a functional hospital. It is also 27km from Murrayville as opposed to Ouyen which is 109km and Mildura which is 210km away (only 60km less than driving to Adelaide). However, towns like Broken Hill 250km to the north also have a relationship to Mildura, with anecdotal evidence suggesting that many workers are choosing to base themselves in Mildura and fly in and out of the mines. They are also choosing to base their families in Mildura where there are services and facilities available for them, and a pleasant lifestyle, in relatively close proximity. Closer at hand, the town of Wentworth is the largest centre in proximity to Mildura on the NSW side of the river and the two towns enjoy a close relationship with many residents living in Wentworth and working in Mildura and visa versa. The smaller settlements of Buronga and Gol Gol immediately across the border from the City of Mildura rely very heavily on Mildura for services and in fact, operate very much as northern 'suburbs' of the City.

The two main intersecting highways connect Mildura to most major centres, albeit involving long distances (the drive to Melbourne takes around 8hrs), and two main bridges connect the municipality to NSW (the Abbotsford Bridge at Yelta to the east near Wentworth and the main Chaffey Bridge in Mildura). There was previously a train connection to Melbourne (the Vineland) that used to run a number of services including overnight berths and car facilities. The service was withdrawn under the Kennett government in 1993. Nowadays, the primary way people from outside the immediate area access the City and the broader municipality is by air, although bus services still connect all major regional centres. The Mildura airport is serviced by Rex, Virgin and Qantas airlines and is Victoria's busiest regional airport. Direct flights are available to Adelaide, Melbourne, Sydney and Broken Hill. The airport is currently undergoing an upgrade to ensure it can accommodate recent increases in passenger numbers and performs a vital role in connecting the City to the wider region.

Within a Victorian context the municipality sits within the Loddon Mallee North Region which extends along the Murray all the way to Echuca (shown in Figure 1). This regional categorisation includes the municipalities of Campaspe, Swan Hill, Buloke and Gannawarra and is a subgroup of the broader Loddon Mallee Region which also includes the municipalities of Loddon, Central Goldfields, Mount Alexander, Greater Bendigo and Macedon Ranges. Within that broader region, Bendigo and Mildura have been the focus for much of the recent State Government investment in the region.



figure 1 loddon mallee region

A regional plan is currently under way for the Loddon Mallee North Region under the auspices of the DPCD. While this plans has identified broader issues and opportunities it has also set a number for strategic directions of the broader region. The 'vision' for the region is shown in the box below, along with the strategic directions for growth. The *Mildura Housing and Settlement Strategy* (MHSS) will need to ensure it is consistent with these broader regional aspirations.

OUR ASPIRATIONS

Over the next 10-20 years, this Regional Strategic Plan will assist us to build a region that has:

- Sustainable, water efficient farming our agricultural producers will be recognised leaders in sustainable, water efficient dryland and irrigation farming and food production and will make an increasing contribution to the regional economy.
- Resilient and connected communities - across the region, communities will have access to employment, health, education and other social services. They will value and benefit from cultural diversity. Thriving social networks will enable connections within and between communities on both sides of the Murray River. The community's resilience will continue to be demonstrated by its capacity to adjust to change and embrace growth.
- A diverse and robust economy - supported by high quality infrastructure, our economy will diversify and strengthen from its strong, existing agricultural base. Existing and new industries will be developed which can capitalise on our competitive strengths. A skilled and diverse regional workforce will help to ensure industries and communities take advantage of future opportunities.
- Enhanced natural and cultural heritage - our natural and cultural heritage will continue to be valued and protected. The Murray River and its floodplains and waterways will be healthy. Environmental water will be managed regionally and used efficiently.

figure 2 loddon mallee regional strategic plan, northern region 2013, 'our aspirations'



STRATEGIC DIRECTIONS

balance our irrigation, amenity and environmental water needs

- Supporting our irrigation industry through world-class water supply infrastructure.
- Continuing to produce quality food, wine and fibre using sustainable, highly water efficient farming practices.
- Managing flows and water quality in the Murray River and regional waterways so that they remain our environmental, cultural and economic lifeblood.
- Ensuring that the effects of climate change are appropriately factored into water planning decisions.

strengthen our settlements and communities, especially our small towns

- Further developing the culture of support and collaboration that exists between communities, industry and the public sector.
- Improving community connectedness, health and well-being, and reducing instances of social disadvantage.
- Ensuring that communities value and benefit from cultural diversity.
- Supporting all sectors of the community to adapt to the social and economic impacts and opportunities of climate change.
- Building on our thriving arts culture and improving participation in cultural and recreational activities.
- Ensuring that our people have equitable access to health and community services.
- Ensuring that health facilities in regional centres and small towns provide required levels of service to meet the demographically changing needs of our people.

strengthen and diversify our economy

- Creating a strong, diverse and sustainable economy with a wide range of employment opportunities and a flourishing entrepreneurial culture.
- Continuing to grow the agriculture, food processing and related support services contribution to our economy.
- Developing infrastructure and services that facilitate continued growth of our economy.
- Supporting and developing tourism infrastructure and product to attract tourists to our region.
- Leveraging greater employment and investment outcomes from identified growth sectors.

improve our infrastructure

- Developing our freight transport infrastructure and services to support economic growth and overcome crossborder regulatory issues.
- Developing and implementing public and community transport services which will assist in connecting communities and addressing personal mobility issues.
- Prioritising, coordinating and implementing regional airport and aerodrome infrastructure investment.
- Ensuring that we have high quality infrastructure and services that support economic development, including energy and telecommunications infrastructure.
- Ensuring that our energy demands are increasingly met from renewable sources, including local large scale solar power generation.

improve education and training outcomes

- Improving school completion rates and participation in post-secondary education or vocational training.
- Ensuring that a strengthened regional tertiary education sector can respond to identified regional skills requirements.
- Ensuring that our workforce is increasingly skilled and adaptable to the needs of a diverse economy.

protect and enhance our natural environment

- Connecting the vegetation/biolink communities of the Mallee, northern Wimmera and Goldfields to the Murray River, and managing identified flagship areas.
- Increasing community involvement in natural resource and cultural planning and management.
- Maintaining flows and water quality in the Murray River and waterways so that they remain our environmental, cultural and economic lifeblood.
- Ensuring that the potential impacts and opportunities of climate change are factored into natural resource planning and management.

resolve our cross-border issues

- Engaging with communities and Government agencies in New South Wales, Victoria and South Australia to overcome regulatory barriers and service delivery anomalies.
- Strengthening and building new partnerships to achieve shared goals.
- Engaging with programs, advisory bodies and policy networks to gain additional expertise and capacity.

It is important to note that concurrently, DPCD is also undertaking another regional plan (developed in collaboration with relevant NSW municipalities) for the Murray River corridor. Known as the Murray River Settlement Strategy, (MRSS) it also seeks to develop a set of principles and directions. As with the Loddon Mallee North regional plan, it is expected that the MRSS will seek additional growth and consolidation of Mildura as a major regional centre.

Some of the key areas of investment in Mildura that are proposed or have been funded as part of regional development initiatives include:

- Develop Mildura Base Hospital as a regional health care services hub.
- Further investment in Murray River bridge crossings and Mildura Airport.
- Investment in Northern Mallee Transport Connections Program - \$22.8 million.
- Grape waste-to-energy project at Australian Tartaric Products (ATP) in Colignan - \$7.5 million.
- The Mildura to Menindee Project to link the rail network at Mildura into the National Rail Grid.
- \$11 million for the Mildura Riverfront Masterplan to provide a world class marina and riverfront development.

One of the key opportunities within the region must be the continued focus at both State and Federal level for investment and distribution of population growth to regional centres. Recent discussion around the current Melbourne Metropolitan Planning Strategy have also placed a strong emphasis on regional cities accommodating Victoria's growth in the future. However, there are a number of other factors that are operating a regional or higher level which will influence the settlements within Mildura, many of which are linked to broader macro-economic trends. Key among these are:

- The continued growth of dry land farming as a major economic driver for the region.
- The growing role of the City of Mildura in providing employment across a range of other service sectors such as health and education.
- Potential new economic development opportunities in areas such as renewable energy (particularly large scale solar), mineral sands and nature-based and Indigenous tourism.
- Current issues around viticulture due to supply and demand pressures.
- The volatility of water supply for agriculture due to reduced rainfall and other environmental considerations.
- Impacts of climate change not only on agriculture but also on the livability of settlements and safety of residents.



figure 3 loddon mallee regional strategic plan, northern region 2013, 'strategic directions'



figure 4 context plan

3 municipal context

overview

Figure 4 to the left illustrates the broad characteristics of the Rural City of Mildura. The main urban centre of the municipality is the City of Mildura. While the municipality has a population of around 52,000 people, 48,000 of these (92%) live within an area of approximately 300km² in the north-east corner of the municipality. This main settlement area is based around the City of Mildura, but also includes Merbein, Red Cliffs, Irymple and many of other smaller settlements and dispersed rural dwellings, within the 'peri-urban' area. The City of Mildura itself, and the associated irrigation areas, were laid out by the Chaffey brothers as part of the original subdivision of the land. That original subdivision has provided a strong grid subdivision pattern of 10 acre blocks aligned on a 45° angle.

Outside this major cluster of settlements, the Calder Highway heads south to Ouyen, the largest settlement in the south of the municipality. To the west of Ouyen, along the Mallee Highway are a series of small townships, forming the southern 'string' of rural settlements, including Murrayville, Walpeup and Underbool. This string of settlements is commonly referred to as the Mallee Track. Separating this southern grouping of settlements and surrounding agricultural land from the northern section of the municipality is a significant expanse of public conservation areas including the Murray-Sunset National Park, Hattah-Kulkyne National Park and Annuello Flora and Fauna Reserve.

To the north of the municipality, the Sturt Highway runs west from Merbein towards Renmark in South Australia, although most of the settlements in this northern 'string' are located along the Red Cliffs–Meringur Road which runs parallel to the south. This cluster of settlements are commonly referred to as the Millewa Region. In addition to this main settlement cluster and the northern and southern 'strings' there are also a number of more dispersed settlements, including along the Murray River, particularly where it forms the eastern boundary of the municipality, including settlements such as Colignan and Nangiloc.



The key driver for growth in Mildura, as across most municipalities, is the intensity of job opportunities within easy commuting distance. Where there are jobs, people will want to live, and conversely, where there are not jobs, a corresponding reduction in population could be expected. As such, this background report includes some assessment of the commercial growth scenarios and trends to ensure this is considered in planning for future settlement. However, it is acknowledged that outside of the main urban centre, large scale shifts in employment will be dependant on individual projects (such as solar parks) which are difficult to predict.

The municipality is home to very significant areas of national park and other conservation reserves, which are addressed in more detail in later sections of this report. The most significant of these parks are the aforementioned Murray-Sunset National Park and the Hattah-Kulkyne National Park, home to the RAMSAR listed Hattah Lakes system.

Land that is not identified for conservation purposes is overwhelmingly dedicated to agriculture with two extensive east-west bands of broadacre dryland farming extending from Mildura and Ouyen across to the South Australian border. In the north-east corner of the municipality are the Mildura Older Irrigation Areas (MOIA) and the Mildura New Irrigation Areas (NIA). The MOIA is discussed in more detail at Section 5 but comprises land around the main settlement cluster. The NIA consists of approximately 14,475ha of land at Nangiloc, Colignan, Lindsay Point and Cullulleraine with irrigation water provided through private diversions from the Murray River. These areas were established much later than the OIA (from 1975) and the lots sizes are much more substantial than the smaller 10ha blocks that characterise the older irrigation areas. This distinction in the subdivision pattern can clearly be seen in figure 7 (overleaf)



The Australian Bureau of Statistics (ABS) divides the municipality in to a number of different sectors. Some of the most important distinctions are:

- Part A and Part B of the municipality: these designations generally align with the north-eastern sector (the Mildura Older Irrigated Areas) which contains most of the major urban centres (Part A), and Part B which is the remainder of the municipality. These areas are shown on the diagram below.
- When assessing data for many of the townships, the ABS statistics often also consider the populations of some of the surrounding areas. This is particularly the case when looking at some of the smaller townships. This settlement level assessment has been undertaken at the SA2 level.
- The 2011 census also saw a shift in the areas for which data was collected from units known as Census Collection Districts (CCDs) to Statistical Local Areas (SLAs). As the boundaries of these areas do not directly correspond, some caution should be used when comparing data over time.

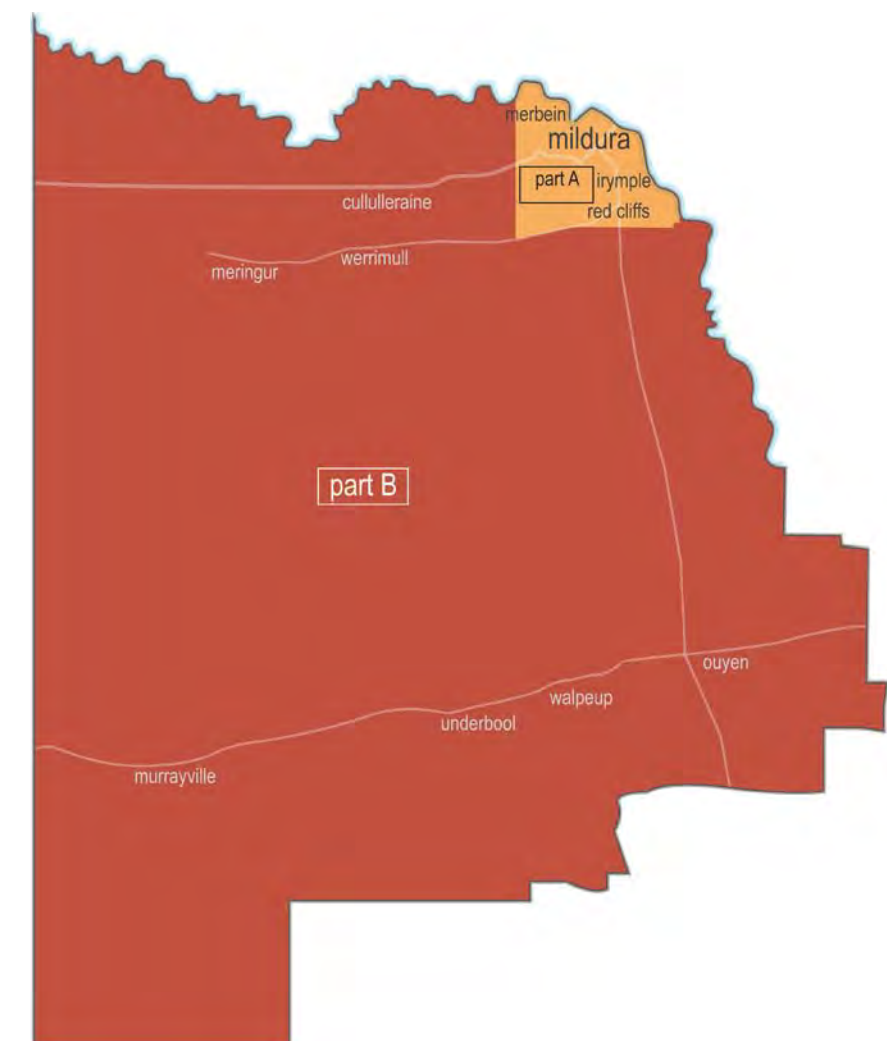


figure 5 ABS area designations

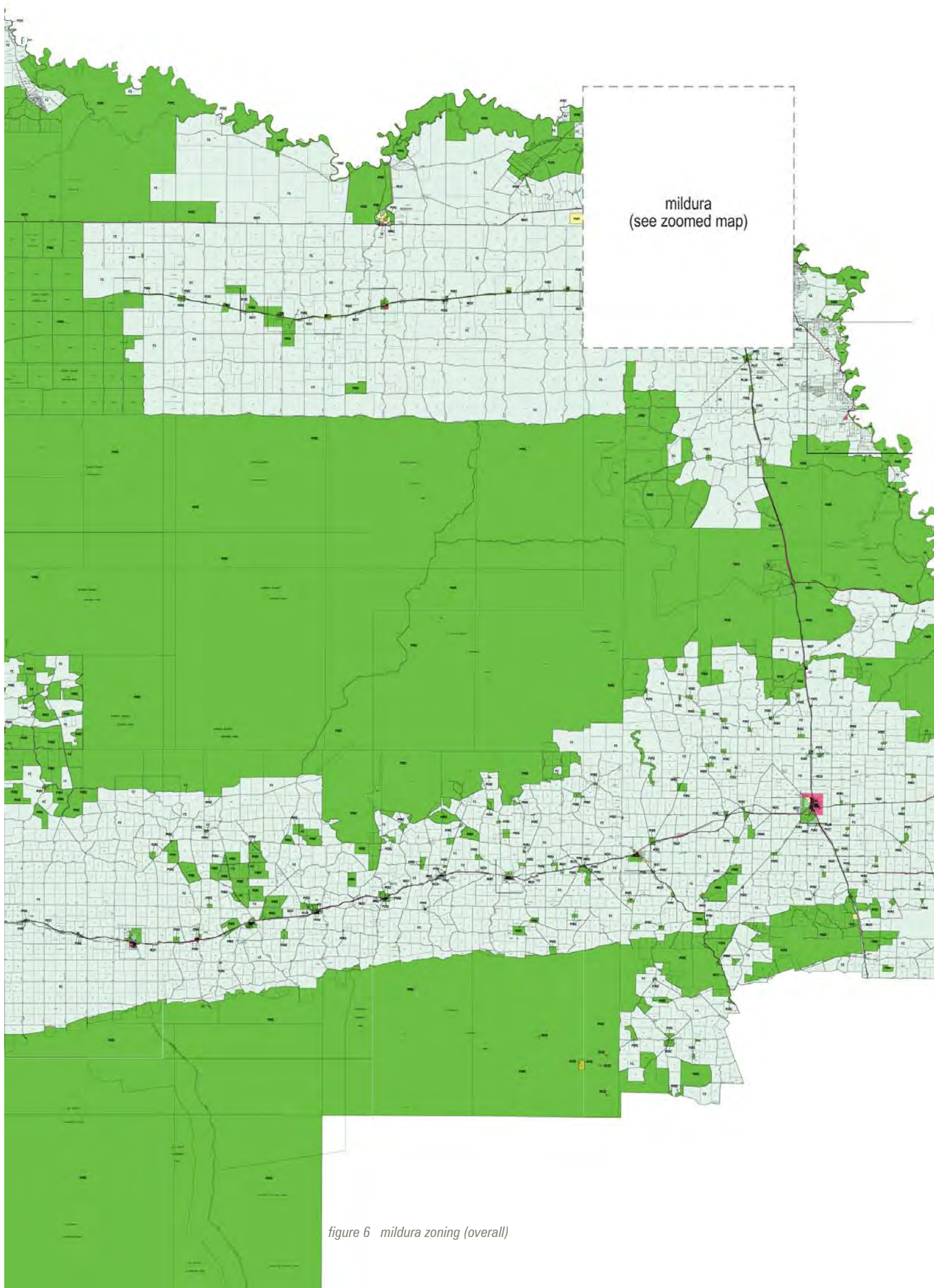


figure 6 mildura zoning (overall)

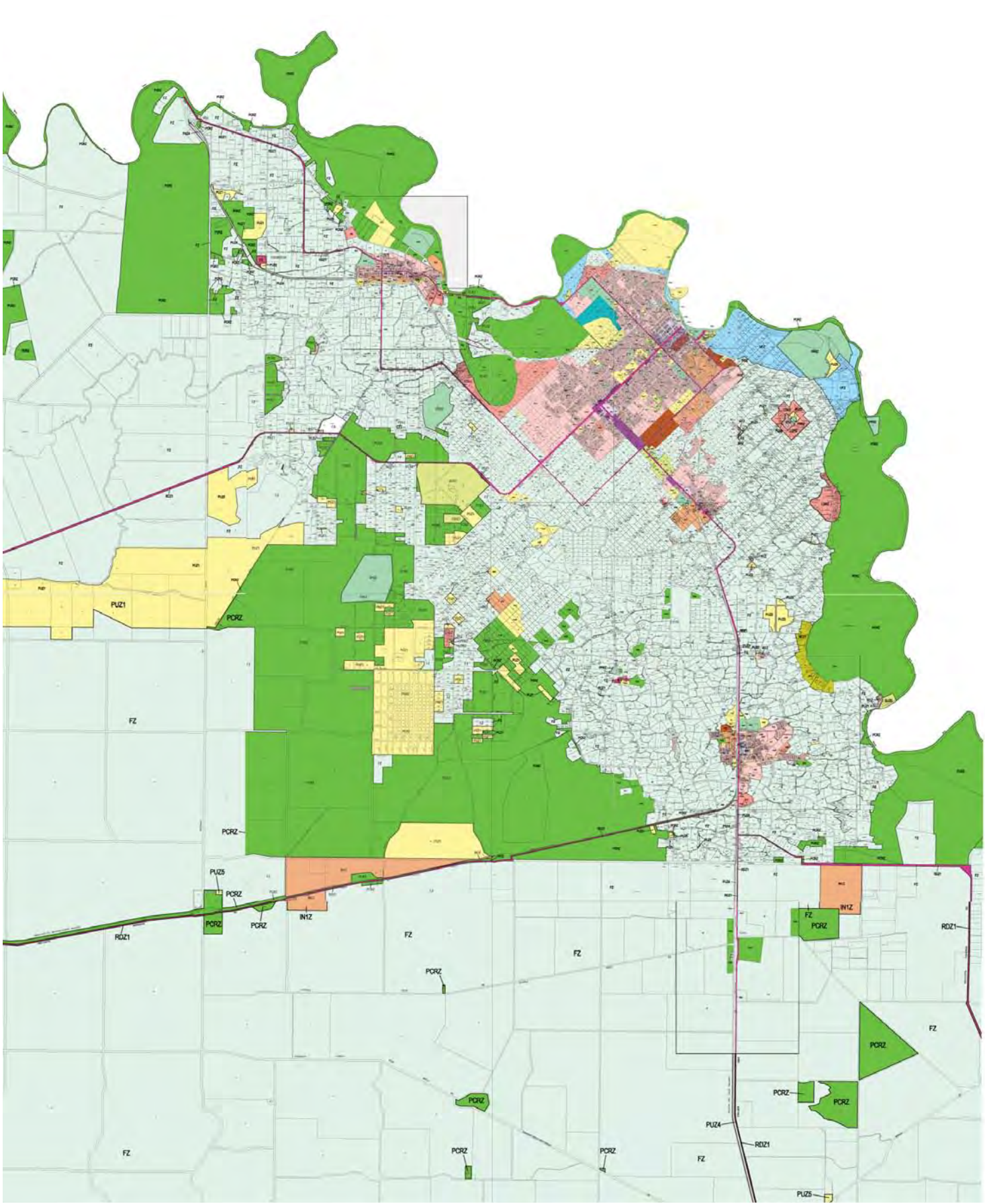


figure 7 mildura zoning (north-east area)

settlement history

Both Mildura and the broader region have a long history of indigenous settlement, with human occupation recorded at Mungo National Park to the north well beyond 40,000 years ago. The Murray region was home to a number of Aboriginal groups including the Latje Latje, Jadi Jadi, Wadi Wadi and Paakantyi tribes, with the name Mildura translated to mean ‘red earth and dust’ in Latje Latje language.

European history of the region dates back to the 1830s, when explorer Captain Charles Sturt arrived in the area, discovering and naming both the Murray and Darling Rivers. Following this, a number of settlers and drovers began to arrive, bringing cattle and sheep to graze the natural pastures along the two rivers, expanding their holdings west from the Murrumbidgee area and north-east from South Australia.

First European settlement in Mildura dates back to 1847, when the Jamieson brothers were granted a licence to take up land for pastoral use. The town was officially named Mildura on 20 March 1858. In 1878, there was a change of ownership to Alexander McEdward, who in 1884 was forced to sell due to the severe drought and rabbit plague of the 1880s.

During the major drought in Victoria, from 1877 to 1884, Alfred Deakin, a minister in the State Government and chairman of a Royal Commission on water supply, went to visit the irrigation areas of California, in search of a solution. He met two water irrigation engineers, George and William Chaffey, who were interested in the potential of irrigation from the Murray River in Australia.

In 1886 George Chaffey came to Australia and selected a derelict sheep station at Mildura as the site for his first irrigation settlement. In October 1886 an agreement was made between the Chaffey Brothers and the Victorian Government to secure the application of private capital to the construction of irrigation works, and the establishment of a system of instruction in practical irrigation. The Mildura Irrigation Company was formed on 28 December 1887.

The first of the settlers arrived in the same year and established a canvas town on the area now known as Lock Island. The 500 hectare township of Mildura was designed and laid out on the Californian Pattern with Deakin Avenue, the main thoroughfare, extending 8 km to the south-west. The American tradition of naming the streets with numbers was also borrowed. The Chaffeys developed a series of steam-driven pumps to lift the water from the Murray River, first into Kings Billabong, then subsequently to various heights to irrigate up to 33,000 acres.

The Chaffey brothers wanted to make Mildura a vibrant community and their plans included many visionary concepts. An agricultural college was needed and to finance this they allocated one-fifteenth of the land as ‘College leases’, providing vital funding to schools over many years. Prominent locations were made available for churches, while facilities for clubs were also encouraged. Parks and town transport were considered, inspiring the centre plantings of Deakin Avenue (which was originally intended to also provide a tram service).

At first the Chaffey irrigation venture was a success, but due to the 1890’s depression, reduced markets for their produce and lack of credit, the Chaffeys were ruined. George Chaffey left Australia in 1897, never to return. Ben Chaffey stayed on, and through his determination and belief in Mildura, paid off his creditors, and when good times returned became a leader again. He was twice elected mayor, founded the Australian Dried Fruits Association, and was president of the Mildura Horticultural and Agricultural Society.

The region’s diverse cultural and economic identity was firmly established following the arrival of the soldier settlers and the post-war migrants from Italy, Ireland, Greece, England and the former Yugoslavia who brought with them traditional cultivation skills that helped to make Mildura the important Australian food bowl it is today. Mildura became the main town of the district and suburbs and new satellite towns were created. In 1937 it officially became a city.

Many of the other settlements in the area, including Merbein were also established as part of Chaffey’s efforts to irrigate the area from the Murray. Merbein was officially named in 1909 and the area expanded in 1910 when a railway was built, linking the town to Mildura. The town continued to grow following World War 1 and 2, with an influx of returned soldiers and migrants.

Red Cliffs, however, was developed after World War 1 for approximately 700 returned soldiers, becoming the largest Irrigated Soldiers’ Settlement in Australia. The 33,000 acres were purchased by the government and considered ideal for the production of dried fruit. Properties of approximately 15 acres were allocated and clearing of the Mallee Scrub began in 1920 and the (then) largest pumping plant in the Southern Hemisphere was completed at Red Cliffs in 1923.

Settlement in the southern parts of the municipality occurred separately to the northern areas. Before European settlement, the area around Ouyen was occupied by the Wergaia Aborigines, with the name Ouyen deriving from the term ‘wuya-wuya’, referring to the name of a pink-eared duck, once common in the area. Ouyen was established as a town in 1906, and developed around a railway, after the Melbourne to Mildura line was built. Blocks in the area were sold in 1910 and cleared for sheep, wheat, barley and oat production.



the economy

A significant portion of Mildura's economy has traditionally been based around agricultural activities, including the growing and processing of agricultural produce, services to agriculture, and the transport and storage of agricultural produce.

While agriculture remains connected to many economic activities in Mildura and the Sunraysia region (refer to commentary in later in this section), the broader economy is undergoing a structural change. Over the years, as Mildura's population has increased, the economy has become more diverse, with expansion in the tertiary or services sector. These structural changes are evident from the results of the most recent ABS Census, as shown at figure 8.

The share of tertiary sector (services) jobs in the Mildura municipality has increased from 71% in 2006 to 77% in 2011. Growth in employment in consumer services and a decline in employment in Primary and Secondary industries (i.e. agriculture and manufacturing) has been the main factors in this structural shift.

In recent years, a significant amount of investment has occurred in the construction of new buildings. For instance, from 2009 to 2011 approximately \$140 million per year has been invested in construction activities in the municipality, which is above the long-term average of \$107 million per year between 2001 and 2011. Figure 9 illustrates the recent level of investment in new building construction.

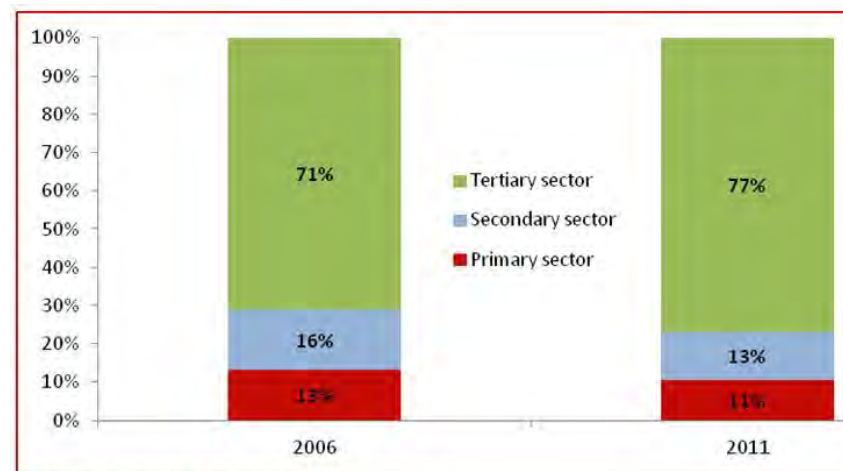
Residential construction accounts for the majority of new building investment, with an average of \$64 million per annum in investment between January 2001 and September 2012, and this accounts for 70% of new building investment in Mildura.



However, despite this structural change and generally higher levels of investment, analysis of recent data reveals the following:

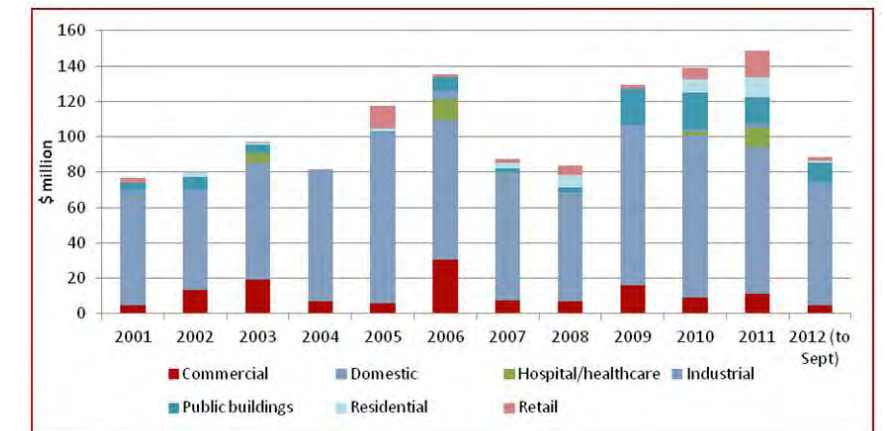
- The size of Mildura's labour force remains constant at an estimated 23,000 residents, despite an increase in population. A decline in the participation rate from 62.9% to 60.6% contributed to the lack of growth in the labour force.
- Between 2006 and 2011, the number of employed residents declined by approximately 210 persons, while the number of unemployed residents increased by approximately 200 persons (ABS Census, 2011).
- The total number of jobs located in the municipality declined from approximately 19,420 jobs in 2006 to 18,800 jobs in 2011, representing a loss of - 620 jobs (ABS Census, 2006 and 2011).
- Mildura has a high unemployment rate. The Statistical Local Area (SLA) of Mildura- Part (A), which contains the urban parts of the municipality, had an unemployment rate of 7.5% in the June 2012 Quarter. The SLA of Mildura – Part (B), which contains the balance of the municipality, had an unemployment rate of 3.8% at June 2012. These figures compare to an average unemployment rate throughout regional Victoria of 5.2%.

These trends suggest that many of the people losing their jobs in primary and secondary industries may be finding it difficult to re-train and find new positions in the tertiary or 'services' economy.



Source: ABS Census data, 2006 and 2011

figure 8 share of employment in the rural city of mildura, 2006 and 2011



Source: Building Commission of Victoria

figure 9 value of new building investment, 2001 to september 2012

the people

Table 1 provides a summary of the socio-economic characteristics of residents of the Rural City of Mildura by SA2 for 2011, based on ABS 2011 Census data. In general terms, the main socio-economic characteristics of Mildura residents include the following:

- **Incomes:** The median incomes for Mildura RC are below those for regional Victoria. Throughout the municipality, the median individual income is approximately -6% below regional Victoria and the median household income is approximately -7% below that of regional Victoria.
- The Irymple SA2 has highest incomes in the municipality, with median household income almost +10% above the regional Victorian median. By comparison, median house incomes are lower than regional Victoria in the Mildura SA2 (-10% below regional Victoria), Red Cliffs SA2 (-11%), Merbein SA2 (-9%) and Mildura Region (-4%).
- **Age Structure:** The age structure throughout the municipality is similar to the average for regional Victoria. Observations with respect to the SA2 areas include:
 - The Irymple SA2 has the highest share of residents of school age, with 25% of the population aged between 5 and 19 years. This compares to 21% for Mildura SA2, 22% for the Red Cliffs SA2, 22% for the Merbein SA2 and 20% for the Mildura Region SA2. The average for regional Victoria is 20%.
 - Mildura SA2 has the highest share of residents aged 20 to 34 years, accounting for 19% of the population. This compares to 12% for Irymple SA2, 15% for the Red Cliffs SA2, 13% for the Merbein SA2 and 12% for the Mildura Region SA2. The average for regional Victoria is 16%.
 - The share of residents aged 65 years or over ranged from 14% in Irymple SA2 to 18% for the Mildura Regional SA2. The average for regional Victoria is 18%.

- Family composition: Overall, the family composition throughout the municipality is similar to the average for regional Victoria, with the municipality having only a slightly lower share of couple families and a slightly higher share of single parent families. The Irymple SA2 has the highest share of couple families with children, representing 50% of families. This compares to the average for the municipality of 41%.
- Dwelling structure: Throughout the municipality, 85% of occupied dwellings are separate houses, and this compares to 89% for regional Victoria. The share of separate houses is the lowest in the Mildura SA2 (80%), where urban consolidation provides for a greater share of semi-detached houses (7%) and flat, units and apartments (11%). Throughout the municipality, semi-detached housing accounts for 5% of occupied dwellings and 8% of flats, units and apartments.
- Tenure Type: Compared to regional Victoria, Mildura has a high proportion of rented dwellings (31%) compared the average for regional Victoria (25%). The Mildura SA2 is the main rental location, with rented dwellings representing the highest form of tenure type and accounting for 37% of dwellings.
- The SA2s of Irymple (44%), Red Cliffs (40%) and Merbein (42%) all have a higher share of dwellings being purchased with a mortgage compared to the average for the municipality (34%) and regional Victoria (34%).
- Unemployment: Areas with the highest rate of unemployment in the municipality are the Mildura SA2 (7.5%) and the Merbein SA2 (7.1%). The regional Victoria figure is 5.2%.

Category	Mildura SA2	Irymple SA2	Red Cliffs SA2	Merbein SA2	Mildura Region SA2	Mildura LGA	Balance of Victoria
Income							
Median individual income (annual)	\$24,200	\$26,580	\$22,470	\$22,130	\$25,410	\$24,240	\$25,740
Variation from Bal of Victoria median	-6.0%	+3.3%	-12.7%	-14.0%	-1.3%	-5.8%	-
Median household income (annual)	\$44,700	\$54,040	\$44,060	\$44,820	\$47,360	\$45,760	\$49,270
Variation from Bal of Victoria median	-9.3%	+9.7%	-10.6%	-9.0%	-3.9%	-7.1%	-
Age Structure							
0-4 years	7.0%	6.0%	5.9%	6.4%	5.9%	6.6%	6.3%
5-19 years	20.7%	25.1%	22.2%	22.5%	19.6%	21.5%	19.7%
20-34 years	18.8%	12.3%	14.5%	12.6%	12.2%	16.5%	16.0%
35-64 years	36.8%	42.8%	41.2%	42.9%	44.2%	39.1%	40.4%
65-84 years	14.3%	12.4%	14.0%	13.5%	15.7%	14.1%	15.2%
85 years and over	2.3%	1.3%	2.3%	2.1%	2.4%	2.2%	2.3%
Total persons	30,660	6,490	5,390	4,640	3,820	50,980	1,345,890
Median Age (years)	37	39	40	41	46	39	41
Country of Birth							
Australia	87.1%	91.7%	91.9%	93.6%	93.9%	89.3%	88.8%
Other Major English Speaking Countries	3.6%	2.5%	3.3%	3.2%	3.0%	3.3%	5.4%
Other Overseas Born	9.3%	5.8%	4.8%	3.1%	3.1%	7.4%	5.9%
Family Composition							
Couple family with no children	39.9%	37.1%	37.5%	41.3%	47.0%	39.9%	42.2%
Couple family with children - Total	37.5%	49.9%	43.5%	40.9%	43.6%	40.6%	40.4%
Couple family - Total	77.4%	87.0%	81.0%	82.2%	90.6%	80.5%	82.7%
One parent family - Total	20.9%	12.1%	17.4%	17.5%	8.2%	18.1%	16.1%
Other families	1.7%	0.9%	1.7%	0.3%	1.2%	1.4%	1.3%
Dwelling Structure (Occupied Private Dwellings)							
Separate house	80.2%	93.6%	91.8%	95.5%	93.8%	85.4%	88.9%
Semi-detached, row or terrace house, townhouse etc.	7.2%	2.9%	4.2%	0.0%	0.0%	5.2%	4.0%
Flat, unit or apartment	11.0%	1.8%	3.2%	1.8%	2.3%	7.6%	6.1%
Other dwelling	1.6%	1.7%	0.8%	2.7%	3.9%	1.8%	1.1%
Occupancy rate	90.4%	90.2%	88.0%	90.4%	81.2%	89.3%	83.0%
Average household size	2.4	2.7	2.5	2.6	2.4	2.5	2.4

table 1 summary of socio-economic characteristics of mildura residents by SA2, 2011

Category	Mildura SA2	Irymple SA2	Red Cliffs SA2	Merbein SA2	Mildura Region SA2	Mildura LGA	Balance of Victoria
Tenure Type (Occupied Private Dwellings)							
Owned outright	30.3%	38.4%	34.4%	37.0%	53.3%	34.0%	39.6%
Owned with a mortgage	31.8%	44.0%	39.6%	42.1%	22.8%	34.3%	34.3%
Rented	36.9%	17.0%	25.4%	19.7%	22.4%	30.7%	25.2%
Other tenure type	1.0%	0.6%	0.6%	1.2%	1.6%	0.9%	0.8%
Housing Costs							
Median monthly mortgage repayment	\$1,290	\$1,340	\$1,110	\$1,170	\$910	\$1,250	\$1,320
Variation from Bal of Victoria median	-2.3%	+1.5%	-15.9%	-11.4%	-31.1%	-5.3%	-
Median weekly rents	\$190	\$180	\$160	\$160	\$90	\$180	\$190
Variation from Bal of Victoria median	0.0%	-5.3%	-15.8%	-15.8%	-52.6%	-5.3%	-
Labour Force Characteristics							
Unemployment rate	7.5%	3.7%	6.5%	7.1%	4.2%	6.6%	5.2%
Participation rate	58.6%	66.7%	60.2%	60.9%	66.5%	60.6%	61.3%
Occupation							
Professionals	20%	18%	15%	15%	17%	19%	20%
Technicians and Trades Workers	16%	20%	17%	17%	15%	17%	19%
Community and Personal Service Workers	13%	11%	10%	12%	11%	12%	12%
Clerical and Administrative Workers	15%	17%	12%	14%	13%	14%	14%
Sales Workers	14%	13%	14%	13%	9%	14%	12%
Machinery Operators and Drivers	8%	9%	10%	10%	13%	9%	8%
Labourers	14%	14%	22%	18%	23%	16%	15%

Source: ABS Census, 2011



key observations by settlement

Table 2 provides a summary of a selection of socio-economic characteristics relevant to this housing and settlement strategy, based on regions which broadly reflect each of the identified settlements. The main observations include the following:

- The rural settlements in close proximity to the urban areas of Mildura have a socio-economic profile that is distinct from other areas. These settlements include Nichols Point/Kings Billabong, Cardross and Koorlong, each of which is characterised by the following:
 - An above average share of residents who are children (0-19 years) and below average share of older residents
 - Above-average incomes
 - Higher-than-average household sizes
 - Higher share of dwellings owned with a mortgage.
- Settlements represented by significantly lower incomes and housing costs compared to the averages for the municipality and regional Victoria include Red Cliffs, Merbein and Murrayville.
- In general, rural settlements and the Rural Balance have a higher share of dwellings owned outright and a significantly lower share of rented dwellings. The settlement of Mildura is the main rental location in the municipality.
- Mildura is the only settlement that has any significant representation of medium to high-density residential living.

A more detailed summary of the socio-economic profiles for each settlement is provided in the Township Profiles, found at Section 4.

Characteristic	Mildura (incl Cabarita)	Irymple	Red Cliffs	Merbein	Sub-total: Urban Settlements	Nichols Point and Kings Billabong	Cardross	Koorlong	Ouyen	Nangiloc and Colignan	Murrayville	Underbool	Mildura Region	Sub-total: Rural Settlements	Rural Balance	Total Mildura LGA	Bal of Victoria
Age Structure																	
Pre-school and school age (0-19 years)	28%	30%	27%	26%	28%	34%	32%	31%	22%	27%	18%	26%	29%	28%	30%	28%	26%
Working age (20-64 years)	56%	54%	52%	51%	55%	55%	57%	62%	52%	64%	54%	52%	56%	56%	58%	56%	56%
Retirees (65+ years)	16%	16%	22%	23%	17%	11%	11%	7%	26%	9%	28%	22%	15%	15%	12%	16%	18%
Median age	37	40	40	46	38	38	36	38	49	41	50	46	41	41	40	39	0
Total persons	31,170	3,550	2,550	1,920	39,190	1,470	460	460	1,080	640	230	200	450	4,990	6,810	50,980	1,345,890
Income																	
Median individual income (annual)	\$24,290	\$25,980	\$20,180	\$19,670	\$23,800	\$27,650	\$28,700	\$26,500	\$24,250	\$27,460	\$20,500	\$28,760	\$24,700	\$26,150	\$25,230	\$24,240	\$25,740
Variation from Bal of Victoria median	-6%	1%	-22%	-24%	-8%	7%	11%	3%	-6%	7%	-20%	12%	-4%	2%	-2%	-6%	0%
Median household income (annual)	\$44,970	\$50,380	\$37,800	\$35,640	\$43,990	\$61,440	\$56,930	\$64,480	\$41,320	\$46,430	\$34,740	\$52,090	\$46,900	\$49,830	\$53,020	\$45,760	\$49,270
Variation from Bal of Victoria median	-9%	2%	-23%	-28%	-11%	25%	16%	31%	-16%	-6%	-29%	6%	-5%	1%	8%	-7%	0%
Family Composition																	
Couple family with children - Total	38%	47%	36%	32%	38%	53%	55%	55%	39%	48%	31%	38%	50%	48%	47%	41%	40%
Average household size	2.4	2.6	2.3	2.3	2.4	2.9	2.7	3.1	2.3	2.5	1.9	2.4	2.6	2.6	2.7	2.5	2.4
Dwelling Structure																	
Separate house	80%	90%	87%	92%	82%	96%	97%	95%	96%	88%	92%	100%	86%	94%	98%	85%	89%
Medium-high density	18%	8%	12%	3%	16%	1%	3%	2%	4%	0%	3%	0%	8%	2%	1%	13%	10%
Other	2%	2%	1%	4%	2%	3%	0%	3%	1%	12%	6%	0%	6%	4%	1%	2%	1%
Tenure Type																	
Owned outright	30%	37%	35%	37%	32%	42%	33%	33%	55%	32%	61%	78%	42%	45%	41%	34%	40%
Owned with a mortgage	32%	42%	33%	34%	33%	43%	45%	55%	21%	25%	19%	13%	22%	32%	44%	34%	34%
Rented	37%	20%	32%	28%	34%	15%	20%	12%	23%	41%	17%	5%	34%	22%	15%	31%	25%
Other tenure type	1%	1%	0%	1%	1%	1%	2%	0%	1%	1%	3%	4%	2%	1%	1%	1%	1%
Housing Costs																	
Median monthly mortgage repayment	\$1,290	\$1,270	\$1,000	\$1,040	\$1,260	\$1,610	\$1,390	\$1,530	\$790	\$880	\$700	\$620	\$270	\$1,240	\$1,230	\$1,250	\$1,320
Variation from Bal of Victoria median	-2%	-4%	-24%	-21%	-5%	22%	5%	16%	-40%	-33%	-47%	-53%	-80%	-6%	-7%	-5%	0%
Median weekly rents	\$190	\$180	\$170	\$160	\$180	\$160	\$160	\$120	\$120	\$110	\$70	\$130	\$50	\$120	\$130	\$180	\$190
Variation from Bal of Victoria median	0%	-5%	-11%	-16%	-5%	-16%	-16%	-37%	-37%	-42%	-63%	-32%	-74%	-37%	-32%	-5%	0%

Source: ABS Census, 2011

table 2 Summary of Socio-Economic Characteristics of Mildura Residents by SA2, 2011



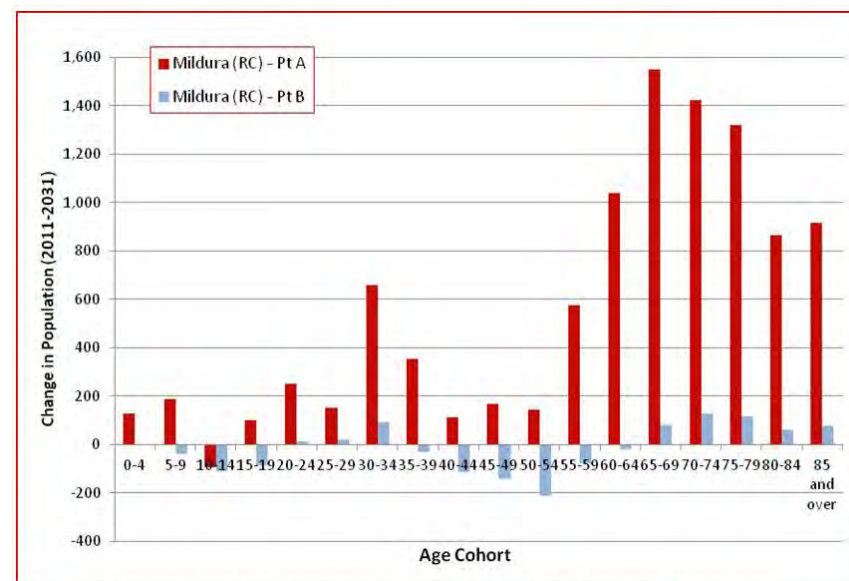
The ABS also produces an index that provides an overview of the socio-economic status of different areas. It is a useful tool in establishing which sectors of the community may be experiencing higher levels of socio-economic disadvantage, and conversely, where there are areas of relative advantage. Figure 11 to the right demonstrates the index within the Mildura context. It indicates that the only areas where there are populations in the 1st deciles are around the main urban centre of Mildura.

forecast age structure

Mildura's population is forecast to age significantly over the 2011 to 2031 period. According to forecasts prepared by the DCPD (Victoria in Future, 2012), the 65 year-plus cohort is forecast to increase by approximately +6,075 persons to 14,815 persons in 2031, representing a total increase of 80% on current levels.

This trend will have important implications for housing in Mildura, including the need to construct age-appropriate dwellings for older people, retirement units, units that are suitably equipped for people with disability, and units that can be retro-fitted with the necessary fixtures so that people can 'age in place' without having to move house or leave Mildura.

The ageing trend is shown at figure 10. The figure also shows that rural parts of Mildura (referred to as Mildura – Part B) is likely to lose many of its young and working age people, either to Mildura's urban areas or to other locations (such as Melbourne).



Source: Department of Planning and Community Development, Victoria in Future 2012 and Essential Economics

figure 10 forecast population change by broad age cohort, mildura rural city, 2011-2031

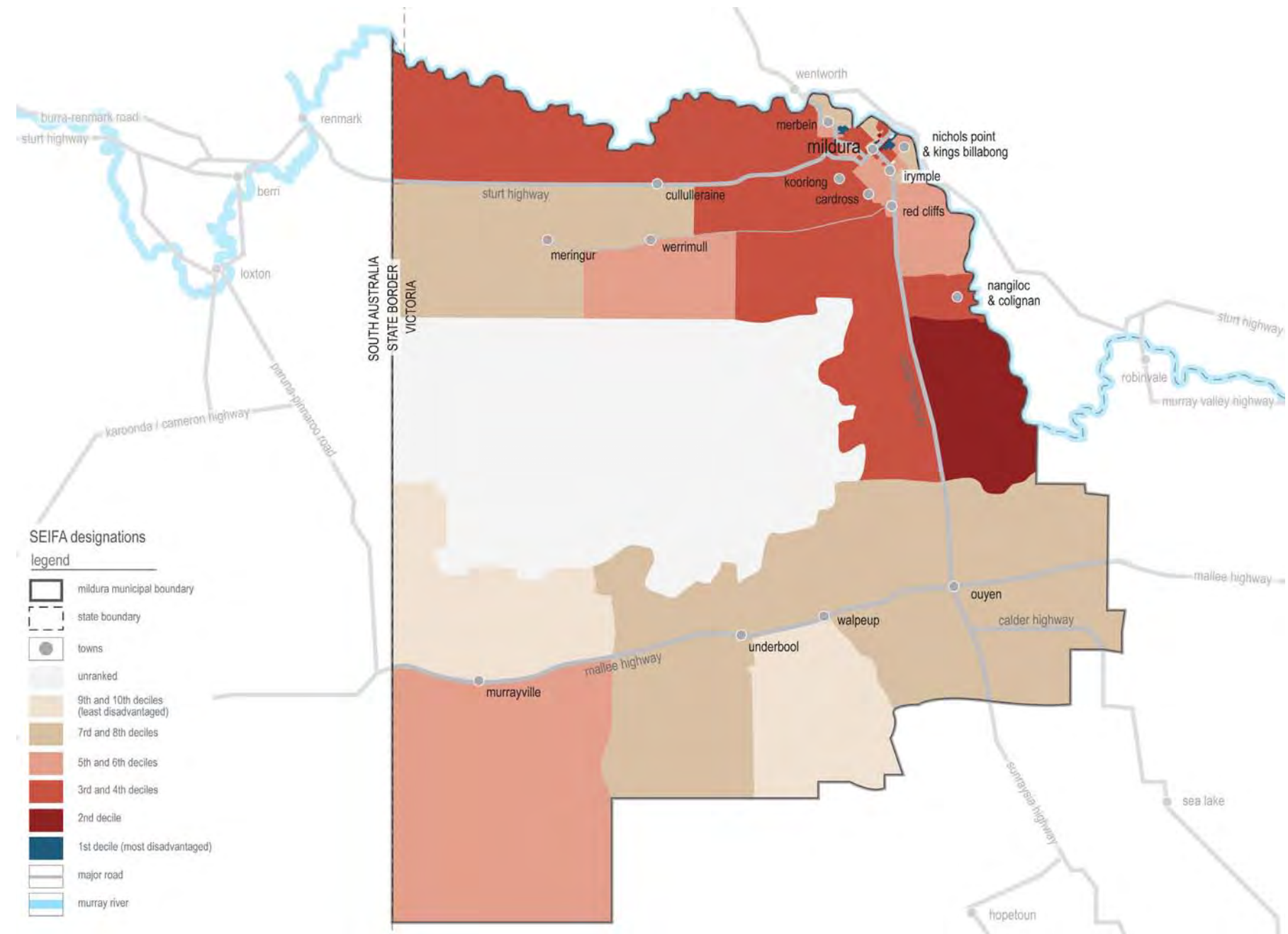


figure 11 SEIFA designations, rural city of mildura (ABS)

the housing market

The Mildura residential property market provides a variety of residential typologies, including conventional residential home and land packages in the urban areas of Mildura and nearby townships, established housing, rural living and lifestyle lots, hobby farms, marina and golf living.

The residential property market in Mildura has broadly followed that of the residential property market cycles which have been reflected throughout regional Victoria. This includes strong rates of residential property sales and prices throughout the early to mid-2000's, followed by a general slowing down in the property market.

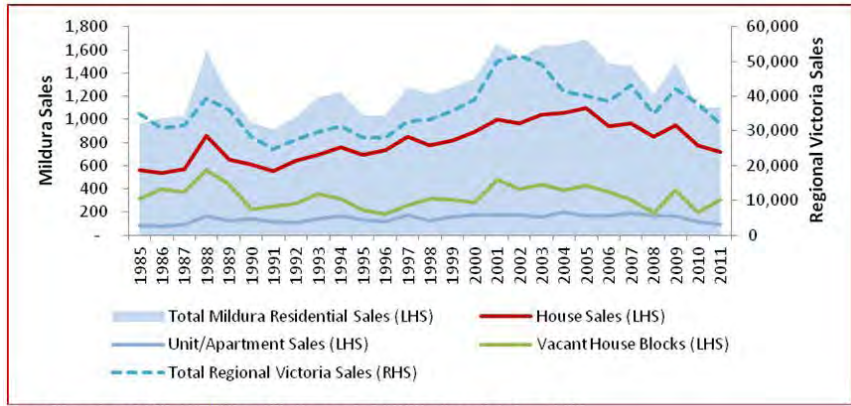
Figure 12 compares the residential property sales for Mildura (RC) with those of regional Victoria and illustrates that, in broad terms, trends in Mildura's property market broadly reflect trends experienced elsewhere in regional Victoria.

However, compared to regional Victoria, Mildura provides a more affordable residential product, with median prices for houses, land and rural/lifestyle lots significantly below median prices for regional Victoria. Furthermore, although trends in the growth median prices broadly reflect those of regional Victoria, the level of price growth has been below that of other regions.

Mildura also competes with the residential market across the Murray River in New South Wales. The townships of Gol Gol, Buronga and Wentworth are both located in close proximity to employment and services provided in the Mildura CBD. Although the residential markets in these areas are not extensive in comparison to Mildura, they provide opportunities that are not present in the Victorian townships. For instance, in NSW it is easier to develop riverfront properties than in Victoria, and the level of government incentive is also higher in NSW compared to Victoria at the present time.



Development in Burgona and Gol Gol (outlined in the Wentworth LEP and Buronga/Gol Gol Structure Plan) has seen the recent release of approximately 196ha which is expected to accommodate in the order of 2000 residential lots. It is important to note that the Structure Plan for this area seeks an average lot size of 700-750sqm (or 11 lots/ ha) for these new areas, in contrast to the existing average lot size of 1700sqm (or 5.2 lots/ ha) and the Victorian State Government target of 15 lots/ha.



Source: Department of Sustainability and Environment, A Guide to Property Values, 2011.

figure 12 number of residential sales in mildura (RC), 1985-2011

Tables 3-6 summarise the recent trends in median residential property prices in Mildura, based on information contained in the A Guide to Property Values (DSE, 2011). The conclusions from an analysis of residential property price trends are summarised below.

- Mildura's residential housing market is affordable. Median residential property prices in Mildura are significantly below the median for regional Victoria, as illustrated by the following:
- The median house price in the municipality in 2011 was \$211,250, which was -25% below the median for regional Victoria (\$280,000)
 - The median unit/apartment price in the municipality in 2011 was \$150,000, which was -37% below the median for regional Victoria (\$239,000)
 - The median vacant house lot in the municipality in 2011 was \$80,000, which was -36% below the median for regional Victoria (\$125,000)
- The median vacant rural/lifestyle lot in the municipality in 2011 was \$107,475, which was -21% below the median for regional Victoria (\$136,000)

- B. Median price growth has been below the average for regional Victoria
 - Over short and medium-term, growth in residential property prices in the municipality has been below the average rate of growth in regional Victoria. For instance, over the 2001 to 2011 period, the following average annual rates of price growth occurred:
 - Median house price growth, 2011-2011:
 - Mildura: +5%pa
 - Regional Victoria: +9%pa
 - Median unit/apartment price growth, 2011-2011:
 - Mildura: +4%pa
 - Regional Victoria: +9%pa
 - Median vacant land price growth, 2011-2011:
 - Mildura: +5%pa
 - Regional Victoria: +11%pa
- Nichols Point is one of the more expensive settlements - Nichols Point is one of the more expensive settlements according to the limited sales information available. In 2011, the median house price in Nichols Point was \$311,500 which, although more expensive than the median price of other suburbs/settlements, remains only +11% above the median house price for regional Victoria.
- In general, median property prices are lower in settlements located further from the urban areas of Mildura - For instance, the 2011 median house price in Ouyen was \$100,000, while prices in Red Cliffs (\$170,000) and Merbein (\$158,500) were also among the lowest for areas for which median house price data is available.

Location	2001	2004	2008	2011	Variation from Regional Victoria	Average Annual Growth			
						01-04	04-08	08-11	01-11
Mildura (suburb)	\$135,000	\$185,000	\$200,000	\$221,500	-21%	+11%	+2%	+3%	+5%
Irymple (suburb)	\$139,000	\$202,500	\$210,000	\$228,000	-19%	+13%	+1%	+3%	+5%
Red Cliffs (suburb)	\$98,000	\$143,000	\$162,000	\$170,000	-39%	+13%	+3%	+2%	+6%
Nichols Point (suburb)	\$230,000*	\$270,500	\$290,000*	\$311,500	+11%	+6%	+2%	+2%	+3%
Merbein (suburb)	\$102,800	\$140,000	\$165,000	\$158,500	-43%	+11%	+4%	-1%	+4%
Ouyen (suburb)	\$53,800	\$75,000	\$97,500	\$100,000	-64%	+12%	+7%	+1%	+6%
Gol Gol (suburb)	-	\$215,000	\$265,000	\$246,000	-12%	-	+5%	-2%	-
Buronga (suburb)	-	\$160,000	\$192,500	\$209,750	-25%	-	+5%	+3%	-
Mildura Rural City	\$130,000	\$178,000	\$192,000	\$211,250	-25%	+11%	+2%	+3%	+5%
Regional Victoria	\$120,990	\$193,000	\$235,000	\$280,000	-	+17%	+5%	+6%	+9%

Source: Department of Sustainability and Environment, A Guide to Property Values, 2011; RP Data
Note: * denotes limited sales

table 3 median house prices, 2001-2011

Location	2001	2004	2008	2011	Variation from Regional Victoria	Average Annual Growth			
						01-04	04-08	08-11	01-11
Mildura (suburb)	\$105,000	\$144,000	\$160,000	\$160,000	-33%	+11%	+3%	+0%	+4%
Mildura Rural City	\$105,000	\$142,000	\$156,500	\$150,000	-37%	+11%	+2%	-1%	+4%
Regional Victoria	\$105,000	\$175,000	\$209,000	\$239,000	-	+19%	+5%	+5%	+9%

Source: Department of Sustainability and Environment, A Guide to Property Values, 2011

table 4 median unit/apartment prices, 2001-2011

	2010	2011	Total
Regional Victoria			
Vacant residential lots (up to 1ha)	8,479	7,611	16,090
Vacant residential/rural lifestyle lots	1,776	1,663	3,439
Total	10,255	9,274	19,529
Vacant residential/rural lifestyle lots - %	17%	18%	18%
Mildura (RC)			
Vacant residential lots (up to 1ha)	180	302	482
Vacant residential/rural lifestyle lots	33	58	91
Total	213	360	573
Vacant residential/rural lifestyle lots - %	15%	16%	16%

Source: Department of Sustainability and Environment, A Guide to Property Values, 2011

table 5 median vacant house block prices, 2001-2011

Property Types	No. of Sales		Median Price			
	2010	2011	2010	2011	% change	Variation from Regional Victoria
Mildura (RC)						
Rural/lifestyle property	72	99	\$262,512	\$255,000	-2.9%	-30%
Vacant rural/lifestyle property	33	58	\$115,000	\$107,475	-6.5%	-21%
Regional Victoria Sales						
Rural/lifestyle property	3,563	4,008	\$358,500	\$365,000	1.8%	-
Vacant rural/lifestyle property	1,775	1,663	\$140,000	\$136,000	-2.9%	-

Source: Department of Sustainability and Environment, A Guide to Property Values, 2011

table 6 rural/lifestyle sales trends, 2010 and 2011



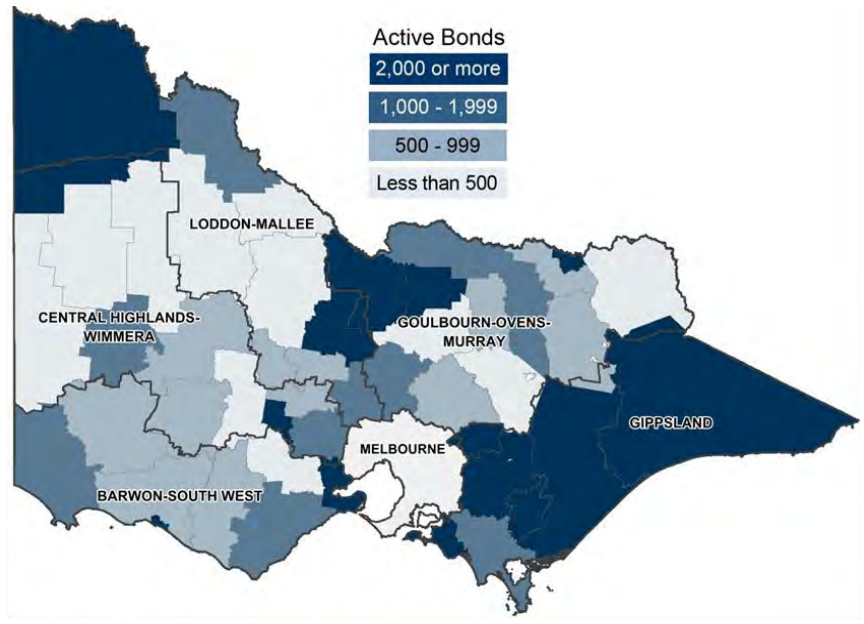
rural ‘lifestyle’ residential land trends

Vacant residential/rural lifestyle lots of 1ha or greater have accounted for 18% of vacant residential land sales throughout regional Victoria in 2010 and 2011. In Mildura (RC), the proportion of the vacant residential land market contained in these larger properties is slightly lower at 16%.

Table 5 summarises the share of vacant residential land sales in regional Victoria and Mildura (RC), including the share of residential/rural lifestyle lots of 1ha or more, while Table 6 shows the recent trends in the median sale price.

rental analysis

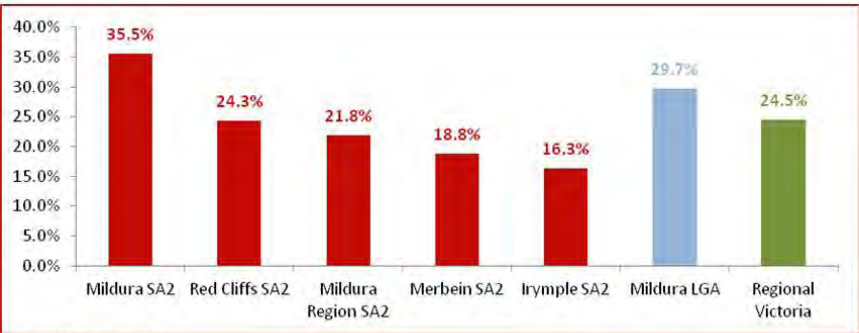
The rental market is a significant component of the residential property market in Mildura, in particular, in the urban parts of Mildura. Figure 13 shows the number of active rental bonds throughout regional Victoria and illustrates the size of Mildura’s rental market compared to other municipalities.



Source: Department of Human Services, Rental Report, June 2012

figure 13 growth in active rental bonds, 2001-2011

Furthermore, ABS 2011 data shows that 37% of occupied dwellings in Mildura are rented, and this compares to the average for regional Victoria of 25%. Figure 14 illustrates the share of occupied dwellings which were rented in 2011 for each of the SA2s in the municipality. Consultation with stakeholders in the local residential market indicate that investors are attracted to Mildura by the relatively affordable housing stock, a strong demand for rental properties and a corresponding low vacancy rate, and solid rental returns.

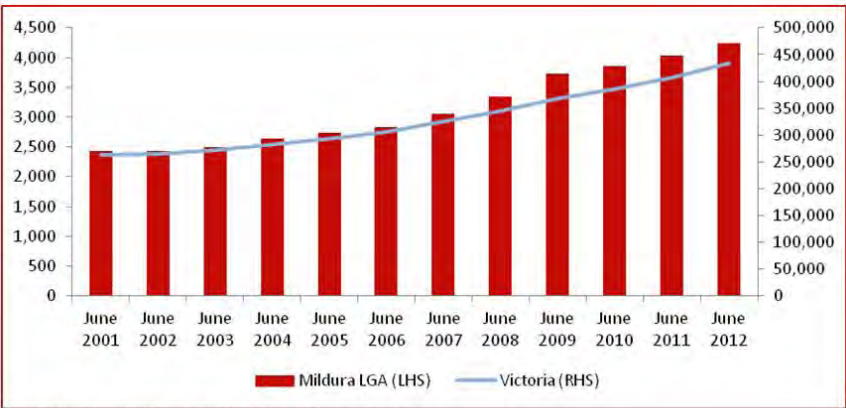


Source: ABS, Census, 2011

figure 14 rentals as a share of occupied dwellings, 2011

Growth in the number of active bonds has occurred through Mildura over the past 10 years. Information from the Department of Human Services shows that the number of rental properties (or active bonds) has increased by 5.2% per annum over the 2001 to 2012 period, and this is above the average for Victoria of 4.7% per annum. Figure 15 shows the trend in the number of active bonds in the Mildura municipality and in Victoria for the 2001 to 2012 period.

Rental vacancies in Mildura are low, with real estate agents indicating a strong level of enquiry and vacancy rate of only 1%. A review of available rental properties in the suburb of Mildura indicates that only 95 rental properties are currently available. Comparing this to the number of occupied rental properties based on ABS 2011 Census indicates that vacancy rate in the suburb of Mildura is in the order of 2%. Overall, the vacancy rate of rental properties in Mildura is low.



Source: Department of Human Services, Rental Report, June 2012

figure 15 growth in active rental bonds, 2001-2011

Rents in Mildura are relatively affordable compared to a number of the larger regional cities. For instance, the median rent for a two-bedroom house in Mildura in June 2012 was \$205/week, which is below the median rent in Bendigo (\$260/week), Wodonga (\$230/week), Ballarat (\$230/week) and Echuca (\$220/week). However, the median rent in Mildura is higher compared to Horsham (\$180/week), Shepparton (\$203/week) and Swan Hill (\$190/week). Table 7 summarises the median rents in Mildura and other selected regional cities in Victoria, while Figure 16 shows that the share of rental properties considered 'affordable' by the Department of Human Services is beyond 80% in Mildura.

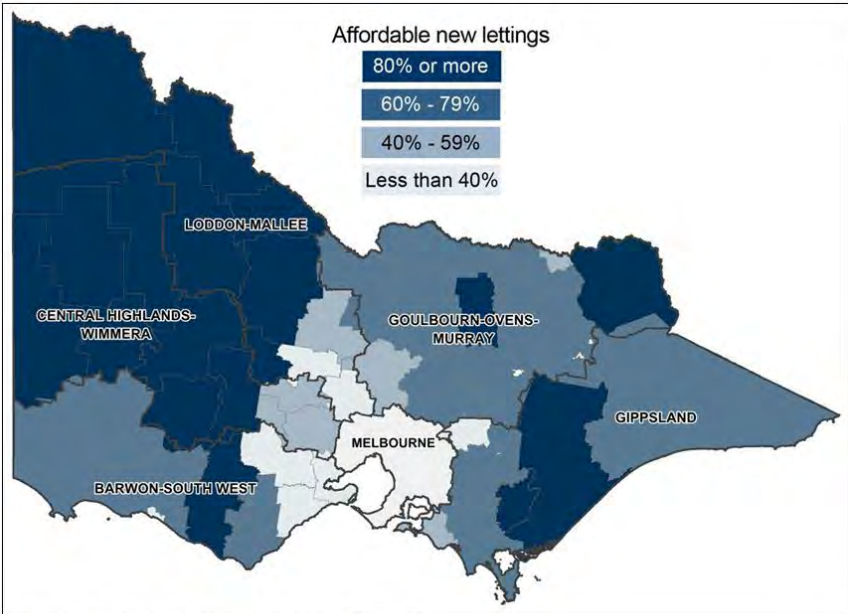
Selected Suburb	2 Bed Flat	2 Bed House	3 Bed House	4 Bed House
Bendigo	\$218	\$260	\$280	\$345
Wodonga	\$200	\$230	\$275	\$350
Ballarat	\$225	\$230	\$265	\$320
Echuca	\$213	\$220	\$265	\$335
Wangaratta	\$175	\$215	\$245	\$300
Mildura	\$175	\$205	\$250	\$310
Horsham	\$175	\$180	\$230	\$310
Shepparton	\$200	\$203	\$260	\$340
Swan Hill	\$200	\$190	\$233	\$295
Loddon Mallee Region	\$200	\$235	\$265	\$330

Source: Department of Human Services, Rental Report, June 2012

table 7 median rental prices, june 2012

Although rents are affordable, they are at a level - when compared to property prices - that is sufficient to attract investment. Discussion with local real estate agents indicates that a significant share of their property sales is to investors, including investors external to the region. As identified earlier, investors are attracted to Mildura by the relatively affordable housing stock, a strong demand for rental properties, a low vacancy rate, and solid rental returns which provide an opportunity for a positively-geared investment property.

The competitive nature of the Mildura rental market has implications for the housing opportunities for the disadvantaged. Although the figures indicate that the Mildura rental market is affordable, the limited supply of rental properties creates significant competition for rental properties. This is understood to have negative implications for persons/families on lower incomes, as they are at a financial disadvantage when it comes to applying and competing for rental properties.



Source: Department of Human Services, Rental Report, June 2012

figure 16 affordable dwellings in regional victoria (june quarter 2012)

'niche' residential products

In recent years, Mildura has seen in the introduction of two niche residential property developments which have provided an additional level of choice over and above the existing product. These developments comprise the Marina development and the golf course development, and a summary of each is provided below:

- Marina development: The Marina residential development has been progressing gradually for several years, with the first blocks of land sold in 2005. However, a 'start/stop' pattern has characterised the progression of the development overall. A further setback occurred in 2012 after the development company Mildura Marina Resort Pty Ltd went into receivership, but the receivership only affected 10 parcels of land, i.e. less than 15% of the developable area. As at November 2012, approximately thirteen developed houses are in the Martina complex, almost half of which appear to be occupied. In addition, the Marina Resort, a luxury development featuring fourteen high-specification apartments, is being developed by the Tierney Group. It is understood that seven apartments have been sold to a mix of local and non-local buyers, including several likely owner-occupiers.
- Fairways Mildura: Stage 1 of the Fairway Mildura development was released in March 2012 and consisted of 30 residential allotments ranging in size from 500m2 to 570m2, and with starting prices from \$110,000. Once completed, the development will consist of 100 allotments.

Further to the two niche products currently on the market, there are additional areas identified for future 'niche' areas including an 'environmental' precinct the north-west of the Fairways development and the inclusion of higher density housing products within the proposed Mildura Waterfront development.

the environment

climate

The Mildura region has a Mediterranean climate with dry summers and mild winters. The mean maximum temperature is 24.0c and the mean minimum temperature is 10.7c (Bureau of Meteorology, 2009). In addition, the Mildura region experiences 132 clear days each year, and 77 days (on average) when the temperature exceeds 30 degrees Celsius. Most rain falls between May and October, with the average rainfall being 283.8mm and the average number of days of rain greater than 1 mm being 43.6 days. The impacts of climate change are expected to see both an increase in the average temperature and an increase in the amount of days above 30 degrees.

topography

The diagram below provides an indication of the broader topography of the north-eastern sector of the municipality, clearly illustrating the lower land along the Murray River and the higher ridge line which extends from the south in two fingers, with Red Cliffs and Merbein positioned on two of the higher points. Also notable is the change in topography along the alignment of the irrigation channel to the north of Irymple, where the land falls away to the south-west and rises somewhat to the north-east before falling towards the Murray.

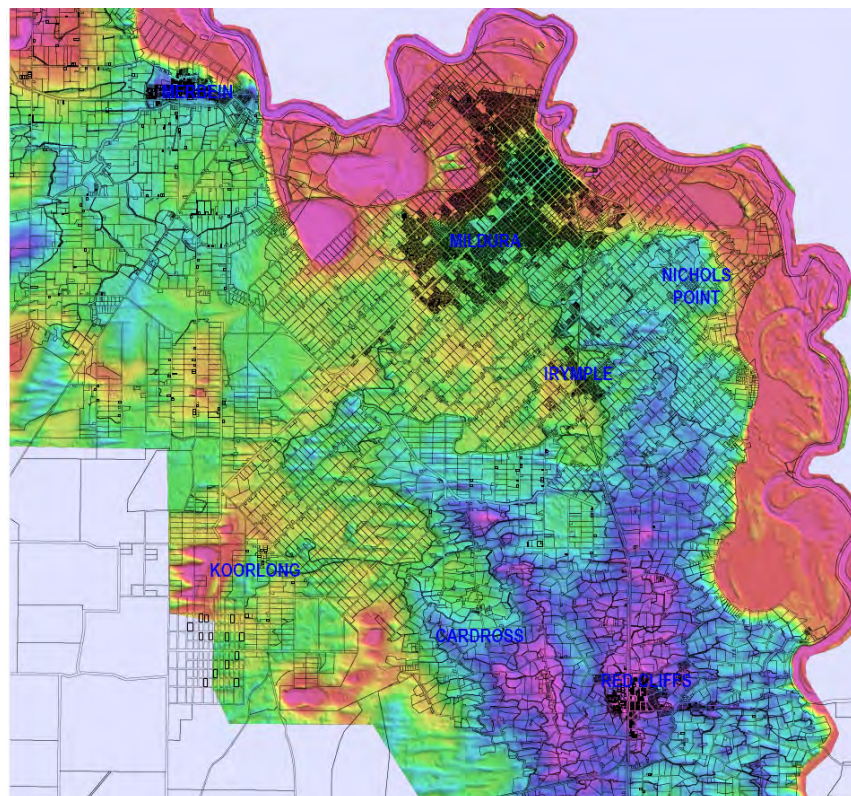


figure 17 topographical plan (source: aurecon engineering)

waterways

The Murray River, which plays a defining role in the municipality, is a significant environmental asset to the area. The Murray River is over 2,000km long and stretches from the Alps in the east through South Australia to the Coorong where it meets the Indian Ocean. The Murray, along with the Darling is a highly modified river system with extensive networks of dams, locks and weirs. This modification has implications for the natural functions of the river system and the balance between environmental and agricultural needs is under constant debate. Given the extensive basin (which stretches well into Queensland) the system supports a vast area. The Darling River meets the Murray near Wentworth.

The Murray supports a range of ecosystems, perhaps the most well known of which are the extensive River Red Gum forests which line the banks and spread across the floodplains. The Murray also supports unique species such as the Murray Cod which grows up to 1.8m. In the Mildura region, the Murray River has contributed very significantly to the agricultural development of the region through irrigation, but is also closely connected to indigenous settlement patterns and is a current recreational and tourism asset. There are no other major waterways within the municipality. However, in addition to the internationally recognised Hattah Lakes system, the area contains nine other nationally significant wetlands (Cardross Lakes, Lindsay Island, Mulcra Island, Wallpolla Island, Wargan Basins, Raak Plain, Pink Lakes, lake Wallawalla, Lake Ranfurly and the Kings Billabong system.

conservation areas

As mentioned earlier within this section, the Mildura region has an extensive network of national parks and reserves. Reserved public land covers nearly a million hectares (or 44%) of the municipality. The Murray-Sunset National Park is the largest in the region, extending from the Murray River at Lindsay Island in the north to Pink Lakes near Underbool in the south. The park has an area of 633,000 hectares and protects 183 species of plants and animals threatened in Victoria.



The Hattah-Kulkyne National Park is the second largest in the region with an area of 48,000ha, located south of Red Cliffs, north of Ouyen and extending to the Murray River at the east and Calder Highway at the west. It has typical mallee vegetation with extensive low scrub and open native pine woodland. The Annuello Flora and Fauna Reserve is located just south of the Hattah-Kulkyne National Park, with a total area of 35,283ha.

The environs of the Murray River also have some significant conservation areas which stretch along the river through the region, in addition to the Murray-Sunset National Park. The River Murray Reserve protects natural and cultural attractions of the area along the river and covers several areas along the river corridor. The reserve also provides access to a range of camping and other recreational opportunities along the Murray. In addition, the Darling Junction Environmental Asset (EA) is located along the Murray River, north-west of Merbein. At Kings Billabong is Kings Billabong Park, with a total area of 2195ha, stretching along the Murray River from Nichols Point to Red Cliffs.

These larger conservation regions are supported by a network of smaller Bush Reserves (BR), Flora Reserves (FR), Flora and Fauna Reserves (FFR), Natural Features Reserves (NFR) and Scenic Reserves (SR) throughout the municipality. Within Mildura and extending south of Irymple are several Mildura Bush Reserves. Within proximity to Merbein are the Merbein BR and the Merbein South FR. At Red Cliffs there are several reserves including Red Cliffs NFR and Red Cliffs SR.

Extending along Red Cliffs-Meringur Road, from the Calder Highway at Red Cliffs to the edge of the Murray-Sunset NP at Meringur are also a number of Bushland Reserves. The Morkala-Red Cliffs Railway Bushland Reserve is a linear reserve which extends this entire length, with a total area of 569.7ha. Other Bushland Reserves in this Millewa Region include: Morkala BR, Karween BR, Meringur BR, Yarrara FFR, Bambill BR, Werrimull BR, Karawinna BR, Merrineer BR, Pirita BR, and Benetook BR. Further to the south along the Mallee Track, some of the more significant reserves include the Murrayville BR and Murrayville FR, Underbool BR, Walpeup BR and Walpeup FFR, and Ouyen Bush Reserves.



vegetation

Mildura's vegetation has great national significance and supports a unique range of flora and fauna. The main class of vegetation is known as the Mallee which comprises over 400 different fauna species, many of which are classed as threatened, as well as a range of threatened flora species. The Department of Sustainability and Environment identifies that:

"The landscape includes sand dunes, red sandstone ridges and some unusual wildlife. Plants and animals of the Mallee are very well adapted to the dry semi-arid environment which exists there. The mallee scrub is home to abundant wildlife, including emus, kangaroos, Mitchell's hopping-mice and lizards. Many bird species are present, including wrens, honeyeaters, whistlers, parrots and mallee fowl."

The name 'Mallee' is identified as originating as an Aboriginal name for a group of eucalypts which grow to a height of 2 - 9 metres, and have many stems arising from a swollen woody base known as a lignotuber. Several layers of vegetation grow in association with Mallee eucalypts, from large shrubs up to 3 m high to very small grasses and forbs, and ephemerals. There is a lot of bare ground and any leaf litter decomposes slowly in the dry conditions. Mallee is also a name given to the type of vegetation community in which the Mallee eucalypts grow. Mallee areas are generally very flat, and without hills or tall trees."

Vegetation within Victoria is generally classified within particular 'bioregions' which are associated with different Ecological Vegetation Classes (EVCs). The Mildura region has six bioregions in total, with the municipality predominantly identified as being within the Murray Mallee bioregion, with some areas to the south-west being within the Lowan Mallee bioregion. Along the Murray River to the north of the region is the Murray Scroll Belt bioregion, and to the east along the Murray River is the Robinvale Plains bioregion.

The total of 42 EVCs found in the municipality can be grouped as follows:

- Heathland (2 EVCs)



- Mallee (10 EVCs)
- Plains Grasslands and Chenopod Shrublands (5 EVCs)
- Plains Woodlands or Forests (5 EVCs)
- Riparian Scrubs / Swampy Scrubs and Woodlands (1 EVCs)
- Riverine Grassy Woodlands and Forests (8 EVCs)
- Salt tolerant and/or succulent Shrublands (8 EVCs)
- Wetlands (8 EVCs)

These remaining vegetation classes represent only about 60% of the pre-settlement extent, and the majority of these vegetation classes are classified as endangered, vulnerable or depleted.

endangered flora

The *Mildura Vegetation Strategy* identifies that of the 1045 species of flora found in the municipality, 238 (or 23%) are rare or threatened. As identified in the Mildura Vegetation Strategy:

19 species of flora listed as threatened at a state and/or national level (DSE 2005). Of the five nationally threatened species, four are listed as vulnerable - Club spear-grass Austrostipa nullanulla, Bead glasswort Tecticornia flabelliformis, Lowan phebalium Phelbalium lowanense, Yellow swainson-pea Swainsona pyrophila, and one is listed as endangered - Winged peppergrass Lepidium monoplacoides. An additional 200 species are listed as Victorian Rare or Threatened Species (VRoTS) (DSE 2005).

The Dwarf lantern-flower Abutilon fraseri is listed under the *Flora and Fauna Guarantee Act*. In addition the Buloke Woodlands of the Riverina and Murray Darling Depression Bioregions are listed as an endangered community under the *Environmental Protection and Biodiversity Conservation Act*.



Threatened species within the Mildura LGA, listed as endangered include the following:

- Austrostipa wakoolica.
- Greencomb Spider-orchid, Rigid Spider-orchid.
- Winged Pepper-cress.

endangered fauna

In line with the figures for endangered flora, the *Mildura Vegetation Strategy* identifies that of the 381 species of fauna found in the municipality, 106 (or 28%) are rare or threatened. Threatened species within the Mildura LGA, listed as endangered, include the following:

- Australasian Bittern.
- Bush Stone curlew
- Great Knot
- Broad shelled Tortoise
- Little Egret
- Grey Falcon
- Red naped Snake
- Little Bittern
- Malleefowl
- Swift Parrot.
- Mueller's Skink
- Growling Grass Frog
- Black-eared Miner.
- Carpet Python
- Samphire Skink
- Barking Owl
- Blue billed Duck
- Red-lored Whistler
- Superb Parrot
- Redthroat
- Gull-billed Tern
- Freckled Duck
- Lined Earless Dragon
- Hooded Scaly foot

commercial growth

This section details the existing context in relation to commercial activity (both retail and industrial). An understanding of where these uses currently occur and where they may establish in the future will influence where people choose to settle, and as such, a broad understanding of these matters should inform the Strategy.

retail context

The Mildura Central Business District (CBD) and the commercial activity located along Fifteenth Street are the main locations serving the retail, commercial, entertainment and civic requirements for residents of the municipality and beyond. The *Mildura Retail Strategy 2010* (Essential Economics, 2010) indicates that these centres serve a regional catchment of almost 100,000 residents, stretching into New South Wales and South Australia.

While the Mildura CBD has traditionally been the focus for retail and commercial activity, continued retail development along Fifteenth Street has made this area a major retailing destination for convenience, higher-order and homemaker retailing. The development of this area continues today, with the recent construction of a Big W Discount Department Store and a Dan Murphy's liquor outlet. In addition, approval has been granted for a Coles supermarket and a Masters home improvement store. While Fifteenth Street performs a necessary role in providing additional retail choice, it is important that the Mildura CBD maintains its primacy as the top regional activity centre for entertainment, shopping, business, tourism and community activities.

The provision of shopping and other services that are typically provided in activity centres is important when assessing existing and future settlement and housing patterns. The opportunity for employment in activity centres is also a key consideration, since good access to services and employment are two factors that generally lead to one housing location being referred over another.

A summary of the activity centres serving the Mildura region is provided below:

- **Mildura CBD:** This Regional centre provides a range of roles including retail, entertainment, business, community, civic and tourism. The CBD comprises an estimated 63,100m² of retail floorspace, with the main anchor tenants being Kmart discount department store (DDS) and Coles, Woolworths and Supa IGA supermarkets, combined with a wide range of speciality shops and other businesses.
- **Fifteenth Street:** This is a sub-regional centre comprising an enclosed shopping centre and adjoining retail. The precinct includes Target and Big W, a Woolworths supermarket, Dan Murphy's liquor store and a variety of speciality stores. Approved plans exist for the development of a Coles supermarket to the south of Fifteenth Street.
- **Fifteenth Street Homemaker Precinct:** Fifteenth Street has developed into a significant homemaker precinct containing approximately 46,800m² of retail floorspace, including approximately 31,200m² of homemaker retail floorspace.

The precinct contains a number of national brand homemaker and leisure tenants and is the main location of homemaker retailing in the region.

- **Neighbourhood Centres in Urban Mildura:** Urban Mildura contains only one small neighbourhood centre, located in Deakin Avenue. The centre is anchored by a small Foodworks supermarket. It is likely that demand for neighbourhood shopping facilities may arise in the southern growth areas of Mildura in the future.
- **Town Centres:** A number of town centres are located throughout the municipality which provide local convenience services, and these include:
 - Merbein, anchored by a Supa IGA supermarket.
 - Red Cliffs, anchored by Supa IGA supermarket, but also with a second Foodworks supermarket.
 - Irymple, which currently contains only a limited provision of retailing. However, a number of proposals exist for the development of a supermarket-based centre in the township.
 - Ouyen, a small strip-based centre anchored by an IGA supermarket.

In addition to the above, limited retail and commercial services are located throughout the urban areas of Mildura and the rural townships, providing local retailing and other services.

industrial context

Industrial land and development is a significant contributor to employment in Mildura. For instance, according to figures in the ABS 2011 Census, the industry sectors of manufacturing, construction and transport, postal and warehousing, which are typically located on industrial land, contributed to approximately 3,180 jobs in the municipality in 2011 (ABS 2011 Census) and accounted for 17% of all jobs. The majority (60%) of these jobs are located in urban Mildura.

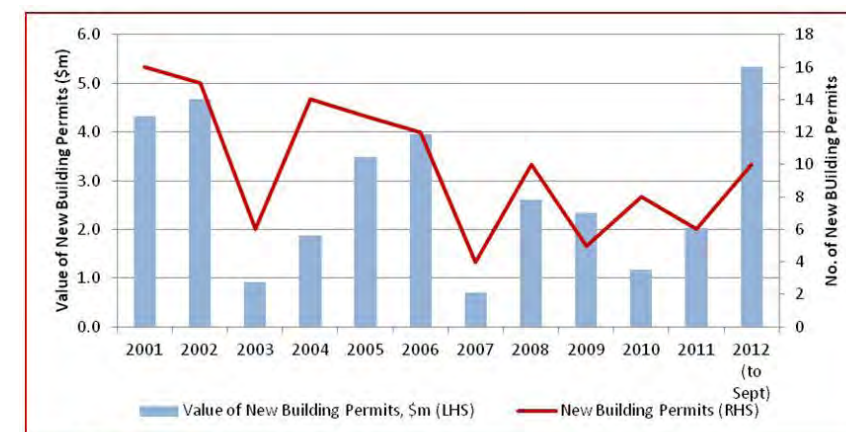
The concentration of industrial employment in Mildura is reflected in the supply of industrial land. Table 8 below summarises the vacant and occupied industrial land based on information contained in the *Draft Urban Development Program* (UDP, 2011), and shows that the township of Mildura contains 77% of occupied industrial land in the municipality. Other locations with a more limited supply of occupied industrial land are Irymple, Merbein, Koorlong and Red Cliffs.

Location	Occupied		Vacant		Total	
	area	share	area	share	area	share
Mildura	363ha	77%	157ha	20%	520ha	41%
Irymple	50ha	11%	43ha	5%	93ha	7%
Merbein	26ha	6%	5ha	1%	31ha	2%
Koorlong	23ha	5%	380ha	47%	403ha	32%
Red Cliffs	9ha	2%	216ha	27%	225ha	18%
Total Mildura LGA	471ha	100%	801ha	100%	1,272ha	100%

Source: DPCD, Urban Development Program Regional Industrial Report, Mildura Rural City Council V2 Draft, 2011

table 8 industrial land supply, 2011

In recent years, no clear pattern has emerged in the number of new industrial building permits, with numbers ranging from four in 2007 to ten in 2008, and ten industrial building permits for the first three-quarters of 2012. The value of the permits in 2012 has been significantly higher than in previous years. Figure 18 illustrates the recent trends in new industrial building permit activity.



Source: Building Commission of Victoria

figure 18 value of new industrial building investment, 2001 to september 2012

According to the draft UDP, the township of Mildura has been the only major location for industrial development, and this reflects the preference for operating industrial businesses in Mildura compared to the other smaller industrial areas in the municipality. The benefits include proximity to a large labour force, good access to business services, opportunities to derive synergies with other co-locating industries, and high levels of accessibility. It is likely that Mildura will continue to be the main location for industrial development in the future providing a supply of land available for development exists. To this extent, a significant supply of Industrial 3 Zone land exists in the suburb of Mildura along Benetook Avenue, and potential exists that this form of industrial land may extend further to the south in the future. While only a limited supply of Industrial 1 Zone land is currently available for development in Mildura, vacant Industrial 1 land is available in nearby Irymple and Thurla.



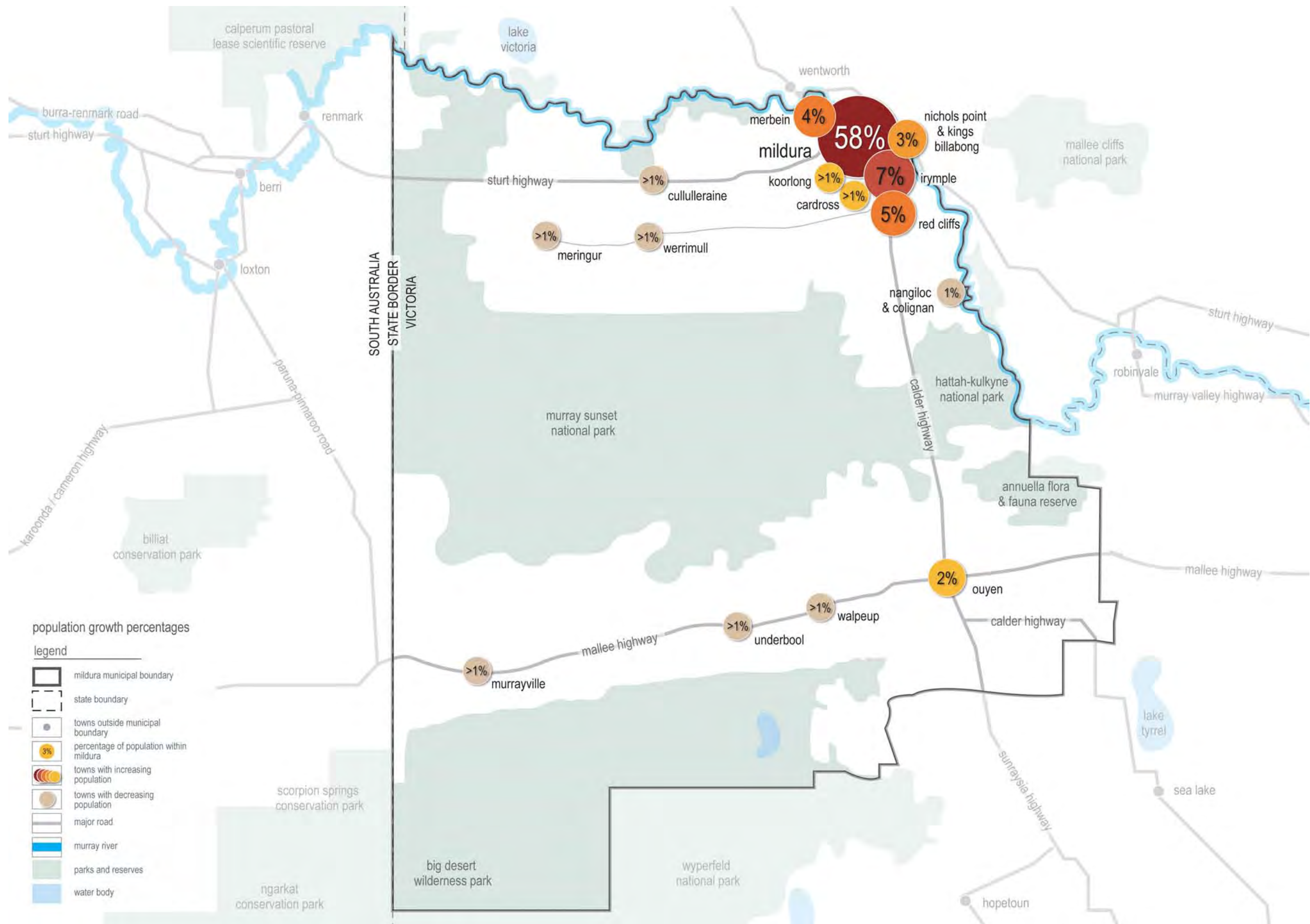


figure 19 towns population percentage

4 township profiles

The following section contains more detailed profiles and analysis of the existing conditions in relation to the following settlements:

- Mildura (including Cabarita)
- Irymple
- Red Cliffs
- Merbein (including Merbein West)
- Nichols Point and Kings Billabong
- Koorlong
- Cardross
- Ouyen
- Colignan and Nangiloc
- Murrayville
- Underbool
- Meringur, Werrimull and Lake Cullulleraine

The location of these settlements is identified on the plan shown to the left (Figure 19). These profiles provide the following information:

- A brief overview of the role and function of the settlement;
- An overview of the existing policy direction regarding the settlement;
- A plan identifying the current and known future land uses within the township;
- A demographic profile including the growth over time in the settlement;
- A brief outline of any relevant environmental matters and infrastructure available;
- A plan identifying those environmental considerations and existing infrastructure;



- Documentation of the level of existing community services and facilities;
- Discussion regarding the current housing market in each settlement;
- A summary of the existing supply of land in different zones; and
- An overview of the key strengths, weaknesses or opportunities in each township.
- Recommendations for the townships.

While these township brochures summarise the existing conditions in each settlement, they will be supplemented in the following stage of this project with the future vision for each township. They will then form a stand-alone resource for each township that can serve as a reference point for other purposes.

mildura

mildura housing & settlement strategy

overview

Mildura is the regional centre serving the north-western part of Victoria and areas in nearby New South Wales and South Australia. The Mildura settlement is the main residential location in the Rural City of Mildura and contained a population of approximately 31,810 residents in 2011. While other regions in the municipality have experienced stagnant and declining populations, Mildura has been the driving force for population growth in the municipality.

Recent residential development has occurred primarily to the south, where large areas of land (firstly between 15th and 16th Streets and more recently between 16th and 17th Streets) have been brought on line for greenfield residential development. There has also been some recent residential development to the east in a number of separate pockets and some niche residential developments have commenced, including marina and golf course developments. Future development is currently expected to extend to 17th Street but beyond this area, the Mildura Airport provides a constraint to future growth and as such, consideration of other areas for growth will be required in the longer term.

The settlement of Mildura was planned to a 10 acre block grid network, aligned on a 45 degree angle with Deakin Avenue forming the central spine, leaving a legacy of a strong grid network of numbered 'streets' running north-west to south-east and 'avenues' running north-east to south-west. Recent subdivision patterns in Mildura South have occurred in a different manner from traditional Mildura subdivisions, most noticeably in the size of the lots (particularly in comparison to the size of dwellings) but also in the materials, width of streets and provision of public spaces and landscaping. Recent developments have tended to also favour cul-de-sac road alignments, rather than the traditional grid network.

The Mildura CBD and surrounding areas provide the shopping, entertainment, civic, community, tourism, recreation, business services and employment opportunities for the surrounding residents, businesses and visitors to the region. However, in recent years much of the retail investment has been in the 15th Street area, where the Centro shopping centre, and an associated homemaker centre draw residents from a wide area. The proximity of this 15th Street strip to the settlement of Irymple is also blurring the boundaries between these two settlements and increasing pressure on the land between the settlements. However, planning is ongoing for a major project intended to link the Mildura CBD to the riverfront providing a range of land uses, including higher density residential development.

The Murray River wraps around the settlement to the north, and a number of areas close to the river are affected by flooding. To the north-west, Lake Hawthorn and Lake Ranfurly are key environmental features which have a close relationship to the urban areas.

key demographics

Estimated resident population: **31,810 persons**

Median annual household income: **\$44,970**
(-2% below median for Mildura (RC))

Couple families with children: **38% of families**
c.f. 41% for Mildura (RC)

age structure

Pre-school and school age (0-19 years): **28% (28%)**

Working age (20-64 years): **56% (56%)**

Retirees (65+ years): **16% (16%)**



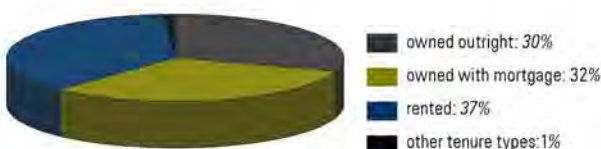
tenure type

Owned outright: **30% (34%)**

Rented: **37% (31%)**

Owned with a mortgage: **32% (34%)**

Other tenure type: **1% (1%)**



Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.



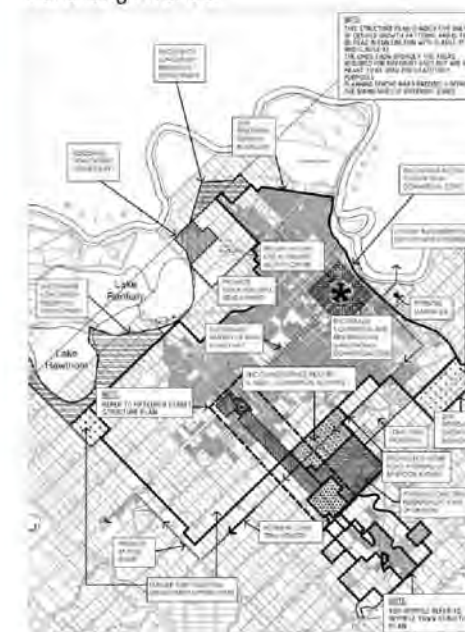
policy influences

As the main urban centre in the municipality, much of the existing policy relates to Mildura. The following current policy is directly applicable:

- > Reinforce the development of Mildura as the key service centre of the Region providing a wider range of community and commercial services along with residential, industrial, commercial and community development opportunities.
- > Facilitate the urban expansion of Mildura, Mildura South and Irymple as the prime residential growth areas of the municipality and wider region.
- > Support well designed infill residential development and urban consolidation within the existing residential areas of Mildura and Irymple.
- > Ensure that there is at least a 10 year supply of vacant zoned residential land able to readily access required infrastructure.
- > Ensure that the residential growth areas of Mildura, Mildura South and Irymple are contiguous with existing residential estates and in locations that reflect logical and cost effective infrastructure servicing options.
- > Provide drainage and other relevant infrastructure on at least two or ideally three development fronts within the Mildura, Mildura South and Irymple urban areas.
- > Encourage future residential development at a range of lot sizes and densities (including medium density development) in appropriate locations, particularly in close proximity to town activity centres.
- > Encourage a diversity of housing styles and densities reflecting changing market demands and recent trends such as the development of units and smaller housing lots.
- > Accommodate the demand for rural residential and low density residential development in planned estates.
- > Discourage housing in locations where amenity may be negatively impacted by farming and related activities, or where the location of housing may inhibit rural activities.
- > Discourage the siting of sensitive land uses such as residential development along either side of Benetook Avenue (from Eleventh Street to Seventeenth Street) and along the heavy vehicle by-pass designation of Seventeenth Street (from Benetook to Deakin Avenue).
- > Ensure that development is in accordance with the Mildura Airport Master Plan 2000-2015, particularly in relation to noise and height restrictions.

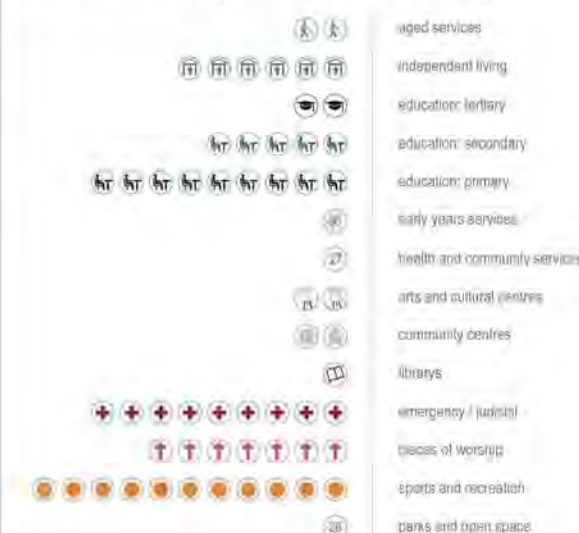
Existing policy also outlines a range of different built form responses to establish a sense of an 'inter-urban' break between the settlements of Mildura and Irymple, particularly along Fifteenth Street. There is also extensive policy direction regarding the staging and implementation of new residential growth areas. Zoning and overlays vary widely across different areas of Mildura, although the presence of overall related to flood risk and the environmental sensitivity along the river corridor are notable, as are the development related overlays applied to future growth areas.

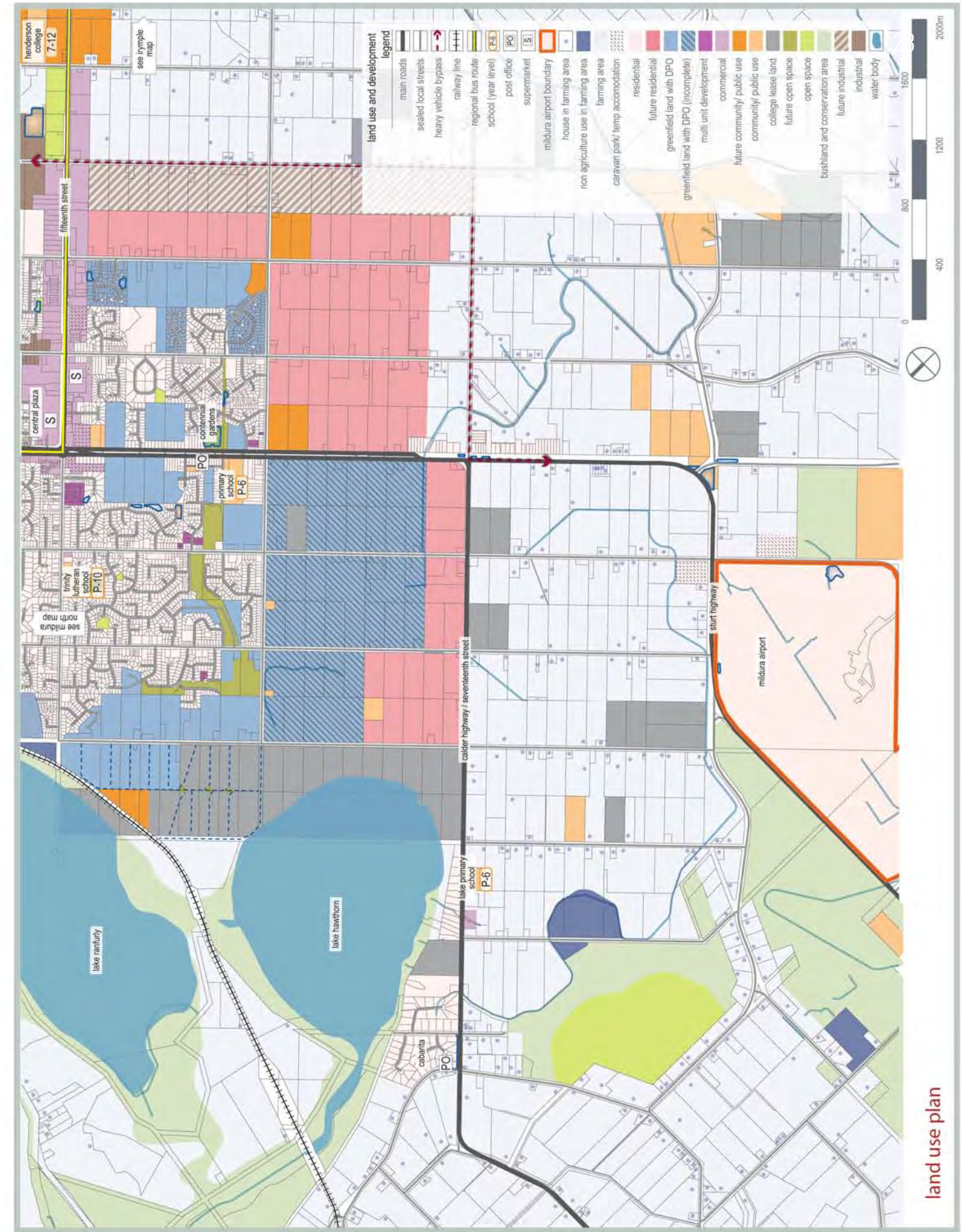
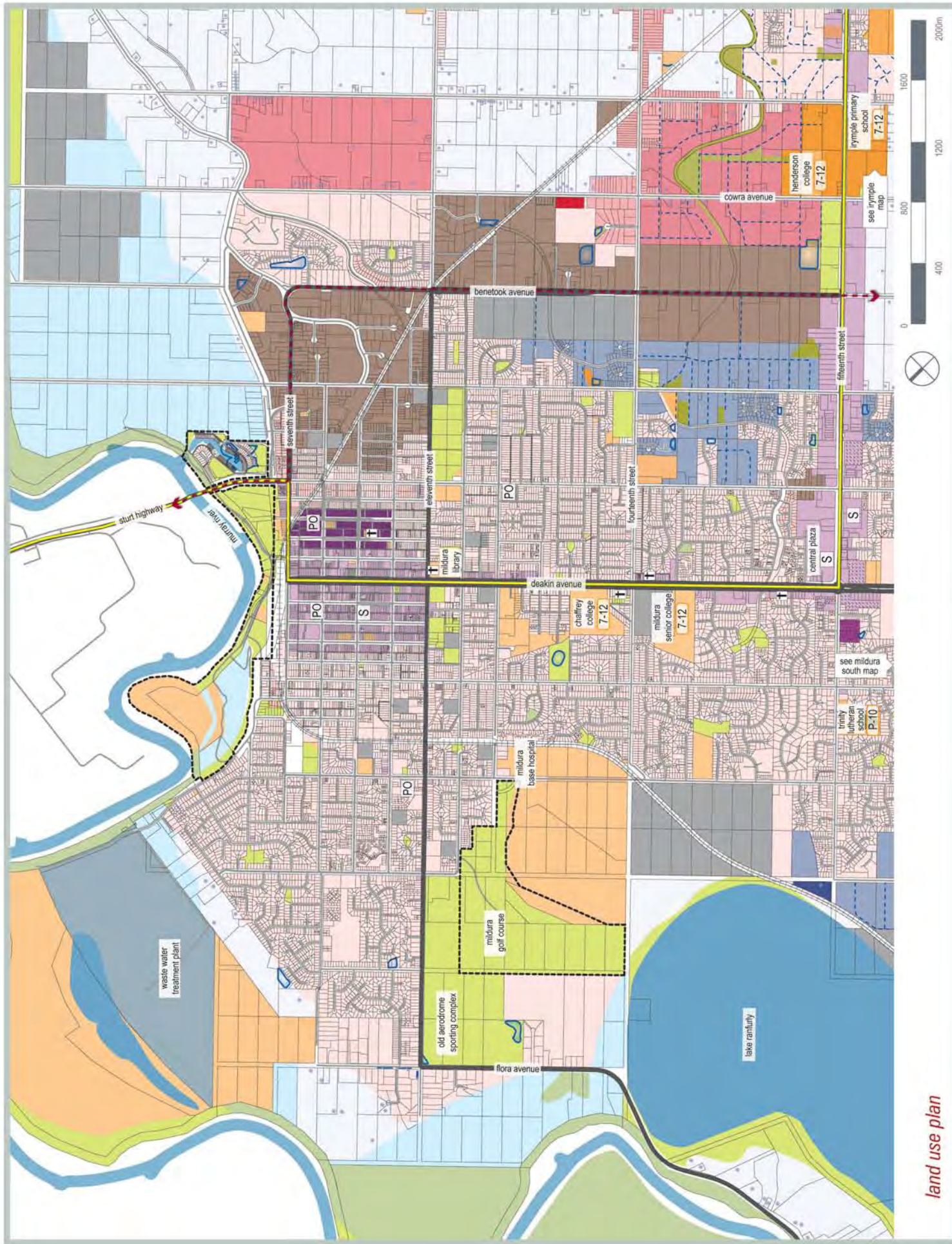
The structure plan identified for the settlement (found in the Mildura Planning Scheme) includes a long term growth boundary (to 2030). This identifies a number of areas which are intended to accommodate long term growth. The areas identified for growth in that plan include, Mildura South, the area between Mildura and Irymple, a small area to the north west and an area to the north-east of Eleventh Street near Sandilong Avenue.



In general, growth areas in Mildura are identified through the structure plan and then rezoned from the existing zone (generally the Farming Zone) to the Residential 1 Zone when demand requires it. The areas are generally planned through the application of a Development Plan Overlay and a Development Contribution Plan Overlay, mechanisms which require the preparation of a plan for a whole precinct to be prepared before development commences and for the costs involved in the provision of infrastructure in those areas to be established and shared between Council and the developer.

community infrastructure



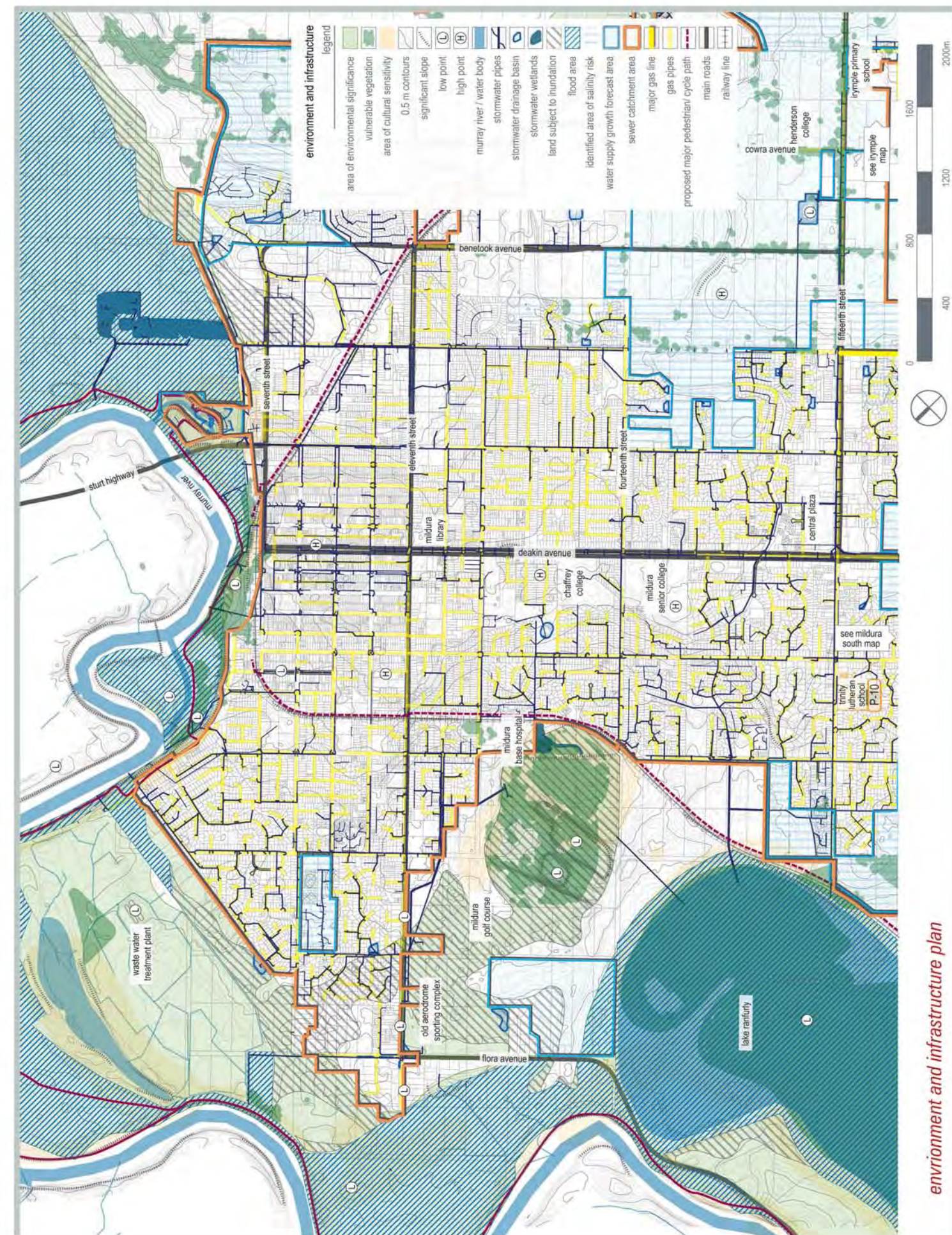


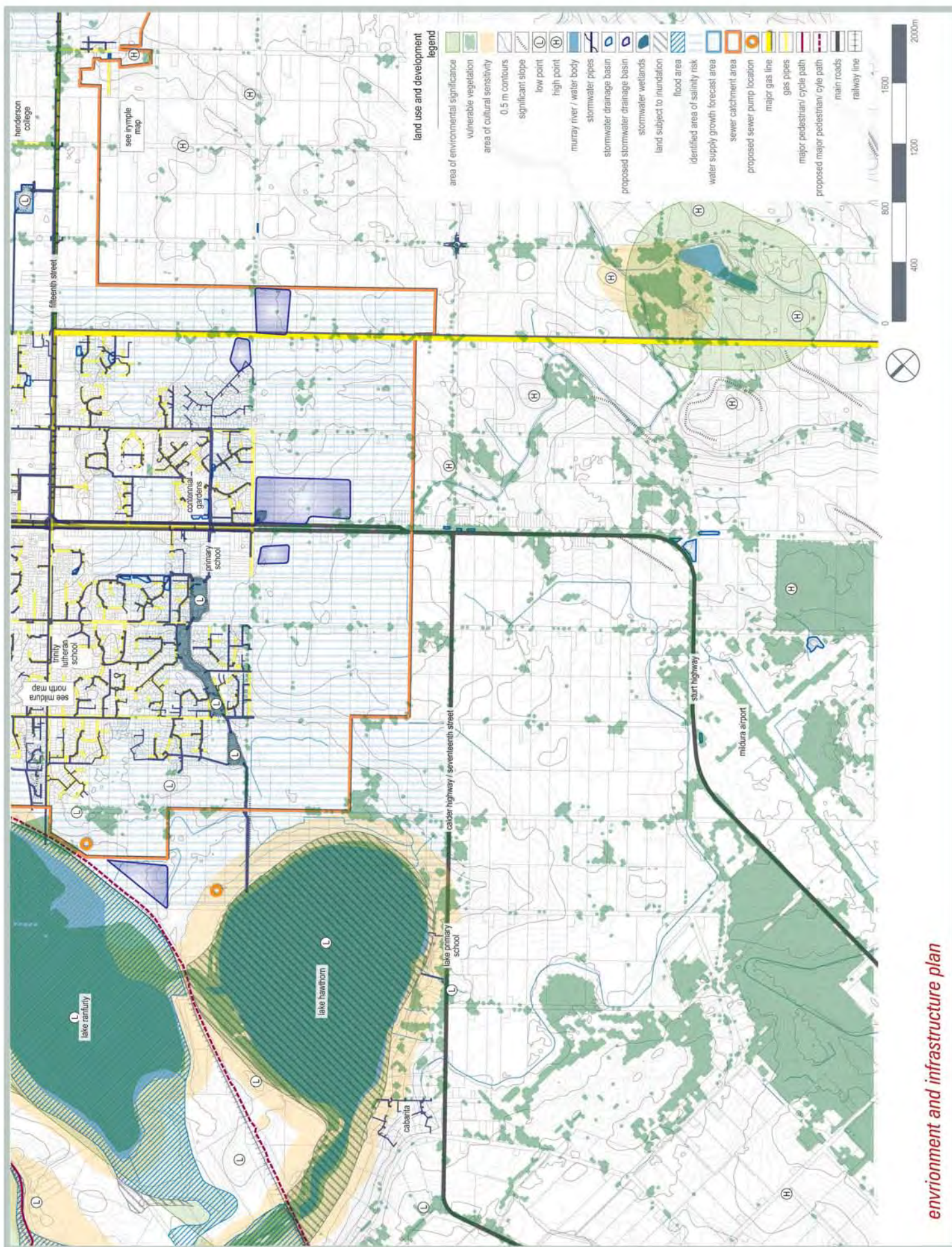
infrastructure considerations

- > Existing drainage infrastructure services the current residential areas and disposed of at the Etiwanda Wetlands prior to disposing to the Murray River. Major upgrades of the Etiwanda system have recently been completed. Proposed works include modifications to the Wetlands to allow additional flows, to mitigate flooding in other existing developed areas and to provide additional capacity for future planned residential growth.
- > Limited drainage infrastructure is available to the east of Benetook Avenue to service growth beyond the currently planned development areas. Major studies have been undertaken to assess requirements in Mildura east area and to integrate the Nichols Point drainage system.
- > Future growth in the east will be limited by the capacity of the stormwater system and the capacity of the Etiwanda Wetlands to accept increased flows. New developments will typically require new or extended drainage infrastructure to be constructed with on-site attenuation. A major upgrade of the wetlands is required to allow full development within the catchment area. Areas to the SE are likely to be diverted to the Mildura South (MS) drainage system.
- > MS is serviced by a piped drainage network which discharges stormwater to Lake Hawthorn. A system of gravity drains, drainage basins and pump stations is used to control the flow of stormwater. The wetlands provides stormwater treatment and storage capacity prior to the Lake Hawthorn outfall.
- > Development in MS has been constrained due to the capacity of the existing stormwater infrastructure. Significant drainage planning and modelling has been undertaken for future development, extending to near 17th Street to the south west which is largely controlled by the topography as a major ridge line exists along the line of 17th Street.
- > Formal drainage is currently provided to the residential development along Lake Hawthorn in Cabarita which discharges directly to Lake Hawthorn at two locations on Regina Avenue and Lakeside Avenue.
- > An extensive irrigation drainage system exists in the MS area, controlled by LMW. As the horticultural areas are taken up by development an opportunity exists to utilise the irrigation drainage network to assist with the collection and disposal of stormwater. Some preliminary studies have been undertaken by LMW and MRCC.
- > Housing in MS is serviced by the LMW reticulated sewerage system. Sewerage is discharged to the Koorlong Waste Water Treatment Plant via a system of gravity mains, pumping stations and rising mains. The Koorlong WWTP has capacity to support this growth. Upgrades were completed in 2010, and will cater for increase in population to 2020. LMW are currently considering options for the potential diversion of flows from Merbein and Mildura WWTP to Koorlong. This may impact on the capacity of the Koorlong WWTP to accommodate additional growth in the MS region beyond the current growth

forecasts without major upgrades.

- > The extension of the sewer system to service Cabarita is currently not proposed and not considered feasible. Further development in the Cabarita area will likely require on-site treatment systems to be implemented to minimize the potential for groundwater contamination close to Lake Hawthorn.
- > All water supplied to Mildura is sourced from the Murray River. Two major water treatment plants service the area. The Mildura treatment plant located adjacent to 7th Street and Cureton Avenue currently has a supply capacity of 85ML/day. The Mildura West treatment plant is located on Ontario near 14th Street. This plant currently has a capacity of 20 ML/day however there is potential to upgrade the plant to increase its capacity to up to 80ML/day.
- > Water is pumped from the treatment plants to two water towers which feed to additional booster pump stations and ground storages throughout the supply area.
- > Unfiltered water is currently supplied to the horticultural areas within the MS region.
- > The existing major water infrastructure has capacity to service the planned growth within MS. Based on their current capacity the existing treatment plants are able to service up to approximately 50,000 residential homes. The future upgrade of the Mildura West plant will increase the capacity to supply approximately 80,000 residential homes.
- > A ridge located between Nichols Point and Irymple is approximately 10m higher than the main Mildura township and is likely to be difficult to service due to low water pressures.
- > Powercor has high voltage and low voltage networks throughout the Mildura township with sufficient capacity to adequately service all existing development. Powercor typically supplies underground cabling to all new residential areas in the Mildura region.
- > Gas to the Mildura area is supplied via a 100mm transmission pressure main that extends from Berri, SA. Gas is currently reticulated though most of the new residential areas. However, it is the decision of the developer as to whether gas will be provided to individual lots - the provision of gas to residential areas will largely be driven by consumer demand.
- > The current gas supply to Mildura is nearing capacity. A major upgrade was recently announced which will provide 50% additional capacity to service residential and industrial areas across the region. The timing of this upgrade works is currently uncertain. The major consumer of gas is typically industry and major upgrades of the gas supply will largely be dependent upon industrial demand.
- > Copper voice services and ADSL/ADSL2+ internet services are available across Mildura in addition to wireless and cabled telecommunication services. New development in Mildura will need to include infrastructure suitable for roll-out of the NBN at a future date however there is presently no confirmed date of when the NBN will be available within Mildura.





environment and infrastructure plan

housing market

Mildura is considered an affordable residential location, with the median house price in 2011 (\$221,500) approximately -21% below regional Victoria. This affordability, along with the attractive rural lifestyle, access to services and employment opportunities across a wide array of industries has driven significant development in Mildura over the past decade or so.

Another aspect which has contributed to residential demand is the rental market, with demand for investment properties driven by strong rental demand and low vacancy rates.

Over the 2001-2010 period, Mildura (and the surrounding region) experienced an average of 260 new dwelling building permits per annum based on ABS data; according to Council's more recent data, Mildura experienced an average of 220 new dwelling building permits per annum between 2010 and 2012.

Council's building permit data indicates that strong demand for residential lots smaller than 800m² exists, with 60% of new building permits between 2010 and 2012 occurring on lots smaller than 800m². The Residential 1 Zone (R1Z) accounted for 93% of development this period. A significant amount of development has occurred in the southern growth area.

land supply and demand

'indicative' dwelling requirements (net), 2012-2032

Total new dwelling requirements: 4,400 to 5,200 dwellings. Indicative distribution by zone:

R1Z:	4,000 to 4,700 dwellings
LDRZ:	110 to 130 dwellings
FZ:	110 to 130 dwellings
Other Zone:	220 to 260 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table below indicates the existing supply of land in Mildura.

mildura

	R1Z	LDRZ	TZ
potential lots (15 lots/ha)	5377 (1115%)	152	N/A
number of existing vacant lots	109	20	N/A
number of existing developed lots with subdivision potential	48	12	N/A
land (hectares)	350	71	N/A

cabarita

	R1Z	LDRZ	TZ
potential lots (0.45 lots/ha)	N/A	21	N/A
number of existing vacant lots	N/A	2	N/A
number of existing developed lots with subdivision potential	N/A	0	N/A
land (hectares)	N/A	10.5	N/A

opportunities and constraints

- Major regional centre likely to attract consistent growth from both within the region and beyond over the coming years.
- Opportunity to provide a variety of housing typologies, that meet the needs of existing and future residents in Mildura, including the aged, low-income, high-income, and short-term residents.
- The development of strong planning and urban design guidelines will ensure property values are maintained in the residential growth areas.
- Recent subdivision in the Mildura South area is not providing the best outcomes for existing or future residents.
- Existing long term growth strategy exists in Mildura South. Expansion of services has been planned for by all authorities.
- Development to the south-east is currently constrained by the capacity of existing stormwater system. Future development will require upgrades.
- Assessment of the infrastructure needs of the south east of Mildura, Irymple and Nichols Point holistically may be possible.
- Waterfront development has the opportunity to increase residential populations close to the CBD in high quality environment.
- Recognition of the role of Fifteenth Street will support more planned outcomes in the area and avoid incremental or ad-hoc development
- New planning zones will need to be considered and could be tailored to specific areas.
- Careful consideration of areas where additional low density housing may be provided.

recommendations

- Acknowledge long term growth to Mildura East and ensure appropriate planning, particularly of drainage.
- Provide a range of additional lot sizes including larger lots to accommodate demand.
- Protect future expansion of the Mildura Airport.
- Identify and protect opportunities for longer term expansion of retail and industrial land.
- Promote improvements to the Mildura CBD and Riverfront.
- Investigate options for the use and development of College Lease land.
- Consider the best mechanism for developing future urban land and ensure DPO's provide guidance regarding staging of development.

red cliffs

mildura housing & settlement strategy

overview

Red Cliffs is located along the Calder Highway, approximately 13 km to the south of Mildura, and is one of the urban settlements in the Rural City of Mildura. It was originally established as an irrigated soldier settlement. The settlement area, largely consisting of the established residential areas, contained a population of approximately 2,550 residents in 2011. The town centre is located to the east of the highway, and signified by the presence of Big Lizzie.

The residential areas extend across to the western side of the highway, where residential development wraps around some old industrial areas, which are not currently being fully utilised. However, the majority of the residential areas wrap around the town centre to the east of the highway and extend in fingers out to the east along Nursery Ridge Road and south along the highway. To the north of the town the popular Red Cliffs Secondary College and Quandong Park mark the edge of the township, while to the south pockets of lower density residential land remain undeveloped. Two large pockets of residential zoned land have started to develop on the eastern edge of town and a third remains vacant.

Residents have access to a variety of services and facilities within the Red Cliffs settlement (e.g. retail, four schools, early childhood learning, limited health facilities, recreation facilities, etc) and nearby Irymple and Mildura. The proximity to the Mildura / Irymple Fifteenth Street strip, just 10km to the north has had an impact on the towns retail offering, although the presence of two existing supermarkets indicates the town centre retains a meaningful catchment. The town centre itself is also under a Heritage Overlay in recognition of Barclay Square. Situated across to the far east, adjoining the Murray River is a pocket of existing residential development around Lee Street. However, the connection to the river at this closest point remains minimal.



key demographics

Estimated resident population: **2,550 persons**

Median annual household income: **\$37,800**
(-17% below median for Mildura (RC))

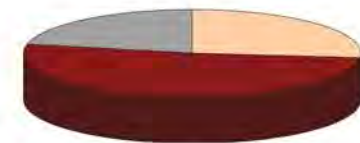
Couple families with children: **36% of families**
(c.f.41% for Mildura (RC))

age structure

Pre-school and school age (0-19 years): **27% (28%)**

Working age (20-64 years): **52% (56%)**

Retirees (65+ years): **22% (16%)**



pre-school and school age
(0-19 years)
working age (20-64 years)
retirees (65+ years)

tenure type

Owned outright: **35% (34%)**

Rented: **32% (31%)**

Owned with a mortgage: **33% (34%)**

Other tenure type: **0% (1%)**

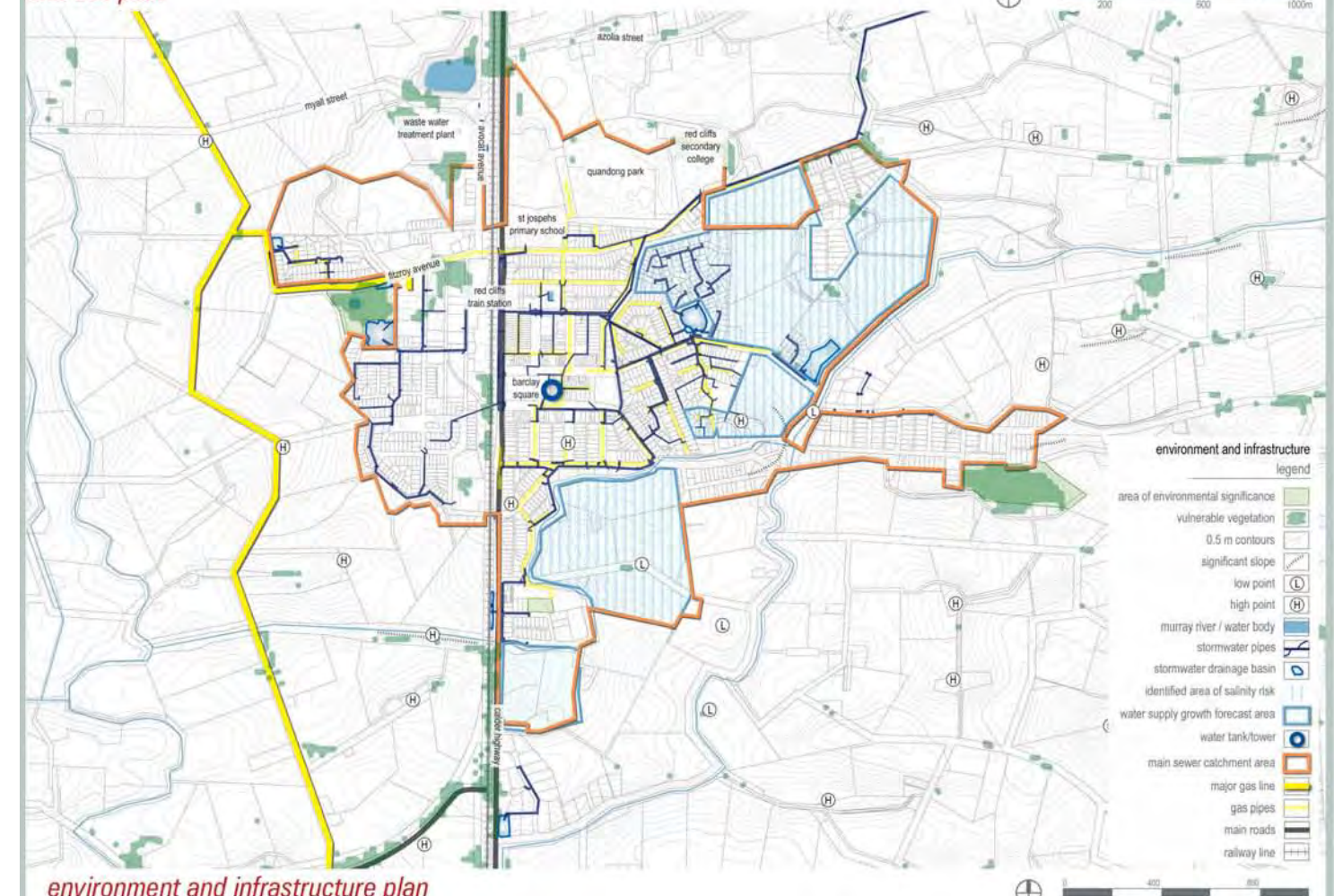


owned outright: 35%
owned with mortgage: 33%
rented: 32%

Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.



land use plan

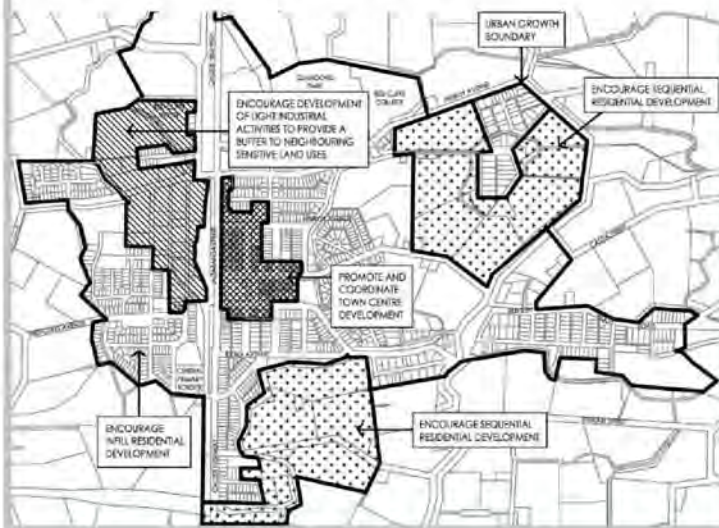


environment and infrastructure plan

policy influences

Red Cliffs is seen as consolidating its role under current policy as a service centre. However, in the case of Red Cliffs policy specifically identifies the role the township plays in supporting the surrounding rural communities.

The development of any large scale economic development opportunities such as solar farms to the south of the settlement may also support this role. No formal structure plan document has been prepared for Red Cliffs, although recent development plans (*Red Cliffs Residential Development Plan 2009*) have been prepared for the residential growth areas and the Mildura Planning Scheme identifies broad directions as seen below.



community infrastructure



infrastructure considerations

Red Cliffs township has the following existing and future infrastructure:

- > Piped stormwater drainage and a number of detention basins service the township. A number of works packages in progress to expand stormwater capacity. The implementation of these works is subject to available Council funding. New residential developments will require the implementation of on-site attenuation.
- > Serviced by a reticulated sewer system. The Red Cliffs Wastewater Treatment plant was recently decommissioned and all sewer flows are now pumped to the Koorlong Wastewater treatment plant. Upgrades will be required to sewerage systems in order to support new development in the township.
- > Reticulated water supply is available to the Red Cliffs township. A pump station in Red Cliffs pumps water from the Murray River where the water is treated and then pumped to a water tower located within the centre of the township and gravity fed into the reticulation system. The treatment plant currently has capacity to supply up to 9.5ML/day. Current average daily consumption during the summer months is below 6.0ML/day.
- > Powercor has high voltage and low voltage networks in the township with sufficient capacity to adequately service all existing development. Powercor has a 66kV terminal substation in Red Cliffs which supplies the zone substations across the Mildura region.
- > Gas is generally available throughout the Red Cliffs residential area and is supplied via a 100mm transmission pressure main that extends from Berri, SA. Gas can be readily supplied to future planned development areas in Red Cliffs subject to the upgrades to the Mildura supply being implemented.
- > The township is serviced with copper voice services and ADSL/ADSL2+ internet services. Access to high speed broadband appears to be reasonable with spare ports available and multiple providers.
- > There are a number of off-road shared paths within the Red Cliffs area, including those along Fitzroy Avenue, Indi Avenue, Cassia Street and Nerrum Avenue.
- > The existing bus service runs from Mildura to Red Cliffs via Irymple with between 15-17 services per day on weekdays and 4-9 services per day on weekends.
- > Roads used to access residential development areas (e.g. Indi Avenue) may require upgrade to allow for the increased traffic volumes, pedestrians and cyclists resulting from the higher population in these precincts.

housing market

Red Cliffs is considered an affordable residential location, with the median house price in 2011 (\$170,000) approximately -20% below the median of Mildura (RC) and -39% below regional Victoria. This affordability, along with the lifestyle features associated with living in a small settlement within commuting distance to employment and services in Mildura, has contributed to residential development occurring on the fringes of the settlement.

Over the 2001-2010 period, Red Cliffs experienced an average of 6 new dwelling building permits per annum based on ABS data; according to Council's more recent data, Red Cliffs experienced an average of 26 new dwelling building permits per annum between 2010 and 2012



land supply and demand

indicative dwelling requirements (net), 2012-2032

Total new dwelling requirements: 300 to 400 dwellings. Indicative distribution by zone:

R1Z:	290 to 380 dwellings
LDRZ:	10 to 20 dwellings
Other Zone:	10 to 20 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table below indicates the existing supply of land in Red Cliffs.

	R1Z	LDRZ	TZ
potential lots	1143 (15 lots/ha)	26 (0.45 lots/ha)	N/A
number of existing vacant lots	129	14	N/A
number of existing developed lots with subdivision potential	16	0	N/A
land (hectares)	95	12.8	N/A

opportunities and constraints

- > Opportunity to continue to provide an affordable residential location for residents in the Mildura region seeking a small township lifestyle in close proximity to Mildura.
- > Separation of the township by the Calder Highway and rail line into two separate areas.
- > Single lane highway accessing Mildura.
- > Implications of an ageing population on future dwelling stock, population levels and services.
- > Excellent educational and sporting facilities.
- > Interesting history and the southern most major settlement in the north-east of the municipality
- > Requirement to maintain or increase population in order to maintain a vibrant town centre.
- > Major planning studies have been undertaken to assess infrastructure works required to accommodate short to long term development.
- > Declining industrial areas and potential future development in these areas
- > Serviced by sewer, potable water, power, stormwater drainage, telecommunications and gas supplies.

recommendations

- > Improve access between Red Cliffs and Mildura to support on-going development of the town and undertake upgrades to the town centre to refresh and strengthen township identity.
- > Improve provision of appropriate housing for older persons.
- > Review infrastructure and community facility standards to ensure they meet current and future needs.



merbein

mildura housing & settlement strategy

overview

Merbein is located approximately 9 km to the west of Mildura, and is one of the urban settlements in the Rural City of Mildura. The settlement area, largely consisting of the established residential areas, contained a population of approximately 1,960 residents in 2011. The settlement runs along the northern side of the existing rail line with industrial uses occurring along this alignment and the commercial spine along the Ranfurly Way / Commercial Street beyond this.

Residential areas generally follow a grid alignment, although this grid skews to the east and more recent subdivision in the north have introduced cul-de-sac's. These residential areas are pleasant and retain a rural township feel due to the wide road reserves, and unformed kerbs. The residential areas extend back to an escarpment to the north. Land beyond the escarpment is flood prone and there remains considerable residential land available for development at the top of the escarpment. A generous recreation precinct to the north east of the town looks out over the floodplain, beyond Whiting Street. A significant aged care facility has established adjoining this reserve. There are discrete areas of low density land to the south east and another isolated pocket to the north west which has not yet been developed.

Merbein's residents are serviced by a variety of services and facilities within the Merbein settlement (e.g. retail, two schools, early childhood learning, limited health facilities, recreation facilities, etc) and nearby Mildura. The town centre is relatively poorly presented, although a new community centre is currently under construction at the corner of the Calder Highway and Ranfurly Way. Ranfurly way provides access to the Mildura via Flora Avenue and Eleventh Street, with the CBD of Mildura 12kms away.

Merbein contains an industrial area which provides employment opportunities for local residents, who are generally characterised by lower incomes. Beyond the industrial areas to the south of the railway line a row of existing residences stretch south along the Calder Highway. A second industrial area closer to the Murray represents a significant precinct in itself and adjoining it is a lookout offering panoramic views across the Murray to New South Wales.

key demographics

Estimated resident population:	1,960 persons
Median annual household income:	\$35,640 (-22% below median for Mildura (RC))
Couple families with children:	32% of families c.f. 41% for Mildura (RC)

age structure

Pre-school and school age (0-19 years):	26% (28%)
Working age (20-64 years):	51% (56%)
Retirees (65+ years):	23% (16%)



pre-school and school age
(0-19 years)
working age (20-64 years)
retirees (65+ years)

tenure type

Owned outright:	37% (34%)
Rented:	28% (31%)
Owned with a mortgage:	34% (34%)
Other tenure type:	1% (1%)



owned outright
owned with mortgage
rented
other tenure types

Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.

community infrastructure

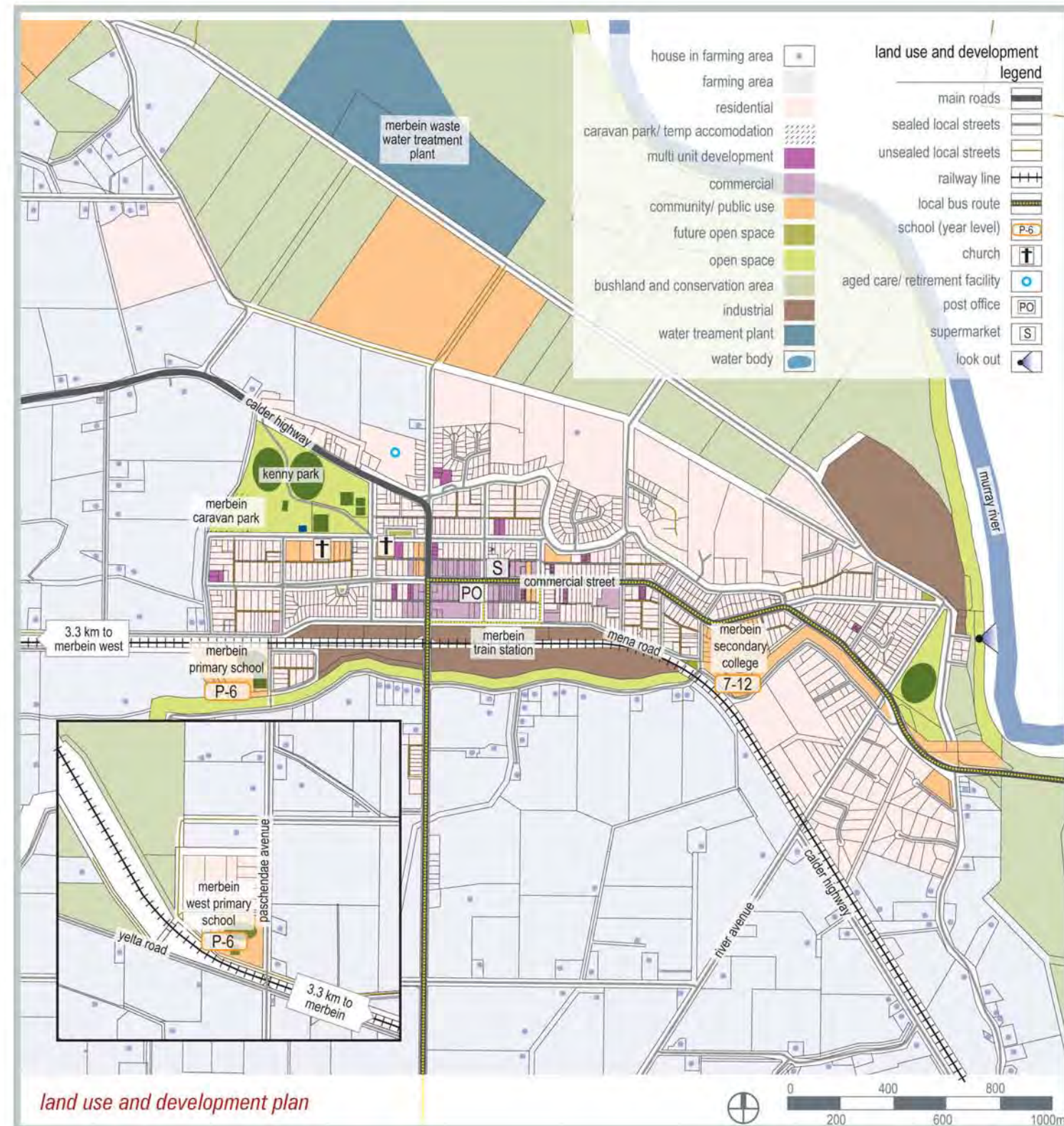
	aged services
	independent living
	education: secondary
	education: primary
	early years services
	health and community services
	community centres
	libraries
	emergency / judicial
	places of worship
	sports and recreation
	parks and open space

housing market

Merbein is considered an affordable residential location with the median house price in 2011 (\$158,500) approximately -25% below the median of Mildura (RC) and -43% below regional Victoria.

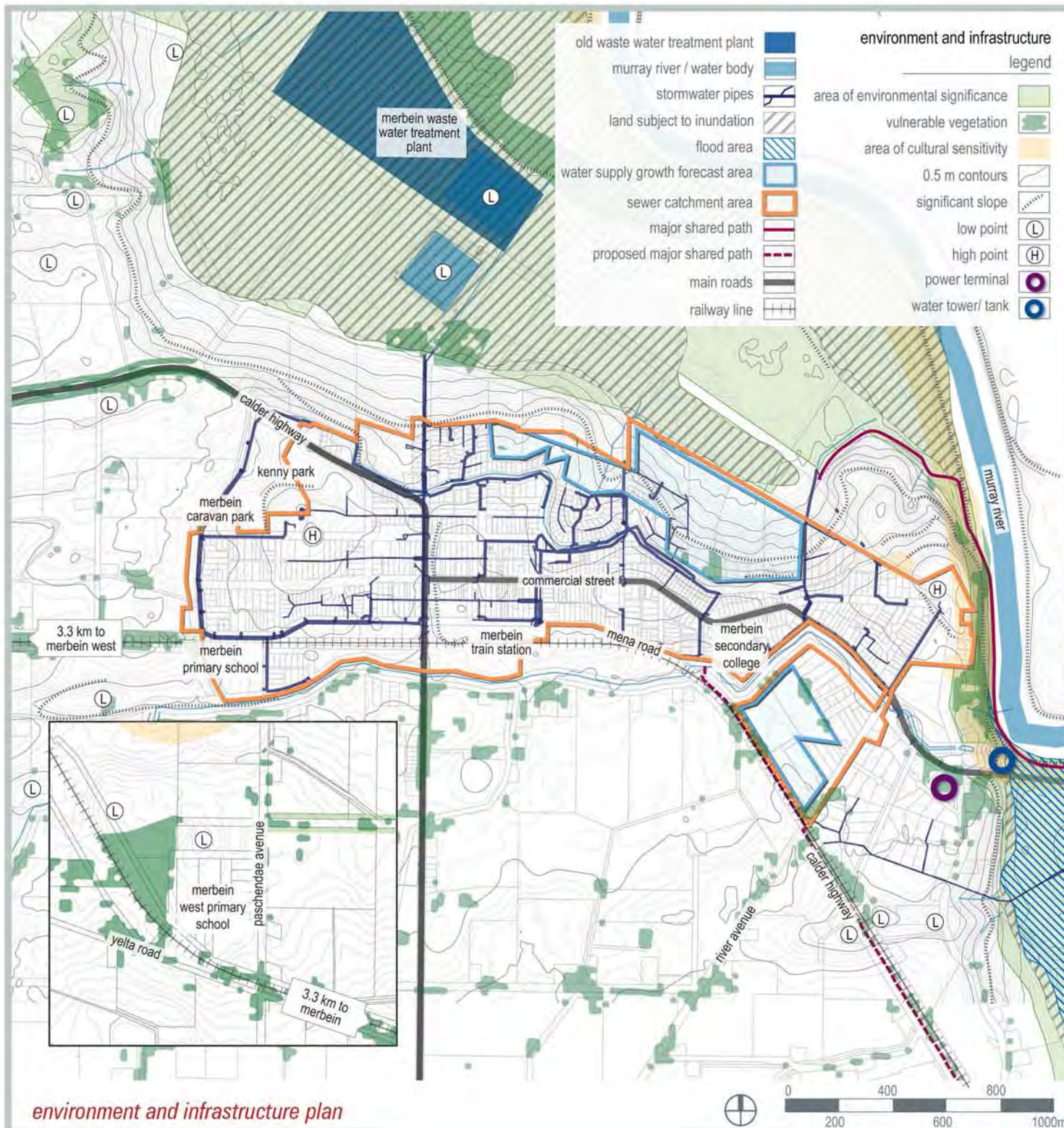
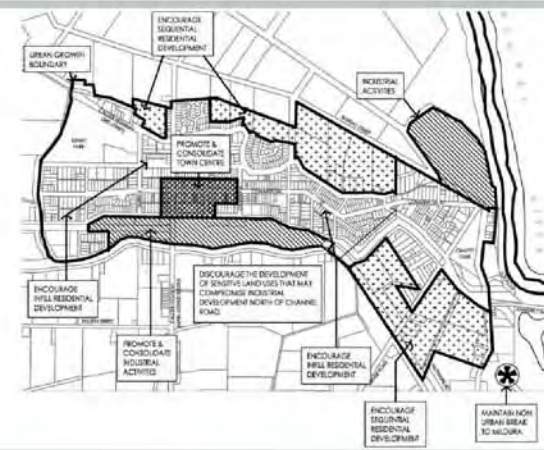
Only limited residential development has occurred in Merbein in recent years, with an average of 5 new dwelling building permits per annum occurring between 2001-2010 based on

ABS data; according to Council's more recent data, the trend on limited development has continued, with only an average of 3 new dwelling building approvals occurring over the 2010 to 2012 period.



policy influences

There is relatively little existing policy related to Merbein. The relatively stable residential market means there is less pressure on this settlement and therefore less need for regulation. However, policy does seek the retention of the settlement as a service centre for the residents of the surrounding areas. Policy also current seeks the consolidation of the town centre and the provision of additional infill development in the existing urban areas, with many of the existing dwellings occupying substantial sized blocks.



environment and infrastructure plan

infrastructure considerations

Merbein township has the following existing and future infrastructure:

- > There is an existing stormwater drainage has three main outfalls to North, however it is aged and has insufficient capacity to service existing development. Future development to the North may be achievable by providing bio-retention areas.
- > Reticulated sewerage services are available and wastewater is conveyed to the Merbein Wastewater Treatment Plant to the North West of the township. Minor upgrades and extensions will be required in order to support new development in the township.
- > Potable water is supplied to the Merbein from the Mildura Water Treatment Plant. Water supply to new development will require routine extension and augmentation.
- > Powercor has high voltage and low voltage networks in the township with sufficient capacity to adequately service all existing development.
- > Currently there is no reticulated natural gas supply to the Merbein.
- > Designated cycle lanes are provided along Commercial Street through to the Calder Highway/Main Avenue North, along sections of Rielly Street and along Ranfurly Way to Flora Avenue and a number of off-road trails exist within the area.
- > The existing bus service runs from Mildura to Merbein via Seventeenth Street (9-10 services per day) and Eleventh Street (4-5 services per day).
- > Calder Highway, Chaffey Street and Main Avenue North intersection may require review.



land supply and demand

indicative dwelling requirements (net), 2012-2032

Total new dwelling requirements: 150 to 200 dwellings. Indicative distribution by zone:

R1Z: 140 to 190 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table below indicates the existing supply of land in Merbein.

	R1Z	LDRZ	TZ
potential lots	484 (15 lots/ha)	48 (0.45 lots/ha)	N/A
number of existing vacant lots	45	24	N/A
number of existing developed lots with subdivision potential	56	1	N/A
land (hectares)	36	21.9	N/A

opportunities and constraints

- > Opportunity to provide an affordable residential location for residents in the Mildura region seeking a small township lifestyle in close proximity to Mildura.
- > Implications of an ageing population on future dwelling stock, population levels and services.
- > Streetscape upgrades to the main commercial spine may be beneficial and assist in existing perceptions.
- > Possibility to better (carefully) utilise proximity to environmental assets to the north and south east of town.
- > Excellent community services and facilities.

recommendations

- > Strengthen the identity of Merbein as a separate, well serviced township closely accessible to Mildura.
- > Undertake upgrades to key areas of the township.
- > Provide some opportunities for the introduction of a Rural Living Zone in Merbein, providing a greater diversity of residential opportunities
- > Review infrastructure and community facility standards to ensure they meet current and future needs.

cardross

mildura housing & settlement strategy

overview

Cardross is a small rural settlement located approximately 11 km to the south of Mildura to the west of Red Cliffs. The settlement area consists of Township (TZ) and Farming (FZ) land. Approximately 460 residents (2011 estimate) live in the settlement of Cardross, with socioeconomic characteristics reflecting an area with a high proportion of families with children, and incomes above the medians for Mildura (RC). A significant share of households (45%) currently have a mortgage, compared to the average for Mildura (RC) (34%).

Cardross is currently a very small but attractive settlement, comprising a cluster of around 30 dwellings, supported by a Primary School and local shop / post office which serves as the local hub. This local hub also provides take away pizza and a range of other local services. The township also has a public hall in addition recreation reserve to the north, which is currently being upgraded and will provide additional community facilities including a playground, resurfaced netball courts and new club rooms for community use when complete. The neat and tidy main street, with sealed shoulders, curb and channel and grassed nature strips is attractive and neat.

Dwellings are relatively mixed, but primarily single storey and constructed of brick or weatherboard with many displaying carefully tended gardens. New development is occurring on spare lots along the main street frontage (Dairtnunk Ave) and the role of the township within the broader older irrigation area is clear though the number of private post office boxes utilised in the township, which far outnumber the dwellings present.



key demographics

Estimated resident population:	460 persons
Median annual household income: (+24% above median for Mildura (RC))	\$56,930
Couple families with children: (c.f. 41% for Mildura (RC))	55% of families

age structure

Pre-school and school age (0-19 years):	32% (28%)
Working age (20-64 years):	57% (56%)
Retirees (65+ years):	11% (16%)



pre-school and school age: 32%
working age: 57%
retirees: 11%

tenure type

Owned outright:	33% (34%)
Rented:	20% (31%)
Owned with a mortgage:	45% (34%)
Other tenure type:	2% (1%)



owned outright: 33%
owned with mortgage: 45%
rented: 20%
other tenure types: 2%

Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.



infrastructure considerations

Cardross township has the following existing and future infrastructure:

- > Limited drainage exists within the township. Topography makes the Cardross area difficult to drain. Development should be restricted to minimal areas of low density residential development as a result. All residential lots are serviced by a septic system. There is no reticulated sewer system available to service residential development and it is unlikely to be provided.
- > Potable water is supplied to the Cardross from the Lower Murray Water treatment plants in Mildura. Upgrades to the water supply system will likely be required to accommodate increased growth.

- > Powercor has electricity networks in the township with sufficient capacity to adequately service all existing development.
- > The township relies on bottled gas for gas supply. The high pressure transmission main extends to the south of Cardross however a direct connection to this main for reticulation is not viable.
- > The township is serviced with copper voice services and ADSL/ADSL2+ internet services from the Red Cliffs Exchange. Access to high speed broadband appears to be possible.
- > There are no bus routes in Cardross.



land use and development plan

policy influences

Most of the township is zoned Township Zone, with parcels of land within the Public Conservation and Resource Zone, Public Parks and Recreation Zone and Public Use Zone. The township is surrounded by Farming zoned land.

There is no policy reference within the Mildura Planning Scheme to Cardross, although as with other smaller settlements in Mildura, local policy supports the continued growth and role of the town through the provision of adequate residential land, convenience shopping and community services for their surrounding areas.

community infrastructure



community centres

education: primary

sports and recreation

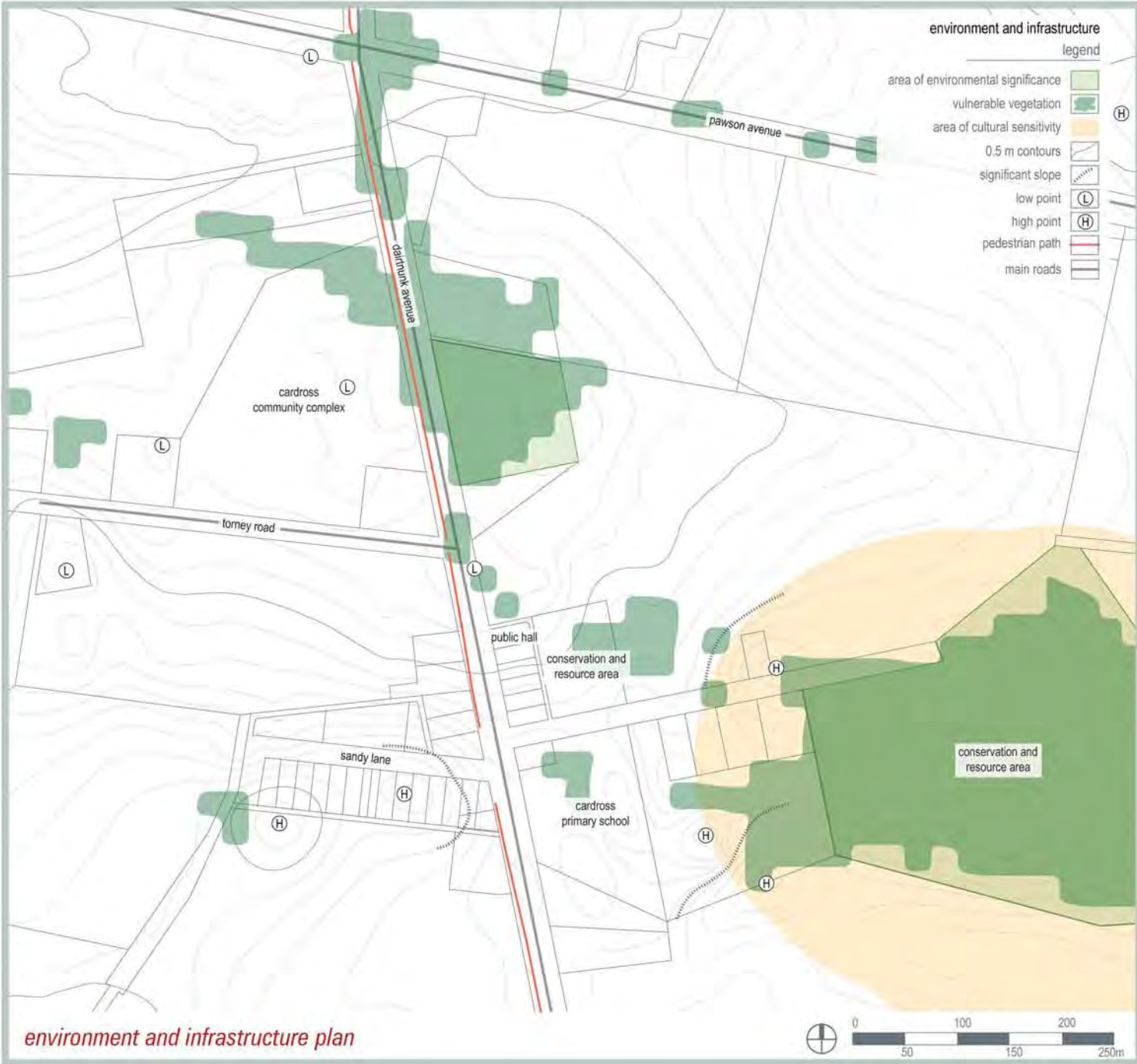
housing market

The residential property market in Cardross largely consists of rural lifestyle lots, while a review of the existing properties on the market also highlights a number of vineyards for sale.

Compared to other locations, limited sales and development activity has occurred in Cardross in recent years. Over the 2001-2010 period, Cardross experienced an average of two new dwelling building permits per annum based on ABS data, and according to Council’s more recent data, experienced an average of two new dwelling building permits per annum between 2010 and 2012.

opportunities and constraints

- > Potential exists for Cardross to expand its role as a rural lifestyle location, having regard for a general demand for larger lifestyle lots in the region, particularly those in relatively close proximity to employment and services offered in Mildura.
- > Pleasant town centre and excellent existing and currently developing facilities.
- > Expansion of the township will need to consider drainage requirements given topography and any development will need to be on larger lots capable of addressing these issues.
- > New shared path connection to Mildura but no bus services.



land supply and demand

‘indicative’ dwelling requirements (net), 2012-2032

Total new dwelling requirements: 20 to 30 dwellings

Indicative distribution by zone:

TZ: 10 to 15 dwellings

FZ: 10 to 15 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table below indicates the existing supply of land in Cardross.

	R1Z	LDRZ	TZ
potential lots (0.4 lots/ha)	N/A	N/A	4
number of existing vacant lots	N/A	N/A	3
number of existing developed lots with subdivision potential	N/A	N/A	0
land (hectares)	N/A	N/A	4.6



recommendations

- > Provide rural living opportunities around Cardross in clearly designated areas to support township.
- > Promote investment in improved transport connections in Cardross to improve access to services and facilities.
- > Review infrastructure and community facility standards to ensure they meet current and future needs.



irymples

mildura housing & settlement strategy

overview

Irymple is located along the Calder Highway, approximately 5km to the south of Mildura, and is one of the urban settlements in the Rural City of Mildura. The settlement area consists of the existing township and the surrounding rural areas. The settlement area contained a population of approximately 3,590 residents in 2011. Various developments in the intervening land between Mildura and Irymple mean the settlement has a very close relationship with the urban area of Mildura. The services and facilities offered in Mildura are easily accessible to Irymple residents, particularly those located along Fifteenth Street. There is a significant industrial precinct located in the southern part of the settlement.

The settlement is expanding to the north where an existing open channel indicates the current extent of growth planning. There is, however, also a large number of dwellings in the area to the north of the township, which blur this settlement edge. In addition, limited retail and town centre services are currently provided in Irymple. However, plans exist for the development of new town centre in the near future and retail facilities have been proposed. The relationship with the existing retail development along Fifteenth Street (which continues to expand) is limiting development within the 'town centre' of Irymple and additional incentives or development may be beneficial.

The town's civic and community uses are scattered to either side of the Calder Highway which runs through the town centre, but here is no clearly defined central meeting space within the centre. The settlement also has three schools in the settlement. Housing stock is generally conventional suburban although there are some pockets of larger lots, which exhibit a much more vegetated character.



key demographics

Estimated resident population: 3,590 persons

Median annual household income: \$50,380 (+ 10% above median for Mildura (RC))

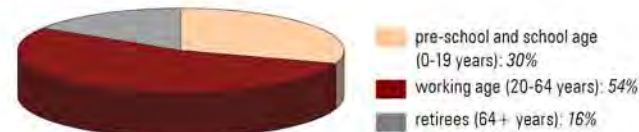
Couple families with children: 47% of families c.f. 41% for Mildura (RC)

age structure

Pre-school and school age (0-19 years): 30% (28%)

Working age (20-64 years): 54% (56%)

Retirees (65+ years): 16% (16%)



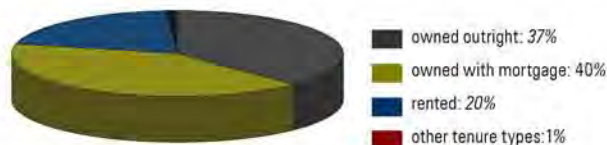
tenure type

Owned outright: 37% (34%)

Rented: 20% (31%)

Owned with a mortgage: 40% (34%)

Other tenure type: 1% (1%)



Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.

community infrastructure



land supply

'indicative' dwelling requirements (net), 2012-2032

Total new dwelling requirements: 400 to 500 dwellings
Indicative distribution by zone:

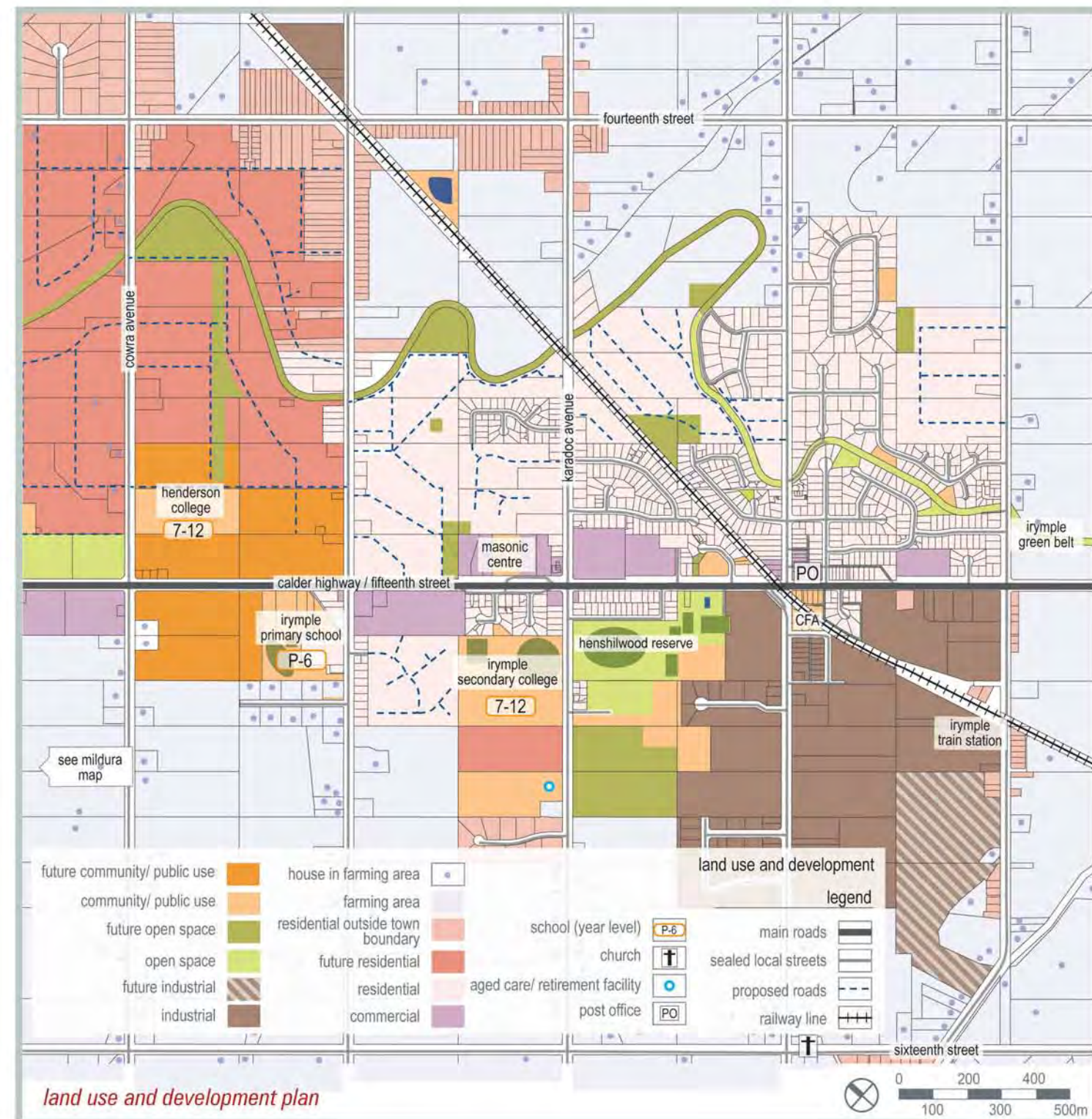
R1Z: 380 to 480 dwellings
FZ: 10 to 20 dwellings
Other Zone: 10 to 20 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table to the left indicates the existing supply of land in Irymple.

	R1Z	LDRZ	TZ
potential lots (15 lots/ha)	1062	N/A	N/A
number of existing vacant lots	64	N/A	N/A
number of existing developed lots with subdivision potential	294	N/A	N/A
land (hectares)	88	N/A	N/A



policy influences

As a result of the proximity to the urban area of Mildura and the pressure for development in the intervening farming zoned land (which is affected by the MOIA incorporated document) there is a substantial amount of policy in relation to Irymple. Most notable is the townships designation as one of three dedicated growth areas for the municipality (the others being Mildura and Mildura South). The *Mildura Irymple Interface Study* provides detail about the intervening

land between Mildura and Irymple, putting in place a long term vision for the area which comprises most of the policy direction in relation to Irymple.

The township has also had a recent structure plan prepared which includes additional detail about the residential growth that is to occur in the northern part of the township. The structure plan also seeks the development of a town centre and connections to the urban area of Mildura via a 'greenway'.

housing market

Irymple is considered an affordable residential location, with the median house price in 2011 (\$228,000) approximately +8% above the median of Mildura (RC) and -19% below regional Victoria. This affordability, along with the lifestyle features associated with living in a small settlement within commuting distance to services in Mildura, has contributed to residential development occurring on the fringes of the settlement and its surroundings.

Over the 2001-2010 period, Irymple experienced an average of 13 new dwelling building permits per annum based on ABS data; according to Council's more recent data, Irymple experienced an average of 25 new dwelling building permits per annum between 2010 and 2012. Council's building permit data indicates that 66% of new dwellings are occurring on Residential 1 (R1Z) land and 32% are occurring in Farm Zone (FZ) land.

infrastructure considerations

Irymple township has the following existing and future infrastructure:

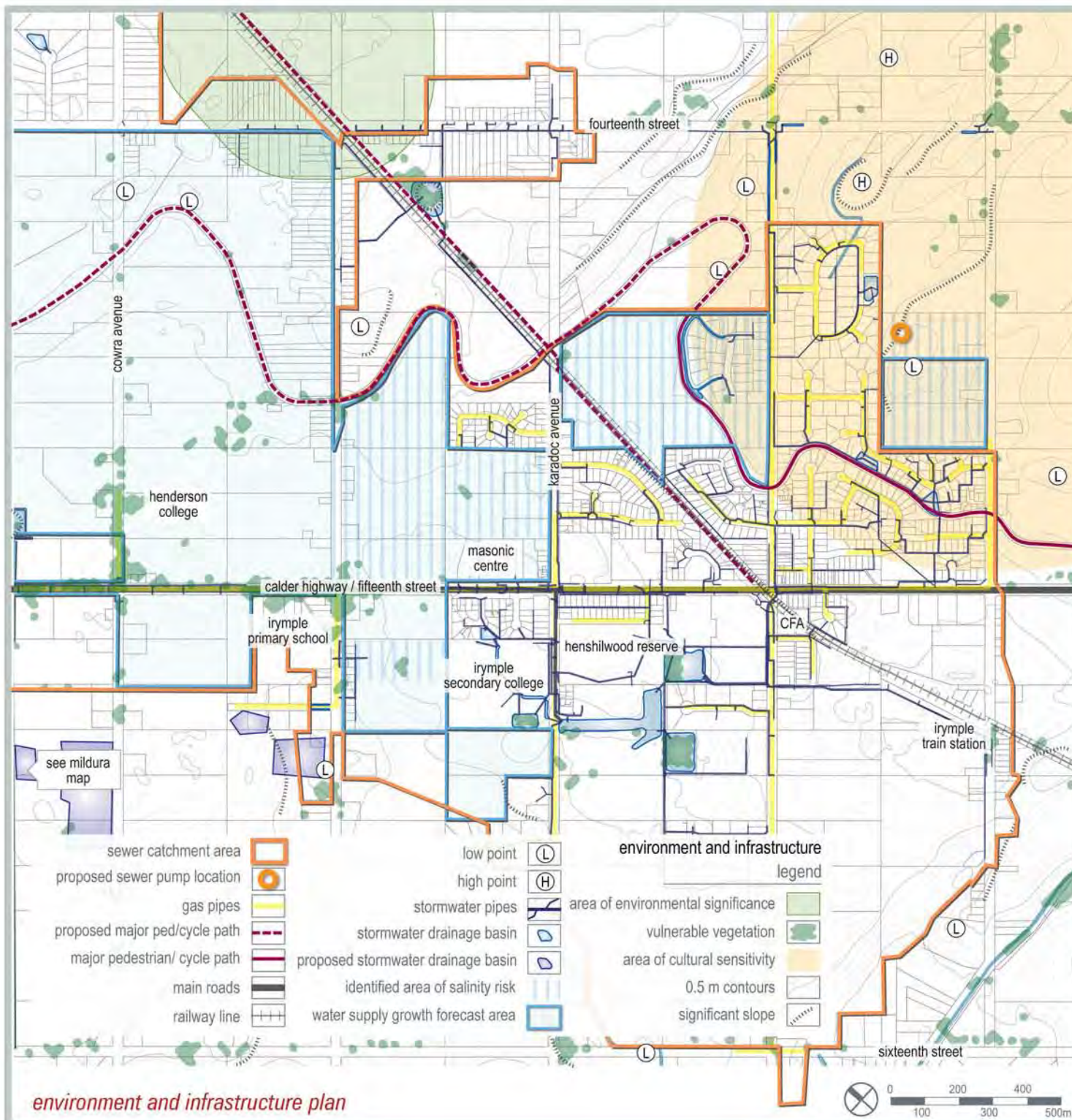
- > Irymple is currently serviced by a piped drainage network which discharges water to the Karadoc basin. Major upgrades of Karadoc basin completed and additional upgrades are planned. Future development of Irymple will require major upgrades. The LMW irrigation drainage system may provide an efficient solution to partly servicing future growth areas.
- > Medium to high density housing is serviced by the LMW reticulated sewerage system which is discharged to the Koorlong WWTP. Some houses have on-site septic systems. Minor upgrades will be required to support new development in the township with proposals for a new sewer pumping station on the eastern side of town.
- > Potable water is supplied to the Irymple area from the two Water Treatment Plants within Mildura.
- > Gas is generally available throughout Irymple.
- > The township is serviced with copper services and ADSL/ADSL2+ internet however access to high speed broadband is quite limited.
- > There are two bus services from Mildura to Red Cliffs via Irymple (15-17 services daily on weekdays, 4-9 services daily on weekends).

opportunities and constraints

- > Is a designated growth area, but this growth must be carefully managed.
- > Opportunity to continue to provide an affordable residential location for residents in the Mildura region seeking a small township lifestyle in close proximity to Mildura.
- > The development of a new town centre is likely to stimulate additional residential development in Irymple.
- > Irymple is generally located in area of low lying land; as such stormwater drainage is a significant issue restricting development of the area. Opportunities to consider this longer term in conjunction with drainage needs for Nichols Point and Mildura.
- > Major infrastructure works have been undertaken with future short to long term works planned to provide sufficient infrastructure for the development of the full catchment area.
- > Strip retail development along Fifteenth Street will compromise the township identity.
- > Opportunities to maximise the connections to the urban area of Mildura for active transport users.
- > Existing larger lot developments could serve as benchmark for transition between urban centres.
- > Existing industrial area with long term expansion opportunities to provide local jobs.

recommendations

- > In agricultural areas north of Irymple where existing 'rows' and 'clusters' of houses, prepare a common sense guidelines to limit infill housing.
- > Acknowledge the 'interface' area between Irymple and Mildura is comprised and will experience a form of urban development in the medium to long term.
- > Strengthen the identity and character of Irymple in order to retain its individual identity.
- > Develop processes for the financing of upfront provisions of stormwater and drainage infrastructure well in advance of the development.
- > Consider the best mechanism for developing future urban land and ensure DPO's provide guidance regarding staging of development.



koorlong

mildura housing & settlement strategy

overview

Koorlong is a small rural settlement located approximately 12km to the south-west of Mildura. Approximately 460 residents (2011 estimate) live in the settlement of Koorlong, with socioeconomic characteristics reflecting an area with a high proportion of families with children, and incomes above the medians for Mildura (RC). A significant share of households (55%) currently have a mortgage, compared to the average for Mildura (RC) (34%). Koorlong currently comprises a Primary School, community hall and local shop / post office, supported by a couple of relatively recent low density subdivisions and dwellings on surrounding farming land. To the south and west of the settlement there are extensive areas of conservation and public land, including a large area of State Forest, and some significant wetlands to the west. Further to the south of Koorlong is the large area of industrial zoned land intended to accommodate much of Mildura's future large scale industrial growth.

The two (relatively) new low density subdivisions which comprise the majority of residences in Koorlong reflect a consistent character of neat, relatively modest low density dwellings, many of which are of a relatively high quality. Public realm treatments in the subdivisions reflect the rural nature with swale drains, landscaping and extensive use of post and wire fencing, which creates an attractive environment. The streetscape character of the 'main street' (Benetook Avenue) however, does not reflect this and is relatively unformed with wide gravel verges and little consistent landscape or other treatments. There are some additional dwellings to the west and south on farming land which are associated with the settlement but land to the east is relatively undeveloped. Although there are some commercial operations present, there appears to be little farming occurring in the immediate vicinity of the settlement.



key demographics

Estimated resident population: **460 persons**

Median annual household income: **\$64,480**
(+ 41% above median for Mildura (RC))

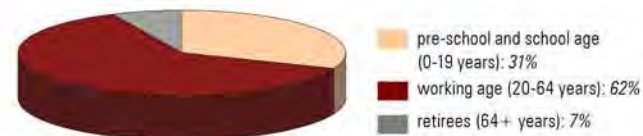
Couple families with children: **55% of families**
c.f. 41% for Mildura (RC)

age structure

Pre-school and school age (0-19 years): **31% (28%)**

Working age (20-64 years): **62% (56%)**

Retirees (65+ years): **7% (16%)**



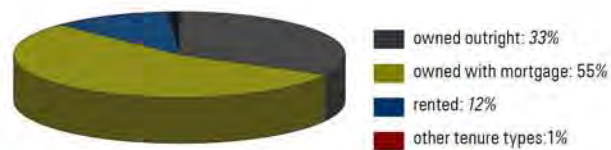
tenure type

Owned outright: **33% (34%)**

Rented: **12% (31%)**

Owned with a mortgage: **55% (34%)**

Other tenure type: **1% (1%)**



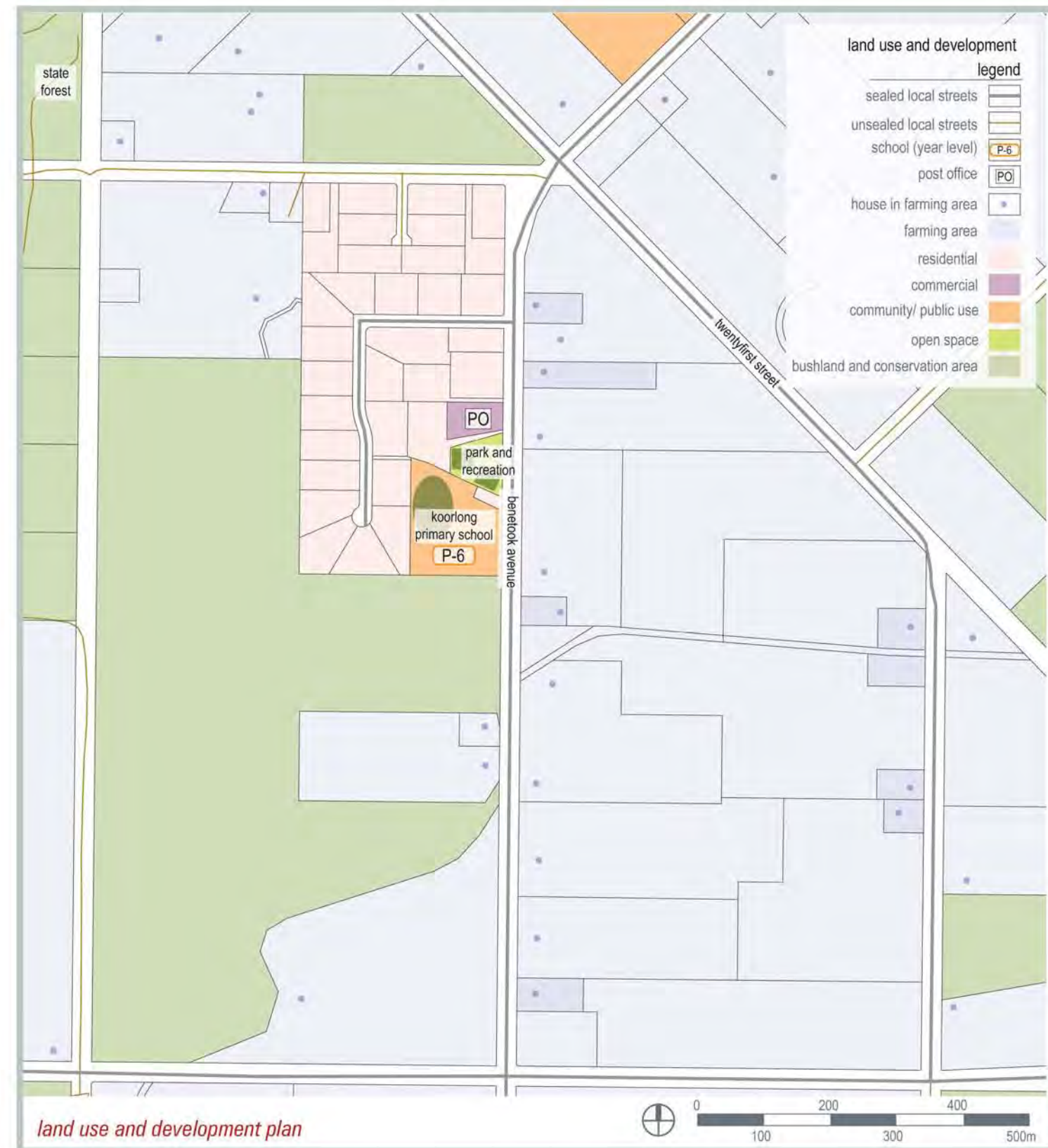
Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.



policy influences

Most of the township is zoned Low Density Residential, with parcels of land within the Public Conservation and Resource Zone, Public Parks and Recreation Zone and Public Use Zone. The township is surrounded by Farming zoned land the towns shop is zoned Business 1. As with other smaller settlements in Mildura, local policy supports the continued growth and

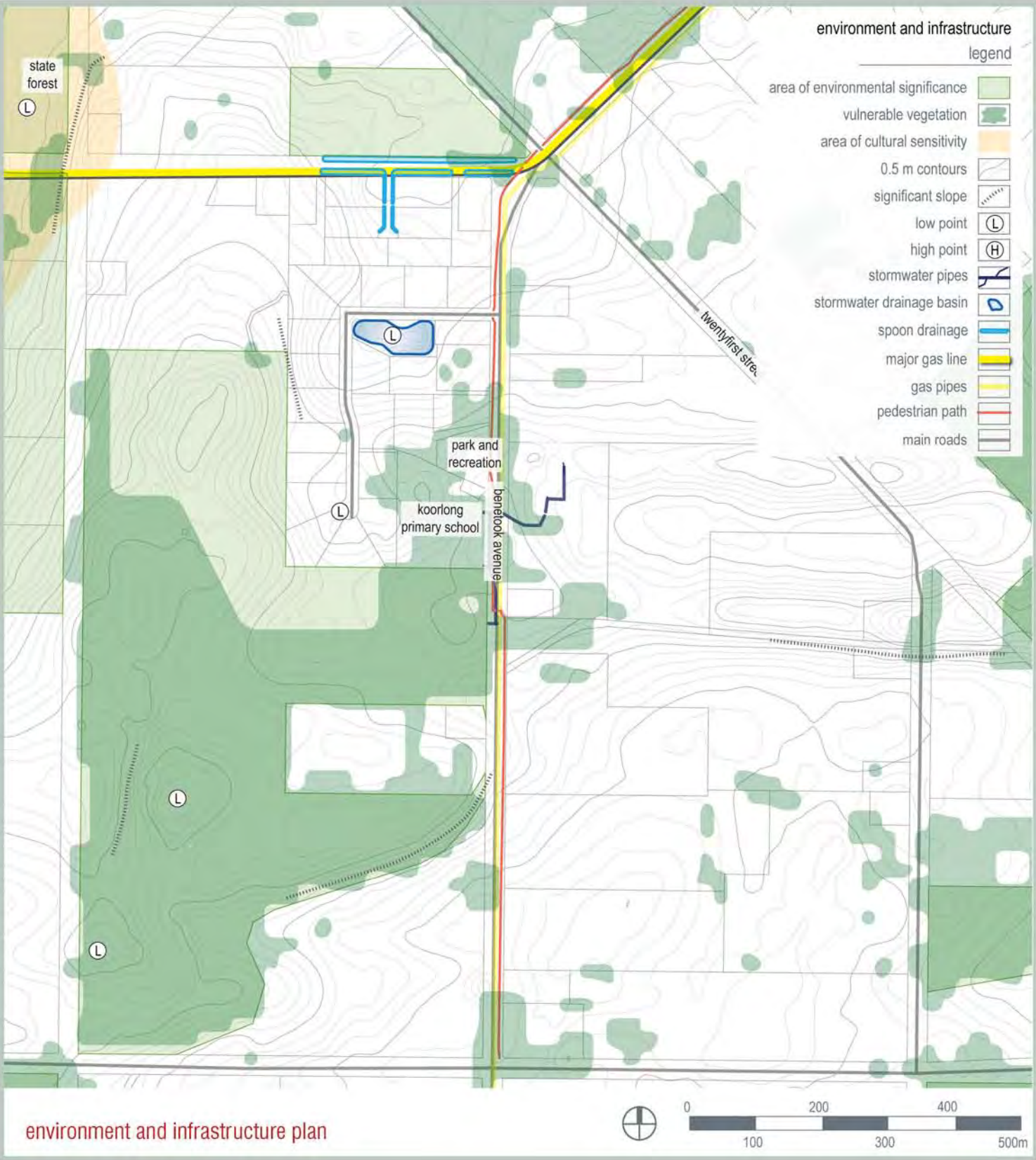
role of the settlement through the provision of adequate residential land, convenience shopping and community services for their surrounding areas.



infrastructure considerations

- > All residential lots are serviced by a septic system. Given the close proximity of the Koorlong Waste water treatment plan the provision of reticulated sewer to service long term growth may be viable with the installation of a standalone pumping station.

- > Potable water is supplied to Koorlong from the Mildura Treatment Plants. Major upgrades to the water supply system may be required to accommodate future growth.
- > Powercor has electricity networks in the township with sufficient capacity to adequately service all existing development.



land supply and demand

'indicative' dwelling requirements (net), 2012-2032

Total new dwelling requirements: 20 to 30 dwellings
Indicative distribution by zone:

- LDRZ: 10 to 15 dwellings
- FZ: 10 to 15 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table below indicates the existing supply of land in Koorlong.

KOORLONG	R1Z	LDRZ	TZ
potential lots (0.45 lots/ha)	N/A	2	N/A
number of existing vacant lots	N/A	2	N/A
number of existing developed lots with subdivision potential	N/A	0	N/A
land (hectares)	N/A	0.8	N/A

community infrastructure

- education: primary
- early years services

housing market

The residential property market in Koorlong largely consists of rural lifestyle lots. Compared to other locations, limited sales and development activity has occurred in Koorlong, with a limited supply of vacant land contributing to the lack of activity.

Over the 2001-2010 period, Koorlong experienced an average of five new dwelling building permits per annum based on ABS data, and according to Council's more recent data, experienced an average of two new dwelling building permits per annum between 2010 and 2012.

opportunities and constraints

- > Potential exists for Koorlong to expand its role as a rural lifestyle location, having regard for a general demand for larger lifestyle lots in the region, particularly those in relatively close proximity to employment and services offered in Mildura.
- > Treatment of drainage and waste should be carefully considered due to proximity to wetlands.
- > Opportunities to explore connections to the nearby wastewater treatment plant.
- > Proximity to industrial estate may increase opportunities for local jobs.
- > Opportunity exists to link wetlands and other open space to township or to improve biodiversity outcomes through community engagement.
- > Support for local school, shop and existing community facilities.
- > Existing character of subdivisions sets a standard for integration of landscaping and rural character within any new subdivisions.
- > Currently little land available for development.

recommendations

TO BE CONFIRMED AS PART OF BACKGROUND STAGE



underbool

mildura housing & settlement strategy

overview

Underbool is a small rural settlement located on the Mallee Highway, approximately 120km south-west of Mildura and 50km to the west of Ouyen. For the purpose of this study, the Underbool settlement contains the Township Zoned (TZ) land and the immediate surrounding areas. Underbool plays a service role for the surrounding agricultural areas. Unlike Walpeup, which has a closer relationship with Ouyen and Murrayville, which relates to Pinnaroo, Underbool is relatively isolated, sitting midway between Ouyen and Murrayville. This means the town is relatively self-contained, although beyond primary school, students must travel outside the area.

The town does not seem to have had any significant recent investment. Along the main street (Cotter Street / Mallee Hwy) is the Primary School, Preschool, garage, large brick pub, police station and a couple of agricultural suppliers, as well as the local store / café / Post Office.

The residential areas of the town have an ordered and regular subdivision pattern and are generally bounded by Underbool South Road, Fasham and East Streets, with larger and consolidate lot to the south. To the north of the highway and railway line are a large recreation reserve nestled into the Mallee and the town's water treatment plant which has been recently upgraded. A golf course marks the western boundary. The town's residential buildings are generally older with a mix of smaller weatherboard and fibro houses with later brick dwellings which tend to be larger, although still single story. There is a notable collection of attractive older weatherboard dwellings with wide verandahs in the central area of the town.



key demographics

Estimated resident population:	200 persons
Median annual household income: (+14% above median for Mildura (RC))	\$52,090
Couple families with children: c.f. 41% for Mildura (RC)	38% of families

age structure

Pre-school and school age (0-19 years):	26% (28%)
Working age (20-64 years):	52% (56%)
Retirees (65+ years):	22% (16%)



tenure type

Owned outright:	78% (34%)
Rented:	5% (31%)
Owned with a mortgage:	13% (34%)
Other tenure type:	4% (1%)



Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.

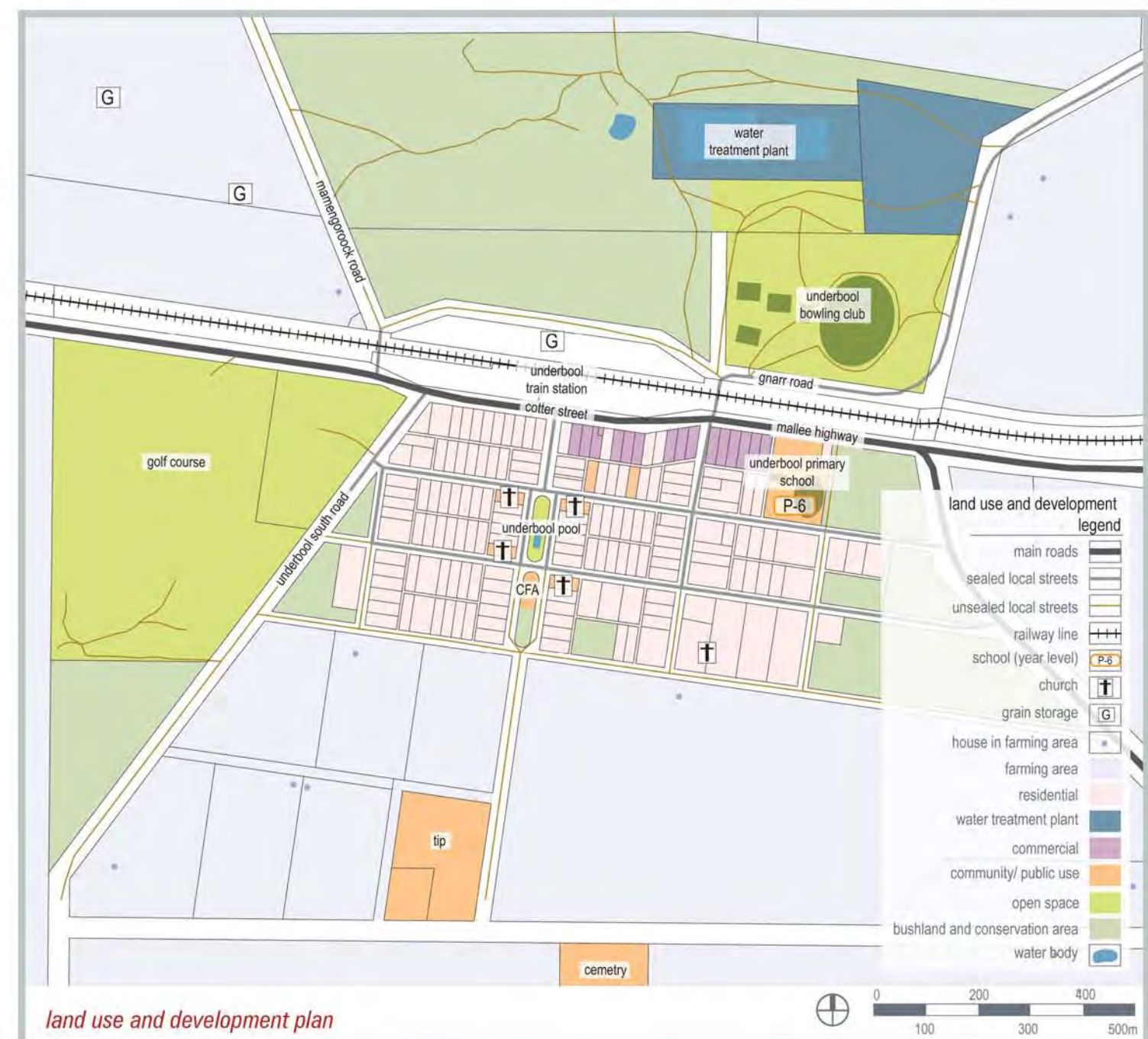


policy influences

Most of the township is zoned Township Zone, with parcels of land within the Public Conservation and Resource Zone, Public Parks and Recreation Zone and Public Use Zone.

The township is surrounded by Farming zoned land. In relation to Underbool, local policy supports the continued growth through the provision of adequate residential land, convenience shopping and community services for their surrounding areas and as gateways to public land such as National Parks.

Underbool is identified in local policy as having a notable proportion of the municipalities population.



infrastructure considerations

- > Rural drainage servicing with negligible formalised drainage or stormwater management infrastructure. Any development would require on-site detention and management of stormwater.
- > Septic tanks service the townships. No reticulated sewer or treatment plants are located close. Further development would likely be serviced by septic tanks, hence low density only could be supported.
- > GWM Water has a potable water supply system in this township. This water is pumped from the Wemen pumps in Liparoo through a rising main to Underbool via Ouyen. The existing water supply is suitable for short term, however the mains may need to be extended.

- > Powercor has electricity networks in the townships with sufficient capacity. Power is supplied the Ouyen substation.
- > The township relies on bottled gas bottles for gas supply. Underbool is not located in close proximity to a transmission line. There are currently no future plans to provide the township with a reticulated gas service.
- > The township are serviced with copper voice services and ADSL internet services from the Underbool Exchanges however access to high speed broadband is not available.
- > The 'Speedlink' from Albury to Adelaide which runs daily, return is the only bus route through Underbool.

community infrastructure



education: primary

early years services

health and community services

libraries (mobile)

emergency / judicial

places of worship

sports and recreation

parks and open space

opportunities and constraints

- > Impact of limited employment opportunities, service provision and trends of declining small rural communities on future housing demand.
- > Connections to the local agricultural community, while less numerically will retain importance.
- > Implications of an ageing population on future dwelling stock, population levels and services.
- > Relatively generous amount of services which will need population to sustain them.
- > Attractive older housing stock.
- > Limited connectivity could be improved to increase attractiveness of township to new residents.
- > Position on main highway means potential to attract passing traffic to generate economic development opportunities.
- > Existing vacant commercial premises and flexible zoning mean opportunities exist.

housing market

Limited residential sales and development has occurred in Underbool in recent years, with less than one new dwelling permit occurring per annum over the past 10 or so years. A review of current properties on the market shows that no residential properties are currently in the market.

land supply and demand

'indicative' dwelling requirements (net), 2012-2032

Limited opportunity for any significant extent of residential development in the future. No expansion of land zoned for residential purposes required.

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

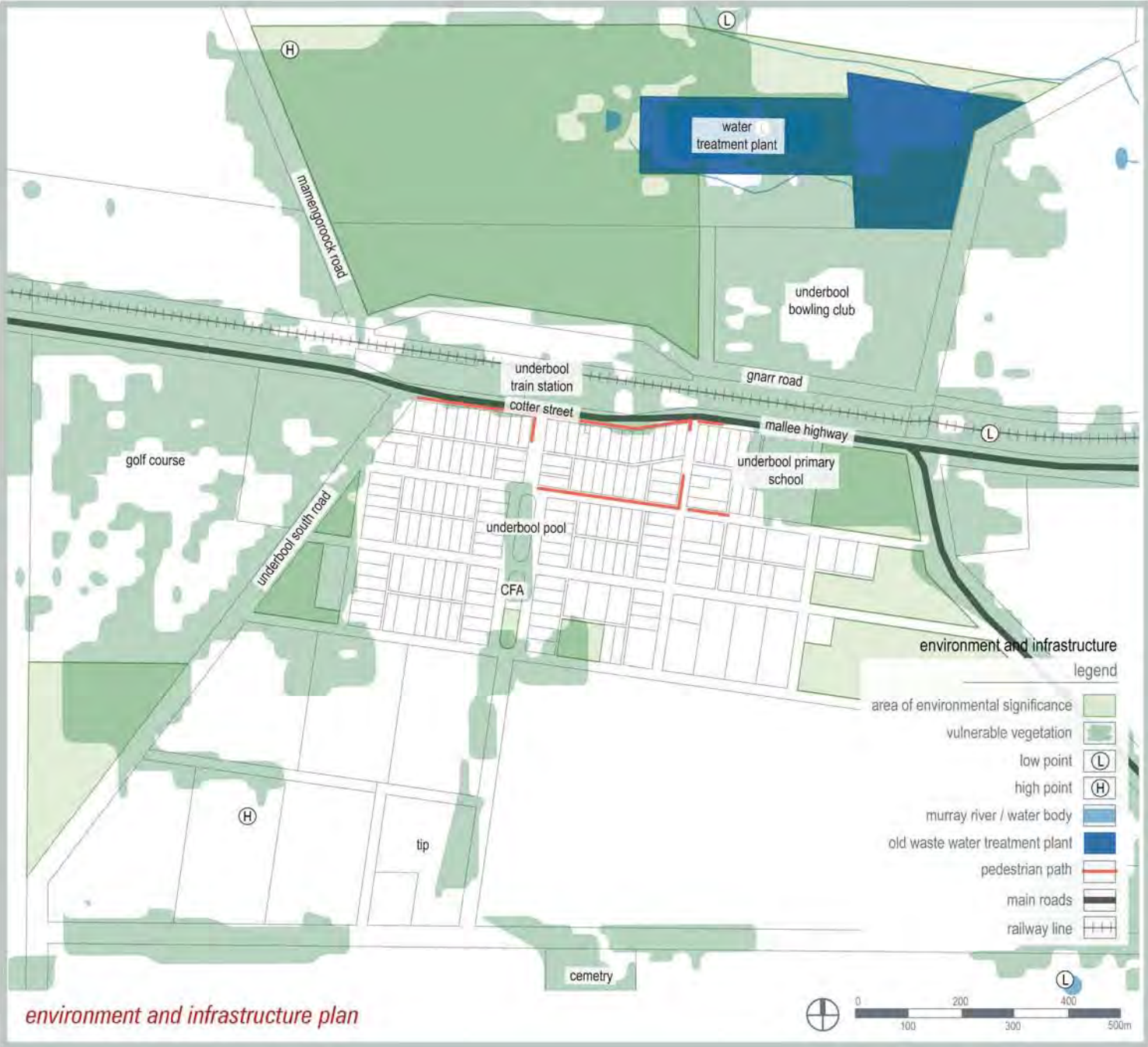
current supply

The table below indicates the existing supply of land in Underbool.

	R1Z	LDRZ	TZ
potential lots (0.4 lots/ha)	N/A	N/A	42
number of existing vacant lots	N/A	N/A	40
number of existing developed lots with subdivision potential	N/A	N/A	1
land (hectares)	N/A	N/A	7.5

recommendations

- > Promote investment in improved transport connections in Underbool to improve access to services and facilities.
- > Provide a multipurpose community hub in Underbool to maintain services for residents and promote visitation.



environment and infrastructure plan

murrayville

mildura housing & settlement strategy

overview

Murrayville site at the far west of the Mallee Track region and is the largest town along that southern band of settlements, beyond Ouyen. For the purpose of this study, the Murrayville settlement contains the Township Zoned (TZ) land and the immediate surrounding areas. The settlement, comprising approximately 230 residents (2011 estimate), is served by a small strip based town centre and limited commercial activities along the Mallee Highway

Given its location only 20km from the South Australian border, most residents use the facilities available in Pinnaroo 27km away. Pinnaroo has a higher order supermarket, as well as a hospital and agricultural equipment suppliers used by Murrayville residents. In fact, many residents relate more strongly to Adelaide as their major regional destination rather than the city of Mildura. Murrayville itself has a hotel, supermarket, café, post office and petrol station, all of which are located along the main road (Mallee Highway / McKenzie Street). As the highway frontage has developed, activity along Reed Street, where a row of shops had been established, has declined, although the commonwealth bank remains.

The town has a regular sub-division pattern aligned on an angle and extending to the south of the highway, with larger lots at the periphery. The town's recreation facilities are located on the northern side of the highway / train line, with the community college (P-12) located to the west. The town is surrounded to the east, west and south by broadacre farmland. To the north are large areas of public conservation land, as well as a large grain storage facility.

While most of the standard house blocks have been developed with older weatherboard or mid-centre brick dwellings, there are several larger vacant blocks with in the town. Newer development tends to have occurred in the 1970's / 80's and generally has a larger footprint, and is of brick construction. The town has a busy caravan park, as well as some temporary accommodation provided within the old primary school building. While the hospital no longer provides critical care it is still used for a number of health related purposes. There is no medium density or retirement living / aged care provided within Murrayville.

key demographics

Estimated resident population:	230 persons
Median annual household income:	\$34,740
(-24% below median for Mildura (RC))	
Couple families with children:	31% of families
c.f. 41% for Mildura (RC)	

age structure

Pre-school and school age (0-19 years):	18% (28%)
Working age (20-64 years):	54% (56%)
Retirees (65+ years):	28% (16%)



pre-school and school age
(0-19 years): 18%
working age (20-64 years): 54%
retirees (65+ years): 28%

tenure type

Owned outright:	61% (34%)
Rented:	17% (31%)
Owned with a mortgage:	19% (34%)
Other tenure type:	3% (1%)



owned outright: 61%
owned with mortgage: 19%
rented: 17%
other tenure types: 3%

Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.



policy influences

Most of the township is zoned Township Zone, with parcels of land within the Public Conservation and Resource Zone, Public Parks and Recreation Zone and Public Use Zone. The township is surrounded by Farming zoned land. Local policy supports the continued growth and role of Murrayville through the provision of adequate residential land, convenience shopping and community services for their surrounding areas and as gateways to public land such as National Parks. Murrayville is identified in local policy as having a notable proportion of the municipalities population.



land use and development plan

community infrastructure

- aged services
- education: secondary
- education: primary
- early years services
- health and community services
- libraries (mobile)
- emergency / judicial
- places of worship
- sports and recreation
- parks and open space

housing market

Limited residential sales and development has occurred in Murrayville in recent years, with less than one new dwelling permit occurring per annum over the past 10 or so years.

A review of current properties on the market shows three houses are currently for sale with prices ranging from \$59,000 to \$117,500 – illustrating both the limited activity in the local real estate market and the comparable affordability of residential property.

opportunities and constraints

- > Key service centre for surrounding area, in conjunction with Pinnaroo.
- > Excellent community facilities and the town centre has retained shops, including cafe, supermarket and bank outlet.
- > Lovely heritage buildings within town centre which could be utilised for tourism purposes.
- > Existing caravan park and other tourism related businesses.
- > Potential for older persons accommodations be provided near health services.
- > Some older housing stock in need of renewal.
- > Strong community spirit.
- > Aging population will need access to appropriate services and facilities and opportunities to stay within their local communities.
- > Relatively robust agricultural surrounds.



infrastructure considerations

- > Minimal formalised drainage system currently available. MRCC have plans to install a new stormwater wetland which will accommodate existing and currently predicted growth. New development in the area will require additional detention basins or on-site stormwater management.
- > Septic tanks service the townships. Further development within the township would likely be serviced by septic tanks, hence low density development only could be supported. No reticulated sewer system available or proposed to support future development.
- > GWM water supply potable water to the Murrayville township via groundwater.
- > Powercor has electricity networks in the township with sufficient capacity to adequately service all existing development.
- > The township relies on bottled gas bottles for gas supply. Given the remote location and predicted population levels the supply of gas is not viable in to the foreseeable future.
- > The township is serviced with copper voice services and ADSL internet services from the Murrayville Exchange however access to high speed broadband is not available.
- > Two bus routes existing in Murrayville; Adelaide to Murray Bridge, Murrayville and Tintinara and 'Speedlink' from Albury to Adelaide which both run on daily returns.

land supply and demand

Future housing requirements will be closely tied with the agricultural industry.

'indicative' dwelling requirements (net), 2012-2032

Limited opportunity for any significant extent of residential development in the future. No expansion of land zoned for residential purposes required.

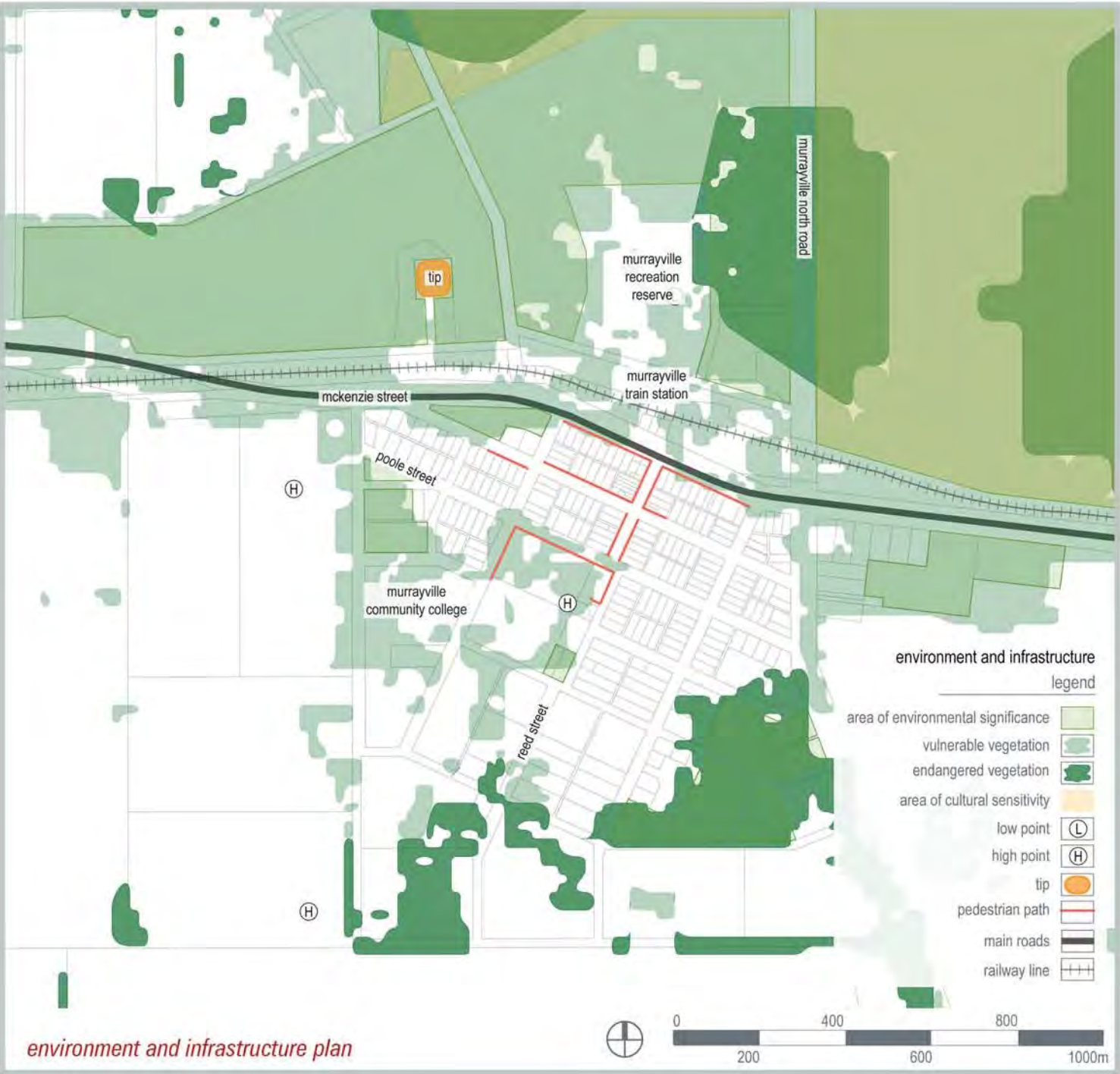
current supply

The table below indicates the existing supply of land in Murrayville.

	R1Z	LDRZ	TZ
potential lots (0.4 lots/ha)	N/A	N/A	53
number of existing vacant lots	N/A	N/A	53
number of existing developed lots with subdivision potential	N/A	N/A	0
land (hectares)	N/A	N/A	8

recommendations

- > Promote investment in improved transport connections in Murrayville to improve access to services and facilities.
- > Provide a multipurpose community hub in Murrayville to maintain services for residents and promote visitation.
- > Pursue the provision of additional accommodation options for older residents.



environment and infrastructure plan

nichols point & kings billabong

mildura housing & settlement strategy

character and role

Nichols Point is a small rural settlement only 5km to the east of Mildura comprising a variety of housing types, a general store, recreational reserve and a primary school. The settlement is one of the most affluent areas in the Mildura (RC), with above average incomes and property values a characteristic of the area. In addition, the settlement is popular families with children; the settlement has an average household size of 2.9 persons compared to the average for Mildura (RC) of 2.5 persons.

Nichols Point has a large new school and recreation reserve located centrally within the township. The core settlement area is a section of residential zoned land on the other side of Fifth Street from the school. A church and shops sit within the settlement core. Lots in this area have generally been developed at larger than average size, with almost all lots in the settlement being between 1000 and 3500sqm. This larger lot size and associated vegetation provide a distinct character. This character increases the attractiveness of the township for residents. There are large areas of land zoned for lower density (over 4000sqm) development around the core, but these areas have been delayed in developing, due to a range of factors. However demand remains strong in the area, and the amount dwellings in the agricultural areas around the settlement testify to this.

Kings Billabong is located a further 3km to the east, and contains large lifestyle lots which are more consistent in both their size and zoning. The older part of Kings Billabong developed along the billabong edge (Cooke Street) and contains some of Mildura's highest quality dwellings set in landscaped surrounds. More recent development on the western side of Cureton Avenue has followed more modern low density patterns with an greater emphasis on larger dwellings with less focus on the surrounding landscape. There are no services or facilities provided within the Kings Billabong settlement. The surrounding Farming Zoned (FZ) land is also included with the settlement and forms part of the Mildura Older Irrigation Area.

key demographics

Estimated resident population: **1,490 persons**

Median annual household income: \$61,440
(34% above median for Mildura (RC))

Couple families with children: 53% of families
c.f. 41% for Mildura (RC)

age structure

Pre-school and school age (0-19 years): 35% (28%)

Working age (20-64 years): 55% (56%)

Retirees (65+ years): 11% (16%)



tenure type

Owned outright: 42% (34%)

Rented: 15% (31%)

Owned with a mortgage: 43% (34%)

Other tenure type: 1% (1%)



Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.



infrastructure considerations

Nichols Point and Kings Billabong townships has the following existing and future infrastructure:

- > Very little formalised drainage exists but drainage modelling and strategic plan for the servicing of the Nichols Point area have been undertaken based on current zoned land subdivided into 4000sqm lots.
- > A new reticulation system services the areas comprising a pressure pipe network that flows to the Mildura East system which disposes the sewer at the Koorlong Waste Water Treatment Plant.
- > Potable water is currently supplied to the Nichols Point from Mildura. The existing infrastructure is anticipated to have sufficient capacity to meet current expected growth demands until 2020.
- > Powercor has high voltage and low voltage networks in the township with sufficient capacity to adequately service all existing development.

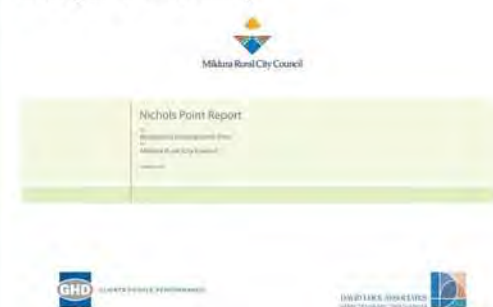
- > The township relies on bottled gas for access to gas supply. Gas supply could be available to new developments via extension of existing gas mains from the Mildura or Irymple at a cost.
- > The Nichols Point township is serviced by the main Mildura telephone exchange with copper voice services and ADSL/ADSL2+ internet services are available in addition to wireless telecommunication services.
- > Off-road trails within the area include: Bruce's Ben and Kings Billabong Park and Fifth Street from Cureton Ave to Laurel Ave but improvements to the proposed bike path route links to the MRCC Bicycle Plan could be achieved.
- > The basic grid layout within the Nichols Point area encourages heavy vehicle traffic along all roads. It will be important to address this within any planned residential development.
- > Widening of Koorlong Avenue is recommended with allowance for improved pedestrian access.



policy influences

There is little specific policy reference to Nichols Point or Kings Billabong within the Mildura Planning Scheme. However the current zoning indicates support for the expansion of these settlements as lower density alternatives to the nearby urban centre of Mildura. Much of the relevant policy direction is contained within the Development Plan for Nichols Point (shown below).

One of the key issues likely to affect Nichols Point is the recent State Government changes to the Low Density Residential Zone which halve the current minimum lot size. The existing development plan infrastructure requirements therefore potentially conflict with the changes to the zoning.



housing market

The Nichols Point/Kings Billabong is a popular residential location due to the rural aspect, its close proximity to Mildura and the availability of larger lifestyle lots. The Low Density Residential Zoned (LDRZ) subdivision in Kings Billabong is one of the only lifestyle lot subdivisions in the region.

Nichols Point is one of the more expensive settlements according to the limited sales information available. In 2011, the median house price in Nichols Point was \$311,500, which was +47% above the median of Mildura (RC) and +11% above that of regional Victoria.

The Nichols Point/Kings Billabong settlement has experienced limited residential development over the past 10 or so years, with an average of 3 new dwelling building approvals per annum occurring between 2001 and 2010; according to Council's data, this has increased to an average of 7 new dwelling building permits per annum between 2010 and 2012. These recent building permits occurred on LDRZ (65%) and FZ (35%) land.

community infrastructure

nichols point



education; primary



sports and recreation

land supply and demand

indicative dwelling requirements (net), 2012-2032

Total new dwelling requirements: 100 to 120 dwellings Indicative distribution by zone:

LDRZ:	70 to 80 dwellings
FZ:	30 to 40 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table below indicates the existing supply of land in Nichols Point and Kings Billabong.

nichols point

	R1Z	LDRZ	TZ
potential lots (0.45 lots/ha)	2	125	N/A
number of existing vacant lots	N/A	5	N/A
number of existing developed lots with subdivision potential	N/A	5	N/A
land (hectares)	N/A	60	N/A

kings billabong

	R1Z	LDRZ	TZ
potential lots (0.45 lots/ha)	N/A	73	N/A
number of existing vacant lots	N/A	30	N/A
number of existing developed lots with subdivision potential	N/A	1	N/A
land (hectares)	N/A	33.6	N/A

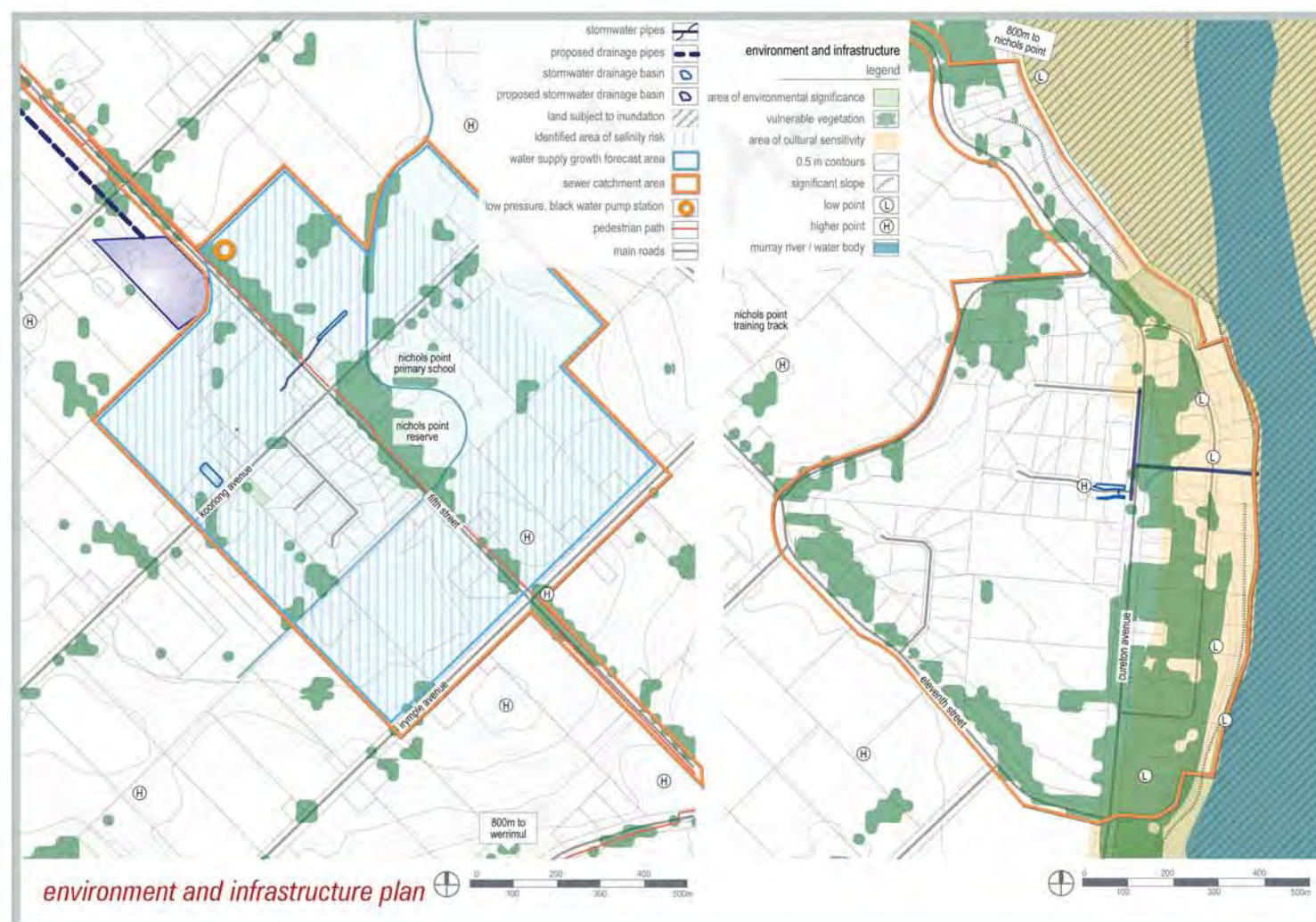


opportunities and constraints

- > Pleasant and attractive town centre in Nichols Point with new school, shop and recreation facilities. Opportunities for additional commercial development such as cafe/restaurants.
- > Opportunity to continue to provide a premium residential location with 'rural lifestyle' opportunities in close proximity to the main Mildura settlement area.
- > A significant amount of development has occurred in the Farming Zone, which has undergone recent changes in regard to the extent to which the land can be subdivided. This will have an implication of the types of lots available for development in the Nichols Point/Kings Billabong settlement.
- > Newer areas of Kings Billabong could be developed to reflect the vegetated character of the older area.
- > Issues with the provision of appropriate infrastructure (in particular drainage infrastructure) to service increased densities allowed under new residential zones.
- > Opportunities to consider drainage solutions as part of broader consideration of long term infrastructure requirements of Mildura given proximity.

recommendations

- > Rezone existing Low Density Residential land in Nichols Point, with minimal lot size controls to reflect the character and identity of the town. Apply a Neighbourhood Residential Zone to this land, and consider additional land rezoning surrounding Nichols Point.
- > Investigate a second 'Etiwanda' type wetlands to the north of Nichols Point to service development expansion to the east of Mildura.
- > Develop processes for the financing of upfront provisions of stormwater and drainage infrastructure well in advance of the development.
- > Review infrastructure and community facility standards to ensure they meet current and future needs.
- > Consider the best mechanism for developing future urban land and ensure DPO's provide guidance regarding staging of development.



nangiloc & colignan

mildura housing & settlement strategy

overview

Nangiloc and Colignan are two small rural settlements located on the Murray River, approximately 40km south of central Mildura. Approximately 640 residents live in the settlement, with a significant share aged between 20 and 64 years, and working in agriculture. For the purpose of this study, the Nangiloc and Colignan settlement contains these small townships and significant areas of rural and farming land surrounding these towns, including Iraak located to the north. The two settlements, while separated by quite some distance have a close and historic relationship. Within Nangiloc there is an extensive recreation reserve, and primary school, as well as a tavern / general store / post office.

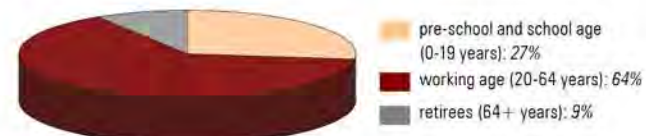
Residential development is present in a number of separate pockets spread through both Colignan and Nangiloc. To the north is a caravan park and vacant zoned land, along with the first strip of housing. Slightly further south is what could be considered to be the 'core' of the settlement, where the general store, church, recreation reserve, primary school and associated childhood services are clustered. With the exception of the church and recreation reserve, which are nestled in bushland, the majority of uses occur of the western side of the road, with the eastern side being primarily protected land associated with the river corridor. The river itself runs close by the road at numerous points through the settlement. A substantial proportion of housing in the area is located on Farming zoned land, despite appearing to form part of the main settlement clusters.

A number of commercial uses (primarily associated with the surrounding agricultural uses) are also located along Kulkynne Way. Further south is the township of Colignan with a cluster of development where the old school and community pool are located. Further south again is another strip of housing along Boonoonar Road which essentially forms the southern boundary of this settlement area and is one of the gateways into Hattah-Kulkynne National Park. Between Colignan and the Boonoonar Road area is a large zoned site which remains undeveloped.

Housing is exclusively single storey detached dwellings from a range of eras, including some older farmhouses and more recent development, although the majority appear to have been constructed from the 1940's to 70's and some appear to be nearing the end of their useful life.

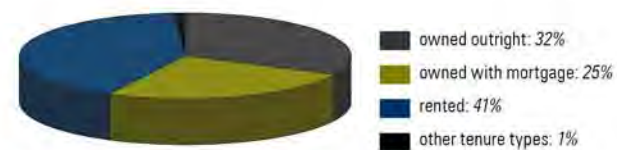
key demographics

Estimated resident population:	640 persons
Median annual household income: (+1% above median for Mildura (RC))	\$46,430
Couple families with children: c.f. 41% for Mildura (RC)	48% of families
age structure	
Pre-school and school age (0-19 years):	27% (28%)
Working age (20-64 years):	64% (56%)
Retirees (65+ years):	9% (16%)



tenure type

Owned outright:	32% (34%)
Rented:	41% (31%)
Owned with a mortgage:	25% (34%)
Other tenure type:	1% (1%)



Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.



community infrastructure

colignan, nangiloc and iraaak

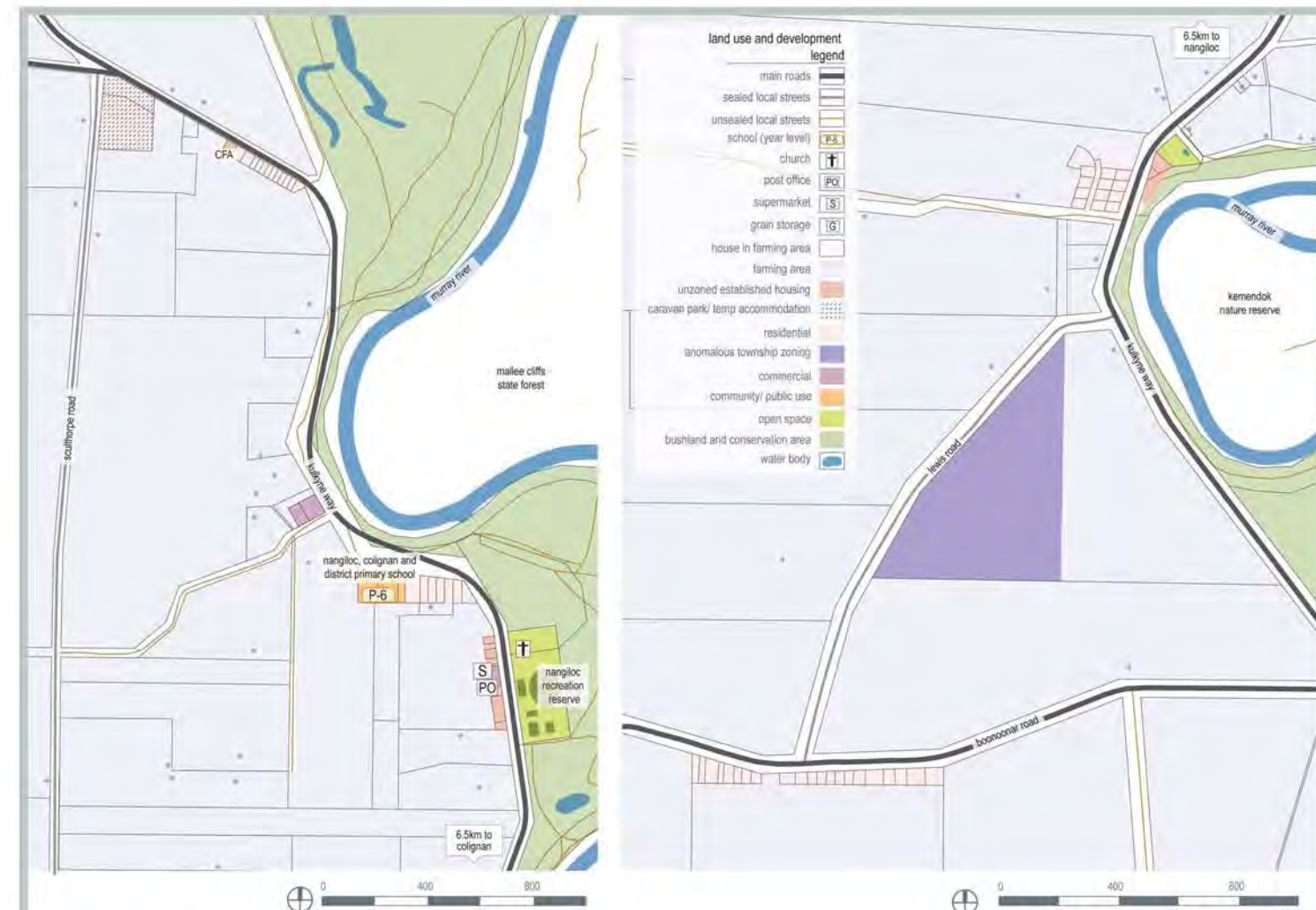
	education: primary
	early years services
	health and community services
	libraries (mobile)
	emergency / judicial
	sports and recreation

policy influences

Most of the township is zoned Township Zone, with parcels of land within the Public Conservation and Resource Zone, Public Parks and Recreation Zone and Public Use Zone. The township is surrounded by Farming zoned land.

There is no policy reference within the Mildura Planning Scheme to either Nangiloc or Colignan, although as with other smaller settlements in Mildura, local policy supports the continued growth and role of the town through the provision of adequate residential land, convenience shopping and community services for their surrounding areas.

Due to the proximity to the river corridor, much of the area is also subject to controls intended to protect both the environment and also the potential aboriginal cultural heritage which may be associated with that corridor.



land use and development plan

infrastructure considerations

- > Colignan and Nangiloc currently are serviced by a rural drainage system with negligible formalised drainage or stormwater management infrastructure. Any development in these townships would require on-site detention and management of stormwater.
- > Septic tanks service the townships. No reticulated sewer or treatment plants are located in close proximity to the township. Further development within the township would likely be serviced by septic tanks, hence low density development only could be supported.
- > Powercor has electricity networks in the township with sufficient capacity to adequately service all existing development.
- > The township relies on bottled gas supply. Given the remote location and predicted population levels the supply of gas is not viable.
- > The townships are serviced with copper voice services and ADSL internet services from the Nangiloc Exchange however access to high speed broadband is not good.

- > Two off-road shared paths exist along Kulkyne Way in Nangiloc and Colignan.
- > There are two bus services; Colignan to Mildura and Red Cliffs to Colignan, both have one service on Friday and Saturday.
- > Residential development in towns will need to be appropriately separated from any heavy vehicle movements along Kulkyne Way.



housing market

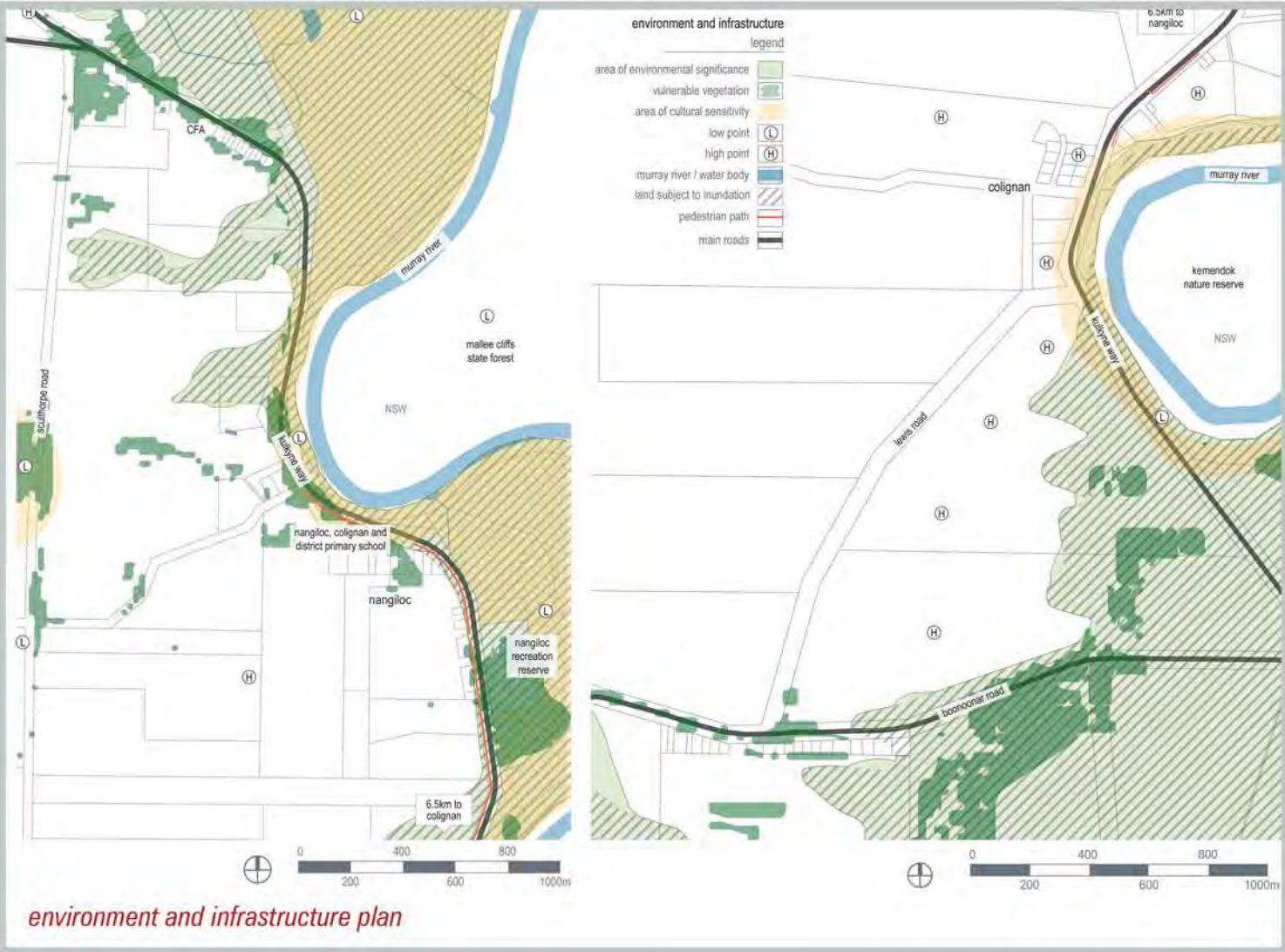
Limited residential sales and development has occurred in the Nangiloc and Colignan settlement in recent years, with less than one new dwelling permit occurring per annum over the past 10 or so years.

A review of current properties on the market shows a limited supply of properties for sale; the majority of these properties representing large rural lots associated with agricultural activities.



opportunities and constraints

- > Future housing requirements will be closely tied with the agricultural industry.
- > Limited opportunities for riverfront lifestyle properties may exist, considering environmental and cultural heritage issues.
- > Tourism opportunities associated with the northern gateway to the National Park may be better utilised.
- > Explore synergies with the need for accommodation for seasonal workers and tourism opportunities.
- > Connectivity between the settlement themselves and also to the main urban centre of Mildura need to be improved.
- > Opportunities to further consolidate services for the community in a centralised location.
- > Future residential development should occur in a consolidated manner, rather than reinforcing the existing dispersed settlement pattern.



land supply

'indicative' dwelling requirements (net), 2012-2032

Limited opportunity for any significant extent of residential development in the future. No expansion of land zoned for residential purposes required.

current supply

The table below indicates the existing supply of land in Nangiloc and Colignan.

nangiloc

	R1Z	LDRZ	TZ
potential lots (0.4 lots/ha)	N/A	N/A	7
number of existing vacant lots	N/A	N/A	10
number of existing developed lots with subdivision potential	N/A	N/A	3
land (hectares)	N/A	N/A	10.1

colignan

	R1Z	LDRZ	TZ
potential lots (0.4 lots/ha)	N/A	N/A	10
number of existing vacant lots	N/A	N/A	4
number of existing developed lots with subdivision potential	N/A	N/A	6
land (hectares)	N/A	N/A	0.7

recommendations

- > Promote investment in improved transport connections in Nangiloc and Colignan to improve access to services and facilities and to Mildura.
- > Improve services and facilities in these townships.



ouyen

mildura housing & settlement strategy

overview

Ouyen is a rural settlement located on the Mallee Highway, approximately 100km to the south of Mildura, and operates as the service centre for the southern part of the municipality. The settlement area largely consists of Township Zoned (TZ) land and contains a population of approximately 1,090 residents (2011 estimate). A large proportion (26%) of these residents are aged 65 years or over compared to the average (16%) for Mildura (RC).

A variety of retailing and other services are provided in the town centre along Oke Street, along with a range of civic and community uses, forming the core of the township. The secondary school is currently undergoing a significant upgrade, and it and much of the town's recreational facilities are separated from the main town centre by the highway. Combining with the secondary school, the local primary school is now available as a development site to the immediate north of the town centre.

Ouyen has a range of health services available, including the Ouyen and District Hospital (located in the southern part of the settlement) which serves a large catchment. However, there are limited numbers of public housing or housing suited to older persons within the township, which most of the stock being single detached dwellings. Development opportunities to the north east are relatively constrained due to an escarpment and existing golf course and there are also native vegetation issues which need to be considered.

Retailing, health related and tourism services are significant employers of local residents. Other significant industries include agriculture and a developing mining sector, including the mineral sands located to the west of the township.



key demographics

Estimated resident population: **1,090 persons**

Median annual household income: **\$41,320**
(-10% below median for Mildura (RC))

Couple families with children: **39% of families**
c.f. 41% for Mildura (RC)

age structure

Pre-school and school age (0-19 years): **22% (28%)**

Working age (20-64 years): **52% (56%)**

Retirees (65+ years): **26% (16%)**



tenure type

Owned outright: **55% (34%)**

Rented: **23% (31%)**

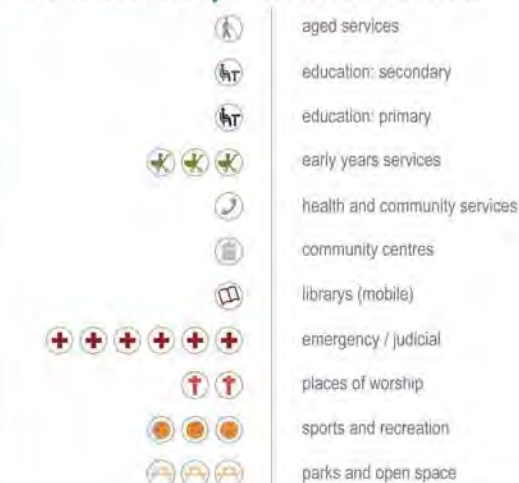
Owned with a mortgage: **21% (34%)**

Other tenure type: **1% (1%)**



Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.

community infrastructure



housing market

Ouyen is an affordable residential location with the median house price in 2011 (\$100,000) approximately -53% below the median of Mildura (RC) and -64% below regional Victoria. The low median house price reflects an older housing stock and limited demand for residential property in Ouyen.

Only limited residential development has occurred in Ouyen in recent years, with an average of two new dwelling building permits per annum occurring between 2001-2010 based on ABS data; according to Council's more recent data, the trend on limited development has continued, with only an average of 3 new dwelling building approvals occurring over the 2010 to 2012 period.



land supply

'Indicative' Dwelling Requirements (net), 2012-2032

Total new dwelling requirements: 20 to 30 dwellings.
Indicative distribution by zone:

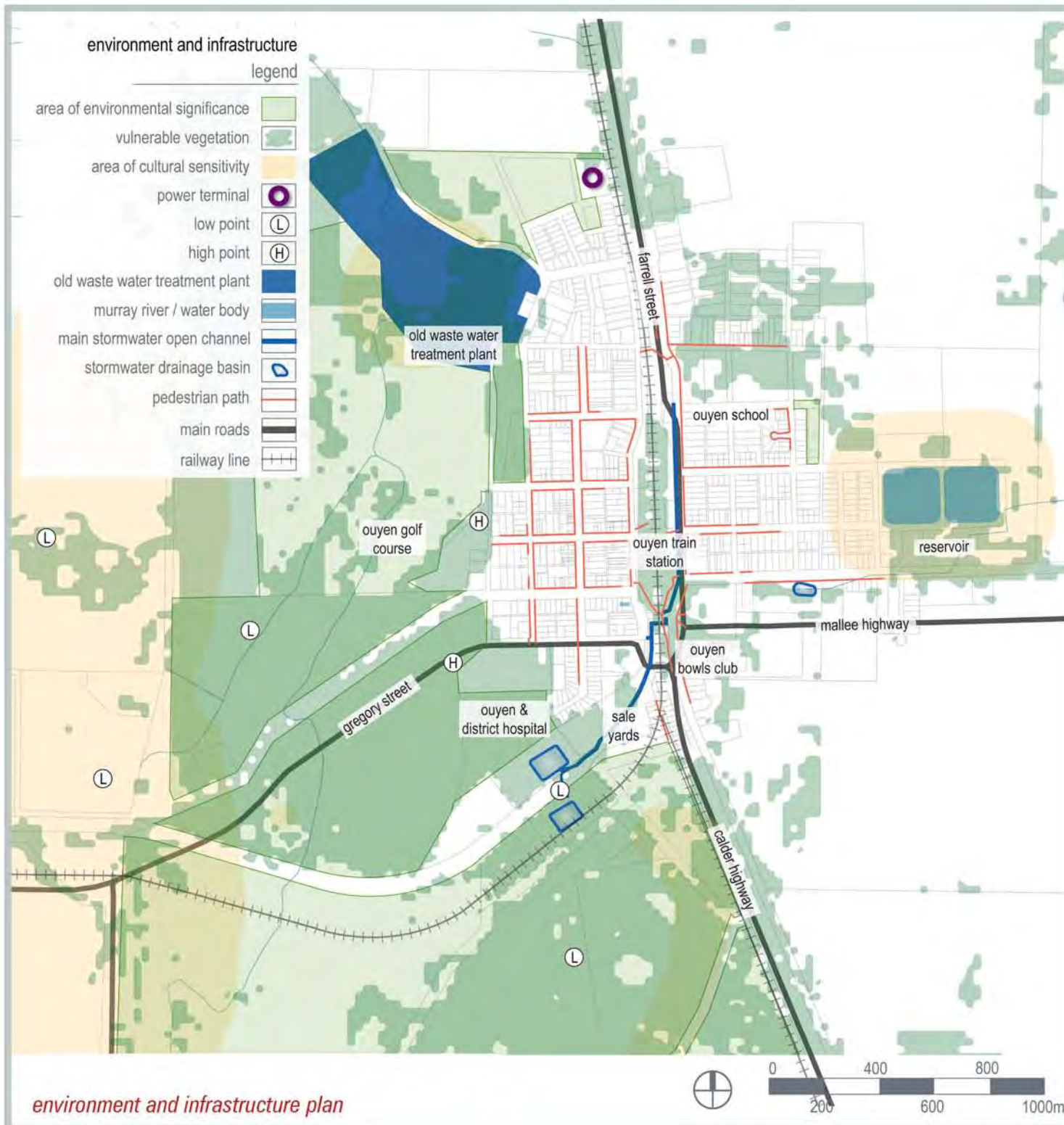
TZ: 20 to 30 dwellings

Note: Forecast dwelling by zone are indicative and based on existing land zoning pattern.

current supply

The table below indicates the existing supply of land in Ouyen.

	R1Z	LDRZ	TZ
potential lots (750 lots/m2)	N/A	N/A	3715
number of existing vacant lots	N/A	N/A	83
number of existing developed lots with subdivision potential	N/A	N/A	14
land (hectares)	N/A	N/A	283.2



policy influences

Current policy seeks to reinforce Ouyen as a service centre providing important support services for the communities in the southern areas of the municipality. The Township Zone which affects much of the township is a flexible zone which allows a range of uses and there are extensive areas of this zone to the east and north. West and south of the township land is affected by the Public Conservation and Resource Zone and the Public Parks and Recreation Zone.

infrastructure considerations

- > The main drainage line in Ouyen is an open channel that runs from the northern part of the township, discharging into an open dam at the south western part of the township. Development to the east of the Highway may be constrained. Future upgrades may be required.
- > A reticulated sewerage system exists within the Ouyen township along with a local sewerage treatment plant. The sewerage system services 2/3 of the township and has spare capacity to accommodate planned future growth.
- > GWM Water has a potable water supply system within the Ouyen township which has capacity to accommodate future growth with extensions required. This water is pumped from the Wemen pumps in Liparoo to Ouyen.
- > A Powercor substation is located in the northwest corner of the town.
- > The township relies on bottled gas for access to gas supply. There are currently no future plans to provide a reticulated gas service.
- > The township is serviced with copper voice services and ADSL/ADSL2+ internet services however access to high speed broadband is quite limited at present.
- > An off-road trail at the rear of the hospital for rehabilitation is proposed. In addition, a recreational trail on the western edge of the township is being investigated.
- > There are 3 bus services in Ouyen; Horsham to Mildura (3 services/ week), Melbourne to Adelaide (daily, return), and 'Speedlink' from Albury to Adelaide (daily, return).
- > Victoria's VLine coach services from Ouyen connect to rail services Ararat Swan Hill and Maryborough Stations.

constraints and opportunities

- > The ability to maintain and grow the employment base in Ouyen will have strong implications on the residential market in Ouyen.
- > Opportunities to maximise location and consolidate role as a service centre by continuing to expand service offer.
- > Requirement to maintain or increase population in order to maintain a vibrant community and town centre.
- > Implications of an ageing population on future dwelling stock, population levels and services.
- > Potential difficulty in servicing large areas of existing zoned land to the west.
- > Limited land is available for development in the core of the centre but could be achieved if demand was there.
- > Areas of older public housing stock in need of renewal but also some very attractive areas of residential.
- > Opportunities to provide increase options for older residents form southern part of the municipality to access housing opportunities without needing to move to Mildura.
- > Development opportunity on the old primary school site.

recommendations

- > Provide a multipurpose community hub in Ouyen to maintain services for residents and promote visitation.
- > Pursue the provision of additional accommodation options for older residents.
- > Review infrastructure and community facility standards to ensure they meet current and future needs.



millewa region

mildura housing & settlement strategy

overview

The Millewa Region includes the small settlements of Meringur, Werrimul and Lake Cullulleraine, along with the surrounding rural areas. The region is extensive in size and covers land from the west of Merbein to the South Australian border, and includes more than 200km of frontage to the Murray River. Approximately 450 residents (2011 estimate) live in the Millewa Region.

Lake Cullulleraine is located on the main route to Renmark in the west and the settlement comprises a large lake, used for recreational purposes, with a range of other recreation and sporting facilities also provided, as well as some tourism uses. The main settlement area is relatively low density and has established to the south-west of the lake, proximate to the roadhouse.

To the south of Lake Cullulleraine, along the Meringur North Road, is the settlement of Werrimul, home to "Victoria's most outback pub". This settlement has established to the south of the Red Cliffs-Meringur Road, with a small business area including the pub and a post office / general store, with residential areas generally to the south of this. Some recreation facilities are provided to the north and the town has a school. While some areas are well maintained, there are a number of run-down properties in the settlement, detracting from the otherwise attractive rural feel of the township. An impressive Catholic Church sits to the south.

Further to the west, at the end of the road is the smaller township of Meringur comprising a post office, Pioneer Village and a handful of houses. The school, which has been closed for a while, is being used by the community as their former meeting place has become unusable but its future is currently uncertain. The region's local newspaper is printed in Meringur.

policy influences

The townships are zoned Township Zone, with parcels of land within the Public Conservation and Resource Zone, Public Parks and Recreation Zone and Public Use Zone. The townships are surrounded by Farming zoned land.

As with other smaller settlements in Mildura, local policy supports the continued growth and role of the settlement through the provision of adequate residential land, convenience shopping and community services for their surrounding areas.

key demographics

Estimated resident population: **450 persons**

Median annual household income: \$46,900
(+2% above median for Mildura (RC))

Couple families with children: 50% of families
c.f. 41% for Mildura (RC)

age structure

Pre-school and school age (0-19 years): 29% (28%)

Working age (20-64 years): 56% (56%)

Retirees (65+ years): 15% (16%)

tenure type

Owned outright: 42% (34%)

Rented: 34% (31%)

Owned with a mortgage: 22% (34%)

Other tenure type: 2% (1%)

Note that figures for Mildura RC as a whole are shown in brackets for comparison purposes.

community infrastructure

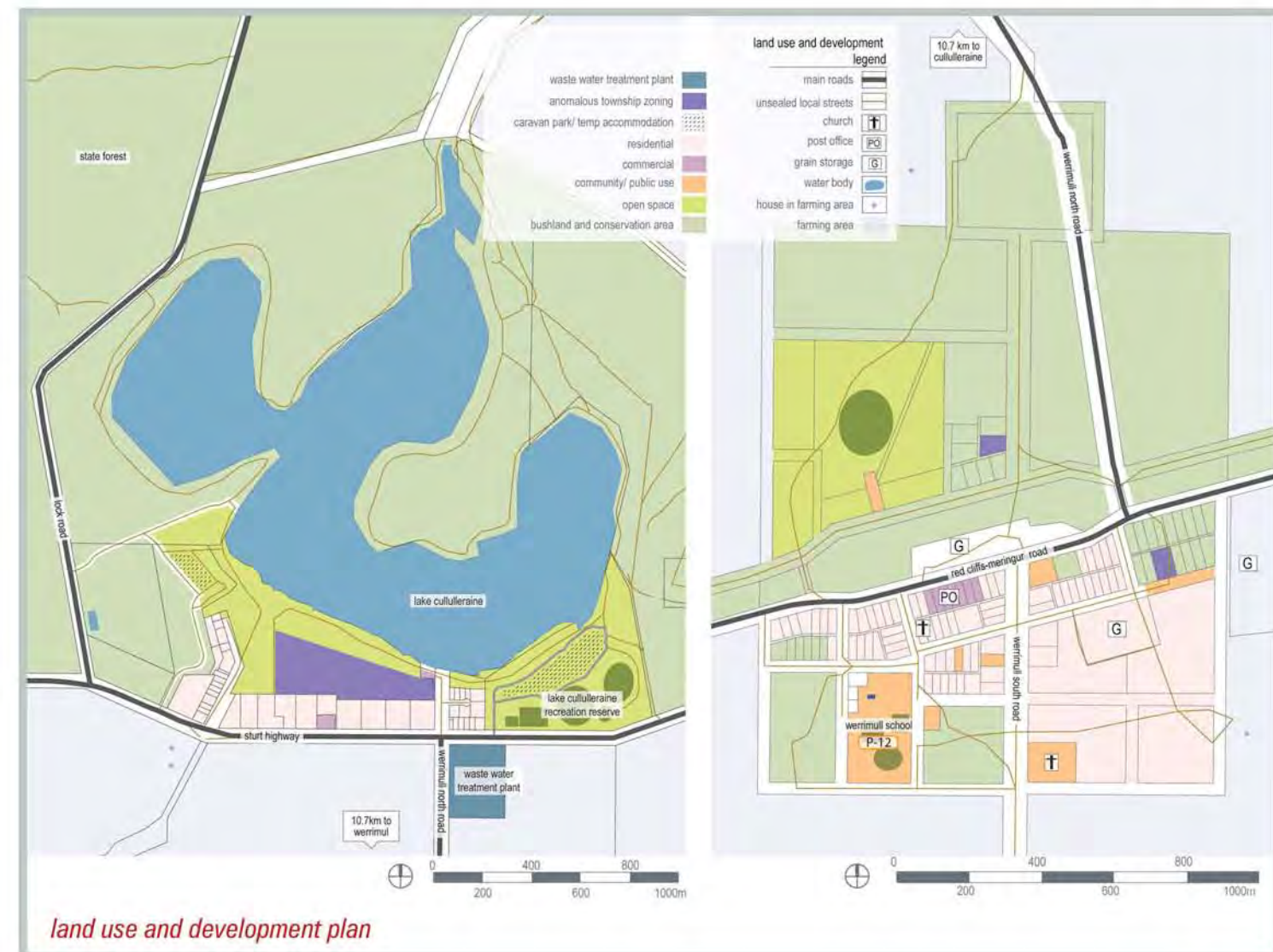
werrimull, cullulleraine and meringur

	education: secondary
	education: primary
	early years services
	health and community services
	libraris (mobile)
	emergency / judicial
	sports and recreation

housing market

Limited residential sales and development has occurred in the Millewa Region in recent years, with less than one new dwelling permit occurring per annum over the past 10 or so years.

The new residential dwelling permits that have occurred over this period, have all been in the Farm Zone (FZ). A review of current properties on the market shows only a limited number of residential properties for sale in the region.



land use and development plan

land supply and demand

Future housing requirements will be closely tied with the agricultural industry and those seeking a rural lifestyle.

'indicative' dwelling requirements (net), 2012-2032

Limited opportunity for any significant extent of residential development in the future. No expansion of land zoned for residential purposes required.

current supply

The table below indicates the existing supply of land in

	R1Z	LDRZ	TZ
potential lots (0.4 lots/ha)	N/A	N/A	21
number of existing vacant lots	N/A	N/A	21
number of existing developed lots with subdivision potential	N/A	N/A	0
land (hectares)	N/A	N/A	2.5

Werrimul

	R1Z	LDRZ	TZ
potential lot numbers	N/A	N/A	12
existing lot numbers	N/A	N/A	1
land (hectares)	N/A	N/A	5.6

Lake Cullulleraine

	R1Z	LDRZ	TZ
potential lots (0.4 lots/ha)	N/A	N/A	32
number of existing vacant lots	N/A	N/A	32
number of existing developed lots with subdivision potential	N/A	N/A	1
land (hectares)	N/A	N/A	4.3

Meringur



environment and infrastructure plan



infrastructure considerations

- > Rural drainage servicing with negligible formalised drainage or stormwater management infrastructure.
- > Any development in these townships would require on-site detention and management of stormwater.
- > Development within close proximity to Lake Cullulleraine may be accommodated with the incorporation of suitable onsite treatment of stormwater runoff.
- > Septic tanks service the townships. No reticulated sewer or treatment plants are located in proximity to the township
- > Improved water quality will be achieved through the commissioning of the Lake Cullulleraine Water Treatment Plant. Further upgrades to the plant are required to be able to supply potable water however; this is not currently planned for.
- > Power to the Millewa communities such as Werrimul, Meringur and Lake Cullulleraine is supplied by the Powercor substation located in Merbein, with sufficient capacity to adequately service all existing development and any minor residential growth that could be reasonably expected in the area.
- > The township relies on bottled gas for access to gas supply. The Berri-Mildura gas main runs along the Sturt Highway, which is in relatively close proximity to these townships, however connection to the main is not feasible based on current population levels and future growth expectations.
- > Each township is serviced with copper voice services from a local telephone exchange. Access to broadband is not available.
- > Mobile phone service is limited in the townships of Werrimul and Meringur.
- > New development in the township will need to include infrastructure suitable for the roll-out of the NBN at a future date however there is presently no confirmed date of when the NBN will be available within the township. It is highly likely that the NBN will be provided by a wireless service in this township.
- > No designated pedestrian or bicycle facilities were identified within Werrimul, Meringur or Cullulleraine apart from an off-road bicycle trail at



opportunities and constraints

- > Future housing requirements will be closely tied with the agricultural industry and those seeking a rural lifestyle.
- > Lake Cullulleraine's position on the highway and lakeside location offers opportunities for rural living or tourism.
- > No significant long term growth in the area is envisaged by the infrastructure authorities and as such limited upgrades to infrastructure other than for maintenance purposes have been planned for.
- > Expansion of services is not seen as priority by authorities based upon expected growths and given that the provision of most services required to service low density housing is not seen as economically viable at this stage.
- > Community already operating as a region, increasing resilience of townships, with Lake Cullulleraine providing recreation opportunities and Werrimul the focus for community events.
- > Pioneer village at Meringur offers tourism opportunities.
- > Former rail line offers potential to provide cycle / shared path linking settlements.



recommendations

- > Promote investment in improved transport connections to the Millewa region settlements to improve access to services and facilities.
- > Provide multipurpose community hubs in the Millewa region townships to maintain services for residents and promote visitation.
- > Improve services and facilities in these townships.



5 non-urban profile

rural footprint and areas

While the settlements outlined in the previous section of this report are the key focus of this strategy, it must be acknowledged that a proportion of settlement within the municipality occurs within the rural areas. Indeed, many of the townships outlined previously support extensive areas of the rural balance and play a much wider role than just servicing their identified residential population. While this is acknowledged to a degree by the extent of the relevant statistical areas it is still worth gaining an understanding of the activity and character of Mildura's rural balance.

Firstly, it is important to note that Mildura's rural areas can be divided into three separated categories. The first of these is the Mildura Older Irrigation Areas (Mildura, Red Cliffs and Merbein). These are the rural areas in closest proximity to the major settlements and much of these areas have a distinct subdivision pattern, having been subdivided at the time of the establishment of the settlement. A summary of the history of those areas was included within the Key Issues and Influences Paper. The second area is the New Irrigation District which extends to the south and west of the Older Irrigated Areas. As the name suggests, these areas are also irrigated, but were established more recently and are characterised by a much larger subdivision pattern. Beyond the irrigated areas, the remainder of Mildura's land outside the urban areas is dominated by broadacre farming. These three agricultural areas, together with land set aside for conservation make up the rural balance of the municipality.

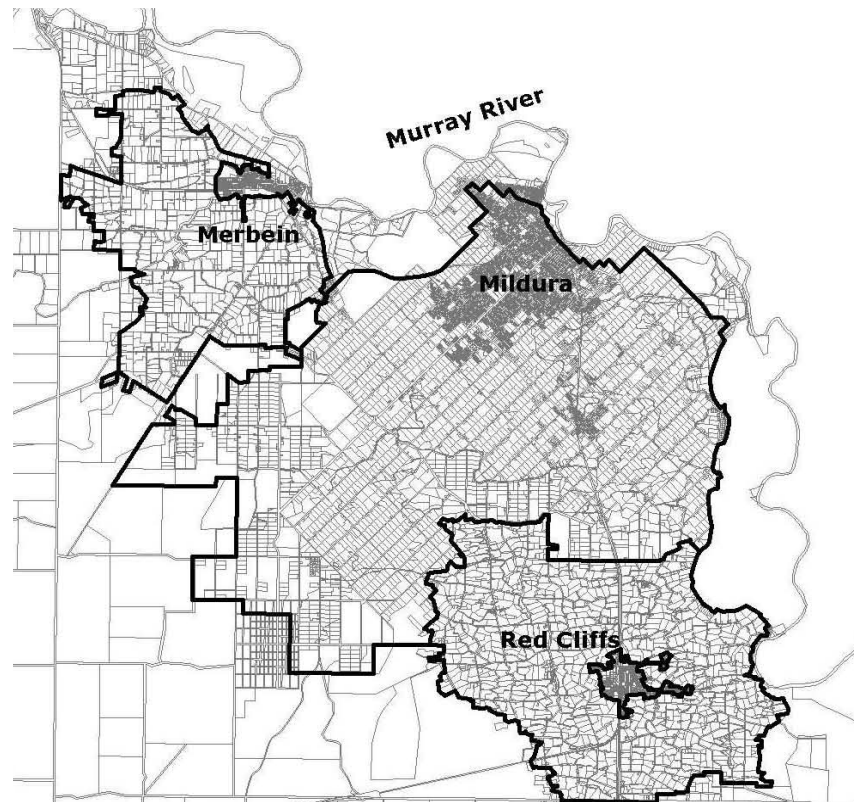


figure 20 mildura's old irrigation areas (mildura planning scheme)

role and profile of agriculture in mildura

The structural change in employment in the Mildura economy is highlighted earlier in this Background Report; however, despite a significant loss of direct employment in the agricultural sector it still continues to be an integral part of Mildura's economy, both directly and indirectly. Between 2006 and 2011, direct agricultural employment declined by more than 600 jobs, from approximately 2,470 jobs in 2006 to 1,840 jobs. Nevertheless, agriculture still contributes directly to 10% of employment in Mildura. In addition to direct employment, agriculture also indirectly supports a lot of other businesses who provide support services or inputs to agricultural production. In addition, the wages of those employed in the agriculture sector are also spent in the local economy and which also support a variety of other jobs.

The employment multiplier for agriculture in Mildura is estimated at 2.4, based on analysis of ABS data. A multiplier of 2.4 means that for every 10 direct jobs in agriculture, a further 14 jobs are generated in the wider economy through the production of inputs to agriculture or the spending of wages by agricultural employees. These indirect jobs could be generated in locations throughout Australia; however, having regard for the relative isolation of Mildura, it would be reasonable to expect that a significant proportion of these indirect jobs would be generated locally. Applying the multiplier of 2.4 to the 1,840 direct agricultural jobs in Mildura in 2011, indicates that a further 2,640 indirect jobs are created throughout the wider economy. Assuming say 50% of these jobs are retained locally, agricultural employment in Mildura supports a further 1,320 jobs locally. Although this is high level analysis, it illustrates the importance of agriculture to the local economy.



While there is no doubt the drought in the past decades has significantly impacted on existing agricultural enterprise in the region, agriculture is an industry that is subject to extensive restructuring and the introduction of new practices over time. While it is clear this that this restructuring is very difficult for some, it should nevertheless be acknowledged as an inherent part of the industry. The recent opening of a new agricultural bank within Mildura itself (Rabobank opened a formal branch in February 2013) is an indicator of the potential future strength of this sector.

Furthermore, agriculture plays a vital role in underpinning the social and cultural identity of Mildura and its residents. While most obviously, the vineyards of the older irrigated areas have come to define the City and contribute to its setting (thereby relating to the tourism as well as agricultural sectors), the broader signifiers of Mildura as a city are linked to its agricultural history, not just through the vines but also through the citrus grown in the area. Together with the Murray River, these agricultural aspects of the municipality underpin perceptions of the area, and together form the basis of the municipality's 'brand'.

An excellent reference to the current agricultural production in the municipality can be found in the Crop Report prepared by the Loddon Mallee Catchment Management Authority which provides detailed analysis of outputs and production trends within the various irrigation districts. The latest report identifies a shift towards increases in production within the Older irrigation Areas, after a number of years of declining production over the period dominated by the recent drought.

The following summaries are provided for the three Older Irrigation Areas in the latest crop report:

Red Cliffs:

- Grapevines grown for wine production have remained the dominant crop from 1997 to 2012. Between 1997 and 2012 wine grape plantings and dried vine fruit plantings decreased by 620 hectares and 930 hectares respectively. Table grape plantings increased by 260 hectares. Grapevine plantings decreased by 33% (1,290 hectares) in the period from 1997 to 2012.
- In 2012, the irrigable area was 4,520 hectares; a 2% (70 ha) increase from 4,450 hectares in 1997. The number of irrigation properties decreased by 59 properties between 1997 and 2012. The average irrigable area per property increased from 8.7 hectares in 1997 to 9.9 hectares in 2012.
- 29% of the irrigable area was vacant in the 2011-12 irrigation season; 27% was previously permanent plantings and 2% was previously seasonal plantings.

Mildura:

- The Mildura Irrigation District has approximately 705 irrigation properties. Average property size (irrigable area) is 8.6 hectares. The irrigable area decreased by 7% (460 hectares), from 6,490 hectares in 1997 to 6,030 hectares in 2012. The number of irrigation properties decreased by 122 properties between 1997 and 2012. The average irrigable area per property increased from 7.7 hectares in 1997 to 8.4 hectares in 2012.
- Grapevines remained the dominant crop from 1997 to 2012. These were predominantly grown for wine production until 2009. By 2012, table grapes were the dominant grape commodity.
- 30% of the irrigable area was vacant in the 2011-12 irrigation season; 25% previously permanent plantings and 5% previously seasonal plantings.

Merbein:

- The Merbein Irrigation District has approximately 310 irrigation properties. Average property size (irrigable area) is 9.9 hectares. The number of irrigation properties decreased by 20 properties between 1997 and 2012. The average irrigable area per property increased from 9.5 hectares in 1997 to 9.9 hectares in 2012.
- Grapevines remained the dominant crop type from 1997 to 2009. These were predominantly grown for dried vine fruit from 1997 to 2006. While wine grape plantings dominated by 2009, dried vine fruit regained dominance by 2012.
- The irrigable area decreased by 3% (95 ha), from 3,140 ha in 1997 to 3,060 ha in 2012. 38% of the irrigable area was vacant in the 2011-12 irrigation season; 37% was previously permanent plantings and 1% was previously seasonal plantings.



trends in the value of agricultural commodities

The Mallee region, which includes Mildura and other areas in north-western Victoria, is of state-wide significance in regard to the value of its production of agricultural commodities. This is particularly the case for the production of fruit (including grapes) and cereal crops for grain.

Based on ABS data shown in Table 9, the Mallee Region accounted for 40% of the total gross value of fruit, 91% of grapes and 40% of cereal crops for grain produced in Victoria.

In a more local context, the SLA of Mildura (RC) – Part A (see plan on page 7) is also a significant contributor to the value of fruit and grapes production. In 2011, Mildura (RC) – Part A accounted for half of the gross value of grapes produced in the Mallee Region and 80% of the gross value produced in the City of Mildura. ABS data (Cat No: 7503.0) shows the gross value of grapes produced in Mildura (RC) – Part A in 2011 was \$140 million, and this compares to the total gross value produced in Mildura (RC) of \$174 million and \$281 million in the wider Mallee Region.

Although Mildura (RC) – Part A is a significant contributor to the overall value of grape production in the region, an issue of concern in recent years has been the declining value of production in grapes in the Mallee Region. These trends are summarised in Table 9 below.

The figures indicate both the importance that agriculture in Part A of the municipality (which coincides approximately with the Older Irrigation Areas) plays within not only the local but also the State economy. They also indicate, however, the period of restructuring that is likely to occur as the production of one commodity reduces and new practices or commodities are introduced.

Location	2008	2009	2010	2011	Average annual growth			
					2008-09	2009-10	2010-11	2008-2011
Total value of Agriculture (\$m - gross)								
Victoria	11,658	10,201	10,347	11,618	-12.5%	1.4%	12.3%	-0.1%
Mallee	1,209	1,136	1,276	1,654	-6.0%	12.3%	29.7%	11.0%
Mallee share of Victoria	10%	11%	12%	14%	-	-	-	-
Total Value - Fruit (\$m - gross)								
Victoria	1,087	1,170	1,213	1,431	7.7%	3.6%	18.0%	9.6%
Mallee	427	499	574	572	16.9%	15.2%	-0.4%	10.3%
Mallee share of Victoria	39%	43%	47%	40%	-	-	-	-
Total Value - Grapes (\$m - gross)								
Victoria	398	360	379	309	-9.5%	5.2%	-18.3%	-8.1%
Mallee	322	327	299	281	1.6%	-8.5%	-6.1%	-4.4%
Mallee share of Victoria	81%	91%	79%	91%	-	-	-	-
Total Value - Cereal crops for grain (\$m - gross)								
Victoria	1,359	998	1,055	1,575	-26.5%	5.7%	49.3%	5.0%
Mallee	331	282	328	633	-14.8%	16.3%	92.9%	24.1%
Mallee share of Victoria	24%	28%	31%	40%	-	-	-	-
Annual rainfall for Mildura (mm)	202	233	591	657	15.3%	153.7%	11.2%	48.2%

Source: ABS, Value of Agricultural Commodities Produced, annual (Cat No: 7503.0); Bureau of Meteorology

table 9 declining value of grape production

influences and policy

The declining terms of agricultural trade are a major issue for most farmers, but most agricultural industries will, over time develop new methods of production or develop new markets. However, in Australia the productively gains that have been made to date (which have kept farming businesses viable) have tended to rely on increasing the size of farms. In essence, the 'get big or get out' scenario. Within the Mildura context this has occurred relatively successfully within the broadacre and New Irrigation Districts but appears to be more problematic within the Older Irrigation Areas. The State Government's farming policy identifies "production landscapes offer the greatest opportunities for farm businesses to keep ahead of declining terms of trade. The main agricultural advantage is not better soils, or better rainfall, but the lack of competition from other land purchasers."

This lack of competition does not exist within the north-eastern sector of Mildura at the current time. While zoning of the land and the State level policy indicate that agricultural uses in the area should be prioritised, in reality a tradition of excisions for dwellings and the availability of some remaining opportunities under the 'sunset clause' of the MOIA Incorporated Document has raised the expectations of landowners that land they no longer see as viable for farming will be able to be sold for residential purposes. Given the higher costs associated with land which can accommodate a dwelling, this compromises the ability of those who do wish to consolidate land within these areas to do so.

The presence of large numbers of dwellings within these areas also has implications for the ability of the land to be used productively. Modern farming is essentially an industrial land use with all the associated amenity impacts and the co-location of dwellings can lead to disputes. Consolidation within these areas may not necessarily have to mean the acquisition of contiguous land. Given the land is predominantly vineyards, additional flexibility exists for farms to acquire parcels which may be in separate locations. This is a common practice in many grape growing areas.



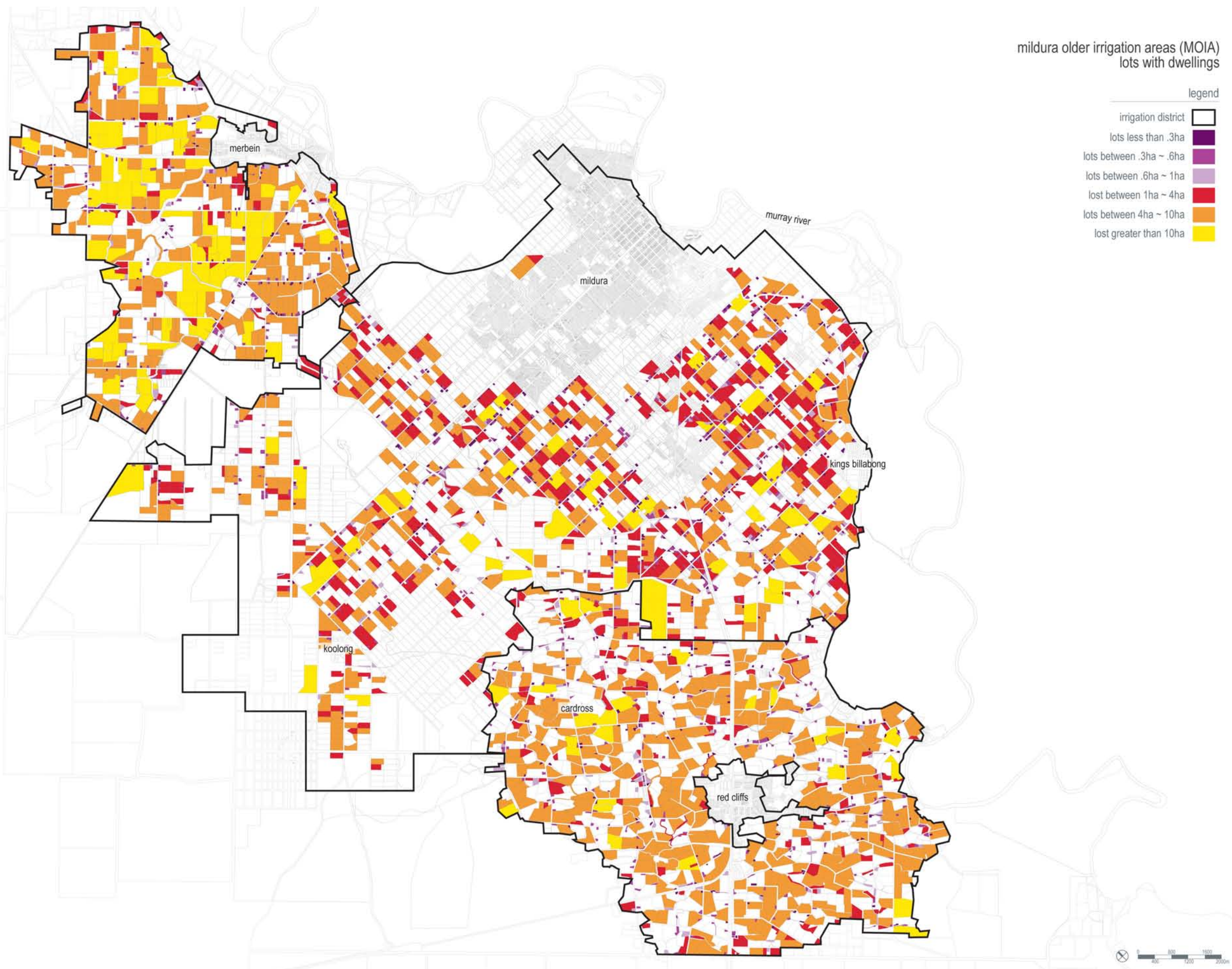


figure 21 MOIA: lots with dwellings

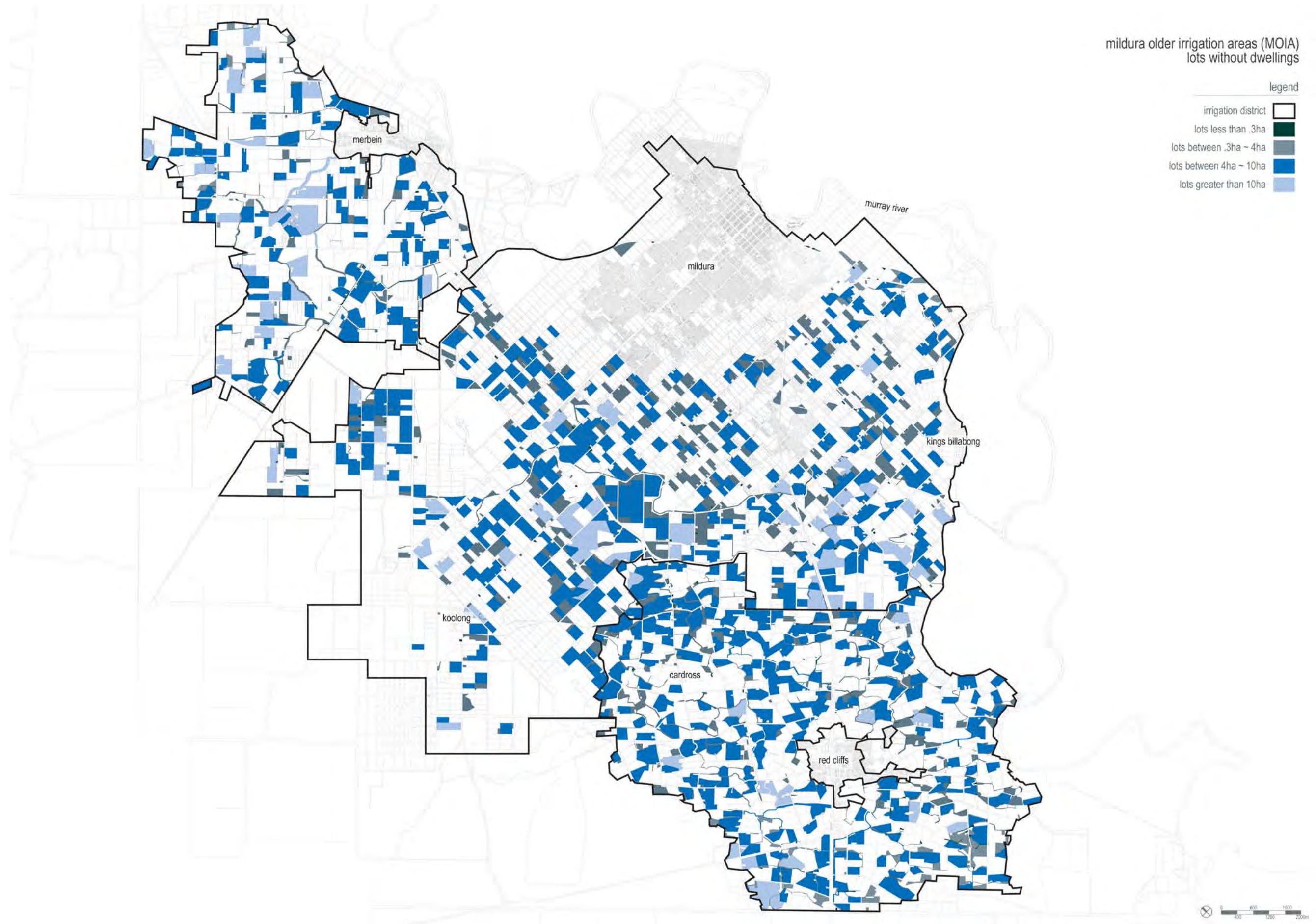


figure 22 MOIA: lots without dwellings



It is also important to acknowledge the existence of a large amount of existing irrigation infrastructure that is present within these areas and the current modernisation project being undertaken by Lower Murray Water. The continued development of land for non-agricultural uses has the potential to affect the viability of supply through some of these irrigation channels and pipes.

While there is clear policy direction on the need to preserve agricultural land and to encourage consolidation of land for the purposes of farming, it is acknowledged that in the unique circumstances of the MOIA, there are additional difficulties that need to be addressed. An approach to this land that ignores the presence of existing dwellings or seeks to maintain the status quo is unlikely to prevent additional erosion of agricultural viability within this area.

residential development in the farming zone

One of the key factors influencing development in the MOIA is the subdivision pattern. Unlike many agricultural areas, the lots within the MOIA are relatively small. Indeed, only Shepparton has a similar situation within a farming area, with land in that area being developed for orchards, rather than vineyards. The 10 acre (4ha) parcels created under the original Chaffey subdivision are generally reflected in the size of many of the other lots within the area. The sheer number of lots has meant that, with dwellings developed on many of these lots, there are a very significant number of dwellings within within an area that is zoned for agricultural purposes. This can clearly been seen on Figure 21 which identifies the lots sizes of the lots within the MOIA which currently have a dwelling. Figure 22 identifies those which do not have a dwelling on them. This assessment was undertaken as part of background research by DPCD as part of their investigation into the MOIA

As the figures illustrates, there are very few patterns to be found to easily categorise where dwellings have or haven't developed within the area. Perhaps the most pertinent observations from the preceding diagrams are the presence of relatively larger lots within the western portion of the Merbein district and in southern areas of the Red Cliffs district, even though many of them have a dwelling. Also notable on Figure 22 is the presence to the south of the main urban area of Mildura of a (relatively) large number of larger lots without existing dwellings.

Areas within the MOIA district have been under intense pressure in recent years to allow use of the land for non-agricultural purposes (in almost all cases, for a dwelling). While some of this demand has been associated with agricultural uses it is likely the majority has been unrelated to the agricultural use of the land, except where a connection is drawn by a proponent between a perceived lack of viable agricultural use and the use of the and for a dwelling.

Location	Total, 2010-2012	Annual Average, 2010-2012	%
Northern Part of Municipality	124	41	94%
Southern Part of Municipality	8	3	6%
Total	132	44	100%

Source: Mildura Rural City Council

table 10 dwelling permit in the mildura farming zone

The overwhelming majority of new dwelling building permits on Farming Zone (FZ) land have occurred in the northern part of the municipality, which reflects the Mildura Older Irrigation Areas. Over the 2010-2012 period, 94% of the 132 new dwelling building permits on FZ land were in the areas surrounding Mildura, Irymple, Red Cliffs and Merbein.

On one hand, this indicate a general demand for rural and lifestyle properties in close proximity to the services, facilities and employment opportunities in this part of the municipality. However, it may also reflect the upcoming 'sunset clause' associated with the potential to develop dwellings on FZ land (between 0.3ha and 1.2ha) identified in the Mildura Older Irrigation Area Incorporated Document.

It is worth noting though, that Mildura does not have any land zoned for Rural Living or for Rural Activity, both of which provide greater flexibility for uses within rural areas than the Farming Zone which is intended to protect and prioritise agricultural uses.



6 housing requirements: demand

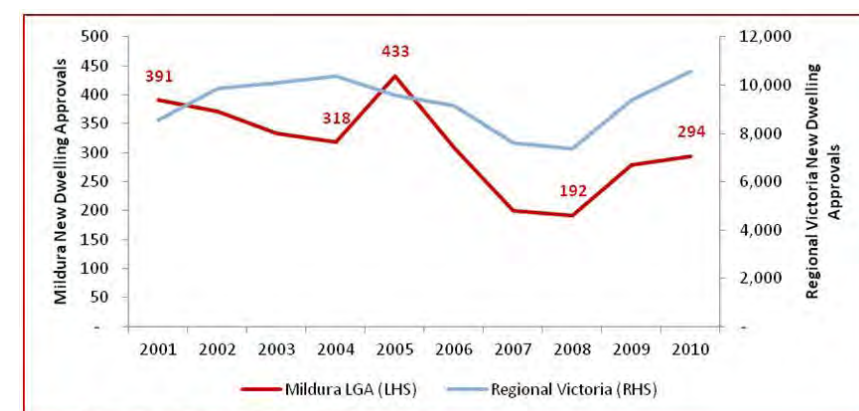
residential development trends

Analysis of new residential dwelling building permit data provides a valuable insight to the residential development trends for a particular area. The following section summarises the key residential development trends, including trends in the location, land use zone and lot size of residential development in the municipality.

The analysis is based on official ABS New Dwelling data for the years 2001 to 2010 at a Census Collection District level, and new dwelling building approvals data provided by the Rural City of Mildura at a property level and which provides information on lot size and zone.

In general, the pattern of residential development in Mildura over the past decade has been in-line with regional Victoria, with strong rates of residential development occurring in the early to mid-2000's, before a decline occurred in the mid to late-2000's and a subsequent recovery towards the later part of the decade.

Information in Figure 23, which is based on ABS new dwelling approvals data, illustrates the extent of residential development in Mildura declined from a peak of 433 new dwelling approvals in 2005 to 192 approvals in 2008, before a recovery over the 2009 and 2010 period. Although growth in the number of new dwelling approvals occurred in 2009 and 2010, the number of approvals remained below the level experienced in the early part of the decade.



Source: ABS, New Dwelling Approvals data by CCD (customised)

figure 23 new dwelling approvals, mildura (RC) and regional victoria, 2001-2010

new dwelling permit trends by settlement

The major residential development trends in the municipality – based on analysis of ABS new dwelling building approvals by settlement over the 2001 to 2010 period – are shown in Table 11 and include the following:

- The Mildura settlement (including Cabarita) is the major location for residential development. Over the 2001 to 2010 period, the Mildura settlement and the immediate surrounding areas accounted for an average of approximately 260 new dwelling approvals per annum, which represented 82% of all new dwelling approvals in the municipality.
- The other urban settlements of Irymple, Red Cliffs and Merbein accounted for approximately 25 new dwelling permits per annum over the 2001 to 2010 period, a large proportion of this development occurring in Irymple over the years 2001 to 2003.
- Although not experiencing this same level of development as the urban settlements, the rural settlements of Nichols Point/Kings Billabong, Cardross and Koorlong, which are in close proximity to the services and employment opportunities provided in Mildura, have generally experienced a higher rate of development than those located further afield.
- The exception is Ouyen, which averaged two new dwelling approvals per annum between 2001 and 2010, and which is the service centre for the southern part of the municipality.

The information in Table 11 is based on ABS New Dwelling Approvals data at a Census Collection District (CCD) and is only available to 2010. Due to the settlement boundaries not aligning with ABS CCD boundaries, the number of new dwelling approvals for each settlement includes some of the surrounding areas.



Analysis of new dwelling building permit data provided at the property level for year 2010 to 2012, shown in Table 12, indicates that the level of residential development in more recent years has been relatively constant. The exception is an accelerated rate of growth in the settlements of Irymple and Red Cliffs, where it is evident residential development is occurring on the fringes of the corresponding urban areas.

Based on analysis of Council's data, the distribution of residential development between 2010 and 2012 has occurred as follows:

- Mildura settlement: Approximately 220 new dwellings per annum (69% of all new dwellings)
- Irymple: Approximately 25 new dwellings per annum (8% of all new dwellings)
- Red Cliffs: Approximately 25 new dwellings per annum (8% of all new dwellings)
- Merbein: Only 3 new dwellings per annum (1% of all new dwellings)
- Rural settlement: Approximately 15 new dwellings per annum (5% of all new dwellings)
- Rural balance: An average of 28 new dwellings per annum (9% of all new dwellings). Interestingly, the majority of these new dwellings (93%, or 26 new dwellings per annum) were located in the areas surrounding the urban settlements of Mildura, Red Cliffs, Irymple and Merbein, which form part of the Mildura Old Irrigation Areas.

Note that a direct comparison between the figures in Table 11 and 12 is not recommended as each Table is from a different data set and each is based on slightly different geographical areas.



Settlement (including surrounding areas)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total, '01-'10	Annual Average, '01-'10	Share of Total LGA
Mildura (incl Cabarita)	331	314	275	262	373	262	151	146	236	220	2,570	257	82%
Irymple	22	25	25	7	11	6	9	5	7	9	126	13	4%
Red Cliffs	1	5	1	10	5	7	11	5	10	3	58	6	2%
Merbein	14	6	8	0	4	11	1	2	1	6	53	5	2%
Sub-total: Urban Settlements	368	350	309	279	393	286	172	158	254	238	2,807	281	90%
Nichols Point and Kings Billabong	2	4	0	7	2	1	1	2	4	6	29	3	1%
Cardross	1	2	0	4	2	1	0	1	2	3	16	2	1%
Koorlong	2	1	5	6	11	5	5	4	2	7	48	5	2%
Ouyen	2	0	2	3	3	2	2	1	2	3	20	2	1%
Nangiloc and Colignan	1	0	1	1	1	3	0	0	0	1	8	>1	0%
Murrayville	0	1	0	0	0	0	0	0	0	0	1	>1	0%
Underbool	0	0	0	2	0	1	0	0	0	0	3	>1	0%
Millewa Region	1	0	1	0	0	0	0	0	0	1	3	>1	0%
Sub-total: Rural Settlements	9	8	9	23	19	13	8	8	10	21	128	13	4%
Other	14	13	16	16	21	9	20	26	15	35	185	19	6%
Total Mildura LGA	391	371	334	318	433	308	200	192	279	294	3,120	312	100%

Source: ABS, New Dwelling Approvals data by CCD (customised)
Note: Data for settlement includes surrounding areas, which form part of the 'Rural Balance'

table 11 new dwelling permits by settlement, 2001-2010



Settlement	Total, 2010-2012	Annual Average, 2010-2012	Share of LGA
Mildura (incl Cabarita)	662	221	69%
Irymple	74	25	8%
Red Cliffs	77	26	8%
Merbein	9	3	1%
Sub-total: Urban Settlements	822	274	86%
Nichols Point and Kings Billabong	20	7	2%
Cardross	5	2	1%
Koorlong	7	2	1%
Ouyen	8	3	1%
Nangiloc and Colignan	1	0	0%
Murrayville	1	0	0%
Underbool	0	0	0%
Millewa Region	4	1	0%
Sub-total: Rural Settlements	46	15	5%
Rural Balance	85	28	9%
Total Mildura LGA	953	318	100%

Source: Mildura Rural City Council

table 12 mildura rural city council new dwelling building permit data, 2010-2012

analysis of new dwelling building permits by zone

Based on Council’s New Dwelling Building Approvals data, 79% of new dwellings between 2010 and 2012 occurred on Residential 1 Zoned (R1Z) land. The share of development on R1Z land was particularly high in the Mildura (93%) and the urban settlements of Red Cliffs, Irymple and Merbein (83% combined) where conventional detached housing accounts for a large proportion of housing stock.

Other relevant planning zones where residential development has occurred include:

- Farming Zone (FZ), which has accounted for 14% of new dwellings, including 71% of new dwellings in the rural settlements and rural balance.
- Low Density Residential Zone (LDRZ), which accounts for 4% of new dwellings.
- Township Zone (TZ), which accounts for 1% of new dwellings.
- Other zones accounted for 1% of new dwellings.

Table 13 summarises the analysis of new dwelling building approvals by zone.

analysis of new dwelling building permits by lot size

Table 14 provides an analysis of new dwelling building permits by lot size over the 2010 to 2012 period. The main points include the following:

- Mildura Settlement: The majority of new residential development consisted of conventional detached housing on smaller lots, with 76% of new dwelling building approvals for lots on less than 800m2 of land. A further 18% were for lots on 800-1,600m2 of land. This correlates with the finding that 93% of new development was on R1Z land. (refer Table 13).

Settlement and Zone	Total, 2010-2012	Annual Average, 2010-2012	Share of Settlement	Share of Total LGA
Mildura (including Cabarita)				
Residential 1	617	206	93%	65%
Low Density Residential	5	2	1%	1%
Farm Zone	21	7	3%	2%
Other (Public Use, Special Use)	19	6	3%	2%
Total Mildura (including Cabarita)	662	221	100%	69%
Red Cliffs, Irymple and Merbein				
Residential 1	132	44	83%	14%
Farm Zone	25	8	16%	3%
Other (Industrial 1, Business 1)	3	1	2%	0%
Total Red Cliffs, Irymple, Merbein	160	53	100%	17%
Kings Billabong and Nichols Point				
Low Density Residential	13	4	65%	1%
Farm Zone	7	2	35%	1%
Total Kings Billabong and Nichols Point	20	7	100%	2%
Other Settlements and Rural Balance				
Township Zone	13	4	12%	1%
Low Density Residential	18	6	16%	2%
Farm Zone	79	26	71%	8%
Other (Rural Conservation)	1	0	1%	0%
Total Other Settlements and Rural Balance	111	37	100%	12%
Total Mildura LGA				
Residential 1	749	250	79%	79%
Low Density Residential	36	12	4%	4%
Township Zone	13	4	1%	1%
Farm Zone	132	44	14%	14%
Other	23	8	2%	2%
Total Mildura LGA	953	318	100%	100%

Source: Mildura Rural City Council

table 13 new dwellings by zone, 2010-20102

- Urban Settlement of Red Cliffs, Irymple and Merbein: A large proportion of new development in these urban settlements has also consisted of conventional detached housing on smaller suburban lots, with 45% of development occurring on lots of less than 800m2. However, these settlements also provide an opportunity for larger allotments, with 30% of development occurring on lots of 800-1,600m2, and a further 25% occurring on lots larger than 1,600m2.
- Kings Billabong and Nichols Point: The majority of development in this area has occurred on LDRZ in Kings Billabong, with the balance occurring on FZ land. Consequently, this settlement provides an opportunity for larger allotments, with 65% of new development occurring on lots in the range of 2,600-4,200m2 and 35% of development on larger lots.
- Other Settlements and Rural Balance: The majority of residential development (71%) occurred in the FZ and consequently the majority of development has been on larger lots. For example, 40% of development has been on lots larger than 40,000m2 (or 4ha), 30% of development has been on lots in the range of

2,600-4,200m2 and 15% of lots have been developed on lots in the range of 4,200-12,000m2. It is worth noting that a large proportion of development has been in the Rural Balance Areas which surround the urban settlements (i.e. Mildura, Merbein, Irymple and Red Cliffs).

Although variations exist between the settlements, Mildura remains as the main residential location in the municipality. Therefore, the trends exhibited within the Mildura settlement are strongly reflected in the totals for the Mildura LGA. In the Mildura LGA, the majority of residential development (60%) occurs on smaller lots of less than 800m2, with a further 18% of development occurring on 800-1,600m2 lots. The extent of development on larger lots is limited, in a municipal context. These patterns are summarised in Table 14.

	Mildura (including Cabarita)	Red Cliffs, Irymple and Merbein	Kings Billabong and Nichols Point	Other Settlements and Rural Balance	Total Mildura LGA
Average Annual New Dwelling Building Approvals, 2010-2012					
0-800m²	167	24	0	1	192
800-1,200m²	37	10	0	1	48
1,200 -4,000m²	4	11	1	6	21
4,000-6,000m²	2	3	4	8	17
6,000-10,000m²	0	0	0	2	3
10,000-20,000m²	3	0	1	2	6
20,000-40,000m²	6	2	1	1	10
40,000m² plus	2	3	0	15	20
Total	221	53	7	37	318
Share of Settlement					
0-800m²	76%	45%	0%	3%	60%
800-1,200m²	17%	19%	0%	3%	15%
1,200 -4,000m²	2%	21%	10%	16%	7%
4,000-6,000m²	1%	5%	65%	23%	5%
6,000-10,000m²	0%	0%	0%	6%	1%
10,000-20,000m²	1%	1%	10%	5%	2%
20,000-40,000m²	3%	4%	10%	3%	3%
40,000m² plus	1%	5%	5%	41%	6%
Total	100%	100%	100%	100%	100%

Source: Mildura Rural City Council
Note: Figures are rounded

table 14 new dwellings by lot size, 2010-2012



recent trends in total dwelling growth by statistical local area

The above analysis illustrates where residential development is occurring; however, it does not take into account the demolition of dwellings, or the total net growth in dwellings. Analysis of ABS Census data for 2006 and 2011 provides insight into the total net dwelling growth in the municipality and shows the following:

- Net dwelling growth for the Statistical Local Area of Mildura Part A (which largely encompasses the urban areas of Mildura, Red Cliffs, Irymple and Merbein) between 2006 and 2011 amounted to approximately an additional +1,380 dwellings, or approximately +280 additional dwellings per annum.
- A situation of net decline in the number of dwellings in the Statistical Local Area of Mildura Part B (which encompasses the balance of the municipality) of approximately -180 dwellings, or approximately -40 dwellings per annum. This is representative of the declining rural population due to a number of factors, including the consolidation of farms over this period and the consequent movement of people away from the rural areas.

residential property market – key considerations

The *Mildura Housing and Settlement Strategy – Issues and Influences* report identified a number of issues and influences that will require consideration in the development of the Strategy, and these included the following which may change or influence the trends identified in this section:

- Regional considerations, including the regional significance of Mildura
- An ageing population
- Macro-economic trends and drivers, including international, national and regional trends which will effect employment and housing markets
- Climate change and its impact on agriculture, infrastructure and the housing markets’ response to climate change
- Older irrigation areas and water rights, including the pressure for the subdivision of agricultural land for residential purposes
- The future role and function of smaller settlements, in light of declining economic roles and populations
- Environmental influences
- Infrastructure provision, including the impact Development Contribution Plans have on the extent and timing of development
- Community health and well-being
- Affordable and diverse housing
- Low-density and rural living opportunities
- College lease land and its impact on supply

- The Mildura- Irymple interface area, and the timing and staging of development
- Connectivity and movement
- Proposed new land use zones and their impact of residential land supply.
- Changes to the urban structure of Mildura

Essential Economics undertook one-on-one consultation with real estate agents, property developers, Council officers, education and health providers and local stakeholders with experience in local financing and business development. In general, the issues identified above were reiterated throughout this consultation. As the consultation was generally of a ‘property’ focus, the issues that tended to arise more often included the following:

- A tightness in supply for low-density and rural residential land. Real estate agents indicated that they had strong levels of enquiry for residential allotments of one to five acres; however, often they had very little product to offer.
- The impact of Development Contribution Plans on the profitability of residential subdivision.
- A limited supply of residential builders, most of who tend to undertake the dual role of property developer and builder. This has implications on the variety and quality of residential subdivision.
- A low rental vacancy, with agents indicting a high level of enquiries for rental properties. In general, a significant amount of demand is for properties in three to four-bedroom houses in Mildura. The presence of a high level of external investment in the residential sector was also noted.
- In addition to the above, the issue of the provision of short-term accommodation was also identified. This includes the following:
 - Seasonal workers: MADEC, who operate an employment services firm specialising in seasonal workers, indicate that each year there is a requirement for more than 6,000 seasonal workers over the harvest period (Essential Economics, *Mildura Retail Strategy*, 2010).
 - Students: Including students from the Monash University Regional Clinical School, Latrobe University and SuniTAFE.
 - Visiting professionals: Including visiting medical professionals and businesses executives.

Currently, the housing requirements for the above are met by a mix of the private rental market, on-site student dorms in the case of students, houses either owned or rented by the organisation, caravan park accommodation, and accommodation provided on farms in the case of some seasonal farm workers. These ‘specialised’ housing needs are documented in the following chapter.

7 housing requirements: diversity

The *Mildura Housing and Settlement Strategy* is not just a study that is looking at issues of the supply and demand for residential land within Mildura, but also at whether the housing that is currently being provided is meeting current needs, and is likely to meet future needs. People's housing needs are diverse and arise from a range of social, cultural, economic and locational factors. This section outlines general trends in housing requirements for specific groups of people, but it is important to also recognise that these groups are not homogenous, and within each group will be a range of needs. However, these general trends and understanding of the current situation assist in providing guidance for future directions and policy.

One of the most important things to note though, is that gaining an understanding of both the current provision of particular specialised housing markets (and the associated demand and issues) is by no means a straightforward exercise. Data on the needs of these groups is kept by a range of bodies and agencies and the distinctions between different groups are often very fluid. Those with special housing needs are also often accessing services from a range of providers depending on the current availability. All of these factors should be taken into account when considering the following information. The needs of a range of different groups was assessed and documented in recent Grattan Institute reports (including *The Housing We Want* (2011)) and a number of papers prepared by the Australian Housing and Urban Development Institute which have informed this Background Report.



families

traditional family unit

Housing needs of families with children often prioritise the importance of a large detached houses with ample inside and outdoor space (ie enough bedrooms and living areas), as well as safety and close proximity to schools, family and friends.

sole parents

The rapid growth in families with dependent children headed by sole parents, many of whom live on low incomes, means that their access to affordable housing is an important factor in their residential location. There are relatively high concentrations of lone parents in regional areas of Australia. Housing affordability is of particular importance for many sole parents, particularly those with low incomes. In addition, the quality and accessibility of schools, jobs, shops, and other local neighbourhood features is of importance.

Both traditional family units and sole parent families will generally access housing through the broader residential sales and rental markets, although there is a higher proportion of sole parents accessing supported housing, detailed further below.

young people

Location of housing close to education and employment is important for young people. As most young people have low incomes, affordability is also a key factor in housing choice. In addition, security, convenience and access are other factors identified in the Grattan report as important for young people.

Young people are also often the most vulnerable to housing stresses that can result in homelessness. Services to address youth homelessness in the region are important as young people from rural areas are more likely to stay in the region close to friends and family than to access accommodation and emergency services in larger cities or towns. Housing for younger people is generally provided by the rental market and is also addressed in the following section on short-term accommodation which deals with student housing.

transient populations

In addition to accommodating permanent residents, Mildura also accommodates a range of groups of people who require some form of short-term accommodation. These include in the order of 6,000 seasonal workers, university students and visiting professionals. At various periods throughout the year, the influx of people into Mildura can increase the number of people accessing facilities and services in the order of 10%.

Currently, these groups of persons are accommodated in the following manner:

- Seasonal farming workers are accommodated in various forms of accommodation, including caravan parks, backpackers and on-site accommodation on farms.

- Students are accommodated in on-site student dormitories and in private houses owned or leased by universities or the private rental market. A low vacancy rate (1-2%) exists in Mildura's private rental market.
- Visiting professionals are accommodated in serviced apartments, motel/hotels, and in rental accommodation.

In recent years, a number of serviced apartment complexes have been developed which cater for tourists, travelling business people and visiting professionals. These developments include Quest Apartments (2010), and Indulge Apartments in Langtree Avenue (2010) and Ontario Street (2012), supplementing the traditional hotel/motel offer.

Potential may exist for a co-ordinated approach to providing short-term accommodation for these various groups, although noting that expectations on the type and quality of accommodation varies between these groups. Ensuring such an adequate (and appropriately priced) supply of such accommodation and which is affordable, will be important in assisting the development of industries which frequently use short-term accommodation. Council may have a role in facilitating discussions with these groups and determining their accommodation needs into the future.

Short-term accommodation that consists of accommodation in the private rental market is accounted for in the forecasts of dwelling requirements presented earlier in this Background Report; however, other forms of accommodation – including serviced apartments, retirement villages and aged-care – are additional requirements that need to be accommodated in Mildura.

While information relating to retirement villages and aged-care is provided below, short-term accommodation in the form of serviced apartments, caravan parks and backpackers would require a detailed assessment of the tourism market as these forms of accommodation also serve the tourism market in the region.



older persons

Significant ageing of Mildura’s population is forecast to occur over the period 2012 to 2032. Based on the Medium and High population growth scenarios (detailed in Section 9), Mildura’s population aged 65 years or over is forecast to increase by approximately +6,250 to +7,370 residents over the period, as shown in Table 15.

This level of growth in the older population will require the development of appropriate housing, including smaller housing lots, retirement village development and aged care facilities, all of which should be located in close proximity to appropriate facilities and services.

	Medium Scenario	High Scenario
Population forecasts		
2012	51,900	51,900
2022	55,980	58,120
2032	60,540	65,110
Forecast Population aged 65 years plus		
2012	8,600 (16.6%)	8,600 (16.6%)
2022	11,380 (20.3%)	11,820 (20.3%)
2032	14,850 (24.5%)	15,970 (24.5%)
Population growth in person aged 65+ years plus		
2012-2022	+2,780	+3,220
2022-2032	+3,470	+4,150
2012-2032	+6,250	+7,370

Source: DPCD, Victoria in Future, 2012; ABS, Regional Population Growth, 3218.0; Essential Economics
Note: Figures are rounded

table 15 forecast population age 65 plus years, 2012-2032

Older residents value stable, secure, affordable accommodation that facilitates maximum levels of independent living for as long as possible. Most older residents prefer to age-in-place, live independently and actively engage in their communities.

The vast majority of Australians aged 65 and over occupy a private dwelling, with only 7 per cent in residential aged care. Separate houses predominate (home ownership and three bedroom dwellings) however there is a progressive decline as age increases in favour initially of medium and higher density housing forms and, in later cohorts, residential aged care, according to recent research. There is overwhelming evidence that most older Australians wish to remain at home as long as possible for a range of reasons, including personal and financial security, family memories, a sense of place and wellbeing, familiarity and maintenance of social networks.

Despite the desire to stay at home, difficulties increase with age, the most prominent being the burden of property maintenance, health care needs, transport, housework and mobility difficulties. Reasons for moving to residential aged care include inappropriateness of the design of most houses and the cost and energy involved in modifications. As older people continue to age, modifications will be required to assist them with independent living for as long as possible. New houses should be designed for ready modification, as this is more cost-effective.

Close proximity to health services, local shops, family and friends, as well as safety are important for lone older people.

The HACC group deals primarily with the more vulnerable groups of older people and report that Mildura has a very high proportion of older people (receiving HACC services) in rental housing compared to other local government areas. In percentage terms, 9.9% of HACC’s Mildura clients are in private rental accommodation (this is compared to 2.9% as the lowest percentage and 10.1% as the highest). In terms of numbers 338 HACC clients in Mildura were in private rental accommodation, compared to the lowest number of 19 and the highest number of 548 (most other high numbers being in the 300s).

This indicates that there is a significant proportion of vulnerable older people within the community accessing the private rental market in addition to those who own their own home or are accommodated through supported services or in retirement living or aged care units.

retirement village demand

Retirement villages are a form of development that caters for independent retirees, typically aged 65 years or over. In general, retirement villages will contain a range of Independent Living Units (ILUs) and a community centre that may contain a range of recreational facilities. A large number of private and not-for-profit organisations operate retirement villages, although the industry has undergone a period of consolidation in recent years.

Retirement village developers/operators will typically seek locations that are in close proximity to shops and services, medical facilities, public transport and entertainment/recreational pursuits. In addition, a secure environment is also a major consideration for retirees. To this extent, future retirement village development is likely to be directed to the urban areas of Mildura.



A high level analysis of the potential future demand for retirement village units (or ILUs) for Mildura over the next 20 years indicates that potential for approximately an additional 230 to 270 ILUs, provided in perhaps 1-2 villages (depending on the size of the village). This analysis is based on the following:

- Forecast population growth aged 65 years as shown in Table 16.
- An assumed market penetration of 5% of residents aged 65 years and over residing in retirement villages.
- A share of 10% of retirement village residents aged younger than 65 years.
- An average household size of 1.3 persons per ILU.
- An existing supply of approximately 410 ILUs in Mildura, based on information contained in the ABS 2011 Census.

The above forecast demand for retirement village development is considered conservative and is based on the market penetration of retirement villages remaining at 5% of residents aged 65 years or over. Potential exists that this market penetration will increase in the future, as retirement village become more accepted in the market place.

If the market penetration of retirement villages in Mildura increase to 7.5% by 2032 and having regard for the information presented above, this would lead to a demand for approximately 540 to 610 ILUs.

The existing supply of independent living units in Mildura is documented in the table below. This information has been sourced from Council’s records and indicates that there is likely to be a significant shortfall in independent living units if the demand figures above are compared to supply. The demand is identified as an additional 540 – 610 beds across the municipality, however, the table below indicates a total of only an additional 16 units. It will be important therefore to ensure that sufficient land is allocated to accommodate new retirement living complexes, in addition to the expansion of existing developments outlined below.

	Retirement Developments- Existing ILUs	Retirement Developments- Proposed ILU Beds
Mildura	410 ILUs (ABS, 2011)	
Red Cliffs		St Vincent de Paul- 12 beds
Murrayville		Murrayville Bush Nursing Centre- 4 ILUs

table 16 existing and proposed retirement living developments

aged care

Aged care is similar to retirement villages, in that it is a specialised industry. However, some key differences exist, including the following:

- Aged care provides care services to residents, whereas retirement villages are for independent retirees
- Aged care operators generate the majority of income from obtaining bed licence fees, rather than from property-related transactions. For this reason, not-for-profit organisations account for a large share of operators in the aged care sector, reflecting the limited financial returns compared to other investment opportunities otherwise sought by private sector entities.

Over the next 20 years demand will exist for an estimated additional 440-510 aged care beds in Mildura. This analysis is based on the following:

- National planning benchmark of 88 aged care beds (including 44 low care and 44 high care) per 1,000 residents aged 70 years or over
- Supply of approximately 520 aged care beds in the Mildura of June 2012, based information from the Department of Health and Ageing.
- Forecast population aged 70 years and over.

The existing supply of units in aged care beds in Mildura is documented in the table below. This information has been sourced from Council's records and indicates that there is likely to be a significant shortfall in aged care beds as the demand figures above are compared to supply. The demand is identified as an additional 440 – 510 beds across the municipality, however, the table below indicates a total of only an additional 188 beds. It will be important therefore to ensure that sufficient land is allocated to accommodate aged care developments, in addition to the expansion of existing developments outlined below.

	Aged Care- Existing Beds	Aged Care- Proposed Beds
Mildura	520 aged care beds in June 2011 (Dept of Health and Aging)	342 Ontario Ave- 38 beds 1520 Deakin Ave- 45 beds
Red Cliffs	Jacaranda village - 75 beds 21 Snowy Ave – 29 beds	21 Snowy Ave- 49 beds
Merbein	Chaffey aged care- 78 beds	3-15 third street- 14 beds
Irymple		Oasis Aged Care- Karadoc Ave- 42 beds

table 17 existing and proposed aged care beds

indigenous residents

A number of influences affect both indigenous home rental patterns and ownership. Recent research indicates that entrenched poverty may be the strongest influence, which results in many indigenous residents relying on social housing, and effectively largely excluding most indigenous people from home ownership. In many regional centres, the indigenous population is an important and visible component of the broader community. In some regional centres the indigenous population experiences discrimination within the housing market, especially in private rental, and this contributes to a segmented housing system of supply. Violence, instability of tenure and overcrowding also have adverse effects on indigenous housing.

The *National Indigenous Housing Guide* identifies that in considering the housing requirements of Indigenous Australians, “all aspects of the physical environment, including the social, cultural and environmental attributes of places” need to be considered. That is, not only dwellings but also open space, infrastructure and community services. Sustainable housing for Indigenous Australians needs to include culturally appropriate design; environmental efficiency; housing layouts which encourage healthy living; training and employment for the housing sector workforce; full costing of projects across their life cycle; and innovative construction, procurement and ownership arrangements. Links to external services as well as tenancy support programs are identified as crucial in ensuring stable tenancies and avoiding homelessness. A culturally appropriate housing service which allows for the maintenance of tradition and housing which caters to fluctuating numbers of residents would also be of great benefit. Within Mildura, this service is provided by the Mildura Aboriginal Corporation.

Despite adjusting to many aspects of sedentary life, many Indigenous people retain a traditional preference for living in flexible, mixed-use spaces inside a house, under a veranda, in the space surrounding a house (the yard), and in the open spaces between houses. Indigenous households often require sufficient space to accommodate an extended family, for reasons of cultural preference as well as the severe shortage of housing resulting in over-crowding. Cultural traditions in some communities require separate living areas for special groups, e.g. young men, thus increasing the complexity of housing provision that must be made.

supported accommodation

Supported accommodation covers a range of areas discussed in more detail below, however there are two strong themes which link all element of supported housing that should be highlighted. The first of these is affordability, much of which is addressed by the supporting body, but the second theme is easy access to services and facilities. In most cases this means walking and so an emphasis on safe and amenable pedestrian access to services and facilities is highlighted.

public and community housing

Demand for public and community housing is stronger than ever. Over the last decade, reduced investment in public housing has contributed to a reduced supply of low-cost rental housing. With private rental supply low, social housing provision in rural and regional areas is also inadequate to meet demand. The National Affordable Housing Agreement has delivered some social housing but the scheme has had a low profile in regional Australia, and the National Rental Affordability Scheme hasn't delivered units in areas suitable for many low-income families that rely on public transport.

As the population ages, the demand for public housing for older people is expected to outstrip supply. Older people have specific needs which can be anticipated and planned. This includes physical infrastructure such as hand rails, and support services needed to help tenants maintain independence for as long as possible. Public housing which is accessible, close to social support such as family and friends, and has adequate maintenance and modifications best suits older persons.

Within Mildura, public housing is provided by the Department of Human Services (through the Office of Housing). The Mildura Office is responsible for around 1080 properties, with approximately 972 of these in the Rural City of Mildura. A breakdown of the location of these properties is as follows:

- Mildura: 850 (87.5%),
- Irymple: 10 (1%),
- Merbein: 34 (3.5%),
- Red cliffs: 68 (7%)
- Ouyen: 10 (1%).



Of note in relation to public housing in Mildura is the following:

- Property types provided in public housing are currently: 1 bedroom (22.6%); 2 bedrooms (30%); 3 bedrooms (41.9%); 4 bedrooms (5.4%).
- Current waiting list demands are for 1 bedroom (49.4%), 2 bedroom (27%), 3 bedroom (16.5%) & 4 bedroom (7.1%). Statistically 3 bedroom properties still represent the highest proportion of stock but waiting list demands show that a slowly increasing demand for 1 and 2 bedroom stock has taken these waiting lists to 76% of the total demand.
- Elderly applicants (>55 years) represent 7.7% of applicants.
- Demand for Ouyen diminished to an extent that only one block of eleven elderly person units remain.

The Department are not anticipating that stock in the Mildura area will either increase or decrease to any considerable amount in the immediate future. The main urban area of Mildura is expected to continue to experience the highest level of demand. Given the ability to provide units in close proximity to public transport, schools and other services and facilities within this larger centre this is the preferred location as well as that with the highest level of demand.

supported accommodation - disability

People who have disabilities or long-term health problems may need physical alterations made to their accommodation and/or assistance of personal support services to be able to live independently. Often the private rental market does not provide suitable housing for people who require modified housing or with significant personal support needs. Supported accommodation is provided by the Department of Human Services (detailed above) as well as through community organisations. Successful housing for those requiring supported accommodation includes housing with appropriate modifications as well as a coordinated approach with relevant community agencies and support services.



Within Mildura, the Sunraysia Residential Services (SRS) currently provides respite services to 101 clients, of which 36 families are part of the aging carers (65 years+) network. Through their Community Living Project Construction Planning program, they estimate that, in the next two years, the Sunraysia region will require double the accommodation placements due to high numbers of adolescents with complex medical conditions and very challenging behaviours associated with their disabilities. In 2011, SRS worked with eight residents who required individualised accommodation with one-to-one support for their protection and that of the community. The number of referrals continues to trend upwards rather than decreasing, and the influx of immigrants into the Sunraysia region only compounds the trend. From their current service delivery, they understand that in the next few years there is going to be no less than 36 families looking for shared supported accommodation, and also that there are five families which will require shared supported accommodation within the next year.

SRS currently rents five residential properties, most of which are a compromise on accessibility and suitability, to try and satisfy current demand as best as possible. The cost to rent and then to maintain the private rental homes, plus find a landlord willing to have modifications to their investment homes, is an ongoing challenge. They are currently running a program to construct a supported residential home and units for people with a disability.

As with many of the other groups identified in this section, issues around the provision of appropriate levels of public transport are critical. However, the design of current subdivisions is also highly problematic for those with disabilities in relation to access, inclusion and liveability.

crisis accommodation

Crisis and emergency accommodation includes a range of specialist services for people who are homeless or at risk of homelessness or after an emergency. Crisis accommodation is provided by the Department of Human Services as well as through community organisations. However, few details are available to determine whether there are existing emergency accommodation units within the municipality or if emergency accommodation is provided through the private rental market or as part of public housing stock.

implications

The following is a summary of what the background information documented in this section implies for the Strategy in terms of addressing those matters within the Strategy's scope. These include:

- The aging population in Mildura will require a more diverse range of housing options than currently exist, including more supported housing, retirement housing and in-home support, in Mildura and also in surrounding townships, many of which have little infrastructure or services currently to support older persons.

- To address the needs of an aging population more supported housing, retirement housing and in-home support will be required in the future. This is particularly important for older people in townships wanting to age in place.
- The trend of decreasing household size for older persons requires more flexible and adaptable designs that can accommodate people with limited mobility and people living alone.
- For older people who are frail or have a disability, more public housing may be required as a long term solution to homelessness, rather than relying on rental housing which can cause vulnerability to rent increases and insecure tenure.
- There is an increasing number of families moving into Mildura from farms, including single mothers, many who move for education reasons. A range of housing options is needed, including larger rental houses (3+ bedrooms) for families, mid-high range dwellings, as well as affordable housing options.
- Many young people study in Mildura and retaining young people in the region is a priority for the future. More affordable rental housing is required for young people, including housing close to education and employment opportunities.
- Professional workers employed in the region on a short term basis require mid-high end housing options.
- Transient workers require affordable and flexible housing options.
- A range of other factors need to be considered including the need to provide affordable housing located close to services, shops and public transport, and neighbourhoods which are safe and walkable.
- The role of caravan parks needs to be considered as an important provider of low cost visitor accommodation and temporary housing, rather than just as tourism accommodation.



8 sustainable growth influences

When developing a framework for the long term housing and settlement needs of Mildura, given the long term planning involved, it is vital that the strategy considers issues related to sustainability. 'Sustainability' is both as complicated and as simple as it sounds. The framework needs to be able to provide for longer term needs; to consider how the decisions made now may impact on the lives of later generations who will chose to make the municipality their home. However, sustainability is also incredibly complex, addressing a range of social, economic and environmental considerations. This section of the background report seeks to provide an overview of some of the key themes which are relevant to the Strategy and explore ways in which the Strategy may be able to incorporate responses which will increase the sustainability of the municipality's settlements, communities and housing.

One of the key issues is how Mildura will be affected by the changing climate. Data provided for the Mallee region by the CSIRO indicate that the region will be both hotter and drier than it is today, and that average temperature in summer will rise by 1 degree by 2030 based on current trends and greater increases beyond this time frame. In addition to this, the amount of 'hot' days (over 30 degrees) will increase. Rainfall will also be reduced, in particular, Spring rains. Extreme weather events will become more frequent, with Mildura experiencing an increase in 'extreme' fire danger days of between 18 and 119% by 2050.

The impacts of these changes were explored in an earlier piece of work undertaken by Council (*North West Victoria Foodbowl Climate Change Adaptation Strategy*). That document outlined that the main impact of these changes will be felt:

- In the need to use water more efficiently as a result of less water being available due to reduced rainfall, greater risks of contamination of water due to lower flows and increased bush fires and more demand for water as temperatures rise.

- Agriculture will experience change which will be positive, but also negative, making the overall impact on viability difficult to predict, however, water allocations for irrigated agriculture are likely to be more constrained.
- Impacts on biodiversity, in particular those species with restricted or dispersed populations, small numbers or specialised habitat requirements, including through amplification of existing risks.
- Communities will be impacted (in particular the elderly) through increased heat waves and associated health risks. Communities will also be more exposed to costs associated with changes to existing weather patterns as well as increased energy costs associated specifically with cooling of houses.

Those specific impacts will be discussed in this section along with a range of other issues including declining rural settlements, energy efficient housing and food sensitive design.

consolidated vs dispersed settlement

Consolidated settlements are those with dense and proximate development patterns. Benefits include shorter travel distances, less car dependence, more district-wide energy utilisation and possibilities for local energy generation, optimal use of land resources, better urban-rural linkages, better public transport provision, and better access to a diversity of local services and jobs. Consolidated settlements offer more opportunities for environmental sustainability, social equity and economic viability. Factors influencing this trend include increasing population and conservation of land resources, climate change and the need to reduce CO2 emissions through reduced car travel and improved energy efficiency, rise in energy prices, a need for sustainable economic growth, declining populations, increases in ageing demographics and changing household sizes.

One of the key questions in Mildura is whether the current trend towards settlement occurring through the north-eastern sector is sustainable. As it stands there is a significant population spread through this area. Figure 23, which identified lots with dwellings within the MOIA area, clearly demonstrates this. While some of these dwellings remnants of previous or existing agricultural use of the land, many of them are used solely for residential purposes. In the longer term whether this is sustainable in terms of the provision of services to those residents and the ability of those residents to access services (for example, if petrol should increase significantly in price) must be considered. There are advantages to the provision of houses on larger blocks (discussed further below) but the principle of consolidation as opposed to dispersal would seem to be a core element of sustainability within the Mildura context. A consolidated settlement would also reduce the impact of residential development on both areas of agricultural and environmental sensitivity. At a broader scale, the scattering of rural settlements do have an important role to play in supporting the urban centres of the north-east sector, however these smaller settlements are generally facing consistent population decline. Responses to that issue are discussed further below.

While the trend is towards consolidated settlements, it is important to clarify that this does not mean everyone must live on a 450sqm block in the suburbs. Rather, it is a response which calls for a clearly defined and contiguous urban area, where there may be a diversity of lot sizes and housing types but where the continuous nature of the settlement pattern makes the provision of services and facilities more viable and sustainable in the longer term.



food sensitive planning and urban design

Food Sensitive Planning and Design (FSPUD) is an approach that addresses how food is produced, moved, processed and consumed to provide regular access to safe, nutritionally adequate, and culturally acceptable food for communities. In addition, consideration of urban planning in the production, distribution and consumption of food all make a significant contribution to the environmental impact and the health of the community.

Several factors are driving the need to consider FSPUD including climate change impacts such as reduced rainfall, increasing temperatures and extreme weather events which are likely to affect food production; the cost and availability of fossil fuels which are used for fertilisers and agricultural chemicals on farms as well as for the distribution of food and consumer access; reduction of agriculturally productive land from competing uses to accommodate growing urban populations; and the scarcity and cost of critical resources such as water, energy and agrochemicals which may influence the equitable provision of adequate food to growing populations. On the ground this often manifests itself in the introduction of urban agriculture production and in stronger policy controls regarding the protection of agricultural land proximate to urban centres to ensure reduced distances for food to travel. Food Sensitive Planning and Design has strong links to Healthy Communities, and this link is reflected in key reference documents such as that produced by the Heart Foundation (*Food Sensitive Planning and Urban Design* (2011)).

FSPUD is an important consideration for Mildura's future as agriculture is a key industry in the region. Planning responses in Mildura might include maintenance of productive capability of farming land through certainty in planning schemes, as well as integration of productive uses within new settlements; and easy access to food retail to ensure food security. It is important to consider also other opportunities that may be available to support locally produced food, with the majority of agricultural production in the region being geared towards export, rather than provision of food for the local population. A diversity of opportunities to access fresh produce within new growth areas is also vital.

Responses to the issue include the recent Wodonga Land Use Planning Project. This case study considered access to food and is documented in the Heart Foundation report. Responses included 'food security sympathetic inclusions' such as small local activity centres for access to food in new residential developments; higher residential densities to encourage walkability for food access; rezoning of land to encourage more diverse shopping centres.



biodiversity protection

Biodiversity refers to the variety of different plants, animals, micro-organisms, their genes, and the ecosystems they form. Loss of biodiversity is one of Australia's most serious environmental problems. Agriculture depends on healthy ecosystems to provide services that include nutrient and waste recycling, pollination from insects, sediment control, and clean water. Biodiversity also provide the foundation for clean air and clean water and the diverse natural environments which underpin tourism within the region. Some impacts on biodiversity include population growth and development which has led to the loss and fragmentation of native habitat, the loss of species, increased levels of salinity, reduced stream flow, poor water quality, erosion, changes to natural fire regimes and increased activity of weeds and pests. On top of this, climate change will alter ecosystems causing more intense and frequent disturbances in the future which will add to the many existing pressures.

Biodiversity is important for Mildura's future. The Mallee covers nearly 40% of the region's area and is home to five distinct bioregions which are significant for their unique species, some of which are classified as threatened within Victoria. Future housing and settlement will need to be sensitive to the region's biodiversity, through protecting diversity; maintaining and re-establishing ecosystem functions; and reducing threats to biodiversity. On the ground, response to biodiversity will need to consider both where development should not occur, in order to protect endangered species, but also where urban development may actually be able to assist in providing links between fragmented habitats along 'greenways' or other areas of open space within the urban centres. Responses in a Mildura context have included the Draft Mallee Native Vegetation Plan, which sought to increase awareness and appreciation of native vegetation, protecting and enhancing remnants, encouraging landholders to integrate native vegetation management into agricultural practices and utilising native vegetation to rehabilitate degraded landscapes. Other responses include those seen in Queensland where State level guidelines provide a framework for the creation of wildlife corridors through urban areas.



energy efficiency in housing

As outlined at the beginning of this Section, one of the impacts of climate change is likely to see increased energy costs both as a result of changes to policy setting and also due to increased needs for cooling, particularly in the Mildura context. Environmentally sustainable housing can deliver substantial emissions reductions, greater thermal comfort and can also produce significant financial savings in the long term. Ensuring new housing development maximises the saving for occupiers involved through smart design will be critical. The balance between short term saving in providing affordable housing will need to be balanced with the longer terms costs involved in developing housing that creates financial strain due to the costs involved in keeping it comfortable.

Housing in Mildura will need to consider how new and existing dwellings could be made more energy efficient, especially in Mildura's climate. Mildura has hot, dry summers and cool winters. Key sustainable housing design principles for this climate include:

- Using passive solar principles with well-insulated thermal mass.
- Maximising night time cooling in summer
- Considering convective ventilation, which allows rising hot air while drawing in cooler air.
- Building more compact shaped buildings with good cross ventilation for summer.
- Maximising solar access, exposure to cooling breezes and cool air drainage. Protect from strong, cold winter and dusty summer winds.
- Shading all west glass in summer and consider double glazing.
- Providing shaded outdoor living areas.

Many of the above steps can be undertaken simply by careful planning that are not connected to increased costs. While elements such as solar panels are obviously a positive in achieving energy efficient housing, the most value for money in terms of energy efficacy is generated by low or no-cost considerations at a planning and design stage. What this requires is a shift away from current forms of housing to ones which are better placed to respond to the climate. The Mildura Settlement and Housing Strategy will be well placed to begin this transition. There are a significant number of new developments now being designed at similar costs to existing housing but with energy efficiency considered in their design. Work undertaken by many of the major development industry bodies in Melbourne, including Places Victoria and Lend Lease, demonstrate the ability of housing across a range of budgets to provide a more energy efficient response.

sustainable transport

Neighbourhoods which encourage sustainable transport options (walking, cycling, public transport, reduced car dependence) reduce greenhouse gas emissions and improve health and wellbeing of the community as a whole. Several factors are driving this trend including health risks (both physical and mental health is improved through active transport such as walking and cycling). Also driving the trend is the fact that transport is the second largest producer of greenhouse gas emissions in Victoria after stationary energy production, with almost 90 per cent of transport emissions coming from road transport (private vehicles, trucks, buses and commercial vehicles). In addition, the combination of a carbon price and volatility in the global price of oil means that transport emissions are likely to become a financial issue as much as an environmental one in the years ahead.

Responses for Mildura should include increased street connectivity, good public transport links, footpaths and bike lanes, higher residential density and mixed land use and high quality public realm increasing pedestrian comfort. Many of these elements are already present in new development areas of Mildura but will increase in importance. More specifically, the following development principles which encourage the use of active transport should be developed including:

- Compact and co-located areas of activity which are accessible by a range of transport options including public transport and cycling;
- Highly interconnected streets and pedestrian and bike networks offering a choice of convenient and safe routes;
- Comfortable and attractive streets where large canopy trees provide shade on residential streets and wide awnings provide weather protection in activity areas.

Successful responses include the Bendigo City Centre. This was a project which created a pedestrian friendly centre including new public spaces and nodes, public realm improvements and shared spaces (see www.healthyplaces.org.au).



urban heat island effect

The 'urban heat island' effect is a phenomenon where urban areas show higher temperatures than the surrounding rural landscapes, particularly at night. This is mainly caused by the replacement of natural surfaces with impervious hard surfaces which retain large amounts of thermal energy, creating a unique urban environment. It is primarily caused by urban development, which associated with vegetation removal, high stormwater runoff from impervious surfaces, urban materials with high heat capacity, urban geometries which absorb and trap heat, and waste heat reduction from urban activities. Climate change may lead to extreme temperatures and fluctuations in urban areas, resulting in increased heat related illness and mortality.

Mildura should therefore consider how to mitigate this now and for the future. An increasing aging population in Mildura emphasises the importance of consideration of mitigation to reduce heat related illness and morbidity in this vulnerable population. Measures could be put in place to address the urban heat island effect through built form and landscaping and recent responses have included the City of Melbourne's *Urban Forest Strategy* which is a direct response to this issue. Responses in the Mildura context might include:

- Increased vegetation in parks, streetscapes and the private realm.
- Expansion of use of WSUD (see section following).
- Use of materials, in particular roofing, which are highly reflective, thereby reducing heat storage and transfer.
- Wider streets for ventilation and cooling, and orientation of buildings to reduce incoming solar radiation.
- Increased parkland and open spaces.
- Support for green roofs which reduce heat transfer into buildings.



- Reduction in use of impervious surfaces, particularly dark surfaces, such as asphalt
- Energy efficiency in building design, in particular insulation and double glazing reduce the need for heating and cooling].

water sensitive urban design

Water-sensitive urban design is the integration of urban planning and development with the management, protection and conservation of the water cycle as a whole. The key principles include: protecting natural systems, integrating storm water treatment, protecting water quality, reducing run off and peak flows, and adding value while minimising development costs. As Australia's rainfall and runoff are among the world's most variable, it makes water management very challenging. Climate change is expected to increase rainfall variability.

In Mildura, drainage is a key issue, which will be further challenged in the future by climate change and an expected increase in frequency and severity of major storm events and floods. New development will need to consider WSUD principles for sustainability and viability. Timing and cost of infrastructure provision is another consideration which can be a barrier for new developments in Mildura.

Successful case studies where WSUD principles have been implemented are becoming more common as the practice gains widespread acceptance and are integrated into a number of Victorian planning schemes. One such example is the Lynbrook Estate, an 800 lot development that incorporates WSUD principles adopted at both the streetscape and sub-catchment scale. (see www.melbournewater.com.au).

Response in the Mildura context may include:

- Site responses - allotment density and layout, porous pavement, sand filter, buffer strip, grassed or vegetated swales, bioretention systems, rain gardens
- Precinct responses - Street layout and landscape, precinct retention, porous pavement, sand filter, buffer strip, grassed or vegetated swales, bioretention systems, urban forest, constructed wetlands and treatment ponds, stormwater reuse
- Regional responses - Public open space, multiple use corridors, constructed wetlands and treatment ponds, stormwater reuse



9 growth scenarios

population growth trends in mildura (RC)

The Rural City of Mildura comprises the following five regions referred to by the Australian Bureau of Statistics (ABS) as 'Statistical Area 2 (SA2)':

- Mildura (SA2), which mainly contains the urban areas of the Mildura township.
- Irymple (SA2), which includes the townships/settlements of Irymple, Nichols Point, Kings Billabong, and the immediate surrounding rural areas.
- Red Cliffs (SA2), which includes the townships/settlements of Red Cliffs, Cardross and the surrounding rural areas.
- Merbein (SA2), which includes the townships/settlements of Merbein, Cabarita and surrounding rural areas.
- Mildura Region (SA2), which includes the balance of the municipality and includes the townships/settlements of Ouyen, Koorlong, Nangiloc, Colignan, Murrayville, Underbool, Walpeup, Meringur, Werrimull and the balance of the rural areas.

Mildura (SA2) comprises a 2011 population of approximately 31,270 residents and is the main population, economic, service and employment centre in the municipality.

Over the 2001-2006 period, the population in Mildura (SA2) increased at an average annual rate of +1.7% per annum (or +480 residents per annum), more than double the average annual growth rate in regional Victoria. More recently, population growth in Mildura (SA2) has slowed, with average population growth of +1.3% per annum (or +260 residents per annum) between 2006 and 2011. The trend for a slowing in the population growth rate over the past five years is reflective of other regional Victorian cities.



Over the past 10 years, Mildura (SA2) has been the only region in the municipality that has experienced any significant population growth, recording an increase of +3,700 residents between 2001 and 2011. In contrast, the population in Irymple (SA2) remained relative constant, while population decline occurred in Merbein (SA2), Red Cliffs (SA2) and the Mildura Region (SA2).

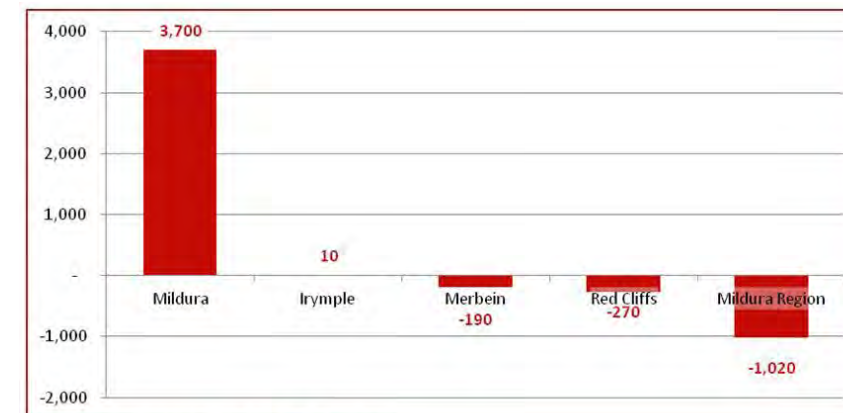
A combination of the availability of affordable land in close proximity to services and employment are major factors contributing to the stronger population growth in Mildura (SA2) compared to the other areas of the municipality.

Table 8 and Figure 24 illustrate these recent population growth trends in Mildura by SA2.

SA2	2001	2006	2011	Average Annual Growth (%)			Average Annual Growth (No.)		
				'01-'06	'06-'11	'01-'11	'01-'06	'06-'11	'01-'11
Mildura	27,570	29,950	31,270	1.7%	0.9%	1.3%	480	260	370
Irymple	6,550	6,770	6,560	0.7%	-0.6%	0.0%	40	-40	-
Merbein	4,910	4,880	4,720	-0.1%	-0.7%	-0.4%	-10	-30	-20
Mildura Region	4,840	4,500	3,820	-1.4%	-3.2%	-2.3%	-70	-140	-100
Red Cliffs	5,750	5,490	5,480	-0.9%	0.0%	-0.5%	-50	-	-30
Mildura (RC) - Total	49,620	51,590	51,850	0.8%	0.1%	0.4%	390	50	220
Regional Victoria	1,333,100	1,383,530	1,426,580	0.7%	0.6%	0.7%	10,090	8,610	9,350

Source: ABS, Regional Population Growth, Cat. No. 3218.0

table 18 population growth trends for mildura by SA2, 2001-2011



Source: ABS, Regional Population Growth, Cat. No. 3218.0

figure 24 population growth trends for mildura by SA2, 2001-2011

Over this 20 year period, Mildura experienced varying rates of population growth, with significant population growth occurring between 1996 and 2001 and only limited growth occurring more recently between 2006 and 2011. The following illustrates the rates of population growth over 5-year intervals between 1991 and 2011:

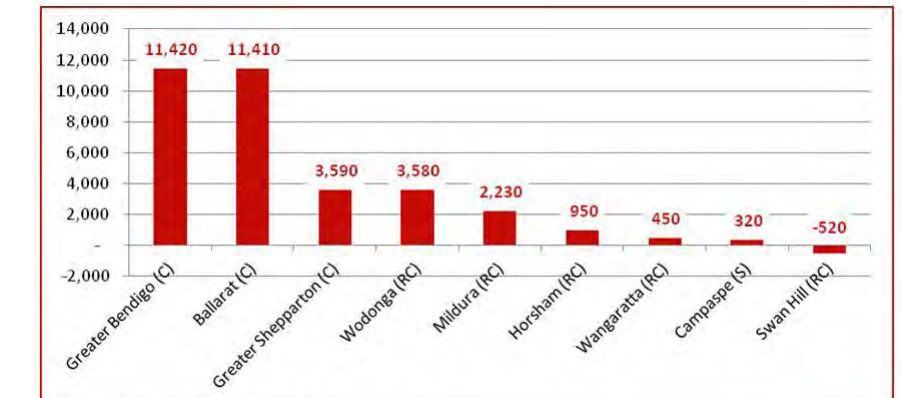
- 1991-1996: Total growth of approximately +1,220 residents at an average of approximately +240 residents a year, or 0.5% pa.
- 1996-2001: Total growth of approximately +3,810 residents at an average of approximately +760 residents a year, or 1.9% pa.
- 2001-2006: Total growth of approximately +1,970 residents at an average of approximately +390 residents a year, or 0.8% pa.

- 2006-2011: Total growth of approximately +260 residents at an average of approximately +50 residents a year, or 0.1% pa.

Mildura's population expanded at rate of more than double that of regional Victoria between 1991 and 2001 (1.1%pa c.f. 0.5%pa); however, more recently Mildura's population growth has slowed to be below the regional Victorian average (0.4%pa c.f. 0.7%pa).

Over the 2001 to 2011 period, Mildura's (RC) population increased by +2,240 residents and this has been below a number of other municipalities in the northern and western parts of Victoria. For instance, the municipalities of Ballarat (with population growth of +11,420 residents over the 2001-2011 period), Bendigo (+11,410 residents), Greater Shepparton (+3,590 residents) and Wodonga (+3,580 residents) all experienced population growth in excess of Mildura's.

Table 19 and Figure 25 below provide a comparison of population growth in Mildura (RC) with other selected municipalities in the north and west of Victoria. Figure 5 illustrates trends in average annual population growth in Mildura over the past 20 years.



Source: ABS, Regional Population Growth, Cat. No. 3218.0

figure 25 population growth trends for mildura and selected municipalities, 1991-2011

Selected Local Government Areas	1991	1996	2001	2006	2011	Average Annual Growth (%)			Average Annual Growth (%)		
						'91-'01	'01-'11	'91-'11	'91-'01	'01-'11	'91-'11
Mildura (RC)	44,590	45,810	49,620	51,590	51,850	1.1%	0.4%	0.8%	500	220	360
Ballarat (C)	79,120	79,110	83,600	88,450	95,010	0.6%	1.3%	0.9%	450	1,140	790
Campaspe (S)	33,850	34,710	36,350	37,430	36,670	0.7%	0.1%	0.4%	250	30	140
Greater Bendigo (C)	81,290	84,520	90,450	96,540	101,870	1.1%	1.2%	1.1%	920	1,140	1,030
Greater Shepparton (C)	52,800	54,180	58,150	59,430	61,740	1.0%	0.6%	0.8%	540	360	450
Horsham (RC)	17,800	17,940	18,590	19,160	19,540	0.4%	0.5%	0.5%	80	100	90
Swan Hill (RC)	21,480	20,870	21,350	21,390	20,830	-0.1%	-0.2%	-0.2%	-10	-50	-30
Wangaratta (RC)	25,970	26,040	26,660	27,330	27,110	0.3%	0.2%	0.2%	70	50	60
Wodonga (RC)	27,820	30,200	32,460	34,290	36,040	1.6%	1.1%	1.3%	460	360	410
Regional Victoria	1,264,720	1,276,880	1,333,100	1,383,530	1,426,580	0.5%	0.7%	0.6%	6,840	9,350	8,090

Source: ABS, Regional Population Growth, Cat. No. 3218.0

table 19 population growth trends for mildura and selected municipalities, 1991-2011

population and dwellings forecasts

Three population and dwelling growth scenarios for the Rural City of Mildura have been prepared. These scenarios are based on a review of Victoria in Future 2012 prepared by the Department of Planning and Community Development (DPCD), the latest ABS population and demographic trends, residential development trends, and an understanding of the likely future trends affecting regional areas.

review of victoria in future 2012 (DPCD)

DPCD prepared Victoria in Future 2012 in 2012 and the forecasts represent the official State Government population and dwelling forecasts. These forecasts were prepared prior to the official ABS population estimates being updated for the results of the ABS 2011 Census.

Prior to the release of ABS 2011 Census data, the ABS had over-estimated population growth in the Rural City of Mildura. For example, population estimates released in March 2012 and which did not take into consideration 2011 Census data, estimated Mildura’s population at approximately 54,670 residents; however, this estimate was revised down by 2,820 residents to 51,850 residents after the release of 2011 Census which revealed more limited population growth than first thought.

Consequently, Mildura’s population actually increased by only 260 residents (or +0.1%pa) between 2006 and 2011, significantly less than ABS estimates prior to the 2011 Census. Prior to the 2011 Census, the ABS had estimated growth of 3,080 residents (or 1.2%pa) in Mildura over the same period.

As a result, the forecasts prepared by DPCD and presented in Victoria in Future 2012 do not take into account the most recent trends in population and dwelling growth. Therefore, while forecasts prepared by DPCD have been taken into consideration, the assumed forecast rates of population growth differ from those shown in Victoria in Future 2012.



assumed average annual population growth rates

The following three sets of population and dwelling forecast have been prepared for this Strategy:

- Low Growth Scenario: Reflects a situation where below-average population and dwelling growth occurs in the urban parts of the municipality and a relatively strong rate of population decline occurs throughout the rural areas.
- Medium Growth Scenario: Reflects a situation which broadly reflects recent trends in population growth in the urban parts of the municipality and a lower level of population decline in the rural areas.
- High Growth Scenario: Reflects a situation in which comparatively strong population growth occurs in the urban areas of Mildura compared to recent rates of population growth, and limited growth occurs in the rural areas.

These three scenarios are based on the assumed average annual population growth rates shown in Table 20, which also provides a comparison with recent population growth trends and those forecasts in the Victoria in Future 2012. The forecasts are based on the ABS geography of Statistical Local Area for the purpose of comparison with Victoria in Future 2012.

Scenario	Mildura (RC) – Pt A	Mildura (RC) – Pt B	Mildura (RC) - Total
Recent trends (2001-2011)	+0.7%	-2.2%	+0.4%
Long-term trends (1991-2011)	+1.1%	-2.2%	+0.8%
Victoria in Future 2012 (2011-2031)	+0.9%	-0.3%	+0.8%
MHSS Assumed Growth Rates - Low Scenario			
2012-2022	+0.6%	-2.0%	+0.4%
2022-2032	+0.6%	-2.0%	+0.4%
2012-2032	+0.6%	-2.0%	+0.4%
MHSS Assumed Growth Rates - Medium Scenario			
2012-2022	+0.9%	-1.5%	+0.8%
2022-2032	+0.9%	-1.5%	+0.8%
2012-2032	+0.9%	-1.5%	+0.8%
MHSS Assumed Growth Rates - High Scenario			
2012-2022	+1.2%	+0.2%	+1.1%
2022-2032	+1.2%	+0.2%	+1.1%
2012-2032	+1.2%	+0.2%	+1.1%

Source: DPCD, Victoria in Future, 2012; ABS, Regional Population Growth, Cat. No. 3218.0; Essential Economics
Note: Figures are rounded

table 20 assumed average annual population growth rates, 2012-2032

rural city of mildura population forecasts

Based on the assumed growth rates shown in Table 20, the population in the Rural City of Mildura is forecast to increase as follows:

- Low Scenario: From approximately 51,900 residents in 2012 to approximately 56,670 residents in 2032, representing average annual growth of approximately +0.4% pa or +240 residents per annum.
- Medium Scenario: From approximately 51,900 residents in 2012 to approximately 60,540 residents in 2032, representing average annual growth of approximately +0.8% pa or +430 residents per annum.

- High Scenario: From approximately 51,900 residents in 2012 to approximately 65,110 residents in 2032, representing average annual growth of approximately 1.1% pa or +660 residents per annum.

Scenario	2012	2022	2032	Average Annual Growth, 2012-2032	
				No.	%
Low Scenario					
Mildura (RC) - Pt A	48,520	51,510	54,410	290	0.6%
Mildura (RC) - Pt B	3,380	2,760	2,260	-60	-2.0%
Mildura (RC) - Total	51,900	54,270	56,670	240	0.4%
Medium Scenario					
Mildura (RC) - Pt A	48,520	53,070	58,040	480	0.9%
Mildura (RC) - Pt B	3,380	2,910	2,500	-40	-1.5%
Mildura (RC) - Total	51,900	55,980	60,540	430	0.8%
High Scenario					
Mildura (RC) - Pt A	48,520	54,670	61,590	650	1.2%
Mildura (RC) - Pt B	3,380	3,450	3,520	10	0.2%
Mildura (RC) - Total	51,900	58,120	65,110	660	1.1%

Source: Essential Economics
Note: Figures are rounded

table 21 forecast population in rural city of miludra, 2012-2032

rural city of mildura dwelling growth forecasts

Forecast new dwelling requirements for the Rural City of Mildura by SLA and scenario are shown in Table 22.

These forecasts take into consideration the forecast population growth shown in Table 21, together with assumptions for average household size, persons in non-private dwellings, and dwelling occupancy rates. These assumptions are based on recent trends outlined in ABS Census data and assumptions used by DPCD in Victoria in Victoria 2012 and are outlined below:

- Average household size: Forecast to decline from an estimated 2.5 persons in Mildura (RC) – Part A in 2012 to 2.3 persons in 2032. In Mildura (RC) – Part B, the average household size is forecast to decline from 2.3 persons in 2012 to 2.2 persons in 2032 (figures are rounded).
- Persons in non-private dwellings: Forecast to increase from an estimated 2.0% of the population in Mildura (RC) – Part A in 2012 to 2.5% of the population in 2032. In Mildura (RC) – Part B, the share of persons in non-private dwellings is forecast to increase from 2.4% to 2.9% in 2032 (figures are rounded).
- Dwelling occupancy: Forecast to remain at approximately 90% for Mildura (RC) – Part A and at 80% for Mildura (RC) – Part B.

For the purpose of the MHSS, it would be prudent to plan for the forecast dwelling growth represented in the Medium to High Scenarios, to ensure an adequate level of residential land is available and to ensure a level of choice in housing type and maintain affordability.

forecast dwelling requirements by settlement and zone

This section provides a general overview of future dwelling requirements by settlement and zone based on the analysis presented in this report. These future dwelling requirements can be used for the purpose of identifying future land requirements in each of the settlements for residential development. Although in some instances a reduction in net dwellings is forecast, as shown in Table 23, it is not prudent to plan for dwelling decline unless a major demographic shift is envisaged or land has been identified for other uses; none of these situations is envisaged for the settlements in Mildura.

Table 24 provides an indication of the future residential net dwelling growth in each of the settlements where a sufficient level of residential development opportunity exists.

To this extent, it is unlikely that any significant demand for new dwellings will occur in the rural settlements of Nangiloc and Colignan, Murrayville, Underbool and the Millewa Region, having regard for recent trends and the future opportunities for these settlements. Furthermore, changes to the Mildura Planning Scheme in regard to the subdivision of FZ land will make it increasingly difficult for significant residential development to occur in the rural balance.

	Net Annual Dwelling Change, 2006-2011 (ABS Census)	Total Dwelling Growth			Average Annual Dwelling Growth		
Scenario		2012-2022	2022-2032	2012-2032	2012-2022	2022-2032	2012-2032
Low Scenario							
Mildura (RC) - Pt A	280	2,000	2,000	4,000	200	200	200
Mildura (RC) - Pt B	-40	-300	-200	-500	-30	-20	-30
Mildura (RC) - Total	240	1,700	1,800	3,500	180	180	180
Medium Scenario							
Mildura (RC) - Pt A	280	2,700	3,000	5,700	270	300	280
Mildura (RC) - Pt B	-40	-200	-200	-400	-20	-20	-20
Mildura (RC) - Total	240	2,500	2,800	5,300	250	280	260
High Scenario							
Mildura (RC) - Pt A	280	3,400	3,900	7,300	340	390	360
Mildura (RC) - Pt B	-40	100	100	200	10	10	10
Mildura (RC) - Total	240	3,500	4,000	7,500	350	400	370

Source: ABS, Census of Population and Housing, 2011; Essential Economics
Note: Figures are rounded

table 22 forecast dwelling growth in rural city of mildura, 2012-2032

Indicative forecasts of net dwelling demand for the relevant settlements by zone are shown in Table 24. These forecasts take into consideration the forecast net dwelling demand (refer Table 23) and recent trends in new dwelling building approvals by zone (refer Table 13, page 30).

While the recent trends in the distribution of new dwelling by zone shown in Table 13 in part reflect the demand for land by zone, they are also reflective of the current zoning. To this extent, the forecasts shown in Table 24 represent a scenario where existing land use zoning patterns prevail into the future.

However, opportunities for new residential zones may eventuate in the future. These may include an additional supply of LDRZ in areas where demand for larger lifestyle lots increases, for instance in the Nichols Point/Kings Billabong settlement, other rural settlements in the northern part of the municipality, or on the fringes of the urban settlement (i.e. Mildura, Irymple, Red Cliffs or Merbein).

Another opportunity may be the introduction of a Mixed Use Zone (MUZ) in close proximity to activity centres so as to encourage a mix of residential and commercial uses. The addition of any new residential zoned land should take into consideration the existing supply situation, the infrastructure capacity and other planning-related issues.

Settlement	Total Dwelling Demand, 2012-2032		Annual Dwelling Demand, 2012-2032	
	Medium Scenario	High Scenario	Medium Scenario	High Scenario
Mildura (incl Cabarita)	4,760	5,910	240	295
Irymple	460	600	25	30
Red Cliffs	300	430	15	20
Merbein	160	230	8	10
Nichols Point and Kings Billabong	110	130	5	7
Cardross	20	40	1	2
Koorlong	20	30	1	2
Ouyen	20	30	1	2
Other Settlements and Rural Balance	-550	100	-30	5
Total Mildura LGA	5,300	7,500	265	375

Source: Essential Economics
Note: Figures are rounded

table 23 forecast new dwelling requirements by settlement, 2012-2032

Settlement	R1Z	LDRZ	TZ	FZ	Other Zone
Mildura (incl Cabarita)	4,300 to 5,300 lots	110 to 150 lots	-	120 to 150 lots	240 to 300 lots
Irymple	440 to 570 lots	-	-	10 to 20 lots	10 to 15 lots
Red Cliffs	290 to 410 lots	10 to 20 lots	-	-	10 to 15 lots
Merbein	150 to 220 lots	-	-	-	-
Nichols Point and Kings Billabong	-	80 to 90 lots	-	30 to 40 lots	-
Cardross	-	-	10 to 20 lots	10 to 20 lots	-
Koorlong	-	10 to 20 lots	-	10 to 20 lots	-
Ouyen	-	-	20 to 30 lots	-	-

Source: Essential Economics
Note: Figures are rounded

table 24 indicative net dwelling requirements by settlement and zone, 2012-2032



10 existing land supply

One of the key matters the *Mildura Housing and Settlement Strategy* needs to address is whether Mildura has enough zoned land to meet the needs of the expected population over the next 10-15 years. Section 9 provided a full breakdown of the expected population and demand across different zones and at different lot sizes - in essence, the demand for residential dwellings. While the information contained in that section is comprehensive, there are always factors that influence whether land is available for development that can be almost impossible to categorise and to document. To ensure that these factors do not adversely constrain development or inflate the price of housing, it is important to ensure that a generous supply of land is available to meet the needs of the population.

In order to establish whether additional land is required in Mildura, it is necessary to look at what the existing situation is in regards to the potential supply of land. That is, how much vacant land is there available for development? This section of the Background Report addresses this matter. It is important to note however, that this chapter deals only with vacant land or land above a certain size where subdivision is more likely. However, there are always subdivisions of existing dwellings or development of units within existing urban areas that will also contribute to the supply of housing within Mildura. These and other factors are detailed further in this section of the report. As such, when looking at only the supply figures documented in this section, it should be understood this represents a very conservative assessment of the current supply of land and that significant additional development is possible and likely to occur within other areas.



Land supply calculations were undertaken for all the main settlements in Mildura and for each zone within these settlements. The supply was calculated using a GIS mapping program called MapInfo and based on 2012 aerial photography. This program allowed the identification of all parcels within specific zones. Land that would not be available to develop was excluded (this removed sites like schools from the calculations and excluded college lease land and other land which is unlikely to develop). Land was then separated out into a number of different categories to allow for different calculations in relation to the amount of dwellings the land could accommodate, as follows:

- Vacant land.
- Land with subdivision potential: This is land that already has one dwelling on it but which is of sufficient size that additional dwellings could also be accommodated on the lot. This assessment was done visually in all settlements except Mildura. Within the City of Mildura, only land over 4,000sqm was included in the calculations. When the amount of dwellings possible on a lot were calculated for this land, the land required to accommodate the existing dwelling was taken into consideration.
- Greenfield land: This category was applied to land in large parcels on the edge of town where the structure of the land has not yet been determined or implemented. Therefore, unlike 'vacant' land within existing urban areas, infrastructure such as roads and drainage basins need to be provided. While a figure of 20% is generally utilised, in the case of Mildura a figure of 25% was adopted in recognition of the need for extensive drainage infrastructure.



what is the current supply by settlement?

It is important to have an understanding of where vacant land is located and how much of it is available within the different categories identified above. As such, the following tables document the supply of land and potential dwellings within each of the major settlements being considered as part of this project.

	hectares	potential dwellings
R1Z		
vacant (over 0.4h only, 32 lots)	64	955
subdivision potential (over 0.4h only, 48 lots)	49	682
greenfield (74 lots)	332	3,740
identified future greenfield (potential only)	[385]	[5755]
total	445 [830]	5,376 [11,151]
LDRZ		
vacant (over 0.4h, 20 lots- mildura)	39	86
vacant (over 0.4h, 2 lots- cabarita)	0	0
subdivision potential (over 0.8h, 12 lots)	32	55
subdivision potential (over 0.8h, 0 lots)	11	21
total	82	162

table 25 land supply: mildura

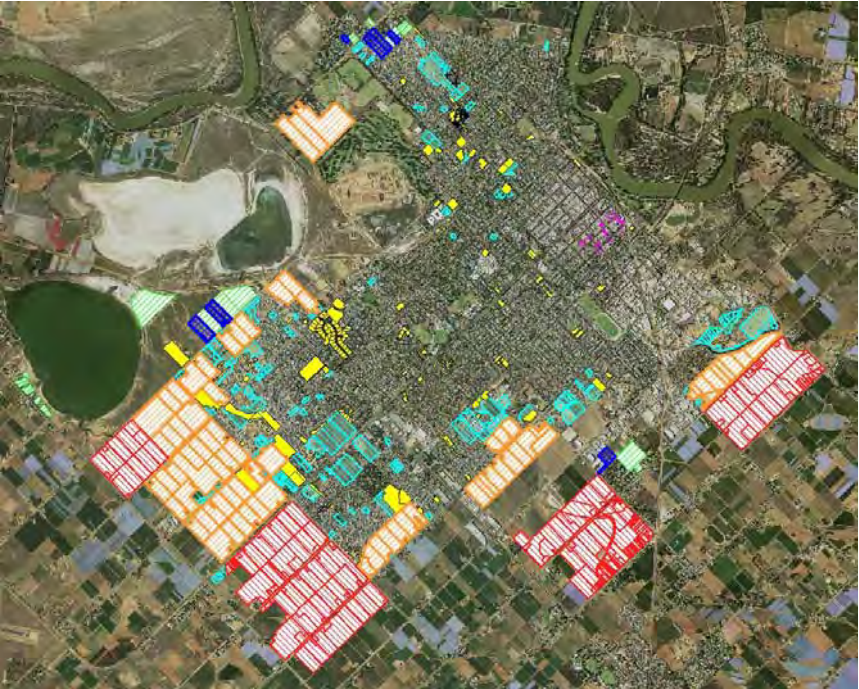


figure 26 land supply: mildura

	hectares	potential dwellings
R1Z		
vacant (over 0.4h only, 46 lots)	12	176
subdivision potential (over 0.4h only, 294 lots)	23	294
greenfield (18 lots)	53	592
identified future greenfield (potential only)	0	0
total	88	1062

table 26 land supply: irymple

	hectares	potential dwellings
R1Z		
vacant (over 0.4h only, 46 lots)	12	176
subdivision potential (over 0.4h only, 56 lots)	25	308
greenfield	0	0
identified future greenfield (potential only)	0	0
total	36	484
LDRZ		
vacant (over 0.4h, 24 lots)	11	24
subdivision potential (over 0.8h, 1 lots)	11.3	24
total	22.3	48

table 27 land supply: merbein

	hectares	potential dwellings
TZ		
vacant (over 0.4h, 83 lots)	38	464
subdivision potential (over 0.8h, 14 lots)	245	3251
total	283.3	3,715

table 28 land supply: ouyen

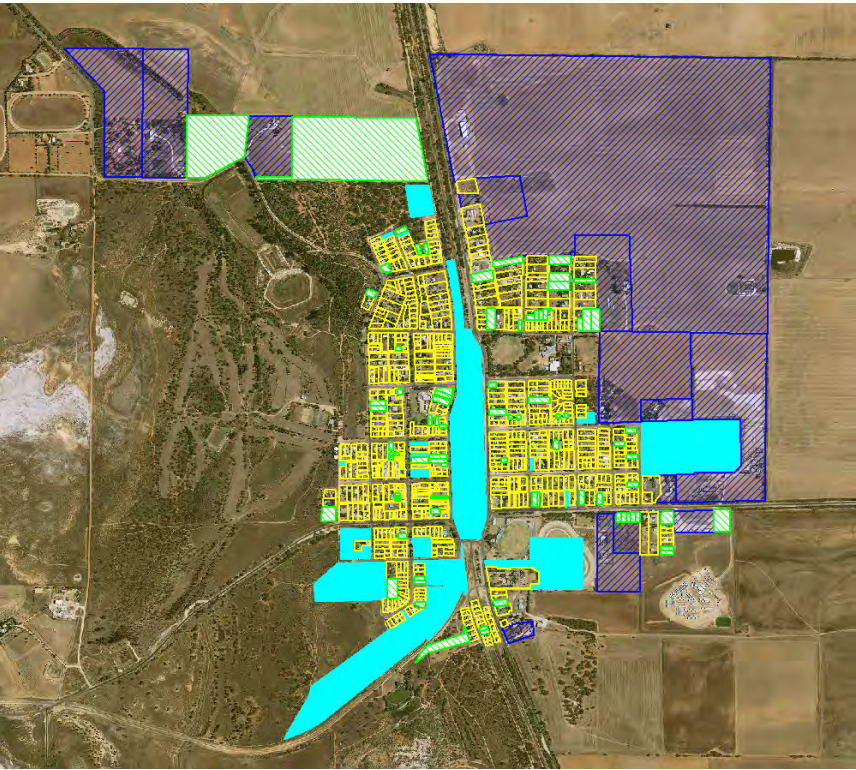


figure 27 land supply: ouyen

	hectares	potential dwellings
R1Z		
vacant (over 0.4h only, 115 lots)	14	204
subdivision potential (over 0.4h only, 16 lots)	12	155
greenfield (14 lots)	70	784
identified future greenfield (potential only)	0	0
total	95	1143
LDRZ		
vacant (over 0.4h, 14 lots)	13	26
subdivision potential (over 0.8h, 0 lots)	0	0
total	13	26

table 29 land supply: red cliffs

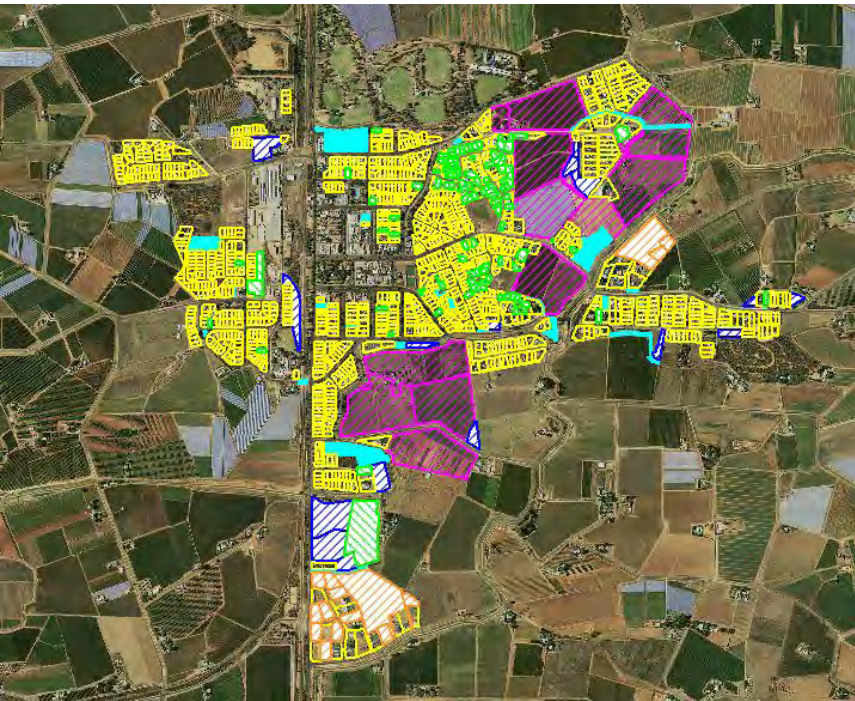


figure 28 land supply: red cliffs

	hectares	potential dwellings
R1Z		
vacant (over 0.4h only)	0	2
subdivision potential (over 0.4h only)	0	0
greenfield	0	0
identified future greenfield (potential only)	0	0
total	0	2
LDRZ		
vacant (over 0.4h, 5 lots)	39	86
subdivision potential (over 0.8h, 5 lots)	21.5	39
total	60.5	125

table 30 land supply: nichols point



figure 29 land supply: red cliffs

	hectares	potential dwellings
LDRZ		
vacant (over 0.4h, 30 lots)	28	63
subdivision potential (over 0.8h, 1 lots)	5.2	10
total	33.2	73

table 31 land supply: kings billabong

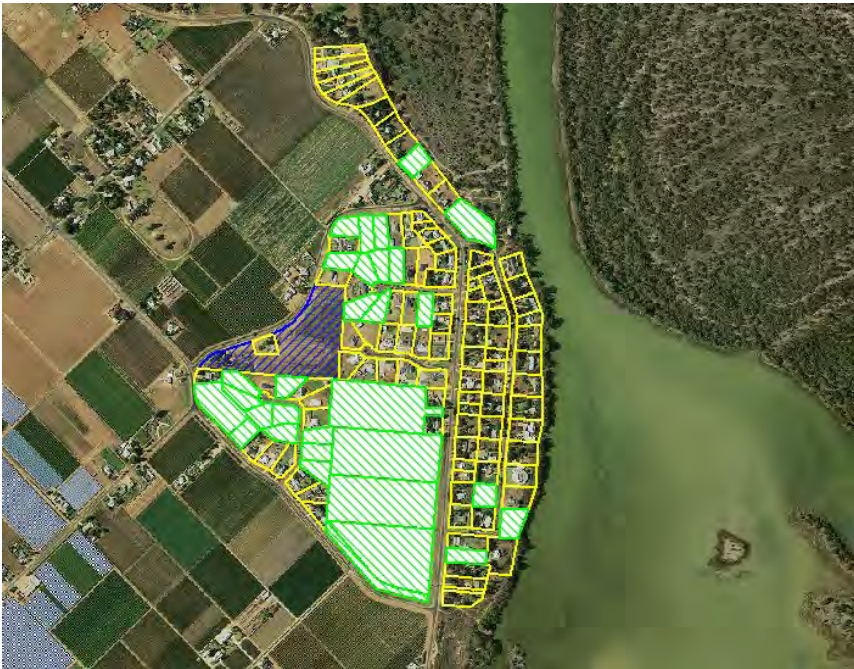


figure 30 land supply: kings billabong

	hectares	potential dwellings
TZ		
vacant (over 0.4h, 3 lots)	4.6	2
subdivision potential (over 0.8h, 0 lots)	0	2
total	4.6	4

table 32 land supply: cardross



figure 31 land supply: cardross

	hectares	potential dwellings
LDRZ		
vacant (over 0.4h, 2 lots)	0.81	2
subdivision potential (over 0.8h, 0 lots)	0	0
total	0.81	2

table 33 land supply: koorlong

Figures were also generated for the smaller settlements. However in relation to those settlements there is generally sufficient land available for future development, but insufficient demand for new development to warrant full documentation. Supply is documented for those townships on each relevant Township Profile (Section 4).

is the current supply of land sufficient?

To gain an understanding of whether current supply is sufficient, it is necessary to compare the supply figures identified above with the estimates of demand. The demand figures for the main settlements addressed above are documented in Section 9 and are repeated in the table below.

Settlement	R1Z	LDRZ	TZ	FZ	Other Zone
Mildura (incl Cabarita)	4,300 to 5,300 lots	110 to 150 lots	-	120 to 150 lots	240 to 300 lots
Irymple	440 to 570 lots	-	-	10 to 20 lots	10 to 15 lots
Red Cliffs	290 to 410 lots	10 to 20 lots	-	-	10 to 15 lots
Merbein	150 to 220 lots	-	-	-	-
Nichols Point and Kings Billabong	-	80 to 90 lots	-	30 to 40 lots	-
Cardross	-	-	10 to 20 lots	10 to 20 lots	-
Koorlong	-	10 to 20 lots	-	10 to 20 lots	-
Ouyen	-	-	20 to 30 lots	-	-

Source: Essential Economics
Note: Figures are rounded

table 34 indicative net dwelling requirements by settlement and zone, 2012-2032

Comparing the current supply and demand the following is noted:

- Mildura has enough residential zoned land available to meet the identified demand over the next 20 years based on current growth trends. In addition, as outlined above, there are large areas of land that have already been identified as accommodating future growth. When those areas are also considered, Mildura has a very generous supply of residential land. There is therefore no need to identify any future land for conventional residential development in Mildura.
- Given these calculations are based on an average lot size of 750sqm (significantly larger than existing trends) this will remain the case even if the density at which residential development is occurring decreases.
- In regards to lower density residential development, there is a potential under supply as a result of the low number of lots presently available for development. However, the demand for lower density development is currently being partially met in nearby settlements and in rural areas surrounding Mildura. There is therefore little strategic justification for to identify additional land for lower density residential development associated with the Mildura urban area.
- Irymple has a generous supply of residential land available for development.
- Merbein has a generous supply of residential land available for development.
- Red Cliffs has a generous supply of residential land available for development.
- Nichols Point has a generous supply of low density residential land and there is no need for additional rezoning. There is only one lot available in a conventional residential zone in Nichols Point. While no demand was identified for this land in Nichols Point, this may have been influenced by a lack of supply. There may therefore be a need for some conventional residential land within Nichols Point.
- Kings Billabong is a low density settlement and has adequate supply of land to meet demand.
- There is a very limited supply of land at Cardross and significant demand identified for lower density development that is currently being accommodated within the surrounding Farming Zone
- There is a very limited supply of land at Koorlong and significant demand identified for lower density development that is currently being accommodated within the surrounding Farming Zone
- Ouyen has a significant oversupply of land in the Township Zone on the basis of current residential demand. However, given the Township Zone can also accommodate commercial and industrial uses, it is not considered that there are any significant issues arising out of the supply and demand assessment for Ouyen.

When a comparison of the supply of land within settlements and the demand outlined above is undertaken gaps in the current supply can be identified. It is important to note that the identification of these 'gaps' is not a reason, of itself, to provide land in that location. It may be that there are external factors (such as the lack of available land in other locations) that have been driving the demand. Therefore the 'gaps' outlined in this section should be taken as a guide only. Other factors for consideration in any assessment of the supply and demand of land include:

- The amount of demand that will be met through general infill development (currently 18.2% of Mildura's housing is medium density).
- Niche developments outlined earlier including the marina and golf course development.
- Any demand that is met through higher density housing provided as part of the waterfront development.
- Housing development in agricultural areas allowed under current policy.
- The difficulty in identifying what housing people want, as opposed to what they are buying because it is available.

Following is a summary of the areas where the Mildura Housing and Settlement Strategy will need to consider recommending additional land be identified to meet anticipated demand:

- Larger lower density or rural living lots around the Mildura / Cabarita area.
- Possibly conventional residential lots in Nichols Point (noting the existing Residential 1 Zone land is developed in lots of 1200 -1500sqm).
- Lower density lots around Koorlong.
- Lower density lots in the Cardross area.

From the above analysis it is apparent that the main gap in supply in Mildura is in relation to larger, lower density residential lots. It is likely that demand calculations for such lots have been inflated by the recent development /approval of dwellings within the Farming Zone. Such dwellings are likely to have been developed/approved almost exclusively for residential/lifestyle purposes, rather than in association with an agricultural use, given perceptions of agricultural viability in the area. This may have been influenced by the existence of a sunset clause for the development of dwellings under the current MOIA incorporated document, rather than an inherent demand for larger lots. However, feedback from key stakeholders such as real estate agents, suggests this is not the case and that there is a strong demand for larger lots. While this demand is currently being met by excisions and new dwelling within the Farming Zone, once these developments cease, the demand will need to be accommodated elsewhere.

B. the recommendations



11 drivers and directions

This section of the Background Report begins to look forward and provides preliminary recommendations about how the municipality should begin to address some of the issues identified in the study to date. The section is structured to ensure that there is a clear understanding of why particular recommendations have been made. To that end a series of 'key drivers' are outlined. These are overarching 'big picture' considerations that form the basis of the recommendations.

The chapter then provides a summary of the overall approach that has been taken to planning for future settlement and housing in Mildura. These elements will provide the overall structure of the Strategy to be prepared in the following stage of this project.

Following documentation of the approach, a series of 'key directions' are outlined, followed by some more detailed directions relating to different types of settlement within the municipality

It is important to understand that the recommendations presented in this document do not represent the full suite of strategies and objectives that will be outlined in the final Mildura Housing and Settlement Strategy to be prepared in the following stage. What is presented here is intended to provide an understanding of the directions that will be pursued by the Strategy for endorsement prior to the preparation of the Strategy itself.

The previous sections of this Background Report have outlined existing conditions in relation to particular areas and settlements, and the likely demand for land in to the future. They have also outlined a range of other matters that the Strategy will need to address. All of that information has informed the drivers and directions outlined below.

key drivers

Following are a list of statements which are taken as 'givens', and which are considered to 'drive' the preliminary directions outlined in this chapter. While there are a significant number of other factors which will influence the settlement patterns within Mildura, many of these are subject to change, or represent current policy or positions which may change in the future. The drivers listed below represent broader matters which will underpin the development of Mildura into the future. The key drivers are considered to be as follows:

- Mildura is a major regional growth node and an employment, service and tourism centre for north-west Victoria and south-west NSW.
- There is a gravitation of population towards the main urban areas of Mildura and decline in population within smaller settlements within the municipality.
- There is more than sufficient urban land identified to accommodate Mildura's future residential growth requirements, but there is a need for great choice, variety and design quality in the type of dwellings provided.
- Issues exist in relation to the timing and staging of residential development around Mildura. Areas that are difficult to service (particularly sewer and stormwater servicing) for urban uses will be associated with higher infrastructure costs.
- The Fifteenth Street spine is changing the urban form of Mildura and will impact on the future pattern of urban development.
- There is strong demand for low density and rural residential land in Mildura that is currently partially met through ad-hoc excisions and the development of houses within the Farming Zone.
- Mildura is dependent on agriculture for its economic future. Agriculture is also vital to Mildura's social and cultural identity.

- Agriculture is a constantly changing industry with inevitable restructuring being part of the history of the industry. Agricultural viability in Mildura is largely influenced by issues that are beyond the control of Council.
- Some agricultural areas of close Mildura are not likely to see future reinvestment in agriculture due to a range of reasons including pressures for future urban use.
- The proximity of 'lifestyle' dwellings to intensive agriculture is not a preferable planning outcome and has implications in relation to spray drift and amenity impacts that are not fully understood or documented.
- Climate change will have a range of impacts in Mildura, some of which will influence settlement patterns and some of which (such as higher temperatures) will require changes to housing design.

our approach

This section outlines about how the forthcoming strategy should be approached and how it should be structured and implemented. It outlines the overarching decisions that have been made by the project team in structuring the forthcoming report. It was considered that having an understanding of how the Strategy would be implemented and structured was important in ensuring the preliminary directions could contribute to a coherent overall Strategy. Therefore the forthcoming Strategy will seek to do the following:

1. Formalise a series of principles to underpin development in Mildura and update policy to reflect these. While Mildura has a relatively strong existing policy bass for settlement this will need to be updated and the agreed principles upon which decisions are being made should be clearly articulated.
2. Develop a hierarchy of settlements to enable co-ordinated planning and decision-making. There are a number of settlements which all have different needs. Clearly identifying where the settlements sit within a hierarchy (and where this is anticipated to change over time) will provide clarity around the role and function of each settlement.
3. Identify beyond 2030 – a long term vision. While State and Local policy require in the order of 10 or 15 years supply of land to be available, this Strategy should identify the very long term directions for growth to allow shorter term decisions to be made with an understand of the long terms outcomes being sought. While these areas may not be required for 50 or 100 years, it allows decision such as where new infrastructure should be provided to be made with an understanding of the future directions.
4. Provide a strong policy setting and adjust zoning controls where required. The strategy will need to investigate the rezoning of and where appropriate and also the use of new zones within the



municipality. There are a number of zones not currently used within the municipality, and a number of new or amended zones that are proposed for introduction, that should be used in place of policy to guide decision making where possible.

5. Clearly identify the following categories of land and provide different responses:

- urban land
- future urban land
- interface areas
- lower density residential land
- agricultural land

Providing a more nuanced position in regards to land in Mildura (rather than urban vs agricultural) is vital and is discussed further below.

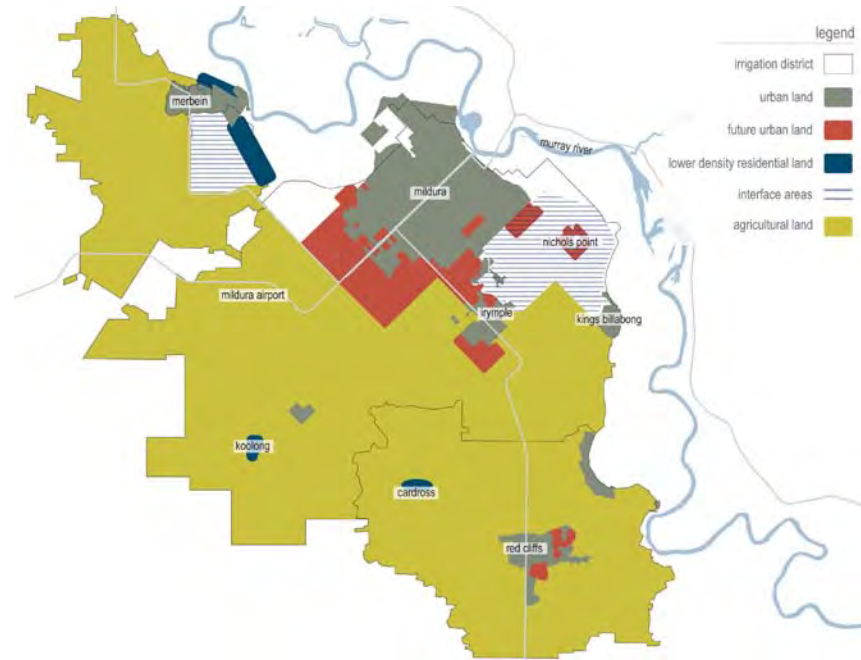


figure 32 land categories for directions

6. Identify and provide policy for urban areas under two key themes: 'Cooling the Suburbs' and 'Healthy Communities'. Most of the key issues identified by stakeholders and background research within urban areas can be addressed within these two themes and they are applicable beyond a 'planning' context and thus can invoke 'whole of Council' decision making.

7. Support meaningful changes to ensure that housing diversity and affordability is supported by planning policy. The Strategy will need to propose some specific targets and actions to achieve a greater diversity of housing stock, in addition to local policy. New approaches to the understanding of and management of the 'non-standard' housing will also be needed.

8. Provide for lower density and rural living opportunities only where they will have an overall community (rather than individual) benefit. The 'facts and figures' have identified that there is a need to additional lower density housing. However, this should not be provided in an ad-hoc manner that responds to pressures for individuals to allow dwellings within farming areas. Rather a co-ordinated response should underpin the identification of areas best suited to this style of development, having regard to where the best outcomes for the broader Mildura community can be generated.

9. Ensure transport planning is integrated with the overall settlement strategy and undertake an integrated transport strategy having regard to the recommendations of the final MHSS. Particularly within the Mildura context, transport is crucial to how people live, and importantly, how they are able to access services and facilities. It will be vital that transport provision is reviewed and approached in an integrated manner considering two different modes of transport may work together and the long term vision that is outlined by the forthcoming Settlement Strategy.



preliminary directions

Figure 32 clearly outlines one of the key aspects of the approach which seeks to provide a more nuanced and responsive approach to settlement within the Mildura Older Irrigated Areas. However, this response should not be interpreted to mean that the Strategy is considering relaxing or abandoning the controls which apply to the majority of land within the MOIA. On the contrary, background research has indicated that, while the agricultural markets have been difficult over the previous decade there is not sufficient justification for a wholesale relaxation of the MOIA policy. To do so would undermine the regional economy. The wholesale release of this land for development would also severely compromise the orderly planning of the urban areas of Mildura and would fail to provide the 'lifeline' that many who oppose the existing MOIA policy believe they would receive. The facts of supply and demand underpin this assertion.



figure 33 mildura urban area surrounds

This Background Report does however, identify that there are a number of areas where, while farming is still a viable and on-going concern (and hence, the strategy does not seek to undermine it) the dominant land use is already primarily residential. In some of these areas there is considered to be less long term and on-going potential for the land to be used for agricultural purposes - whether as a result of lot fragmentation, existing dwelling numbers or the long term growth patterns of Mildura's urban areas.

The diagram (Figure 33) above provides an overview of some of the influencing factors in identifying these 'interface' areas. It identifies the areas where there are some larger lots remaining (which increases the long term viability of farming), land affected by the environs of the Mildura Airport and areas where there are a greater number of lots which have not yet been developed with dwellings (which also lessens conflict between agricultural and residential land uses).

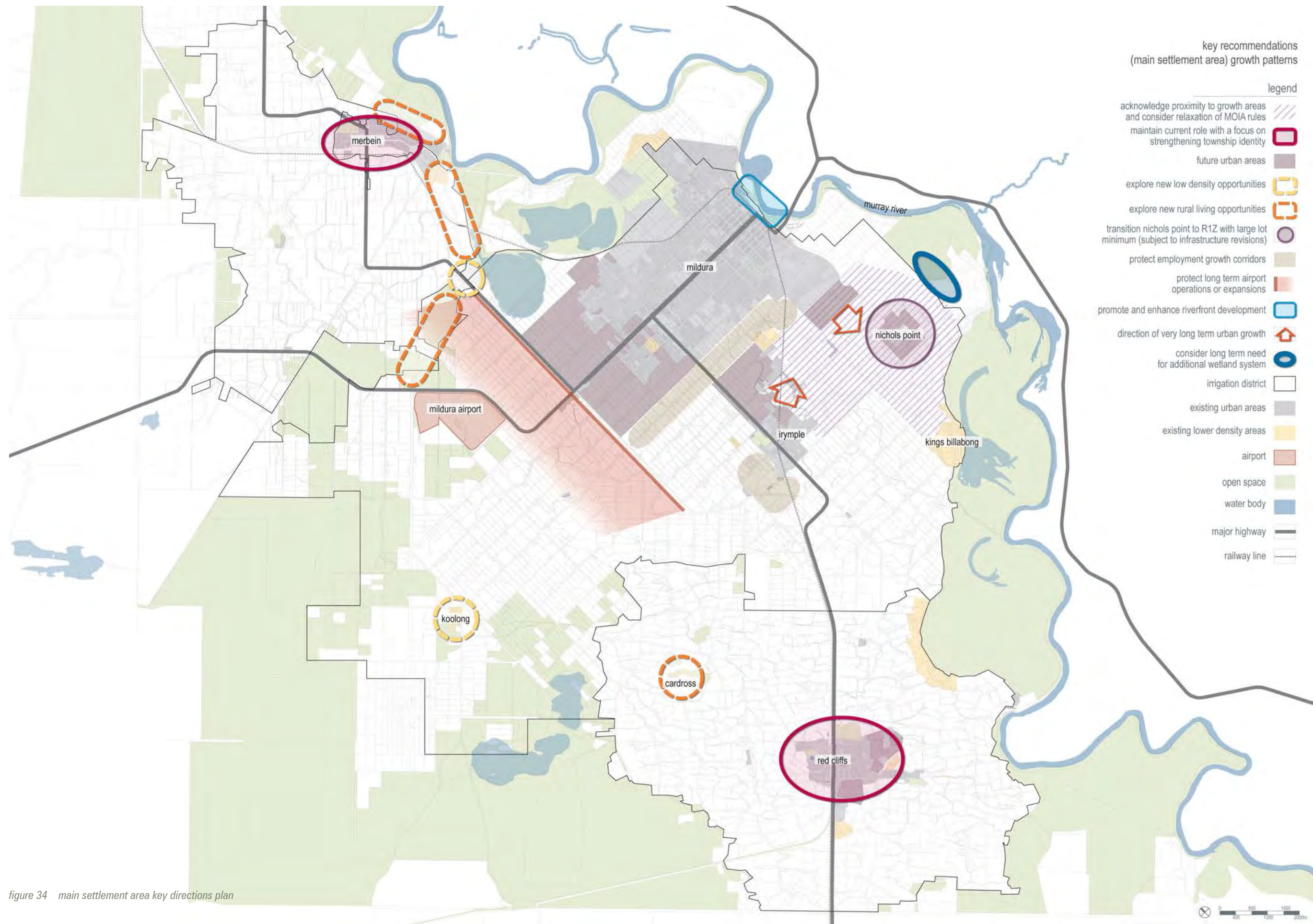


figure 34 main settlement area key directions plan

This clearly begins to identify the general areas which may be considered to be less or more likely to be used for agricultural purposes over the longer term.

In the areas proximate to urban expansion where there is less likelihood of long term agricultural investment, there should be more flexibility for the development of dwellings, provided they are not compromising agricultural use of the land. Within these interface areas there are a number of other areas which fall within a 'subgroup' which will see development within the medium, rather than long term (the 'future urban' land). Those areas will require additional policy direction to avoid compromising the orderly development of the land for urban purposes, as an ad-hoc approach to subdivisions in these areas can make the creation of healthy and well connected communities in the future difficult. In addition to these interface areas, there are some specific areas identified to meet the need for lower density residential development, in a range of formats and locations to maximise housing diversity and to support particular settlements.

Beyond these areas, land which is considered to have a viable future for long term agriculture has been approach on the basis that, in recognition that the areas discussed above are capable of accommodating the medium to long term residential needs of Mildura, these 'agricultural areas' should be afforded very strong and active protection from residential encroachment.

key directions

The following are the 'key directions' which have underpinned the specific directions which are documented later within this section:

1. Avoid ad-hoc development in urban and rural areas in favour of carefully planned and orderly outcomes.
2. Ensure that sufficient land to meet projected needs across a range of residential housing types is provided in appropriate locations.
3. Recognise the need to provide opportunities 'rural living' and 'low density' residential opportunities and direct these to specific areas where they will not compromise long term agricultural production.
4. Enhance and celebrate unique township identities.
5. Support smaller settlements, specifically those with an existing school and general store where appropriate.
6. Improve the diversity of housing on offer in both urban and rural areas.
7. Encourage residential consolidation in Mildura, particularly proximate to the CBD.
8. Improve community health and sustainability outcomes in urban areas through improved neighbourhood and building design.
9. Improve provision of appropriate housing for older persons.

10. Improve access to services and facilities, particularly by active transport.

The diagram on the preceding page (Figure 34) graphically illustrates how these preliminary directions, including the area specific directions outlined below may occur within the main urban settlement area, noting that these directions will be refined through the formulation of the Strategy.

area specific directions

Directions for specific areas are as follows, noting these are subject to refinement and may be supplemented by additional strategies and actions through the next stages of the Mildura Housing and Settlements Strategy.



URBAN AREAS

1. Provide a greater diversity of residential lot sizes by requiring percentages of developable land to meet differing density targets.
2. Facilitate the development of medium density infill development within existing urban areas, especially close to activities centres and public transport.
3. Document policy positions around provision of affordable housing with clear targets and strategies.
4. Ensure the opportunity exists to provide for larger scale residential developments, such as independent living and aged care accommodation, to be provided in the planning and development of greenfield residential areas.
5. Emphasise support for older people in their homes within planning policy and set out guidelines for adaptable housing.
6. Utilise partnerships to provide affordable housing that is also high quality (rather than relying on private market which can lead to poor quality outcomes) and improve data collection systems for specialised housing markets.



7. Review infrastructure and community facility standards to ensure they meet current and future needs and seek to provide clarity about the levels of service provision likely to be required in growth areas.
8. Consider the best mechanism for developing future urban land (including alternate zones such as the Urban Growth Zone) and ensure that DPOs (or other mechanisms used) provide guidance regarding how staged development can occur considering the potential for parcels to be developed individually.
9. Develop processes and review options for the financing of upfront provision of infrastructure to ensure that drainage and stormwater infrastructure is developed well in advance of development to provide certainty, and ensure minimal delays, while not preventing development from occurring due to the magnitude of infrastructure costs.
10. Provide guidelines for sustainability and liveability measures to be included in new houses and in new subdivisions to ensure healthy and sustainable communities. Ensure these are clearly articulated within the Mildura Planning Scheme rather than as separate 'guidelines'.
11. Integrate walking and cycle paths (such as the existing green and blue ways) in new development areas and provide more passive and connective recreational opportunities in residential areas, in additional to traditional 'active' recreational spaces.
12. Investigate options for the realising the use and development College Lease land, in accordance with the purpose for which it is zoned.
13. Provide clear direction about the staging for parcels of urban land around Mildura to reduce speculation and provide location choice and price competition to in the parcels available for development.
14. Rezone ad hoc pockets of Farming zoned land and Urban Flood zoned land around Mildura to reflect long term future use.

15. Promote improvements to the Mildura CBD and Riverfront to encourage additional residential growth centrally, through implementation of current plans for those areas.
16. Acknowledge that the 'interface' area between Irymple and Mildura is compromised and will experience a form of urban development in the medium to long term. The need will exist to strengthen the identity and character of Irymple in order to retain its individual identity, as despite development gradually occurring between the two towns.
17. Strengthen the identity of Merbein as a separate, well serviced township, close to and accessible to Mildura, for those seeking an alternative to living in a suburb of the larger township of Mildura.
18. Improve access between Red Cliffs and Mildura to support on-going development of the town and undertake upgrades to the town centre to refresh and strengthen township identity.
19. Pursue the provision of additional accommodation options for older residents in the Mallee Track area, specifically Ouyen and also Murrayville.
20. In the smaller townships along the Mallee Track and the Millewa Region focus on the provision of multipurpose community hubs to maintain services for residents and promote visitation.
21. Promote investment in improved transport connections to smaller settlements to improve access to services and facilities.

EMPLOYMENT

22. Identify and protect appropriate opportunities for the longer term expansion of retail and industrial land within Mildura from unplanned residential development, in order to provide job and economic development opportunities.
23. Acknowledge the vital importance of Mildura airport to the municipality's future and ensure that urban (residential) expansion do not constrain the

potential future operation or expansion of the airport. Use the Calder Highway (17th Street) as clear and fixed demarcation to stop urban development encroaching towards the airport to the south-west.

24. Acknowledge the route of the proposed bypass around the city of Mildura and ensure land uses adjoining the bypass maximise economic development opportunities.
25. Acknowledge the emergence of the Fifteenth Street spine as a major new activity centre in Mildura and the implications that will have the future urban form of the town.

INTERFACE AREAS AND FUTURE URBAN LAND

26. Remove the provisions of the MOIA incorporated document, but retain land in a Farming Zone, affecting designated areas at the interface between and long term agricultural areas.
27. Clearly identify agricultural land designated for future urban development and prepare a policy to prevent subdivision and the establishment of dwellings that might compromise the future orderly and proper development of such land.
28. In agricultural areas where there are existing 'rows' or 'clusters' of houses, prepare 'common sense' guidelines to allow the possibility for limited infill housing.
29. Explore other circumstances in which a 'common sense' approach might allow the possibility for limited infill 'rural residential' housing.
30. Investigate opportunities for the establishment of a second 'Etiwanda' type wetlands to service any expansion of the city to the east, in the longer term.

LOWER DENSITY RESIDENTIAL LAND

31. Provide additional LDRZ land (0.4h lots) in Koorlong, close to the shop and school and reflecting the standard of development established though the Bushland Rise estate.

32. Provide some opportunities for the introduction of a Rural Living Zone in Merbein, to provide lots of around 2ha, to the north and south-east of the town adjoining the environmental feature provided by the river corridor.

33. Provide rural living opportunities around Cardross in clearly designated areas to support the existing township.

34. Provide lower density residential land in Mildura itself only in specific areas where it can provide a 'buffer' with existing industrial areas or the heavy vehicle bypass, in recognition of Mildura's role as an 'urban' centre.

35. Rezone existing Low Density Residential zoned land in Nichols Point to a residential zone, subject to controls that restrict the minimum lot size permitted to around 1,500 sqm, to reflect the character and identity of the town. This may be achieved through the new Neighbourhood Residential Zone and is subject to exploration of the implications on drainage capacity.

AGRICULTURAL AREAS

36. Revise the boundaries of the area covered by the MOIA Incorporated Document controls to exclude designated transition areas which are not considered to have very long term potential for agricultural purposes.
37. Consider innovative approaches to encourage sustainable land management practices and provide incentives for the amalgamation of lots for agricultural purposes.
38. Investigate innovative methods to assist people who need to sell their land due to ill health, age or exceptional circumstances, but who cannot find a buyer.
39. Undertake a study to investigate the potential health impacts of residential development within agricultural areas.



appendix 1: transport and infrastructure assessment

