

ATTACHMENT TO AGENDA ITEM

Ordinary Meeting

15 October 2019

Agenda Item 10.6	Update on the Urban Development Program - Residential Land Supply and Demand Assessment City of Greater Shepparton September 2019, and Industrial Land Supply and Demand Assessment City of Greater Shepparton September 2019	
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**RESIDENTIAL LAND
SUPPLY & DEMAND ASSESSMENT**

City of Greater Shepparton

September 2019

Final



23/09/2019

Final Version 1.0

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EXECUTIVE SUMMARY

The following report provides a detailed assessment of the historic, current and future assessment of residential land supply and demand across Greater Shepparton.

Historic Population Growth**Population Growth**

Population growth has increased on an average annual basis of 1.0% or 609 persons per annum from 2011 to 2018. The estimated population in Greater Shepparton in 2018 was 66,007.

Residential Development Activity**Residential Building Approvals**

As measured from 2001/02 to 2018/19* (as at February 2019), residential building approvals within the City of Greater Shepparton averaged 374 per annum. Between 2001 and 2018, the annual number of residential buildings approved has gradually declined, with an average of 420 per annum between 2001 to 2008, down to an average of 319 from 2011 to 2018.

Residential Lot Construction

From 2008 to 2019 residential lot construction activity has averaged 352 per annum (compared to 355 residential building approvals). However, since 2015/16, residential lot construction activity has averaged 497.

Of the lot construction activity measured since 2015/16 to the March Quarter 2019:

- 3% was rural residential (14 lots per annum);
- 6% was aged care facilities – measured in the number of bed places (32 beds/places per annum);
- 10% was aged/lifestyle lots (37 lots per annum);
- 10% was dispersed/minor infill (50 lots per annum); and
- 73% was broadhectare (363 lots per annum).

From 2015/16 to the March quarter 2019, 87% of all residential lot construction was within the urban centre of Shepparton/Mooroopna or 432 lots per annum. Of the remaining lot construction activity:

- 9% was located in the township of Tatura (average of 46 per annum); and
- 2% outside of township boundaries (12 per annum).

Of the broadhectare lot construction activity:

- 0.2% were compact (sized less than 300 sqm);
- 6% were suburban (sized 300 to 500 sqm);
- 80% were large suburban (500 to 1,000 sqm); and
- 14% low density suburban (over 1,000 sqm).

The median sales value of a vacant residential allotment in 2017 was:

- \$125,500 across Greater Shepparton;
- \$128,000 in Kialla;
- \$125,500 in Shepparton;
- \$115,000 in Shepparton North
- \$107,500 in Mooroopna; and
- \$105,000 in Tatura

Since 2007, the median sales value of vacant residential lots has modestly increased in Greater Shepparton from \$98,500 in 2007 to \$125,000 in 2017 – an annual average growth of 2.4% per annum – compared to 4.5% across regional Victoria.



Residential Land Supply**Broadhectare Land Stocks**

In total, Greater Shepparton currently has capacity for the future provision of approximately 10,000 additional dwellings (including areas that are as yet, not zoned for residential development purposes), on broadhectare sites.

This capacity is comprised of:

- 6,668 unzoned broadhectare lots (67% of supply); and
- 3,353 zoned broadhectare lots (33% of supply).

Feedback from the development industry regarding their market expectations and development intentions suggests that over the next five years on average, **283 lots/dwellings** per annum will be constructed within existing zoned broadhectare sites. Historically, over the last five years, lot construction on broadhectare sites has averaged 344 per annum

Rural Residential

Currently across the City of Greater Shepparton there was a total stock of 1,232 rural residential allotments. Of this stock, only 132 lots (11%) were vacant. Vacant rural residential lots as a supply type is comparatively low across the City of Greater Shepparton when compared to other regional municipalities in Victoria.

There are significant stocks of land identified for future rural residential use/zoning. There is a total of 2,011 hectares of land identified for future rural residential zoning, of which, 989 hectares is identified for future Low Density Residential (LDRZ) and 1,022 hectares for future Rural Living (RLZ).

Projected Housing Demand

Spatial Economics have presented two projected demand scenarios based on the most recently available evidence. These demand scenarios are outlined below.

Scenario One: idForecast – dwelling forecasts undertaken for the City of Greater Shepparton by ForecastID. Dwelling requirements from 2016 to 2036 at 376 per annum or a 1.2% per annum growth rate (note this is comparable to the dwelling growth as measured by the ABS Census from 2011 to 2016).

Scenario Two: Recent trend high growth) – simply assumes recent residential lot construction activity as measured from 2015/16. Dwelling requirements from 2016 to 2036 at 497 per annum or 1.6% per annum growth rate.

The largest and fastest growth in households across Greater Shepparton will be households with no children (*lone person and couples without children households*), growing at an average annual rate of 1.3% or 206 households per annum from 2016 and 2036. This household type is projected to represent 57% of the change in household structure to 2036.

The next largest (in terms of absolute growth) is households with children (*couples with kids & single parent families*), projected to grow at 141 households per annum or a 1.2% growth rate, with the larger gain expected to occur between 2016 and 2026.



Adequacy of Land Stocks**Years Supply – Broadhectare**

In terms of zoned broadhectare/major infill residential land stocks it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between 5 to 9 years of demand across Greater Shepparton municipality.

In addition, there are sufficient unzoned broadhectare residential land stocks to satisfy between 16 to 21 years of demand.

Shepparton/Mooroopna

In terms of zoned broadhectare residential land stocks, it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between 7 to 9 years of demand for the Shepparton/Mooroopna urban centre.

Tatura

In terms of zoned broadhectare residential land stocks, it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between 4 to 8 years of demand for the Tatura township.

Spatial Economics recommend:

- 1. Increasing the stock of zoned broadhectare land for the urban centre of Shepparton in the short to medium term.**

It is acknowledged that the North East Shepparton PSP land release area will be available for development in the short-term. However, Spatial Economics consider it would be prudent (to maintain industry competition, housing affordability and the continued provision of geographic competition and choice) to achieve additional rezoning of identified potential residential lands. In addition, this approach would ensure sufficient zoned residential broadhectare land stocks available for development if the North East Shepparton PSP land release area is not actively developed in the short to medium term.

- 2. Increasing the stock of zoned broadhectare land for the township of Tatura in the short-term.**

As previously outlined, the stock of residential broadhectare land in Tatura with active development intentions is effectively depleted. Over recent years the Northlinks estate has been in high demand and is currently largely fully developed.



1.0 Introduction

1.1 Context

The following report is a residential land supply and demand assessment for the City of Greater Shepparton.

The assessment includes:

- the identification of historical and current residential lot construction activity by supply type and location;
- identification of all zoned and unzoned broadhectare residential land supply stocks including estimates of lot yields on a project by project basis;
- identification of anticipated broadhectare residential lot construction activity (development timing);
- estimation of the capacity (lots) of rural residential land stocks;
- examination of the quantum and composition of future residential demand;
- presentation of potential future demand scenarios; and
- estimation of the years of supply of undeveloped broadhectare residential land stocks.

The assessment provides a robust and transparent assessment of the supply and demand for residential land across Greater Shepparton. The assessment will facilitate informed decision making in terms of the existing and future broadhectare residential land supply requirements.

In addition, the information will be of assistance to other related planning processes such as infrastructure and service planning.

1.2 Purpose

The monitoring of land supply is a key tool to assist in the management and development of growth across the municipal area of Greater Shepparton. The primary purpose of monitoring residential land supply is to improve the management of urban growth by ensuring that council, public utilities, government and the development industry have access to up-to-date and accurate information on residential land availability, development trends, new growth fronts, and their implications for planning and infrastructure investment.

The following report provides accurate, consistent and updated intelligence on residential land supply, demand and consumption. This in turn assists decision-makers in:

- maintaining an adequate supply of residential land for future housing purposes;
- providing information to underpin strategic planning in urban centres;
- linking land use with infrastructure and service planning and provision;
- taking early action to address potential land supply shortfalls and infrastructure constraints; and
- contributing to the containment of public sector costs by the planned, coordinated provision of infrastructure to service the staged release of land for urban development.

2.0 Approach & Scope

The following provides a brief outline of the major methodologies and approach in the assessment of recent residential lot construction, residential land supply areas, dwelling demand scenarios and determination of assessing adequacy of residential land stocks.

The methodology that Spatial Economics has employed for this project is based on the simple premise of matching the supply type with demand. This methodology assesses recent construction



and future supply using the same criteria with the supply type definitions based on outcomes and on a lot by lot basis rather than administrative boundaries.

The methodology used by Spatial Economics is consistent with other State Government methodologies around Australia, including the Victorian State Governments Regional Urban Development Program. The criteria used to define the supply types are explained below.

Future Dwelling Requirements

Population and dwelling projections undertaken by id Consulting commissioned by the Greater Shepparton City Council provide a sound basis for potential dwelling growth requirements.

In addition, an alternative dwelling demand scenario is presented based on actual recent growth trends.

The Victorian State Government population and household projections undertaken by the Department of Environment, Land, Water & Planning (VIF2016) are considered 'out-dated' to be utilised in the following land supply assessment – primarily due to VIF2016 being based on 2011 ABS Census data.

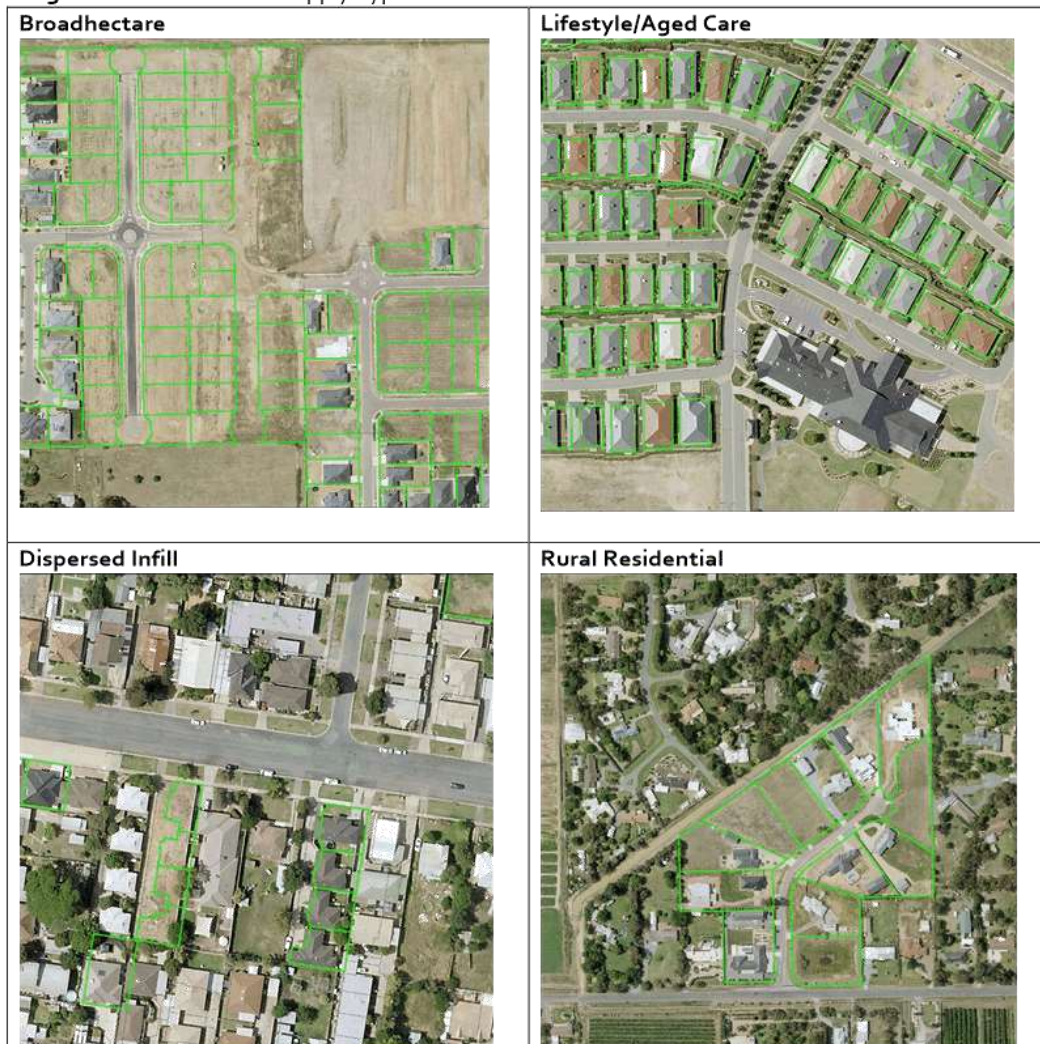
Land Supply Type Definitions

1. **Broadhectare** is defined as residential development on greenfield sites (sites that have not been used previously for urban development purposes or previously subdivided for normal/urban density development) and typically located on/or near the urban fringe.
2. **Dispersed Infill** is from a lot/dwelling construction perspective, residential development occurring within the established urban area (not on broadhectare sites) that yield less than 10 dwellings per individual construction project. Typically, it entails 'backyard' style subdivision projects.
3. **Lifestyle/Aged Care** is from a lot/dwelling construction perspective, housing outcomes that are specifically targeted for aged persons/households. Typically (in the case for Shepparton) these are detached dwellings within lifestyle villages.
4. **Rural Residential** is from a dwelling construction perspective, all activity on land zoned Rural Residential and Low Density Residential.



The images below illustrate the supply types.

Image 1: Residential Land Supply Types



Geography

The following geographic areas are utilised for the land supply assessment and demographic analysis.

Townships: Township boundaries are sourced from the City of Greater Shepparton Municipal Strategic Statement. These boundaries represent the urban centre/township geographic extent. .

ABS Suburbs: Are an ABS approximation of localities gazetted by the Geographical Place Name authority in each State and Territory. Gazetted Localities are the officially recognised boundaries of suburbs (in cities and larger towns) and localities (outside cities and larger towns).

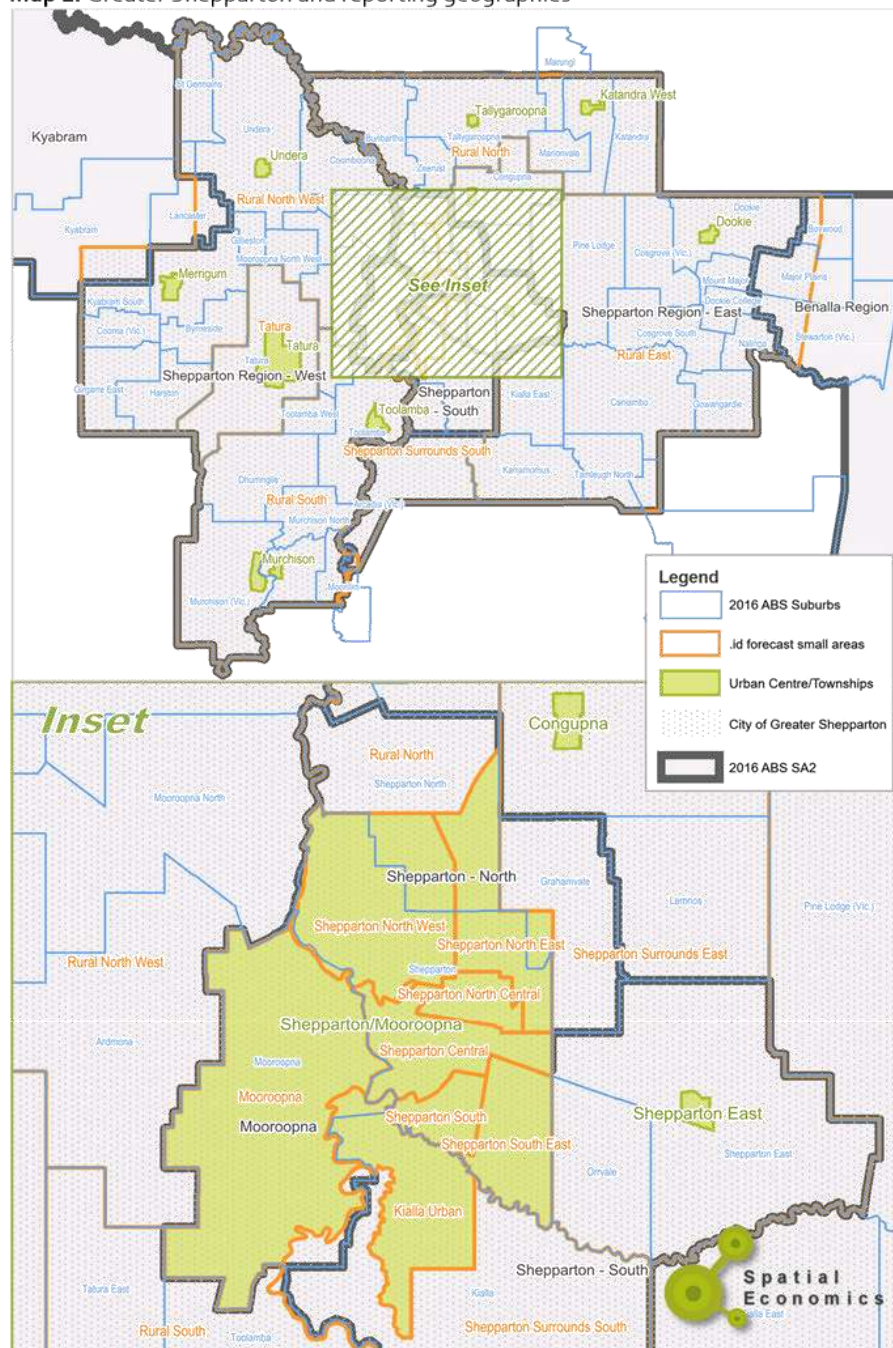
idForecast Small Area: Developed by idForecast for small area demographic projections, these boundaries broadly represent distinct housing market areas and distinct population centres.

2016 ABS SA2: Australian Bureau of Statistics geographic definition that are a general-purpose medium sized area built from whole SA1s. Their aim is to represent a community that interacts



together socially and economically. The City of Greater Shepparton comprises five SA2 areas – Shepparton-North, Shepparton-South, Mooroopna, Shepparton Region-West and Shepparton Region-East. However, the combination of these SA2s do not match the 2016 Greater Shepparton LGA boundary as Greater Shepparton also includes some portions of the Kyabram SA2 and Benalla Region SA2 areas. These SA2 areas are used to assess both estimated resident population (ERP) trends and volumes of residential building approvals.

Map 1: Greater Shepparton and reporting geographies



Residential Lot Construction

Residential lot construction has been determined via the assessment of the residential cadastre and the application of this cadastre to the land supply types identified above.

A constructed lot is defined by the year of construction and the finalisation of certificate of title.

Lot construction is only captured if it is for residential purposes.

It is noted, where new lot construction occurs (typically within mixed use type zones) and one lot results in multiple dwellings, the dwelling count is collected. Lot construction from the following assessment will largely result in one net additional dwelling.

Construction activity has been assessed on an annual financial year basis from 2008 to March 2019.

Lot and dwelling construction have been undertaken for the following supply types:

- Rural Residential;
- Dispersed Infill;
- Lifestyle/Aged Care; and
- Broadhectare.

Lot Yields

Lot yields on a site basis has been undertaken for only broadhectare and rural residential supply types.

In establishing the lot yield for each individual land parcel, the following information was used: incidence and location of native vegetation, zoning, natural features such as creeks, escarpments, floodways, localised current/recent market yields, ability to be sewerred, existing studies such as structure plans.

In addition to site specific issues, 'standard' land development take-outs are employed, including local and regional. The amount/proportion of such take-outs are dependent on the land parcel i.e. a 1ha site will have less take-outs than say a 50ha site. Further intelligence and verification are sourced from the local land development industry and Council officers.

Years of Supply

With the amount of supply and demand estimated, adequacy is described in years of supply. For example, it can be stated that there are X years of supply based on projected demand within a given geographic area.

In assessing the number of years of broadhectare residential land supply, only a component of the total projected demand is apportioned to estimate future demand. The remainder is apportioned for future demand of other forms of residential supply such as dispersed infill and rural residential.



3.0 Population Growth

Key Findings

Population growth for the City of Greater Shepparton has been modest - an average annualized growth of 1% from 2011 to 2018 or 609 persons per annum. In recent years, the rate of population growth has been subdued at around 0.7% per annum.

The greatest rate of population growth has been located within the residential greenfield locations of Shepparton, in the north, east and south (Kialla) urban fringe.

Population growth was subdued in the rural areas of the municipality, however the township of Tatura has experienced relatively strong growth.

The established urban areas of Shepparton and Mooroopna have experienced marginal rates of population growth.

The following section of the report details actual population and dwelling growth for the City of Greater Shepparton and its composite SA2 areas.

In addition, where appropriate, comparison to other Victorian municipalities, the Hume Region and the Rest of Victoria is undertaken.

The Hume Region includes the municipalities of Alpine (S), Benalla (RC), Indigo (S), Mansfield (S), Mitchell (S), Moira (S), Murrindindi (S), Strathbogie (S), Towong (S), Wangaratta (RC), Wodonga (C) and Greater Shepparton (C). For this report, data for the Hume Region excludes Greater Shepparton (C).

3.1 Historical Population Growth

Historical Population Change

The following assessment of historical population growth is sourced from the Australian Bureau of Statistics Estimated Resident Population (ERPs) publication. The Shepparton – North, Shepparton – South, Mooroopna, Shepparton Region – West and Shepparton Region – East population estimates are collected at an ABS SA2 level. These are valuable and provide a source to examine historic rates of population growth and comparative population growth to other jurisdictions.

The ERP is calculated each year by the ABS and re-based after each Census with revised (final) estimates then re-published for the preceding five years. Most municipal level projections use ERPs as a base, rather than Census counts. Census data is great for telling us about the characteristics of the population, while ERPs are a better measure of the total number of people who normally reside in an area.

The most recent estimate of Greater Shepparton's population is 66,007 people at 30 June 2018. The population grew by 935 people (0.7%) from the 30 June 2016 figure. This figure is the last available preliminary population estimate before all Estimated Resident Population (ERPs) are rebased in late 2019 using data from the 2016 Census and the preliminary 2018 total.

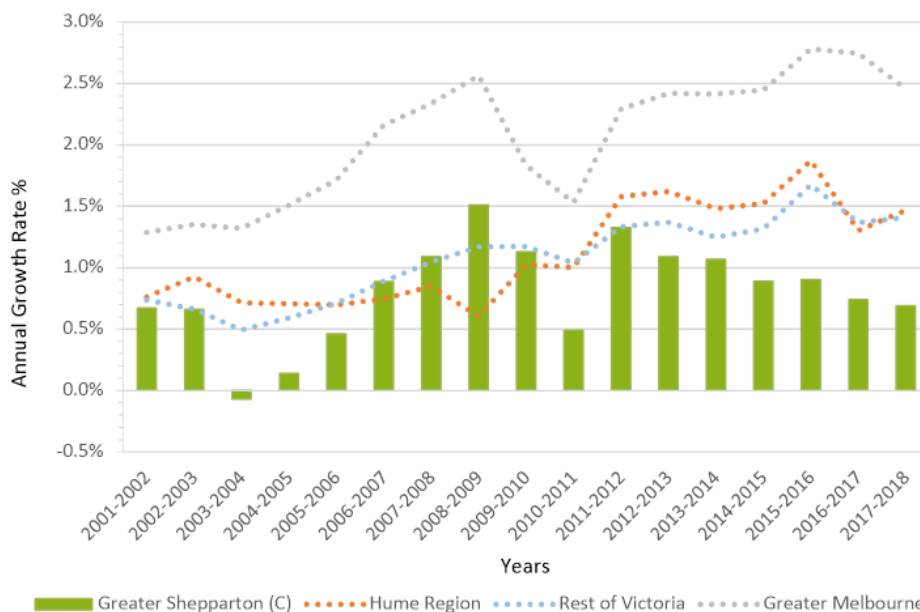
From 2011 to 2018, the resident population increased by 1.0% per annum. In the recent two years, population growth has declined to around 0.7% per annum.

Historically, the Hume Region has generally experienced slightly higher growth rates when compared to the 'Rest of Victoria'. With exception to the 2006 to 2010 period, Greater Shepparton has constantly experienced lower growth rates when compared to the Hume Region and Rest of Victoria.

In the last seven years, Greater Shepparton's growth rate has been in decline and in 2017/2018, was approximately half the rate experienced compared to the rest of the Hume Region (0.7% versus 1.5%).



Graph 1: Estimated Resident Population Annual Growth Rate, 2001 to 2018 (%) – Selected Jurisdictions



Note: Hume Region includes Alpine (S), Benalla (RC), Indigo (S), Mansfield (S), Mitchell (S), Moira (S), Murrindindi (S), Strathbogie (S), Towong (S), Wangaratta (RC), Wodonga (C) and Greater Shepparton (C). Hume Region data in this report EXCLUDES Greater Shepparton (C).

Source: Australian Bureau of Statistics. Estimated Resident Population

During the 2011-2016 period, the City Greater Shepparton experienced net out migration i.e. to Greater Melbourne and interstate (-1,600 persons total).

Other significant net losses were to Greater Geelong and Greater Bendigo (-290 persons and -225 persons respectively) and the broadhectare housing estates in Greater Melbourne, most notably in Casey, Hume, Whittlesea and Wyndham (approximately -500 persons in total).

However, the City of Greater Shepparton did experience some net gains from neighbouring municipalities, the most significant from Moira (+240 persons) and Campaspe +110 persons).

From 2011 to 2016, the most transient population to migrate out of Shepparton were those aged 18 to 24, this age cohort comprised approximately two-thirds of the net out migration. This suggests the departure of young adults moving to Greater Geelong (-120 persons), Greater Bendigo (-150 persons) and Greater Melbourne (-800 persons) were for tertiary education, lifestyle choices and access to service/employment opportunities.

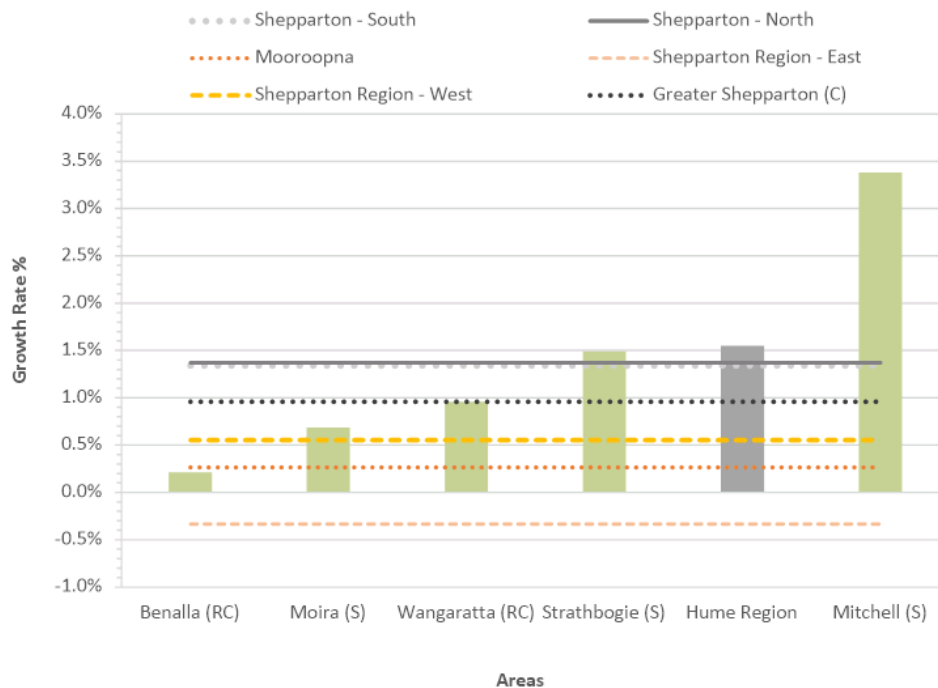
Albeit smaller in numbers, this age group interestingly accounted for the most significant in-migration into the municipality, mainly from the neighbouring municipalities of Moira and Campaspe (+110 persons total). Shepparton also experienced some gain of persons aged 65 years and over, mainly from the neighbouring municipalities of Moira and Strathbogie (+85 persons total).

Historical Population – A Comparison of SA2 areas

During the 2011 and 2018 period, the urban areas of Greater Shepparton – Shepparton-South (1.3%) and Shepparton-North (1.4%) SA2s - experienced moderate growth rates and remained notably higher than that of Greater Shepparton (1.0%) and were comparable to the growth rate of the Hume Region (1.5%).



Graph 2: Estimated Resident Population Growth Rate, 2011 to 2018 (%) – Greater Shepparton SA2s Vs Selected Jurisdictions



Note: Hume Region includes Alpine (S), Benalla (RC), Indigo (S), Mansfield (S), Mitchell (S), Moira (S), Murrindindi (S), Strathbogie (S), Towong (S), Wangaratta (RC), Wodonga (C) and Greater Shepparton (C). Hume Region data in this report excludes Greater Shepparton (C).

Source: Australian Bureau of Statistics. Estimated Resident Population

During the 2011 to 2018 period, the rural SA2s areas experienced significantly lower growth rates compared to the municipal total, the Shepparton Region-East SA2 experienced negative growth. Greater Shepparton and Wangaratta had similar growth rates between 2011 and 2018.

Key Issues

Whilst Greater Shepparton experienced modest population growth in the last decade, and recently declining levels of population growth – as will be illustrated later, the quantum of recent residential development activity is strong.

This illustrates the importance of regular monitoring of a variety of demand indicators and the planning for a range of growth scenarios.



4.0 Recent Residential Development Activity

Key Findings

Development Activity

As measured from 2001/02 to 2018/19* (as at February 2019), residential building approvals within the City of Greater Shepparton averaged 374 per annum. Between 2001 and 2018, the annual number of residential buildings approved has gradually declined, with an average of 420 per annum between 2001 to 2008, down to an average of 319 from 2011 to 2018.

The vast majority of building approvals (95%) since 2001/02 have been for separate houses with the residual being semi-detached dwellings/units.

From 2008 to 2019 residential lot construction activity has averaged 352 per annum (compared to 355 residential building approvals). However, since 2015/16, residential lot construction activity has averaged 497.

Of the lot construction activity measured since 2015/16 to the March Quarter 2019: 3% was rural residential (14 lots per annum); 6% was aged care facilities – measured in the number of bed places (32 beds/places per annum); 10% was aged/lifestyle lots (37 lots per annum); 10% was dispersed/minor infill (50 lots per annum); and 73% was broadhectare (363 lots per annum).

Residential lot construction activity as measured from 2015/16 to the March quarter 2019 was concentrated within the urban centre of Shepparton/Mooroopna at 87% of all lot construction activity or 432 lots per annum. Of the remaining lot construction activity:

- 9% was located in the township of Tatura (average of 46 per annum); and
- 2% outside of township boundaries (12 per annum).

As previously outlined, broadhectare lot construction activity has averaged 363 lots per annum from 2015/16 to the March Q 2019. Of the broadhectare lot construction activity:

- 0.2% were compact (sized less than 300 sqm);
- 6% were suburban (sized 300 to 500 sqm);
- 80% were large suburban (500 to 1,000 sqm); and
- 14% low density suburban (over 1,000 sqm).

Vacant Residential Lot Sales Activity

The median sales value of a vacant residential allotment in 2017 was:

- \$125,500 across Greater Shepparton;
- \$128,000 in Kialla;
- \$125,500 in Shepparton;
- \$115,000 in Shepparton North
- \$107,500 in Mooroopna; and
- \$105,000 in Tatura

Since 2007, the median sales value of vacant residential lots has modestly increased in Greater Shepparton from \$98,500 in 2007 to \$125,000 in 2017 – an annual average growth of 2.4% per annum – compared to 4.5% across regional Victoria.



Section 4.0 of this report details the recent activity of residential lot construction and dwelling approvals in across the City of Greater Shepparton. Residential lot construction activity is detailed from July 2008 to March 2019.

This section of the report details residential lot construction by location, supply type, achieved densities, project size/yield and sales pricing of constructed residential lots.

Where appropriate, comparisons to other regional Victorian jurisdictions is included.

4.1 Residential Building Approvals

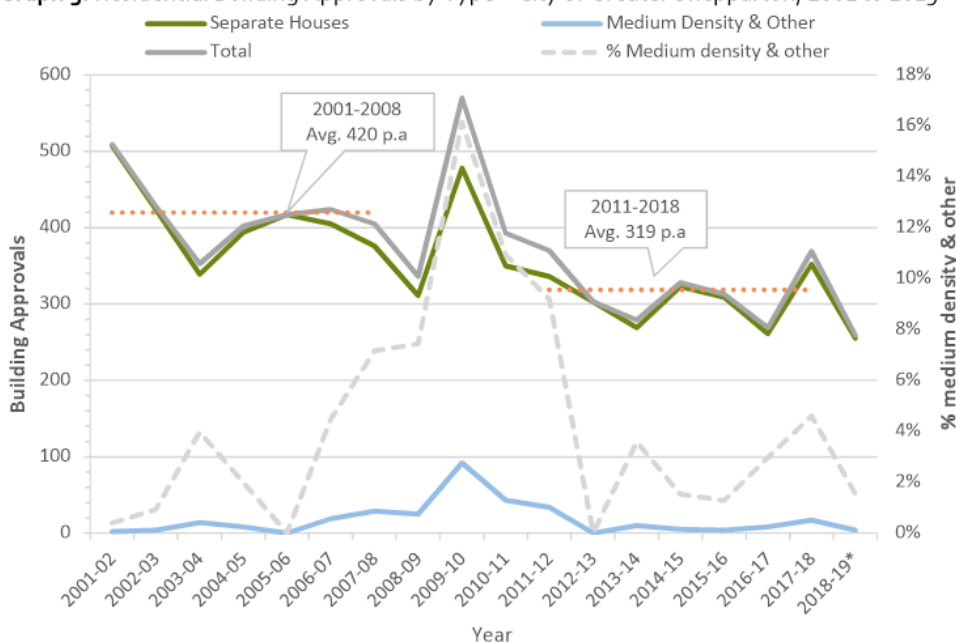
As measured from 2001/02 to 2018/19* (FYTD), residential building approvals within the City of Greater Shepparton averaged 374 per annum. Of which, 95% were for separate dwellings whilst 5% were for medium density housing.

Between 2001 and 2018, the annual number of residential buildings approved has gradually declined, with an average of 420 per annum between 2001 to 2008, down to an average of 319 from 2011 to 2018. During this period, volumes of residential building approvals have “tested new lows”. Greater Shepparton had a peak of nearly 600 residential buildings approved in 2009/10 with nearly 100 (or 16%) of these being for medium density dwelling forms.

Please note that the 2018/19 residential building approvals data is incomplete and is financial year-to-date at February 2019. Upon completion of the 2018/19 data, it can be assumed that the total residential dwelling approvals will likely exceed the average approvals experienced from 2011 to 2018.

This slowing demand for new housing is consistent with population data from the Census.

Graph 3: Residential Building Approvals by Type – City of Greater Shepparton, 2001 to 2019*



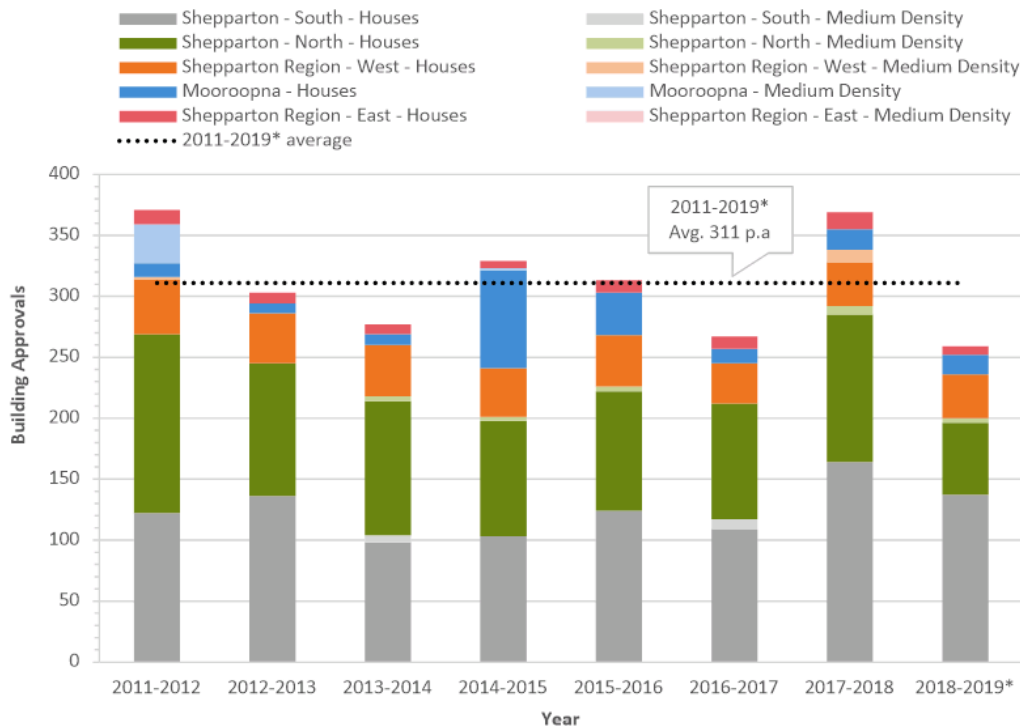
* 2018-2019 Financial year to date (to Feb 2019)
Source: Australian Bureau of Statistics

An examination of ABS SA2 residential building approvals data from 2011 to 2019* (Feb FYTD) reveal most of these residential building approvals have been for separate houses in Shepparton – South and Shepparton – North SA2 areas. Approvals for separate houses in these “urbanising” SA2 areas accounted for nearly three-quarters of total residential building approvals in the municipality



(73%). This was driven by development fronts in the suburbs of Kialla, Shepparton and Shepparton North.

Graph 4: Residential Building Approvals by ABS SA2s - 2011 to 2019* (Feb fytd)



* 2018-2019 Financial year to date (to Feb 2019)
Source: Australian Bureau of Statistics

The Mooroopna SA2 accounted for 8% of total residential approvals between 2011 and 2019* with the majority approved during the 2014/15 and 2015/16 financial years.

Outside of the urban area of Shepparton, the Shepparton Region – West SA2 accounted for 13% of total residential approvals during this period, driven primarily by development in Tatura.



4.2 Residential Lot Construction

Analysis has been undertaken to determine, on a lot by lot basis, the location, supply type and quantum of residential lot construction across the City of Greater Shepparton by financial year from 2008 to March 2019. Lot construction activity has been classified into distinct supply types and/or supply locations.

Compared to building approvals, residential lot construction is markedly more cyclical. From 2008 to 2019 residential lot construction activity has averaged 352 per annum (compared to 355 residential building approvals). However, since 2015/16, residential lot construction activity has averaged 497. Lot construction activity peaked at 703 in 2015/16, declining to a low of 269 the following year and is illustrating significant volumes at 372 in the current financial year (up to the March quarter 2019).

Of the lot construction activity measured since 2015/16 to the March Quarter 2019:

- 3% was rural residential (14 lots per annum);
- 6% was aged care facilities – measured in the number of bed places (32 beds/places per annum);
- 10% was aged/lifestyle lots (37 lots per annum);
- 10% was dispersed/minor infill (50 lots per annum); and
- 73% was broadhectare (363 lots per annum).

4.3 Location of Residential Development Activity

Residential lot construction activity as measured from 2015/16 to March quarter 2019 was concentrated within the urban centre of Shepparton/Mooroopna at 87% of all lot construction activity or 432 lots per annum. Of the remaining lot construction activity:

- 9% was located in the township of Tatura (average of 46 per annum); and
- 2% outside of township boundaries (12 per annum).

There was minimal to no residential lot construction activity within the remaining townships within the municipality of Shepparton.

4.4 Lot Construction by Supply Type

Broadhectare residential lot construction has been and is currently the dominant form of residential development activity. Since 2008, this form of development activity has averaged 70% of the total. However, since 2015/16, broadhectare lot construction activity has increased to 73% of total residential construction activity.

As will be detailed later in the report, it is not expected that the reliance of broadhectare development activity will change in the short to medium term.

Dispersed infill development has consistently delivered approximately 12% of all lot construction activity. This is an important supply source, as will be detailed later it provides:

- a wide range of residential land products;
- a major land supply source within the smaller townships;
- distributed widely across the established urban area; and
- contributes to urban containment/development of under-utilised land parcels.

In addition, dispersed infill development across the Greater Shepparton municipality is not simply developing 'low hanging fruit'. Infill development is characterised by a wide range of yields, densities and project sizes. Dispersed infill development is currently a valuable and strategically important supply source, this as a supply source will become increasingly important over-time.

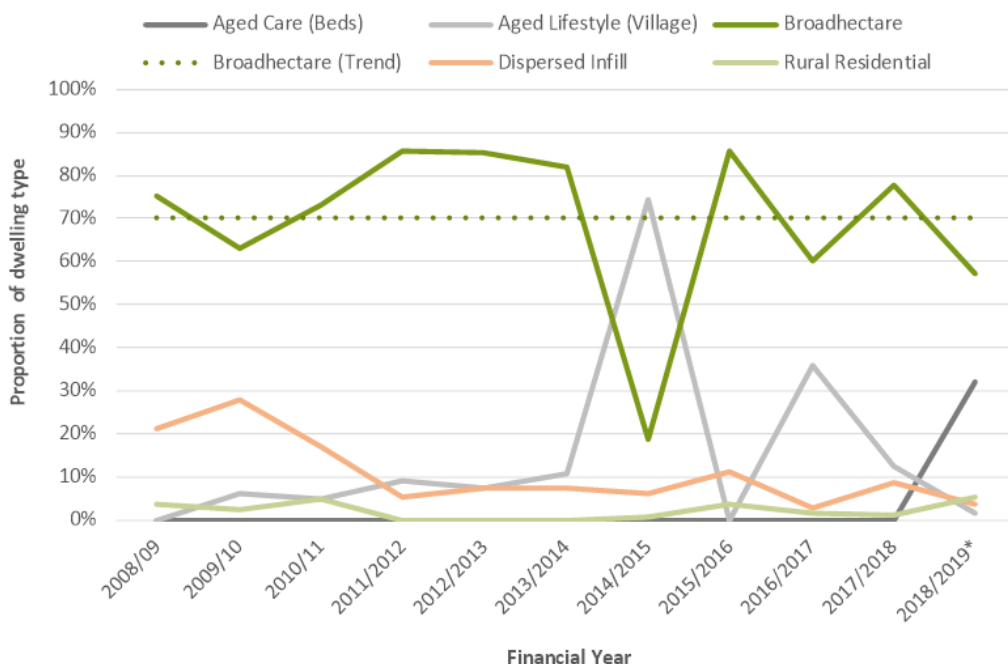


The contribution of rural residential lot construction activity is more sporadic and is not a major residential supply source – contributing typically around 2% of lot construction.

Aged care and retirement living construction is a major residential land supply source, combined since 2008 contributing 16% of all residential lot construction.

Graph 5 below illustrates the continued dominance of broadhectare lot construction activity.

Graph 5: Share of Residential Development Activity by Supply Type – City of Greater Shepparton



Source: Spatial Economics Pty Ltd
* 2018/19 measured to March quarter 2019

4.5 Dispersed/Minor Infill Lot Construction

The following provides an overview of the development outcomes of dispersed infill development activity across the City of Greater Shepparton. Dispersed infill activity is a significant supply source across the municipality, accounting for 12% of lot construction activity since 2008/09. It is important to understand the characteristics of dispersed infill development, so land use planning policy can further enhance development outcomes and optimize this as a supply source in the future.

4.5.1 Dispersed/Minor Infill Supply – Achieved Densities

Dispersed infill lot construction activity across the City of Greater Shepparton municipality is achieving both 1) a wide range of densities and 2) a high proportion of medium density land products.

The experience in Geelong, Ballarat, Bendigo, Torquay, Bacchus Marsh and Melbourne suggests that as the supply of larger parent lots decreases, and land prices continue to rise in the established urban area, the development industry will find it profitable to re-subdivide smaller parent lots.

The size distribution of newly constructed minor infill lots is shown in the graph below.

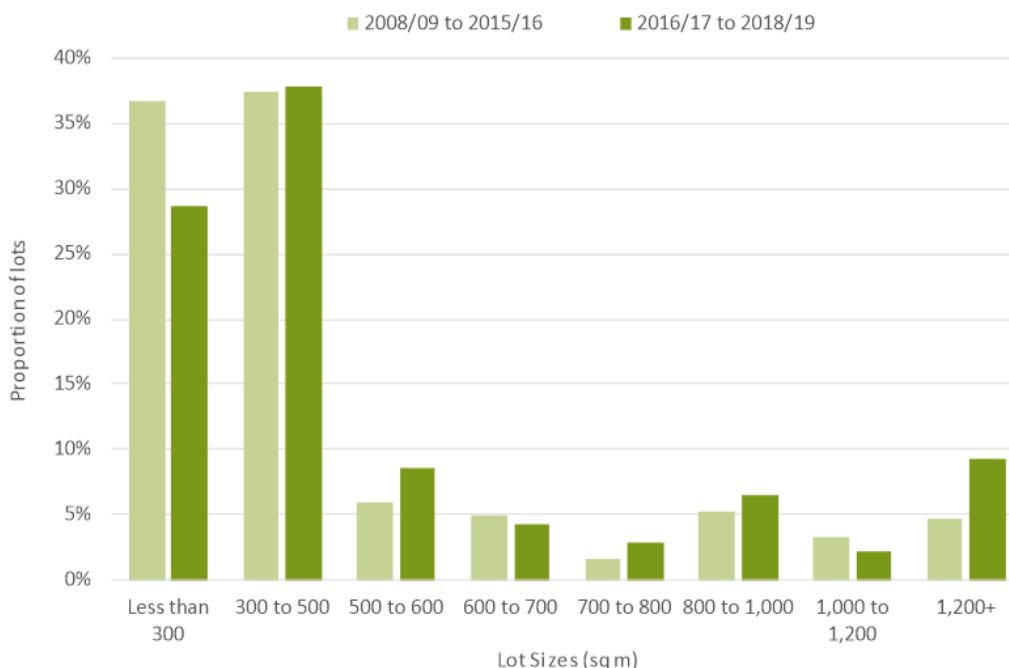
In the last 3 years 29% of all minor infill development activity was sized less than 300 sqm, compared to 37% from 2008 to 2015. The size of minor infill lot construction over the last 3 years is slightly increasing. It is suspected that in the short to medium term, this trend will likely to continue in response to consumer demand.



Since 2016/17, the majority of minor infill lot construction activity (66%) was sized less than 500 sqm. Nearly 34% of minor infill lot construction resulted in lots sized greater than 600 sqm. These 'larger' lots were typically constructed within the smaller townships outside of Shepparton and Mooroopna.

The graph below illustrates the lot size range for constructed dispersed infill lots across the City of Greater Shepparton.

Graph 6: Dispersed Infill - Achieved Lot Size Cohorts, 2008 to 2019



Source: Spatial Economics Pty Ltd

The median size of a constructed dispersed infill lot is approximately 350 sqm, this has varied over-time, however, in recent years there is a distinct trend of decreasing achieved densities.

In summary, dispersed infill lot construction across the City of Greater Shepparton is characterised by medium density outcomes and a diverse range of larger lot sizes.

4.5.2 Dispersed/Minor Infill Supply – Parent Lot Size

Dispersed residential infill development across the City of Greater Shepparton is primarily sourced from 'moderately' sized 'parent' lots, whether vacant or with an existing dwelling. The graph below illustrates the 'parent' lot size distribution for dispersed infill projects.

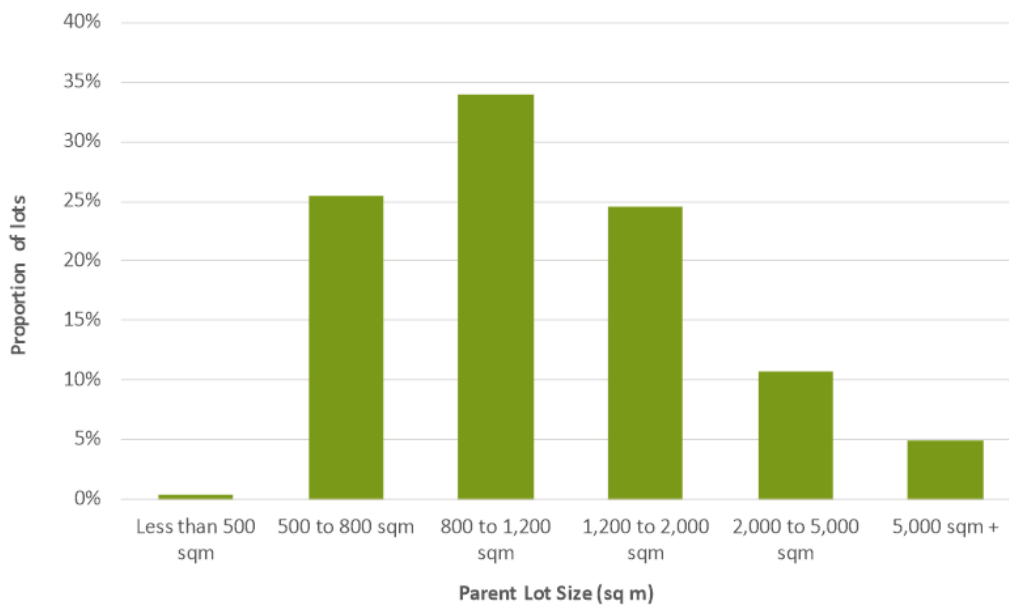
Of particular strategic importance is the significant volume of dispersed infill projects sourced from parent lots sized from 500 to 800 sqm and 800 to 1,200 sqm. Approximately 59% of all dispersed infill projects were sourced from parent lots sized from 500 to 1,200 sqm.

This reliance on relatively smaller parent lot sizes (particularly within the established urban area of Shepparton and Mooroopna) illustrates the significant latent supply potential. There is not a significant reliance on 'larger' sized parent lots as a supply source for dispersed infill residential projects i.e. sized above 2,000 sqm.

Note: - parent lot size refers to the size of the allotment prior to subdivision.



Graph 7: Parent Lot Size of Dispersed Infill Projects (Greater Shepparton), 2008 to 2019



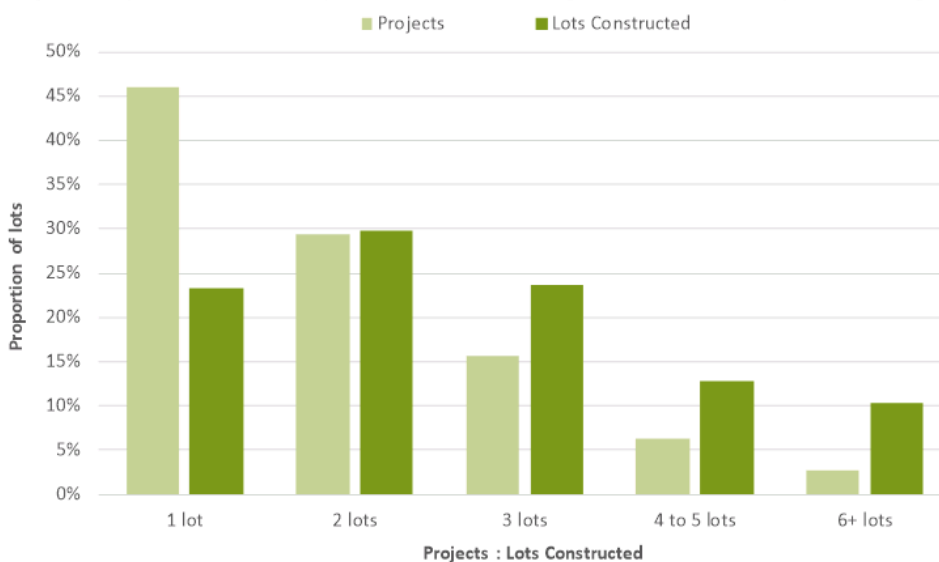
Source: Spatial Economics Pty Ltd

4.5.3 Dispersed/Minor Infill Supply – Project Size and Yield

In addition to the 1) diverse lot sizes delivered and 2) significant proportion of medium density lot size outcomes from dispersed infill development – dispersed infill development projects have relatively ‘significant’ **net** lot yields (in the context of a municipality with the dominant form of land supply sourced from greenfield land). This form of development can be categorised as typically suburban backyard subdivision projects undertaken by the cottage building industry.

Of the dispersed infill lots constructed 77% yielded two or more net lots/dwellings, 10% of lot construction activity was within projects yielding over six dwellings.

Graph 8: Dispersed Infill Development – Lot Yield & Project Size Distribution, 2008 to 2019



Source: Spatial Economics Pty Ltd



Image 2: Dispersed Infill Lot Construction – City of Greater Shepparton

4.6 Broadhectare Lot Construction

As previously outlined, broadhectare lot construction activity has averaged:

- 245 lots per annum from 2008/09 to the March Q 2019;
- 182 lots per annum from 2008/09 to 2014/15; and
- 363 lots per annum from 2015/16 to the March Q 2019.

As outlined previously broadhectare lot construction represents approximately 73% of all residential lot construction activity across the municipality since 2015/16. This contribution measured over-time has been relatively consistent. Spatial Economics based on 1) the existing composition of demand and 2) the existing and planned composition of residential land stocks, consider that the contribution of broadhectare development will remain at these levels for the medium to longer term.



Since 2015/16, the vast majority (88%) of broadhectare lot construction activity was located in the township boundary of Shepparton/Mooroopna, 11% of the broadhectare development activity was located in Tatura. Within the township boundary of Shepparton/Mooroopna the majority of development activity was located in the suburb of Kialla (157 lots per annum), followed by:

- Shepparton North (59 lots per annum);
- Shepparton (56 lots per annum); and
- Mooroopna (47 lots per annum).

4.6.1 Broadhectare Lot Construction – Diversity

Lots constructed from broadhectare supply sources across the City of Greater Shepparton are typically larger in size when compared to other larger regional Victorian urban centres. Graph 9 below illustrates the diversity of broadhectare lot construction.

Of the broadhectare lot construction activity since 2015/16:

- 0.2% were compact (sized less than 300 sqm);
- 6% were suburban (sized 300 to 500 sqm);
- 80% were large suburban (500 to 1,000 sqm); and
- 14% low density suburban (over 1,000 sqm).

The construction of larger lots has been a response by the development industry to consumer preferences. Through consultation with the local land development industry it was constantly stated that there was *"minimal consumer demand for smaller lots sized below 500 sqm."*

In recent years, the proportion of constructed larger sized broadhectare lots has increased, conversely, the proportion of smaller broadhectare lots has decreased.

Graphs 9 and 10 below illustrate both the median size and diversity of broadhectare residential lot construction. The median lot size of constructed broadhectare lots has remained relatively consistent over-time, varying from 720 sqm to 826 sqm. However, there is a general trend of decreasing densities of broadhectare lot construction activity.

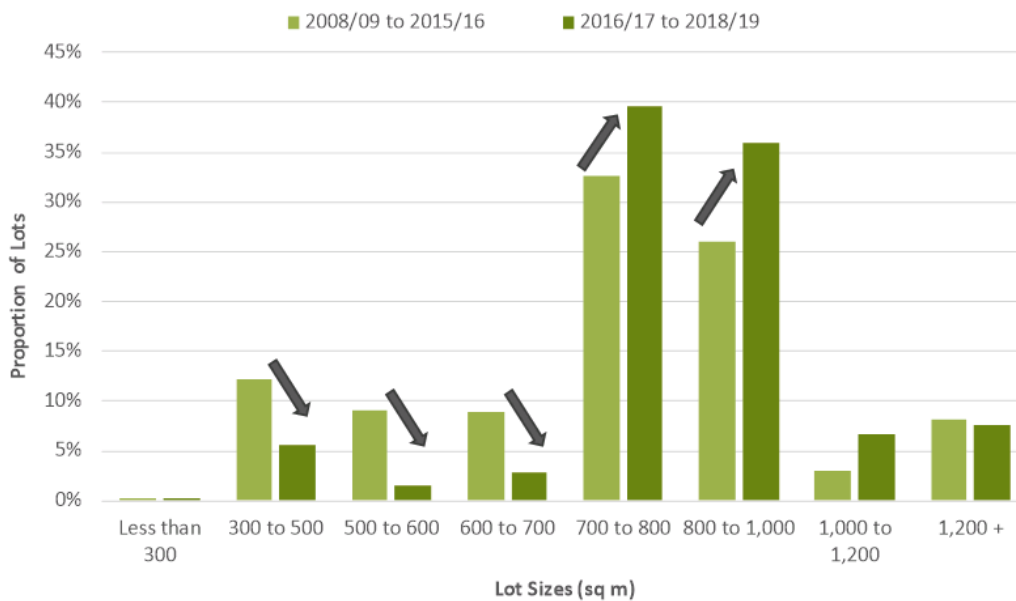
In 2009, the median size of a constructed broadhectare lot was 756 sqm, increasing to 826 sqm in 2017/18 and to around 783 sqm in the current financial year.

Across the majority of major urban centres in Victoria, the median lot size of constructed broadhectare lots is: a) rapidly declining; and b) significantly lower than compared to Shepparton. The declining densities of constructed broadhectare lots in other major urban centres is largely driven by affordability/consumer pricing points and to a lesser degree changing demographic characteristics.

Across the City of Greater Shepparton however, broadhectare lot construction has: a) maintained relative and absolute levels of broadhectare land affordability, in the context of providing consumers their preferred land product (larger lots) and b) provided small lot products within urban lifestyle villages (outlined later in the report), to respond to the demands of the changing demographic composition.

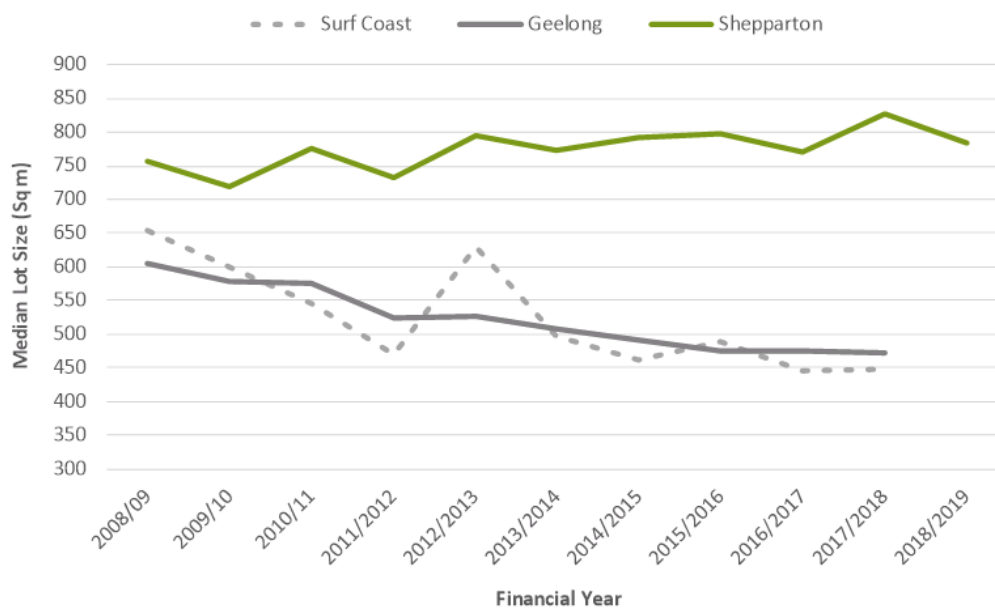


Graph 9: Broadhectare Lot Construction Size Distribution – City of Greater Shepparton



Source: Spatial Economics Pty Ltd

Graph 10: Median Lot Size (sqm) – Broadhectare Lot Construction



Source: Spatial Economics Pty Ltd

4.6 Aged/Lifestyle Living

Aged/Lifestyle living lot construction is a significant residential supply source across the municipal area of Shepparton, representing 16% of all residential development activity since 2008 – averaging approximately 50 lots per annum since 2015/16.

The overwhelming majority of the aged care/lifestyle development activity has been located on broadhectare sites.



Typically, lots/dwellings constructed within these estates have a density of 212 sqm.

Aged/lifestyle village dwelling supply is dominated by two major estates located in the east of the Shepparton urban area, these include:

- Lifestyle Shepparton (65 Channel Road, Shepparton); and
- Kensington Gardens (80 Channel Road, Shepparton).

As will be outlined later in the report, there is currently and projected significant growth in the 'aged' population. It is expected that the underlying demand for this housing type to continue into the future.

4.7 Rural Residential Lot Construction

Rural residential lot construction activity since 2015/16 has represented 3% of all lot construction activity across the municipal area – or 14 lots per annum

Rural residential lot construction in recent years has significantly increased (albeit at low volumes), increasing from an average annual lot production of five from 2008/09 to 2014/15 to 14 from 2015/16.

Of the total rural residential lot construction activity as measured from 2008/09 to the March Quarter 2019, 81% was zoned Low Density (LDRZ), the remaining zoned Rural Living (RLZ).

Nearly 70% of rural residential lot construction was located in Shepparton or surrounding suburbs of Shepparton. From 2008/09 to 2019, there was a total production of rural residential lots by suburb of:

- Mooroopna – 2 lots;
- Shepparton North – 9 lots;
- Kialla – 10 lots;
- Kialla West – 14 lots;
- Grahamvale – 29 lots

There were 19 rural residential lots constructed in Tatura (21% of construction activity) and five lots in Toolamba.

The typical constructed lot size was around 4,300 sqm for lots zoned LDRZ and 2.1 hectares for lots zoned RLZ.

Spatial Economics have observed (compared to many regional Victorian municipalities) that the City of Greater Shepparton has a relatively low contribution of rural residential lot construction. This is not supply related (as will be outlined later) and it is suggested that it is based on consumer preferences being fulfilled by typically larger constructed broadhectare lots.

4.8 Vacant Residential Lot Sales Pricing

The sales value of vacant residential lots is a prime outcome indicator of the 'state of the land supply' market. It is a simple measure that captures both supply and demand dynamics.

Since 2007, the median sales value of vacant residential lots has modestly increased in Greater Shepparton from \$98,500 in 2007 to \$125,000 in 2017 – an annual average growth of 2.4% per annum – compared to 4.5% across regional Victoria.

During this period, neighbouring municipalities of Benalla increased from \$85,000 to \$113,000 (1.0% per annum), Wangaratta increased from \$100,000 to \$140,000 (3.4% per annum).

Between 2007 and 2017, there was a:

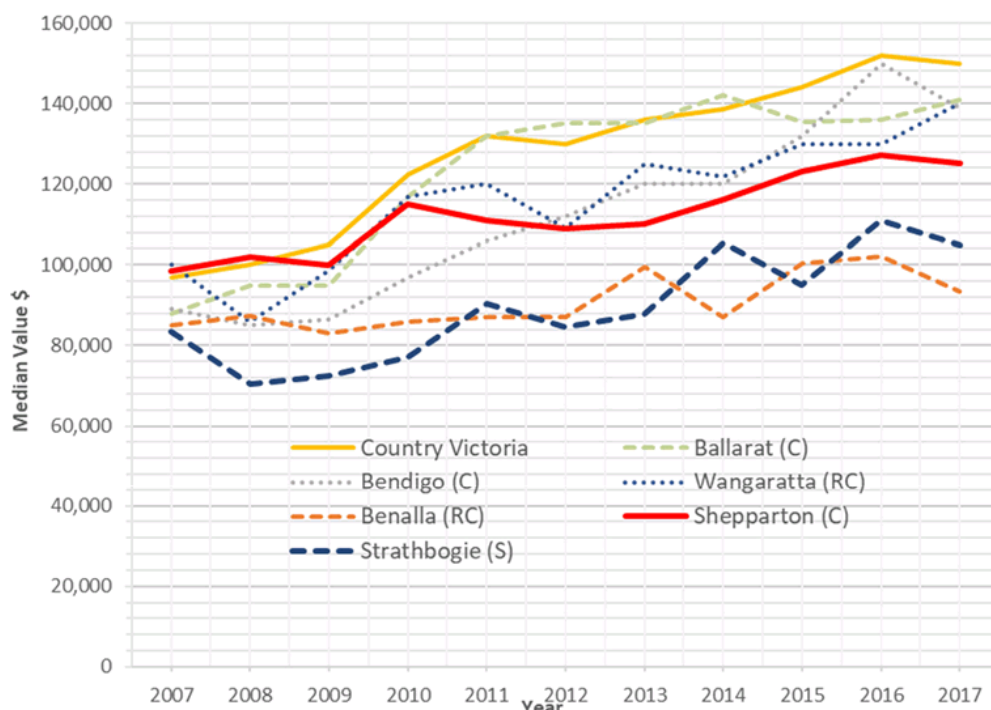
- 2.4% average annual increase across Greater Shepparton;



- 3.4% average annual increase across Wangaratta;
- 4.8% average annual increase across Ballarat;
- 4.6% average annual increase across Bendigo; and
- 2.3% average annual increase across Strathbogie.

Vacant Residential land sales values across the municipal area of Shepparton has relatively only moderately increased over-time, in addition residential sales values are currently relatively affordable to both regional Victoria and other major regional centres.

Graph 11: Median Sales Values – Vacant residential lots, 2007-2017 – Greater Shepparton Vs Selected Jurisdictions



Source: Valuer General Victoria

Vacant residential lots in Greater Shepparton have historically sold at a significant discount compared to those sold across regional Victoria. In 2017, it can be said that vacant residential lots sold in Greater Shepparton attracted a 17% discount to those sold across regional Victoria. This level of purchaser 'discount' has been relatively consistent since 2011, prior to 2011 sales values were relatively comparable.

Analysis of vacant residential land sales values by locality illustrates the differences within Greater Shepparton. Kialla has generally attracted a premium over other localities in the municipality, especially during the 2011 and 2013 period, when the area experienced significant residential growth.

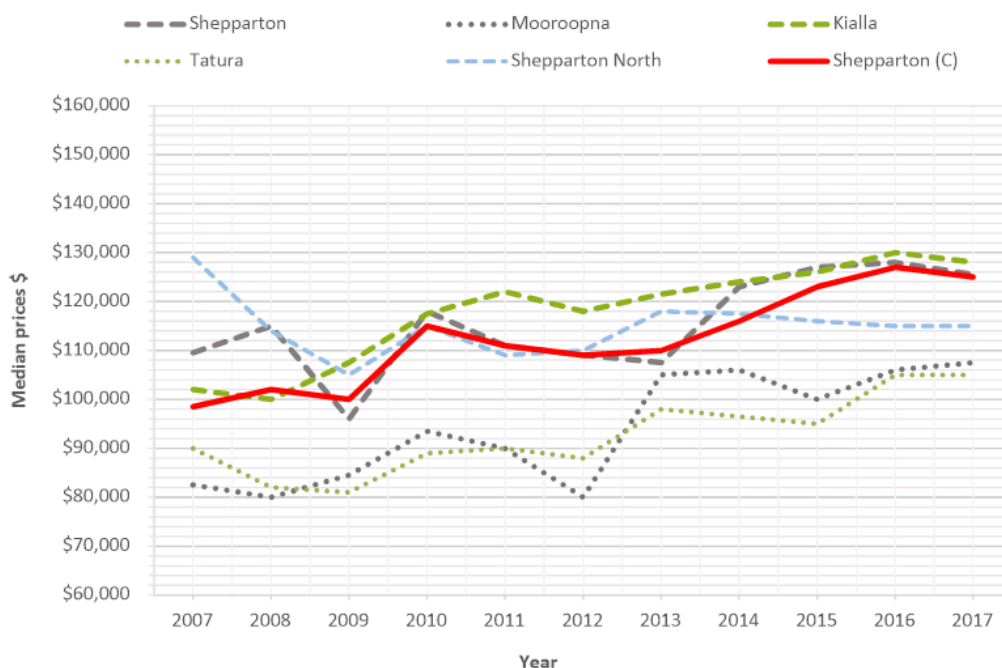
From 2015 onwards, the median values of vacant residential lots in Kialla and Shepparton trended closely to the median values in Greater Shepparton as a whole. Shepparton North is the only locality to experience a slight drop in its median value during this period going from \$129,000 in 2007 to \$115,000 in 2017. The localities of Mooroopna and Tatura share a similar pattern of growth between 2007 and 2017 and have had some notable increase from 2012 onwards.



In 2017, the median sales value of a vacant residential lot by suburb was:

- Kialla - \$128,000;
- Shepparton – \$125,500;
- Shepparton North - \$115,000
- Mooroopna - \$107,500;
- Tatura - \$105,000

Graph 12: Median Sales Values (\$) – Vacant residential lots, 2007-2017 – Greater Shepparton (S) Vs Selected localities



Source: Valuer General Victoria

Median values of vacant residential lots in all localities across Greater Shepparton have remained relatively stable between 2016 to 2017, this illustrates a functioning broadhectare land supply market i.e. amply zoned supply, lot construction activity relative to demand and geographic diversity of supply

From a pure price perspective, the broadhectare land market throughout Greater Shepparton has provided affordable land products in the context of providing typically 'larger' allotments.



Key Issues

As measured through residential lot construction activity, since 2015/16 there has been a sustained shift in increased demand levels for housing lots across Greater Shepparton, particularly in Shepparton and Tatura. This illustrates the need to plan for differing growth scenarios. Projecting future growth is an extremely difficult task.

To deal with this kind of uncertainty it is best to 'lean' on the side of assuming stronger growth overall and in any given market segment. That is to ensure that (within reason) there is scope to meet any unexpected upturn in demand. Secondly, to plan for a diversity of supply types and locations. Planning that locks in controls based on one set of demand projections is likely to make it very difficult for the market to adjust supply to cater for unexpected changes in housing demand.

Recent lot construction reveals the dominance of broadhectare lot construction compared to dispersed infill. There is ample latent supply that would readily support an increased share of dispersed infill development activity.

In the short to medium term, with an increase in housing demand levels, only the broadhectare land development industry has the 'ready' capacity of responding by increasing production. The dispersed infill land/housing industry simply does not have the resources and capacity to respond to short term increases in demand.

A prime outcome indicator of an imbalance of supply and demand is the rapid increase in sales values. Vacant residential lot sales pricing across the Shire has not experienced comparative excessive sales price increases.



5.0 Residential Land Supply

Key Findings

As at March 2019, there was a residential lot capacity within zoned broadhectare sites of approximately 3,353 across the municipal area of Shepparton.

Over 90% of the zoned broadhectare land stocks are located within the urban centre (township boundary) of Shepparton/Mooroopna. Within the urban centre of Shepparton/Mooroopna the zoned broadhectare lot supply is located in:

- Shepparton North West -124 lots;
- Mooroopna -375 lots;
- Shepparton South East – 461 lots;
- Shepparton North East -755 lots; and
- Kialla Urban – 1,257 lots.

In addition, there are approximately 1,261 hectares of land (with an estimated yield of 6,700 dwellings) identified for potential future broadhectare residential development across the municipal area as at March 2019. The vast majority of this identified land is located in Shepparton/Mooroopna and to a lesser degree Tatura.

Feedback from the development industry regarding their market expectations and development intentions suggests that over the next five years on average, **283 lots/dwellings** per annum will be constructed within existing zoned broadhectare sites. Historically, over the last five years, lot construction on broadhectare sites has averaged **344** per annum¹. It is expected and highly probable that this level of anticipated development activity will likely occur, if not exceed stated developer intentions.

Currently across the City of Greater Shepparton there was a total stock of 1,232 rural residential allotments. Of this stock, only 132 lots (11%) were vacant. Vacant rural residential lots as a supply type is comparatively low across the City of Greater Shepparton when compared to other regional municipalities in Victoria.

There are significant stocks of land identified for future rural residential use/zoning. There is a total of 2,011 hectares of land identified for future rural residential zoning, of which, 989 hectares is identified for future Low Density Residential (LDRZ) and 1,022 hectares for future Rural Living (RLZ).

Section 5.0 of the report details the stock (measured in lots) of broadhectare residential land supply across the municipal area of Greater Shepparton as at March 2019.

In addition, it provides an overview of current rural residential land stocks, rural residential lot capacity and the stock of vacant urban lots.

For broadhectare land supply areas, anticipated lot construction timing is presented. This refers to the likely timing of lot construction, not dwelling construction. It is highlighted and highly recognised that the timing presented is a guide, it will not equate to full completion of activity, but rather a guide to likely broad development construction initiation.

The location of the anticipated lot construction activity illustrated will generally commence development (e.g. 0-2 years), although complete 'build-out' may not be achieved within the stated time-frames.

¹ Includes lifestyle village lot/dwelling construction on broadhectare sites.



5.1 Stock of Zoned Broadhectare

As at March 2019, there was a residential lot capacity within zoned broadhectare sites of approximately 3,353 across the municipal area of Shepparton.

Over 90% of the zoned broadhectare land stocks are located within the urban centre (township boundary) of Shepparton/Mooroopna. Within the urban centre of Shepparton/Mooroopna the zoned broadhectare lot supply is located in:

- Shepparton North West -124 lots;
- Mooroopna -375; lots
- Shepparton South East – 461 lots;
- Shepparton North East -755 lots; and
- Kialla Urban – 1,257 lots.

Maps 4 to 9 illustrates the location/distribution of undeveloped residential broadhectare land stocks across the Shepparton/Mooroopna urban centre (zoned and unzoned).

Table 1 identifies the lot yield and estimated development timing of zoned broadhectare land stocks.

Table 1: Anticipated Broadhectare Lot Construction Activity, 2019

Urban Centre/Housing Market	Anticipated Development Timing					Total Zoned Lots	Potential Residential	UGZ - PSP Required	Total Lots
	0-2 years	3-5 years	6-10 years	11+ years	No Timing				
Merrigum							27		27
Murchison	5					5			5
Shepparton East			15		14	29			29
Tatura	33	18		6	144	201	1,068		1,269
Undera	5					5			5
Shepparton/Mooroopna	572	845	792	303	529	3,041	4,491		7,532
<i>Kialla Urban</i>	220	298	227	150	362	1,257			1,257
<i>Mooroopna</i>	56	202	10	98	9	375	791		1,166
<i>Shepparton Central</i>					15	15			15
<i>Shepparton North Central</i>		6			10	16			16
<i>Shepparton North East</i>	184	98	393		80	755	1,500		2,255
<i>Shepparton North West</i>			71		53	124			124
<i>Shepparton South</i>	8	30				38			38
<i>Shepparton South East</i>	104	211	91	55		461	2,200		2,661
Shepparton Rural Surrounds	32	40				72	82	1,000	1,154
<i>Shepparton Surrounds South</i>	32	40				72	82	1,000	1,154
City of Greater Shepparton	647	903	807	309	687	3,353	5,668	1,000	10,021

Source: Spatial Economics Pty Ltd

Based on existing planning permits, recent construction activity and Council/Development Industry feedback it is anticipated that over the next five years, on average, **283 lots/dwellings** per annum will be constructed within existing zoned broadhectare sites in Shepparton/Mooroopna. Historically, over the last five years, lot construction on broadhectare sites has averaged **344** per annum¹. It is expected and highly probable that this level of anticipated development activity will likely occur, if not exceed stated developer intentions.

¹ Includes lifestyle village lot/dwelling construction on broadhectare sites.



In addition to the identified zoned broadhectare land stocks with an estimated development timing, there is broadhectare land stocks where a no timing status and in some cases no yield have been established. This is primarily due to the identified site being highly likely to be developed at some point however, due to for example existing or underutilised uses, the likely development timing is highly speculative.

Of the development sites with an estimated lot/dwelling yield (with a No-Timing status), the majority are located within the urban centres of Shepparton/Mooroopna and Tatura. It is estimated that these sites will yield approximately 529 lots/dwellings in Shepparton/Mooroopna and 144 lots/dwellings in Tatura. These development sites are characterised with existing low-density residential uses. It is expected, that over the course of time, these sites will be redeveloped to higher density residential uses. However, there can be no certainty to the eventual timing of re-development.

There are a further 35 sites with a No Timing status (with no estimated yield estimates) with a total area of 308 hectares. These sites are typically located within the small settlements across the municipal area, in summary these include:

- Dookie - 156 hectares (6 sites);
- Katandra West - 60 hectares (8 sites);
- Merrigum - 50 hectares (5 sites);
- Murchison - 17 hectares (8 sites);
- Tallygaroopna - 6.5 hectares (3 sites);
- Tatura - 2.3 hectares (1 site);
- Toolamba - 2.2 hectares (2 sites); and
- Undera - 1.3 hectares (1 site).

5.2 Stock of Un-Zoned Broadhectare Land

Analysis has been undertaken in conjunction with Council planning officers to identify the location and expected lot yield of currently unzoned residential land stocks. Sites for future residential development are identified within various Council strategy planning documents. Structure planning, and rezoning processes are required before residential development can proceed on such sites.

There are approximately 1,261 hectares of land (with an estimated yield of 6,700 dwellings) identified for potential future broadhectare residential development across the municipal area. The vast majority of this identified land is located in Shepparton/Mooroopna and to a lesser degree Tatura. By Housing Market, the stock of potential (unzoned) broadhectare land are located in:

- Shepparton South East - 2,200 lots (352 hectares);
- Shepparton North East -1,500 lots (173 hectares);
- Shepparton Surrounds South - 1,082 (444 hectares);
- Tatura -1,068 lots (134 hectares); and
- Mooroopna -791 lots (109 hectares).



A major future residential land supply source - the Shepparton North East Structure Plan area, located within the Shepparton North East housing market, this future land release area is summarised below.

Shepparton North East Precinct Structure Plan (PSP) Area

- The PSP applies to land within the North East Precinct Area, which is an area of 177 hectares bound by Verney Road to the west, Ford Road to the north, Grahamvale Road to the east and a Goulburn-Murray Water drainage reserve to the south.
- It is estimated to have a lot/dwelling yield of approximately 1,500.
- The Shepparton North East Precinct Structure Plan (the PSP) is being prepared by the City of Greater Shepparton Council (Council) with assistance from the Victorian Planning Authority (VPA) and in consultation with government agencies, service authorities and key stakeholders.
- City of Greater Shepparton and the VPA have recently prepared Amendment C118 to the Greater Shepparton Planning Scheme, which ultimately will provide for the implementation of the North East Precinct Structure Plan.
- Two Directions Hearings were held on Friday, 11 May 2018 and Thursday, 2 August 2018. The Panel Hearing was held on Monday 20 August 2018. The Panel Report recommends that Greater Shepparton Planning Scheme Amendment C118 be adopted.

5.3 Vacant Urban Lots

A parcel by parcel assessment was undertaken to identify minor infill supply, specifically zoned urban vacant allotments sized less than one hectare. The assessment is based on the latest aerial imagery - December 2018 to May 2019 (based on the availability of small area aerial imagery). The identification of vacant allotments sized less than one hectare does not provide an estimated dwelling yield. Rather it simply identifies the vacant allotment by lot size and location.

Dwelling yields on such allotments can vary significantly, examples range from:

- 800sqm vacant allotment within a broadhectare estate typically would yield one dwelling;
- 800sqm vacant allotment within the urban centre, could typically range from one to four dwellings; and
- 5,000sqm allotment within a township zone (un-sewered) one dwelling compared with anything from five plus dwellings within a larger urban settlement.

Currently, there was 1,112 minor infill lots identified. Of these lots, 856 were sized less than 1,200sqm or 77% of the identified lots. In addition, there were:

- 129 vacant lots sized between 1,200sqm to 2,000sqm;
- 97 lots sized from 2,000sqm to 5,000sqm; and
- 30 lots sized from 5,000sqm to 10,000sqm.

All of these allotments have potential to yield multiple lots post subdivision. As noted previously, 12% of lot construction activity across Greater Shepparton was minor infill, and of this lot construction, 47% was from parent lots sized 1,200sqm or less.

The majority of minor infill supply is located in the suburbs of:

- Shepparton – 491 lots;
- Kialla – 295 lots;
- Tatura – 97 lots; and
- Mooroopna – 67 lots.



5.4 Rural Residential Land Stocks

The stock of both occupied and vacant rural residential allotments have been determined on a lot by lot basis from December 2018 to May 2019 (based on the availability of small area aerial imagery). Occupied is defined as having evidence of a 'habitable' dwelling, commercial use, or other significant capital-intensive land use. Vacant is defined as having no evidence of a significant capital-intensive use (as verified via the interpretation of aerial imagery).

Across the City of Greater Shepparton there was a total stock of 1,232 rural residential allotments. Of this stock, only 132 lots (11%) were vacant. Vacant rural residential lots as a supply type is comparatively low across the City of Greater Shepparton when compared to other regional municipalities in Victoria.

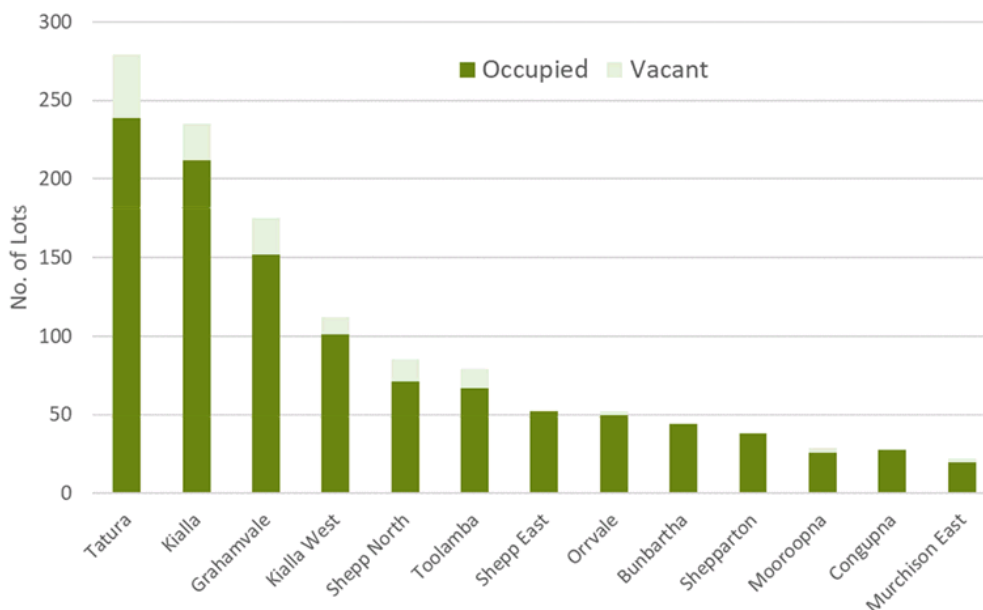
The majority (63%) of the rural residential lot stock is located outside of defined town boundaries. There is considerable stock located within Tatura (279 lots (40 vacant)) and Shepparton/Mooroopna (158 lots (19 vacant)).

Graph 14 summarises the stock (lots) of both occupied and vacant rural residential allotments by suburb.

There is approximately 392 hectares of vacant rural residential land across the municipality. Of this vacant lot stock, 231 hectares is zoned Low Density Residential (LDRZ), the remaining 161 hectares is zoned Rural Living (RLZ).

Graph 15 illustrates the size distribution of all existing rural residential allotments (occupied and vacant).

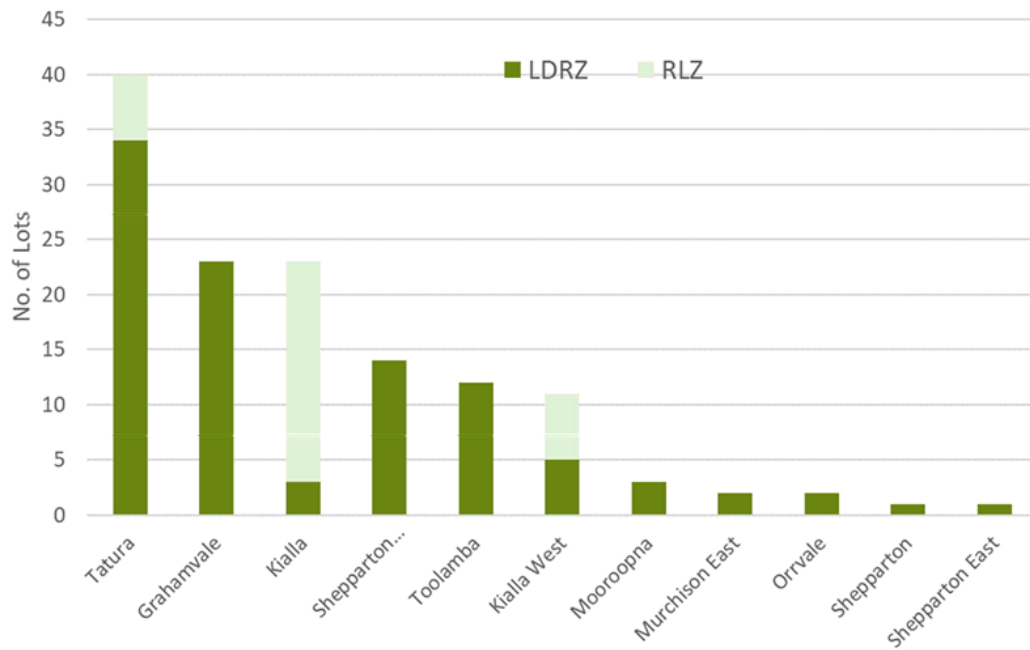
Graph 13: Stock of Rural Residential Allotments, 2019



Source: Spatial Economics Pty Ltd

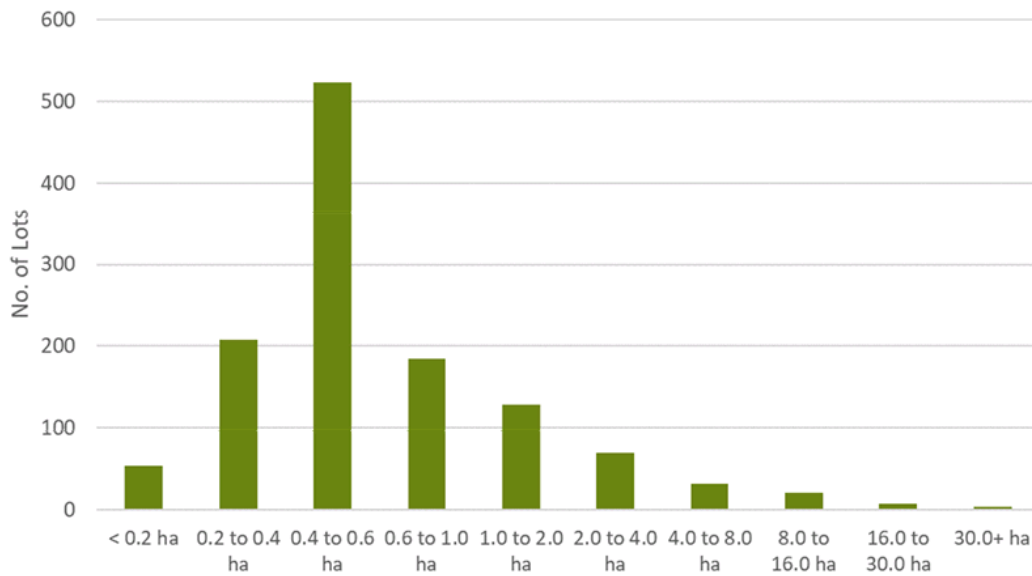


Graph 14: Stock of Vacant Rural Residential Allotments, 2019



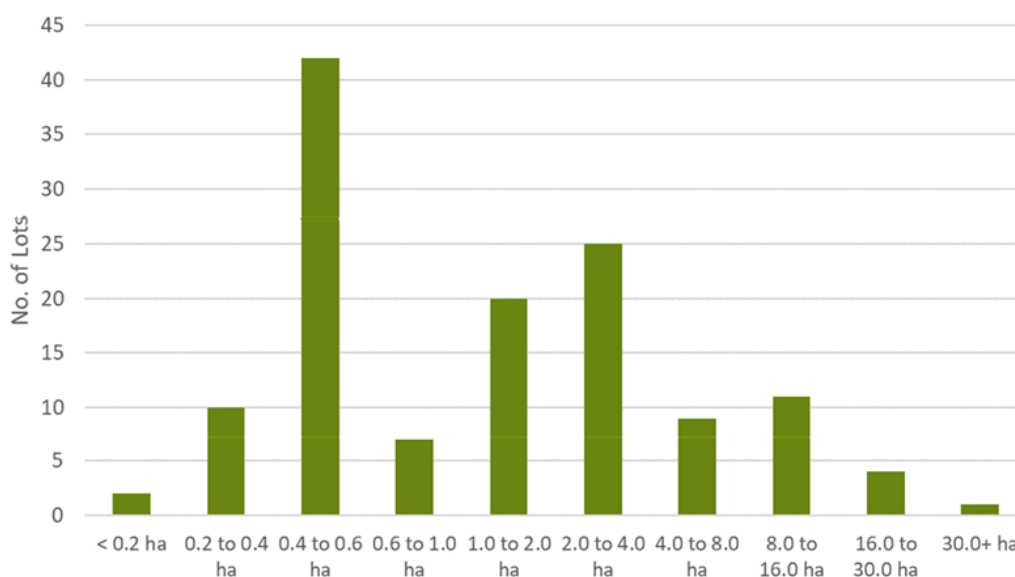
Source: Spatial Economics Pty Ltd

Graph 15: Stock of Rural Residential' Allotments by Lot Size Cohort (occupied & vacant), 2019



Source: Spatial Economics Pty Ltd



Graph 16: Stock of Rural Residential' Allotments by Lot Size Cohort (vacant), 2019

Source: Spatial Economics Pty Ltd

Approximately 79% of the rural residential lot stock (both occupied and vacant) is less than one hectare in size. Only 5% of the rural residential lot stock (or 63 lots) is sized greater than four hectares. The high proportion of smaller rural residential allotments results in a significant limitation in terms of any future feasible re-subdivision.

5.4.1 Short-Term Future Lot Construction - Rural Residential

Since 2015/16, rural residential lot construction across the municipality has substantially increased compared to the longer-term average. From 2008/09 to 2014/15 rural residential lot construction averaged around five lots per annum, increasing to nearly 15 lots per annum in recent years.

Based on subdivision approval data, it is anticipated that this trend is likely to continue and most probably increase. Currently, there is a yield of 165 rural residential lots with current subdivision approval (95% are zoned LDRZ).

These sites are in:

- Shepparton North (75 lots);
- Tatura – 60 lots;
- Toolamba – 15 lots; and
- Kialla – 15 lots.

The estimated net lot yield of 165 rural residential lots is sourced from 21 (18 LDRZ and 3 RLZ) 'parent' lots, of which, eight are vacant and 13 have an existing dwelling. This illustrates the re-subdivision potential of both vacant and occupied rural residential lot stock.

The typical resultant density of the proposed rural residential subdivision is around 2,400 sqm.

5.4.2 Future (Unzoned) Rural Residential Land Stocks

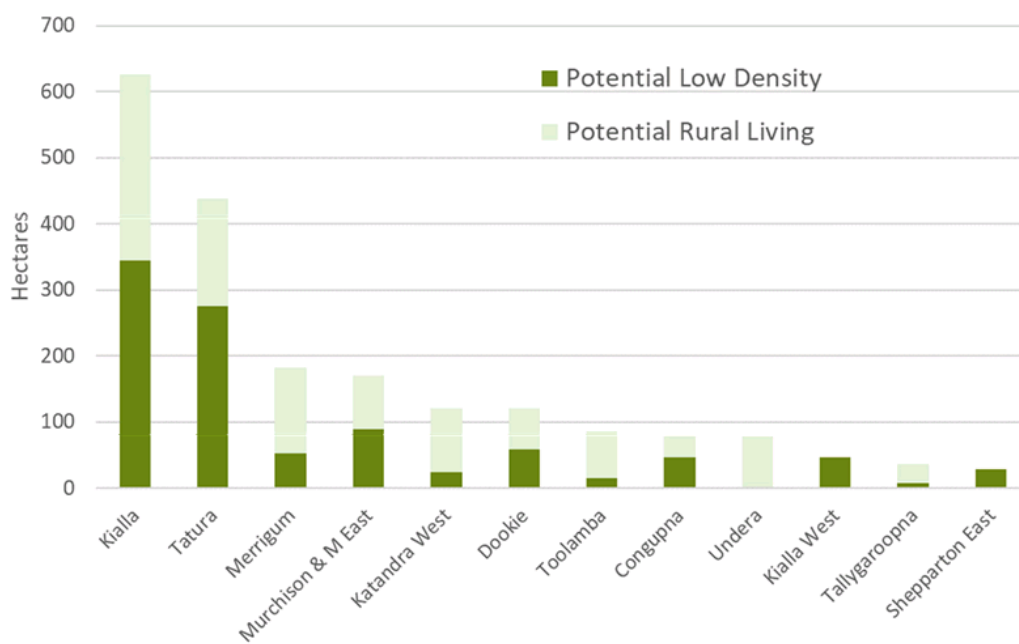
There are significant stocks of land identified for future rural residential use/zoning. Currently, this stock of future rural residential land is not zoned to support rural residential development and is



typically zoned Farm (FZ). This identified land stock is widely distributed across the municipality and all smaller towns are well provided for in terms of future rural residential land stocks.

There is a total of 2,011 hectares of land identified for future rural residential zoning, of which, 989 hectares is identified for future Low Density Residential (LDRZ) and 1,022 hectares for future Rural Living (RLZ).

Graph 17: Stock of Future Rural Residential (unzoned) Land, 2019



Source: Spatial Economics Pty Ltd

5.4.3 Lot Capacity - Rural Residential Land Stocks

Further work has been undertaken to identify the potential future capacity of existing and future rural residential land stocks. Assumptions were made to determine capacities of existing zoned vacant lots, re-subdivision of 'larger' occupied zoned lots and potential capacity of identified future (unzoned) rural residential land.

Recent re-subdivision activity and minimum lots size restrictions for re-subdivision (based on local planning statutes) were major assumptions. A discount for road infrastructure was assumed. The capacity assessment is based on known land development constraints, existing subdivision plans, standard land development take-outs (roads) depending on the size of the allotment and existing road patterns, provision of sewer and differing density assumptions. It is also highlighted that not all vacant rural residential lot stock will be subdivided, rather due to such factors as consumer preference the lots will remain un-subdivided i.e. preference for large allotments.

Three different growth scenarios based on a variety of assumptions were established to understand the levels of potential rural residential land capacities throughout Greater Shepparton. The three scenarios represent a minimum and maximum capacity range, the scenarios include:

- **Scenario 1: Vacant Take-up.** Assumes only existing zoned rural residential vacant lots are the supply source (with no further subdivision) and existing rural residential subdivision projects (with planning approval). This is seen as a highly conservative/base level capacity estimate as it assumes only:
 - existing subdivision projects with approval;



- existing vacant lots equating to one dwelling or no further subdivision (regardless of lot size);
 - no further subdivision of existing 'larger' occupied rural residential lot stock; and
 - no consideration of identified future (unzoned) rural residential land stocks.
- **Scenario 2: Market Approach.** This scenario assumes market-based subdivision density outcomes by zone type and location. Major supporting assumptions include:
 - One additional dwelling on vacant LDRZ lots sized less than 0.6 ha;
 - LDRZ 'market' assumptions apply only to existing vacant LDRZ lots sized between 0.6 ha to 8.0 ha;
 - LDRZ lots larger than 8.0 ha, 'market' assumptions applies, regardless of land status (vacant or occupied);
 - One additional dwelling on vacant RLZ lots sized less than 8.0 ha;
 - RLZ 'market' assumptions apply to RLZ lots (occupied and vacant) larger than 16.0 ha; and
 - Market based densities applied by zone type and location for all future (unzoned) rural residential land stocks.
 - **Scenario 3: Maximised Statutory Provisions.** The Greater Shepparton Planning Provisions provides statutes regarding lot size outcomes (minimum lot size) after subdivision. LDRZ (zoned) land with access to reticulated sewer infrastructure would have a 0.2 ha minimum lot size, while areas without reticulated sewer infrastructure would have a 0.4 ha minimum lot size. It also states that the minimum lot size for RLZ must be 8.0 ha. These assumptions also apply to all future rural residential land (unzoned).

Major supporting assumptions include:

- One additional dwelling on vacant LDRZ lots sized less than 0.6 ha;
- LDRZ 'planning' assumptions apply only to existing vacant LDRZ lots sized between 0.6 ha to 8.0 ha with assumed lot outcomes of between 0.2 to 0.4 ha post subdivision;
- LDRZ lots larger than 8.0 ha, planning assumptions applies, regardless of land status (vacant or occupied);
- One additional dwelling on vacant RLZ lots sized less than 8.0 ha;
- RLZ 'planning provision' assumptions apply to RLZ lots (occupied and vacant) sized larger than 16.0 ha with assumed lot outcomes of 8.0 ha after subdivision;
- Planning based provision densities applied by zone type and location for all future (unzoned) rural residential land stocks.

Tables 2a to 2c summarise the above assessment by housing market and suburb.

For existing zoned rural residential by capacity scenario results in:

- Scenario 1 – 248 LDRZ lots/dwellings and 41 RLZ lots/dwellings;
- Scenario 2 - 725 LDRZ lots/dwellings and 100 RLZ lots/dwellings; and
- Scenario 3 – 1,056 LDRZ lots/dwellings and 56 RLZ lots/dwellings.

For future (unzoned) rural residential by capacity scenario results in:

- Scenario 2 – 1,869 LDRZ lots/dwellings and 428 RLZ lots/dwellings; and
- Scenario 3 – 3,057 LDRZ lots/dwellings and 118 RLZ lots/dwellings.



Table 2a: Scenario 1 – Zoned Rural Residential Lot/Dwelling Capacity, 2019

Housing Market/Suburb	LDRZ	RLZ	Total
Kialla Urban		1	1
Kialla		1	1
Mooroopna	3		3
Mooroopna	3		3
Rural South	28		28
Murchison East	2		2
Toolamba	26		26
Shepparton North East	88		88
Shepparton	1		1
Shepparton North	87		87
Shepparton Surrounds East	26		26
Grahamvale	23		23
Orrvale	2		2
Shepparton East	1		1
Shepparton Surrounds South	14	34	48
Kialla	9	28	37
Kialla West	5	6	11
Tatura	89	6	95
Tatura	89	6	95
Greater Shepparton	248	41	289

Source: Spatial Economics Pty Ltd



Table 2b: Scenario 2 – Zoned & Unzoned Rural Residential Lot/Dwelling Capacity, 2019

Housing Market/Suburb	LDRZ	RLZ	Future		Total
			LDRZ	RLZ	
Kialla Urban		1			1
Kialla		1			1
Mooroopna	8				8
Mooroopna	8				8
Rural East			129	26	155
Dookie			129	26	155
Rural North	0		69	52	121
Bunbartha	0				0
Katandra West			54	40	94
Tallygaroopna			15	12	27
Rural North West			94	86	180
Merrigum			94	54	148
Undera				32	32
Rural South	48	0	229	66	343
Murchison			170		170
Murchison East	5		29	33	67
Toolamba	43	0	30	33	106
Shepparton North East	382				382
Shepparton	1				1
Shepparton North	381				381
Shepparton Surrounds East	26		140	14	180
Congupna	0		77	14	91
Grahamvale	23				23
Orrvale	2				2
Shepparton East	1		63		64
Shepparton Surrounds South	17	78	646	116	857
Kialla	9	72	541	116	738
Kialla West	8	6	105		119
Tatura	244	21	562	68	895
Tatura	244	21	562	68	895
Greater Shepparton	725	100	1869	428	3122

Source: Spatial Economics Pty Ltd



Table 2c: Scenario 3 – Zoned & Unzoned Rural Residential Lot/Dwelling Capacity, 2019

Housing Market/Suburb			Future		Total
	LDRZ	RLZ	LDRZ	RLZ	
Kialla Urban		1			1
Kialla		1			1
Mooroopna	10				10
Mooroopna	10				10
Rural East			121	7	128
Dookie			121	7	128
Rural North	0		66	14	80
Bunbartha	0				0
Katandra West			50	11	61
Tallygaroopna			16	3	19
Rural North West			223	23	246
Merrigum			223	15	238
Undera				8	8
Rural South	51	0	410	17	478
Murchison			322		322
Murchison East	8		56	9	73
Toolamba	43	0	32	8	83
Shepparton North East	510				510
Shepparton	1				1
Shepparton North	509				509
Shepparton Surrounds East	26		158	4	188
Congupna	0		98	4	102
Grahamvale	23				23
Orrvale	2				2
Shepparton East	1		60		61
Shepparton Surrounds South	23	45	909	34	1011
Kialla	11	39	711	34	795
Kialla West	12	6	198		216
Tatura	436	10	1170	19	1635
Tatura	436	10	1170	19	1635
Greater Shepparton	1056	56	3057	118	4287

Source: Spatial Economics Pty Ltd

5.5 Investigation Areas

Investigation Areas island which has been identified by Council for possible future urban development. Investigation areas are progressively being assessed to determine land conditions, servicing and development potential before future zoning options can be fully assessed and determined. No assessment has been undertaken to determine land suitability, future land use or dwelling/lot yields for this report.



Key Issues

The estimated lot/dwelling capacity of existing zoned broadhectare land supply sites are essentially based on recent trends, planning permits and short to medium terms market expectations. Over the last ten years, the median constructed broadhectare lot size within the growth areas of metropolitan Melbourne, Greater Geelong, Ballarat, Bendigo and smaller urban centres such as Torquay/Bacchus Marsh has dramatically declined. However, within Shepparton, the median constructed broadhectare lot size has remained relatively consistent and comparatively larger.

This is a direct response from the development industry to provide land products based on consumer preference. The estimated lot yields for the identified broadhectare development sites reflect the current achieved densities. Based on industry feedback there is minimal demand for smaller/compact allotments (outside of the lifestyle villages) and the consumer preference for larger allotments is likely to continue into the foreseeable future. Spatial Economics consider this a likely outcome if the development industry can maintain the current level of affordability/price points for larger allotments. If additional cost pressures emerge, this may result in smaller allotments to maintain similar pricing structures.

Based on industry/developer intentions, nearly 50% of the zoned broadhectare land supply will be developed over the next five years. It is critical to maintain sufficient zoned broadhectare land stocks for each differing localised housing market to maintain current levels of housing affordability and to meet underlying dwelling requirements.

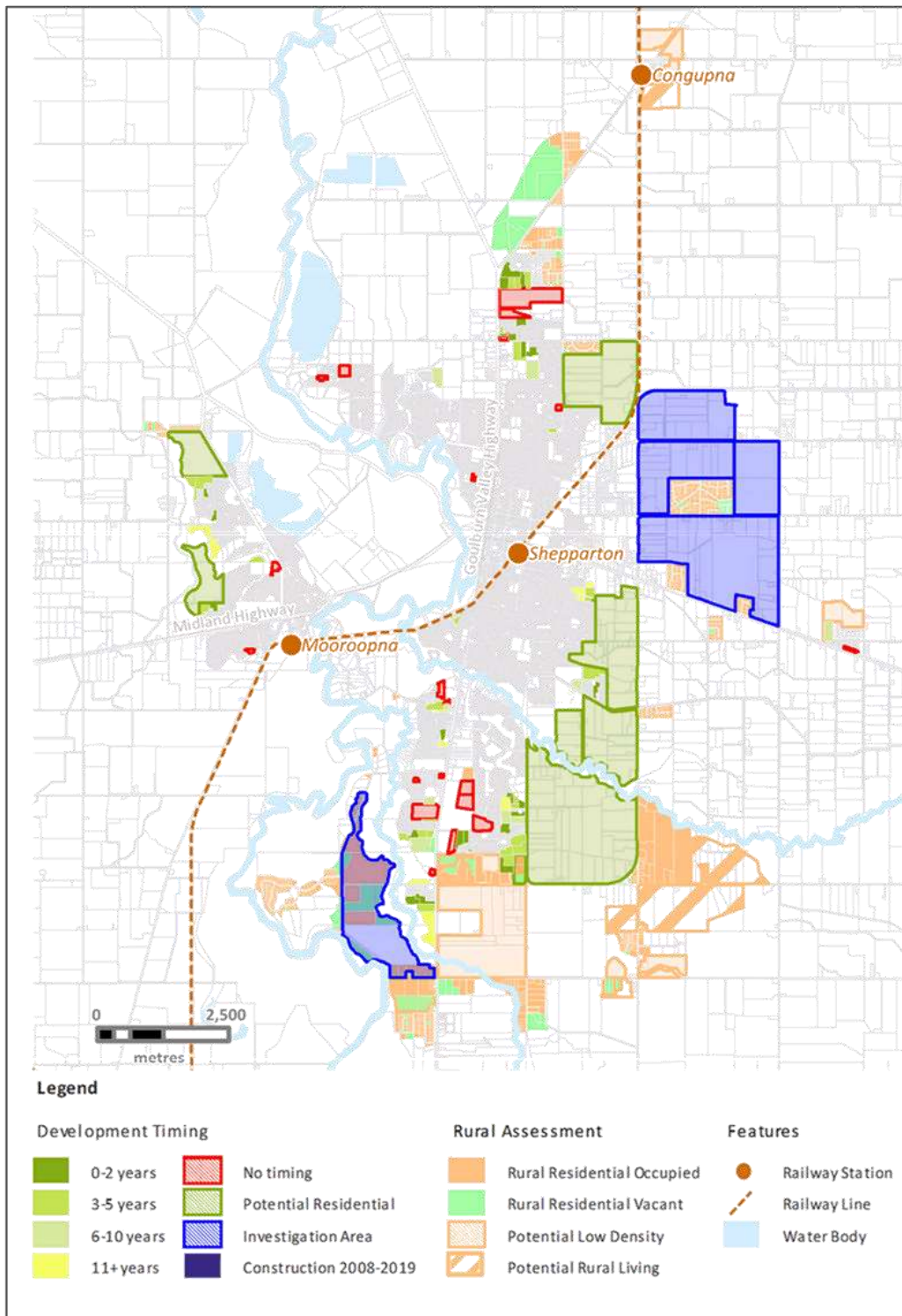
Retirement living is on the increase reflecting changing demographics and preferences. Future broadhectare areas will need to accommodate this type of development.

Although not assessed within this study, it is observed (through considerable experience), there is a high capacity for dispersed infill redevelopment. This means that there are readily alternative residential land supply stocks outside of undeveloped broadhectare estates - therefore a feasible opportunity to decrease the reliance on broadhectare land.

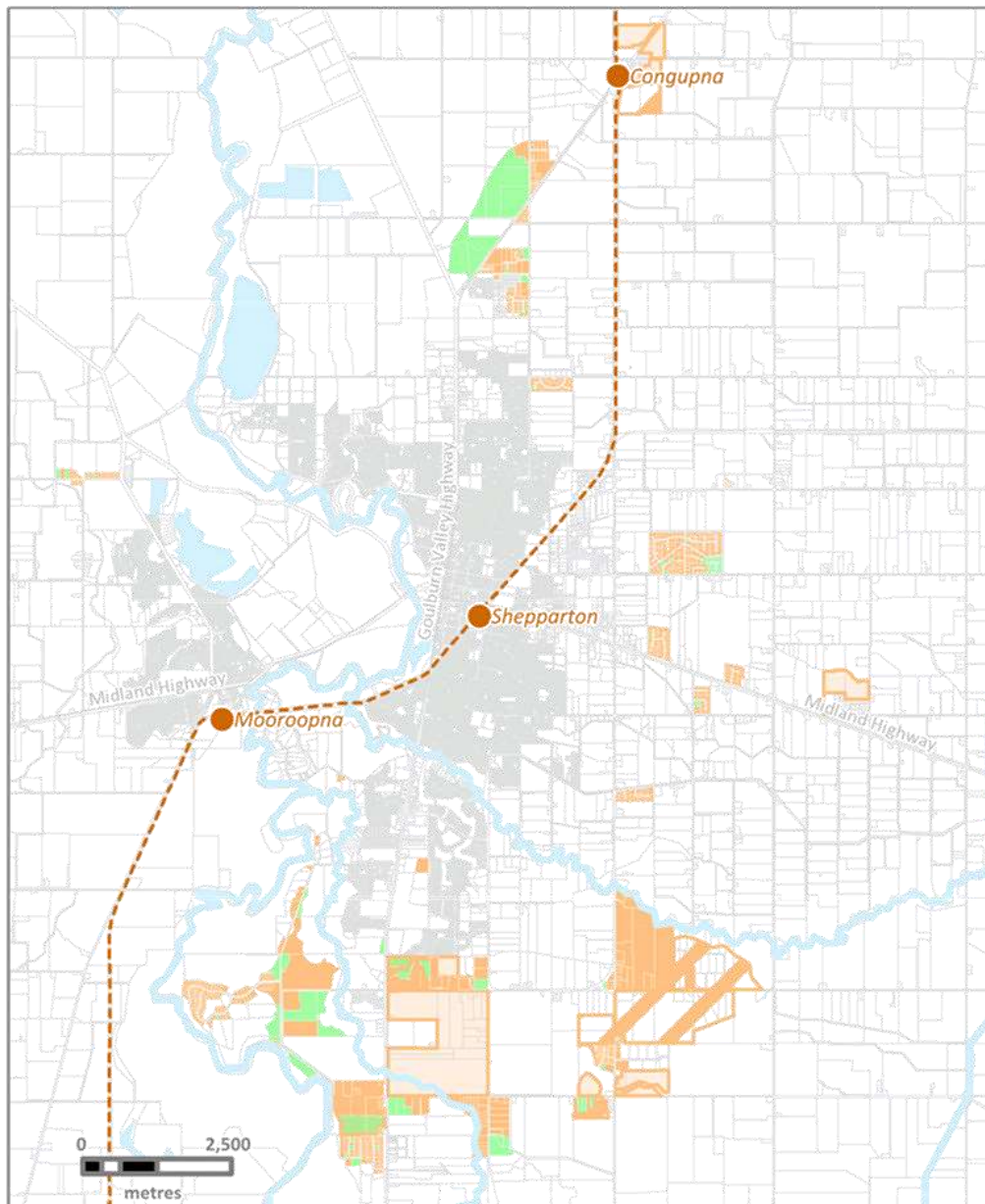
There is a significant supply of future rural residential land identified with over 2,000 hectares identified across the municipality, located within all urban settlements/townships.










Map 2: Residential Land Supply Status Overview – Shepparton/Mooroopna



Map 3: Rural Residential Land Supply Status Overview – Shepparton/Mooroopna

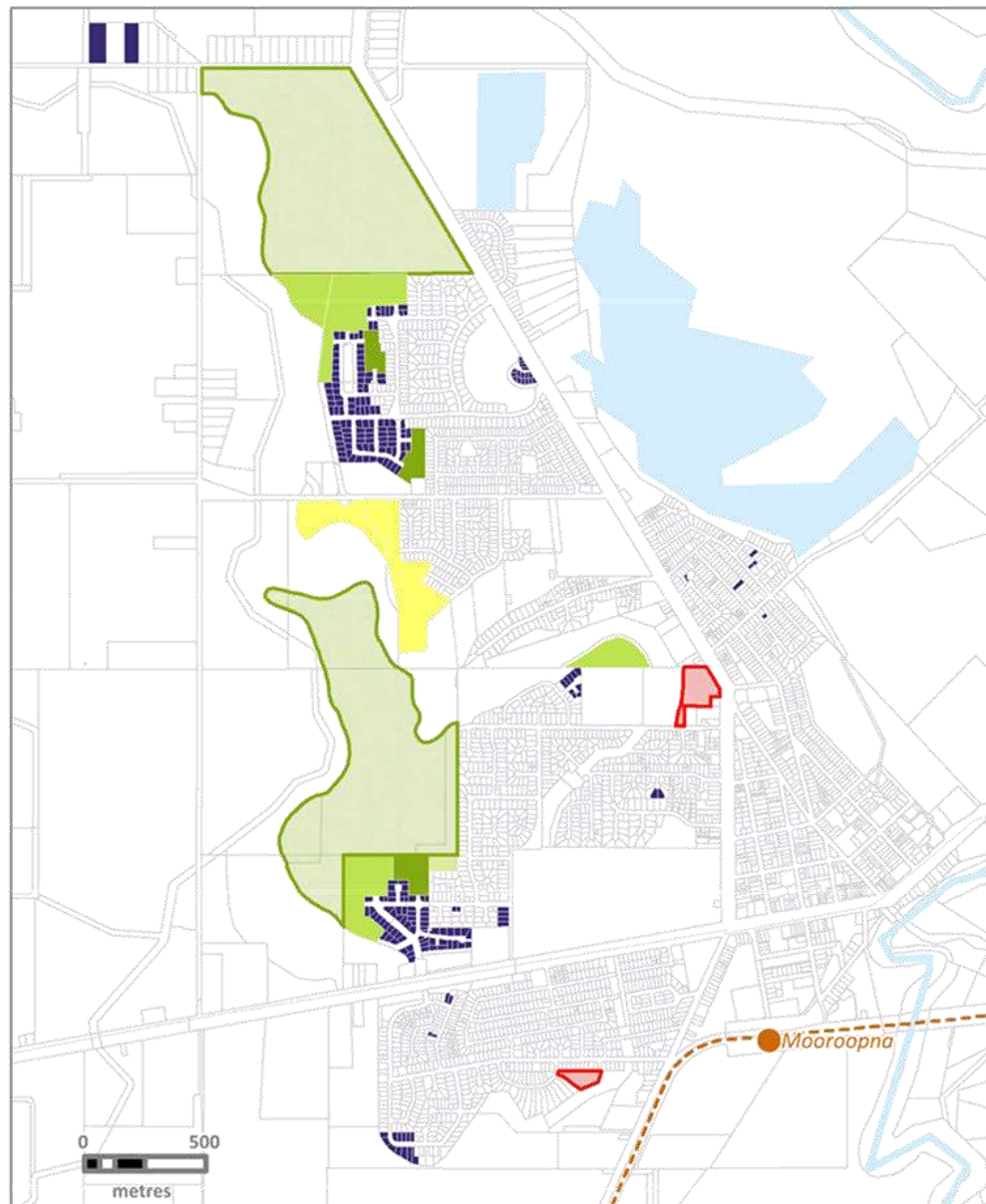


Legend

Rural Assessment		Features	
	Rural Residential Occupied		Railway Station
	Rural Residential Vacant		Railway Line
	Potential Low Density		Water Body
	Potential Rural Living		



Map 4: Residential Land Supply Status – Mooroopna

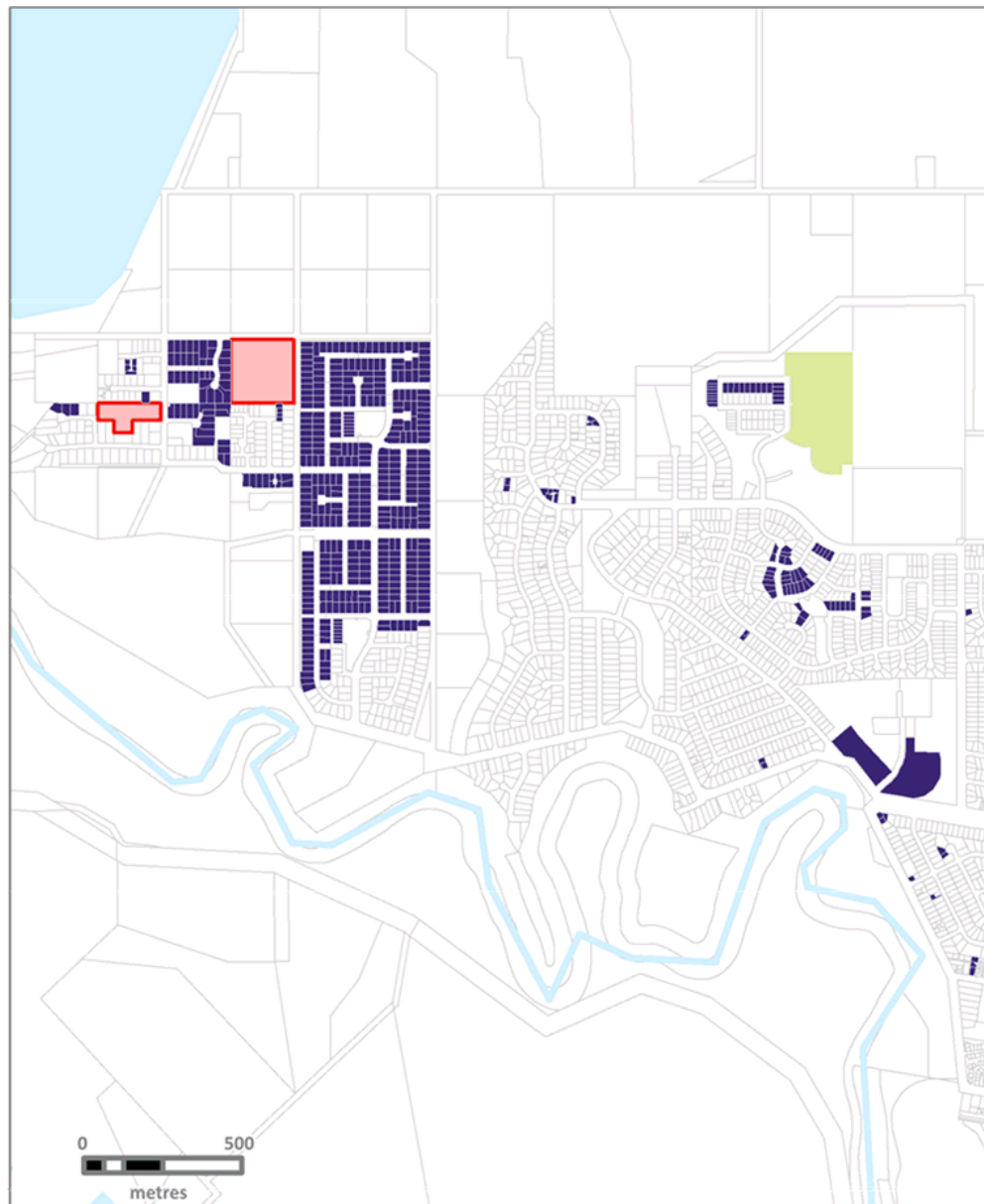


Legend

Development Timing		Rural Assessment		Features	
	0-2 years		No timing		Railway Station
	3-5 years		Potential Residential		Railway Line
	6-10 years		Rural Residential Vacant		Water Body
	11+ years		Potential Low Density		
			Potential Rural Living		



Map 5: Residential Land Supply Status – Shepparton North West



Legend

Development Timing

- 0-2 years
- 3-5 years
- 6-10 years
- 11+ years
- No timing
- Potential Residential
- Investigation Area
- Construction 2008-2019

Rural Assessment

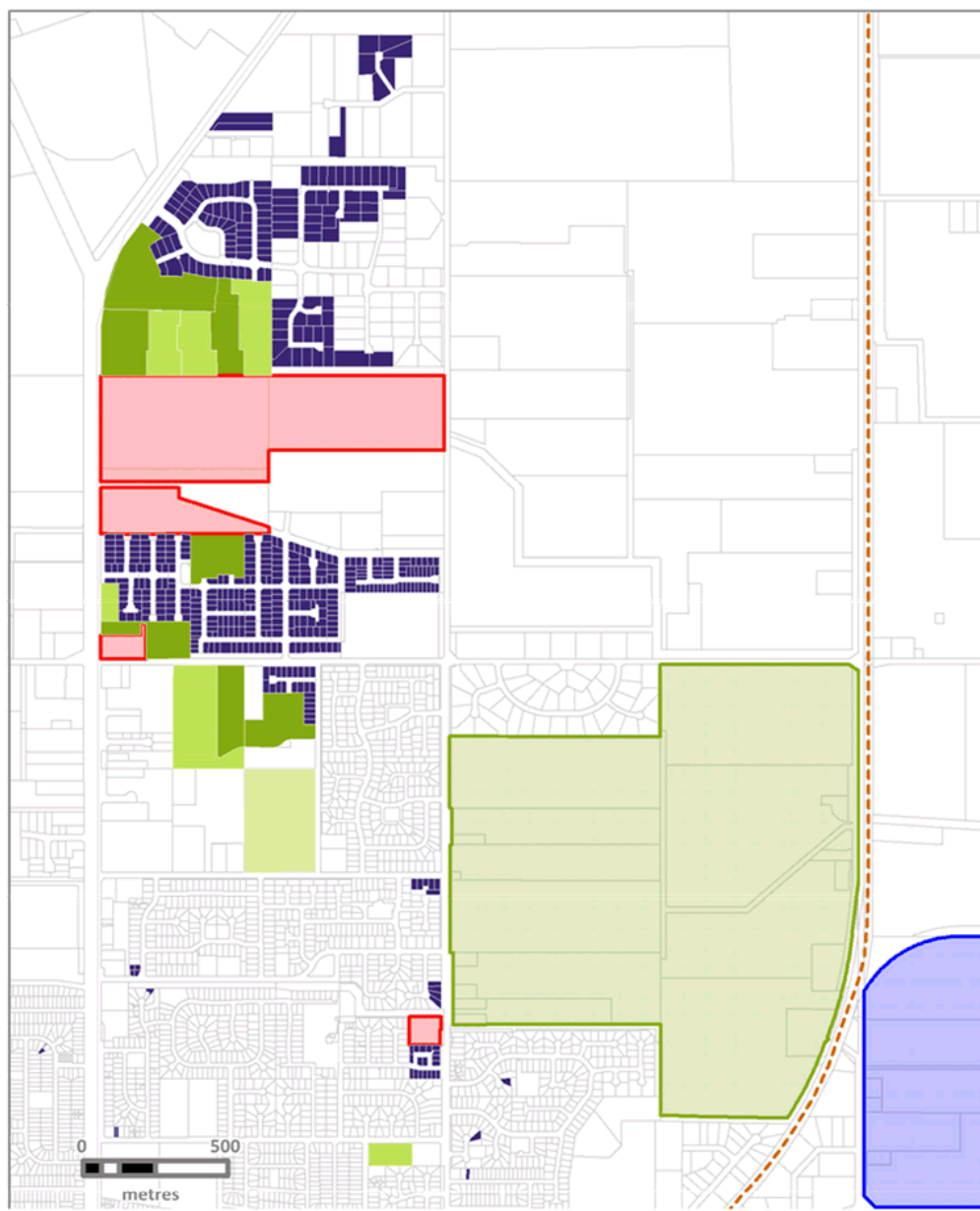
- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



Map 6: Residential Land Supply Status – Shepparton North & North East



Legend

Development Timing

- 0-2 years
- 3-5 years
- 6-10 years
- 11+ years
- No timing
- Potential Residential
- Investigation Area
- Construction 2008-2019

Rural Assessment

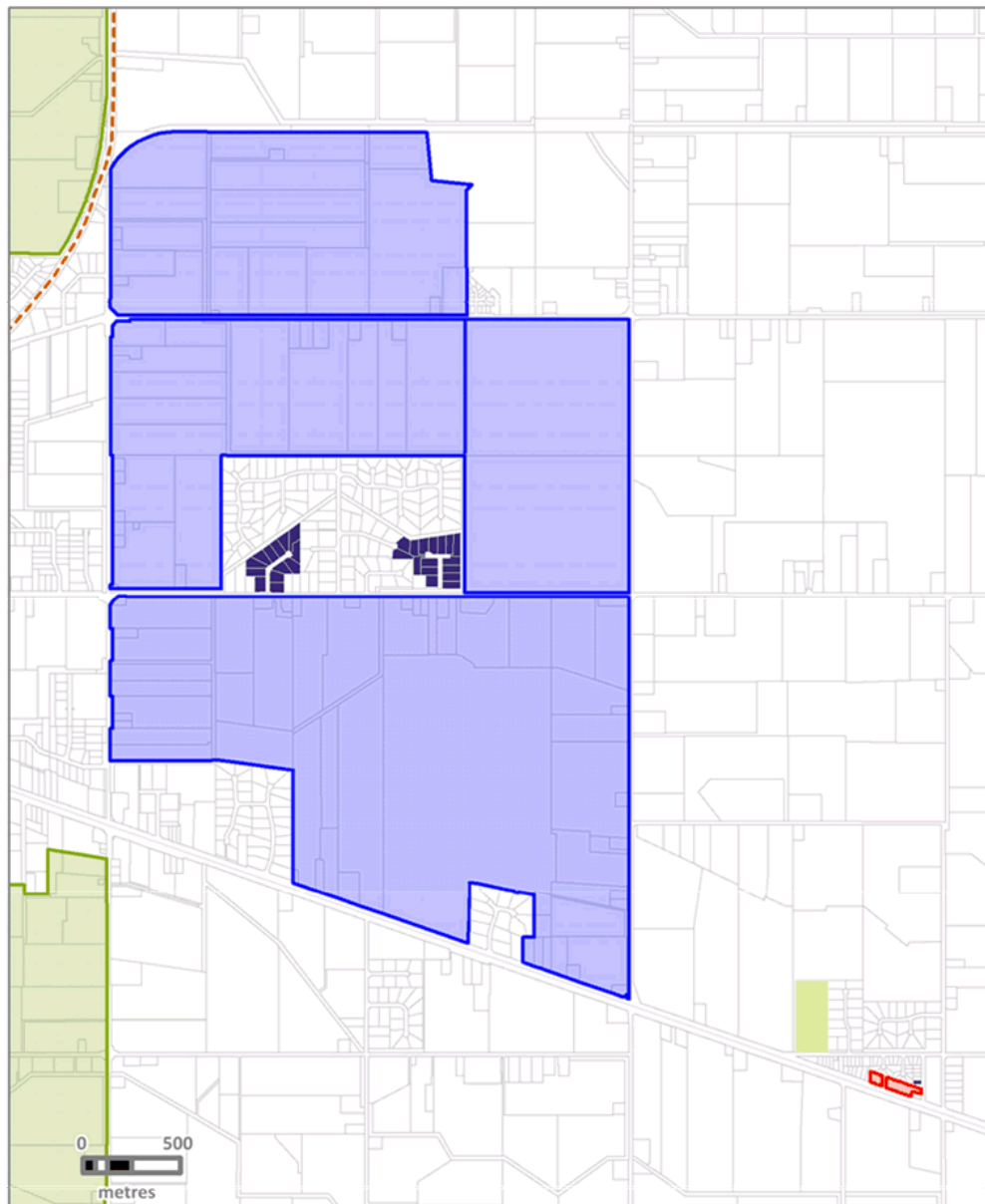
- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



Map 7: Residential Land Supply Status – Shepparton East (Investigation Area)

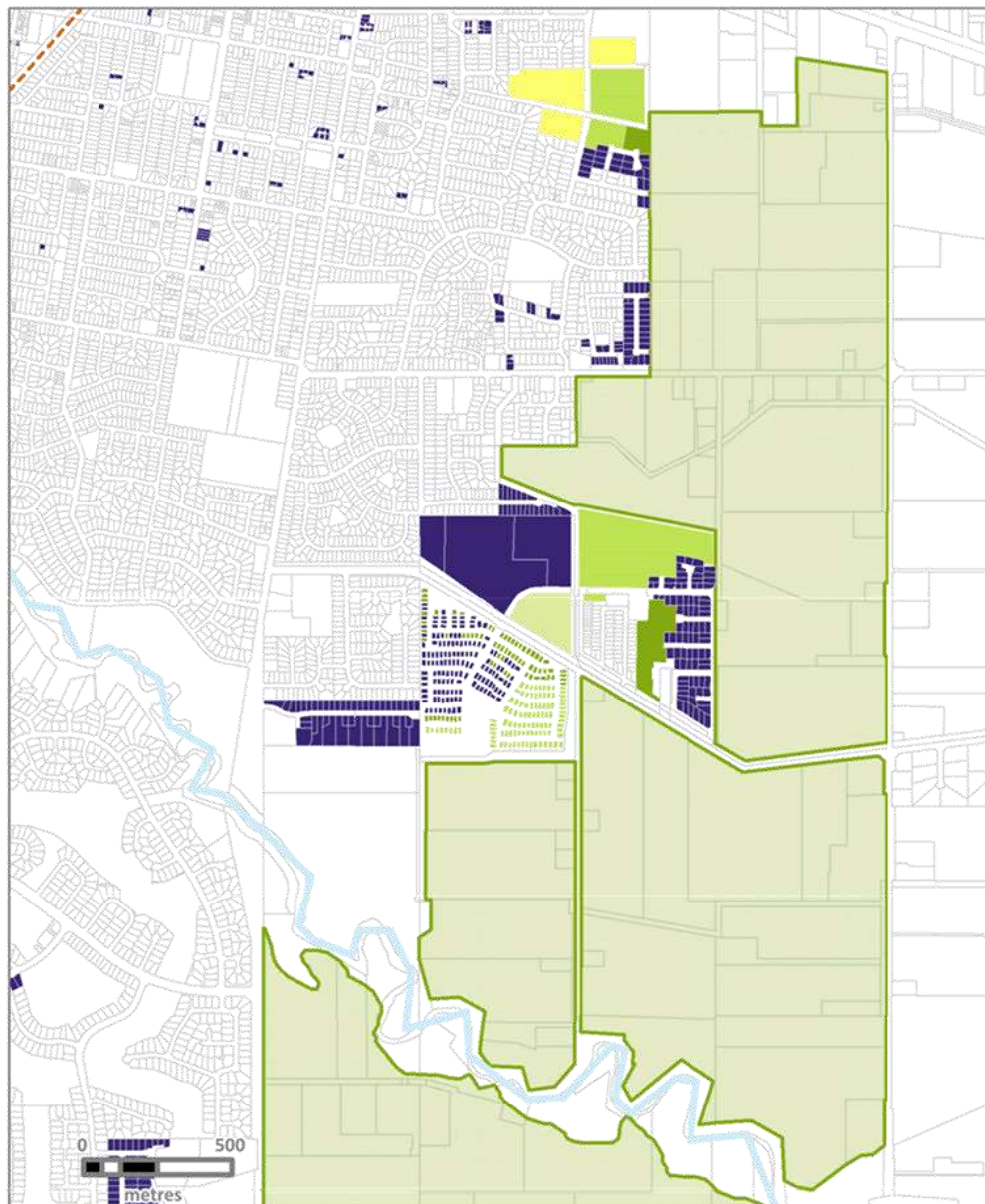


Legend

Development Timing		Rural Assessment		Features	
	0-2 years		No timing		Railway Station
	3-5 years		Potential Residential		Railway Line
	6-10 years		Investigation Area		Water Body
	11+ years		Construction 2008-2019		
			Rural Residential Occupied		
			Rural Residential Vacant		
			Potential Low Density		
			Potential Rural Living		



Map 8: Residential Land Supply Status – Shepparton East



Legend

Development Timing

- 0-2 years
- 3-5 years
- 6-10 years
- 11+ years
- No timing
- Potential Residential
- Investigation Area
- Construction 2008-2019

Rural Assessment

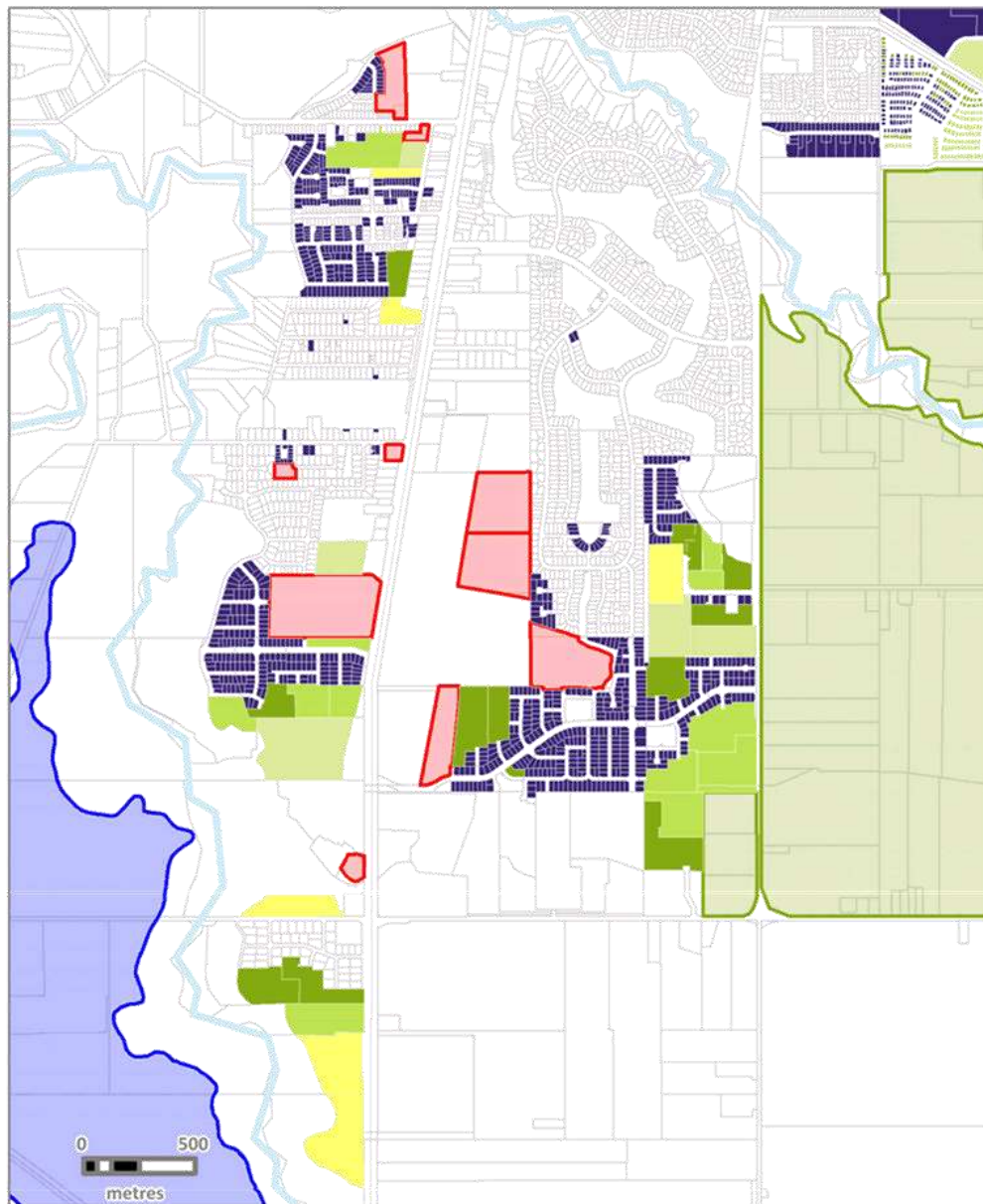
- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



Map 9: Residential Land Supply Status – Kialla



Legend

Development Timing

- 0-2 years
- 3-5 years
- 6-10 years
- 11+ years
- No timing
- Potential Residential
- Investigation Area
- Construction 2008-2019

Rural Assessment

- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



6.0 Projected Housing Demand

Key Findings

Spatial Economics have presented two projected demand scenarios based on the most recently available evidence. These demand scenarios are outlined below.

Scenario One: idForecast – dwelling forecasts undertaken for the City of Greater Shepparton by ForecastID. Dwelling requirements from 2016 to 2036 at 376 per annum or a 1.2% per annum growth rate (note this is comparable to the dwelling growth as measured by the ABS Census from 2011 to 2016).

Scenario Two: Recent trend high growth – simply assumes recent residential lot construction activity as measured from 2015/16. Dwelling requirements from 2016 to 2036 at 497 per annum or a 1.6% per annum growth rate.

The largest and fastest growth in households across Greater Shepparton will be households with no children (*lone person and couples without children households*), growing at an average annual rate of 1.3% or 206 households per annum from 2016 and 2036. This household type is projected to represent 57% of the change in household structure to 2036.

The next largest (in terms of absolute growth) is households with children (*couples with kids & single parent families*), projected to grow at 141 households per annum or a 1.2% growth rate,

The two age cohorts that are projected to increase at the greatest rates are:

- *Seniors (70 to 84)* at 2.3% per annum; and
- *Elderly aged (85+)* at 3.2% per annum.

The Victorian State Government has modified the FHOG to increase the FHOG to \$20,000 for eligible first-home buyers who buy or build their new home valued up to \$750,000 in regional Victoria. Greater Shepparton is defined as a regional area for the purpose of the FHOG. This assessment has not attempted to quantify the level of brought forward demand in the City of Greater Shepparton.

This assessment incorporates the most recently available demand figures to project dwelling requirements and future adequacy of residential land. These figures use dwelling projections undertaken by id Consulting (id Forecasts) for Greater Shepparton (updated at October 2017) as the basis for projecting dwelling requirements.

Projected dwelling requirements sourced id Forecast indicate that from 2016 to 2036 there will be a total dwelling requirement of **7,516** with an average annual growth of **376** dwellings or **1.2%** per annum.

It is expected that the growth areas of Kialla, Shepparton North-East, Shepparton South-East and Mooroopna will accommodate for about **75%** (or 5,600) of these dwellings at an average annual growth of 281 dwellings or 2.2% per annum.

For specific time cohorts, the average annual dwelling requirement across the **municipal area of Shepparton** include:

- 2016 to 2021 – 389 (1.4%);
- 2021 to 2026 – 372 (1.2%);
- 2026 to 2031 – 371 (1.2%); and
- 2031 to 2036 – 371 (1.1%).



For specific time cohorts, the average annual dwelling requirement within the **township boundary of Shepparton (including Mooroopna)** include:

- 2016 to 2021 – 339 (1.7%);
- 2021 to 2026 – 324 (1.5%);
- 2026 to 2031 – 322 (1.4%); and
- 2031 to 2036 – 322 (1.3%).

For specific time cohorts, the average annual dwelling requirement in **Tatura** include:

- 2016 to 2021 – 27 (1.3%);
- 2021 to 2026 – 27 (1.2%);
- 2026 to 2031 – 27 (1.1%); and
- 2031 to 2036 – 27 (1.1%).

The perfect 'demographic storm' Spatial Economics highlighted within the Geelong Settlement Strategy – background papers are gathering strength, just when it might have reached a point where it would not continue. The ingredients of that 'storm' were:

- high levels of net overseas migration (+237,200) to Australia in 2017/18, although this was down from the peak of 300,000 in 2007/08;
- but in Victoria's case this was embellished by a high share coming to Victoria - up to 36% in 2017/18 compared with the usual 20%-25%;
- record (at least since 1971) levels of net interstate migration to Victoria;
- high natural increase - record numbers of births. Although the fertility rate is going down migration adds to the pool of people who are in childbearing ages;
- deaths increasing but only slightly owing to continuing improvements in life expectancy; and
- in Shepparton's case, its attractiveness as a) regional economic centre and b) regional service centre in the Goulburn Valley.

Then in May 2017 there was a radical upward revision of Victoria's 2016 population estimates which flowed through to settlements such as Shepparton. In September 2017, we had the release of the March 2017 quarter population estimates for States and Territories. Importantly, what stands out, is the net overseas migration is again on the increase - up 45,000 in the year to 31st March 2017 compared with the year to March 2016.

Furthermore, Victoria's share remains high - at around 36%. With NSW, the two states account for 76% of net overseas migration (NOM). Victoria's NOM for 2016-17 is likely to be 16,000-18,000 higher than it was in 2015-16. There are several implications of this:

1. The high dwelling growth scenario presented below of 1.6% for Greater Shepparton is possible (likely to be a practical planning scenario).
2. The recent growth means that, when the ABS and DELWP do their next set of projections, there will be a considerable uplift in assumptions and the projected population for Melbourne by 2050. Spatial Economics estimate it will be closer to 9 million than 8 million. This new figure becomes a guide for planning, development and investment for Greater Melbourne (this includes implications/growth flow-on to major regional centres such as Shepparton).
3. This faster growth rate of population growth in Victoria has a marginal direct impact on Shepparton. But the greater impact is likely to be the indirect one - the more quickly Melbourne fills up and outwards, the sooner and greater will be the overflow to regional Victoria.



4. This combination of interstate and overseas migration adds to the pool of young adults. It adds to births, and 20-40 years down the track, adds to the pool of future procreators.

6.1 Housing Demand Scenarios

Up front, Spatial Economics acknowledges that all projections are 'wrong'. That is to say, they will almost never exactly match the actual amount and timing of population growth. However, when they point us in the right *direction* then they are doing what they are intended for. In this context it is often most sensible to use several scenarios with various growth rates. This can help decision makers to better understand the range of uncertainty and to plan in a way that minimises the adverse effects of underestimating or overestimating growth.

Another factor influencing the accuracy/achievement of projected growth numbers is the availability and composition of residential land supply. If the land supply is restricted this will prevent the underlying demand for housing being realised.

So, what is the best course of action? In planning terms, we really need to be prepared for a range of possible futures of population and dwelling growth – this means considering a range of realistic growth forecasts and supply options.

Spatial Economics have presented two projected demand scenarios based on the most recently available evidence. These demand scenarios are outlined below.

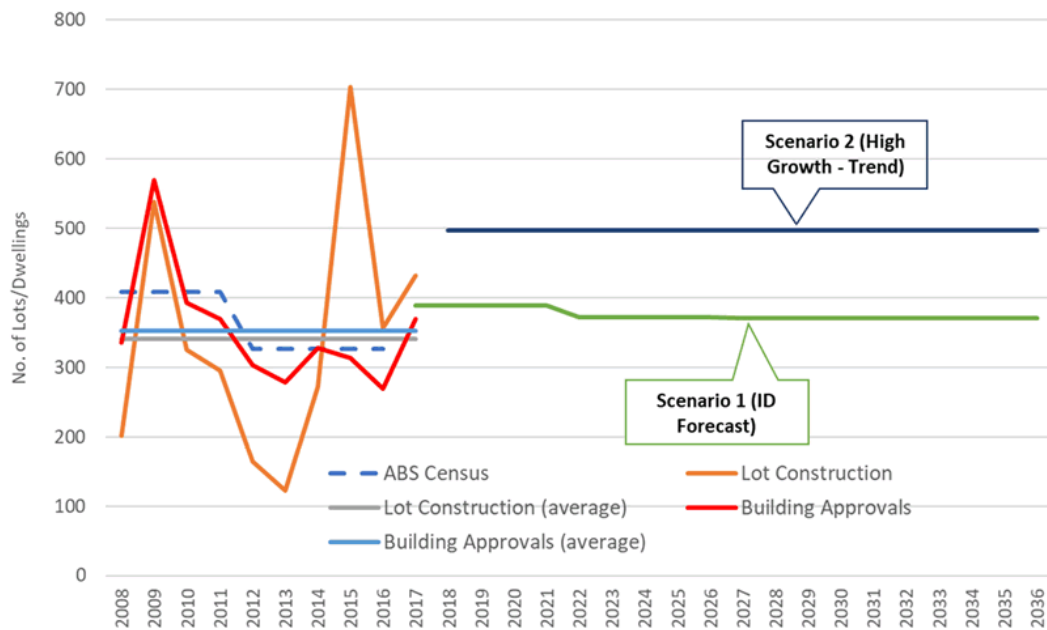
Scenario One: idForecast – dwelling forecasts undertaken for the City of Greater Shepparton by ForecastID. Dwelling requirements from 2016 to 2036 at 376 per annum or a 1.2% per annum growth rate (note this is comparable to the dwelling growth as measured by the ABS Census from 2011 to 2016).

Scenario Two: Recent trend high growth) – simply assumes recent residential lot construction activity as measured from 2015/16. Dwelling requirements from 2016 to 2036 at 497 per annum or 1.6% per annum growth rate.

Graph 16 summarises the projected demand scenarios for residential dwellings for the City of Greater Shepparton. In addition, it highlights historic 'actual' demand for residential dwellings in the form of residential lot construction and net dwelling growth identified by the ABS Census.



Graph 18: Historic and Projected Demand for Residential Dwellings, 2008 to 2036



Source: Forecast ID - Greater Shepparton
 Australian Bureau of Statistics – 2006, 2011 and 2016 Population and Housing Census
 Australian Bureau of Statistics – Building Approvals
 Lot Construction - Spatial Economics Pty Ltd

First Home Owners Grant (FHOG)

The Victorian State Government has modified the FHOG to increase the FHOG to \$20,000 for eligible first-home buyers who buy or build their new home valued up to \$750,000 in regional Victoria. Greater Shepparton is defined as a regional area for the purpose of the FHOG.

A new home includes:

- A newly built home;
- An existing property which is being sold for the first time as a new residential premise;
- A land and building package, or
- Vacant land on which you will build a new home.

The \$20,000 FHOG will be applicable to:

- Contracts entered into from 1 July 2017 to 30 June 2020 for the purchase of a new home in regional Victoria;
- Comprehensive home building contracts entered into from 1 July 2017 to 30 June 2020 by the owner of land wholly in regional Victoria, or a person who on completion of the contract will be the owner of land wholly in regional Victoria, to have a home built on the land; and
- The building of a home wholly in regional Victoria if the building work commences between 1 July 2017 and 30 June 2020 inclusive.

At a macro level, initiatives such as the FHOG (when there is no geographical differentiation) simply brings forward underlying housing demand. Overall housing demand decreases proportionally once the grant ends and/or underlying demand for housing is satisfied.



However, with the current FHOG, underlying demand will be both brought forward and transferred geographically from potential competing metropolitan areas. This will likely have a marginal effect for Greater Shepparton in terms of transferring of demand but will likely bring forward underlying demand.

Expressed demand levels for housing will increase during the implementation of the newly structured FHOG across Greater Shepparton. However, once this ceases, the level of expressed housing demand will be normalised (based on natural increase, household formation and population migration levels i.e. underlying demand).

This assessment has not attempted to quantify the level of brought forward demand in the City of Greater Shepparton.

6.2 Changing Composition of Future Housing Demand – Household Types

Projections by household type have been commissioned and produced by .id consultancy for the period of 2016 to 2036 for Greater Shepparton. Household type projections provide useful insights to potential changes to the composition of future demand drivers.

The type of households that people live in and changing preferences over time affects the way in which a population changes. As people grow from children to adults and into old age, they change the type of households that they live in. The traditional path has been to start as a child in a family household, move into a group or lone person household as a youth, becoming a part of a couple relationship within 5-10 years. Rearing of children is followed by an 'empty-nester' period and ultimately being a lone person, as partners die.

Households at different ages are likely to have differing economic positions and needs. Young people are often more concerned with location than space, middle aged lone person household may be looking for more space for part-time care of kids, older lone person households are likely to want to retain space for visiting family, but perhaps lower maintenance.

The implication is that the demand for these different types of housing may be met somewhat by the existing housing stock. However, over time it will require new and different approaches to planning and land development to enable this more diverse housing to be made available in the future.

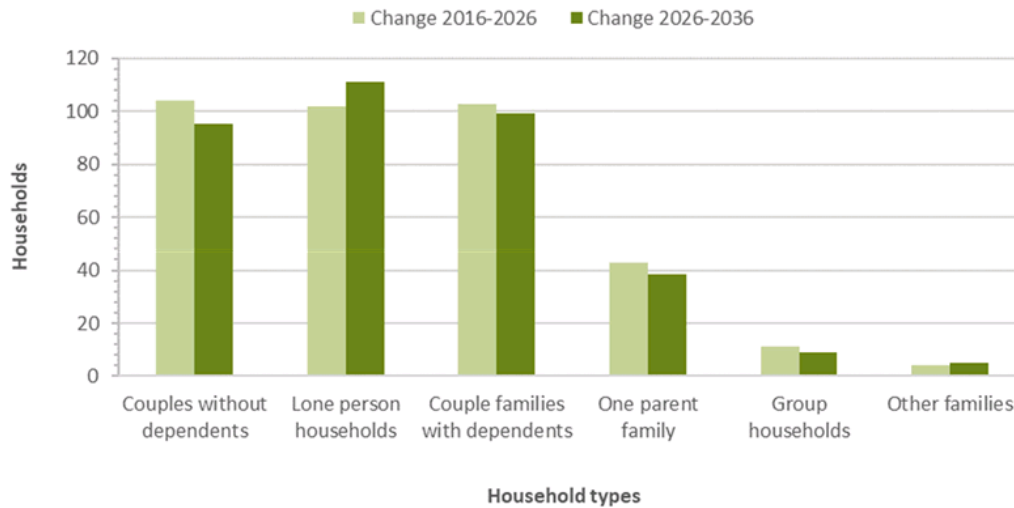
Understanding the changes that people make at different ages in their life, and the different types of housing they are likely to consume at those life stages is therefore an important factor in forecasting future population and household types.

The largest and fastest growth in households across Greater Shepparton will be households with no children (*lone person and couples without children households*), growing at an average annual rate of 1.3% or 206 households per annum from 2016 and 2036. This household type is projected to represent 57% of the change in household structure to 2036.

The next largest (in terms of absolute growth) is households with children (*couples with kids & single parent families*), projected to grow at 141 households per annum or a 1.2% growth rate, with the larger gain expected to occur between 2016 and 2026.



Graph 19: Projected Average Annual Growth in Households by Type, Greater Shepparton – 2016 to 2036



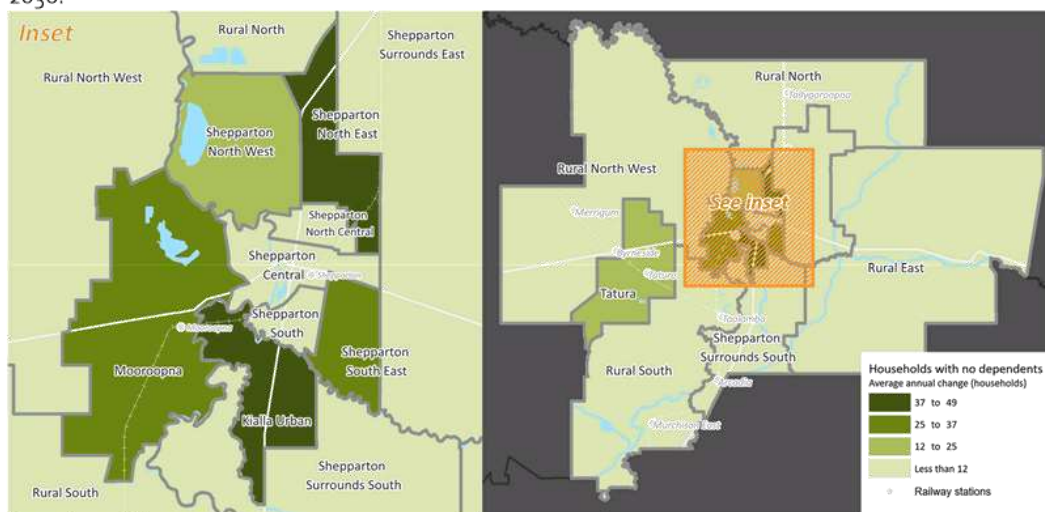
Source: forecast.id

The dominant growth of “households without kids” is largely reflecting the ageing of the existing population (i.e. children leaving home and retirees). Commissioned population forecasts by custom geographies forecast gains across the municipality, with the largest expected to occur in the existing growth areas of Kialla Urban (+ 49 households per annum) and Shepparton North East (+ 39 households per annum) between 2016 and 2036.

Currently areas with young families, it is expected that these areas will become “empty nester” households by 2036. Mooroopna and Shepparton South East will also experience notable levels of average annual change in “households without kids” (both + 32 households per annum). The established inner areas of Shepparton and the rural areas are likely to experience small gains of this household type, with Tatura being the most significant, forecasted to gain on average 15 “households without kids” per annum to 2036.



Image 3: Greater Shepparton - Average annual change of households without dependents, 2016 to 2036.

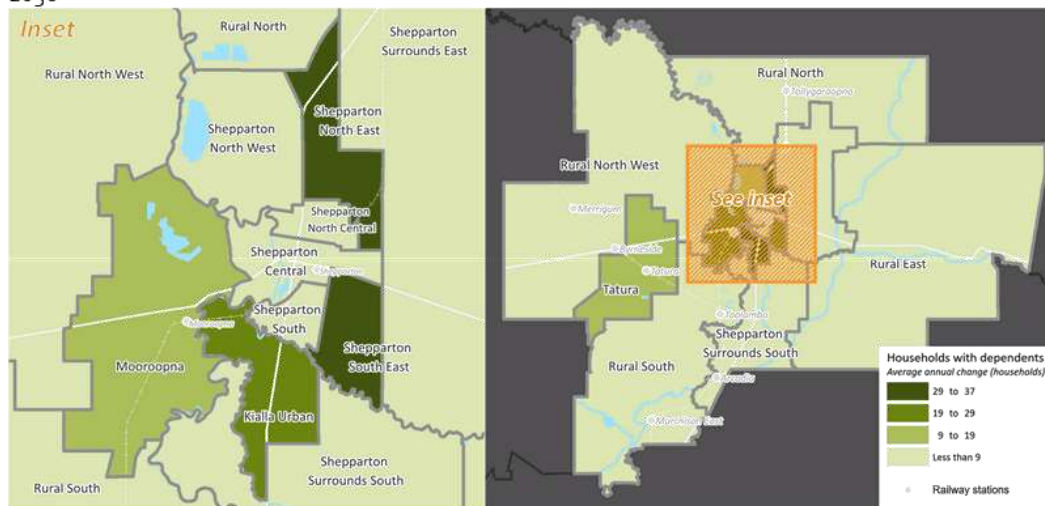


Source: forecast.id

The growth of “households with kids” correlates with the forecast residential development in the municipality. It is expected that the largest growth of this household type is likely to occur in Shepparton North East (+ 37 households per annum) and Shepparton South East (+ 31 households per annum). Some gains are also expected in Kialla Urban (+ 27 households per annum) between 2016 and 2036.

On a much lower scale, Mooroopna and Tatura will likely experience some growth of “households with kids” likely averaging 11-12 households per annum to 2036. Small gains are forecast in Shepparton’s established urban and the rural areas.

Image 4: Greater Shepparton - Average annual change of households with dependents, 2016 to 2036



Looking at the growth in smaller household types from a demand composition perspective, there is a significant opportunity for the housing development industry for the provision of diversification of dwelling stock, particularly medium density products. As outlined previously, this will cater not just



for new residents but offer opportunities for existing households to change dwelling types as household characteristics change.

6.3 Changing Composition of Future Housing Demand – Age Structure

The following provides an overview of the projected age structure of residents across the City of Greater Shepparton. Like household structures, it provides indications of influences and opportunities for future housing demand for differing housing types.

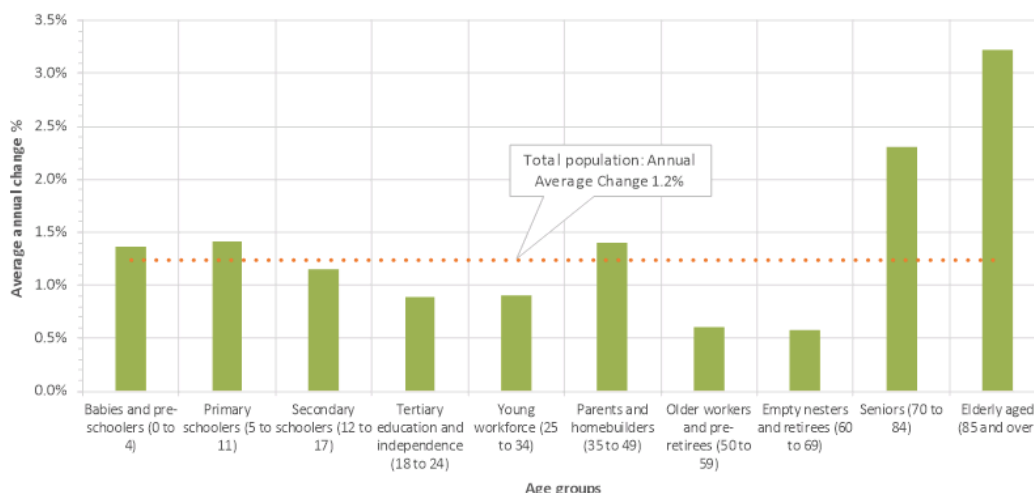
As Graph 18 illustrates the two age cohorts that are projected to increase at the greatest rates are:

- Seniors (70 to 84) at 2.3% per annum; and
- Elderly aged (85+) at 3.2% per annum.

This strong growth simply reflects the ageing of the existing resident population and to a lesser degree, likely regional migration to Shepparton to access higher-order health facilities. Along with the growth in seniors and the elderly, parents and homebuilders (35 to 49) and their dependents (0-17) also predominate projected population growth.

By 2036, it is forecasted that homebuilders, including their dependents will account for nearly 45% of the resident population of Greater Shepparton.

Graph 20: Average Annual % Change in Population by Age Cohort, 2016 to 2036



Source: Forecast id

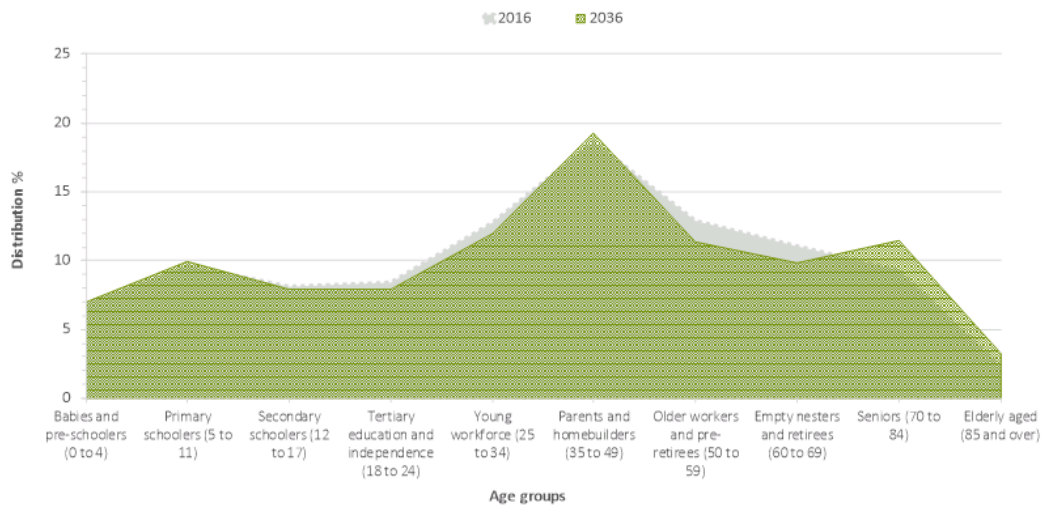
It is often highlighted with various strategic planning exercises the issue of the ageing of the population and its various impacts on service provision and changing housing and accommodation needs. However, Graph 15 illustrates the proportional distribution of the population by age structure at 2016 and 2036.

It effectively illustrates the age structure will largely be the same during this period with exception to a slightly higher proportion in the older age groups. Specifically, in 2016, 9.3% of the population of Greater Shepparton is estimated to be aged 70 to 84, increasing to 11.5% of the population by 2036.

The key message is that there will be strong growth rates of elderly people in the future although the age structure will still be relatively likened to the current situation.



Graph 21: Proportional Population Distribution by Age Cohort, 2016 and 2036



Source: Forecast id

While there is not an available projection for dwellings by type for the City of Greater Shepparton, it is likely that most of the demand will be for separate houses, rather than medium or higher density dwellings. However, looking at the growth in smaller households, there may be some opportunity for smaller dwellings (even if they are smaller separate houses) to be offered for the growing and ageing population. This is currently being evidenced by the strong recent lot/housing construction of 'lifestyle' or retirement villages in Shepparton.



Key Issues

Up front, Spatial Economics state the notion that all projections are 'wrong'. That is to say, they are almost never *exactly* going to match the actual amount and timing of population growth. However, when they point us in the right *direction*, in particular giving us a picture of what the future is likely to be (with various growth rates), then they are doing exactly what they are intended for.

So, then what is the best course of action? In planning terms, we really need to be prepared for the range of possible futures of population and dwelling growth – this means considering a range of realistic options.

When planning for future housing demand (housing need) there are two key approaches can help with this kind of uncertainty:

First, to 'lean' on the side of assuming stronger growth overall and in any given market segment. That is to ensure that (within reason) there is scope to meet any unexpected upturn in demand; and secondly, to plan for a diversity of supply types and locations.

Planning that locks in controls based on one set of demand projections is likely to make it very difficult for the market to adjust supply to cater for unexpected changes in housing demand.

Greater Shepparton is projected to experience significant socio-demographic changes. Specifically, the majority of household growth will be for households with no children. This growth will be sourced by simply changing household structures and migration to the municipality. This significant household compositional change highlights the need/opportunity for the provision of diverse housing products across diverse locations.

The population across Greater Shepparton is ageing. That is, the proportion of older residents is increasing the most, with the fastest population growth of all age categories being in the 70 to 85+ year age group. This has implications in terms of ageing in place, service delivery, the potential 'churn' of housing stock i.e. downsizing of dwellings and the need for aged care housing (both independent and dependent housing/accommodation).

However, there will be significant, large amounts of growth of family aged adults, children and empty nesters. These household will likely demand and consume traditional separate dwellings.

The current FHOG, will bring forward underlying housing demand to the municipality.



7.0 Adequacy of Land Stocks

Key Findings

In terms of zoned broadhectare residential land stocks it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **5 to 9 years** of demand across the Greater Shepparton municipality.

In addition, there are sufficient unzoned broadhectare residential land stocks to satisfy between **16 to 21 years** of demand.

Shepparton/Mooroopna

In terms of zoned broadhectare residential land stocks, it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **7 to 9 years** of demand for the Shepparton/Mooroopna urban centre.

Tatura

In terms of zoned broadhectare residential land stocks, it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **4 to 8 years** of demand for the Tatura township.

With the amount of supply and demand estimated, it is possible to describe the results in years of supply (a simple and understandable measure). For example, it can be stated that there are X years of supply based on projected demand within a given housing market and by supply type.

This succinct way of describing adequacy is standard across most State Governments in Australia and incorporates a wealth of information into a single figure. A series of adequacy numbers can be provided to reflect differing demand scenarios.

It is also possible to describe adequacy in a qualitative sense but with both the private and public sector familiar to this methodology, it seems appropriate to adopt the above approach.

Years of supply can also be linked to trigger points relating to the need for additional land and more importantly triggering specific strategic land use planning responses. The adequacy of broadhectare/major infill residential land supply sources is calculated as a residual taking into account the state of the other supply types.

Analysis has been undertaken to estimate the years of broadhectare residential land stocks for the municipal area of Greater Shepparton – this is outlined below.

7.1 Years of Supply – Greater Shepparton

Two future demand scenarios are used and assessed against the identified stock of undeveloped residential broadhectare land. The demand scenarios are detailed in the previous section of the report. In summary these include:

Scenario One: idForecast – dwelling forecasts undertaken for the City of Greater Shepparton by ForecastID. Dwelling requirements from 2016 to 2036 at 376 per annum or a 1.2% per annum growth rate (note this is comparable to the dwelling growth as measured by the ABS Census from 2011 to 2016).

Scenario Two: Recent trend high growth) – simply assumes recent residential lot construction activity as measured from 2015/16. Dwelling requirements from 2016 to 2036 at 497 per annum or a 1.6% per annum growth rate.



The share of broadhectare lot construction activity is assumed at

- 84% across the City of Greater Shepparton;
- 87% for Shepparton/Mooroopna; and
- 80% for Tatura.

The benchmarks above are assumed constant over-time and is seen as a conservative assumption¹.

Table 6 summarise the estimated years of broadhectare residential supply by demand scenario as at March 2019.

In terms of **zoned** broadhectare residential land stocks, it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **7 to 9 years** of demand across Greater Shepparton municipality. In addition, there are sufficient **unzoned** broadhectare residential land stocks (this includes the Shepparton North East PSP land release area) to satisfy between **16 to 21 years** of demand.

Shepparton/Mooroopna

In terms of **zoned** broadhectare residential land stocks, it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **7 to 9 years** of demand for the Shepparton/Mooroopna urban centre. In addition, there are sufficient **unzoned** broadhectare residential land stocks to satisfy between **15 to 19 years** of demand.

It is understood that the recently completed Shepparton North East Precinct Structure Plan (implemented via Amendment C118) will be available for development within the short-term. This land release area will approximately 1,500 dwellings, providing an additional four to five years supply of zoned broadhectare residential land stocks.

Tatura

In terms of **zoned** broadhectare residential land stocks, it is estimated based on the identified supply and projected demand scenarios, there are sufficient land stocks to satisfy between **4 to 8 years** of demand for the Tatura township. In addition, there are sufficient **unzoned** broadhectare residential land stocks to satisfy over **25 years** of demand.

However, Spatial Economics consider the stock of 'available' broadhectare land with clear short to medium term development intentions is largely depleted in Tatura. There are a number of broadhectare sites in Tatura with development capacity (particularly 1540 Murchison-Tatura Road) but is located in a) a low demand/amenity area; and b) the site has no clear development intentions

Table 3: Estimated Years of Broadhectare Residential Land Supply, 2019

		Zoned	Unzoned	Total
LGA	Scenario 1	9	21	25+
	Scenario 2	7	16	23
Shepparton/ Mooroopna	Scenario 1	9	19	25+
	Scenario 2	7	15	22
Tatura	Scenario 1	8	25+	25+
	Scenario 2	4	25+	25+

Source: Spatial Economics Pty Ltd

Spatial Economics consider that the total stock of zoned broadhectare residential land is sufficient to meet short-term requirements. However, Spatial Economics recommend that the stock of zoned residential broadhectare land is increased in the short-term to maintain both a) a competitive land supply market; and b) meeting underlying dwelling requirements for the medium and longer term.

¹ Includes construction activity of lifestyle villages located on broadhectare sites



Spatial Economics recommend:

1. Increasing the stock of zoned broadhectare land for the urban centre of Shepparton in the short to medium term.

It is acknowledged that the North East Shepparton PSP land release area will be available for development in the short-term. However, Spatial Economics consider it would be prudent (to maintain industry competition, housing affordability and the continued provision of geographic competition and choice) to achieve additional rezoning of identified potential residential lands. In addition, this approach would ensure sufficient zoned residential broadhectare land stocks available for development if the North East Shepparton PSP land release area is not actively developed in the short to medium term.

2. Increasing the stock of zoned broadhectare land for the township of Tatura in the short-term.

As previously outlined, the stock of residential broadhectare land in Tatura with active development intentions is effectively depleted. Over recent years the Northlinks estate has been in high demand and is currently largely fully developed.

The years of supply is not only dependent on the projected number of dwellings in total, the share of total dwellings within broadhectare supply areas but also the timely realisation of the identified supply opportunities. Therefore, caution is highlighted in the interpretation of the years of broadhectare land supply, as a major assumption is that the identified supply is realised in a development timing setting.

7.2 Interpretation of the 'Adequacy' Benchmarks

Clause 11.02 of the State Planning Policy Framework includes under 'Strategies' the need to:

"Plan to accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur. Residential land supply will be considered on a municipal basis, rather than a town-by-town basis."

The State Planning Policy Framework states at Clause 11 that:

"Planning is to anticipate and respond to the needs of existing and future communities through provision of zoned and serviced land for housing, employment, recreation and open space, commercial and community facilities and infrastructure."

The relevant objective is at 11.02-1 Supply of urban land:

"To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses."

It is important to highlight a number of potential interpretations and considerations of the above clauses within the State Planning Framework:

- The framework cites at least a 15-year supply of land to meet expected demand, this benchmark is a **minimum supply target**.
Although Clause 11.02 states that this benchmark is to be applied at a **municipal level**, it is appropriate for the City of Greater Shepparton that this policy direction is applied at a **township basis**. Residential land supply and demand in for example Tatura, has little relevance to the supply and demand levels in Shepparton. The 15-year supply benchmark should be seen as a policy guide to maintain competitive housing market outcomes.
- The above benchmark was originally developed as a simple, relatively transparent indicator to ensure sufficient broadhectare land within the growth areas of metropolitan Melbourne – representing three business cycles. Other factors were examined within the context of this benchmark, including, but not limited to - the level of industry competition, the composition



of undeveloped land stocks and practicality/likelihood of identified supply being available for development to meet projected demand in the short, medium and longer term.

- The benchmark was seen as guide to decision making to determine the quantum, location and timing of the need to identify additional land stocks and start timely planning for additional supply.

The State Planning Framework identifies in the context of urban land supply the need to ensure a sufficient supply of residential land. The use of the 15-year minimum land supply benchmark is a guiding tool to measure the sufficiency of land supply.

The broadhectare residential supply assessment (the method employed replicates the current State Governments methodology), illustrates that there is between **7 to 9 years** zoned broadhectare residential land stocks at a municipal level.

It is observed that the current outcomes of residential development in Greater Shepparton is resulting in competitive outcomes, specifically: 1) diverse land products; 2) diverse locations of development; 3) affordable land prices; and 4) meeting underlying household demand.

The 15-year supply benchmark is not a 'magical' target, which once supply levels are below this, perverse housing market outcomes result. However, it is a solid guide that indicates planning for additional land supply sources should be under-way or strategic planning initiatives are initiated that changes the composition of demand for increased established urban area residential development.

It is noted that the City of Greater Shepparton has and is currently undertaking major strategic planning initiatives that identify additional supply sources, namely:

- Completion and progression of strategic land use assessments of identified investigation areas;
- Shepparton and Mooroopna 2050: Regional City Growth Plan;
- Shepparton Mooroopna flood mapping and flood intelligence study;
- Toolamba Townships Growth Plan; and
- Greater Shepparton Townships Framework Plan Review, 2018.



Key Issues

Clause 11.02 of the State Planning Policy Framework includes under 'Strategies' the need to:

"Plan to accommodate projected population growth over at least a 15 year period and provide clear direction on locations where growth should occur. Residential land supply will be considered on a municipal basis, rather than a town-by-town basis."

The broadhectare residential supply assessment included within this assessment (the method employed replicates the current State Governments methodology), illustrates that there is between 7 to 9 years zoned broadhectare land stocks. A further 16 to 23 years of unzoned broadhectare land stocks are also identified, well over 25 years broadhectare land supply stocks (zoned and unzoned). Clearly, there is ample broadhectare residential land stocks to meet the requirements of Clause 11.02 of the State Planning Policy Framework.

Spatial Economics consider that the total stock of zoned broadhectare residential land is sufficient to meet short-term requirements. However, Spatial Economics recommend that the stock of zoned residential broadhectare land is increased in the short-term to maintain both a) a competitive land supply market; and b) meeting underlying dwelling requirements.

For both the urban centres of Shepparton/Mooroopna and Tatura, there is a need in the short-term to increase the stock of zoned broadhectare residential land to ensure ample zoned stocks are available to ensure a competitive land supply industry. This is particularly urgent for Tatura, as currently, undeveloped broadhectare land stocks are effectively depleted.

There are ample identified unzoned stocks in both urban centres to meet this need.

From a land supply and demand perspective Spatial Economics consider that to effectively maintain a competitive residential land supply market across distinct urban centres (i.e. Shepparton/Mooroopna and Tatura) there is need to maintain 10 to 15 years supply of zoned residential broadhectare land supply.

It is imperative that ample zoned residential supply opportunities are provided within each major identified housing market within Shepparton/Mooroopna to allow both a competitive land supply market and locational choice to meet consumer preference—in the context of established strategic land use planning objectives and land use capability.

It is recommended that any major rezoning of broadhectare land is prioritised based on localised/housing market needs in the context of existing zoned residential broadhectare stocks.

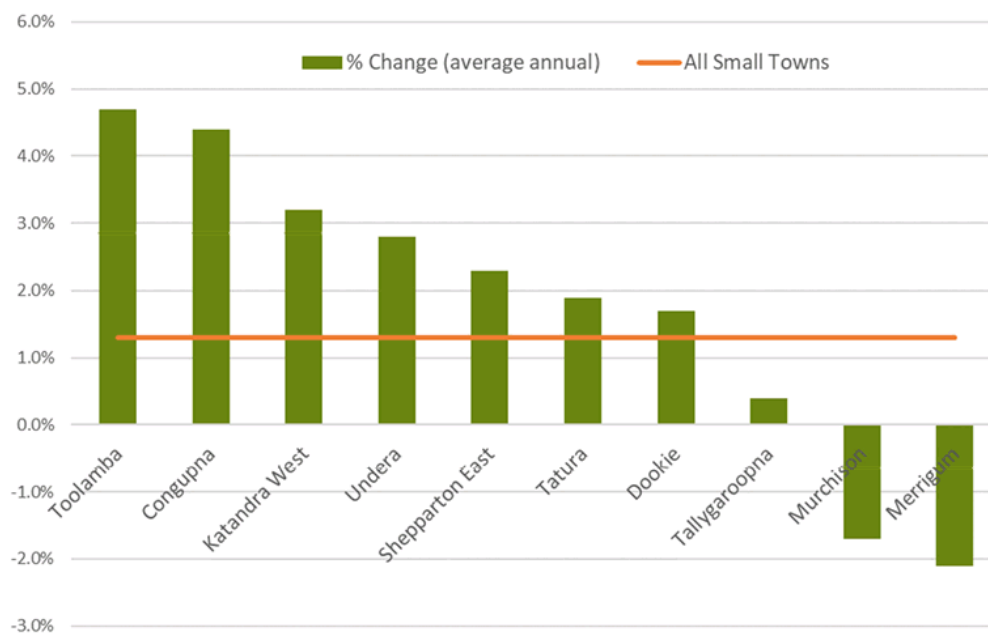


8.0 Small Town Profiles

The following provides a brief profile of the land supply stocks, existing and historic population/dwelling stock and recent residential lot construction activity for the 'small towns' within the municipal area of Shepparton. The information presented, is within the respective current township boundaries.

Overall, the population of the small towns illustrated relatively strong growth as measured from 2011 to 2016, increasing on an average annual basis of 1.3% or 88 person per annum. Population growth was disparate for the differing townships, increasing by 74 person per annum in Tatura to losing 6 persons per annum in Murchison.

Graph 22: Average Annual Population Change by Township, 2011 to 2016



Source: Australian Bureau of Statistics

As at 2016, there is an estimated population residing in these small towns of approximately 6,900. Population as at 2016 by township include:

- Undera - 99;
- Congupna – 200;
- Shepparton East – 207;
- Katandra West - 237;
- Dookie - 253;
- Tallygaroopna – 258;
- Toolamba -352;
- Merrigum – 425;
- Murchison -742; and
- Tatura – 4,122.



Net dwelling growth as measured from 2011 to 2016 averaged 39 per annum, whilst residential lot construction has averaged around 30 per annum (since 2008). This indicates that a significant proportion of dwelling growth within the small townships are constructed on existing vacant lots.

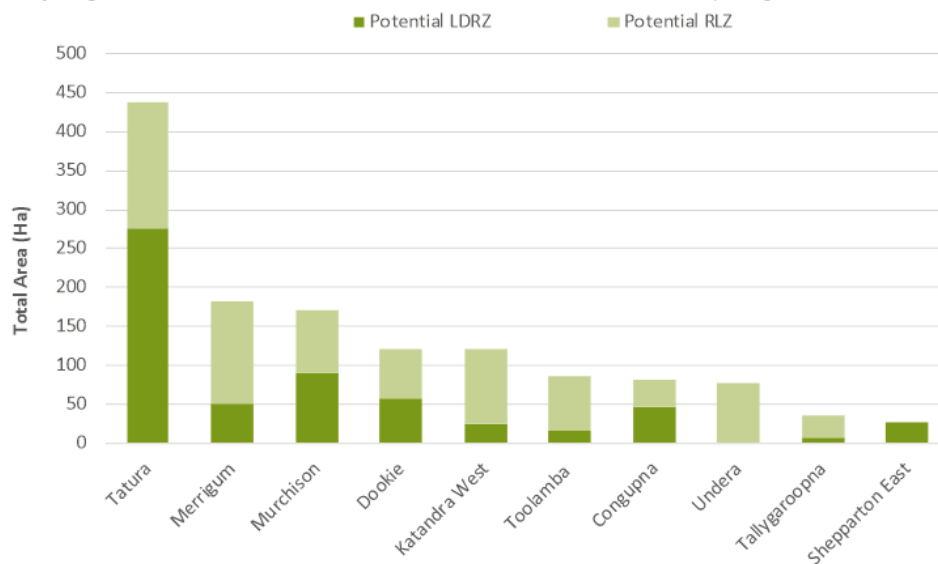
Existing vacant lots are an important land supply source for small townships, particularly where the cost of subdivision can be cost prohibitive relative to prevailing market sale prices.

There are currently around 153 vacant urban lots across the small townships and 100 hectares of vacant rural residential land. There are a number of townships that have no vacant urban lots, these include: Congupna, Shepparton East and Undera.

Overall, the small towns are well serviced with zoned undeveloped urban (broadhectare) land stocks, totalling 364 hectares. Only Congupna has no identified zoned undeveloped broadhectare land stocks. In addition, there is 134 hectares of land identified for future (currently unzoned to support urban development) urban development in Tatura and 4.7 hectares in Merrigum.

Each small township is well stocked with potential rural residential land (currently not zoned to support rural residential subdivision) with a total of 1340 hectares.

Graph 23: Stock of Potential Rural Residential Land Stocks (hectares), 2019



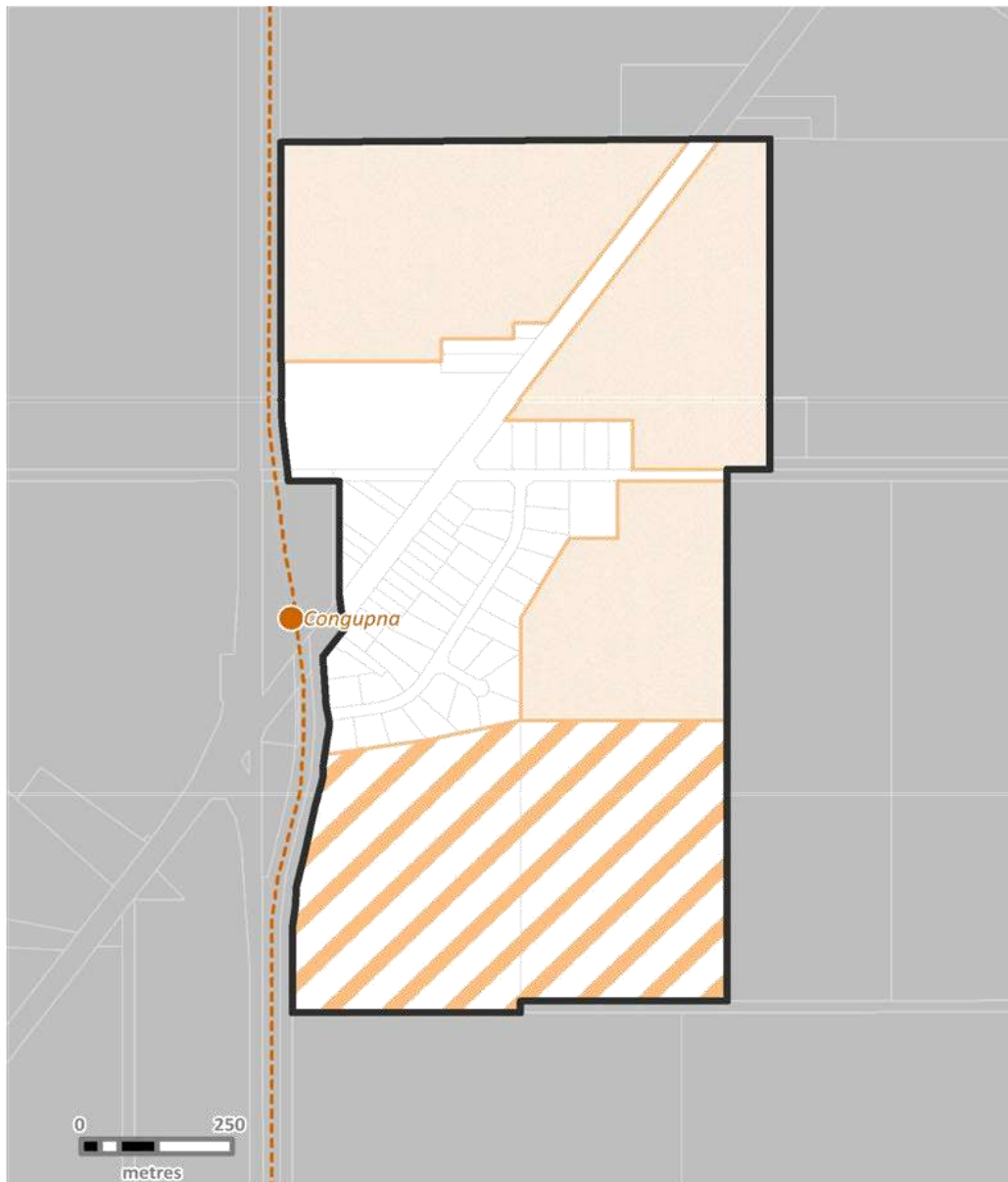
Source: Spatial Economics Pty Ltd

In summary, the small towns have illustrated since 2011 relatively strong growth and is currently well serviced in terms of a variety of residential land supply sources.



8.1 Congupna

Map 10: Land Supply Profile – Congupna



Legend

Rural Assessment

- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



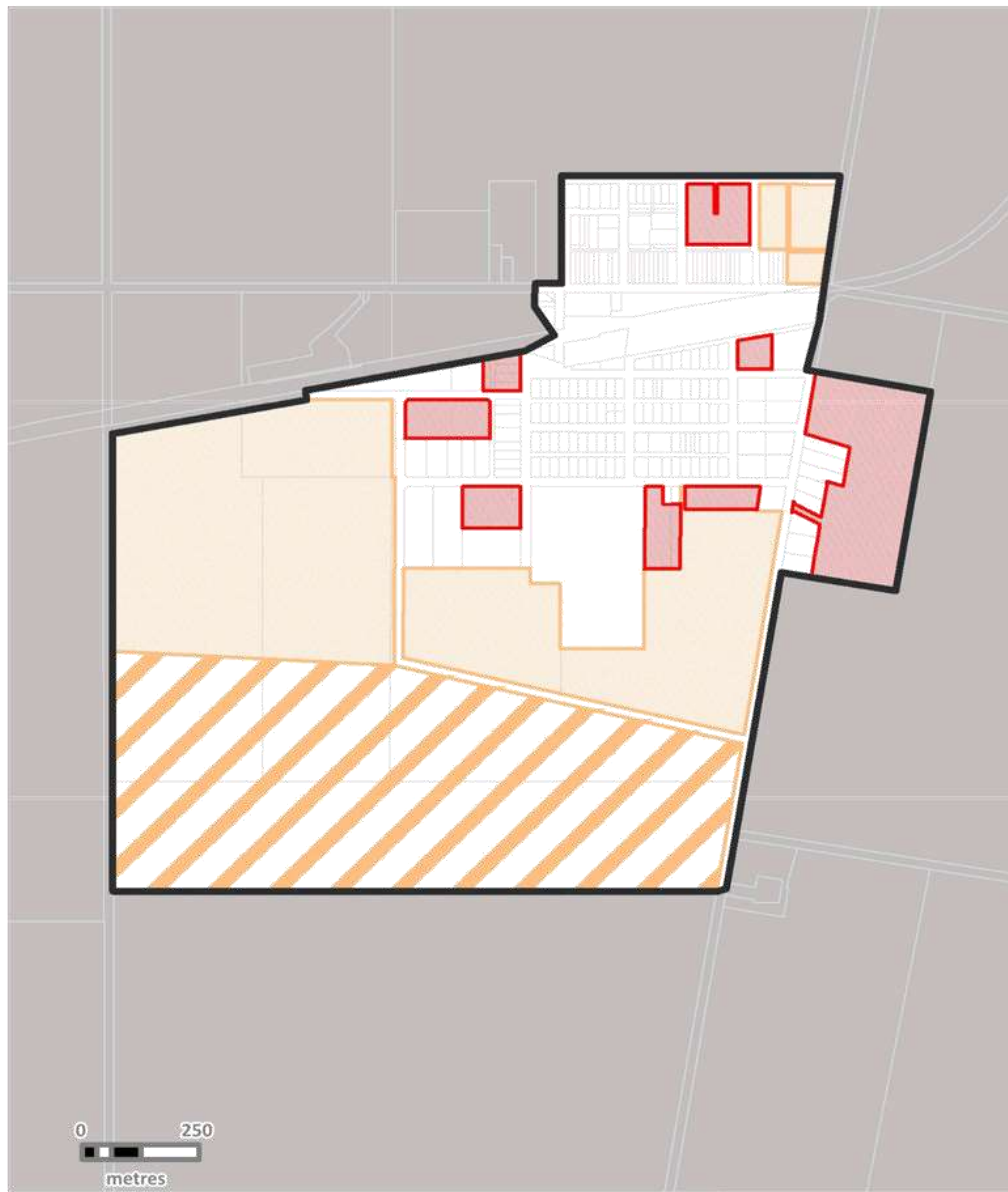
Table 4: Land Supply and Demand Profile - Congupna

Population 2016	200
Population Change % (2011 to 2016), avg annual	0.4%
Population Change # (2011 to 2016)	4
Dwelling Stock (2016)	88
Dwelling Change % (2011 to 2016), avg annual	4.4%
Dwelling Change # (2011 to 2016)	17
Lot Construction (total) 2018 to 2019	0
Vacant Lot Stock - urban	0
Broadhectare - Zoned (area - hectares)	0
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	0
Potential LDRZ (hectares)	47
Potential RLZ (hectares)	34







8.2 Dookie

Map 11: Land Supply Profile – Dookie



Legend

Rural Assessment

-  Rural Residential Occupied
-  Rural Residential Vacant
-  Potential Low Density
-  Potential Rural Living
-  No timing

Features



-  Railway Station
-  Railway Line
-  Water Body



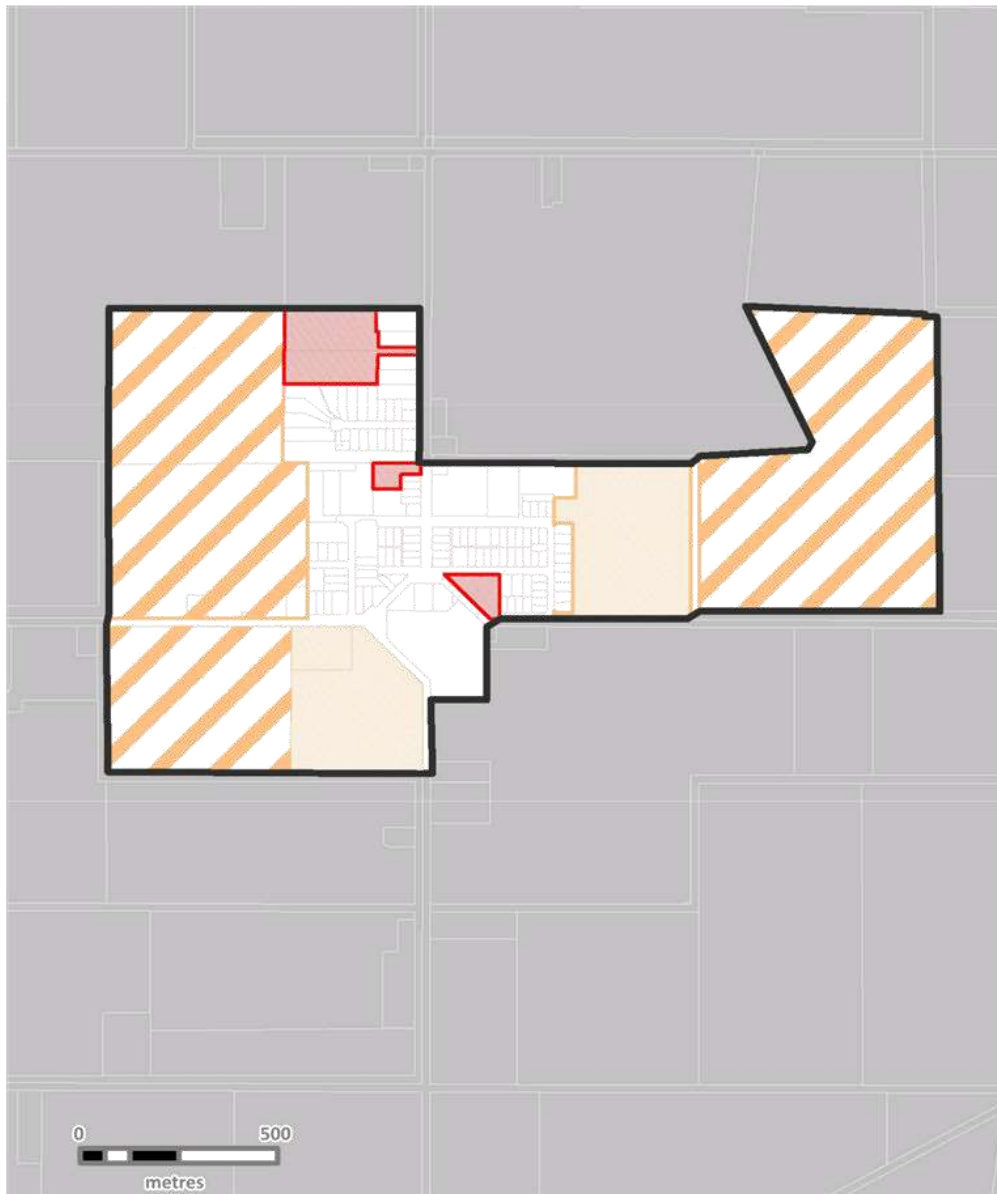
Table 5: Land Supply and Demand Profile - Dookie

Population 2016	253
Population Change % (2011 to 2016), avg annual	0.8%
Population Change # (2011 to 2016)	10
Dwelling Stock (2016)	123
Dwelling Change % (2011 to 2016), avg annual	1.7%
Dwelling Change # (2011 to 2016)	10
Lot Construction (total) 2018 to 2019	1
Vacant Lot Stock - urban	13
Broadhectare - Zoned (area - hectares)	16.7
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	0
Potential LDRZ (hectares)	58
Potential RLZ (hectares)	62



8.3 Katandra West

Map 12: Land Supply Profile – Katandra West



Legend

Rural Assessment		Features	
	Rural Residential Occupied		Railway Station
	Rural Residential Vacant		Railway Line
	Potential Low Density		Water Body
	Potential Rural Living		
	No timing		



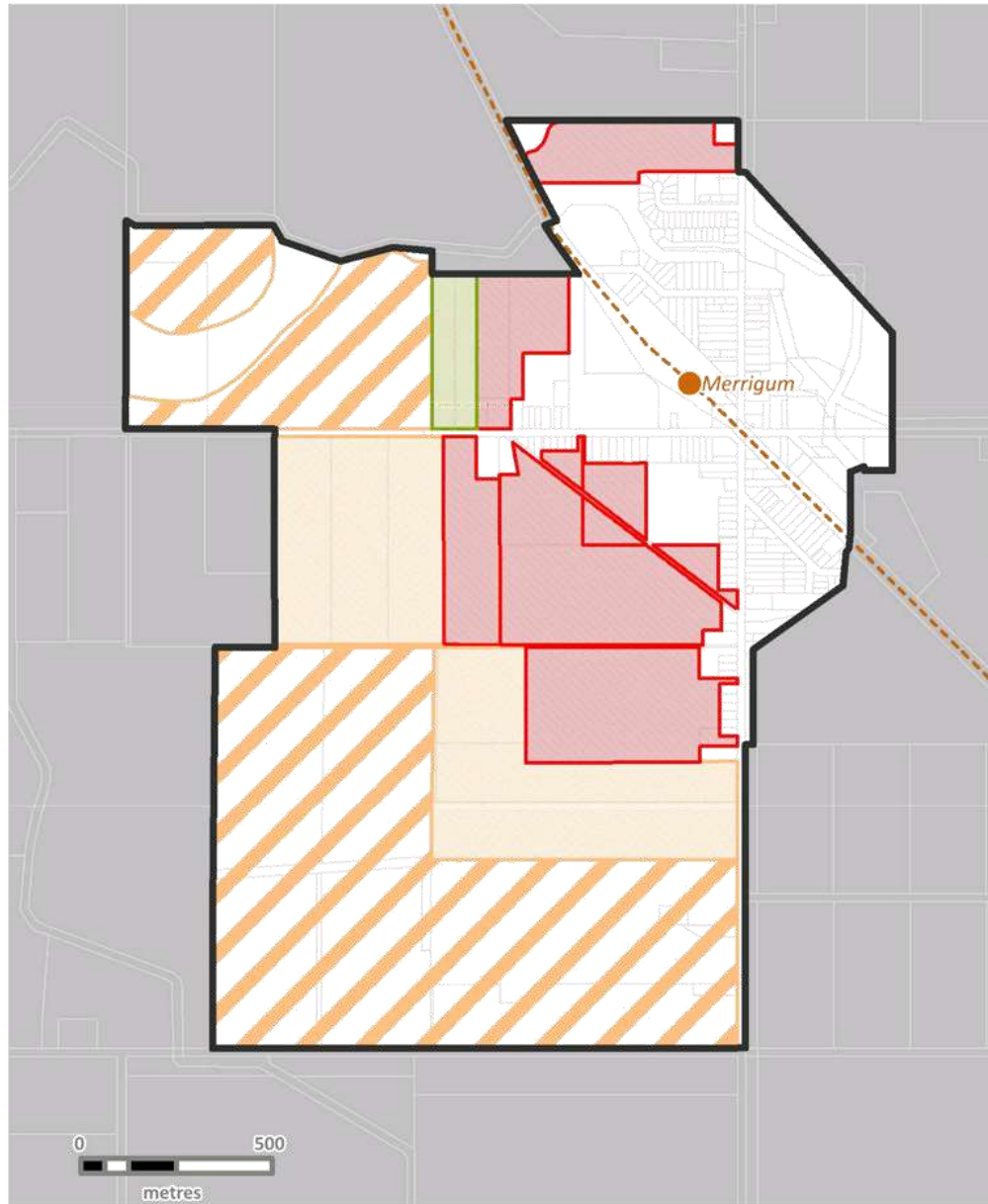
Table 6: Land Supply and Demand Profile – Katandra West

Population 2016	237
Population Change % (2011 to 2016), avg annual	1.5%
Population Change # (2011 to 2016)	17
Dwelling Stock (2016)	104
Dwelling Change % (2011 to 2016), avg annual	3.2%
Dwelling Change # (2011 to 2016)	15
Lot Construction (total) 2018 to 2019	0
Vacant Lot Stock - urban	9
Broadhectare - Zoned (area - hectares)	6.5
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	0
Potential LDRZ (hectares)	24
Potential RLZ (hectares)	96



8.4 Merrigum

Map 13: Land Supply Profile – Merrigum



Legend

Development Timing

- 0-2 years
- 3-5 years
- 6-10 years
- 11+ years
- No timing
- Potential Residential
- Investigation Area
- Construction 2008-2019

Rural Assessment

- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



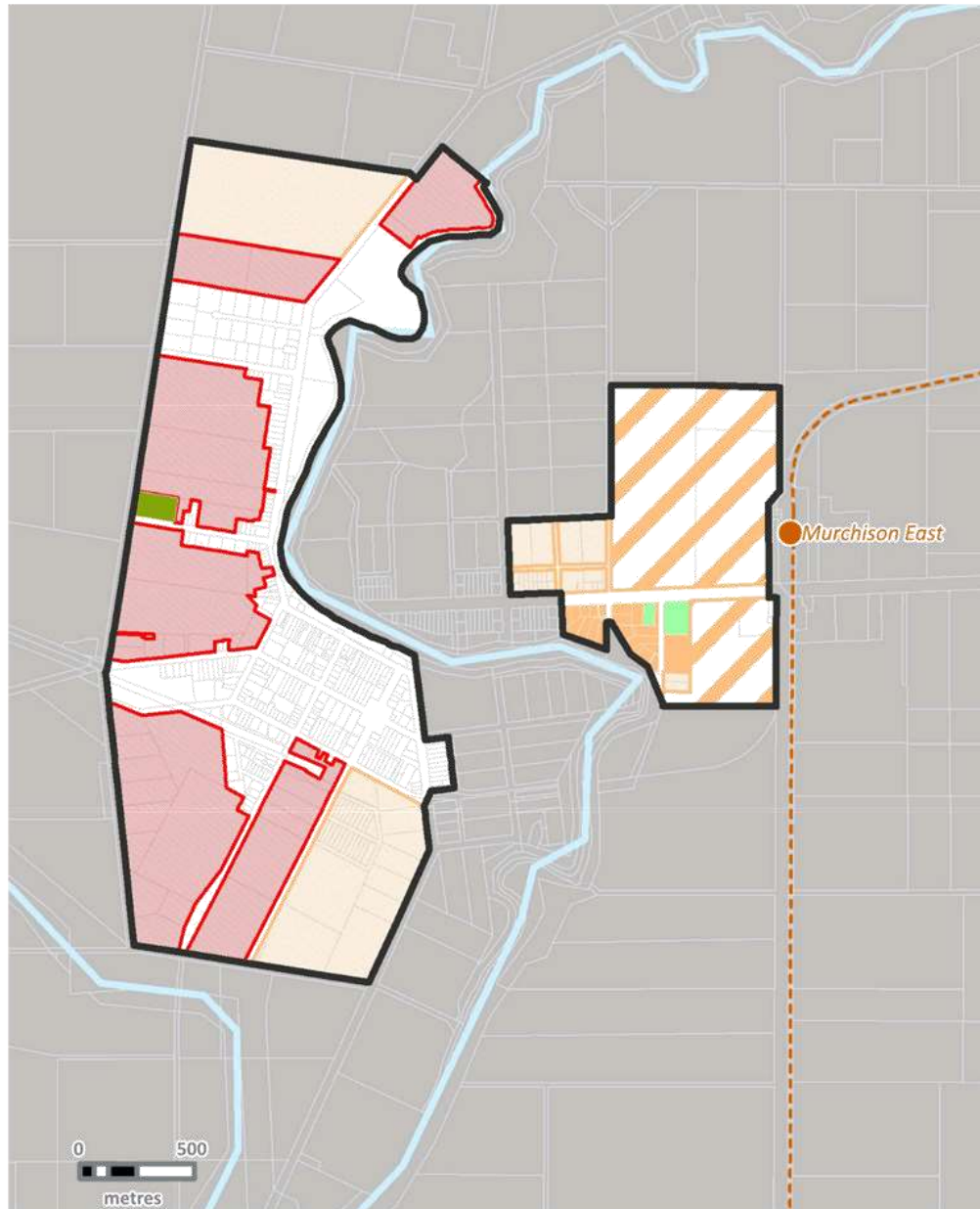
Table 7: Land Supply and Demand Profile - Merrigum

Population 2016	425
Population Change % (2011 to 2016), avg annual	1.3%
Population Change # (2011 to 2016)	26
Dwelling Stock (2016)	186
Dwelling Change % (2011 to 2016), avg annual	-2.1%
Dwelling Change # (2011 to 2016)	-21
Lot Construction (total) 2018 to 2019	13
Vacant Lot Stock - urban	12
Broadhectare - Zoned (area - hectares)	60
Potential Residential (unzoned)- area/hectares	4.7
Vacant Lot Stock -rural residential (area/hectares)	0
Potential LDRZ (hectares)	52
Potential RLZ (hectares)	130



8.5 Murchison/Murchison East

Map 14: Land Supply Profile – Murchison/Murchison East



Legend

Development Timing

- 0-2 years
- 3-5 years
- 6-10 years
- 11+ years
- No timing
- Potential Residential
- Investigation Area
- Construction 2008-2019

Rural Assessment

- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



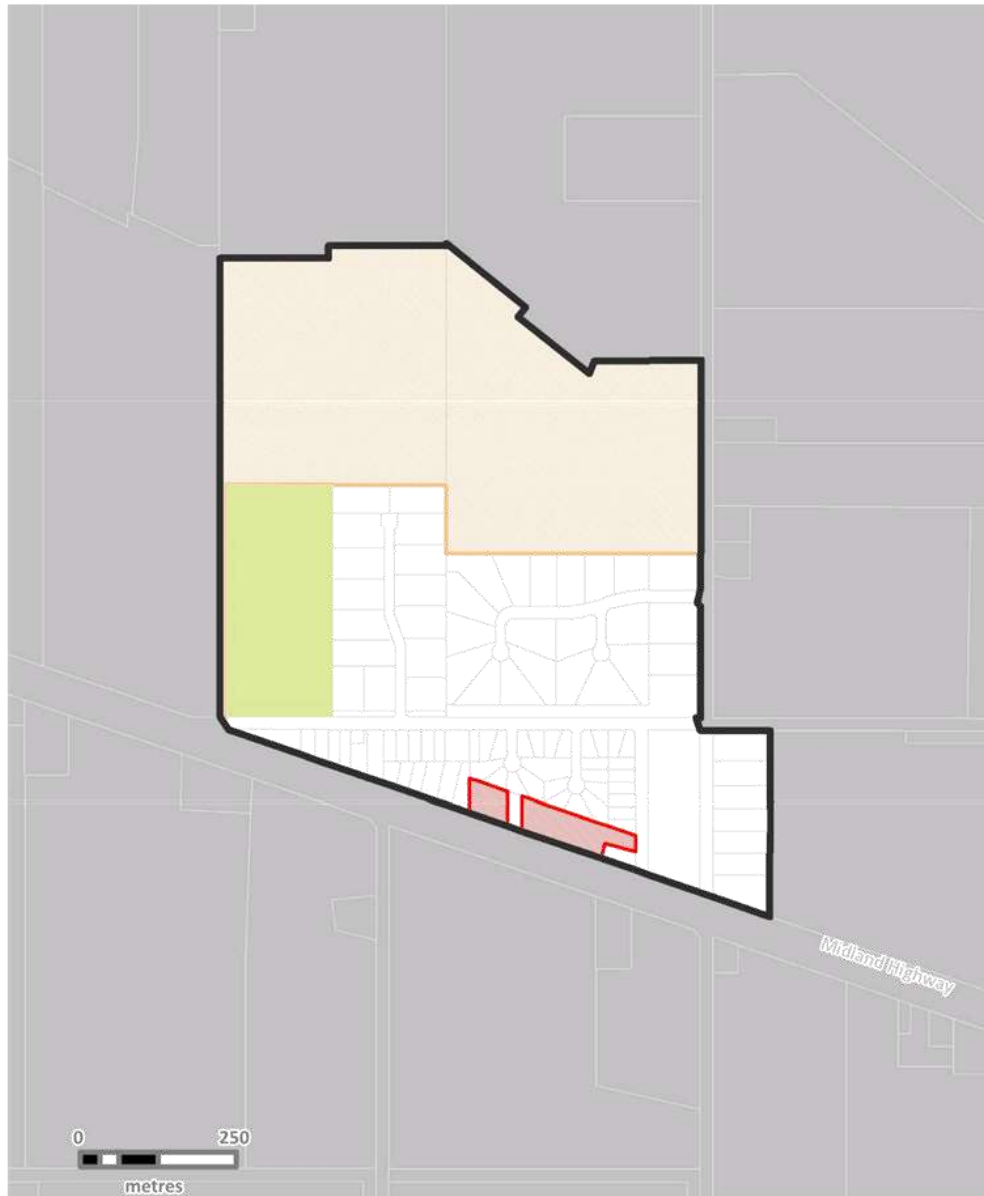
Table 8: Land Supply and Demand Profile – Murchison/Murchison East

Population 2016	742
Population Change % (2011 to 2016), avg annual	-0.8%
Population Change # (2011 to 2016)	-30
Dwelling Stock (2016)	339
Dwelling Change % (2011 to 2016), avg annual	-1.7%
Dwelling Change # (2011 to 2016)	-31
Lot Construction (total) 2018 to 2019	14
Vacant Lot Stock - urban	17
Broadhectare - Zoned (area - hectares)	156
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	2
Potential LDRZ (hectares)	90
Potential RLZ (hectares)	81



8.6 Shepparton East

Map 15: Land Supply Profile – Shepparton East



Legend

Development Timing		Rural Assessment		Features	
	0-2 years		No timing		Railway Station
	3-5 years		Potential Residential		Railway Line
	6-10 years		Investigation Area		Water Body
	11+ years		Construction 2008-2019		
			Rural Residential Occupied		
			Rural Residential Vacant		
			Potential Low Density		
			Potential Rural Living		



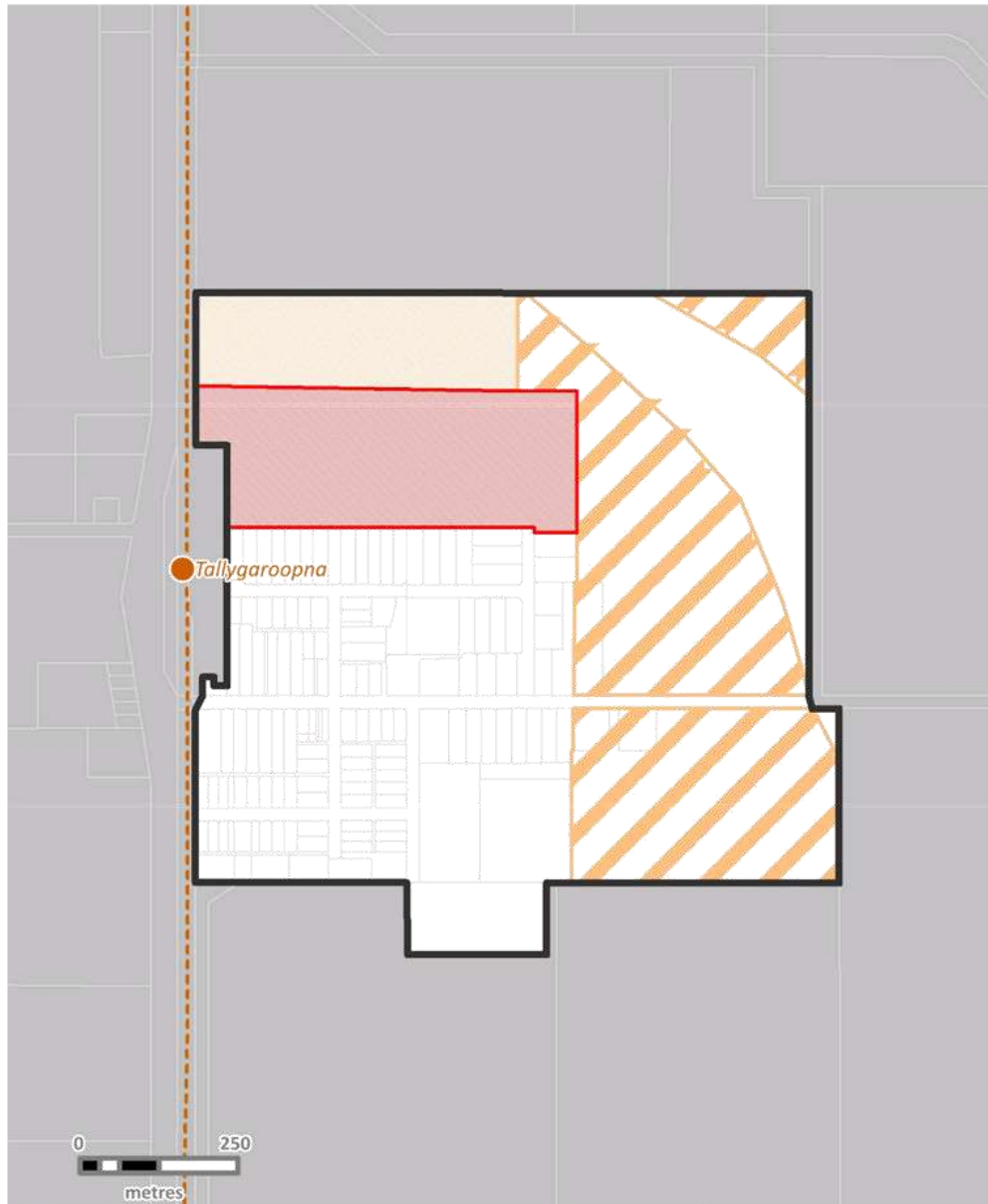
Table 9: Land Supply and Demand Profile – Shepparton East

Population 2016	207
Population Change % (2011 to 2016), avg annual	-1.8%
Population Change # (2011 to 2016)	-20
Dwelling Stock (2016)	85
Dwelling Change % (2011 to 2016), avg annual	2.3%
Dwelling Change # (2011 to 2016)	9
Lot Construction (total) 2018 to 2019	1
Vacant Lot Stock - urban	0
Broadhectare - Zoned (area - hectares)	7.5
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	0
Potential LDRZ (hectares)	28
Potential RLZ (hectares)	0



8.7 Tallygaroopna

Map 16: Land Supply Profile – Tallygaroopna



Legend

Rural Assessment

- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living
- No timing

Features

- Railway Station
- Railway Line
- Water Body



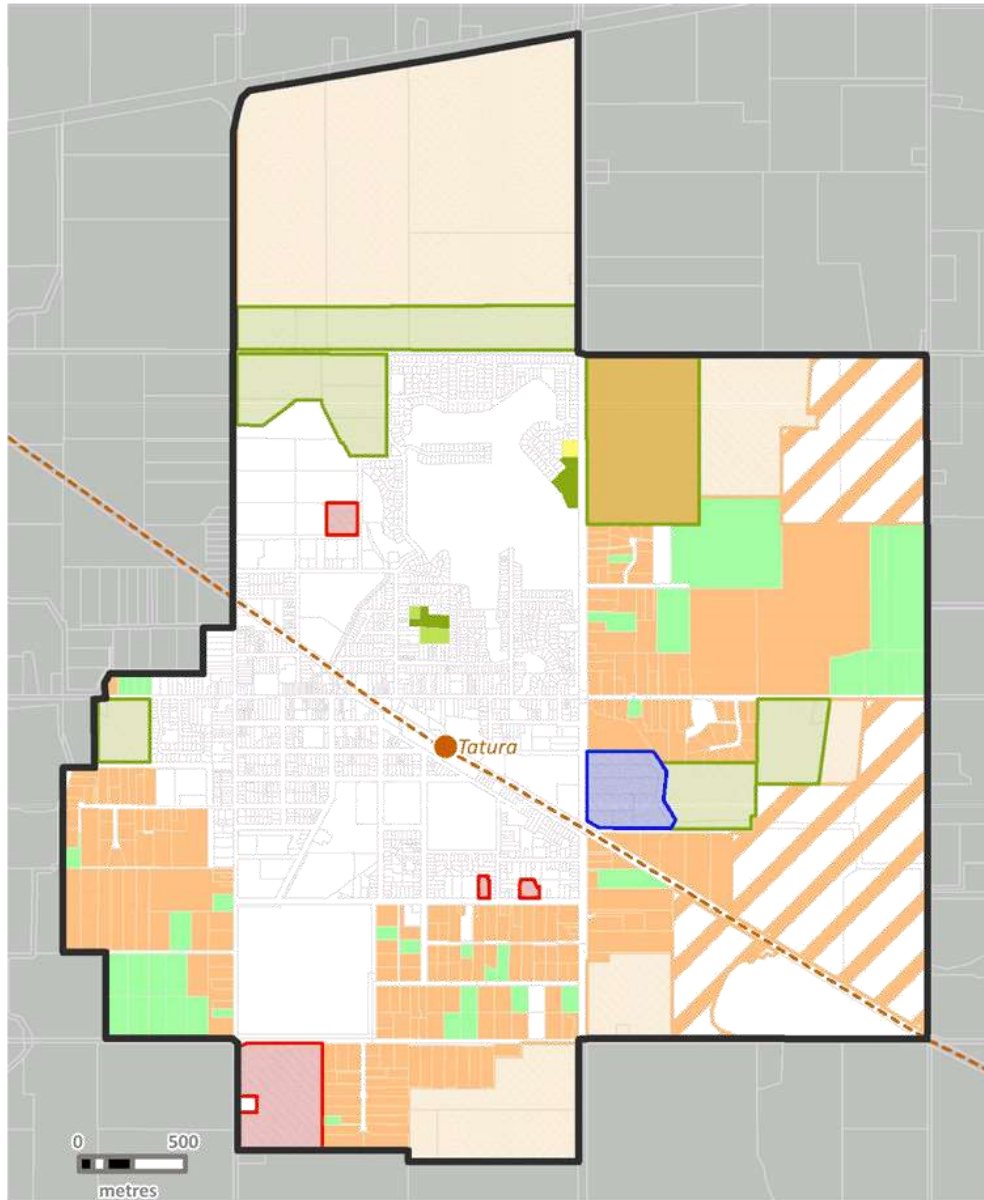
Table 10: Land Supply and Demand Profile - Tallygaroopna

Population 2016	258
Population Change % (2011 to 2016), avg annual	-0.4%
Population Change # (2011 to 2016)	-5
Dwelling Stock (2016)	98
Dwelling Change % (2011 to 2016), avg annual	0.4%
Dwelling Change # (2011 to 2016)	2
Lot Construction (total) 2018 to 2019	16
Vacant Lot Stock - urban	10
Broadhectare - Zoned (area - hectares)	13
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	0
Potential LDRZ (hectares)	8
Potential RLZ (hectares)	28



8.8 Tatura

Map 17: Land Supply Profile – Tatura



Legend

Development Timing		Rural Assessment		Features	
	0-2 years		No timing		Railway Station
	3-5 years		Potential Residential		Railway Line
	6-10 years		Investigation Area		Water Body
	11+ years		Construction 2008-2019		
			Rural Residential Occupied		
			Rural Residential Vacant		
			Potential Low Density		
			Potential Rural Living		



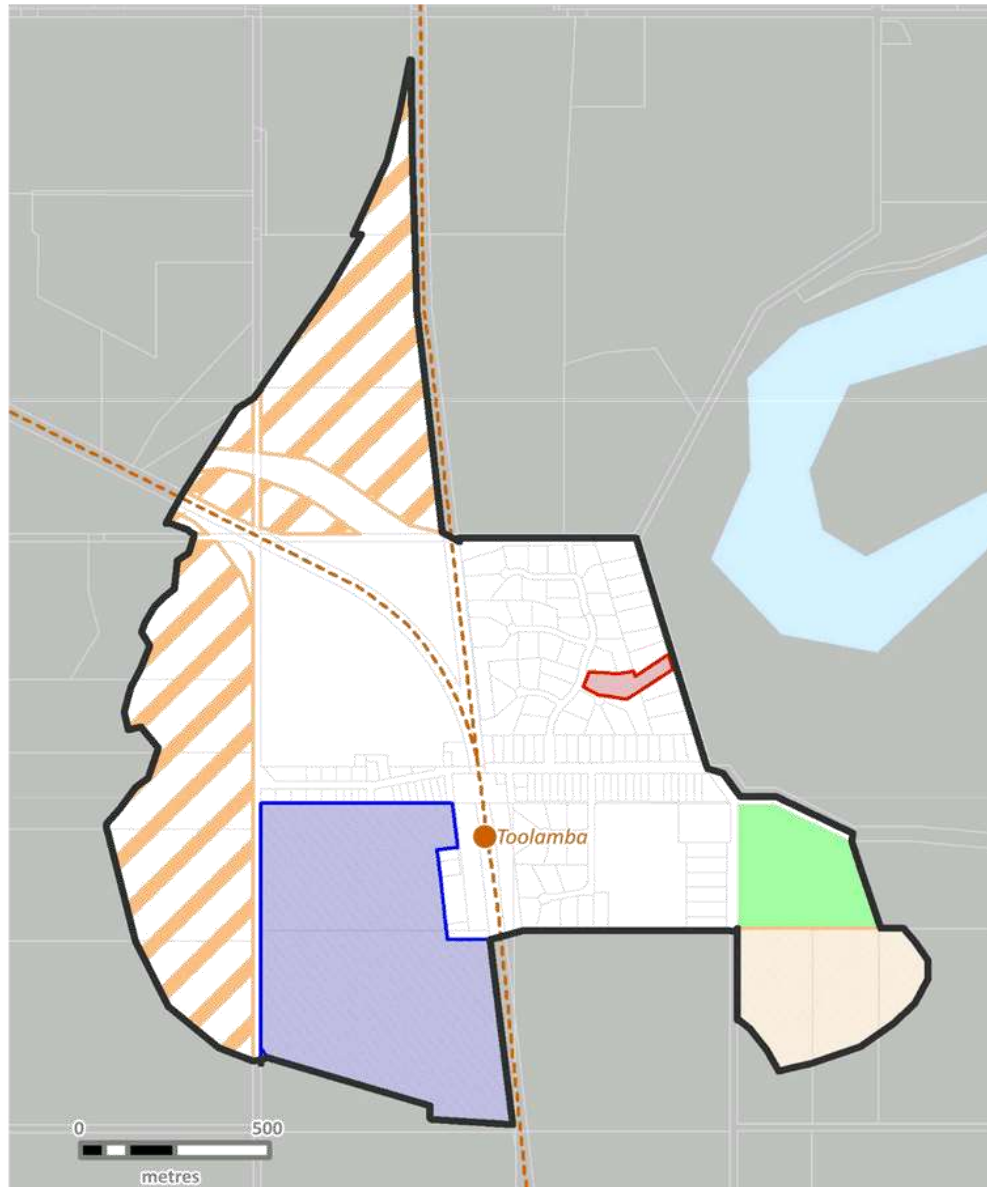
Table 11: Land Supply and Demand Profile - Tatura

Population 2016	4122
Population Change % (2011 to 2016), avg annual	1.9%
Population Change # (2011 to 2016)	369
Dwelling Stock (2016)	1824
Dwelling Change % (2011 to 2016), avg annual	1.9%
Dwelling Change # (2011 to 2016)	164
Lot Construction (total) 2018 to 2019	283
Vacant Lot Stock - urban	87
Broadhectare - Zoned (area - hectares)	5.4
Potential Residential (unzoned)- area/hectares	134
Vacant Lot Stock -rural residential (area/hectares)	88
Potential LDRZ (hectares)	276
Potential RLZ (hectares)	162



8.9 Toolamba & Old Toolamba

Map 18: Land Supply Profile – Toolamba/Old Toolamba



Legend

Development Timing

- 0-2 years
- 3-5 years
- 6-10 years
- 11+ years
- No timing
- Potential Residential
- Investigation Area
- Construction 2008-2019

Rural Assessment

- Rural Residential Occupied
- Rural Residential Vacant
- Potential Low Density
- Potential Rural Living

Features

- Railway Station
- Railway Line
- Water Body



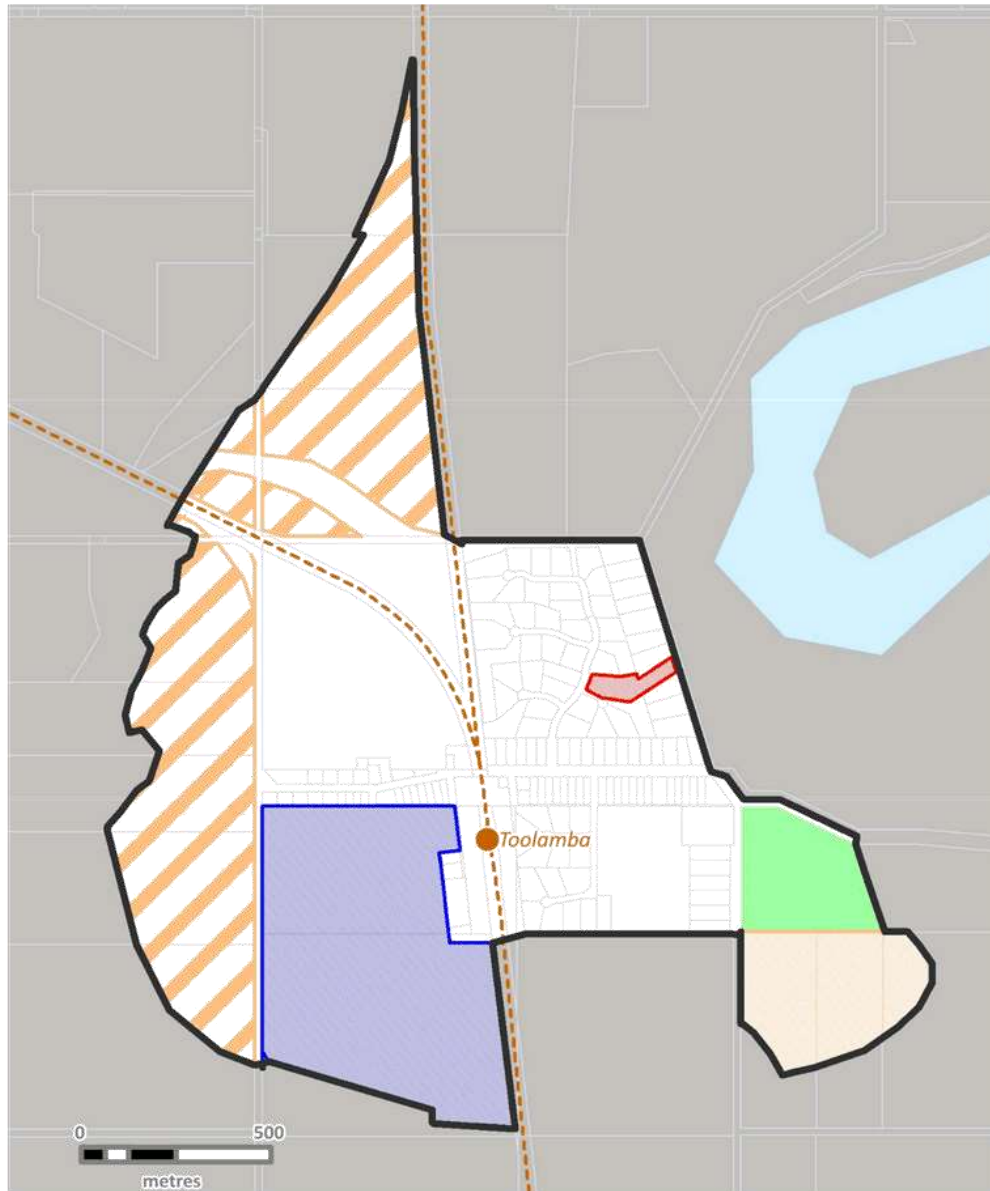
Table 12: Land Supply and Demand Profile – Toolamba & Old Toolamba

Population 2016	352
Population Change % (2011 to 2016), avg annual	3.9%
Population Change # (2011 to 2016)	61
Dwelling Stock (2016)	122
Dwelling Change % (2011 to 2016), avg annual	4.7%
Dwelling Change # (2011 to 2016)	25
Lot Construction (total) 2018 to 2019	24
Vacant Lot Stock - urban	5
Broadhectare - Zoned (area - hectares)	46
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	10
Potential LDRZ (hectares)	15
Potential RLZ (hectares)	70



8.10 Undera

Map 19: Land Supply Profile – Undera



Legend

Development Timing		Rural Assessment		Features	
	0-2 years		No timing		Railway Station
	3-5 years		Potential Residential		Railway Line
	6-10 years		Investigation Area		Water Body
	11+ years		Construction 2008-2019		
			Rural Residential Occupied		
			Rural Residential Vacant		
			Potential Low Density		
			Potential Rural Living		



Table 13: Land Supply and Demand Profile - Undera

Population 2016	99
Population Change % (2011 to 2016), avg annual	1.5%
Population Change # (2011 to 2016)	7
Dwelling Stock (2016)	31
Dwelling Change % (2011 to 2016), avg annual	2.8%
Dwelling Change # (2011 to 2016)	4
Lot Construction (total) 2018 to 2019	0
Vacant Lot Stock - urban	0
Broadhectare - Zoned (area - hectares)	53
Potential Residential (unzoned)- area/hectares	0
Vacant Lot Stock -rural residential (area/hectares)	0
Potential LDRZ (hectares)	0
Potential RLZ (hectares)	78



INDUSTRIAL LAND SUPPLY & DEMAND ASSESSMENT

City of Greater Shepparton

September 2019

Final



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EXECUTIVE SUMMARY

In 2016, Spatial Economics Pty Ltd undertook both a residential and industrial land supply assessment for the Greater Shepparton City Council. This report (industrial land component) provides an update of the assessment undertaken in 2016.

Supply of Industrial Land

As at March 2019, there was a total of 644.5 hectares of zoned industrial land stocks, of which 138 hectares were assessed as available (supply) for industrial purpose development¹. This quantum of zoned industrial supply relative to unavailable industrial land stocks equates to a total land area vacancy rate of 21%.

Compared to the previous industrial land supply assessment undertaken in 2016, the comparable land area vacancy rate for land zoned Industrial 1 (INZ1) and Industrial 2 (INZ2) has substantially decreased, from 34% to 23%.

In terms of the geographic spread of zoned industrial land stocks across Greater Shepparton, the large majority of industrial land is located in the industrial precinct of East Shepparton, with a total of 313 hectares 49% of the total zoned industrial land stocks.

The next largest industrial precinct is North Shepparton at 92 hectares, of which 12.7 hectares is identified as supply. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 58.7 hectares;
- Kialla – 54.7 hectares;
- North West Shepparton – 53.9 hectares;
- Mooroopna – 41.6 hectares; and
- Tatura – 30.4 hectares.

Of the industrial lots identified as supply across Greater Shepparton:

- 70 are located in the East Shepparton precinct;
- 21 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 4 in the North Shepparton precinct;
- 2 respectively in the Lemnos and Tatura precinct; and
- 1 in the North West Shepparton precinct.

There are five major sites (investigation areas) identified for future potential industrial zoning across Greater Shepparton. Of these sites two are located in Tatura (8 and 14 hectares respectively), one in Mooroopna (20 hectares), one in Lemnos (38 hectares) and one in North Shepparton (162 hectares).

Investigation Area 10 (Investigation Area 4 in Clause 21.04-1 Urban Consolidation and Growth) – East of Doyles Road, Grahamvale -has not been included in this assessment as potential (unzoned) industrial land. This is primarily due to the uncertainty of this area regarding its suitability for industrial development.

¹ Excludes industrial land zoned SUZ



Recent Subdivision Activity

Since 2015/16 there have been 57 industrial lots constructed. There has been a significant increase in the subdivision of lots sized from 0.5 to 5 hectares (50% of subdivision activity compared to 9% from 2008 to 2015). Again, the majority (61%) of this recent subdivision activity has been in the East Shepparton industrial precinct.

Industrial lot subdivision activity has decreased marginally since 2015/16, averaging 15 per annum. This compares to 19 lots per annum from 2008 to 2015.

Land Consumption

Consumption of industrial land across Greater Shepparton for various time periods include:

- 3.45 hectares per annum from 2009 to 2015;
- 6.27 hectares per annum from 2015 to 2017; and
- 7.51 hectares per annum from 2017 to 2019.

As measured from 2015 the distribution of industrial land consumption by industrial precinct includes:

- 3.9 hectares per annum in East Shepparton (57% of construction activity);
- 2 hectares per annum in North Shepparton (29% of activity); and
- 0.9 hectares per annum in Kialla (13% of activity).

Further analysis has been undertaken to establish the lot size distribution of consumed industrial land from 2009 to 2019. This is a prime indicator of expressed demand for new industrial built premises. In total there was 71 separate industrial lots that had industrial premises constructed. In summary:

- 70% or 50 lots were sized from 0.1 to 0.5 hectares;
- 17% or 12 lots were sized 0.5 to 1 hectare in size;
- 11% or 8 lots were sized 1 to 5 hectares; and
- 1 lot was sized greater than 5 hectares.

Indicators of Industrial Development Activity

In recent years, the value of industrial building approval activity has significantly increased compared to the medium-term average, this will directly correlate into increased levels of industrial land consumption.

From July 2011 to the March quarter 2019 there was an average annual value of \$14.7 million for select industrial building approval activity. In recent years, the value of industrial building approval activity has significantly increased. Increasing from \$13.8 million in 2016/17, to \$16 million in 2017/18 and to a record high as at the March quarter 2019 of over \$20 million.

Historically, the Gross Regional Product (GRP) for Greater Shepparton has been relatively consistent at around \$3,073 million per annum. However, since 2014 the GRP has increased by 14% to \$3,512 million in 2018.

Both the Manufacturing and Agricultural sectors are key drivers for the consumption of industrial land in Greater Shepparton, directly via manufacturing, processing of agricultural commodities and associated wholesaling, transport and distribution.

The Manufacturing and Agricultural sectors in Greater Shepparton combined equate to:

- 25% of the total value add of the local economy;



- 25% of total employment; and
- 50% of the localised export value.

Total employment in Greater Shepparton since 2010/11 has increased by 7%, however employment in the Agricultural sector has increased by 24%. Whereas, for the same period, employment in the Manufacturing sector declined by 12%.

The industrial sector in Greater Shepparton is experiencing strong growth in recent years, this will ultimately flow into the demand for industrial land, particularly for agricultural processing, transport logistics, warehousing and smaller support industries such as refrigeration repairs/maintenance, mechanical servicing etc.

Adequacy

In total, there is between **13 to 21 years** supply of industrial zoned land across Greater Shepparton and an additional **20 to 32** years supply of land identified for future industrial zoning/development.

The estimation of 13 to 21 years supply of zoned industrial land masks the current deficiency of zoned industrial land across Greater Shepparton.

Spatial Economics consider there are currently insufficient zoned broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a rapid increase in the actual consumption of industrial land at unprecedented levels.

In total, there are only 109 vacant industrial allotments, representing a lot vacancy rate of just 11%. Both the quantum and vacancy rate relative to metropolitan Melbourne and other major regional Victorian centres is considerably low. Typically, the lot vacancy rate is from 25 to 30%.

Outside of the industrial precincts of East Shepparton and Kialla there are minimal vacant zoned industrial lots, specifically by industrial precinct:

- Lemnos – 2 lots;
- Mooroopna – 8 lots;
- North Shepparton – 4 lots;
- North West Shepparton – 2 lots; and
- Tatura – 2 lots.

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 30% of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 31 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and none over 10 hectares. This provides limited choice for potential large industrial land users and limited stock for further subdivision to smaller allotments.

There are currently 233 industrial land users on lots sized less than 1,000 sqm, but only 5 vacant lots in this size.



1.0 Introduction

1.1 Context

The following report is an industrial land supply and demand assessment for the City of Greater Shepparton.

The assessment includes:

- the identification of historical and current industrial lot construction activity by location;
- quantification of local demand drivers/activity for industrial land consumption;
- localised employment trends/composition;
- the identification of historical and current industrial land consumption by location;
- identification of all zoned and unzoned industrial land supply stocks including estimates of the net developable land area on a lot by lot basis;
- presentation of potential future land consumption scenarios; and
- estimation of the years of supply of undeveloped industrial land stocks.

The assessment provides a robust and transparent assessment of the supply and demand for industrial land across Greater Shepparton. The assessment will facilitate informed decision making in terms of the existing and future industrial land supply requirements.

In addition, the information will be of assistance to other related planning processes such as infrastructure and service planning.

1.2 Purpose

The monitoring of land supply is a key tool to assist in the management and development of urban growth across Greater Shepparton. The primary purpose of monitoring industrial land supply is to improve the management of urban growth by ensuring that council, public utilities, government and the development industry have access to up-to-date and accurate information on industrial land availability, development trends, new growth fronts, and their implications for planning and infrastructure investment.

The following report provides accurate, consistent and updated intelligence on industrial land supply and demand. This in turn assists decision-makers in:

- maintaining an adequate supply of industrial land for future employment purposes;
- providing information to underpin strategic planning in urban centres;
- linking land use with infrastructure and service planning and provision;
- taking early action to address potential land supply shortfalls and infrastructure constraints; and
- contributing to the containment of public sector costs by the planned, coordinated provision of infrastructure to service the staged release of land for urban development.



2.0 Approach & Methodology

The following provides a brief outline of the major methodologies and approach in the assessment of recent industrial lot construction, industrial land supply areas, industrial land consumption and associated demand projections and determination of assessing adequacy of industrial land stocks. A more detailed methodology is available titled "*Residential & Industrial Land Supply – Background Paper*" which is available at www.G21.vic.gov.au

2.1 Industrial Land Supply

Industrial land is used for a defined set of industrial uses although there are often a significant proportion of non-industrial uses that occupy industrial land. In line with the definition used by the State Government in the Metropolitan and Regional Urban Development Program, the zones that are considered primarily for industrial use across the municipality of Shepparton include: Industrial 1 Zone (IN1Z), Industrial 3 Zone (IN3Z), Commercial 2 Zone (C2 Zone), and select Special Use Zones (SUZ 6, 9 & 11).

Future (unzoned) industrial land is identified through various strategic planning policy documents and consultation with municipal officers. Future industrial land is currently unzoned to support industrial development; however the land is designated for future industrial purpose.

In this project every parcel of land is deemed to be unavailable or available as supply.

- *Supply* – zoned industrial land classified as available for industrial development. This includes land that is vacant, disused or assigned to marginal non-industrial uses with little capital value, such as farm sheds.
- *Unavailable* – zoned industrial land classified as unavailable for industrial development. This includes land already occupied by industrial uses, construction sites, major infrastructure, capital intensive farming operations, established residential premises or where it is known that the owner has strong intentions not to develop the land in the medium to long term or when there is a known development commitment.

For all industrial land, each individual parcel is recorded with its size and the applicable zone. This enables an assessment of the overall or gross stock of land either as unavailable or available as supply.

In instances where industrial land was in the process of being approved for rezoning to another use (for example a Commercial, Residential or Mixed Use Zone) and, based on Council feedback, the land is identified as unavailable.

In several instances, discrete parcels of land (within one title) have been created to demonstrate a high degree of availability for development on a particular site. For example, where there is a significant area of land with a specific use operating from a small portion of the land and it is understood the balance of the land is regarded as a potential development site, the title area has been split to show the occupied and vacant components of the land.

The supply of industrial land must take into account the likelihood of a reasonable level of infrastructure servicing. However, the level of servicing required for industrial land in small towns is not necessarily high and industrial land may be considered as supply with only limited services available.

All industrial land that is identified as available as supply, is assessed to determine the "net developable land" which is the land available to develop for industrial uses. This is after allowing for local roads and open space as well as allowing for any constraints that are on the land. These constraints including native vegetation, flooding, or terrain can be very



significant and have large effects on the availability of land. The determination of net developable land is done on a site by site basis with reference to any constraints.

2.2 Industrial Lot Construction

Analysis of the cadastral database on land zoned for industrial purposes from July 2008 to March 2019 was undertaken to determine the location, volume and resultant lot size of industrial lot subdivisions.

2.3 Industrial Land Consumption

To determine industrial land consumption, examination of aerial imagery between specific periods was undertaken and updated to March 2019 via a land use survey of each previously identified vacant industrial allotment.

In comparing the extent to which consumption has occurred, land has been 'back cast' against previous periods to ensure like for like areas have been compared. This has been done to ensure that the effect of the rezoning of new industrial land or the rezoning of industrial land to non-industrial uses does not distort the actual consumption that has occurred between periods.

2.4 Future Demand

Projected industrial land demand has been based on the recent industrial land consumption method that calculates the use of industrial land by location, by zone and importantly area. This method is utilised by State Governments' Metropolitan and Regional Urban Development Program.

This method is particularly appropriate for large metropolises, regional centres and townships where there is sufficient demand for industrial land as well as unconstrained supply.

Historical industrial land consumption under the above conditions is a sound base to assess future consumption of industrial land consumption. However, economic/employment activity can and will invariably change. Specifically, as local resident population increases so will the requirement for additional employment land to 'service' the resident population needs. In addition, there is always the likelihood of 'export' related industry development that would require additional industrial land.

Due to this uncertainty relating to forecasting industrial land requirements, three demand scenarios are presented, namely:

Scenario One: Long Term Trend – is assumed at an average annual rate of industrial land consumption of 4.8 hectares. This represents actual industrial land consumption from 2009 to 2019.

Scenario Two: Recent Trend - is assumed at an average annual rate of industrial land consumption of 6.9 hectares. This represents actual industrial land consumption from 2015 to 2019.

Scenario Three: Sustained Accelerated Growth – is assumed at an average annual rate of industrial land consumption of 7.5 hectares. This represents actual industrial land consumption from 2017 to 2019.

Due to the demand for industrial land being relatively 'lumpy' (compared to residential land) the above approach provides sensitivity testing to allow for plausible significant increases in demand for industrial land.



2.5 Adequacy of Industrial Land Stocks

Industrial land 'adequacy' is illustrated by using the number of years of supply through the interaction of both demand and supply. The number of 'years of supply' is measured by dividing estimates of both zoned and unzoned areas (net developable) by the average annual rate of industrial land consumption.

Demand scenarios have been developed for potential higher levels of future demand, to take into account either higher population growth or specific changes to the employment/industrial land market i.e. increased economic development activity.

Industrial land is usually clustered together in definitive nodes or clusters due to the negative external effects of industrial uses on other land uses. Hence, industrial land is analysed through identified industrial precincts.

For the City of Greater Shepparton, the following industrial precincts have been identified, and subsequently land supply information reported and assessed at an industrial precinct and municipal level.

- East Shepparton
- Kialla
- Lemnos
- Mooroopna
- North Shepparton
- North West Shepparton
- Tatura.

The adequacy of industrial land stocks is reported at a municipal level.



3.0 Recent Industrial Development Activity

Key Findings

From July 2011 to the March quarter 2019 there was an average annual value of \$14.7 million for select industrial building approval activity. In recent years the value of industrial building approval activity has significantly increased. Increasing from \$13.8 million in 2016/17, to \$16 million in 2017/18 and to a record high at the **March quarter 2019 of over \$20 million.**

Since 2015/16 there have been 57 industrial lots constructed. Industrial lot subdivision activity has decreased marginally since 2015/16, averaging **15 per annum**. This compares to 19 lots per annum from 2008 to 2015.

Consumption of industrial land across Greater Shepparton for various time periods include:

- 3.45 hectares per annum from 2009 to 2015;
- 6.27 hectares per annum from 2015 to 2017; and
- 7.51 hectares per annum from 2017 to 2019.

The Manufacturing and Agricultural sectors in Greater Shepparton combined equate to:

- 25% of the total value add of the local economy;
- 25% of total employment; and
- 50% of the localised export value.

The value adding of the Agricultural sector has increased by 54% since 2015/16, increasing from \$280 million to \$435 million.

The following provides an overview of the quantum, location and composition of industrial (and related) development activity in terms of:

- Industrial subdivision activity;
- Consumption of industrial land (construction);
- Value of building approvals;
- Value of Gross Regional Product;
- Value adding by specific industry sectors;
- Value of specific local exports; and
- Employment.

3.1 Industrial Subdivision Activity

Detailed analysis of the cadastral database of industrial zoned land across Greater Shepparton was undertaken to establish the location, volume and resultant lot size of industrial subdivision activity. Table 1 summarises the results of this analysis.

From July 2008 to July 2015 there were a total of 115 zoned industrial land subdivisions, with the majority (79 or 69%) located in the East Shepparton industrial precinct and a further 28 lots (24% of activity) located in Kialla. There was minimal industrial subdivision activity in Lemnos, Mooroopna and North Shepparton. There was no industrial subdivision over this period in Tatura.

The majority (75%) of subdivisions resulted in industrial allotments sized from 0.1 to 0.5 hectares and 15% of subdivision resulting in lots sized less than 1,000 sqm.

From July 2008 to July 2015, on average there was 19 industrial subdivisions.



Table 1: Number of Industrial Subdivisions by Lot Size, 2008/09 to 2014/15

Precinct/LGA	Less than 0.1 hectares	0.1 to 0.5 hectares	0.5 to 1 hectares	1 to 5 hectares	5+ hectares	Total
East Shepparton	10	61	3	3	2	79
Kialla	5	21	2			28
Lemnos		2	2			4
Mooroopna	2					2
North Shepparton		2				2
Greater Shepparton	17	86	7	3	2	115

Source: Spatial Economics Pty Ltd

Since 2015/16 there have been 57 industrial lots constructed (Table 2). There has been a significant increase in the subdivision of lots sized from 0.5 to 5 hectares (50% of subdivision activity compared to 9% for the previous period). Again, the majority (61%) of this recent subdivision activity has been in the East Shepparton industrial precinct.

Industrial lot subdivision activity has decreased marginally since 2015/16, averaging 15 per annum. This compares to 19 lots per annum from 2008 to 2015.

Table 2: Number of Industrial Subdivisions by Lot Size, 2015/16 to 2018/19¹

Precinct/LGA	Less than 0.1 hectares	0.1 to 0.5 hectares	0.5 to 1 hectares	1 to 5 hectares	5+ hectares	Total
East Shepparton		20	10	5		35
Kialla		1	1	1		3
Mooroopna	3					3
North Shepparton		3	1	3	1	8
Tatura		1	2	5		8
Greater Shepparton	3	25	14	14	1	57

Source: Spatial Economics Pty Ltd

1: As at March quarter 2019

The majority (75% or 24 lots) of industrial subdivision activity has been on land zoned Industrial 1 (IN1Z), 14% or 24 lots zoned Commercial 2 (C2Z) and the remainder (11% or 19 lots) zoned Industrial 3 (INZ3).

The resultant lot size from industrial land subdivision across Greater Shepparton is typically 2,900 sqm. However, there is significant variance across the differing industrial precincts, ranging from:

- 2,700 sqm in East Shepparton;
- 3,000 sqm in Kialla;
- 5,900 sqm in Lemnos;
- 6,200 sqm in North Shepparton; and
- 1.72 hectares in Tatura.



3.2 Consumption of Industrial Land

Detailed analysis of existing and historic aerial imagery combined with zoning/cadastral information and current comprehensive land use surveys from 2009 to 2019 has been used to establish the consumption of industrial land.

Consumption of industrial land refers to the construction on previously unoccupied industrial land over-time.

From this assessment the consumption of industrial land can be established by location, lot size and zoning. Consumption of industrial land is used as the primary indicator of future demand for industrial land and therefore the adequacy (years of supply) can be established.

There has been a steady and substantial increase over-time of the consumption of industrial land across the Greater Shepparton municipal area.

Consumption of industrial land across Greater Shepparton for various time periods include:

- 3.45 hectares per annum from 2009 to 2015;
- 6.27 hectares per annum from 2015 to 2017; and
- 7.51 hectares per annum from 2017 to 2019.

As measured from 2015 the distribution of industrial land consumption by industrial precinct includes:

- 3.9 hectares per annum in East Shepparton (57% of construction activity);
- 2 hectares per annum in North Shepparton (29% of activity); and
- 0.9 hectares per annum in Kialla (13% of activity).

Comparatively there was minimal industrial land consumption in the industrial precincts of Lemnos, Mooroopna, North West and Tatura.

As measured from 2009 to 2019, 48.25 hectares of industrial land was consumed across Greater Shepparton, the majority (61% or 29.6 hectares) of this consumption has been on land zoned Industrial 1 (INZ1). This is followed by land zoned Commercial 1 (C1Z) at 15 hectares and 3.6 hectares of land zoned Industrial 3 (INZ3).

Further analysis has been undertaken to establish the lot size distribution of consumed industrial land from 2009 to 2019. This is a prime indicator of expressed demand for new industrial built premises. In total there was 71 separate industrial lots that had industrial premises constructed. In summary:

- 70% or 50 lots were sized from 0.1 to 0.5 hectares;
- 17% or 12 lots were sized 0.5 to 1 hectare in size;
- 11% or 8 lots were sized 1 to 5 hectares; and
- 1 lot was sized greater than 5 hectares.

Over this period, there was 43 lots consumed in the East Shepparton industrial precinct, 15 in Kialla and 11 in North Shepparton.



3.3 Industrial Building Approval Activity

The following provides an overview of the value of selected industrial building approvals by type for Greater Shepparton, Table 3 summarises the outcomes.

Table 3: Value (\$ million) of Industrial Building Approvals by Type

	2011/ 12	2012/ 13	2013/ 14	2015/ 16	2016/ 17	2017/ 18	2018/ 19 ¹
Factories	0.60	10.28	2.09	3.54	4.90	2.62	9.03
Warehouses	7.53	5.93	2.49	5.26	4.68	4.19	8.96
Agricultural Buildings	3.15	0.79	1.48	4.93	3.84	8.01	0.74
Other industrial buildings	0.11	0.43	0.20	0.85	0.26	1.19	1.45
Greater Shepparton	11.39	17.43	6.27	14.58	13.68	16.00	20.19

Source: Australian Bureau of Statistics. Building Activity. Cat# 8752.0

1: As at March quarter 2019

From July 2011 to the March quarter 2019 there was an average annual value of \$14.7 million for select industrial building approval activity. In recent years, the value of industrial building approval activity has significantly increased. Increasing from \$13.8 million in 2016/17, to \$16 million in 2017/18 and to a record high at the March quarter 2019 of over \$20 million.

In 2018/19, there was \$9 million in building approvals for factories and nearly \$9 million of approvals for Warehouses. Whereas, in 2017/18 there was significant value (\$8 million) for Agricultural Buildings.

In recent years, the value of industrial building approval activity has significantly increased compared to the medium-term average, this will directly correlate into increased levels of industrial land consumption.

3.4 Supporting Indicators of Industrial Development Activity

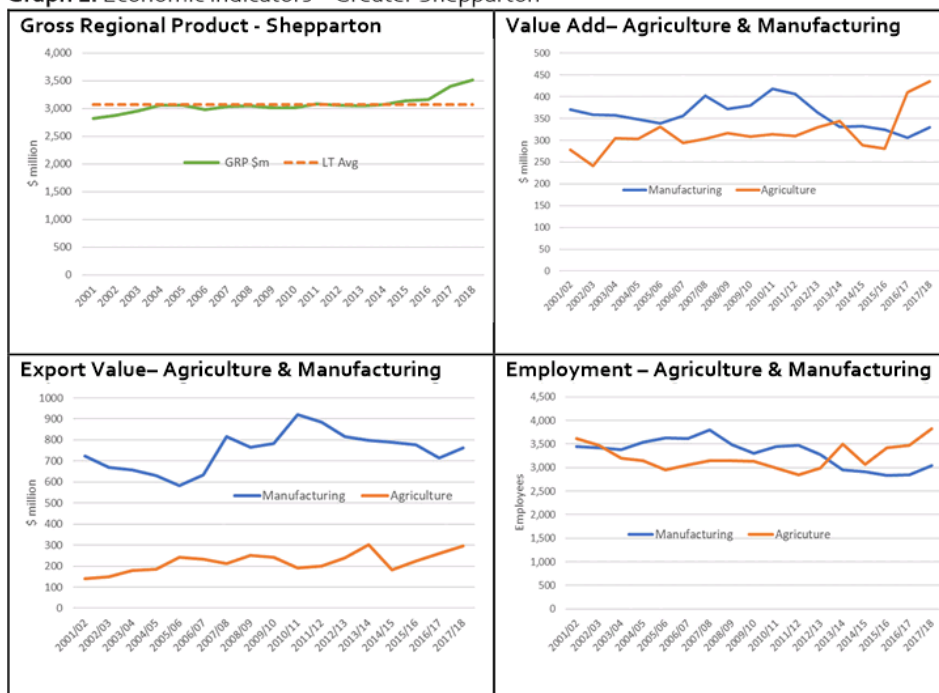
The following provides a brief snapshot of economic activity trends in Greater Shepparton that provides an insight to the likely future industrial activity and therefore ultimately, informing industrial land requirements.

The Gross Regional Product (GRP) is a prime indicator of level of economic activity, in that the GRP is the market value of all final goods and services produced by all firms in an economy.

Historically, the GRP for Greater Shepparton has been relatively consistent at around \$3,073 million per annum. However, since 2014 the GRP has increased by 14% to \$3,512 million in 2018.



Graph 1: Economic Indicators – Greater Shepparton



Source: id community

Both the Manufacturing and Agricultural sectors are key drivers for the consumption of industrial land in Greater Shepparton, directly via manufacturing, processing of agricultural commodities and associated wholesaling, transport and distribution.

The Manufacturing and Agricultural sectors in Greater Shepparton combined equate to:

- 25% of the total value add of the local economy;
- 25% of total employment; and
- 50% of the localised export value.

Total employment in Greater Shepparton since 2010/11 has increased by 7%, however employment in the Agricultural sector has increased by 24%. Whereas, for the same period, employment in the Manufacturing sector declined by 12%.

The decline in Manufacturing employment is reflected in both the decline of the value adding value and export value of this sector. However, Manufacturing still remains a significant driver of the economy in Greater Shepparton (and therefore industrial land consumption). In 2017/18, the Manufacturing industry created \$761 million in export value compared to \$295 million for the Agricultural industry.

In recent years, the Agricultural industry in Greater Shepparton has experienced significant growth. In terms of total export value, in 2017/18 matched the previous peak of approximately \$295 million, increasing from a low of \$182 million in 2014/15.

Importantly, the value adding of the Agricultural sector has increased by 54% since 2015/16, increasing from \$280 million to \$435 million.

The industrial sector in Greater Shepparton is experiencing strong growth in recent years, this will ultimately flow into to the demand for industrial land, particularly for agricultural



processing, transport logistics, warehousing and smaller support industries such as refrigeration repairs/maintenance, mechanical servicing etc.

Key Issues

Greater Shepparton in recent years has experienced a significant increase in industrial activity, in terms of:

- Consumption of industrial land, up from 3.35 hectares historically to 7.5 hectares recently;
- Value of select industrial building approvals up from \$6 million in 2013/14 to \$20 million at the March q 2019;
- the value adding of the Agricultural sector has increased by 54% since 2015/16, increasing from \$280 million to \$435 million; and
- employment in the Agricultural sector has increased by 24% since 2010/11.

However, the quantum of industrial subdivision activity has been relatively constant over-time, with a slight decline in recent years. This indicates industrial development activity has been on existing vacant lot stock.

Of strategic importance is the clear observed significant increase in industrial development activity. It is unknown and difficult to accurately predict whether this level of development activity will sustain over the longer term. What is critical, is to plan for this level of development activity and hence plan for plausible demand scenarios.



4.0 Industrial Land Stocks

Key Findings

As at March 2019, there was a total of 644.5 hectares of zoned industrial land stocks, of which 138 hectares were assessed as available (supply) for industrial purpose development. This quantum of zoned industrial land supply relative to unavailable industrial land stocks equates to a total land area vacancy rate of 21%.

In terms of the geographic spread of zoned industrial land stocks across Greater Shepparton, the large majority of industrial land is located in the industrial precinct of East Shepparton, with a total of 313 hectares - 49% of the total zoned industrial land stocks.

The next largest industrial precinct is North Shepparton at 92 hectares. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 58.7 hectares;
- Kialla – 54.7 hectares;
- North West Shepparton – 53.9 hectares;
- Mooroopna – 41.6 hectares; and
- Tatura – 30.4 hectares.

Across Greater Shepparton there is a variety of industrial zone types, specifically there are:

- 40 hectares of land zoned Industrial 3 (INZ3);
- 96 hectares of land zoned Commercial 2 (C2Z);
- 253 hectares of land zoned Special Use (SUZ - 6, 9 & 11); and
- 509 hectares of land zoned Industrial 1 (INZ1).

There are five major sites identified for future potential industrial zoning across Greater Shepparton. Of these sites two are located in Tatura (8 and 14 hectares respectively), one in Mooroopna (20 hectares), one in Lemnos (38 hectares) and one in North Shepparton (162 hectares).

As at March 2019, there was a total of 961 zoned industrial allotments, of which 108 lots were identified as available supply.

Of the 961 industrial allotments 76% are sized below 0.5 hectares, specifically 238 lots are sized less than 1,000 sqm and 495 lots sized from 1,000 to 5,000 sqm. There are 228 lots sized greater than 5,000 sqm across the municipal area, of which only 30 are identified as supply.

The following section of the report provides an overview of:

- existing zoned industrial land stocks;
- identified future (unzoned) industrial land stocks;
- stock of available (supply) and unavailable industrial land stocks;
- lot size distribution; and
- estimated net developable area.

The industrial land market across Greater Shepparton is primarily located in the urban centres of Shepparton/Mooroopna and to a lesser degree Tatura. For this report, seven industrial precincts have been established on distinct geographical industrial sub-markets. These include: East Shepparton, Lemnos, North Shepparton, North West Shepparton, Mooroopna, Kialla and Tatura.

The majority of historical activity in terms of subdivision, construction and existing industrial uses are located within the East Shepparton industrial precinct.



4.1 Industrial Land Stocks - Area

As at March 2019², there was a total of 644.5 hectares of zoned industrial land stocks, of which 138 hectares were assessed as available (supply) for industrial purpose development. This quantum of zoned industrial land supply relative to unavailable industrial land stocks equates to a total land area vacancy rate of 21%.

Compared to the previous industrial land supply assessment undertaken in 2016, the comparable land vacancy rate for land zoned Industrial 1 (INZ1) and Industrial 2 (INZ2) has substantially decreased, from 34% to 23%. This simply illustrates the recent consumption levels and known commitments for the zoned industrial land stocks in recent years.

In terms of the geographic spread of zoned industrial land stocks across Greater Shepparton, the large majority of industrial land is located in the industrial precinct of East Shepparton, with a total of 313 hectares - 49% of the total zoned industrial land stocks. Of this industrial land located in East Shepparton, 52 hectares is identified as available supply (down from 98 hectares at the 2016 assessment), a 16% land area vacancy rate.

The next largest industrial precinct is North Shepparton at 92 hectares, of which 12.7 hectares is identified as supply. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 58.7 hectares;
- Kialla – 54.7 hectares;
- North West Shepparton – 53.9 hectares;
- Mooroopna – 41.6 hectares; and
- Tatura – 30.4 hectares.

Table 4 summarises the gross area of industrial land stocks by land status and zone type across Greater Shepparton by industrial precinct.

Across Greater Shepparton there is a variety of industrial zone types, specifically there are:

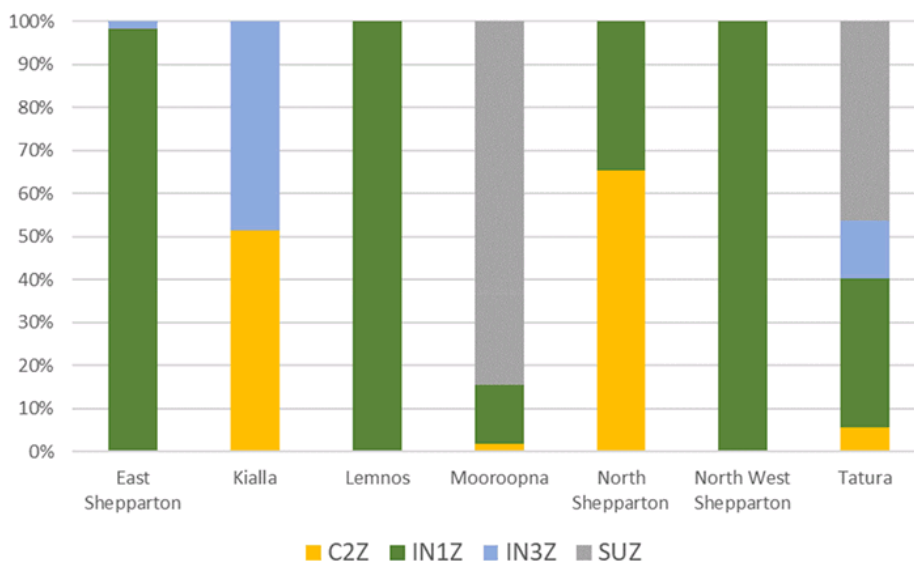
- 40 hectares of land zoned Industrial 3 (INZ3);
- 96 hectares of land zoned Commercial 2 (C2Z);
- 253 hectares of land zoned Special Use (SUZ - 6, 9 & 11); and
- 509 hectares of land zoned Industrial 1 (INZ1).

Graph 2 below illustrates the zoning composition by industrial precinct (measured in area).

² This figure excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11



Graph 2: Zoning Composition by Industrial Precinct (area), 2019



Source: Spatial Economics Pty Ltd

There are three separate areas zoned Special Use. The area zoned SUZ6 is reserved for and for uses associated with the GV Link Freight Logistics Centre. This land is currently undeveloped. This site will not be available for general industrial use. However, the specific location of a freight and logistics centre will mean that there is limited demand for industrial land for these purposes elsewhere across the City of Greater Shepparton.

The areas zones SUZ9 and SUZ11 are designated for Tatura Milk Industries and Unilever respectively and these two industries control all of the land, hence the land is deemed unavailable.

There are five major sites identified for future potential industrial zoning across Greater Shepparton. Of these sites two are located in Tatura (8 and 14 hectares respectively), one in Mooroopna (20 hectares), one in Lemnos (38 hectares) and one in North Shepparton (162 hectares).

Investigation Area 10 (Investigation Area 4 in Clause 21.04-1 Urban Consolidation and Growth) – East of Doyles Road, Grahamvale -has not been included in this assessment as potential (unzoned) industrial land. This is primarily due to the uncertainty of this area regarding its suitability for industrial development. There are a variety of strategic planning issues to be addressed including: access; drainage, flooding and proximity to sensitive land uses. At this stage it is unclear what the future land use or land uses will be.

4.2 Industrial Land Stocks – Lot Size Distribution

Table 6³ below details the number of zoned industrial lots by selected lot size cohorts. As at March 2019, there was a total of 961 zoned industrial allotments, of which 108 lots were identified as available supply.

Of the 961 industrial allotments 76% are sized below 0.5 hectares, specifically 238 lots are sized less than 1,000 sqm and 495 lots sized from 1,000 to 5,000 sqm. There are 228 lots

³ Excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11



sized greater than 5,000 sqm across the municipal area, of which only 30 are identified as supply.

Spatial Economics make the observation that the lot size distribution in Greater Shepparton has a higher proportion of larger lots compared to other major regional Victorian urban centres.

Of the industrial allotments located in the East Shepparton industrial precinct, there are 521 lots sized below 0.5 hectares, of which 57 are identified as supply. There is an additional 113 lots sized greater than 5,000 sqm, of which only 13 are identified as supply. East Shepparton has a lot vacancy rate of 11%, which is considered low.

Of the 109 industrial allotments in the Kialla industrial precinct, 21 have been identified as supply (19% lot vacancy rate).

For the remaining industrial precincts as at March 2019, there were:

- North Shepparton – total of 85 industrial lots (5% vacancy rate);
- Tatura – total of 51 industrial lots (4% vacancy rate);
- Mooroopna – total of 49 industrial lots (16% vacancy rate);
- Lemnos – total of 20 industrial lots (10% vacancy rate); and
- North West Shepparton – total of 13 industrial lots (8% vacancy rate).



Map 1: Industrial Precincts – Greater Shepparton

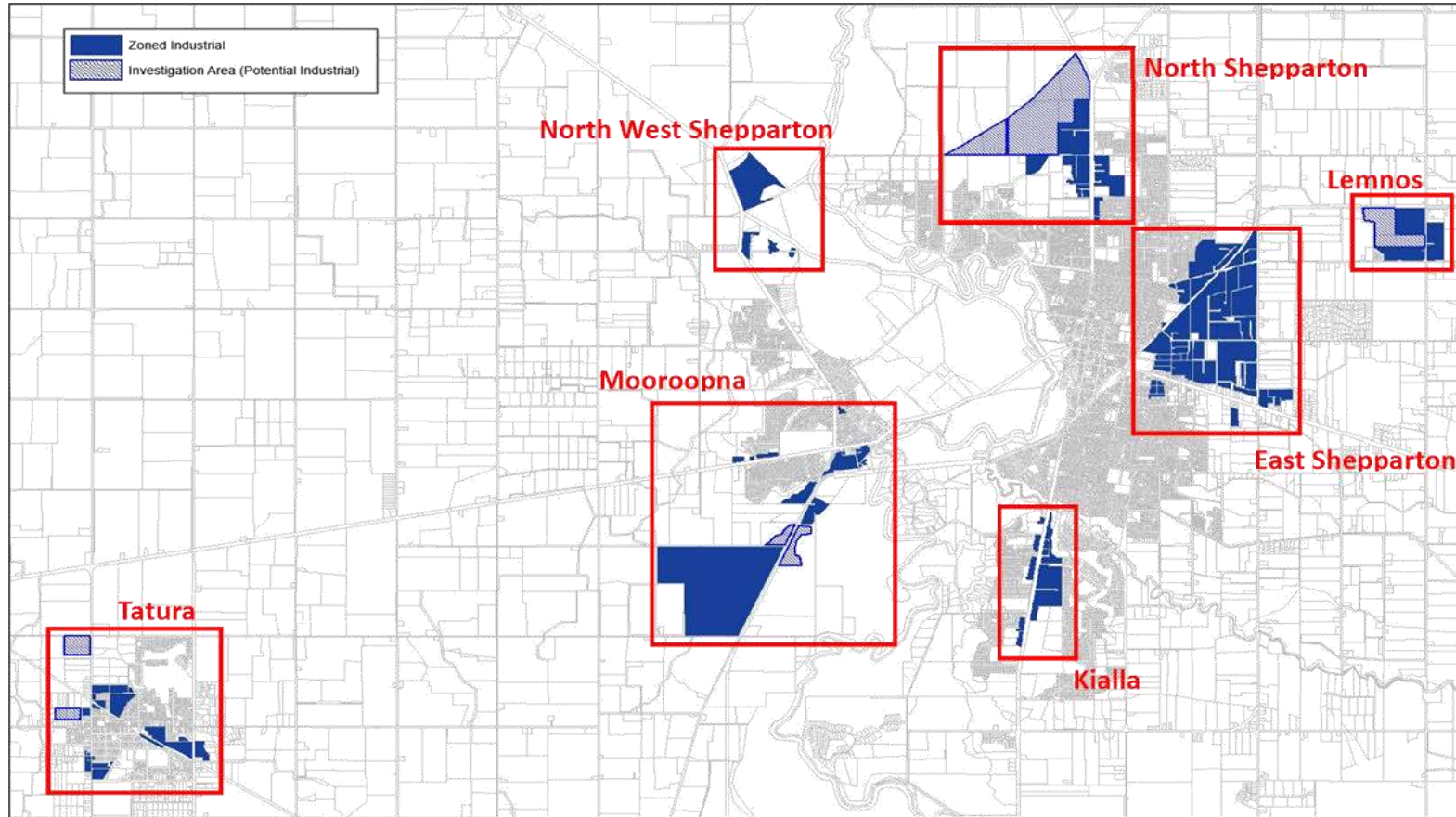


Table 4: Gross Area (hectares) of Industrial Land Stocks, 2019

Industrial Precinct/LGA	C2Z			IN1Z			IN3Z			Total Zoned Stocks			SUZ		
	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %	Unavailable	Supply	Land Area Vacancy Rate %
East Shepparton				256.1	51.4	17%	5.5	0.2	3%	261.5	51.6	16%			
Kialla	23.5	4.8	17%				15.5	11.0	42%	39.0	15.8	29%			
Lemnos				54.6	4.2	7%				54.6	4.2	7%			
Mooroopna	3.7	0.8		30.0	7.1	19%				33.7	7.9	19%		226.5	100%
North Shepparton	53.5	6.6	11%	25.9	6.0	19%				79.4	12.7	14%			
North West Shepparton				9.1	44.9	83%				9.1	44.9	83%			
Tatura	3.2		0%	19.0	0.7	4%	7.5		0%	29.7	0.7	2%	26.3		0%
Greater Shepparton	83.9	12.2	13%	394.5	114.2	22%	28.5	11.2	28%	506.9	137.7	21%	26.3	226.5	90%

Source: Spatial Economics Pty Ltd

Table 5: Industrial Land Stocks - Lots, 2019

Industrial Precinct/LGA	C2Z			IN1Z			IN3Z			Total Zoned Stocks			SUZ		
	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %
East Shepparton				502	68	12%	62	2	3%	564	70	11%			
Kialla	71	8	10%				17	13	43%	88	21	19%			
Lemnos				19	2	10%				19	2	10%			
Mooroopna	6	2	25%	35	6	15%				41	8	16%	2		100%
North Shepparton	66	3	4%	15	1	6%				81	4	5%			
North West Shepparton				12	2	14%				12	2	14%			
Tatura	18		0%	22	2	8%	9		0%	49	2	4%	5		0%
Greater Shepparton	161	13	7%	605	81	12%	88	15	15%	854	109	11%	5	2	29%

Source: Spatial Economics Pty Ltd

Table 6: Number of Zoned Industrial Allotments by Lot Size Cohort, 2019⁴

Industrial Precinct/LGA	Less than 0.1 hectares			0.1 to 0.5 hectares			0.5 to 1 hectares			1 to 5 hectares			5 to 10 hectares			10+ hectares			Total Lots		
	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %
East Shepparton	190	5	3%	274	52	16%	53	4	7%	37	6	14%	9	3	25%	1		0%	564	70	11%
Kialla	9		0%	62	14	18%	11	3	21%	5	3	38%	1	1	50%				88	21	19%
Lemnos				6		0%	5	1	17%	5	1	17%	2		0%				18	2	10%
Mooroopna	16		0%	14	4	22%	2	1	33%	6	3	33%	3		0%				41	8	16%
North Shepparton	8		0%	38	1	3%	15		0%	17	2	11%	3	1	25%				81	4	5%
North West Shepparton				7		0%	3	1	25%	2		0%							12	1	8%
Tatura	10		0%	21	2	9%	13		0%	4		0%	1		0%				49	2	4%
Greater Shepparton	233	5	2%	422	73	15%	102	10	9%	76	15	16%	19	5	21%	1		0%	853	108	11%

Source: Spatial Economics Pty Ltd

⁴ This table excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11

4.3 Supply of Industrial Land

As previously outlined, there was, at March 2019, 138 gross hectares of zoned available industrial land supply (excluding land zoned Special Use).

Of this identified supply, there will be a proportion of land not available for development. Such land development take-outs including, but not limited to local and regional roads, supporting infrastructure, open space requirements, native vegetation, excessive slope and other environmental constraints (waterways). Land development take-outs vary by site and particularly the size of the allotment.

Specific land development take-outs have been assessed on a parcel by parcel basis and results in an estimate of the net developable area i.e. the area available for actual industrial site development.

In total for zoned industrial land stocks¹ across the municipal area there is approximately 100 net developable hectares and 125 hectares for the GV Link sites (SUZ6). In terms of future identified industrial land stocks (unzoned) there is an estimated 154 net developable hectares.

The graphs below illustrate the supply of industrial allotments by selected lot size cohort. The majority of industrial lot supply (68% or 73 lots) are sized between 0.1 and 0.5 hectares, with a further 5 allotments below 0.1 hectares. This reflects the distribution of recent consumption, subdivision and occupied industrial lot status across the municipality. In essence, reflecting the lot size configuration of historical and existing demand.

There are only 15 industrial lots identified as supply that are sized from 1 to 5 hectares, of which six are located in the East Shepparton industrial precinct and three respectively within the industrial precincts of Kialla and Mooroopna. The size of these allotments represents an opportunity for further/future subdivision.

Of the industrial lots identified as supply across Greater Shepparton:

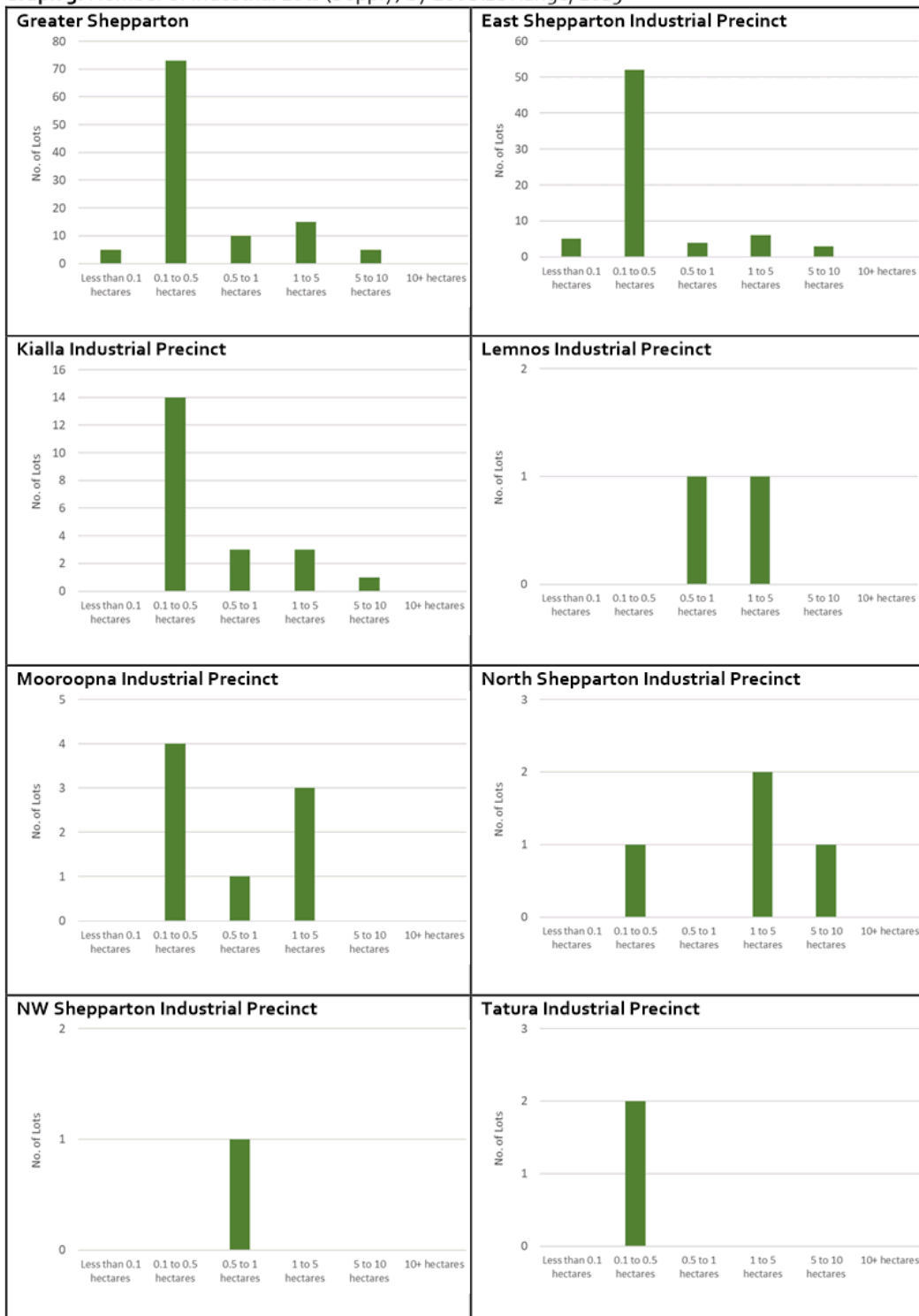
- 70 are located in the East Shepparton precinct;
- 21 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 4 in the North Shepparton precinct;
- 2 respectively in the Lemnos and Tatura precinct; and
- 1 in the North West Shepparton precinct.

It is clear that there are limited industrial lot stocks across Greater Shepparton, both in terms of smaller and larger allotments. The lack of larger allotments is an issue for potential large industrial land users to locate/expand in Shepparton and as a land supply source for potential subdivision.

¹ Industrial zones of C2Z, IN1Z and IN2Z



Graph 3: Number of Industrial Lots (Supply) by Lot Size Range, 2019



Source: Spatial Economics Pty Ltd



Key Issues

Spatial Economics have identified that there are insufficient stocks of zoned industrial land across Greater Shepparton to meet the underlying requirements in the medium term. As at March 2019, there was 138 gross hectares of zoned available industrial land supply (excluding land zoned Special Use). This is likely to equate to approximately 100 net developable hectares.

Of the industrial lots identified as supply across Greater Shepparton, there are only:

- 70 located in the East Shepparton precinct;
- 21 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 4 in the North Shepparton precinct;
- 2 respectively in the Lemnos and Tatura precinct; and
- 1 in the North West Shepparton precinct.

The majority of industrial lot supply (68% or 73 lots) are sized between 0.1 and 0.5 hectares, with a further 5 allotments below 0.1 hectares. There are only 15 industrial lots identified as supply that are sized from 1 to 5 hectares, of which six are located in the East Shepparton industrial precinct and three respectively within the industrial precincts of Kialla and Mooroopna. There are no lots identified as supplied sized above ten hectares.

It is clear that there are limited industrial lot stocks across Great Shepparton, both in terms of smaller and larger allotments. The lack of larger allotments is an issue for potential large industrial land users to locate/expand in Shepparton and as a land supply source for potential subdivision.



5.0 Adequacy of Industrial Land Stocks

Key Findings

In total, there is between **13 to 21 years** supply of zoned industrial land across Greater Shepparton and an additional **20 to 32 years** supply of land identified for future industrial zoning/development.

Spatial Economics consider there are currently insufficient zoned broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a rapid increase in the actual consumption of industrial land at unprecedented levels.

The adequacy of supply is measured by dividing estimates of the net developable area by the average annual rate of industrial land consumption. The result is a measure of adequacy expressed in years.

Firstly, identifying the future location and amount of consumption of industrial land is an uncertain task. Current levels of consumption are used as an indication of the adequacy of industrial land supply. However, the level and location of future consumption may change due to:

- the investment and business activity behaviour of the private sector;
- trends in the global economy;
- propensity for certain activities to agglomerate;
- directions in technology;
- population/employment trends;
- environmental impacts and adaptation; and
- social attitudes.

Historical industrial land consumption is a sound base to assess future consumption of industrial land. However, economic/employment activity can and will invariably change. Specifically, as local resident population increases so will the requirement for additional employment land to 'service' resident population needs. In addition, there is always the likelihood of 'export' related industry development that would require additional industrial land – this is particularly apt for Greater Shepparton.

Due to this uncertainty relating to forecasting industrial land requirements three demand scenarios and related adequacies are presented below.

Scenario One: Long Term Trend – is assumed at an average annual rate of industrial land consumption of 4.8 hectares. This represents actual industrial land consumption from 2009 to 2019.

Scenario Two: Recent Trend - is assumed at an average annual rate of industrial land consumption of 6.9 hectares. This represents actual industrial land consumption from 2015 to 2019.

Scenario Three: Sustained Accelerated Growth – is assumed at an average annual rate of industrial land consumption of 7.5 hectares. This represents actual industrial land consumption from 2017 to 2019.

These three demand scenarios are chosen as they are a simple, transparent and a relevant way to account for an unexpected increase in demand in the future. This approach to include sensitivity testing of projected industrial land consumption is an approach the State Governments' Regional Urban Development Program includes in their industrial land supply assessment.

In total, there is between **13 to 21 years** supply of zoned industrial land across Greater Shepparton and an additional **20 to 32 years** supply of land identified for future industrial zoning/development.



The 'years of supply' is primarily dependent on 1) the realised demand scenario; and 2) the major assumption that all identified supply is made available for development/market. In regard to the latter, there are many factors that may influence the identified land stocks not being available to the market such as ownership intentions, costs of development, land products not meeting industrial land user requirements (lot size, configuration, incompatible neighbouring uses etc).

It is imperative that there are sufficient zoned industrial land stocks, with diverse lot sizes to meet industrial land users' requirements. If suitable land stocks are not available, firms will readily locate to competing areas, most likely outside of Greater Shepparton.

Spatial Economics consider there are currently insufficient zoned industrial broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a rapid increase in the actual consumption of industrial land at unprecedented levels.

Furthermore, there is currently significant commitment from a variety of larger industrial land users to expand and locate their businesses e.g. Freedom Foods, Visy, Powercorp. These commitments (amongst other) equate to approximately 53 hectares of zoned industrial land and as at March 2019, have yet to start construction.

The estimation of 13 to 21 years supply of zoned industrial land masks the current deficiency of zoned industrial land across Greater Shepparton.

In total, there are only 109 vacant industrial allotments, representing a lot vacancy rate of just 11%. Both the quantum and vacancy rate relative to metropolitan Melbourne and other major regional Victorian centres is considerably low. Typically, the lot vacancy rate is from 25 to 30%.

Outside of the industrial precincts of East Shepparton and Kialla there are minimal vacant zoned industrial lots, specifically by industrial precinct:

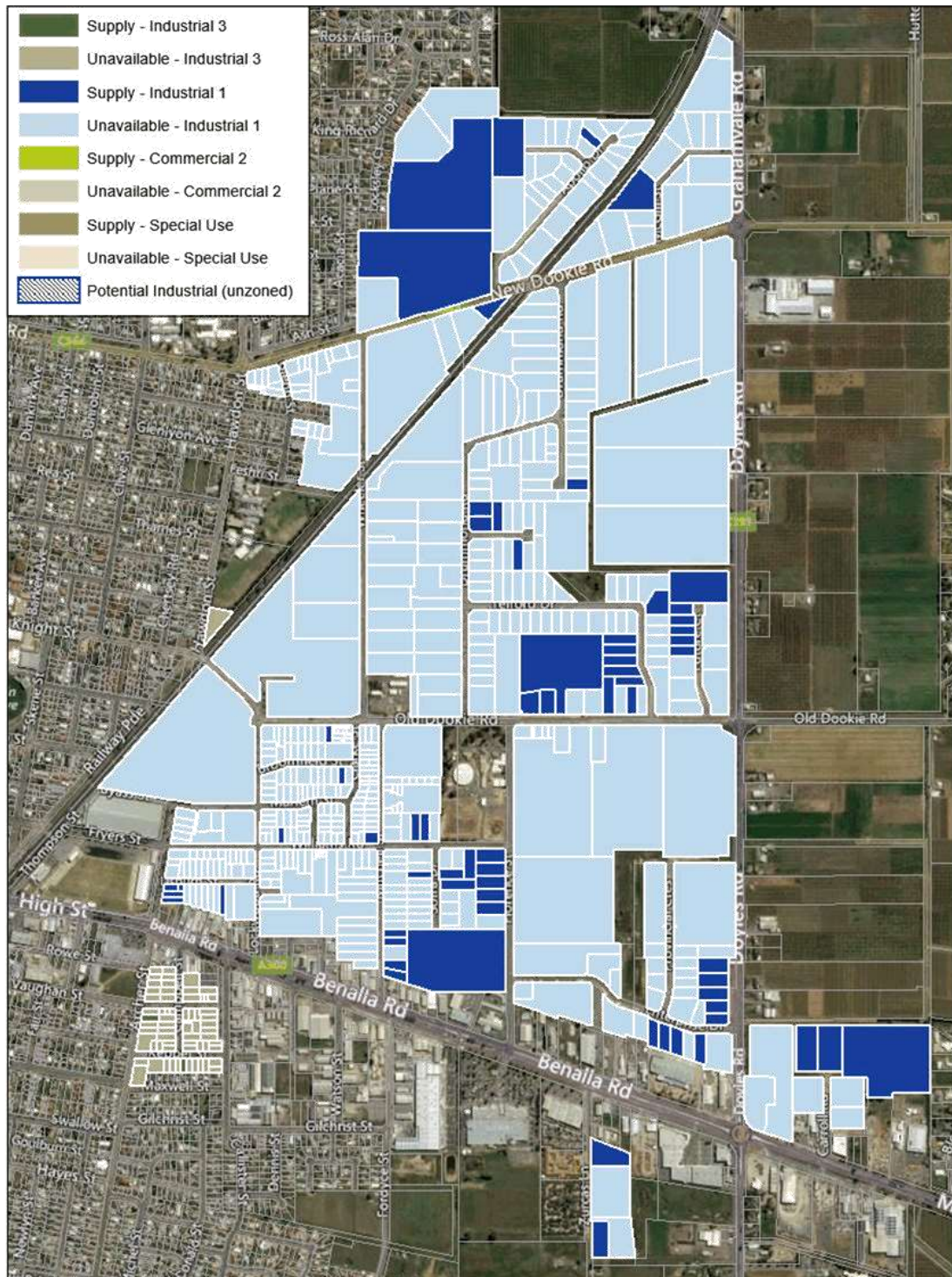
- Lemnos – 2 lots;
- Mooroopna – 8 lots;
- North Shepparton – 4 lots;
- North West Shepparton – 2 lots; and
- Tatura – 2 lots.

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 30% of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 31 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and none over 10 hectares. This provides limited choice for potential large industrial land users and limited stock for further subdivision to smaller allotments.

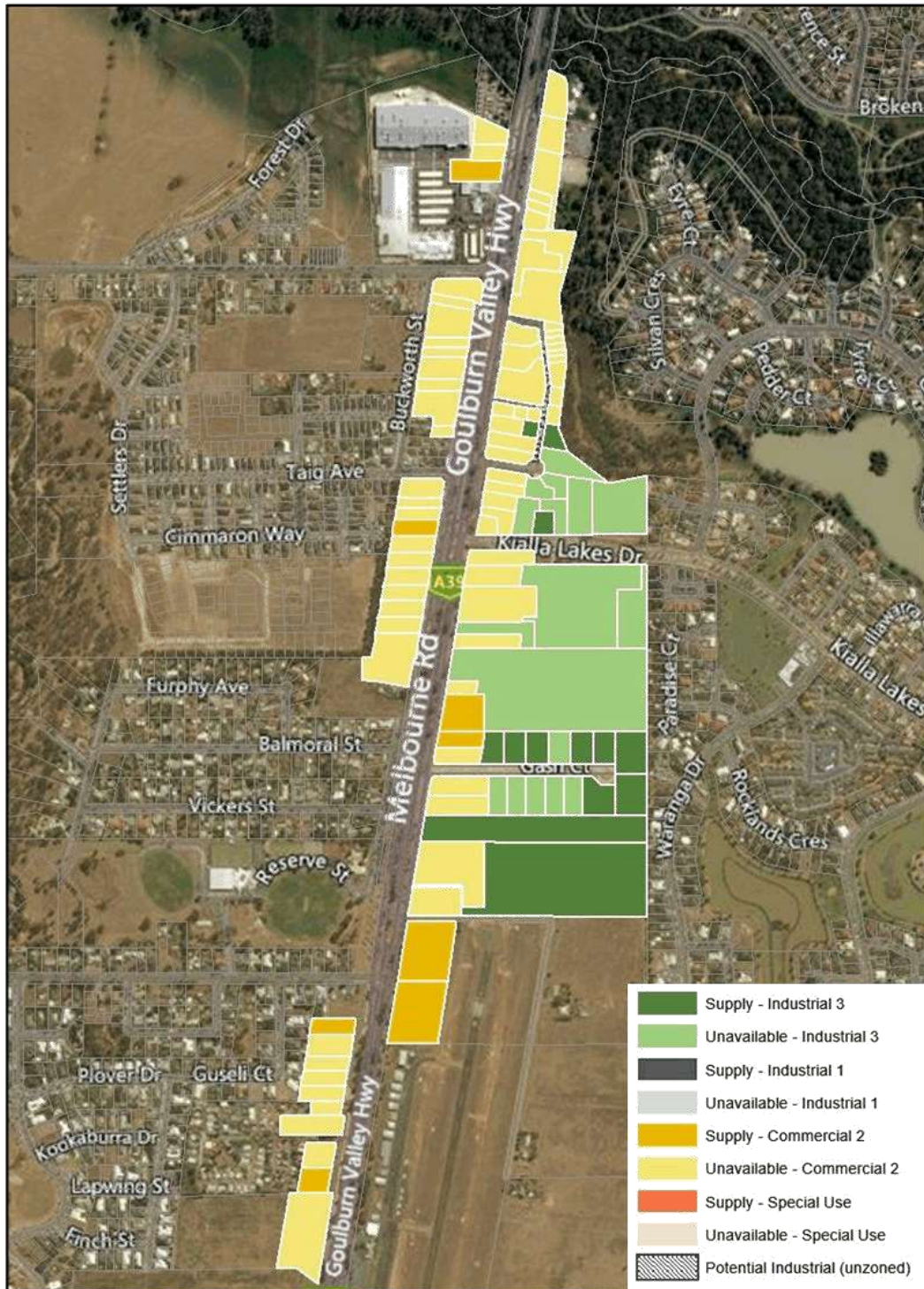
There are currently 233 industrial land users on lots sized less than 1,000 sqm, but only 5 vacant lots in this size.



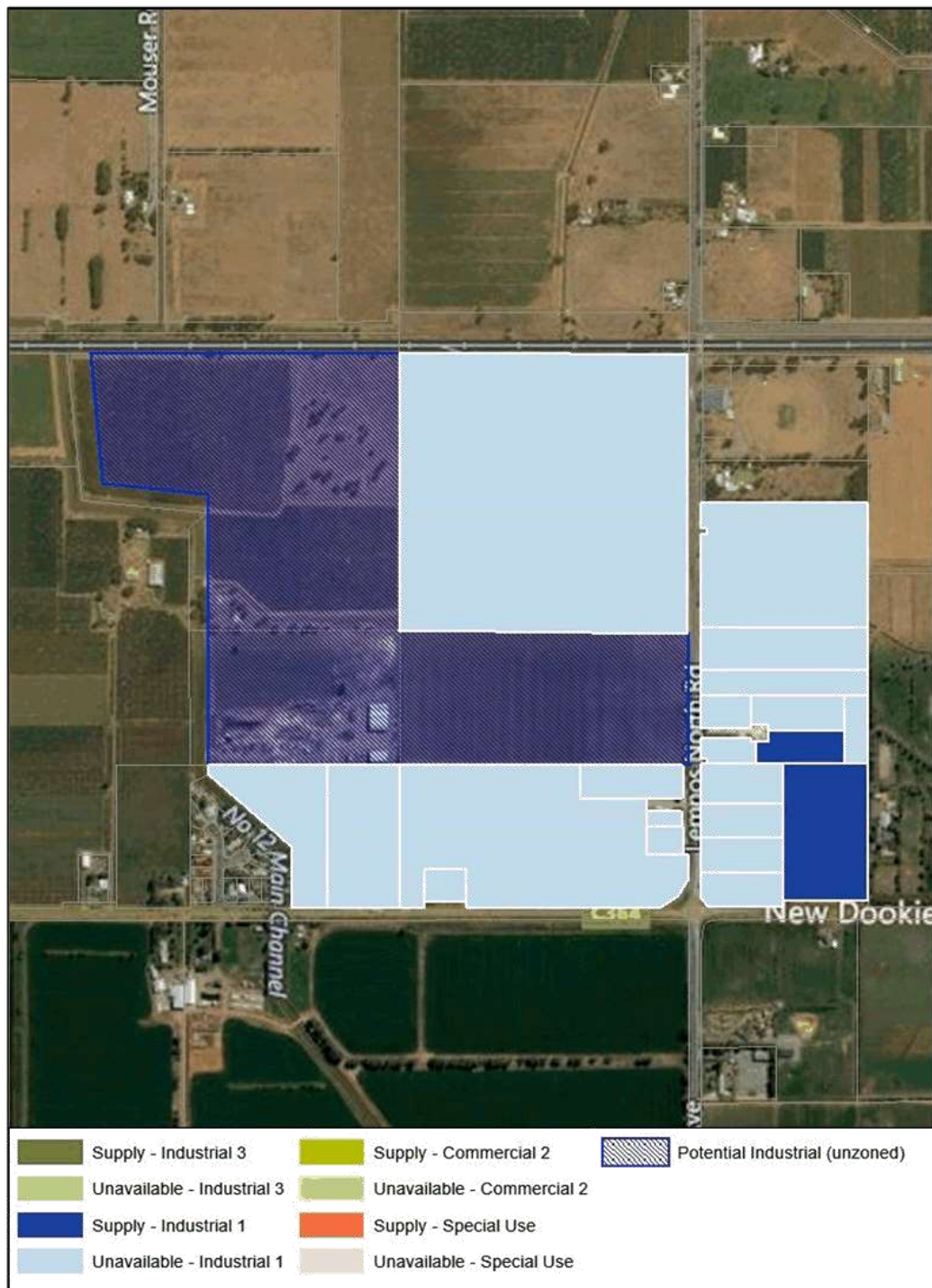
Map 2: East Shepparton Industrial Precinct



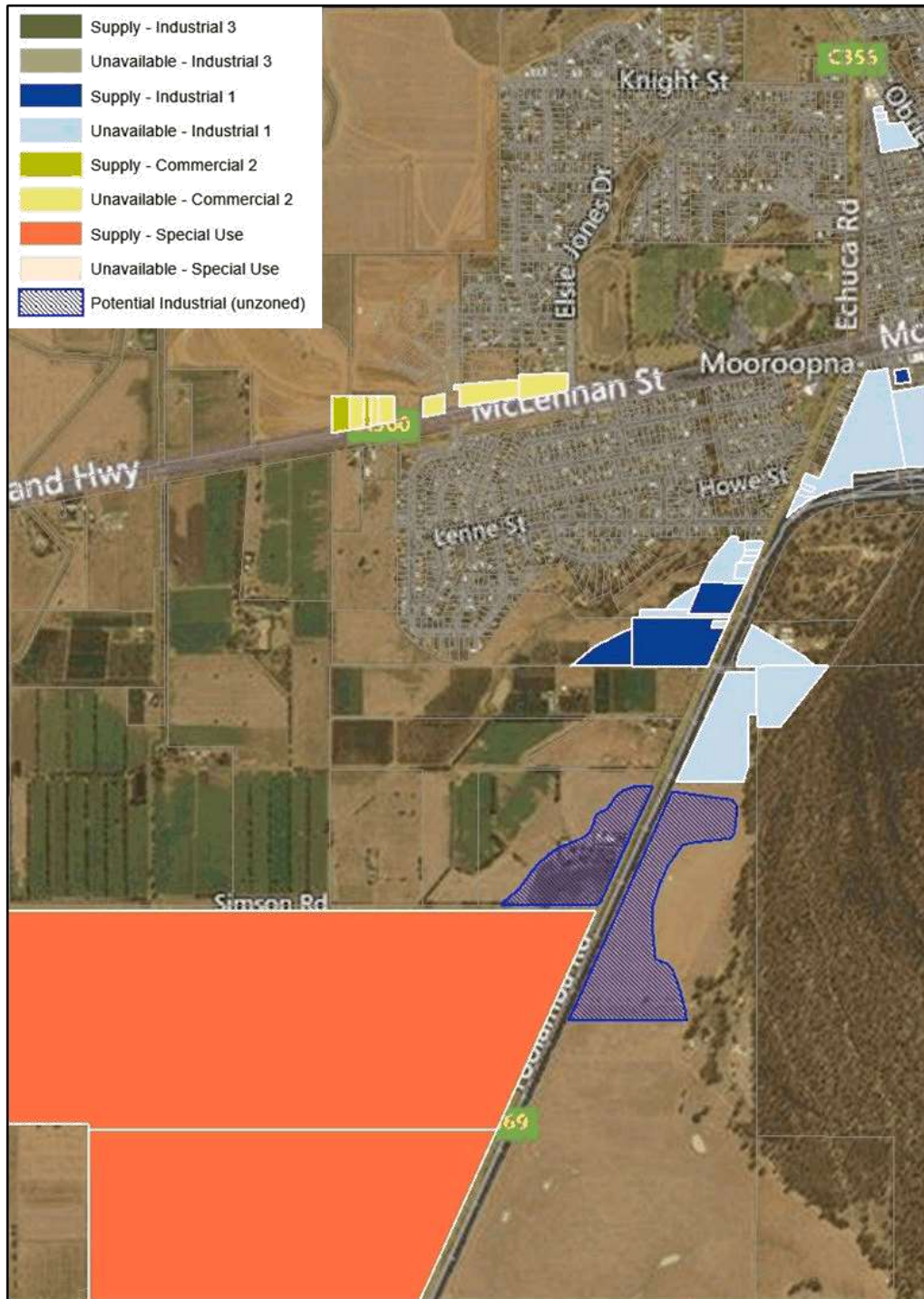
Map 3: Kialla Industrial Precinct



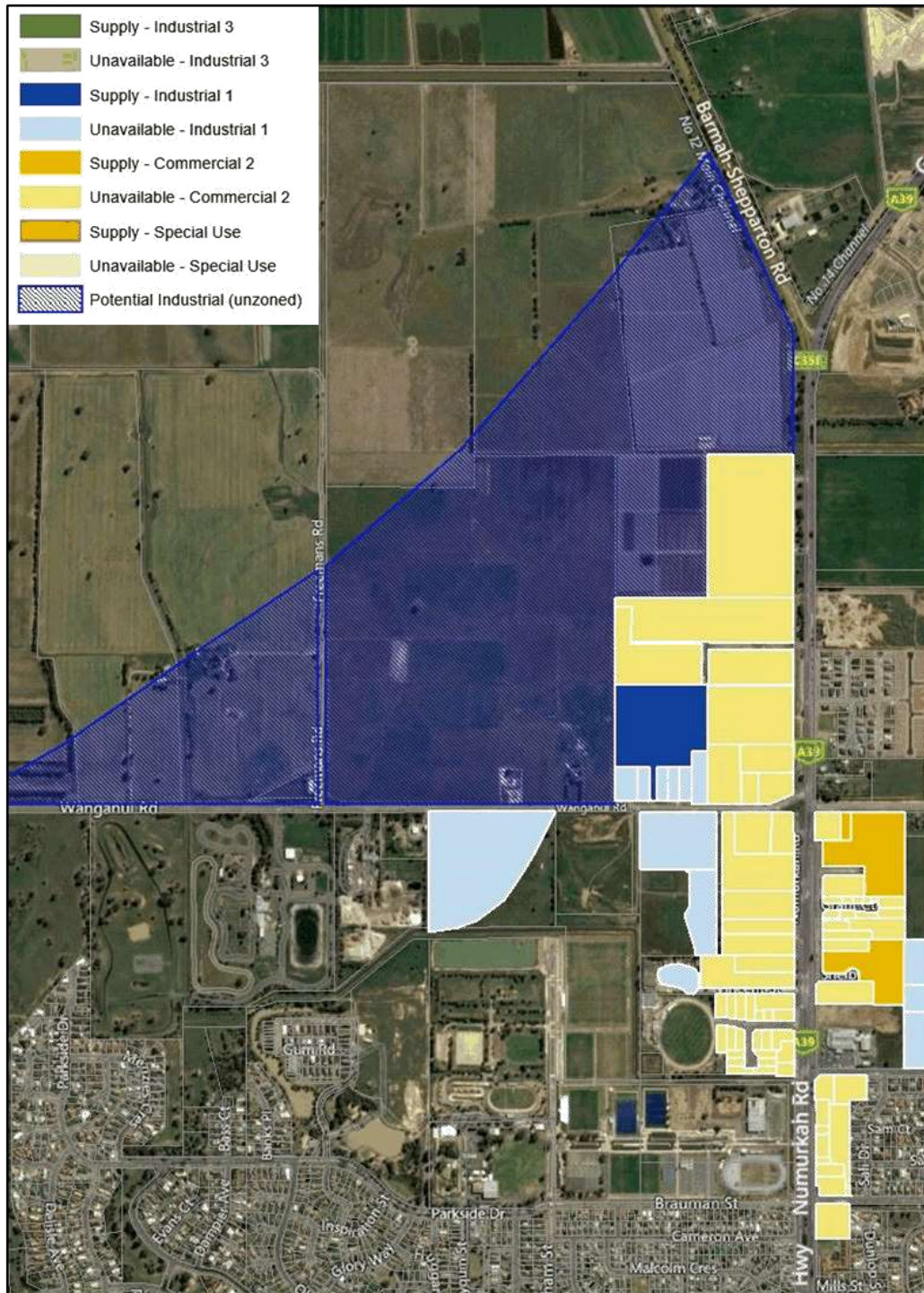
Map 4: Lemnos Industrial Precinct



Map 5: Mooroopna Industrial Precinct



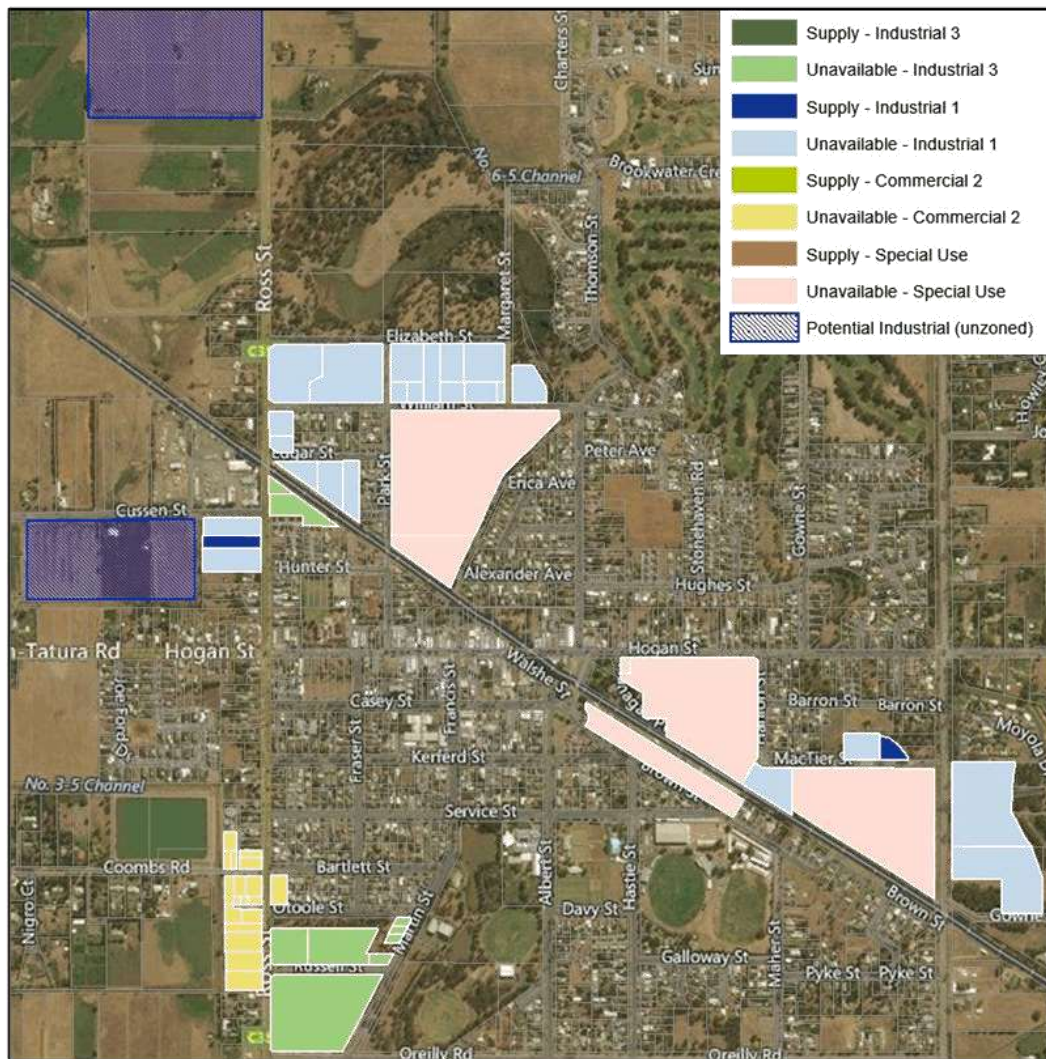
Map 6: North Shepparton Industrial Precinct



Map 7: North West Shepparton Industrial Precinct



Map 8: Tatura Industrial Precinct



Key Issues

Spatial Economics consider there are currently insufficient zoned industrial broadhectare land stocks to meet the requirements in the medium to longer term. Greater Shepparton is currently experiencing a rapid increase in the actual consumption of industrial land at unprecedented levels.

In total, there are only 109 vacant industrial allotments, representing a lot vacancy rate of just 11%. Both the quantum and vacancy rate relative to metropolitan Melbourne and other major regional Victorian centres is considerably low. Typically, the lot vacancy rate is from 25 to 30%.

Outside of the industrial precincts of East Shepparton and Kialla there are minimal vacant zoned industrial lots, specifically by industrial precinct:

- Lemnos – 2 lots;
- Mooroopna – 8 lots;
- North Shepparton – 4 lots;
- North West Shepparton – 2 lots; and
- Tatura – 2 lots.

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 30% of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 31 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and none over 10 hectares. This provides limited choice for potential large industrial land users and limited stock for further subdivision to smaller allotments.

There are currently 233 industrial land users on lots sized less than 1,000 sqm, but only 5 vacant lots in this size.

With the eventual development of the GV Link Freight and Logistics Centre there will be less pressure for other precincts in Shepparton to provide land for logistic (or logistic related manufacturing). This means that there will be less demand for larger lots in the other precincts and it is likely that the larger lots will be subdivided for smaller uses. However, the GV Link Freight and Logistics Centre requires significant upfront infrastructure investment to enable the site for freight and logistic development.

For example, the highly successful Ballarat West Employment Zone (BWEZ) required upfront infrastructure investment from both the State and Federal Governments to enable subsequent private sector investment and development. The BWEZ has been designed and constructed to enhance business productivity, with a freight hub, access for high productivity freight vehicles, secure top-quality infrastructure and strong access to road, rail and ports. Without similar upfront infrastructure investment, the land within the GV Link Freight and Logistics Centre will unlikely come to market due to the upfront cost prohibitive infrastructure requirements.



GLOSSARY OF TERMS

Future industrial land

Land identified by the relevant municipal authority for future industrial development and current zoning not supportive of industrial development. Land which has an 'Urban Growth Zone' applied, and where a precinct structure plan has not yet been approved, may also fall into this category.

Gross industrial land area

Measures the area of industrial land at a cadastral lot/parcel level.

Industrial Precinct

An identified group of industrial allotments that are generally adjacent to each other or exhibit a high degree of substitutability between sites. In general, the smaller townships with industrial land have been allocated one industrial precinct each, with larger towns being divided into separate precincts based primarily on location.

Lot (industrial)

Discrete area of land defined by a parcel boundary identified in the Vicmap Property Database. Each lot has an associated land title and is either zoned for industrial purposes or identified for future industrial use.

Net industrial land supply

Measures the estimated area available for industrial development after accounting for local roads, open space, infrastructure and environmental considerations.

Supply (industrial land)

Zoned industrial land classified as suitable for industrial development. This includes land that is vacant, disused or assigned to marginal non-industrial uses with little capital value, such as farm sheds or vehicle storage.

Unavailable (industrial Land)

Zoned industrial land classified as unavailable for industrial development. This includes land already occupied by industrial uses, construction sites, major infrastructure, intensive farming operations, established residential premises or where ownership development intentions indicate the land will not be developed in the foreseeable future.

