
RESIDENTIAL LAND SUPPLY & DEMAND ASSESSMENT

City of Greater Shepparton

January 2022

Final



19/01/2022

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. This assessment is at September 2021 and is an update to the previous assessment that was as at March 2019

Historic Population Growth

Population Growth

Historically, population growth for the City of Greater Shepparton has been modest - an average annualized growth of 0.8% from 2016 to 2020. For the period of 2019 to 2020, population grew by 0.9%, illustrating an increasing growth rate compared to the previous years.

There has been a decrease in population growth in Australia and Victoria in 2019-20 that can be attributed to Covid. However, it is suggested that regional centres such as Shepparton, have been more resilient to the impacts of Covid compared to the average for Victoria or for Melbourne.

Residential Development Activity

Residential Building Approvals

The Building Approval statistics collected by the ABS for Victoria for the financial year 2020/2021 reveal several interesting trends brought on by the Covid19 pandemic. For Victoria, building approvals have increased from 60,000 to 67,600 over the year to July 2021, a substantial increase of 12.7%.

As measured over the two financial years, residential building approval activity has significantly increased across regional Victoria, increasing by 51% (from 12,300 approvals to 18,540). In comparison, metropolitan Melbourne over the same time period increased by 3%.

Residential building approval has significantly increased across virtually all regional municipalities. Greater Shepparton has illustrated significant growth in building approval activity, increasing by 64%, from 346 approvals to 624 in 2020/21.

Residential Lot Construction

Over the last three financial years residential lot construction activity has averaged around 360 lots per annum, in 2020/21 405 residential lots were constructed.

Of the lot construction activity measured over the **last three** financial years:

- 3% was aged/lifestyle lots (12 lots per annum);
- 4% was dispersed/minor infill lots (13 lots per annum);
- 13% was rural residential lots (48 lots per annum); and
- 80% was greenfield lots (290 lots per annum).

Over the last three years, there has been a significant shift in the composition of residential subdivision activity. Rural residential lot construction and associated dwelling construction has increased from around 2% of total development activity to around 13%. In addition, there is a marked shift to smaller rural residential lots from 4,000 sqm to around 2,100 sqm.

Residential lot construction activity as measured over the last three financial years was concentrated within the urban centre of Shepparton/Mooroopna at 87% of all lot construction activity or 300 lots per annum. Of the remaining lot construction activity:

- 7% was located in the township of Tatura (average of 26 per annum); and
- 5% outside of township boundaries (17 per annum).



Of the broadhectare lot construction activity over the last three financial years (excludes LDRZ):

- 1% were compact suburban (sized less than 300 sqm);
- 3% were suburban (sized 300 to 500 sqm);
- 77% were large suburban (500 to 1,000 sqm); and
- 19% low density suburban (over 1,000 sqm).

The median sales price of a vacant residential lot in 2020 was:

- \$146,000 Greater Shepparton;
- \$149,000 in Wodonga;
- \$150,000 in Wangaratta;
- \$152,000 in Campaspe;
- \$160,000 Bendigo;
- \$195,000 in Ballarat; and
- \$197,000 across regional Victoria (this is heavily influenced by peri-urban municipalities and Geelong);

Vacant Residential land sales values across the municipal area of Greater 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.

Residential Land Supply

Broadhectare Land Stocks

In total, Greater Shepparton currently has capacity for the future provision of approximately 11,000 additional dwellings (including areas that are as yet not zoned for residential development purposes), on broadhectare sites.

This capacity is comprised of:

- 7,468 unzoned broadhectare lots (68% of supply); and
- 3,450 zoned broadhectare lots (32% of supply).

Based on existing planning permits, recent construction activity and Council/Development Industry feedback it is anticipated that over the next two years, on average, **487 lots/dwellings** per annum will be constructed within existing zoned broadhectare sites across the municipality.

Further analysis has been undertaken to assess the composition of the land stocks anticipated to be developed over the next two years. The information was sourced from the development industry, council permit information, related planning/land development consultants and independently verified by Spatial Economics.

Of the 973 greenfield lots anticipated to be constructed over the next two years:

1. 51% or 510 lots have been pre-sold; and
2. 64% or 630 lots have current preliminary sub-division approval, of which the vast majority are currently under construction.

Rural Residential

Currently across the City of Greater Shepparton there was a total stock of 1,351 rural residential allotments. Of this stock, only 119 lots (9%) were vacant. Vacant rural residential lots as a supply type are 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).

The outlook for the demand for smaller rural residential allotments is likely to continue based on current and proposed development activity levels. There is currently a marginal stock of vacant rural residential lots and limited supply for larger/estate like subdivision projects. However, there is significant stock identified for future rural residential rezoning.

Projected Housing Demand

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

Spatial Economics have prepared three growth scenarios by five year intervals from 2021 to 2051 for the municipal area of Shepparton, these include:

- VIF2019 (modified and extended), State Governments official projections;
- Higher growth scenario; and
- Lower growth scenario.

From 2021 to 2036, the above growth scenarios result in:

- VIF2019, an average annual dwelling requirement of 372 (1.2% growth per annum);
- High growth, an average annual dwelling requirement of 505 (1.6% growth per annum); and
- Low growth, an average annual dwelling requirement of 301 (1.0% growth per annum).

Adequacy of Land Stocks

Years Supply – Broadhectare

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 8 to 14 years of demand across the Greater Shepparton municipality.

In addition, there are sufficient unzoned broadhectare residential land stocks to satisfy over 25 of demand (18 years based on the high growth scenario).

Spatial Economics consider the above measure over-states the years of undeveloped greenfield supply. If it is assumed that the majority of land stocks identified to be developed over the next two years is achieved, the lot potential identified in the 11+ years and the No-Timing category is excluded (as these land parcels have significant land development constraints, fragmentation, planning issues, existing uses etc) - the adequacy of undeveloped land stocks significantly declines. This would result in a remaining adequacy of around five years zoned supply.

Spatial Economics recommend:

1. Increasing the stock of zoned broadhectare land for the urban centre of Shepparton - Mooropna in the short term.
2. Increasing the stock of zoned broadhectare land for the township of Tatura in the short-term.



1.0 Introduction

1.1 Context

The following report is a residential land supply and demand assessment for the City of Greater Shepparton as at September 2021. The previous residential land supply assessment was at March 2019.

The current assessment examines historical trends, however, this assessment provides particular attention to both land development outcomes/changes over the last three years.

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 stock (lots) of rural residential land;
- examination of the quantum of future residential demand;
- presentation of potential future demand scenarios; and
- estimation of the years of supply of undeveloped broadhectare residential land stocks.

The following 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 stocks, 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

The Victorian State Government population and household projections undertaken by the Department of Environment, Land, Water & Planning (VIF2019) are used as a basis for determining future population/dwelling requirements.

Spatial Economics have modified the VIF2019 Forecasts based on recent and updated population estimates from the Australian Bureau of Statistics and recent land development outcomes.

In addition, an alternative dwelling demand scenario is presented based on the potential of a) higher sustained growth and b) lower growth – the purpose is to provide sensitivity testing of the adequacy of residential land stocks.

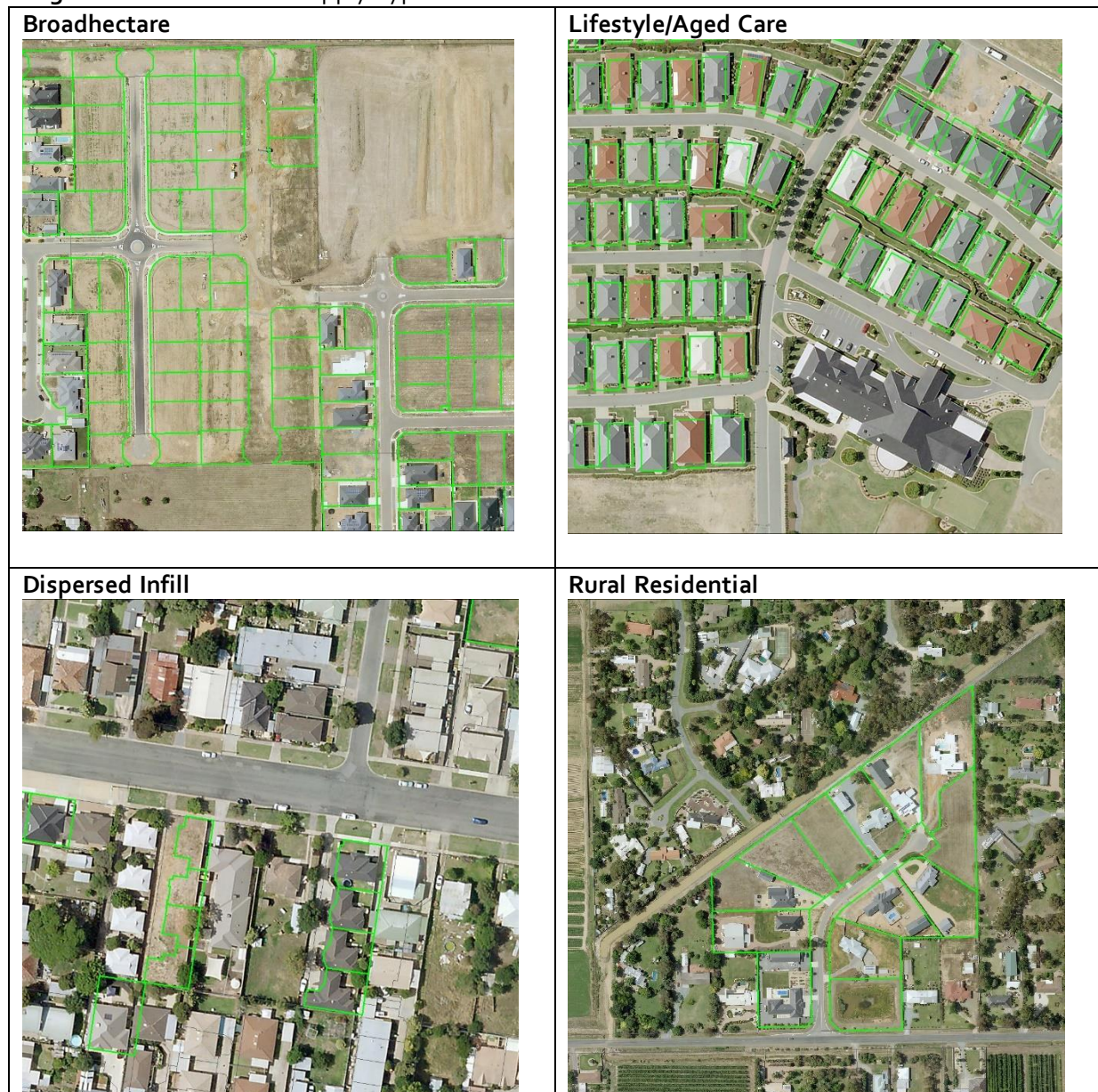
Land Supply Type Definitions

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 Living 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).

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 September 2021.

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 Trends & Projections

Key Findings

Historically, population growth for the City of Greater Shepparton has been modest - an average annualized growth of 0.8% from 2016 to 2020. For the period of 2019 to 2020, population grew by 0.9%, illustrating an increasing growth rate compared to the previous years.

There has been a decrease in population growth in Australia and Victoria in 2019-20 that can be attributed to Covid. However, it is suggested that regional centres such as Shepparton, have been more resilient to the impacts of Covid compared to the average for Victoria or for Melbourne.

In terms of estimating future growth, Spatial Economics believes that current best practice is to utilise a realistic range of growth scenarios when preparing medium and longer-term strategic plans.

Spatial Economics have prepared three growth scenarios by five year intervals from 2021 to 2051 for the municipal area of Greater Shepparton, these include:

- VIF2019 (modified and extended), State Governments official projections;
- Higher growth scenario; and
- Lower growth scenario.

From 2021 to 2036, the above growth scenarios result in:

- VIF2019, an average annual dwelling requirement of 372 (1.2% growth per annum);
- High growth, an average annual dwelling requirement of 505 (1.6% growth per annum); and
- Low growth, an average annual dwelling requirement of 301 (1.0% growth per annum).

The 2021 census has only just been undertaken and won't be published until mid-2022. Consequently, we are now near the end of the five yearly inter-censal cycle when population estimates are most reliant on changes in Medicare registrations rather than census counts. The population estimates for 2017 onwards will be revised in mid-2022 once 2021 census data become available.

3.1 Recent Population Growth Trends

Greater Shepparton's growth rate has varied since the turn of the century. Between 2006 and 2016 it was similar to the average for Regional Victoria. Since 2016 the growth rate has slowed while Regional Victoria's has increased, mainly due to increased spill overs from Melbourne into adjacent LGAs beyond the Greater Melbourne boundary. Greater Geelong has experienced a remarkable rejuvenation attracting more migrants from overseas, interstate, other parts of Regional Victoria and, most significantly, from Melbourne, thereby pushing up Regional Victoria growth rate.



Table 1: Long Term Population Growth: Average Annual Population Growth Rates (%), 2001-2020

	2001-06	2006-11	2011-16	2016-20
Greater Shepparton	0.4%	1.0%	1.1%	0.8%
Greater Bendigo	1.2%	1.5%	1.9%	1.7%
Albury & Wodonga	1.0%	1.0%	1.5%	1.4%
Mildura	0.7%	0.5%	1.1%	0.6%
Ballarat	1.0%	1.9%	1.7%	1.9%
Greater Geelong	1.0%	1.5%	2.1%	2.6%
Regional Victoria	0.6%	1.0%	1.3%	1.3%
Greater Melbourne	1.5%	2.1%	2.5%	2.3%
Victoria	1.2%	1.8%	2.2%	2.1%
Australia	1.2%	1.8%	1.6%	1.5%

Source: ABS.net (Beta)

Table 2: Impacts of Covid? Short Term Population Growth: Average Annual Population Growth Rates (%), 2016-20

	2016-17	2017-18	2018-19	2019-20
Greater Shepparton	0.7%	0.7%	0.8%	0.9%
Greater Bendigo	1.6%	1.7%	1.8%	1.6%
Albury & Wodonga	1.7%	1.4%	1.4%	1.3%
Mildura	0.9%	0.7%	0.5%	0.3%
Ballarat	1.9%	1.8%	2.0%	1.7%
Greater Geelong	2.6%	2.7%	2.7%	2.3%
Regional Victoria	1.3%	1.3%	1.4%	1.3%
Greater Melbourne	2.8%	2.5%	2.3%	1.6%
Victoria	2.4%	2.2%	2.1%	1.5%
Australia	1.7%	1.6%	1.5%	1.3%

Source: ABS.net (Beta)

The decrease in growth in Australia and Victoria in 2019-20 can be attributed to Covid. However the above comparisons suggest that regional centres such as Shepparton, have been more resilient to the impacts of Covid compared to the average for Victoria or for Melbourne. This presumably reflects the attractiveness of regional cities for the population of Australia's capital cities during a period of Covid outbreaks and lockdowns.

Sources of population growth

Owing to international border closures and varied length of lockdowns in different parts of Australia, Covid has disrupted regular sources of population change. As noted above, Covid has primarily impacted on Melbourne rather than Victoria's regional centres. For several decades, overseas migration gains to Victoria have been heavily biased towards Melbourne.

Pre Covid 92% of overseas arrivals to Victoria settled in Melbourne. Closed international borders cut those gains and are therefore the main reason why Melbourne's population has declined for the first time in living memory. But longer lockdowns in Victoria compared to other states has led to Victoria



losing population to other states, a reversal of trends of the last 25 years. But Melbourne's long lockdowns and changed work regimes have also led to a greater flight of people from Melbourne to regional Victoria and to fewer people such as students, job seekers and urban lifestyle seekers moving to Melbourne.

Table 3: Internal Migration, Regional Victoria, 2006-2021

Year to March qtr	Net Intrastate Migration	Net Interstate Migration	Net Internal Migration
2006-2011	5,049	-1,340	3,709
2011-2016	5,585	-22	5,563
2016-2017	8,873	1,805	10,678
2017-2018	13,824	875	14,699
2018-2019	14,211	229	14,440
2019-2020	11,186	-828	10,358
2020-2021	19,678	-5,666	14,012

Source: Provisional Regional Migration Estimates, ABS, August 2021

The result is that Regional Victoria's population growth been little affected by Covid – lower overseas gains and higher interstate losses have been cancelled out by greater net movements of people from Melbourne to Regional Victoria

Since 2016, the ABS has published annual estimates of the components of population growth for Local Government Areas. The following table shows the balance sheets of population gains and losses for Greater Shepparton.

Table 4: Components of population change, Greater Shepparton 2016-20

	Natural Increase	Net migration within Australia	Net overseas migration	Total population growth
2016-17	345	-406	543	482
2017-18	424	-514	544	454
2018-19	307	-355	541	493
2019-20	361	-189	397	569

Source: Provisional Regional Migration Estimates, ABS, August 2021

The position for Greater Shepparton is similar to that of regional Victoria. Population losses to Melbourne and other parts of Regional Victoria (principally Geelong and Bendigo) have been reduced, compensating for lower gains from overseas.

Population changes within Shepparton

The ABS publishes annual population estimates for SA2s which are areas defined by the ABS to assist with local planning and service delivery. There are five SA2s in and around Shepparton. Their external boundaries are different to the municipal boundary of Greater Shepparton.



Table 5: Population Growth within the Shepparton Region: Average Annual Growth Rates

	2001-06	2006-11	2011-16	2016-20
Mooroopna	0.2%	0.3%	0.2%	0.3%
Shepparton North	0.6%	1.3%	1.5%	0.7%
Shepparton South	0.7%	2.2%	1.5%	1.2%
Shepparton Region - East	-0.9%	-0.2%	-0.4%	-0.4%
Shepparton Region - West	-0.2%	0.3%	0.6%	0.7%
Greater Shepparton	0.4%	1.0%	1.1%	1.1%

Source: ABS.net (Beta)

Table 6: Population Growth within the Shepparton region: Average Annual Population Growth

	2001-06	2006-11	2011-16	2016-20
Mooroopna	16	26	19	26
Shepparton North	99	219	277	139
Shepparton South	137	449	331	290
Shepparton Region - East	-38	-8	-15	-4
Shepparton Region - West	-23	30	57	68
Greater Shepparton	216	611	666	500

Source: ABS.net (Beta)

Population projections – A Review

Should population projections for Greater Shepparton be revised to take account of recent events? In other jurisdictions (eg Australia, Victoria, Greater Melbourne), population projections have had to be revised to take account of the dip in population growth resultant of Covid. The Commonwealth and the Victorian Governments have both assumed, in budget papers and policy statements, that Covid will have two to three year impact on population growth before normal service (i.e. pre-Covid trends) are resumed.

In the case of Greater Shepparton and most other parts of Regional Victoria, the evidence suggests that there is no need to update population projections at present. In less than a year's time, 2021 census data will become available (see note below). This will trigger revisions to the ABS's national and state population projections and DEWLP's *Victoria in Future* population, household and dwelling projections. By then it should become a little clearer what the longer term impacts of Covid will be. Will greater and more permanent working from home arrangements lead a more sustained decentralisation of people and jobs out of Melbourne? If so, to what extent will this happen and to where in Regional Victoria will this growth be channelled?

An important note for users

Data on population growth is subject to changes. At the current stage of the census cycle, we are most vulnerable to adjustments which can quickly alter population trends and the population projections which are based on such trends. When 2021 census data is published in July 2022, population estimates between 2017 and 2021 will be revised. These can be significant and change one's understanding about the extent and source of population growth.

The Estimated Resident Population or ERP is the official population figure most used by government. It is used to determine allocation of funding of Local and State Government by the Commonwealth Government. It is also used to determine the distribution of electorates. Population projections made by the ABS, the DELWP and by consultants use the ERP.



The ERPs are used for a wide range of planning purposes – financial, land use, education, health, transport etc.

The ERP is published by the ABS, quarterly for States and Territories and annually for regions, Local Government Areas and for State and Territories. . The annual estimate is for the 30th June, the end of the financial year. The finest geographical level for which ERPs are published is the SA2. There are 461 SA2s in Victoria. There are five SA2s in Greater Shepparton although external boundaries do not align exactly with the municipal boundary.

The ERP is based on census counts. The five yearly census is undertaken in early August. ABS then backdates the population estimate to the previous 30th June. This is done in a number of steps:

1. It takes the usual resident population as recorded in the census. This excludes census night visitors but includes people who were elsewhere in Australia on census night and allocates them 'back home'.
2. It includes the ABS's estimate of the census undercount (ie people missed by the census)
3. It takes out people born between 30th June and census night but includes people who died between 30th June and census night
4. It includes people who were overseas at the time of the census but who normally live in Australia and allocates them to the place where they normally live. Nationally this can amount to several hundred thousand people, although will be a lot less in 2021 than in 2016 owing to Covid.

The ABS then updates ERPs each year relying on births and deaths data and Medicare data.

The latest 'preliminary' population estimate for Greater Shepparton was for 30th June 2020, which was published in March 2021. Next March this will be updated with an estimate for 30th June 2021. But this estimate will still be based on the 2016 census. With the publication of the 2021 census next July, the ABS will publish 'final' ERPs for each year from 2017 to 2021.

The revisions to population estimates following a census can be significant. Following the 2016 census the 2016 ERP for Victoria was revised upwards by over 100,000, resulting in changed trends and changed prospects for future growth across Victoria.

In November 2021, we are currently in the most vulnerable part of the five yearly cycle. The current 2020 estimate and the new 2021 estimate to be published in March 2022, are subject to change. No one knows whether estimates will be revised upwards to downwards or the extent of these changes.

The census also provides important information about the characteristics and sources of population growth and household formation. It is the kicking off point for updating our understanding of the dynamics of population change and the way that population organises itself into households that consume housing. Consequently it is the trigger for updating projections.

As of November 2021, the best advice to users is to (a) be aware of these issues, (b) keep a watching brief on revisions and, (c) be prepared to adjust business models once 2021 census data becomes available and projections are revised.

The Commonwealth and State Governments' views on the impact of Covid:

In December 2020 the Commonwealth Government's Centre for Population published a preliminary view on the impacts of COVID:

"The impact of COVID-19 is expected to be long lasting. Australia's population is expected to be smaller and older than projected prior to the onset of the pandemic.

Australia's population is estimated to be around 4 per cent smaller (1.1 million fewer people) by 30 June 2031 than it would have been in the absence of COVID-19. The population will also



be older as a result of reduced net overseas migration and fewer births. Despite COVID-19, Australia's population is still growing and is expected to reach 28 million during 2028–29, three years later than estimated in the absence of COVID-19.

COVID-19 is projected to slow population growth across all geographic areas analysed, with the duration and magnitude linked to the importance of net overseas migration to different parts of the country.

Capital cities are projected to bear the heaviest impacts, with total population across capital cities estimated to be around 5 per cent lower by 30 June 2031 than in the absence of COVID-19. By contrast, population outside the capital cities is estimated to be around 2 per cent smaller than it would otherwise have been.

The number of people migrating interstate is projected to fall by 12 per cent in 2020–21. This would be the largest year-on-year drop in interstate migration in 40 years and would lead to the lowest rate of interstate migration as a proportion of the population on record.

Melbourne is projected to overtake Sydney to become Australia's largest city in 2026–27, with a population of 6.2 million by 2030–31, compared to 6.0 million in Sydney."

In summary, Covid makes a dent in ongoing population growth from which it will take a long time to recover.

In June 2021, the Commonwealth Treasury published its update of the intergenerational report. One notable feature was the lower 40 year population growth projections. Even if, optimistically, Australia (and the World) can quickly recover from the Covid with life and the economy returning to 'pre COVID normal', that population dent will endure into the future.

In May 2021, the Victorian Treasury published its budget papers which included a four year forecast of population growth which accounted for the impact of Covid:

The Victorian Treasury's short term forecasts

Year	Forecast population growth rate, Victoria
2020/21	0%
2021/22	0.3%
2022/23	1.2%
2023/24	1.7%
2014/25	1.7%

Source: Budget Paper no. 2, page 22, Victorian Treasury, May 21

The Victorian Treasury view mirrors that of the Commonwealth Government: that Covid produces a two-three year dent in population growth. By 2023/24 Victoria population growth is forecast to return to its pre-Covid projections rate i.e. that used in *Victoria in Future 2019*.

3.2 Demographic Projections

The population, household and dwelling growth assumptions used in assessing the adequacy of greenfield residential land stocks for the municipal area of Shepparton are drawn from the Victorian Government's official population projections '*Victoria in Future 2019*' (*VIF 2019*). This publication sets out population, household and dwelling growth projections to 2036 for all regions and local government areas in Victoria.

For the City of Greater Shepparton VIF 2019 forecasts average annual population growth of 0.9%, or a



total population increase of 9,930 people, from 2021 to 2036. VIF 2019 also forecasts an additional 5,367 households in the City of Greater Shepparton by 2036.

VIF 2019 also presents population and dwelling forecasts for sub-areas within Local Government Area boundaries.

3.2.1 Should a single growth forecast be relied upon for longer term strategic planning?

VIF2019 are undertaken and approved by the State Government and are prepared using a well-established and accepted methodology and incorporate sound assumptions.

However, it is reasonable to question whether a single set of growth forecasts should be used in assessing medium to longer-term adequacy of residential land stocks given the inherent uncertainty surrounding future growth.

Spatial Economics believes that current best practice is to utilise a realistic range of growth scenarios when preparing medium and longer-term strategic plans. This has the advantage of recognising the inherent uncertainty involved in any medium to longer-term forecast. It also allows the strategy to be 'stress tested' and helps ensure that land use and infrastructure plans have the flexibility to cope with unexpected changes in growth rates.

The inherent uncertainty associated with any medium to longer-term forecast of population growth is widely accepted.

For example, VIF2019 presents a range of growth forecasts for Victoria and, in its introduction says:

"Population projections are estimates of the future size, distribution and characteristics of the population. They are developed by applying mathematical models and expert knowledge of the likely population trends to the base population.

Projections provide information about population change over space and time but they are not predictions of the future. They are not targets nor do they reflect the expected effects of current and future policies.

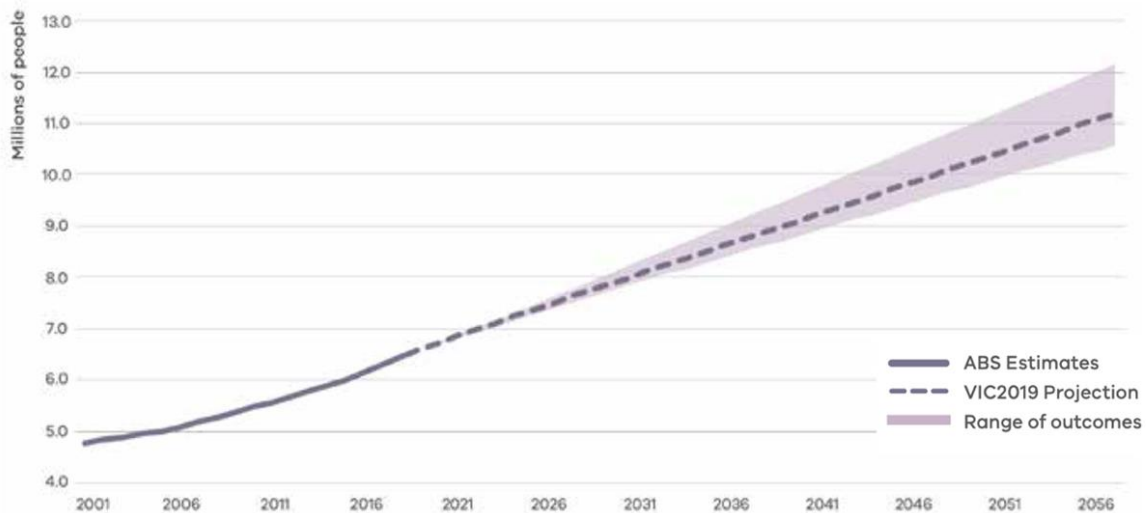
The projections give an idea of what is likely to happen if current trends continue. They may indicate a need to manage change to achieve preferred outcomes or to mitigate the impacts of no-preferred outcomes"

In relation to growth projections for Victoria as a whole VIF2019 says:

"Under the VIF2019 assumptions Victoria is projected to add 4.7 million people from 2018 to 2056, reaching a population of 11.2 million. This represents annual average growth of 125,000 people, at a rate of 1.5% per annum.

Conditions and trends may change in the future, however, and if other assumptions were used, different growth levels would result. Migration levels are more sensitive to changes in policy or economic conditions than births or deaths. Graph 2 (see below) shows population growth outcomes with different migration assumptions, illustrating average annual growth in each scenario, not the volatility of growth in individual years."



Graph 1: Projected population, Victoria" range of outcomes

The unavoidable uncertainty associated especially with assumptions regarding the rate of net overseas migration is very clearly illustrated by the current experience with the impact of the Covid19 pandemic on migration and population growth. As a result of a drastic fall in overseas migration growth rates for Australian, Victorian and regional areas will be substantially reduced for, at least, two years.

VIF2019 does not present multiple growth scenarios for individual regions or municipal areas. This presumably reflects a judgement that to do so would be likely to lead to confusion and could result in 'projection shopping' by those seeking to advance particular points of view either in favour of or expressing concern regarding future growth.

However, the decision to present only a single set of projections in VIF2019 does not remove the uncertainty associated with regional and municipal projections. Instead it avoids addressing the issue. Indeed, the smaller the forecast area (e.g. region as against State, municipal as against region) the greater the uncertainty that is unavoidably associated with any medium or longer-term growth projection.

The question must still be addressed - how robust can we expect population projections for a regional municipality the size of Greater Shepparton to be?

Demographer Tom Wilson of Charles Darwin University has reviewed state government prepared population projections for sub-state regions and municipalities in Australia. He has done so with both the benefit of hindsight and with local and regional population estimates that the ABS has published since the time projections were prepared. His conclusions were as follows:

- Five year projections were better than ten year projections;
- Large area projections were a lot better than small area projections;
- While small area projections have large errors, for places of more than 100,000 people most projections were within 5% for a ten year period;
- For areas under 10,000 people, projections were highly error prone.
- For places over 25,000 people, the correct direction of change (i.e. gain or loss) was projected in 90% of cases;
- For places under 2,000 people, 60% of projections did not project the correct direction of



population change.

These findings correspond with similar research undertaken in the UK. This led Wilson to suggest a realistic 'shelf life' for projections.

Table 7: Shelf life of population projections

Place size (pop'n)	Shelf life of population projections (years)
<2,500	3
2,500 – 10,000	7
10,000 – 50,000	12
50,000 – 100,000	14
>100,000	15

Source: Tom Wilson, Paper presented to Australian Population Association conference, 2016

For the current purpose the key point is that longer term projections are inherently problematic and this needs to be taken into account in sound strategic planning.

Spatial Economics has therefore chosen to utilise a range of growth forecasts in assessing the adequacy of residential land supplies in Greater Shepparton.

3.3 A realistic Range of Growth Scenarios

The growth projections (or scenarios) prepared by Spatial Economics are for the Greater Shepparton municipality.

Spatial Economics projections build on the VIF2019 projections for population, households and dwellings. They do not contradict the VIF2019 projections in any way.

Instead Spatial Economics has expanded VIF2019 projections in three ways. Firstly, we have extended the VIF19 projections from 2036 to 2051. VIF2019 projected that Greater Shepparton population would grow by 0.9% in that final year (i.e. 2035/36). Spatial Economics has assumed this 0.9% annual rate of growth will continue through to 2051. Secondly, we have updated actual estimated resident population for the years of 2019 and 2020. Thirdly, we have developed two alternative population growth scenarios, one higher, one lower. Both the higher and lower projections are based upon what Spatial Economics believes are potentially realistic alternative assumptions regarding future growth trends in Greater Shepparton-.

These alternate growth scenarios are not what we forecast will occur. Instead they are used to demonstrate the impact of possible different growth rates on the demand for dwellings and residential land. Like all projections, the growth scenarios presented in this report should be seen as a way to help better inform decision making.

Spatial Economics' high growth scenario assumes that Greater Shepparton-'s population growth rate rises in 2021 to 1.3% per year – the rate of growth that Albury-Wodonga has experience over the last ten years – and remains at that rate until 2051.

The low growth scenario assumes that Shepparton-Mooroopna's growth drops to 0.7% per year in 2021 and remains at that rate until 2051. This is the rate of growth that Greater Shepparton experienced mid last decade

It will, no doubt, be argued by some that our suggested higher growth scenario is too modest. Higher growth rates experienced in some other regional cities (such as Bendigo or Geelong), or short-term upturns in demand and development activity in Greater Shepparton may be quoted in support of such a view. However, the evidence from across Victoria and New South Wales is clear – growth rates are strongly influenced both by city size (larger cities grow faster) and by distance from the state's main



metropolitan area (cities closer to Melbourne or Sydney benefit most from 'overflow demand' from the higher priced metropolitan area).

Furthermore, VIF 2019 already assumes that, over time, the Shepparton region gains rather than loses people to other parts of Victoria. This compensates for lower and even negative natural increase as the population ages.

In this context the VIF2019 projection, and our two additional scenarios, represent a likely realistic range of future growth for Greater Shepparton.

The projected population and dwelling numbers associated with each of the three (VIF 2019 plus Spatial Economics higher and lower) scenarios are summarised below.

Table 8: VIF2019 extended/modified – Greater Shepparton- projected population and dwelling change from 2021

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041	2041 to 2046	2046 to 2051
Population	3,293	3,345	3,272	3,416	3,567	3,724
Dwellings	1,836	1,912	1,838	1,495	1,561	1,630

Table 9: Higher growth - Greater Shepparton- projected population and dwelling change from 2021

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041	2041 to 2046	2046 to 2051
Population	4,513	4,814	5,135	5,477	5,843	6,233
Dwellings	2,355	2,555	2,667	2,397	2,557	2,728

Table 10: Lower growth - Greater Shepparton- projected population and dwelling change from 2021

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041	2041 to 2046	2046 to 2051
Population	2,401	2,486	2,574	2,666	2,760	2,858
Dwellings	1,456	1,535	1,523	1,167	1,208	1,251

Table 11: Average annual dwelling change – Greater Shepparton, by growth scenario

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041	2041 to 2046	2046 to 2051
VIF2019 (extended)	367	382	368	299	312	326
High	471	511	533	479	511	546
Low	291	307	305	233	242	250

In summary the higher scenario implies an approximately 49% increase in terms of total dwelling demand to 2051 when compared to the 'medium level' VIF2019 projection. The lower scenario results in an approximate 21% reduction in total dwelling demand to 2051 when compared to VIF2019.



Key Issues

Should population projections for Greater Shepparton be revised to take account of recent events? In other jurisdictions (eg Australia, Victoria, Greater Melbourne), population projections have had to be revised to take account of the dip in population growth resultant of Covid.

In the case of Greater Shepparton and most other parts of Regional Victoria, the evidence suggests that there is no need to update population projections at present. In less than a year's time, 2021 census data will become available (see note below). This will trigger revisions to the ABS's national and state population projections and DEWLP's *Victoria in Future* population, household and dwelling projections. By then it should become a little clearer what the longer term impacts of Covid will be.



4.0 Recent Residential Development Activity

Key Findings

The Building Approval statistics collected by the ABS for Victoria for the financial year 2020/2021 reveal several interesting trends brought on by the Covid19 pandemic. For Victoria, building approvals have increased from 60,000 to 67,600 over the year to July 2021, a substantial increase of 12.7%.

As measured over the two financial years, residential building approval activity has significantly increased across regional Victoria, increasing by 51% (from 12,300 approvals to 18,540). In comparison, metropolitan Melbourne over the same time period increased by 3%.

Residential building approval has significantly increased across virtually all regional municipalities. Greater Shepparton has illustrated significant growth in building approval activity, increasing by 64%, from 346 approvals to 624 in 2020/21.

Over the last three financial years residential lot construction activity has averaged around 360 lots per annum, in 2020/21 405 residential lots were constructed.

Of the lot construction activity measured over the **last three** financial years:

- 3% was aged/lifestyle lots (12 lots per annum);
- 4% was dispersed/minor infill lots (13 lots per annum);
- 13% was rural residential lots (48 lots per annum); and
- 80% was greenfield lots (290 lots per annum).

Over the last three financial years there has been a significant composition change in the lot construction supply mix as compared to the longer-term average. There has been an increase in rural residential lot construction (in real terms and as a proportion of the total) and a decrease in minor infill construction within the established urban area.

Residential lot construction activity as measured over the last three financial years was concentrated within the urban centre of Shepparton/Mooroopna at 87% of all lot construction activity or 300 lots per annum. Of the remaining lot construction activity:

- 7% was located in the township of Tatura (average of 26 per annum); and
- 5% outside of township boundaries (17 per annum).

Of the broadhectare lot construction activity over the last three financial years:

- 1% were compact suburban (sized less than 300 sqm);
- 3% were suburban (sized 300 to 500 sqm);
- 77% were large suburban (500 to 1,000 sqm); and
- 19% low density suburban (over 1,000 sqm).



Section 4.0 of this report details the recent activity of residential lot construction and dwelling approvals across the City of Greater Shepparton. Residential lot construction activity is detailed from July 2008 to September 2021.

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 are included.

4.1 Residential Building Approvals

Building Approval Activity in Context

The Building Approval statistics collected by the ABS for Victoria for the financial year 2020/2021 reveal several interesting trends brought on by the Covid19 pandemic. For Victoria, building approvals have increased from 60,000 to 67,600 over the year to July 2021, a substantial increase of 12.7%.

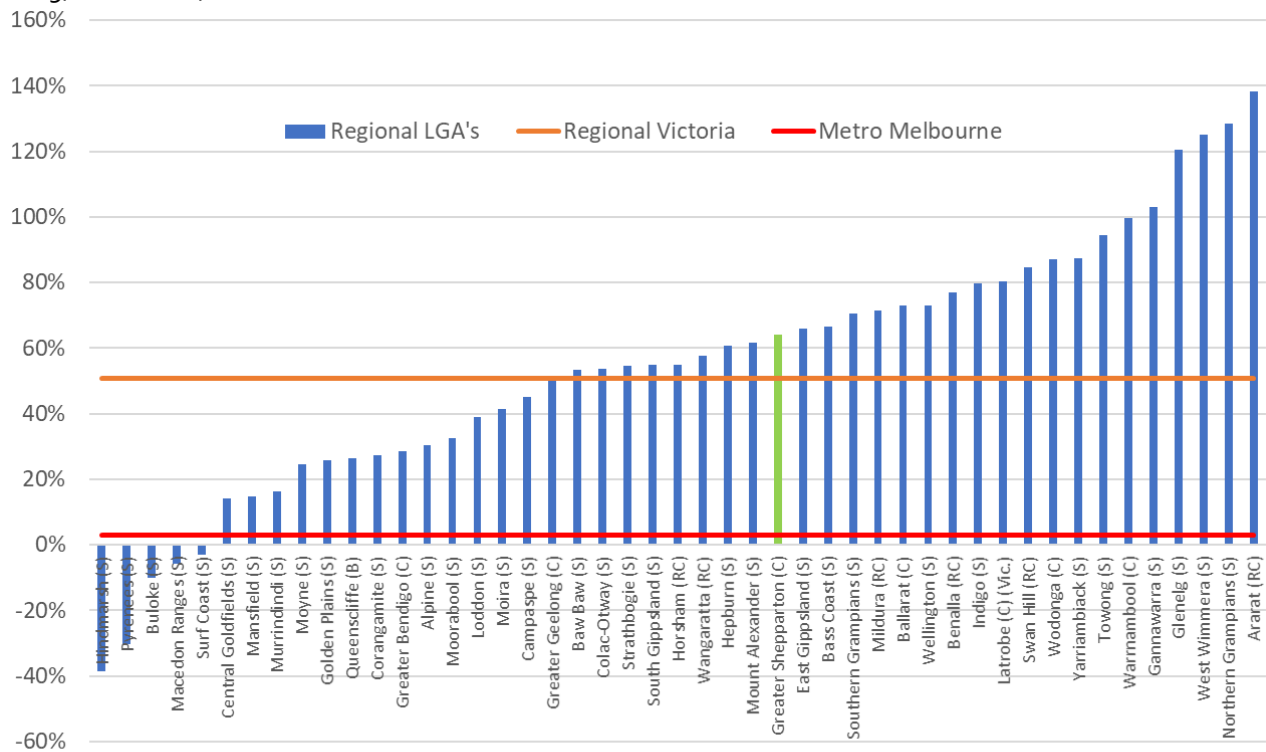
As measured over the two financial years, residential building approval activity has significantly increased across regional Victoria, increasing by 51% (from 12,300 approvals to 18,540). In comparison, metropolitan Melbourne over the same time period increased by 3%.

As a share of total activity, regional Victoria has jumped from 20% of all new dwellings to 28% in one year. The share going to regional Victoria peaked around 2006 and declined until around 2017. The share for regional Victoria had been rising in the last few years in part because of the rise of Geelong before the spike brought on by the pandemic

Residential building approval has significantly increased across virtually all regional municipalities.

Greater Shepparton has illustrated significant growth in building approval activity, increasing by 64%, from 346 approvals to 624 in 2020/21.

Graph 2: Percentage Change in Residential Building Approval Activity by Regional Municipal Areas, 2019/20 to 2020/21



Source: Australian Bureau of Statistics

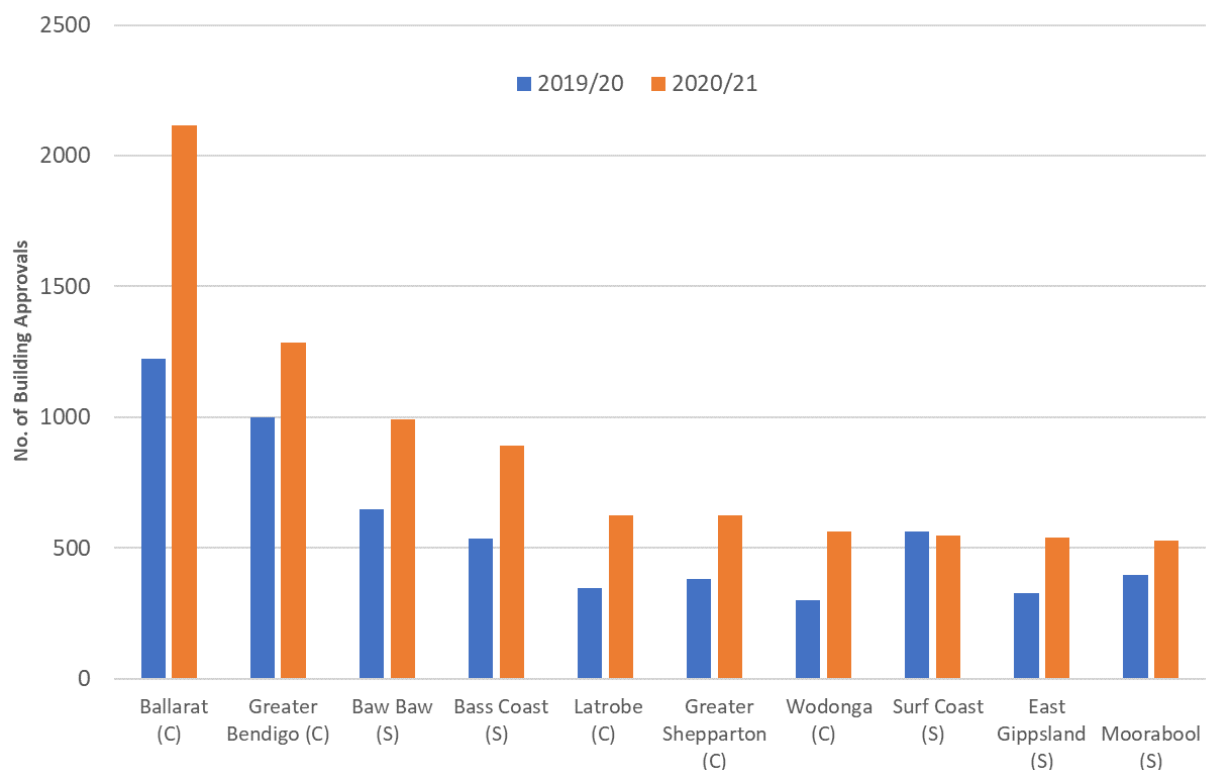


Graph 3 below illustrates the quantum of residential building approval activity for the top ten regional municipalities as measured in volume in 2020/21. The City of Greater Geelong has been excluded from this graphic

In 2020/21, the City of Greater Shepparton had a comparable contribution of building approval activity to that of Latrobe at 624 approvals. The City of Greater Shepparton had substantially more approval activity compared to:

- Wodonga (560 approvals) ;
- Surf Coast (546);
- East Gippsland (541); and
- Moorabool (526).

Graph 3: Volume of Building Approvals - Top Ten Regional Municipalities



Source: Australian Bureau of Statistics

Note Excludes City of Greater Geelong

The large increase in demand for housing across regional Victoria will put significant pressure on local economies to be able to deliver the housing stock. The sharp hike in residential building activity will put additional pressures on supply chains, sourcing labour and associated civil works requirements.

The pandemic and the subsequent work from home phenomenon is having significant impacts on the residential construction industry. With presales in greenfield estates extending out further than ever before, sometimes into multiple years' worth of supply, there will be a backlog of construction requirements.

City of Greater Shepparton

As measured from 2001/02 to 2020/21, residential building approvals within the City of Greater Shepparton averaged 394 per annum. Of which, 95% were for separate dwellings whilst 5% were for medium density housing. In recent years there has been a light increase in the proportion of medium density dwelling construction at around 7% of the total volume of building approvals.

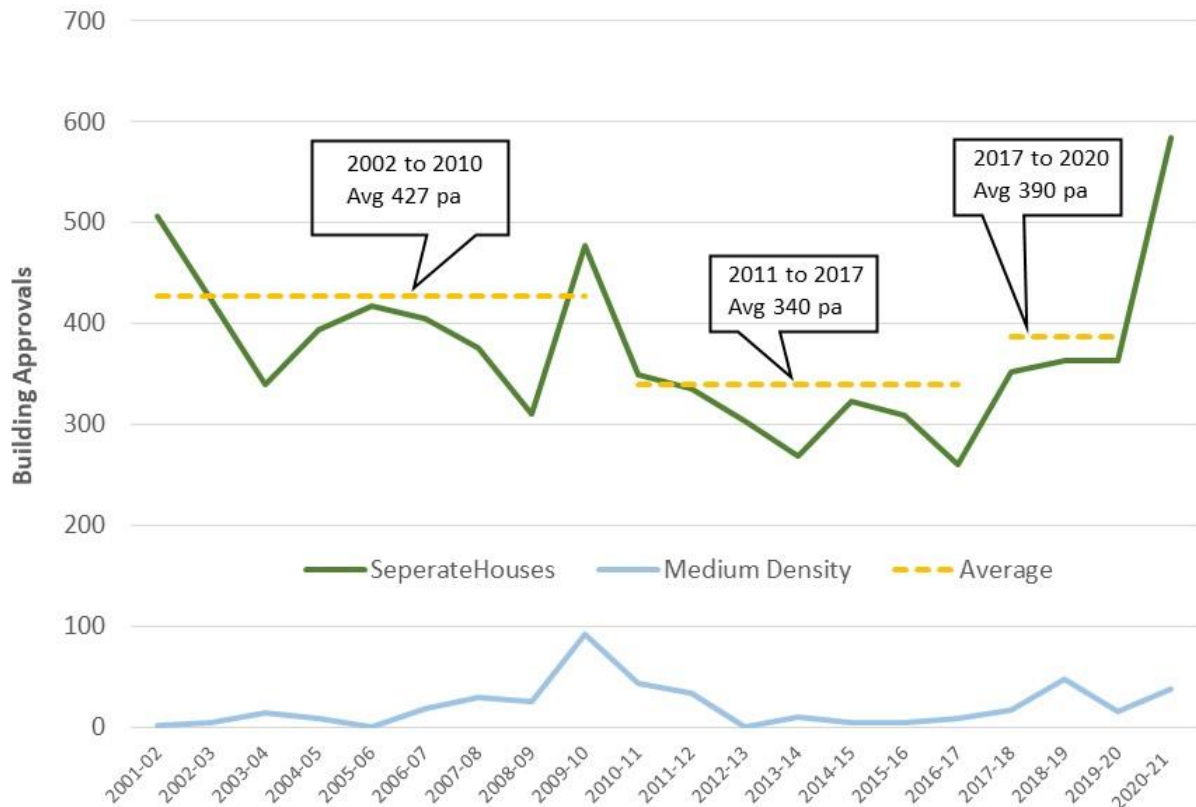


Between 2001 and 2017, the annual number of residential buildings approved has gradually declined, with an average of 427 per annum between 2001 to 2009, down to an average of 340 from 2010 to 2017. During this period, volumes of residential building approvals have “tested new lows” – the lowest being 269 in 2016/17.

However, since 2017, residential building approval activity has illustrated sustained and increasing levels of activity. Over the last four years, residential building approval activity has averaged nearly 450 per annum.

In the last financial year of 2020/21, building approval activity peaked at 623, a 64% increase from the previous financial year.

Graph 4: Residential Building Approvals by Type – City of Greater Shepparton, 2001 to 2021



Source: Australian Bureau of Statistics

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 September 2021. 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.

Over the last three financial years residential lot construction activity has averaged around 360 lots per annum, in 2020/21 405 residential lots were constructed. Whilst in comparison to residential building approval activity over the last three years averaged 470 per annum. This average was significantly influenced by an all-time peak of 23 approvals in 2020/21

This ‘imbalance’ of subdivision activity relative to building approval activity indicates a proportion of housing construction is occurring on existing vacant residential lots:

Of the lot construction activity measured over the **last three** financial years:



- 3% was aged/lifestyle lots (12 lots per annum);
- 4% was dispersed/minor infill lots (13 lots per annum); •
- 13% was rural residential lots (48 lots per annum); and
- 80% was greenfield lots (290 lots per annum).

Over the last three financial years there has been a significant composition change in the lot construction supply mix as compared to the longer-term average. There has been an increase in rural residential lot construction (in real terms and as a proportion of the total) and a decrease in minor infill construction within the established urban area.

Greenfield activity, as a proportion of total activity has remained constant.

4.3 Location of Residential Development Activity

Residential lot construction activity as measured over the last three financial years was concentrated within the urban centre of Shepparton/Mooroopna at 87% of all lot construction activity or 300 lots per annum. Of the remaining lot construction activity:

- 7% was located in the township of Tatura (average of 26 per annum); and
- 5% outside of township boundaries (17 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 80% of the total. This trend has been relatively consistent

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 11% of all lot construction activity. This is an important supply source, as it provides:

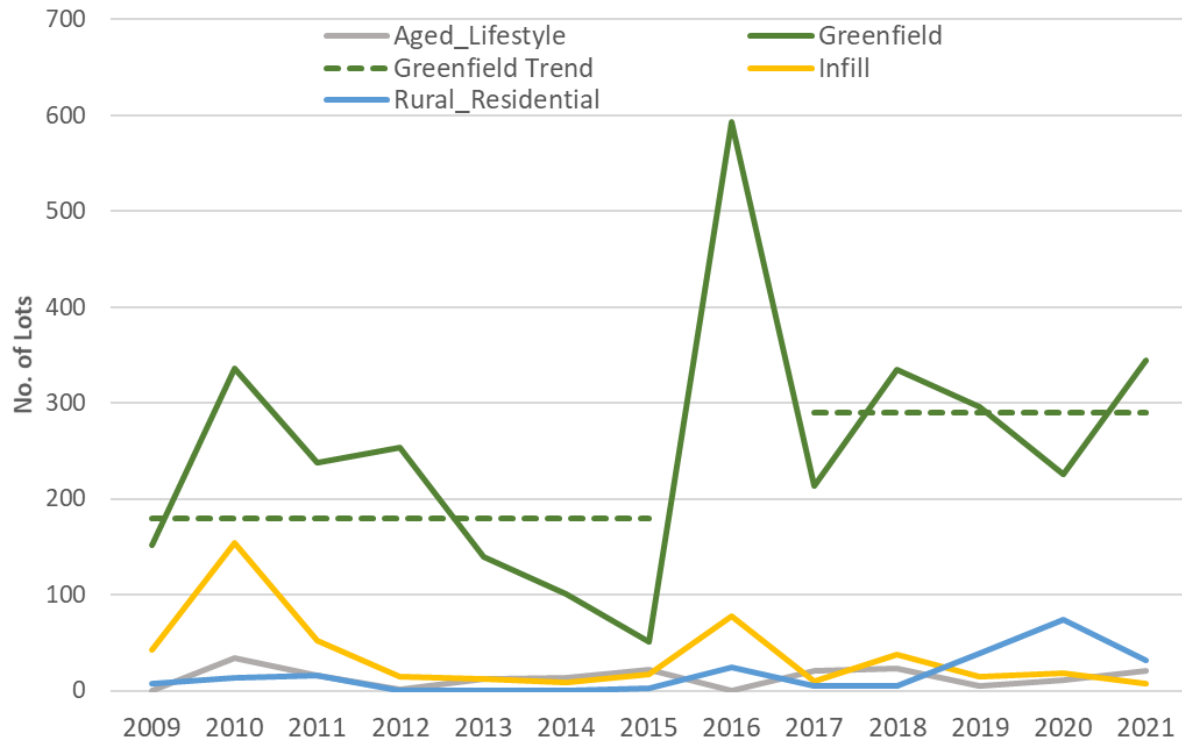
- a wide range of residential land products;
- a major land supply source within the smaller townships;
- distributed widely across the established urban area; and
- contributes to urban containment/development of under-utilised land parcels.

Although, over the last three financial years, the contribution of minor infill development has declined in terms of the proportion of total development (4% of total activity) and in terms of actual construction (averaging 13 lots per annum compared to the long term average of 36 lots).

The contribution of rural residential lot construction activity historically was more sporadic and its contribution as a residential supply source was negligible – contributing typically around 5% of lot construction or 17 lots per annum. However, over the last three financial years rural residential lot construction activity has significantly increased, averaging around 50 lots per annum or 13% of total development activity

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



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

Source: Spatial Economics Pty Ltd

4.5 Broadhectare Lot Construction

Broadhectare or greenfield lot construction activity has averaged:

- 252 lots per annum from 2009 to 2021;
- 180 lots per annum from 2009 to 2015; and
- 334 lots per annum since 2016.

Over the last three financial years greenfield residential lot construction activity has averaged 290 per annum and 335 lots constructed in 2021

As outlined previously broadhectare lot construction represents approximately 80% of all residential lot construction activity across the municipality over the last three financial years.

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.

Over the last three years, the vast majority (94%) of broadhectare lot construction activity was located in the township boundary of Shepparton/Mooroopna and 5% located in Tatura.

Tatura historically contributed around 11% of all greenfield lot construction across the municipality. The significant decline is directly attributable the lack of undeveloped zoned greenfield land supply stocks.

Within the township boundary of Shepparton/Mooroopna the majority of development activity was located in the suburb of Kialla (127 lots per annum), followed by:

- Shepparton (59 lots per annum);
- Shepparton North (43 lots per annum); and



- Mooroopna (33 lots per annum).

4.5.1 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 comparable regional Victorian urban centres. Graph 6 below illustrates the diversity of broadhectare lot construction.

Of the broadhectare lot construction activity over the last three financial years:

- 1% were compact suburban (sized less than 300 sqm);
- 3% were suburban (sized 300 to 500 sqm);
- 77% were large suburban (500 to 1,000 sqm); and
- 19% 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 construction of larger broadhectare lots has increased, conversely, the proportion of smaller to mid-sized lots has decreased.

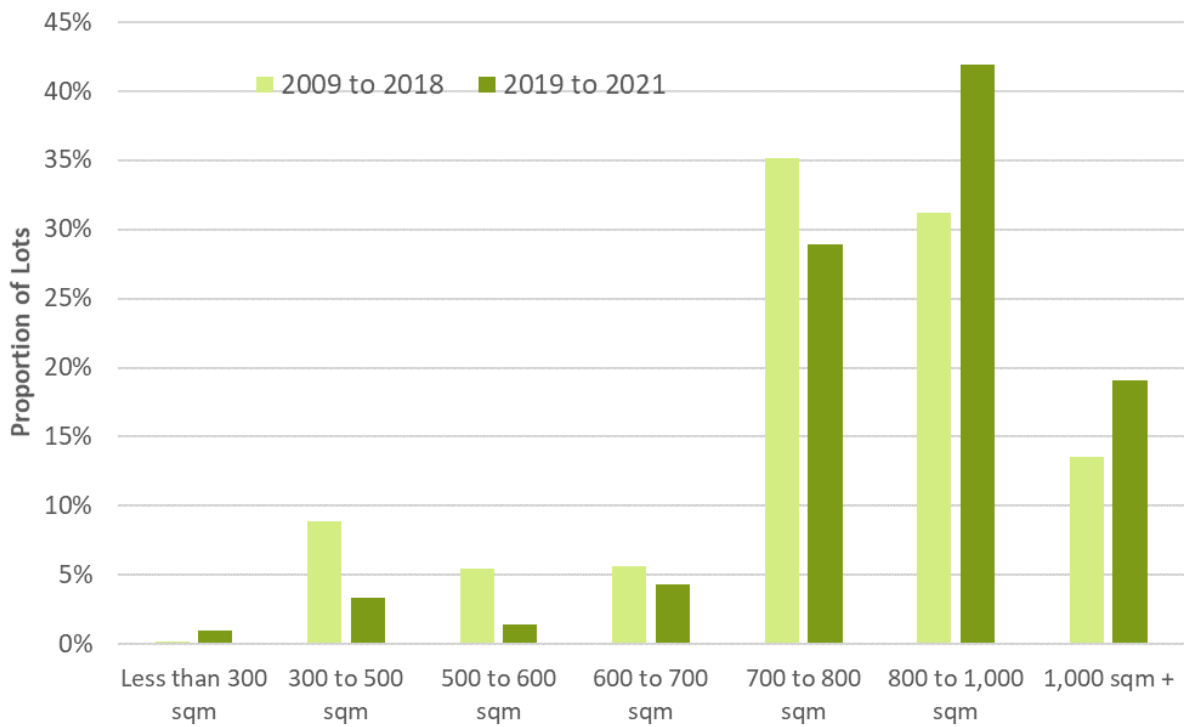
Graphs 6 and 7 below illustrate both the median size and diversity of broadhectare residential lot construction. The median lot size of constructed broadhectare lots has remained relatively consistent over-time, varying from 720 sqm to 826 sqm. There is a general trend of decreasing densities of broadhectare lot construction activity.

Across the majority of major regional 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, to respond to the demands of the changing demographic composition.

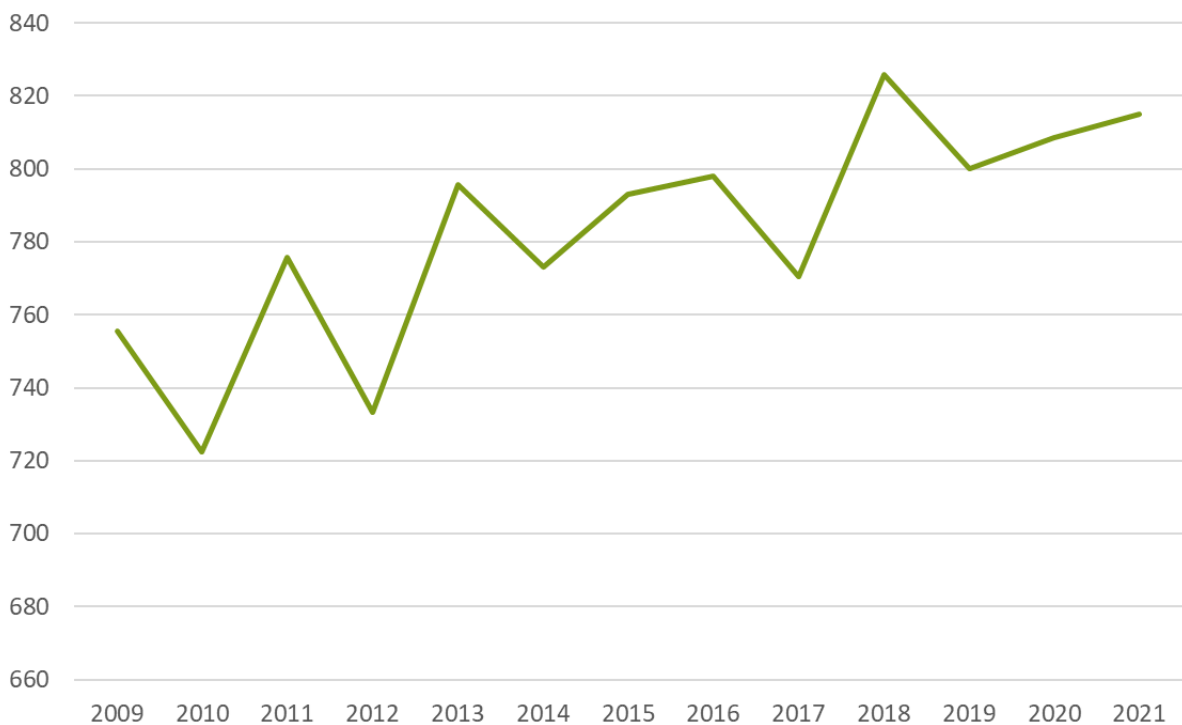


Graph 6: Broadhectare Lot Construction Size Distribution – City of Greater Shepparton



Source: Spatial Economics Pty Ltd

Graph 7: Median Lot Size (sqm) – Broadhectare Lot Construction



Source: Spatial Economics Pty Ltd

4.7 Rural Residential Lot Construction

Rural residential lot construction activity since 2009 has represented 5% of all lot construction activity across the municipal area – or 17 lots per annum



Rural residential lot construction over the last three financial years has significantly increased, increasing to an average annual lot production of nearly 50.

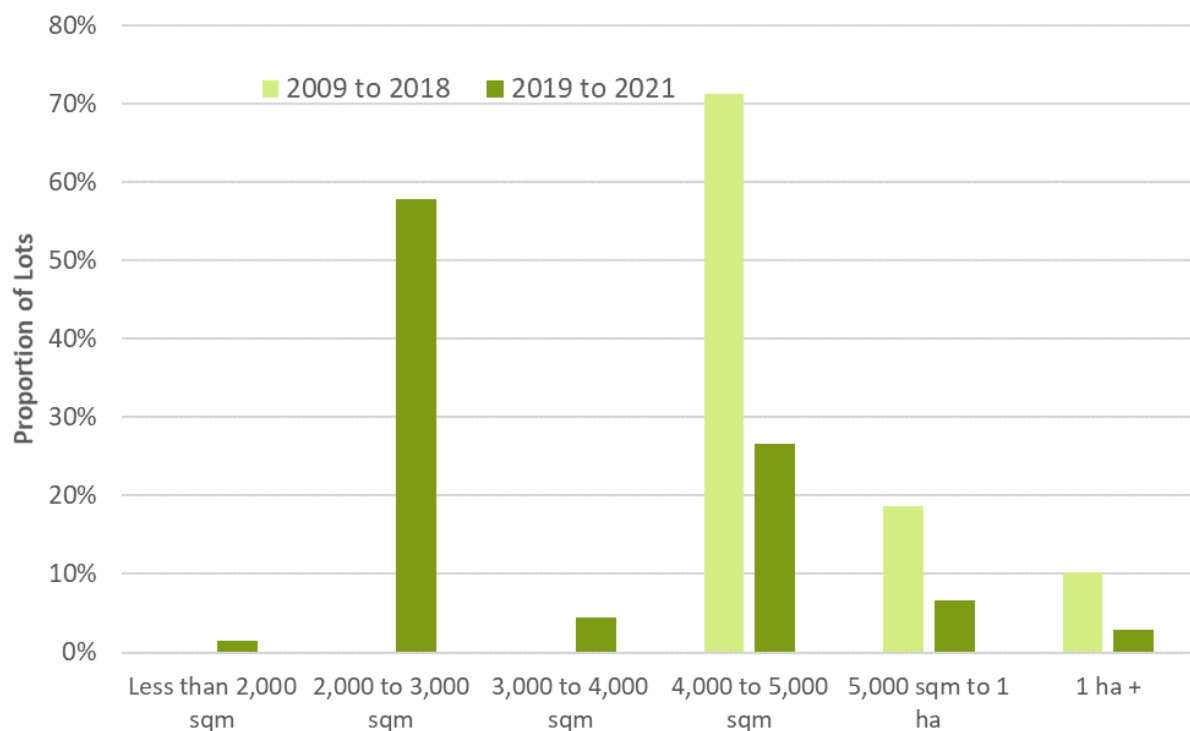
As measured over the last three years the vast majority (93%) of rural residential lot construction was zoned Low Density (LDRZ) and the residual zoned Rural Living (RLZ).

Over the last three years, nearly 75% of rural residential lot construction was located in the surrounding suburbs of Shepparton, development activity was particularly concentrated in Shepparton North. There was substantial rural residential subdivision activity located in Tatura

Over the last three years there has been a significant change in both the quantum and composition of rural residential subdivision activity. Not only has rural residential subdivision activity substantially increased in terms of its' total contribution, but there has also been a marked shift in terms of its lot size outcomes.

Specifically, regarding Low Density Residential (LDRZ) lot construction, historically the typical lot size constructed was between 4 to 5,000 sqm. Over the last three years there has been a significant shift to smaller lots, sized from 2 to 3,000 sqm that are serviced with hydraulic land development infrastructure. This is an emerging trend across regional Victoria.

Graph 8: Low Density Residential (LDRZ) Lot Construction Size Distribution – City of Greater Shepparton



Source: Spatial Economics Pty Ltd

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.

As measured over the longer term from 2009 to 2020 the median sales price of vacant residential lots has increased on an average annual basis by 3.0% in Greater Shepparton, compared to 6.2% in Ballarat, 5.3% in Bendigo and 5.4% across regional Victoria. This illustrates for Greater Shepparton that sufficient residential land was released relative to demand levels.



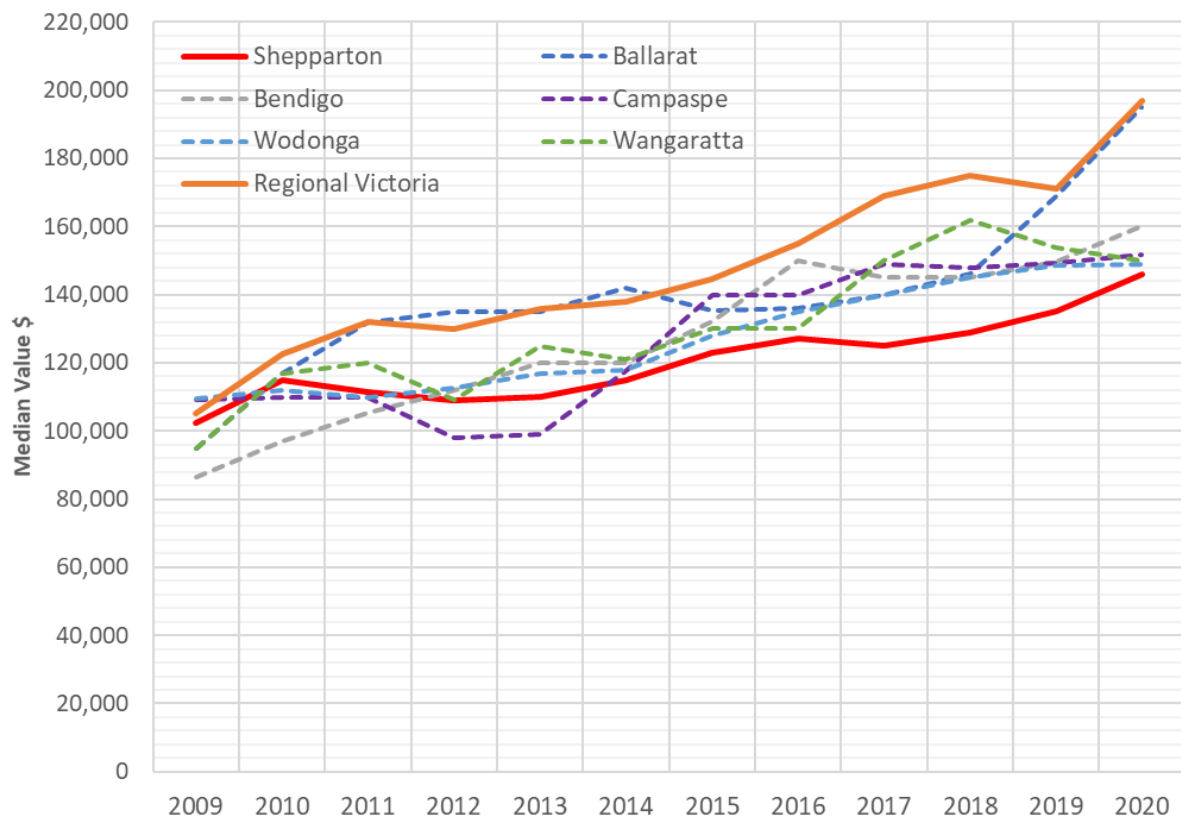
However, over the last three years as measured from 2018 the median sales price of vacant residential land has increased by 4.2% per annum compared to 10.1% in Ballarat, 3.3% in Bendigo and 4.0% across regional Victoria. Sales pricing of vacant residential lands across Shepparton in recent years has accelerated, however, the level of price escalation is in line with regional Victoria and must be interpreted in the context of the recent rapid escalation in expressed demand for residential land and housing.

The median sales price of a vacant residential lot in 2020 was:

- \$146,000 Greater Shepparton;
- \$149,000 in Wodonga;
- \$150,000 in Wangaratta;
- \$152,000 in Campaspe;
- \$160,000 Bendigo;
- \$195,000 in Ballarat; and
- \$197,000 across regional Victoria (this is heavily influenced by peri-urban municipalities and Geelong);

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 9: Median Sales Values – Vacant residential lots, 2009-2020 – Greater Shepparton Vs Selected Jurisdictions



Source: Valuer General Victoria

The volume of residential lot sales has significantly increased across Greater Shepparton, increasing by 58% as measured from 2019 to 2020. In 2019 there were 349 sales of vacant allotments



increasing to 553 in 2020. For regional Victoria, the volume of sales activity over the same period was 45%.

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. However, due to the substantial low density subdivision activity in Shepparton North consequently has attracted a higher premium price and therefore has influenced the median sales value outcomes.

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 the first quarter of 2021, the median sales value of a vacant residential lot by suburb was:

- Shepparton North - \$197,800
- Kialla - \$150,500;
- Shepparton – \$142,500;
- Mooroopna - \$130,000; and
- Tatura - \$96,000.

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

There has been heightened residential development activity across regional Victoria, including significant growth in activity across Greater Shepparton. This has been measured in terms of building approvals, sales volumes and subdivision activity.

This is in the context of a) the Covid pandemic; b) subdued growth across metropolitan Melbourne and c) minimal overseas migration.

The key issue is to whether this surge of development activity will be sustained or whether it is a short-term trend.

Results from the 2021 Population and Housing Census released mid 2022 will provide some insights to this trend. However, it highlights the importance of planning for a range of plausible demand scenarios.

Over the last three years, there has been a significant shift in the composition of residential subdivision activity. Rural residential lot construction and associated dwelling construction has increased from around 2% of total development activity to around 13%. In addition, there is a marked shift to smaller rural residential lots from 4,000 sqm to around 2,100 sqm.



5.0 Residential Land Supply

Key Findings

As at September 2021, there was a residential lot capacity within zoned broadhectare sites of approximately 3,500 across the municipal area of Shepparton.

Over 94% 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 -1,985 lots;
- Kialla -751 lots;
- Shepparton North – 290 lots; and
- Mooroopna – 211 lots.

In addition, there are approximately 1,267 hectares of land (with an estimated yield of 7,468 dwellings) identified for potential future broadhectare residential development across the municipal area as at September 2021. The vast majority of this identified land is located in Shepparton/Mooroopna and to a lesser degree Tatura.

Based on existing planning permits, recent construction activity and Council/Development Industry feedback it is anticipated that over the next two years, on average, **487 lots/dwellings** per annum will be constructed within existing zoned broadhectare sites in Shepparton/Mooroopna.

This level of anticipated lot construction is significantly higher than both a) previous assessments undertaken regarding anticipated future lot construction activity and b) historical actual lot construction activity. However, it is highlighted that this level of anticipated lot construction activity closely correlates to:

1. Current levels of building approval; activity (623 for 2020/21); and
2. Recent sales activity of vacant residential lots (553 completed sales in 2020).

Further analysis has been undertaken to assess the composition of the land stocks anticipated to be developed over the next two years. The information was sourced from the development industry, council permit information, related planning/land development consultants and independently verified by Spatial Economics.

Of the 973 greenfield lots anticipated to be constructed over the next two years:

3. 51% or 510 lots have been pre-sold; and
4. 64% or 630 lots have current preliminary sub-division approval, of which the vast majority are currently under construction.

Currently across the City of Greater Shepparton there was a total stock of 1,351 rural residential allotments. Of this stock, only 119 lots (9%) were vacant. Vacant rural residential lots as a supply type are 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 September 2021.

In addition, it provides an overview of current rural residential land stocks.

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.

5.1 Stock of Zoned Broadhectare

As at September 2021, there was a residential lot capacity within zoned broadhectare sites of approximately 3,500 across the municipal area of Shepparton.

Nearly 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 -1,985 lots;
- Kialla -751; lots
- Shepparton North – 290 lots; and
- Mooroopna -211 lots.

Maps 1 to 7 illustrates the location/distribution of residential land stocks across the Shepparton/Mooroopna urban centre (zoned and unzoned).

Maps 8 to 17 illustrates the location/distribution of residential land stocks across the settlements outside of Shepparton-Mooroopna (zoned and unzoned).

Table 12 identifies the lot yield and estimated development timing of zoned broadhectare land stocks.

Table 12: Anticipated Broadhectare Lot Construction Activity, 2021

Township/Suburb	0-2 years	3-5 years	6-10 years	11+ years	No Timing	Total Zoned Stocks	UGZ - PSP		
							Potential Residential	Required	Total Lots
Merrigum						0	27		27
Murchison	5					5			5
Shepparton East			15		14	29			29
Tatura	24			6	144	174	1068		1242
Undera	5					5			5
Shepparton/Mooroopna	939	418	307	263	1310	3237	5373	1000	9610
<i>Congupna</i>						0	840		840
<i>Grahamvale</i>						0	1160		1160
<i>Kialla</i>	461	78	67	103	42	751	82	1000	1833
<i>Mooroopna</i>	132			70	9	211	791		1002
<i>Shepparton</i>	294	170	240	90	1191	1985	2500		4485
<i>Shepparton North</i>	52	170			68	290			290
City of Greater Shepparton	973	418	322	269	1468	3450	6468	1000	10918

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 two years, on average, **487 lots/dwellings** per annum will be constructed within existing zoned broadhectare sites across the municipality.



This level of anticipated lot construction is significantly higher than both a) previous assessments undertaken regarding anticipated future lot construction activity and b) historical actual lot construction activity. However, it is highlighted that this level of anticipated lot construction activity closely correlates to:

3. Current levels of building approval; activity (623 for 2020/21); and
4. Recent sales activity of vacant residential lots (553 completed sales in 2020).

It is noted that not all building approvals and residential land sales are greenfield lots, however, the vast majority will be from residential greenfield lands.

Further analysis has been undertaken to assess the composition of the land stocks anticipated to be developed over the next two years. The information was sourced from the development industry, council permit information, related planning/land development consultants and independently verified by Spatial Economics.

Of the 973 greenfield lots anticipated to be constructed over the next two years:

5. 51% or 510 lots have been pre-sold; and
6. 64% or 630 lots have preliminary sub-division approval, of which the vast majority are currently under construction.

This highlights to a high degree of certainty that the levels of anticipated lot construction activity will likely occur over the next two years. Spatial Economics perceive this will be highly dependent of the ability of the civil works industry to deliver the required work requirements to meet the anticipated increased levels of demand

It is anticipated that in Shepparton /Mooroopna within the 3 to 5 year anticipated development timing category only 418 lots are identified for development, representing only 140 lots per annum. This is significantly below the previous five year average for greenfield lot construction , at around 285 lots per annum (ignoring the current and anticipated increase in construction rates).

It could be presented that the greenfield lot capacity identified in both the 6 to 10 years and 11+ years anticipated development timing category could be brought forward to meet anticipated demand to the 3 to 5 year demand/supply category. Spatial Economics view that a proportion will be brought forward and larger proportion will not due to a variety of factors.

These factors include:

- 6-10 years – only 307 lots have been identified to be developed in the 6 to 10 year category, of this lot potential nearly 80% is located in the Shepparton North East Structure Plan area. This potential is currently under ownership of one active developer and would require the land to the west of this parcel to be largely fully developed to access land development dependent hydraulic infrastructure; and
- 11+ years: land identified to be developed in the next 11 + years category in nearly all cases are either highly fragmented, have an existing use/s and local knowledge indicating the land owner does not have active development intention. Spatial Economics include these sites as potential development sites as it is believed that in the fullness of time they will be fully developed.

Table 13 below summarises the above issue in more detail. The table illustrates development intentions over the next ten years and excludes zoned undeveloped residential broadhectare land stocks that are either a) pre-sold; and or b) currently with preliminary subdivision approval for construction. Key highlights include:

1. In total there are limited zoned broadhectare lots across key greenfield land release areas; and



2. In some key greenfield land release suburbs there are limited to zero undeveloped zoned broadhectare land stocks.

Specifically, by key greenfield land release suburbs, the current stock of zoned undeveloped greenfield lands that is not pre-sold or currently under construction include:

- zero supply in Mooroopna;
- zero supply in Tatura;
- 170 lots in Shepparton North;
- 264 lots in Kialla; and
- 513 lots in Shepparton.

The above outcomes illustrate that unless additional greenfield lands are rezoned in the short-term in total and across the differing geographical housing sub-markets, industry competition will be limited. Consequently, this will likely result in restricted supply and upward price pressures on residential retail lots.

Table 13: Anticipated Broadhectare Lot Construction Activity – excluding pre-committed land stocks, 2021

Township/Suburb	0-2 years	3-5 years	6-10 years	Total Zoned Stocks
<i>Congupna</i>	0	0	0	0
<i>Grahamvale</i>	0	0	0	0
<i>Kialla</i>	119	78	67	264
<i>Mooroopna</i>	0	0	0	0
<i>Shepparton</i>	103	170	240	513
<i>Shepparton North</i>	0	170	0	170
Shepparton/Mooroopna	222	418	307	947
Tatura	0	0	0	0

Source: Spatial Economics Pty Ltd

Note: Pre-committed includes lots that are either pre sold or lots with preliminary subdivision approval

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 1,300 lots/dwellings in Shepparton/Mooroopna and 144 lots/dwellings in Tatura. Of the lot potential in Shepparton, 1,050 lots are located in the recently rezoned Shepparton North East Structure Plan area.

Besides the lot potential located in the Shepparton North East Structure Plan area, these development sites are characterised with existing low-density residential uses, significant planning issues (airport buffers) and in many instances low demand areas that are unlikely to see significant subdivision activity. With these sites, there can be no certainty to the eventual timing of re-development or likely development yields/density.

There are a further 38 sites with a No Timing status (with no estimated yield estimates) with a total area of 330 hectares. These sites are typically located within the small settlements across the municipal area, in summary these include:



- Murchison - 156 hectares (6 sites);
- Merrigum - 60 hectares (8 sites);
- Undera - 47 hectares (5 sites);
- Kialla - 26 hectares (4 sites);
- Dookie - 17 hectares (8 sites);
- Tallygaroopna - 13 hectares (1 site);
- Katandra West - 6 hectares (3 sites);
- Tatura - 2 hectares (1 site);
- Shepparton North - 1 hectare (1 site); and
- Mooroopna - 1 hectare (1 sites).

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 1,268 hectares of land (with an estimated yield of approximately 7,500 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 suburb, the stock of potential (unzoned) broadhectare land are located in:

- Shepparton - 2,500 lots (352 hectares);
- Grahamvale - 1,160 lots (128 hectares);
- Kialla - 1,082 (444 hectares);
- Tatura - 1,068 lots (134 hectares);
- Congupna - 840 lots (97 hectares);
- Mooroopna - 791 lots (108 hectares); and
- Merrigum - 27 lots (5 hectares).

5.3 Rural Residential Land Stocks

The stock of both occupied and vacant rural residential allotments have been determined on a lot by lot basis at October 2021. 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 1,351 rural residential allotments. Of this stock, only 119 lots (9%) were vacant. Vacant rural residential lots as a supply type are comparatively low across the City of Greater Shepparton when compared to other regional municipalities in Victoria.

The majority (57%) of the rural residential lot stock is located outside of defined town boundaries. There is considerable stock located within Tatura (3121 lots (35 vacant)) and Shepparton/Mooroopna (225 lots (35 vacant)).

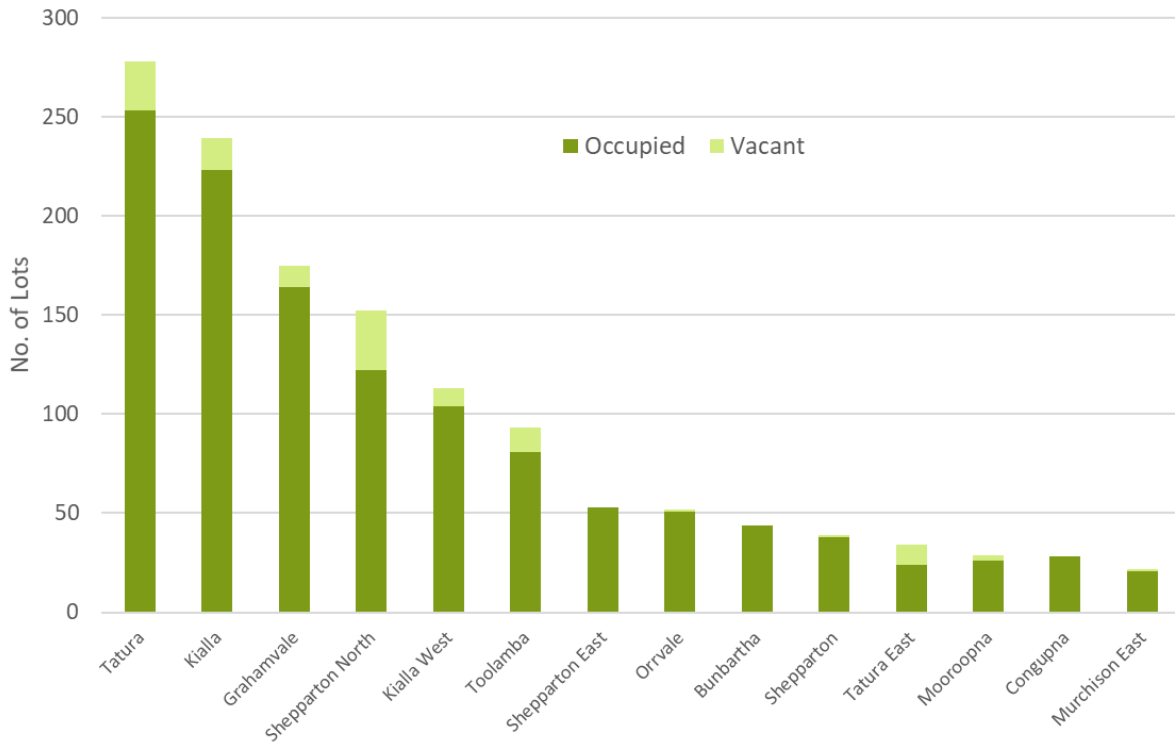
Graph 10 summarises the stock (lots) of both occupied and vacant rural residential allotments by suburb.

There is approximately 321 hectares of vacant rural residential land across the municipality. Of this vacant lot stock, 199 hectares is zoned Low Density Residential (LDRZ), the remaining 122 hectares is zoned Rural Living (RLZ). There has been a total of 71 hectares of rural residential lots converted from vacant to occupied since the last assessment undertaken (FROM December 2018 to October 2021).



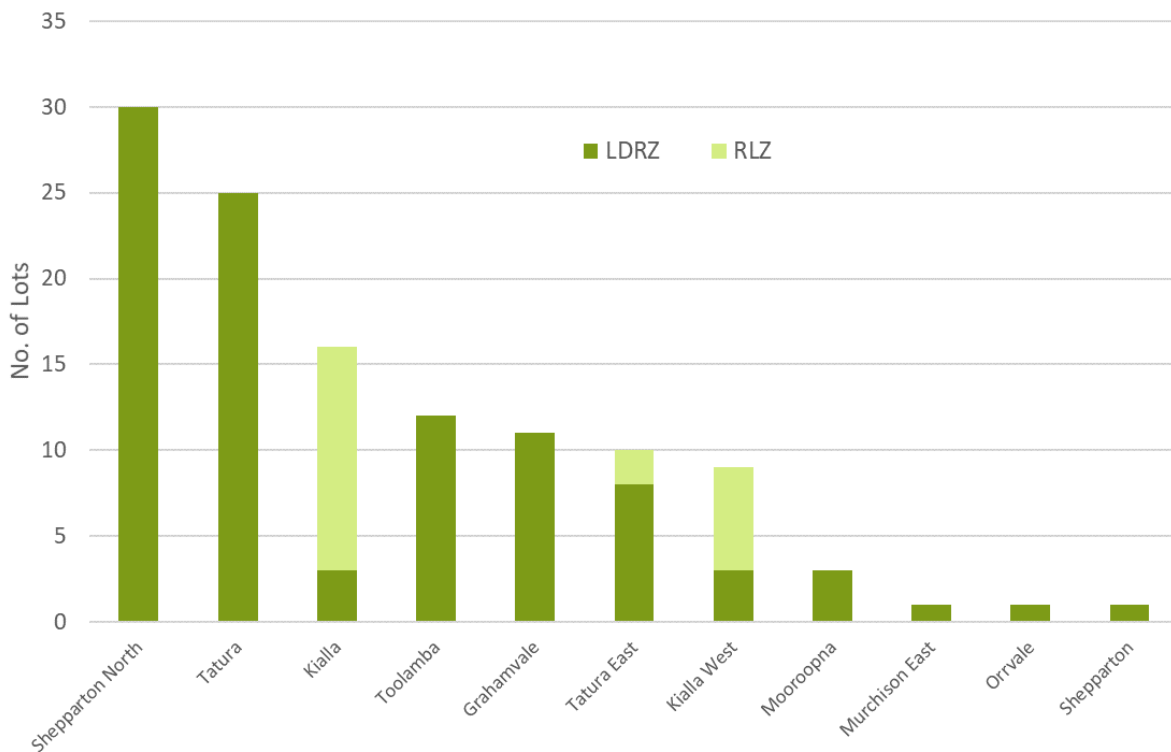
Graph 12 illustrates the size distribution of all existing rural residential allotments (occupied and vacant).

Graph 10: Stock of Rural Residential Allotments, 2021



Source: Spatial Economics Pty Ltd

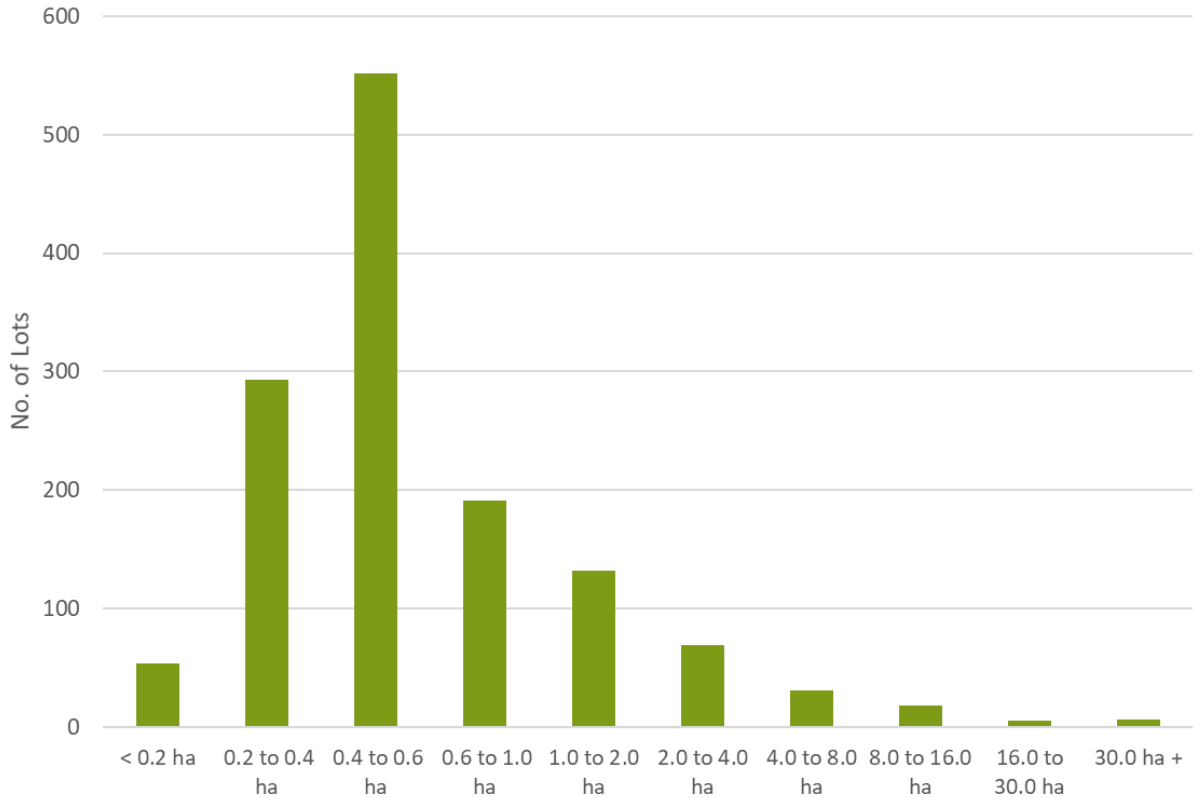
Graph 11: Stock of Vacant Rural Residential Allotments, 2021



Source: Spatial Economics Pty Ltd

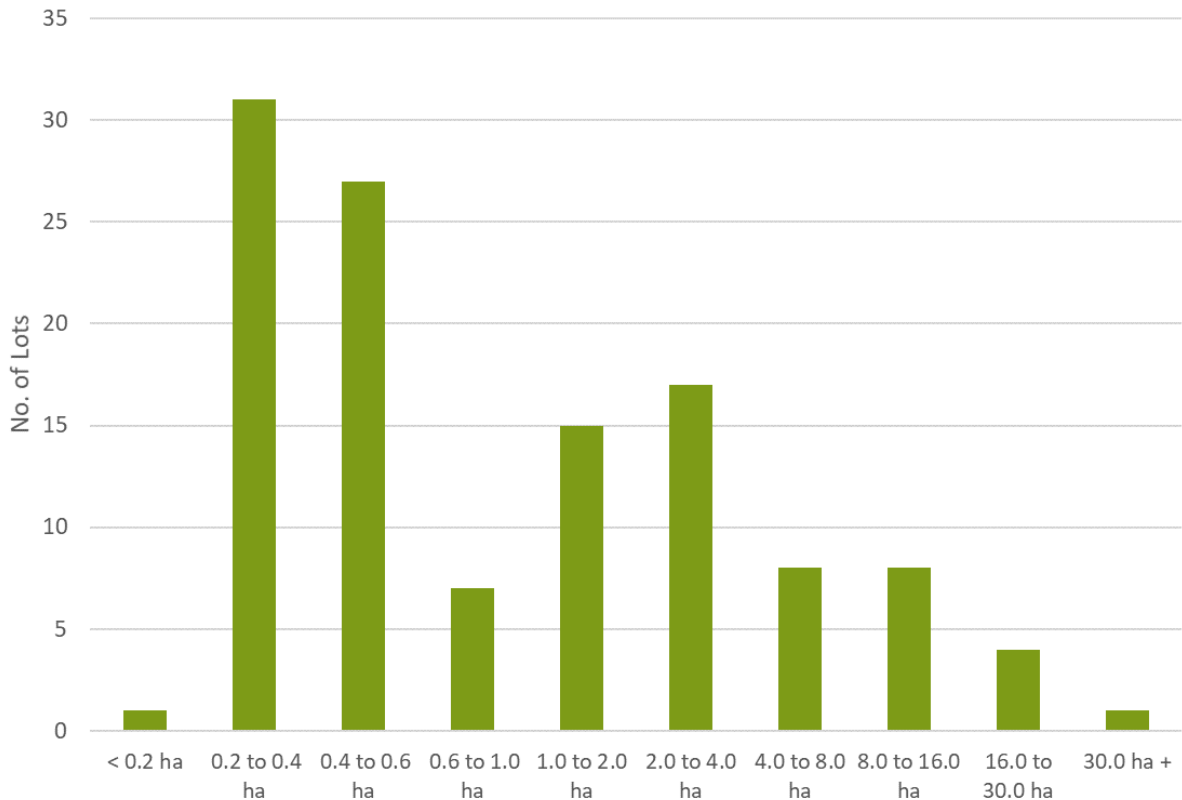


Graph 12: Stock of Rural Residential' Allotments by Lot Size Cohort (occupied & vacant), 2021



Source: Spatial Economics Pty Ltd

Graph 13: Stock of Rural Residential' Allotments by Lot Size Cohort (vacant), 2021



Source: Spatial Economics Pty Ltd

Approximately 80% of the rural residential lot stock (both occupied and vacant) is less than one hectare in size. Only 4% of the rural residential lot stock (or 60 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.

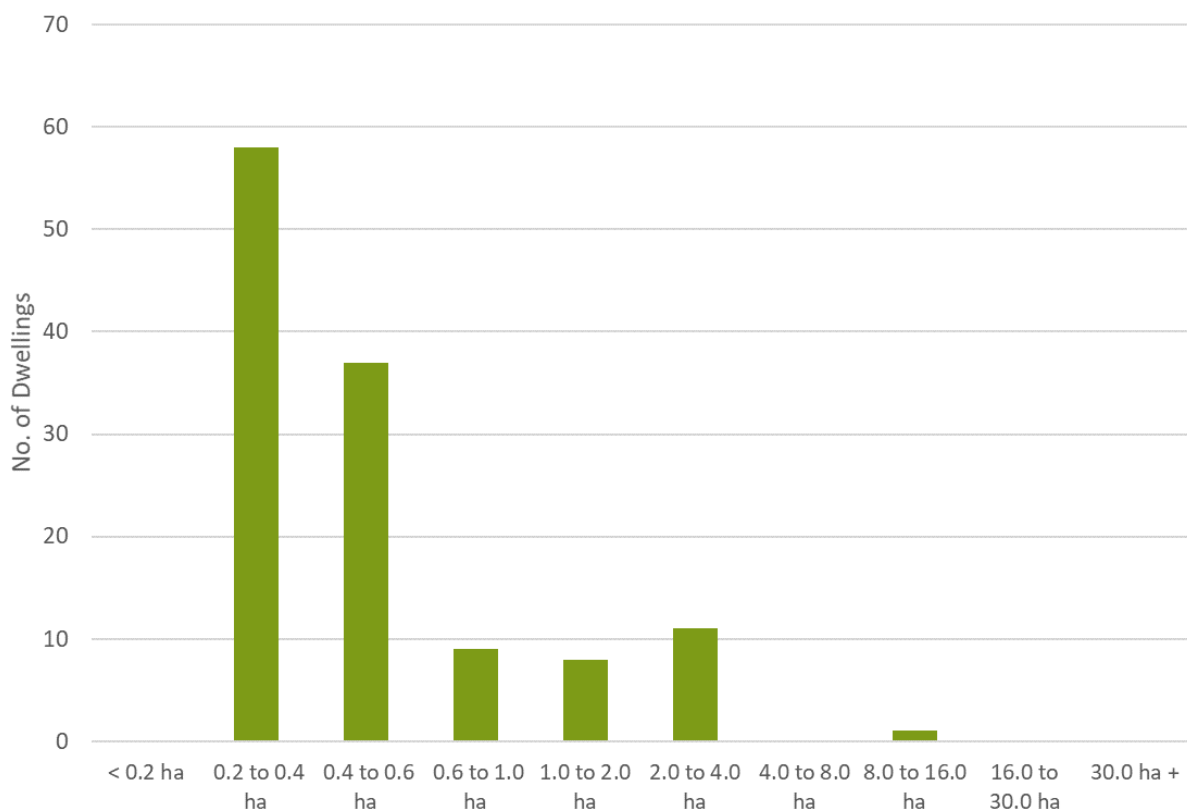
Spatial Economics have observed that since the previous assessment undertaken in 2019 there has been a considerable increase in rural residential development activity. This assessment has previously documented the significant increase in rural residential subdivision activity over the last three years.

Similarly Spatial Economics have observed a significant increase in the construction of new dwellings on rural residential lands.

In total, there has been a total of 124 dwellings constructed on rural residential lands, which equates on an average annual basis to 44 dwellings, compared to 48 lots constructed per annum. The vast majority (77%) of dwelling construction was on lots sized from 2,000 to 6,000 sqm. A large proportion (70%) of this dwelling construction was in either Shepparton-Mooroopna and Tatura.

Graph 14 below illustrates the lot size distribution of recent dwelling construction on rural residential lands.

Graph 14: Lot size distribution of recently constructed dwellings on rural residential lands



Source: Spatial Economics Pty Ltd

5.3.1 Preliminary subdivision approvals – rural residential lands

It appears based on preliminary subdivision approval data the recent trend of a) increased subdivision activity for rural residential lands; and b) a consumer preference for smaller rural residential lots will continue.

Currently, there is a yield of 148 rural residential lots with current subdivision approval (97% are zoned LDRZ). Predominantly the anticipated lot size of the proposed subdivisions is from 2,000 to 4,000 sqm or 87% of the total.

The proposed construction activity is located in:

- Tatura – 92 lots;



- Shepparton North (48 lots); and
- Kialla – 8 lots.

The typical resultant density of the proposed rural residential subdivision is around 2,030 sqm.

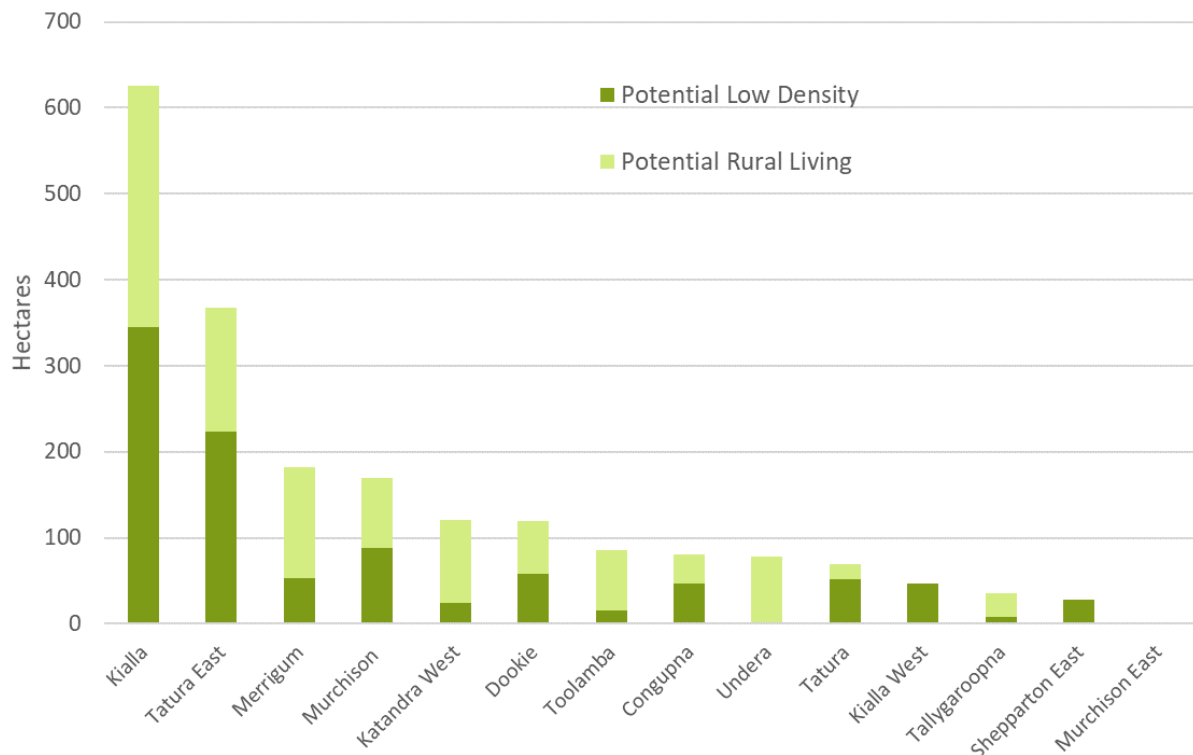
5.3.2 Future (Unzoned) Rural Residential Land Stocks

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).

There are 86 hectares of land currently zoned Rural Living (RLZ) in Kialla/Kialla West identified for future rezoning to Low Density (LDRZ)

Graph 15: Stock of Future Rural Residential (unzoned) Land, 2021



Source: SpatialEconomics Pty Ltd



Key Issues

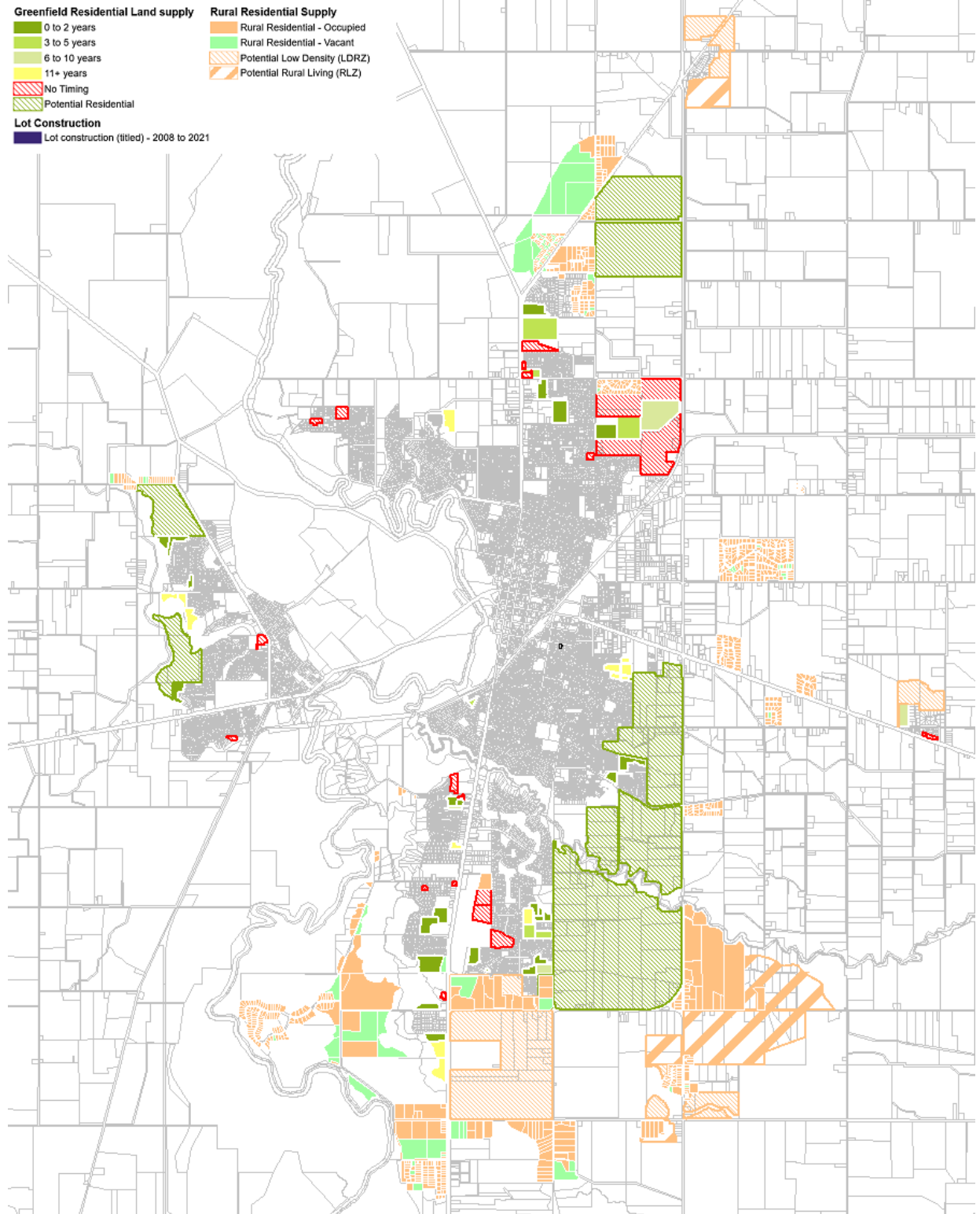
There are limited supplies of zoned broadhectare land stocks in both Shepparton-Mooroopna and Tatura. If zoned land stocks were excluded that were 1) pre-sold, 2) have preliminary subdivision approval/under construction; 3) parcels where no certainty can be provided in terms of development timing and 4) land parcels that are fragmented, have an existing use, have significant planning issues constraints – the likely zoned capacity is around 950 lots.

Spatial Economics consider that there is a shortage of suitable zoned broadhectare land stocks to meet demand in the medium term i.e. post three to five years.

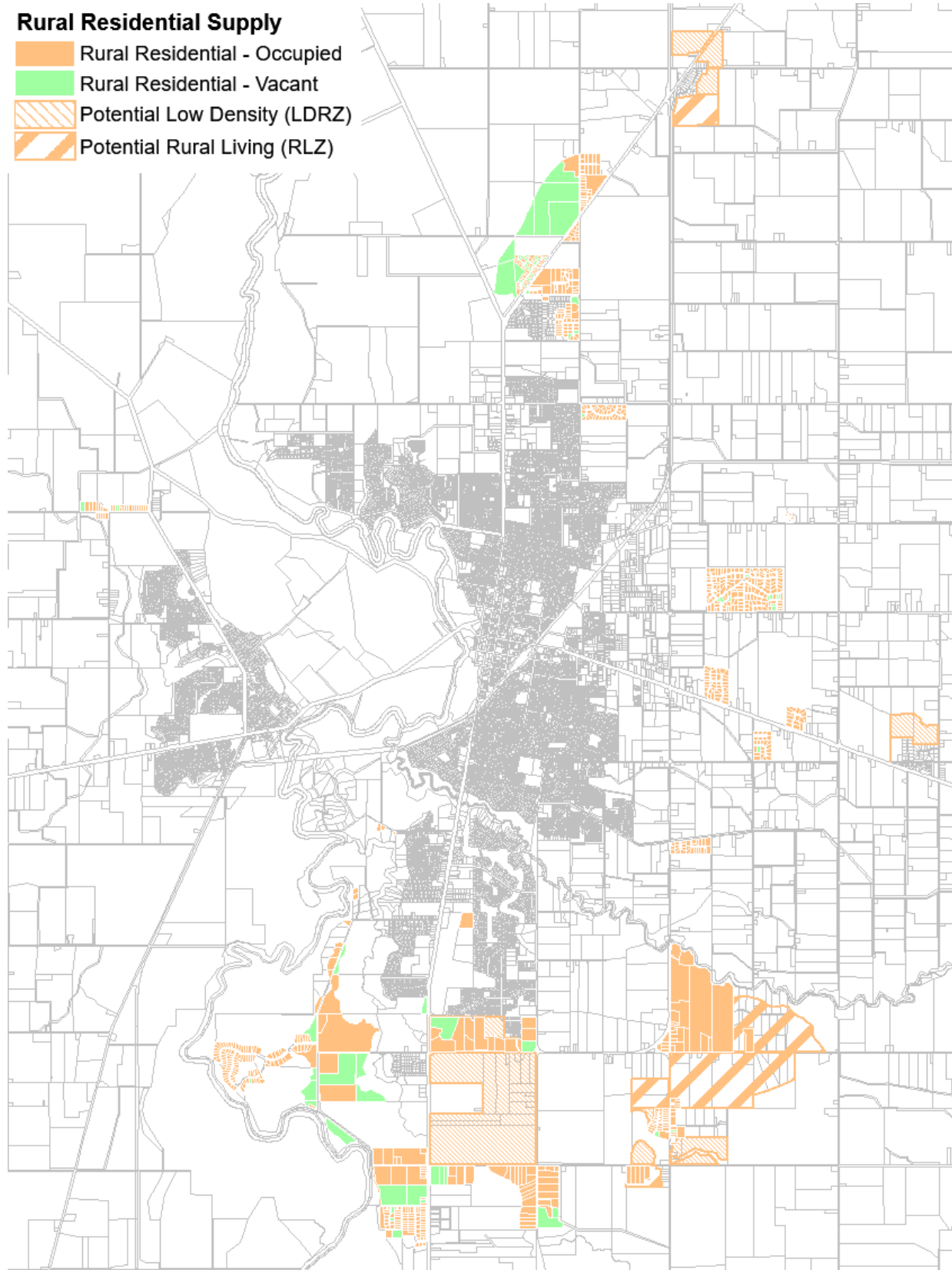
The outlook for the demand for smaller rural residential allotments is likely to continue based on current and proposed development activity levels. There is currently a marginal stock of vacant rural residential lots and limited supply for larger/estate like subdivision projects. However, there is significant stock identified for future rural residential rezoning.



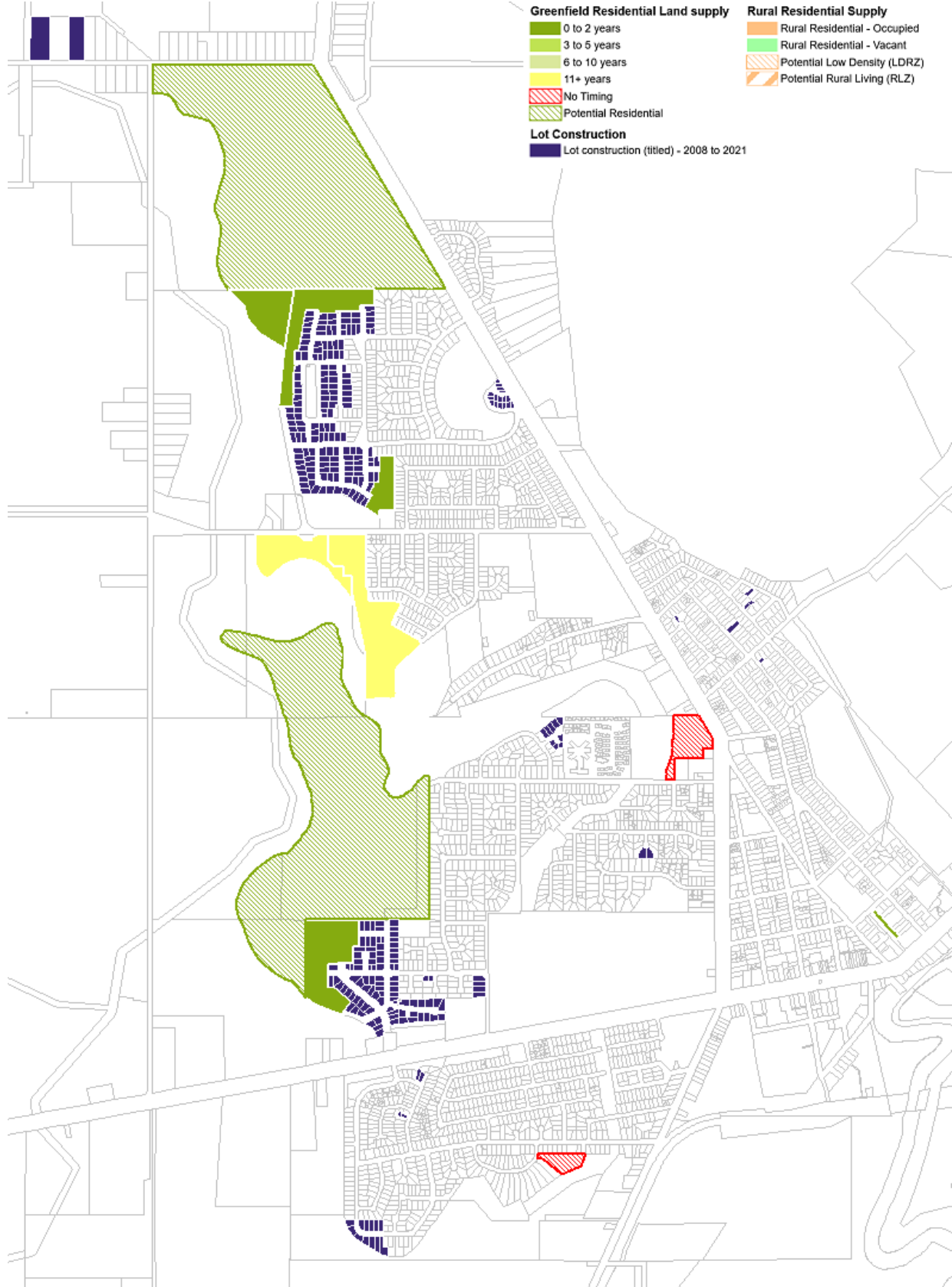
Map 1: Residential Land Supply Status Overview – Shepparton/Mooroopna



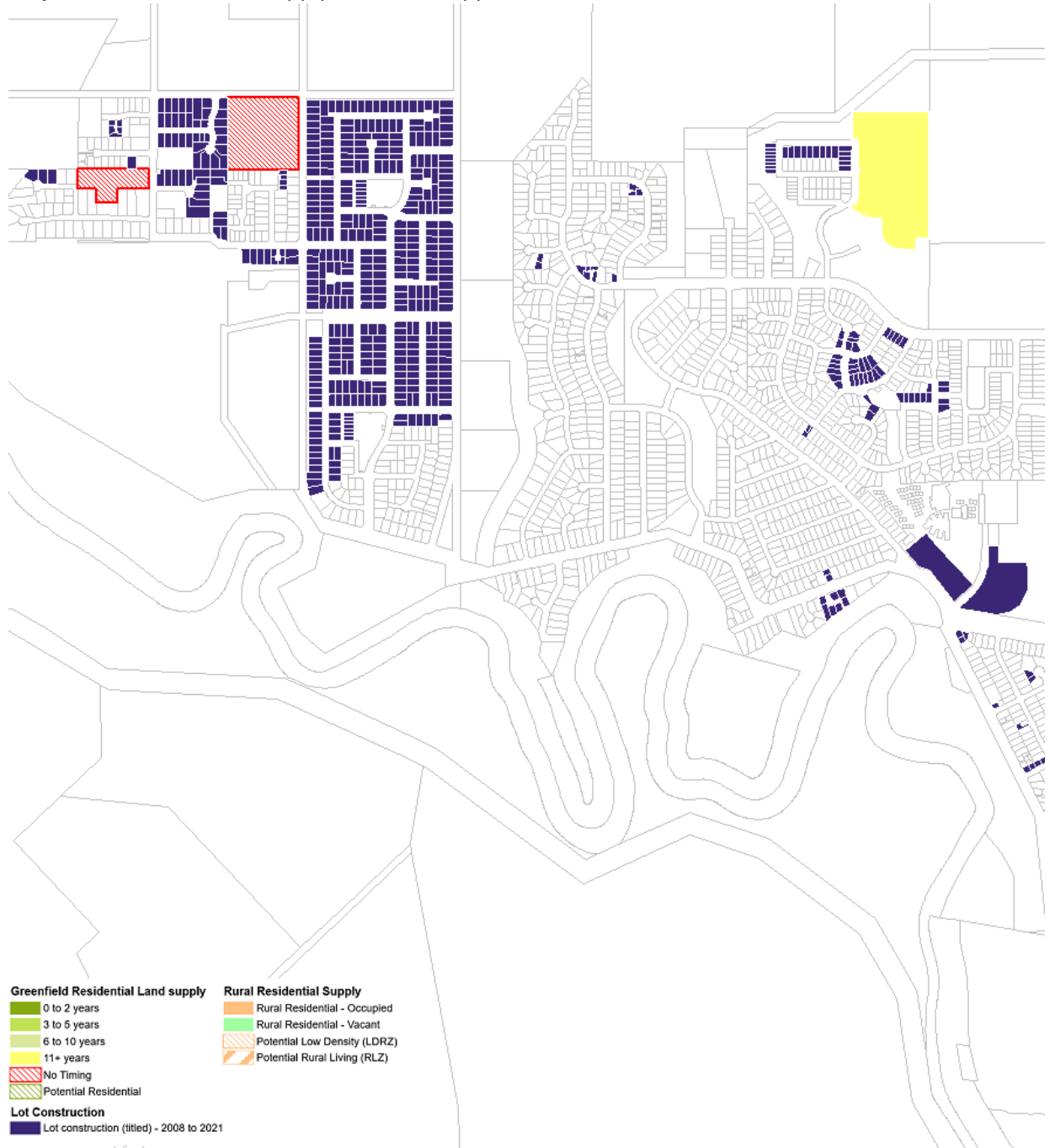
Map 2: Rural Residential Land Supply Status Overview – Shepparton/Mooroopna



Map 3: Residential Land Supply Status – Mooroopna



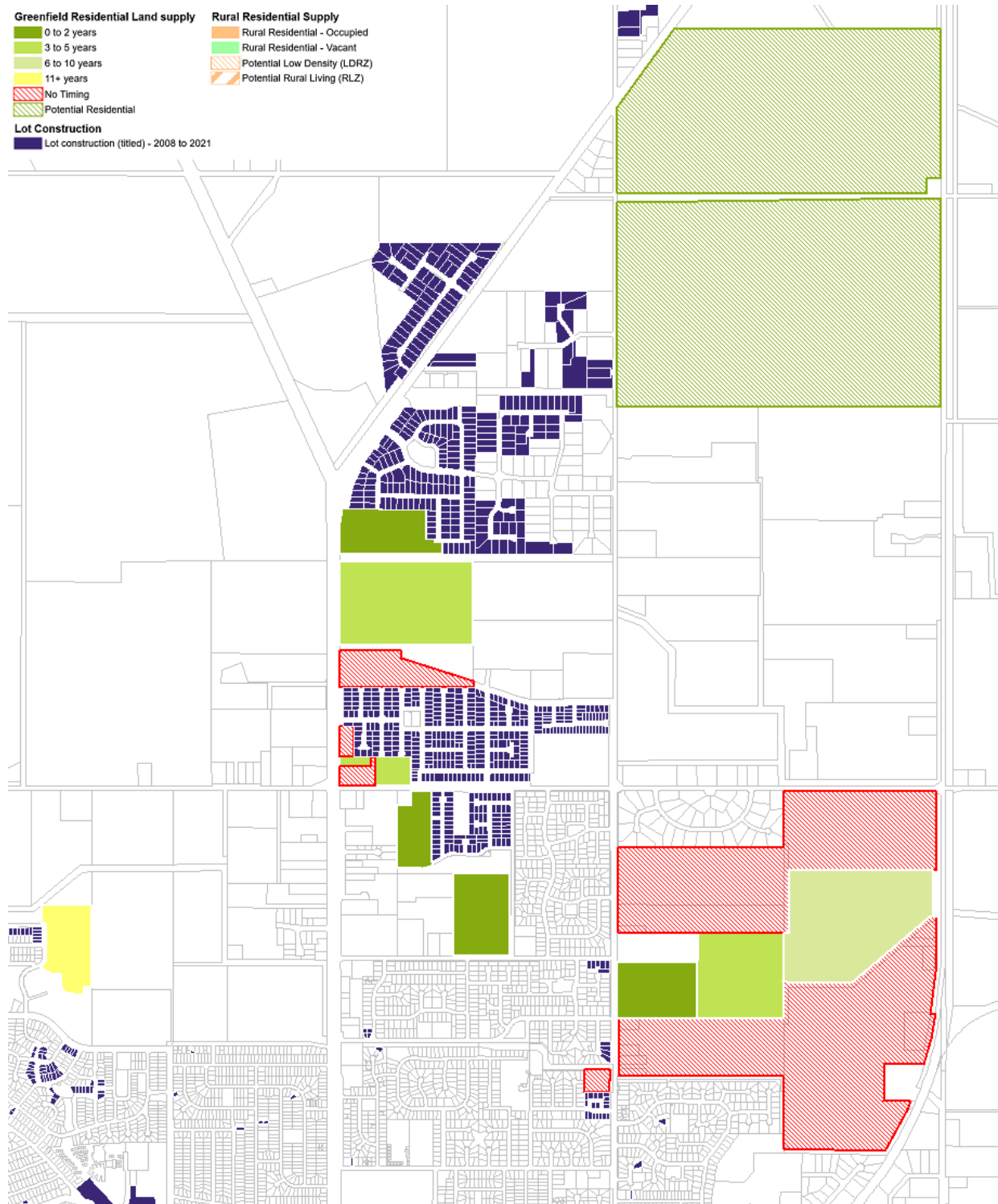
Map 4: Residential Land Supply Status – Shepparton North West



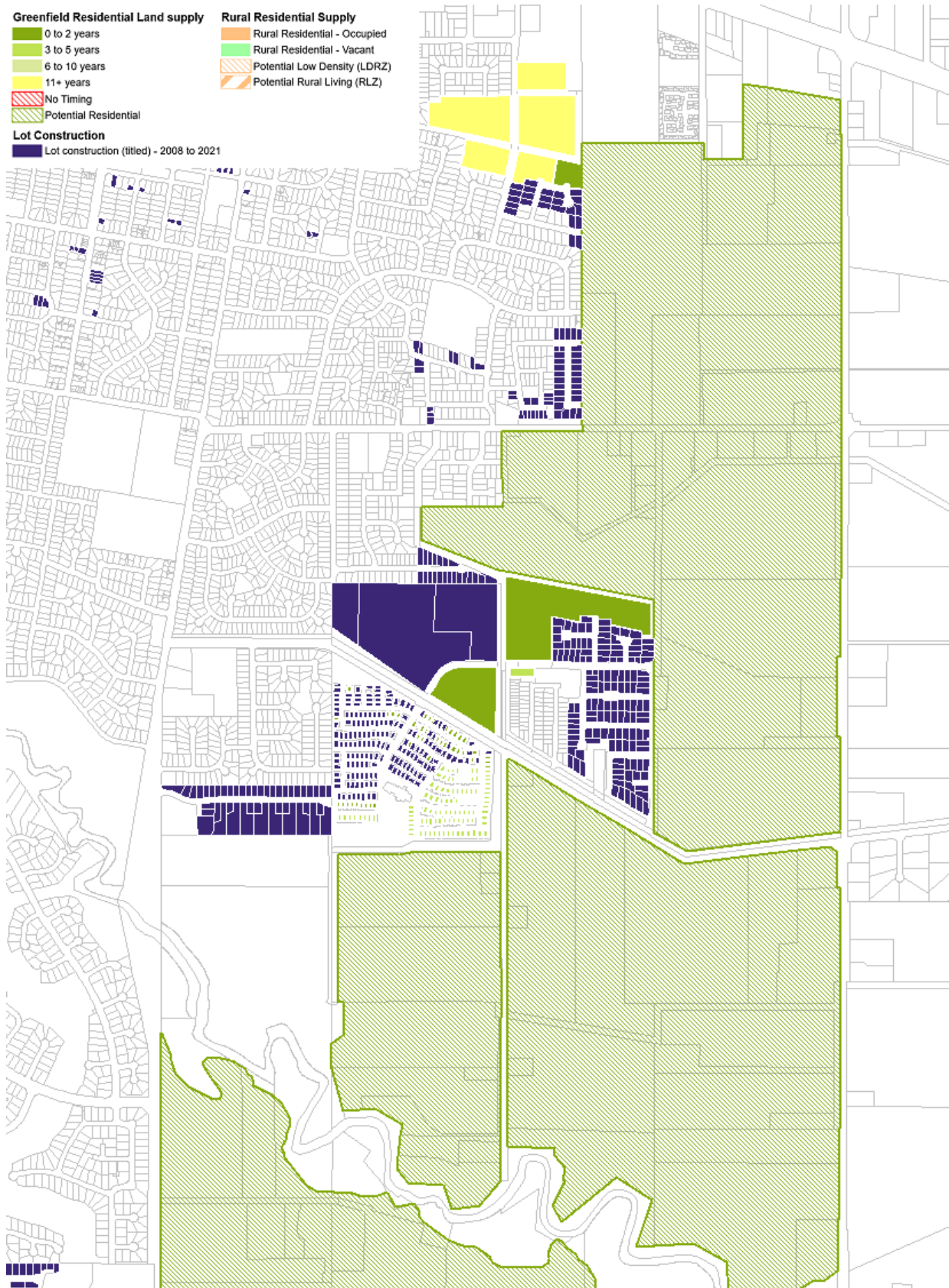
- | | |
|---|---------------------------------|
| Greenfield Residential Land supply | Rural Residential Supply |
| 0 to 2 years | Rural Residential - Occupied |
| 3 to 5 years | Rural Residential - Vacant |
| 6 to 10 years | Potential Low Density (LDRZ) |
| 11+ years | Potential Rural Living (RLZ) |
| No Timing | |
| Potential Residential | |
| Lot Construction | |
| Lot construction (titled) - 2008 to 2021 | |



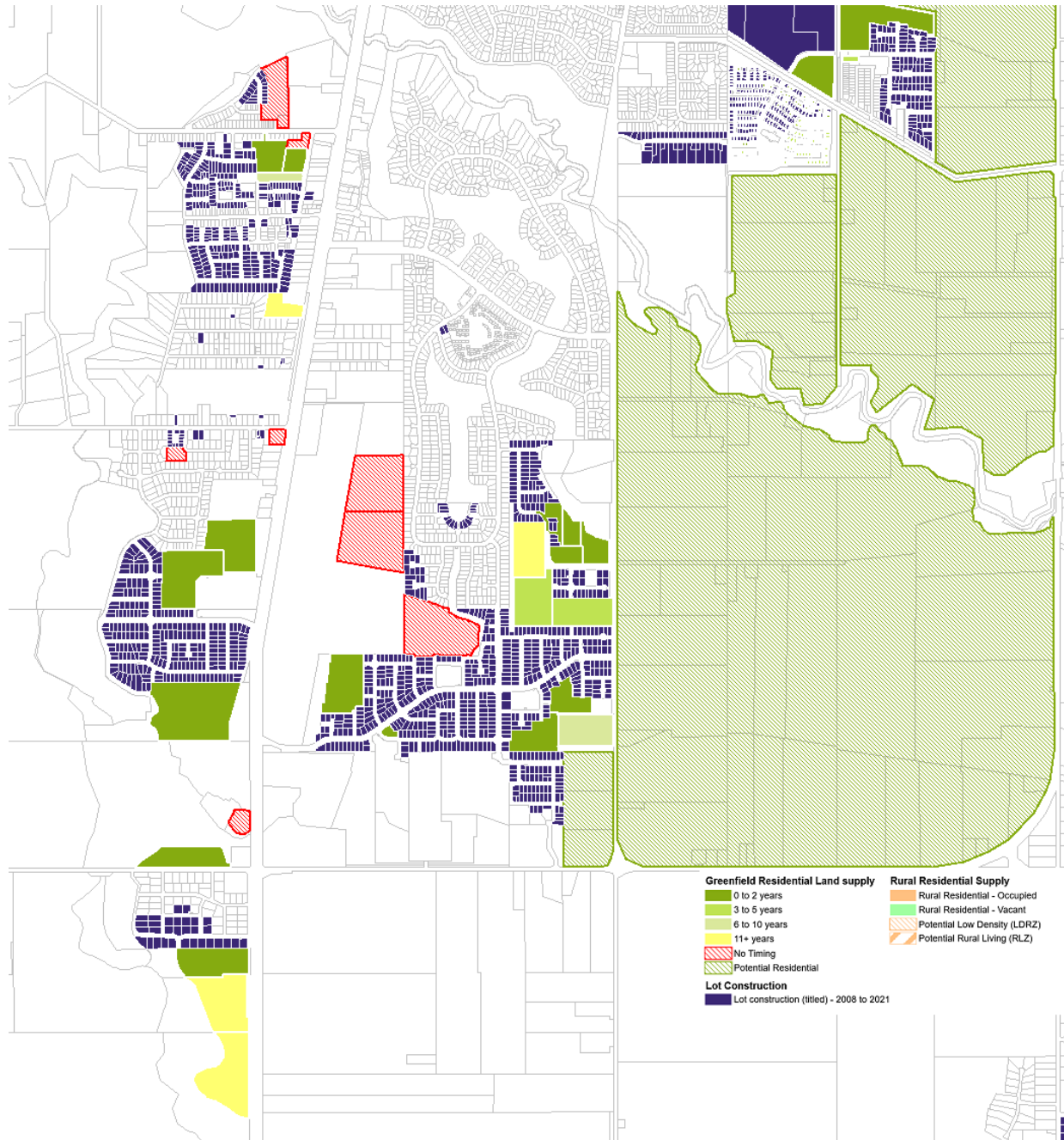
Map 5: Residential Land Supply Status – Shepparton North & North East



Map 6: Residential Land Supply Status – Shepparton East



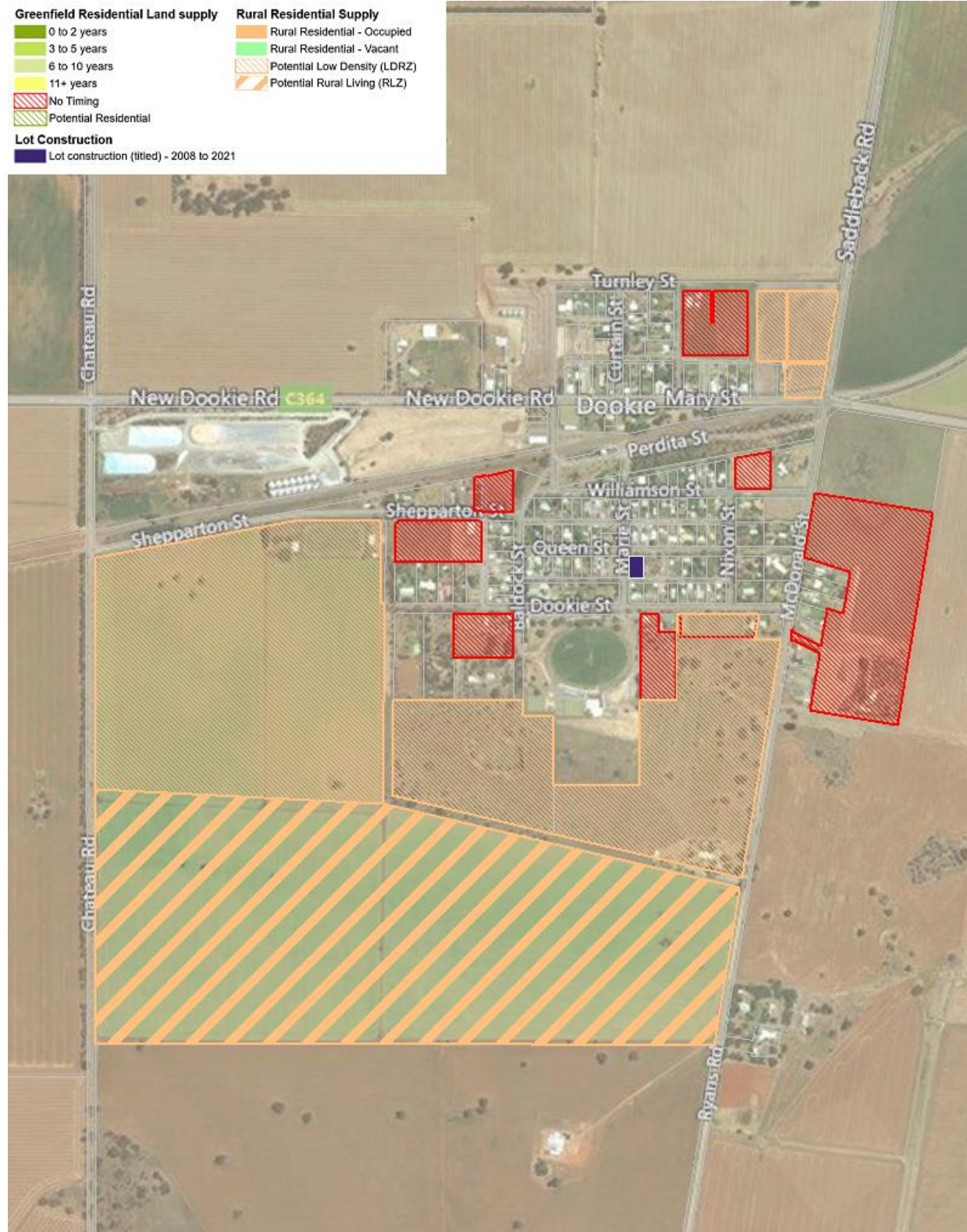
Map 7: Residential Land Supply Status – Kialla



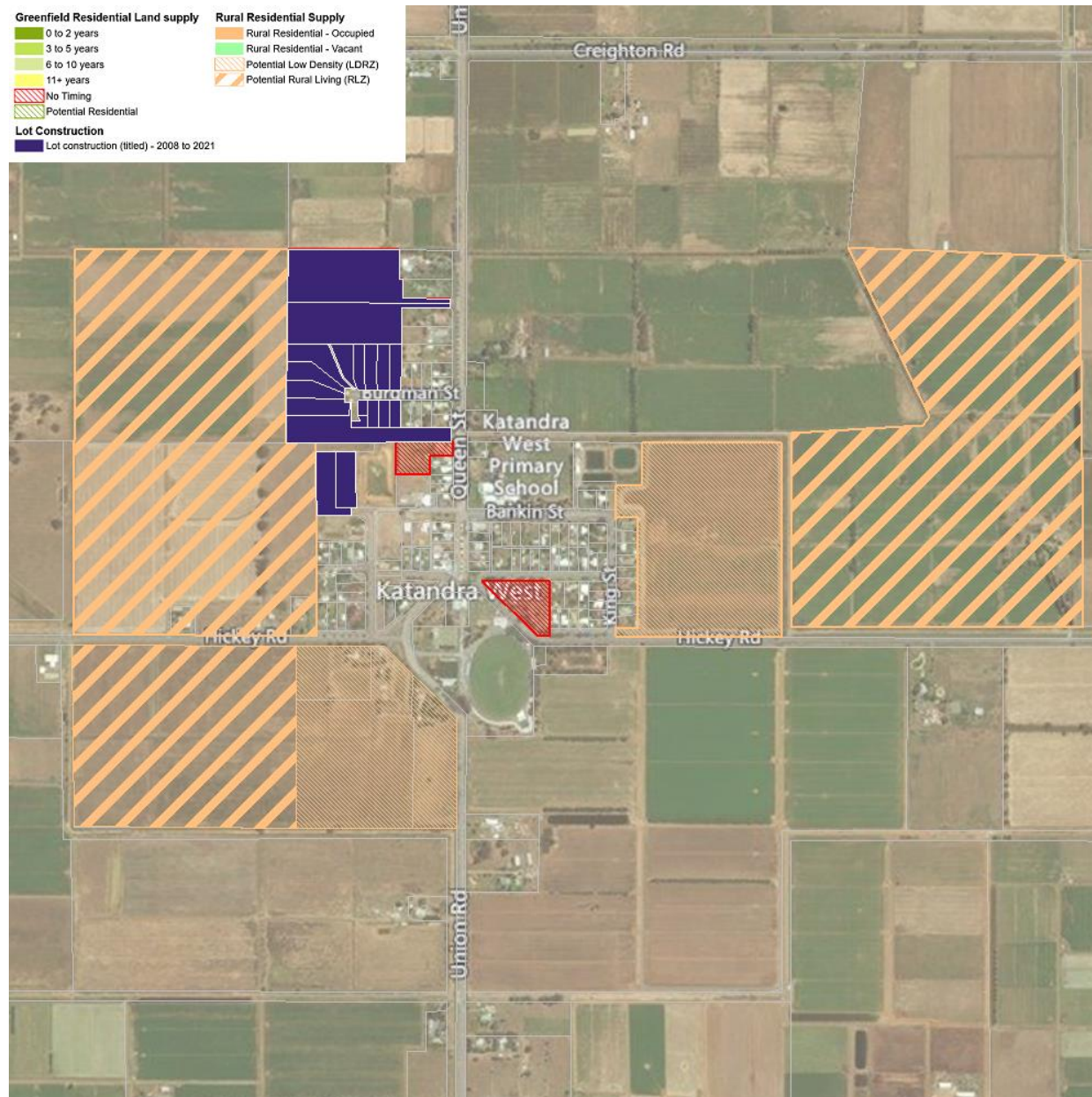
Map 8: Land Supply Profile – Congupna



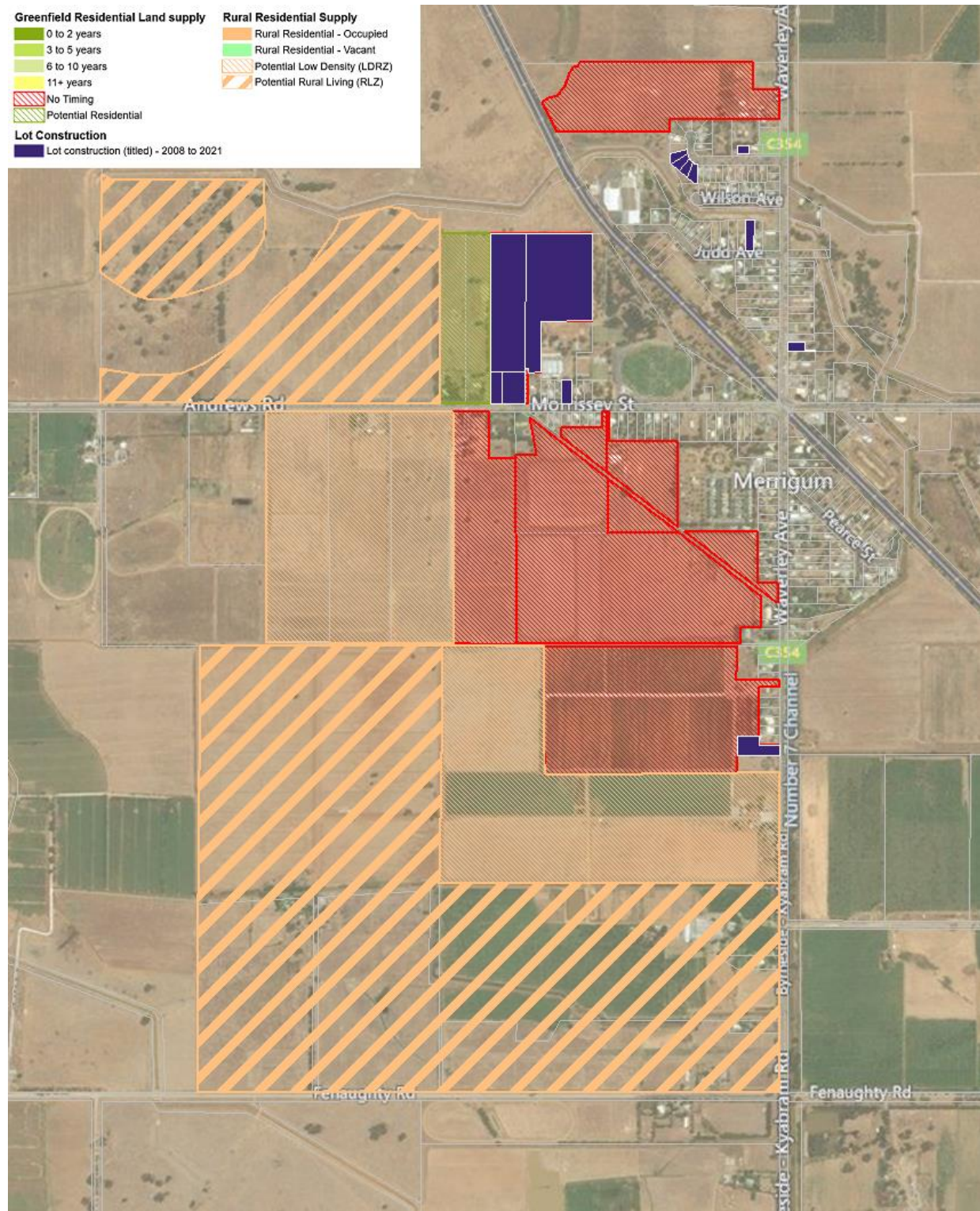
Map 9: Land Supply Profile – Dookie



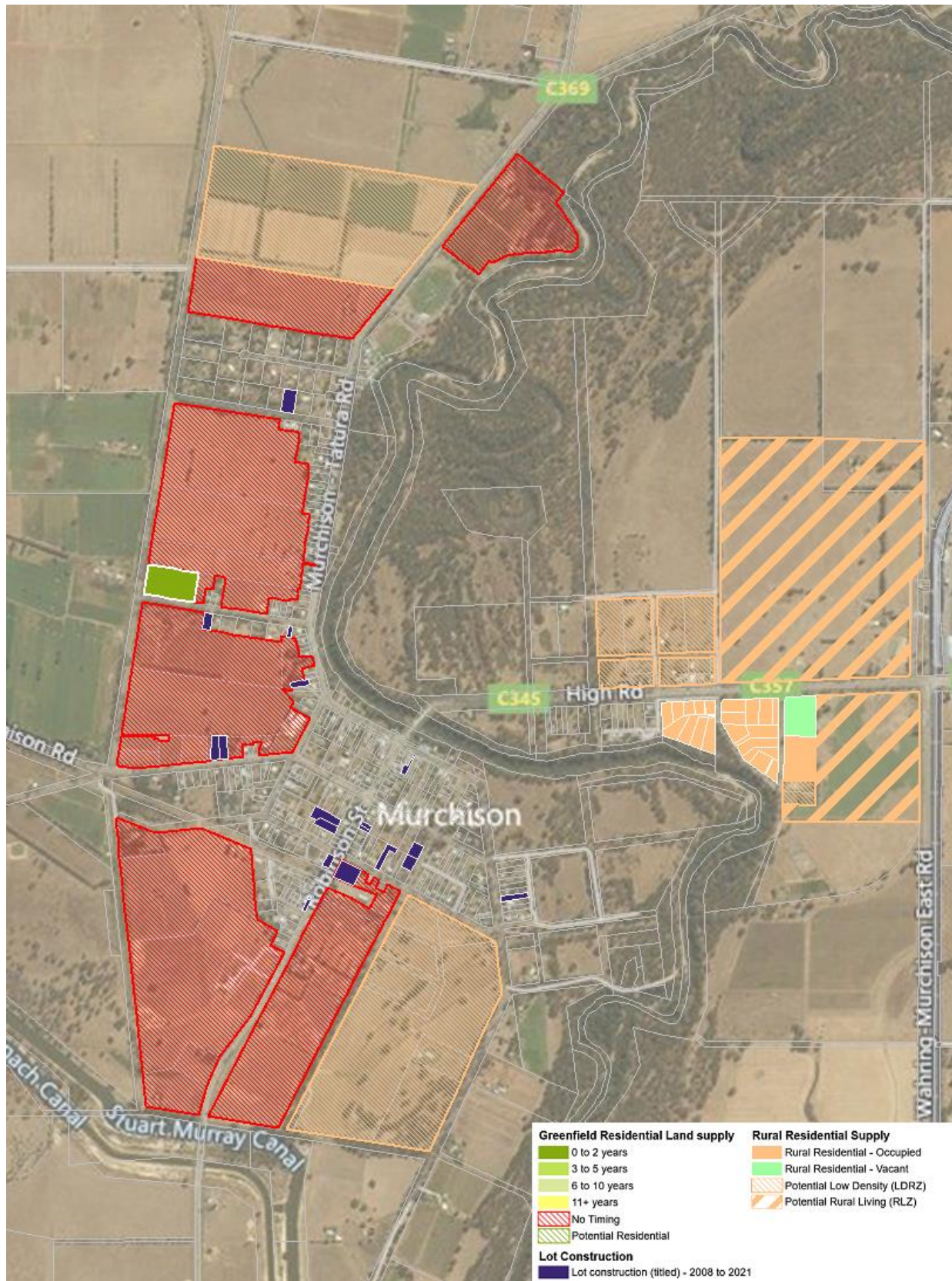
Map 10: Land Supply Profile – Katandra West



Map 11: Land Supply Profile – Merrigum



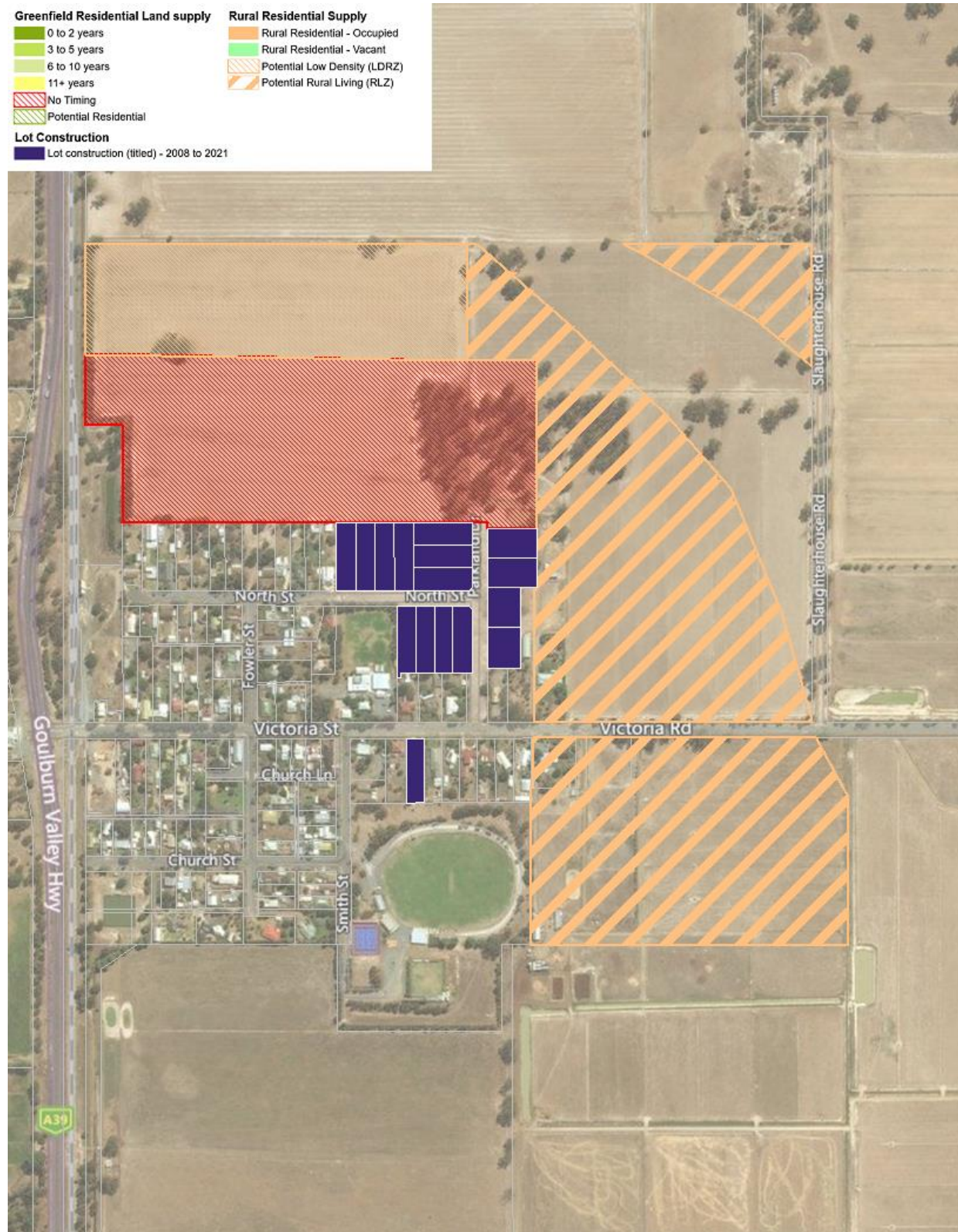
Map 12: Land Supply Profile – Murchison/Murchison East



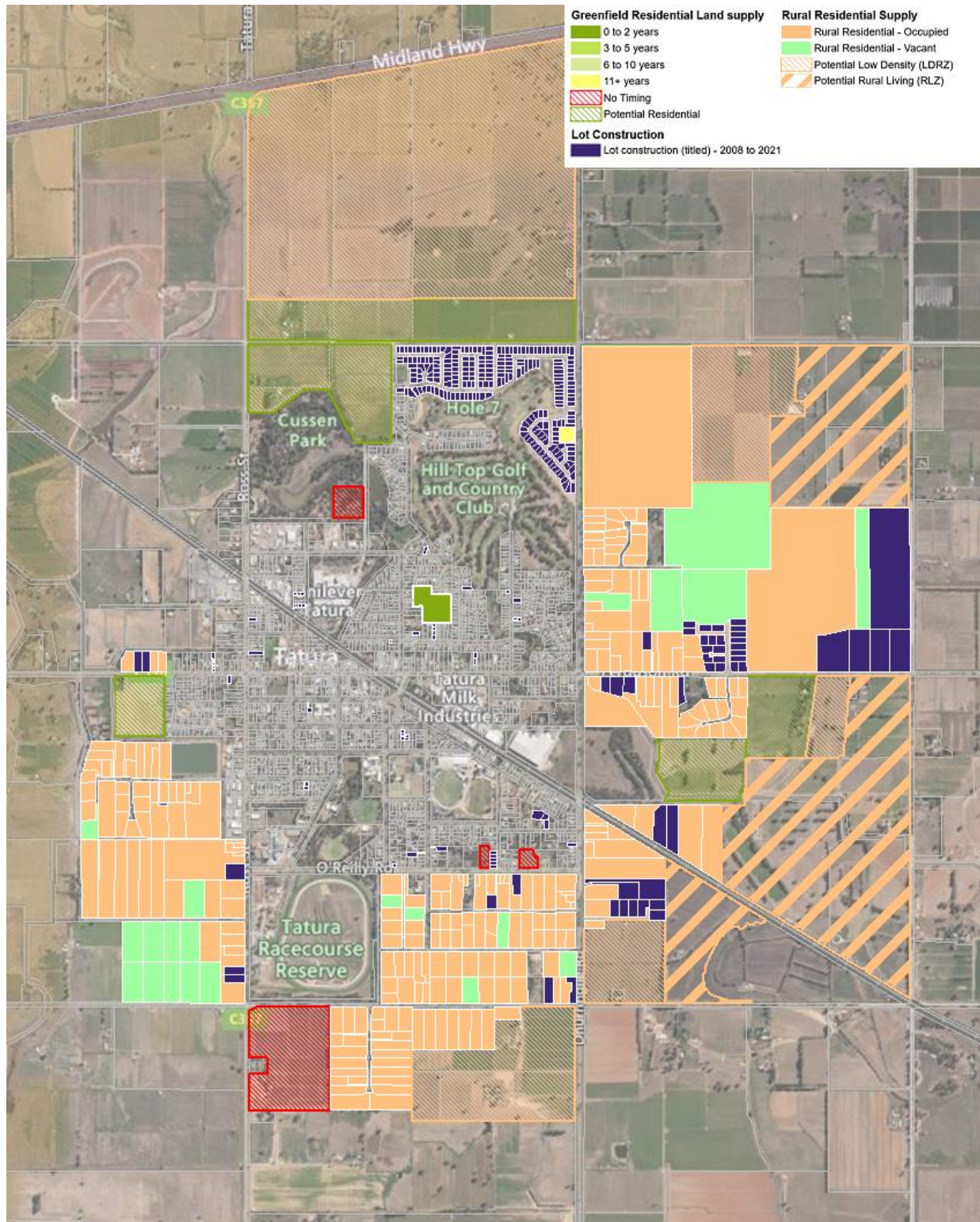
Map 13: Land Supply Profile – Shepparton East



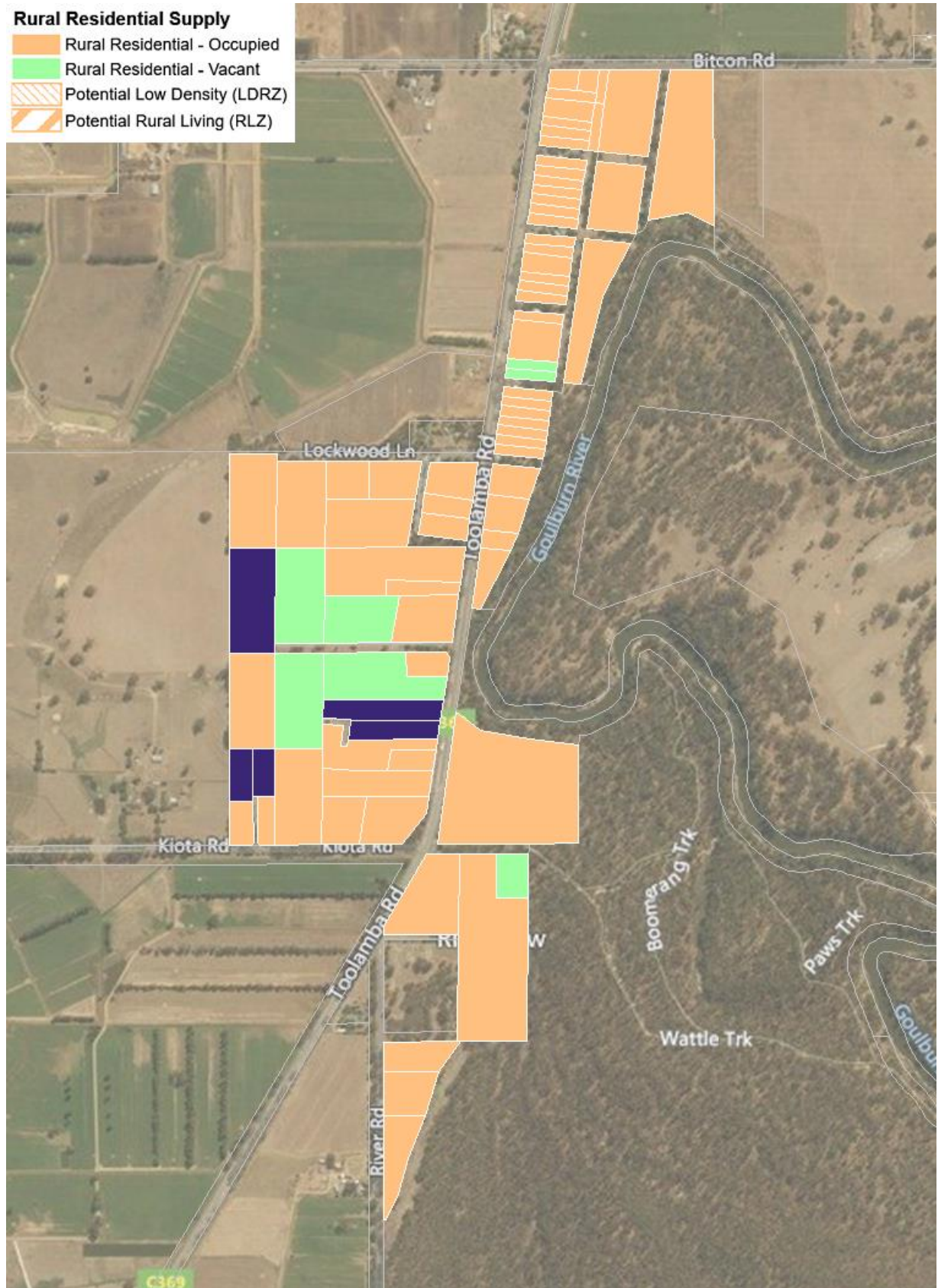
Map 14: Land Supply Profile – Tallygaroopna



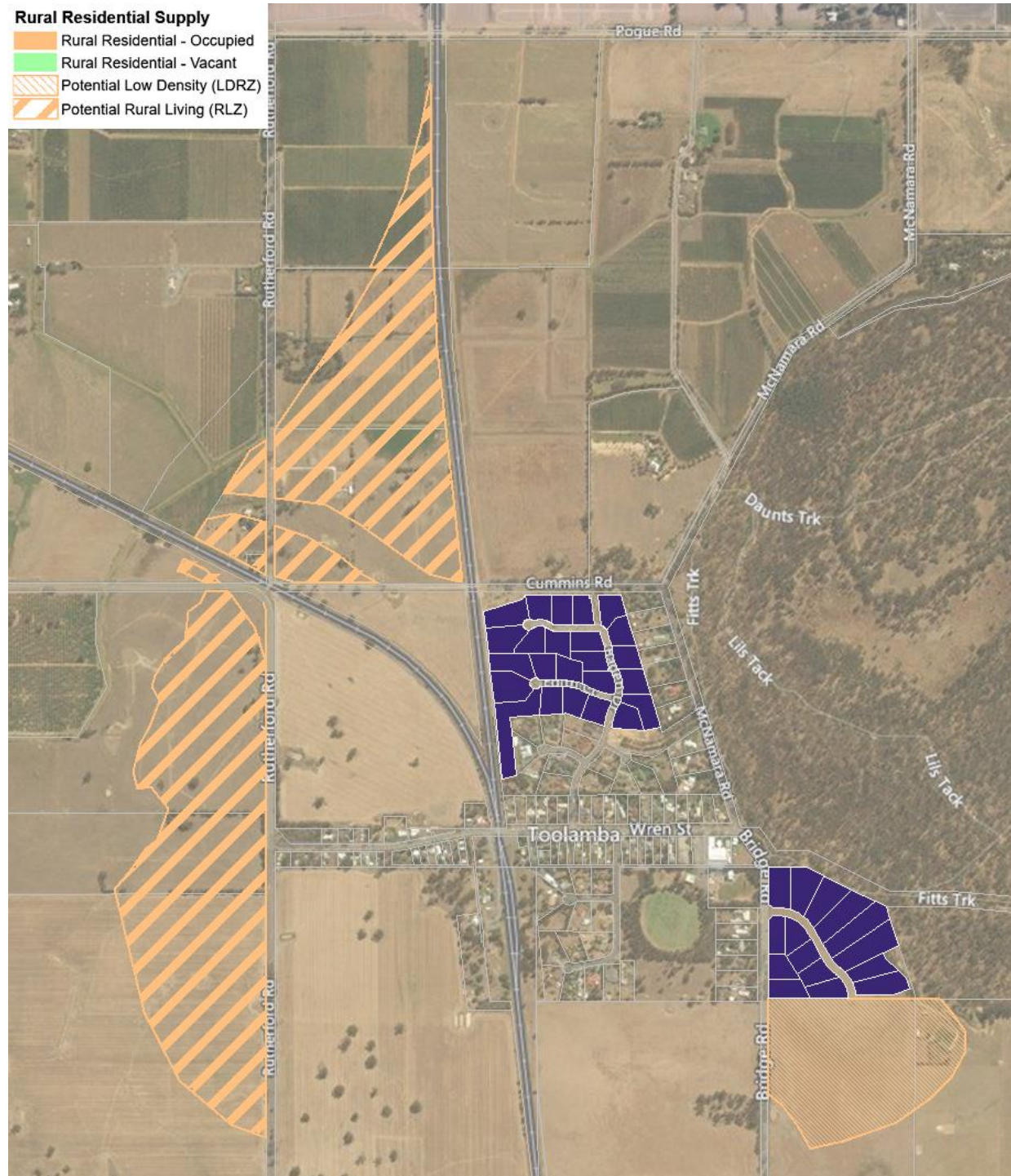
Map 15: Land Supply Profile – Tatura



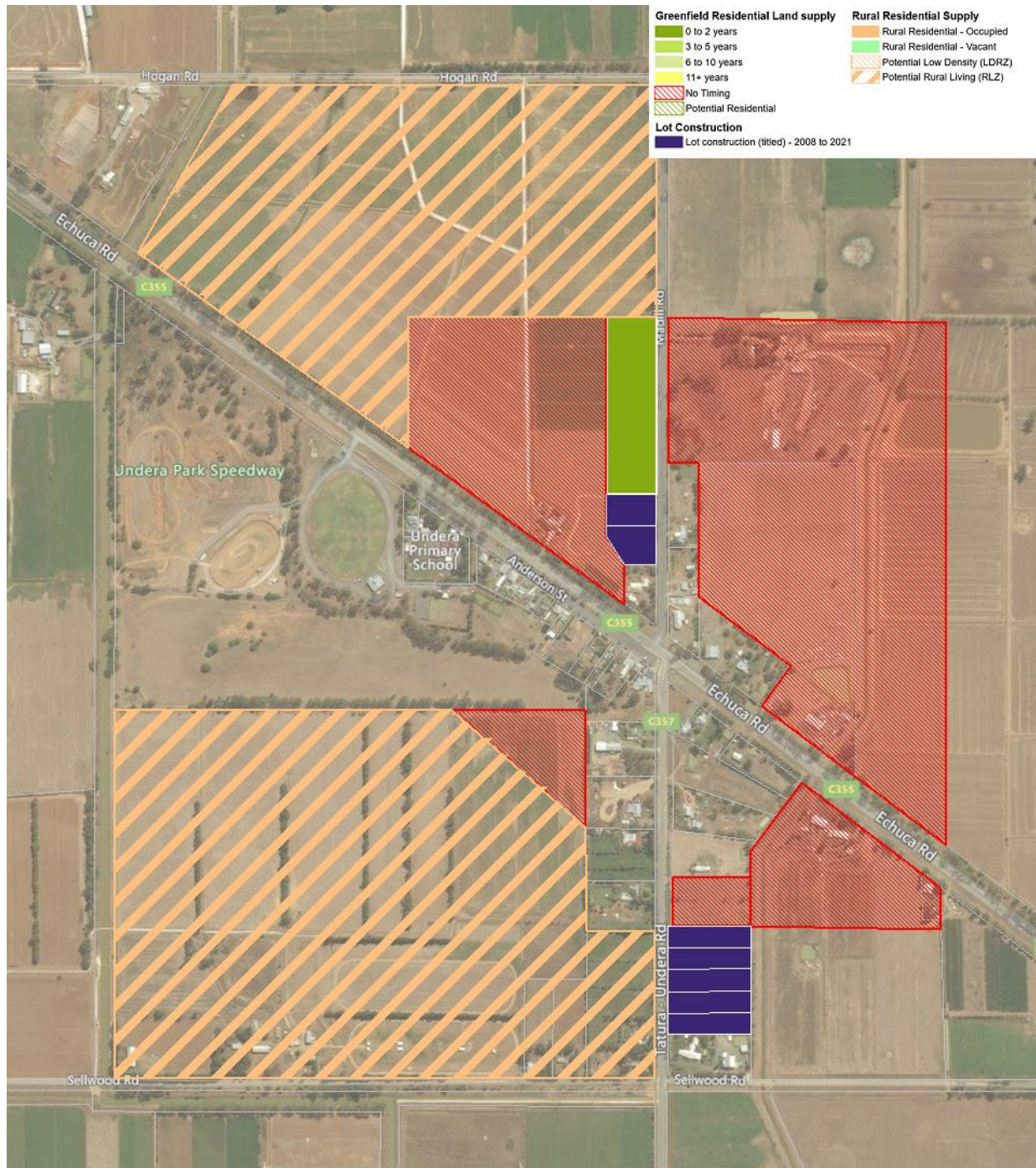
Map 16a: Land Supply Profile – Toolamba/Old Toolamba



Map 16b: Land Supply Profile – Toolamba/Old Toolamba



Map 17: Land Supply Profile – Undera



6.0 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 **8 to 14 years** of demand across the Greater Shepparton municipality.

In addition, there are sufficient unzoned broadhectare residential land stocks to satisfy over 25 of demand.

Spatial Economics consider the above measure over-states the years of undeveloped greenfield supply. If it is assumed that the majority of land stocks identified to be developed over the next two years is achieved, the lot potential identified in the 11+ years and the No-Timing¹ category is excluded (as these land parcels have significant land development constraints, fragmentation, planning issues, existing uses etc) - the adequacy of undeveloped land stocks significantly declines. This would result in a remaining adequacy of around **five years zoned supply**.

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.

6.1 Years of Supply – Greater Shepparton

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

VIF2019, modified and extended – dwelling forecasts undertaken by the State Government. Dwelling requirements from 2021 to 2036 at 372 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).

Higher Growth:– assumes that Greater Shepparton’s population growth rate rises in 2021 to 1.3% per year – the rate of growth that Albury-Wodonga has experience over the last ten years – and remains at that rate until 2051. Dwelling requirements from 2021 to 2036 at 505 per annum or a 1.6% per annum growth rate.

Lower Growth:– assumes that Shepparton-Mooroopna’s population growth drops to 0.7% per year in 2021 and remains at that rate until 2051. This is the rate of growth that Greater Shepparton experienced mid last decade. Dwelling requirements from 2021 to 2036 at 301 per annum or a 1.0% per annum growth rate.

¹ The land identified in the North East PSP area with a No Timing category is included as available supply



The share of broadhectare lot construction activity is assumed at 80% across the City of Greater Shepparton. This benchmarks above are assumed constant over-time and is seen as a conservative assumption.

Table 14 summarise the estimated years of broadhectare residential supply by demand scenario as at September 2021.

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 **8 to 14 years** of demand across Greater Shepparton municipality. In addition, there are sufficient **unzoned** broadhectare residential land stocks to satisfy over 25 years of demand.

Table 14: Estimated Years of Broadhectare Residential Land Supply, 2021

	Zoned	Unzoned	Total
VIF2019 (extended)	11	25+	25+
High Growth	8	18	25+
Low Growth	14	25+	25+

Source: Spatial Economics Pty Ltd

However, Spatial Economics consider the above measure over-states the years of undeveloped greenfield supply. If it is assumed that the majority of land stocks identified to be developed over the next two years is achieved, the lot potential identified in the 11+ years and the No-Timing¹ category is excluded (as these land parcels have significant land development constraints, fragmentation, planning issues, existing uses etc) - the adequacy of undeveloped land stocks significantly declines. This would result in a remaining adequacy of around **five years zoned supply**.

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.

Spatial Economics recommend:

1. **Increasing the stock of zoned broadhectare land for the urban centre of Shepparton-Mooroopna in the short term.**
2. **Increasing the stock of zoned broadhectare land for the township of Tatura in the short-term.**

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.

Key Issues

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.

¹ The land identified in the North East PSP area with a No Timing category is included as available supply



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.



INDUSTRIAL LAND SUPPLY & DEMAND ASSESSMENT

City of Greater Shepparton

January 2022

Final



30/01/2022
Final Version 1.0
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EXECUTIVE SUMMARY

In 2019, 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 2019.

Supply of Industrial Land

As at September 2021¹, there was a total of 642 hectares of zoned industrial land stocks, of which 127 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 20%.

Compared to a 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 21%. 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 311 hectares - 48% of the total zoned industrial land stocks. Of this industrial land located in East Shepparton, 39 hectares is identified as available supply (down from 98 hectares in the 2016 assessment) , a 13% land area vacancy rate.

The next largest industrial precinct is North Shepparton at 92 hectares, of which 15 hectares is identified as supply. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 59 hectares;
- Kialla – 54 hectares;
- North West Shepparton – 54 hectares;
- Mooroopna – 42 hectares; and
- Tatura – 30 hectares.

Of the industrial lots identified as supply across Greater Shepparton:

- 65 are located in the East Shepparton precinct;
- 29 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 6 in the North Shepparton precinct;
- 3 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).

¹ This figure excludes industrial land zoned SUZ that is designated for specific industrial use purposes, specifically SUZ 6, 9 & 11



Recent Subdivision Activity

Since 2019 there have been 36 industrial lots constructed. There has been a significant increase in the subdivision of lots sized from 0.5 to 1 hectare (22% of subdivision activity compared to 11% for the previous period). Again, the majority (53%) of this recent subdivision activity has been in the East Shepparton industrial precinct. However, as a proportion, Kialla has increased its' relative share of subdivision activity from 17% to 31%.

Industrial lot subdivision activity has decreased since 2018, averaging 16 lots per annum. This compares to 24 lots per annum from 2009 to 2018.

Land Consumption

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

- 3.52 hectares per annum from 2009 to 2015;
- 6.06 hectares per annum from 2015 to 2017;
- 15.72 hectares per annum from 2017 to 2019; and
- 3.2 hectares per annum from 2019 to 2021.

As measured from 2015 to 2021 the distribution of industrial land consumption by industrial precinct includes:

- 6.4 hectares per annum in East Shepparton (74% of construction activity);
- 1.3 hectares per annum in North Shepparton (15% of activity); and
- 0.7 hectares per annum in Kialla (8% of activity).

Further analysis has been undertaken to establish the lot size distribution of consumed industrial land from 2009 to 2021. This is a prime indicator of expressed demand for new industrial built premises. In total there was 91 separate industrial lots that had industrial premises constructed. In summary:

- 68% or 62 lots were sized from 0.1 to 0.5 hectares;
- 15% or 14 lots were sized 0.5 to 1 hectare in size;
- 11% or 10 lots were sized 1 to 5 hectares; and

Adequacy

In total, there is between **8 to 15 years** supply of zoned industrial land across Greater Shepparton and an additional **14 to 24 years** supply of land identified for future industrial zoning/development.

The estimation of 8 to 15 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 sustained high level of industrial activity.

In total, there are only 115 vacant industrial allotments, representing a lot vacancy rate of just 12%. 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 – 3 lots;



- Mooroopna – 8 lots;
- North Shepparton – 6 lots;
- North West Shepparton – 1 lot; and
- Tatura – 3 lots.

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 31% (28 lots) of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 29 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and one 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 6 vacant lots in this size.



1.0 Introduction

1.1 Context

In 2019, 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 2019.

The assessment includes:

- the identification of historical and current industrial lot construction activity by location;
- 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 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 September 2021 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 November 2021 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 6.3 hectares. This represents actual industrial land consumption from 2009 to 2021.

Scenario Two: Recent Trend - is assumed at an average annual rate of industrial land consumption of 8.7 hectares. This represents actual industrial land consumption from 2015 to 2021.

Scenario Three: Sustained Accelerated Growth – is assumed at an average annual rate of industrial land consumption of 10.9 hectares. This represents a 25% increase in land consumption from the recent consumption trend.

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 October 2021 there was an average annual value of \$15.4 million for select industrial building approval activity. In recent years the value of industrial building approval activity has significantly increased. Increasing from \$13.7 million in 2016/17, to \$16 million in 2017/18 and to a record high of \$23 million in 2018/19. In 2020/21, the value of building approval activity was recoded at nearly \$20 million and for the first four months of the 2021 financial year just over \$7 million of activity was recorded.

From 2019 to 2021 there have been 36 industrial lots constructed. There has been a significant increase in the subdivision of lots sized from 0.5 to 1 hectare (22% of subdivision activity compared to 11% for the previous period). Again, the majority (53%) of this recent subdivision activity has been in the East Shepparton industrial precinct. However, as a proportion, Kialla has increased its' relative share of subdivision activity from 17% to 31%.

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

- 3.52 hectares per annum from 2009 to 2015;
- 6.06 hectares per annum from 2015 to 2017; 15.72 hectares per annum from 2017 to 2019; and
- 3.2 hectares per annum from 2019 to 2021.

As measured from 2015 to 2021 the distribution of industrial land consumption by industrial precinct includes:

- 6.4 hectares per annum in East Shepparton (74% of construction activity);
- 1.3 hectares per annum in North Shepparton (15% of activity); and
- 0.7 hectares per annum in Kialla (8% of activity).

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); and
- Value of building approvals.

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 2009 to July 2015 there were a total of 167 zoned industrial land subdivisions, with the majority (111 or 66%) located in the East Shepparton industrial precinct and a further 29 lots (17% of activity) located in Kialla. There was minimal industrial subdivision activity in Lemnos and Mooroopna.

The majority (66%) of subdivisions resulted in industrial allotments sized from 0.1 to 0.5 hectares, 12% sized less than 0.1 hectares, 11% sized from 0.5 to 1 hectare and 10% sized from 1 to 5 hectares.

From July 2009 to July 2015, on average there was 24 industrial subdivisions.



Table 1: Number of Industrial Subdivisions by Lot Size, 2009 to 2018

Precinct/LGA	Less than	0.1 to	0.5 to 1	1 to 5	5+	Total
	0.1	0.5				
	hectares	hectares	hectares	hectares	hectares	
East Shepparton	10	80	11	8	2	111
Kialla	5	22	2			29
Lemnos		2	2			4
Mooroopna	5					5
North Shepparton		5	1	3	1	10
Tatura		1	2	5		8
Greater Shepparton	20	110	18	16	3	167

Source: Spatial Economics Pty Ltd

Since 2019 there have been 36 industrial lots constructed (Table 2). There has been a significant increase in the subdivision of lots sized from 0.5 to 1 hectare (22% of subdivision activity compared to 11% for the previous period). Again, the majority (53%) of this recent subdivision activity has been in the East Shepparton industrial precinct. However, as a proportion, Kialla has increased its' relative share of subdivision activity from 17% to 31%.

Industrial lot subdivision activity has decreased since 2018, averaging 16 lots per annum. This compares to 24 lots per annum from 2009 to 2018.

Table 2: Number of Industrial Subdivisions by Lot Size, 2019 to 2021¹

Precinct/LGA	Less than	0.1 to	0.5 to 1	1 to 5	5+	Total
	0.1	0.5				
	hectares	hectares	hectares	hectares	hectares	
East Shepparton		11	6	1	1	19
Kialla		9	1	1		11
Lemnos				1	1	2
North Shepparton	1			2		3
North West Shepparton			1			1
Greater Shepparton	1	20	8	5	2	36

Source: Spatial Economics Pty Ltd

1: As at September 2021

Since 2019, the majority (67% or 24 lots) of industrial subdivision activity has been on land zoned Industrial 1 (IN1Z), 28% or 10 lots zoned Industrial 3 (INZ3) and the remainder (2 lots) zoned Commercial 2 (C2Z)

Since 2019, the resultant lot size from industrial land subdivision across Greater Shepparton is typically 4,000 sqm (increasing from historical outcomes of around 2,900 sqm). However, there is significant variance across the differing industrial precincts, ranging from:

- 4,000 sqm in East Shepparton; and
- 2,000 sqm in Kialla.



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 2021 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. However ever, over the last two years, consumption has declined to lower longer term historical rates at around three hectares per annum.

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

- 3.52 hectares per annum from 2009 to 2015;
- 6.06 hectares per annum from 2015 to 2017;
- 15.72 hectares per annum from 2017 to 2019; and
- 3.2 hectares per annum from 2019 to 2021.

As measured from 2015 to 2021 the distribution of industrial land consumption by industrial precinct includes:

- 6.4 hectares per annum in East Shepparton (74% of construction activity);
- 1.3 hectares per annum in North Shepparton (15% of activity); and
- 0.7 hectares per annum in Kialla (8% of activity).

Comparatively there was minimal to no industrial land consumption in the industrial precincts of Lemnos, Mooroopna, North West Shepparton and Tatura.

As measured from 2009 to 2021, 76 hectares of industrial land was consumed across Greater Shepparton, the majority (73% or 56 hectares) of this consumption has been on land zoned Industrial 1 (INZ1). This is followed by land zoned Commercial 1 (C1Z) at 17 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 2021. This is a prime indicator of expressed demand for new industrial built premises. In total there was 91 separate industrial lots that had industrial premises constructed. In summary:

- 68% or 62 lots were sized from 0.1 to 0.5 hectares;
- 15% or 14 lots were sized 0.5 to 1 hectare in size;
- 11% or 10 lots were sized 1 to 5 hectares; and
- 4 lots were sized greater than 5 hectares.

Over this period, there was 59 lots consumed in the East Shepparton industrial precinct, 16 in Kialla and 12 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	2019/ 20	2020/ 21	2021/ 22 *
Factories	0.6	10.28	2.09	3.54	4.9	2.62	10.11	2.26	0.3	2.3
Warehouses	7.53	5.93	2.49	5.26	4.68	4.19	10.33	3.89	6.2	3.9
Agricultural Buildings	3.15	0.79	1.48	4.93	3.84	8.01	0.99	7.81	13.17	0.6
Other industrial buildings	0.11	0.43	0.2	0.85	0.26	1.19	1.45	0.05	0.26	0.2
Greater Shepparton	11.39	17.43	6.27	14.58	13.68	16.00	22.88	14.01	19.93	7.12

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

*As at October 2021 (4 months of the financial year)

From July 2011 to October 2021 there was an average annual value of \$15.4 million for select industrial building approval activity. In recent years, the value of industrial building approval activity has significantly increased. Increasing from \$13.7 million in 2016/17, to \$16 million in 2017/18 and to a record high of nearly \$23 million in 2018/19. In 2020/21, the value of building approval activity was recorded at nearly \$20 million and for the first four months of the 2021 financial year just over \$7 million of activity was recorded.

The value of industrial building approval activity remains buoyant across the municipal area of Shepparton

In recent years the value of industrial building approval activity for both Warehouses and factories has declined slightly. However, the value of agricultural buildings has substantially increased, recording nearly \$22 million of activity over the past 2.3 years

In recent years, the value of industrial building approval activity has significantly increased compared to the medium-term average – increasing from \$14.6 million to nearly \$18 million per annum. This will directly correlate into increased levels of industrial land consumption.

Key Issues

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 September 2021, there was a total of 6425 hectares of zoned industrial land stocks, of which 127 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 20%.

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 311 hectares - 48% 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 – 59 hectares;
- Kialla – 54 hectares;
- North West Shepparton – 54 hectares;
- Mooroopna – 42 hectares; and
- Tatura – 30 hectares.

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

- 39 hectares of land zoned Industrial 3 (INZ3);
- 97 hectares of land zoned Commercial 2 (C2Z);
- 253 hectares of land zoned Special Use (SUZ - 6, 9 & 11); and
- 507 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 September 2021, there was a total of 985 zoned industrial allotments, of which 115 lots were identified as available supply.

Of the 985 industrial allotments 76% are sized below 0.5 hectares, specifically 239 lots are sized less than 1,000 sqm and 513 lots sized from 1,000 to 5,000 sqm. There are 233 lots sized greater than 5,000 sqm across the municipal area, of which only 29 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 September 2021², there was a total of 642 hectares of zoned industrial land stocks, of which 127 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 20%.

Compared to a 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 21%. 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 311 hectares - 48% of the total zoned industrial land stocks. Of this industrial land located in East Shepparton, 39 hectares is identified as available supply (down from 98 hectares in the 2016 assessment) , a 13% land area vacancy rate.

The next largest industrial precinct is North Shepparton at 92 hectares, of which 15 hectares is identified as supply. The stock of industrial land for the remaining industrial precincts include:

- Lemnos – 59 hectares;
- Kialla – 54 hectares;
- North West Shepparton – 54 hectares;
- Mooroopna – 42 hectares; and
- Tatura – 30 hectares.

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

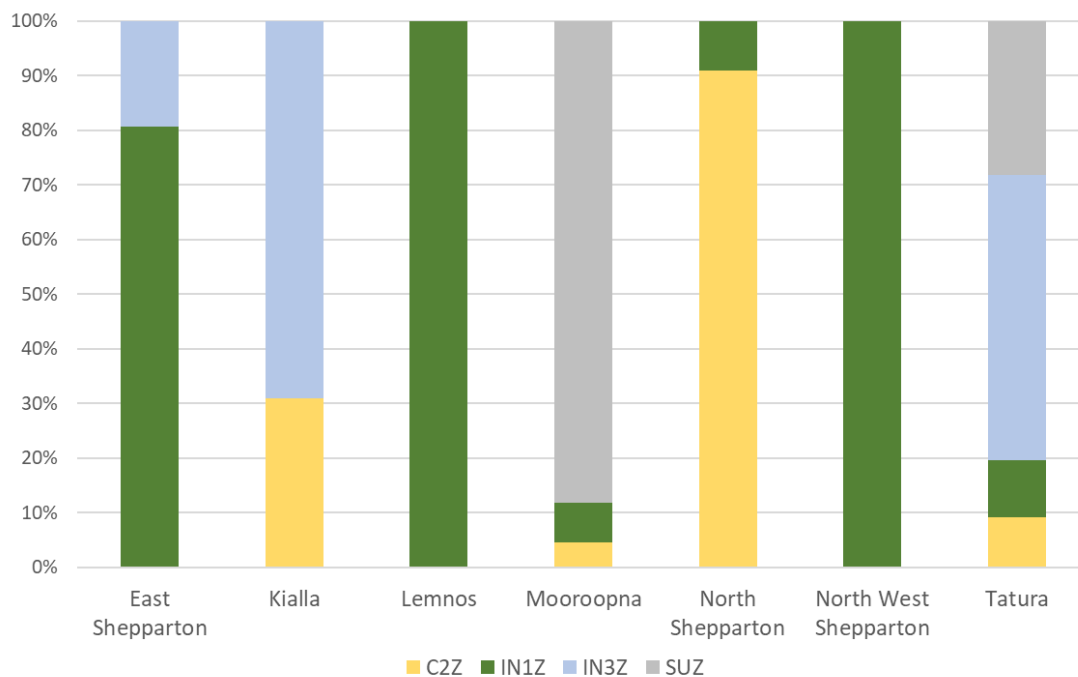
Across Greater Shepparton there is a variety of industrial zone types, specifically there are:

- 39 hectares of land zoned Industrial 3 (INZ3);
- 97 hectares of land zoned Commercial 2 (C2Z);
- 253 hectares of land zoned Special Use (SUZ - 6, 9 & 11); and
- 507 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 1: Zoning Composition by Industrial Precinct (area), 2021

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 September 2021, there was a total of 985 zoned industrial allotments, of which 115 lots were identified as available supply.

Of the 985 industrial allotments 76% are sized below 0.5 hectares, specifically 239 lots are sized less than 1,000 sqm and 513 lots sized from 1,000 to 5,000 sqm. There are 233 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 29 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 530 lots sized below 0.5 hectares, of which 53 are identified as supply. There is an additional 116 lots sized greater than 5,000 sqm, of which only 123 are identified as supply. East Shepparton has a lot vacancy rate of 10%, which is considered low.

Of the 117 industrial allotments in the Kialla industrial precinct, 29 have been identified as supply (25% lot vacancy rate).

For the remaining industrial precincts as at September 2021, there were:

- North Shepparton – total of 86 industrial lots (7% vacancy rate);
- Tatura – total of 51 industrial lots (6% vacancy rate);
- Mooroopna – total of 49 industrial lots (16% vacancy rate);
- Lemnos – total of 22 industrial lots (14% vacancy rate); and
- North West Shepparton – total of 14 industrial lots (6% vacancy rate).



Map 1: Industrial Precincts – Greater Shepparton

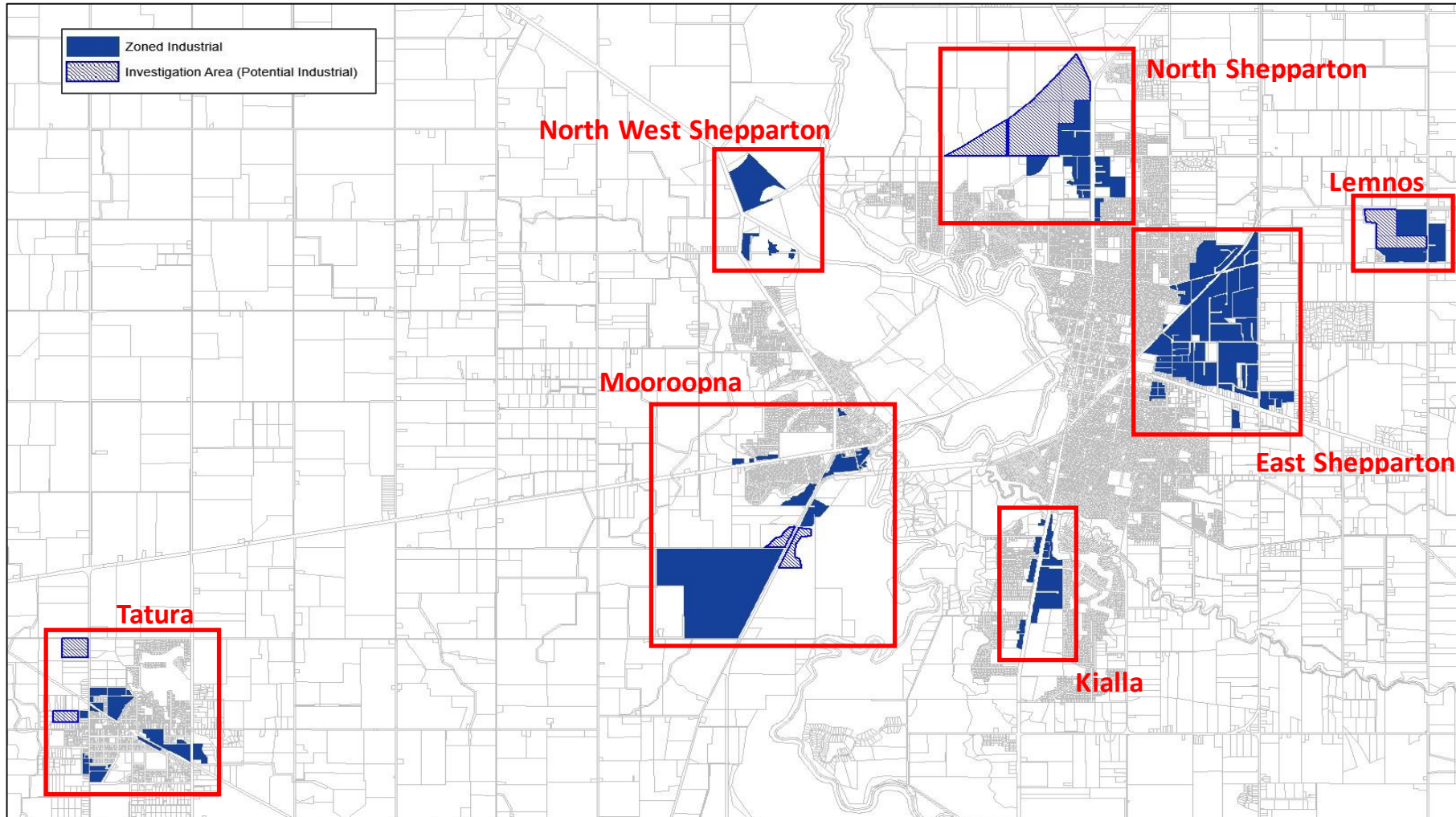


Table 4: Gross Area (hectares) of Industrial Land Stocks, 2021

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				266	39	13%	6	0	2%	272	39	13%	0	0	
Kialla	24	5	17%				16	10	39%	39	15	28%	0	0	
Lemnos				54	5	8%				54	5	8%	0	0	
Mooroopna	4	1	18%	30	7	19%				34	8	19%	0	226	100%
North Shepparton	53	7	11%	23	9	27%				77	15	17%	0	0	
North West Shepparton				10	44	82%				10	44	82%	0	0	
Tatura	3	0	2%	19	1	4%	7		0%	30	1	3%	26	0	0%
Greater Shepparton	84	13	13%	402	104	21%	29	10	26%	515	127	20%	26	226	90%

Source: Spatial Economics Pty Ltd

Table 5: Industrial Land Stocks - Lots, 2021

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				518	64	11%	63	1	2%	581	65	10%	0	0	
Kialla	71	9	11%				17	20	54%	88	29	25%	0	0	
Lemnos				19	3	14%				19	3	14%	0	0	
Mooroopna	6	2	25%	35	6	15%				41	8	16%	0	2	100%
North Shepparton	66	4	6%	14	2	13%				80	6	7%	0	0	
North West Shepparton				13	1	7%				13	1	7%	0	0	
Tatura	17	1	6%	22	2	8%	9		0%	48	3	6%	5	0	0%
Greater Shepparton	160	16	9%	621	78	11%	89	21	19%	870	115	12%	5	2	29%

Source: Spatial Economics Pty Ltd

Table 6: Number of Zoned Industrial Allotments by Lot Size Cohort, 2021⁴

Industrial Precinct/LGA	Less than 0.1 hectares			0.1 to 0.5 hectares			0.5 to 1 hectare			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	191	4	2%	286	49	15%	55	5	8%	39	5	11%	9	2	18%	1		0%	581	65	10%
Kialla	9		0%	62	23	27%	11	3	21%	5	2	29%	1	1	50%				88	29	25%
Lemnos				5	1	17%	5	1	17%	6	1	14%	2		0%	1		0%	19	3	14%
Mooroopna	16		0%	14	4	22%	2	1	33%	6	3	33%	3		0%				41	8	16%
North Shepparton	8	1	11%	38	1	3%	15		0%	16	3	16%	3	1	25%				80	6	7%
North West Shepparton				7		0%	4		0%	2		0%					1	100%	13	1	7%
Tatura	9	1	10%	21	2	9%	13		0%	4		0%	1		0%				48	3	6%
Greater Shepparton	233	6	3%	433	80	16%	105	10	9%	78	14	15%	19	4	17%	2	1	33%	870	115	12%

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 September 2021, 127 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 92 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 (70% or 80 lots) are sized between 0.1 and 0.5 hectares, with a further 6 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 5 industrial lots identified as supply that are sized greater than five hectares, of which two are located in the East Shepparton industrial precinct and one respectively in Kialla, North Shepparton and North West Shepparton. The size of these allotments represents an opportunity for further/future subdivision.

Of the industrial lots identified as supply across Greater Shepparton:

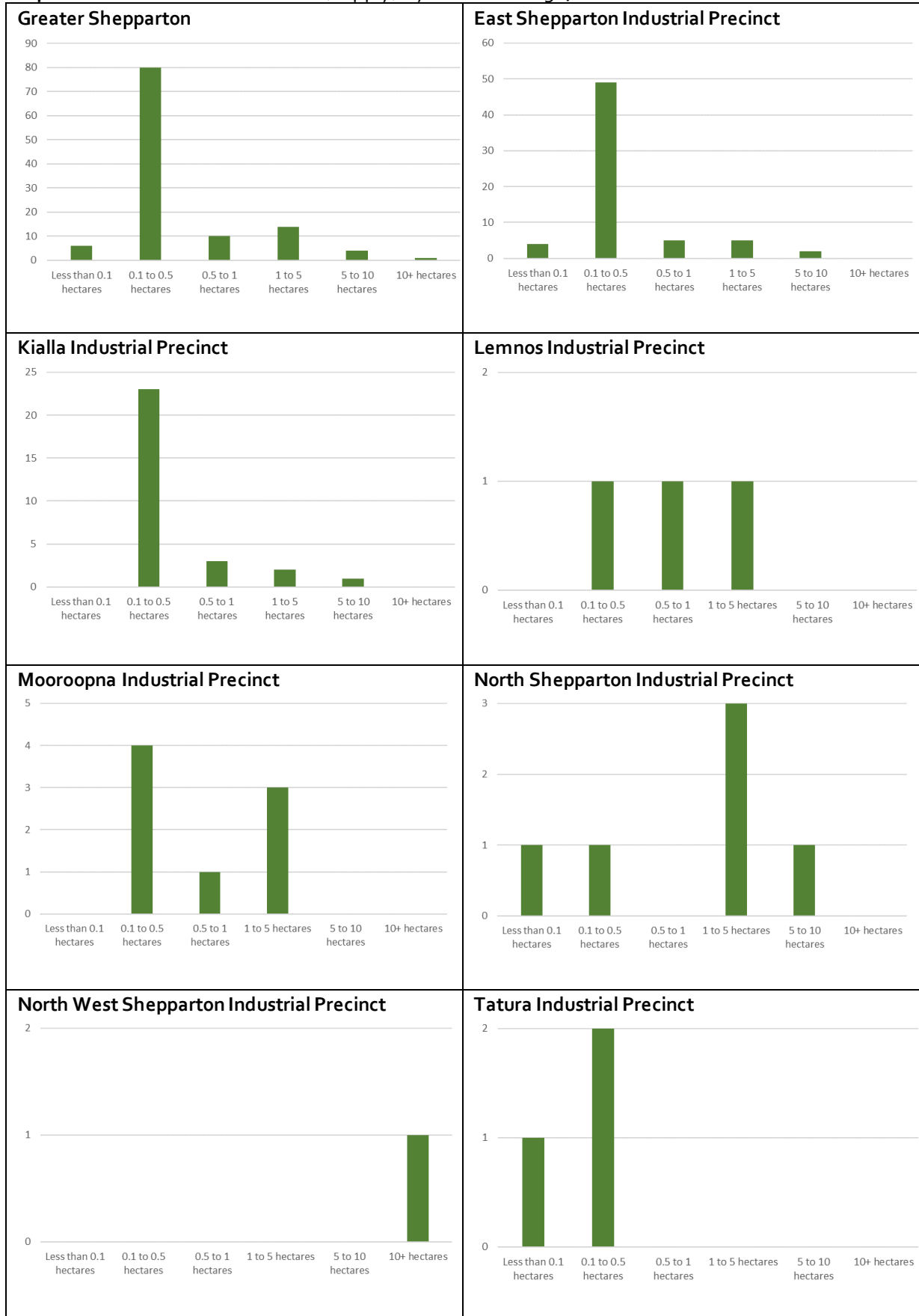
- 65 are located in the East Shepparton precinct;
- 29 in the Kialla precinct;
- 8 in the Mooroopna precinct;
- 6 in the North Shepparton precinct;
- 3 in the Lemnos and Tatura precinct; and
- 1 in the North West Shepparton precinct.

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 2: Number of Industrial Lots (Supply) by Lot Size Range, 2021



Source: Spatial Economics Pty Ltd
 Note: Excludes lots zoned SUZ



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 **8 to 15 years** supply of zoned industrial land across Greater Shepparton and an additional **14 to 24 years** supply of land identified for future industrial zoning/development.

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

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 6.3 hectares. This represents actual industrial land consumption from 2009 to 2021.

Scenario Two: Recent Trend - is assumed at an average annual rate of industrial land consumption of 8.7 hectares. This represents actual industrial land consumption from 2015 to 2021.

Scenario Three: Sustained Accelerated Growth – is assumed at an average annual rate of industrial land consumption of 10.9 hectares. This represents a 25% increase in land consumption from the recent consumption trend.

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 **8 to 15 years** supply of zoned industrial land across Greater Shepparton and an additional **14 to 24 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 sustained increase in the actual consumption of industrial land at unprecedented levels.

The estimation of 8 to 15 years supply of zoned industrial land masks the current deficiency of zoned industrial land across Greater Shepparton.

In total, there are only 115 vacant industrial allotments, representing a lot vacancy rate of just 12%. 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:

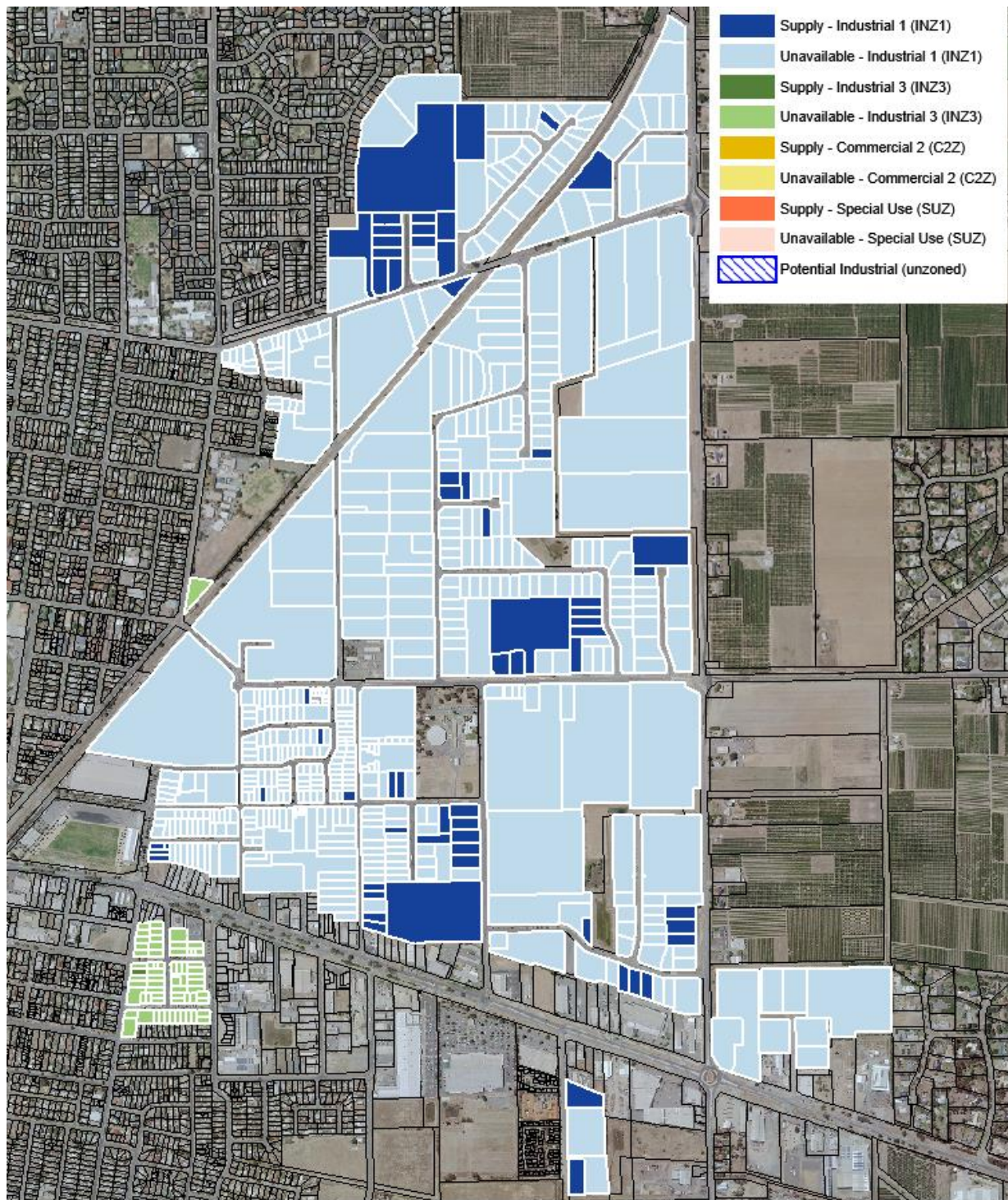
- Lemnos – 3 lots;
- Mooroopna – 8 lots;
- North Shepparton – 6 lots;
- North West Shepparton – 1 lot; and
- Tatura – 3 lots.

Furthermore, there are significant deficiencies in the lot size composition. Since 2009, 31% (28 lots) of all industrial land consumption was on lots sized greater than 0.5 hectares. Currently there are only 29 vacant lots sized over 0.5 hectares. In addition, there are only 5 lots sized greater than 5 hectares, and one 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 6 vacant lots in this size.



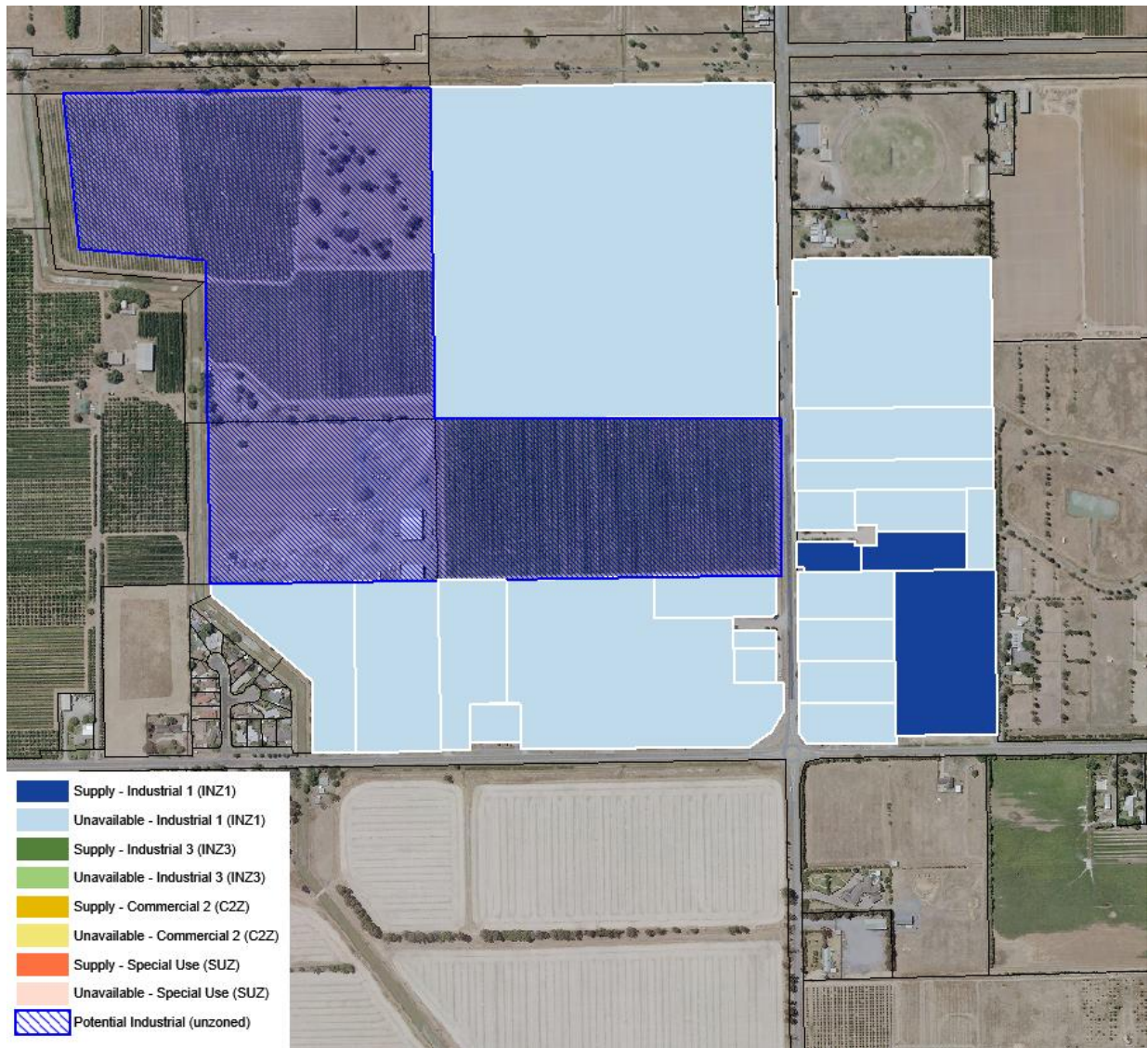
Map 2: East Shepparton Industrial Precinct



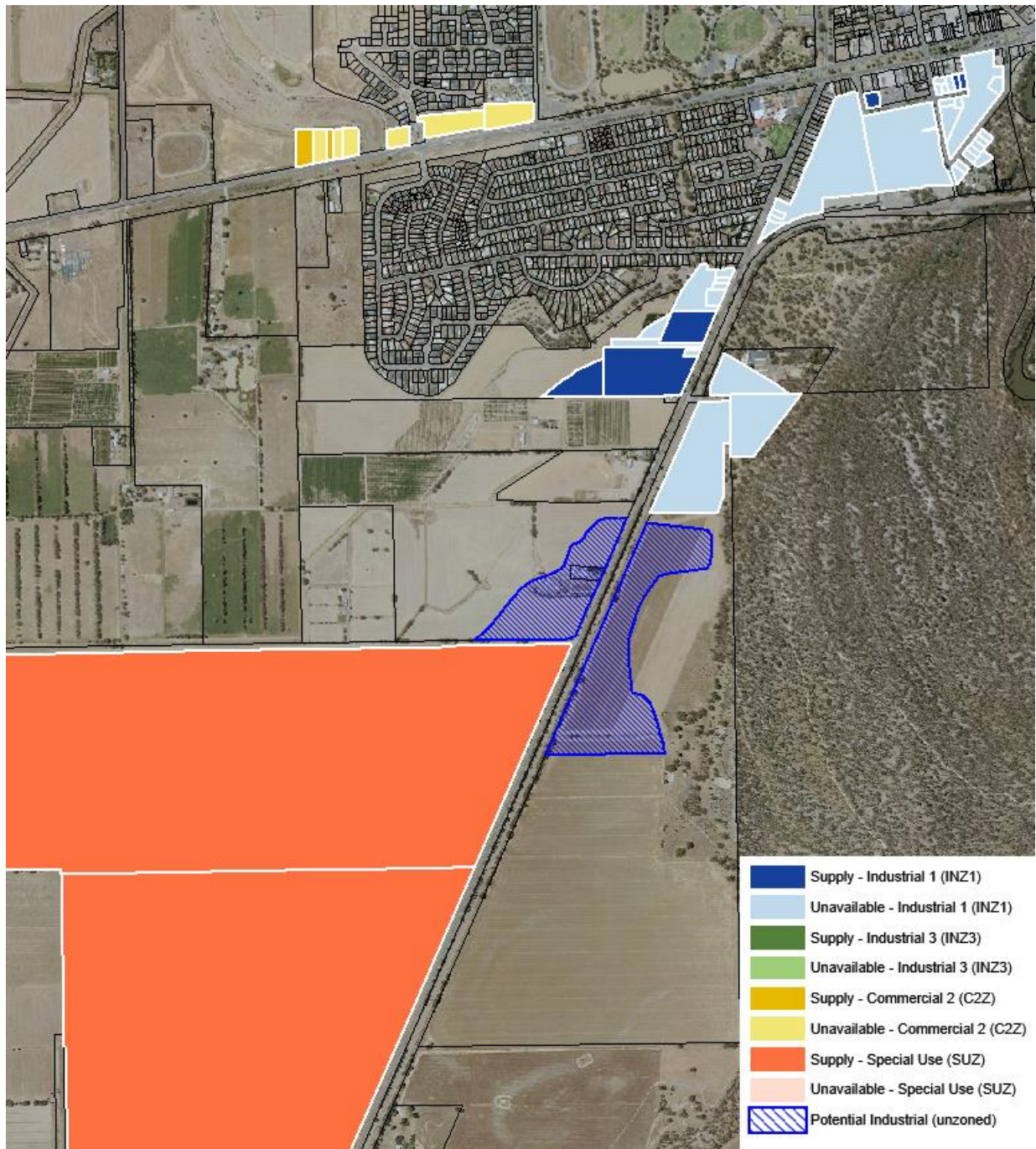
Map 3: Kialla Industrial Precinct



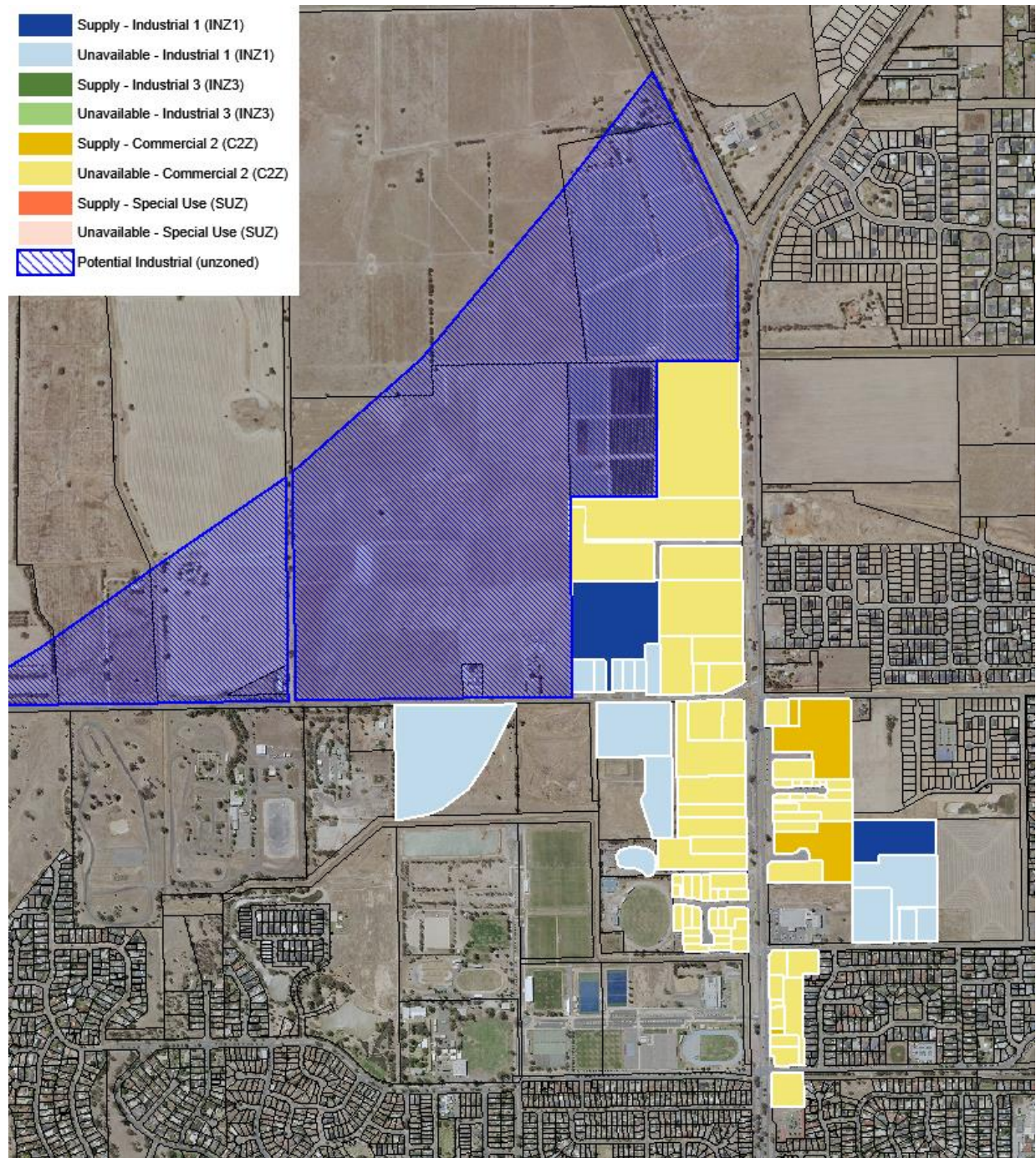
Map 4: Lemnos Industrial Precinct



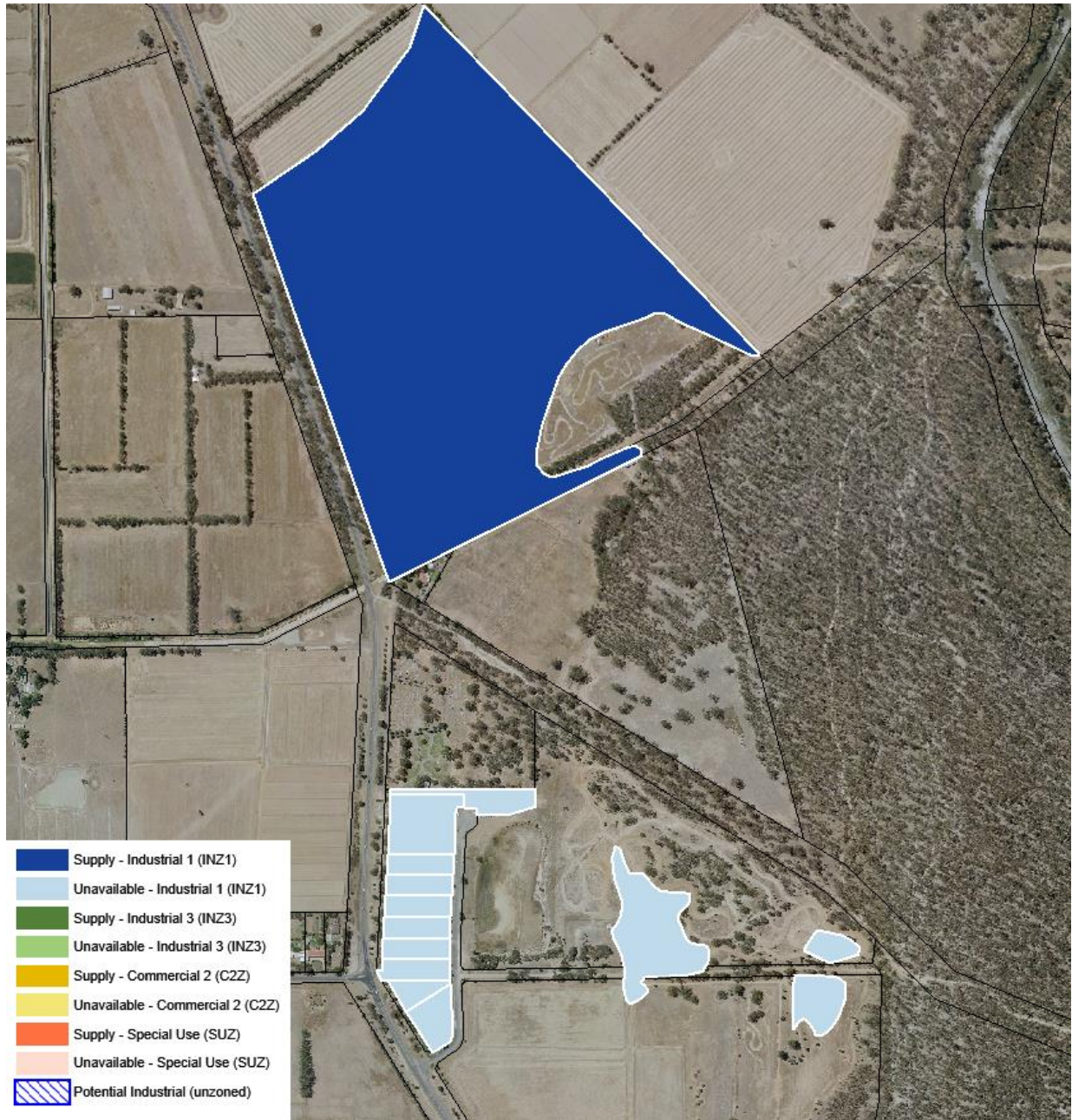
Map 5: Mooroopna Industrial Precinct



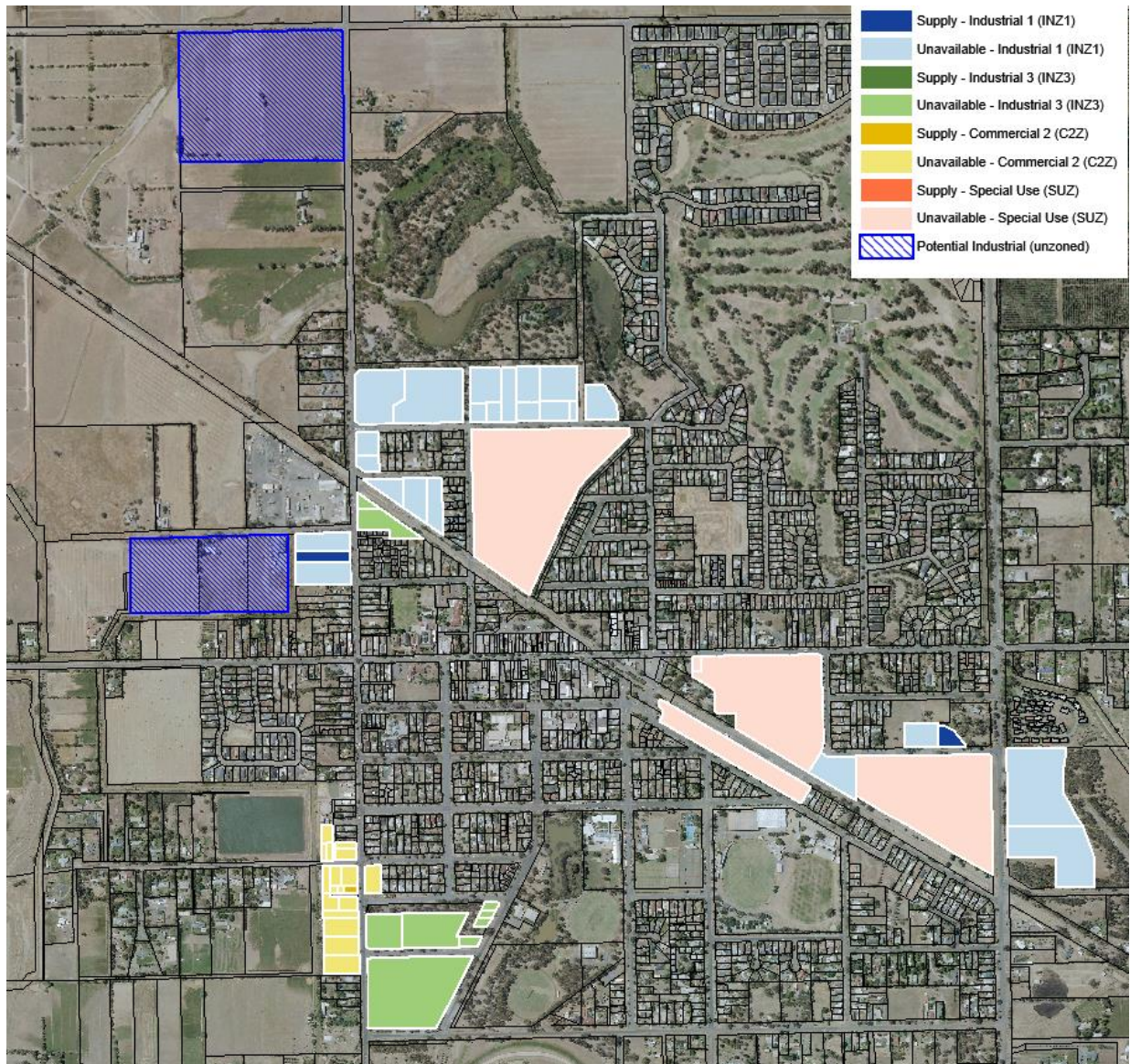
Map 6: North Shepparton Industrial Precinct



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.

