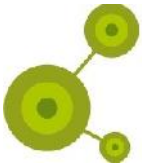
RESIDENTIAL LAND SUPPLY MONITORING PROJECT

City of Greater Shepparton

June 2016
Final



Spatial Economics

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EXECUTIVE SUMMARY

The following report is the residential land component of the land supply assessment for the City of Greater Shepparton. A separate report provides analysis for the industrial component. This report is an update of the report completed in September 2012 under the Urban Development Program – Regional banner.

Recent Activity

As measured from July 2008 to July 2015 residential building approval activity within the municipal area of Shepparton has averaged 368 per annum. This compares to 320 lots per annum that were constructed (the difference is that not all building approvals are constructed). Of this lot construction (66%) was broadhectare, followed by dispersed infill lot construction at 15%, 14% aged care/retirement village, 2% Township and rural residential at 2%.

Residential lot construction activity was concentrated within the urban centre of Shepparton (90% of activity). Within the urban centre of Shepparton, residential lot construction activity was mainly located in Shepparton South East (22% of activity), Kialla (21%), Shepparton North West (19%) and Shepparton North East (13%). From July 2008 to March 2016 there were 173 residential lots constructed in Tatura, representing 7% of all residential lot construction activity across the municipal area.

The majority of dispersed infill projects (65%) resulted in 1 or 2 net additional dwellings/lots. Of all of the dispersed infill lots/dwellings constructed since July 2008, 48% were constructed on 'parent' lots sized less than 1,200 sqm. The typical density pre development was 926 sqm, post development – 362 sqm. This equates to a net addition of 2.5 lots/dwellings post redevelopment.

Broadhectare lot construction for the same period averaged 212 lots per annum. Of this lot construction activity, the vast majority (92%) were located in the urban centre of Shepparton, the remainder in Tatura. Of the broadhectare lots constructed in Shepparton:

- 67 per annum were located in Kialla;
- 52 per annum were located in Shepparton North West;
- 38 per annum were located in Shepparton North East;
- 21 per annum were located in Shepparton South East; and
- 19 per annum were located in Mooroopna.

From July 2008 to March 2016 broadhectare lots construction achieved median lot sizes from 740 sqm to 812 sqm. Typically, (51%) broadhectare lot production has resulted in lots constructed from 500 to 800 sqm. In addition, around 35% of all lot production activity has resulted in lots ranging in size from 800 to 1,200sqm. There has been 136 broadhectare lots constructed sized less than 500 sqm.

As measured from July 2008 to March 2016 there was a total of 56 rural residential lots constructed – or 2% of total residential lot construction activity. Typically, rural residential lot construction was 4,500 sqm in size.

Projected Demand

Projected dwelling requirements sourced from VIF 2015 indicate that from 2016 to 2031 there will be a total dwelling requirement of 6,892 across the municipal area (459 average per annum or 1.5% growth rate). VIF 2015 illustrate that 86% of the projected dwelling requirement will be located within the urban centre of Shepparton.

Projected dwelling requirements sourced from id 2015 indicate that from 2016 to 2031 there will be a total dwelling requirement of 5,663 across the municipal area (378 average per annum or 1.3% growth

rate). id 2015 illustrate that 89% of the projected dwelling requirement will be located within the urban centre of Shepparton.

The largest and fastest growth in households across the municipal area of Shepparton will be both lone person households and couples without dependents, growing by growing at an average annual rate of 1.4% per annum respectively from 2016 and 2036. These two household types are projected to increase the most in terms of actual household growth at 109 and 113 households respectively per annum.

Residential Land Supply

In total there is a total residential lot supply of approximately 15,954. This is comprised of:

- 7,366 unzoned broadhectare lots – Urban Growth Area (46% of supply);
- 4,797 zoned broadhectare lots (30% of supply);
- 2,490 unzoned future rural residential lots (16% of supply);
- 686 vacant urban residential lots (4% of supply); and
- 615 vacant zoned rural residential lot capacity (4% of supply).

As at February 2016, there was 686 minor infill lots identified. Of these lots, 557 were Located within the existing urban area of Shepparton. Vacant residential lot stock outside of the major urban centre of Shepparton was concentrated within the townships of:

- Tatura – 46 lots;
- Katandra West - 25 lots;
- Toolamba – 21 lots;
- Murchison – 14 lots; and
- Dookie – 9 lots.

As at March 2016, there was a residential lot capacity within zoned broadhectare sites of approximately 4,797.

The location of zoned broadhectare residential land stocks is primarily located within the following small area localities within Shepparton:

- Kialla – 1,957 lots (41% of supply);
- Shepparton North East – 802 lots (17% of supply);
- Shepparton South East – 775 lots (16% of supply); and
- Mooroopna – 478 lots (10% of supply).

There were 329 broadhectare lots located within the urban centre of Tatura (7% of total broadhectare stocks).

Over the next five years, it is estimated that on average 440 lots/dwellings per annum will be constructed within existing zoned broadhectare areas. Historically, broadhectare lot construction has averaged 212 per annum. However, in the nine months of 2015/16, there have been 420 broadhectare lots constructed.

There is in terms of unzoned – Urban Growth Area residential broadhectare lot potential of approximately 7,366 across the municipal area. The majority (6,596 lots) are located within the Shepparton urban centre and 770 in Tatura.

As at February 2016 across the City of Greater Shepparton there was a total lot stock of rural residential allotments of 1,224. Of this stock, 110 lots were vacant, a lot vacancy rate of 9%. Of the vacant rural residential lot stock the total area is approximately 505 hectares, of which 354 hectares is zoned RLZ and 151 hectares is zoned RLZ.

The capacity of designated future rural residential stock was assessed. In total across the municipal area of Shepparton there is a net lot/dwelling potential of approximately 2,500, of this potential – 2,000 lots are identified for future LDRZ and the remaining RLZ.

Adequacy of Land Stocks

Shepparton Urban Centre - 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 **14 and 16 years** of demand for the urban centre of Shepparton.

In terms of Urban Growth Area (unzoned) land supply stocks, there is sufficient land to satisfy an additional **20 to 24 years** of demand.

Tatura Urban Centre - 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 around **16 years** of demand for the urban centre of Tatura.

In terms of Urban Growth Area (unzoned) land supply stocks, there is sufficient land to satisfy **over 25 years** of demand.

Key Issues

There are approximately 16,000 residential lots identified across the City of Greater Shepparton. This is a conservative estimate due to the exclusion of infill lots, the inclusion of 'no timing' on some lots, the opportunity of further subdivision within rural residential allotments and the conservative yields put on broadhectare supplies.

Median lot sizes within new broadhectare estates for the respective years have been relatively consistent, varying from 740 sqm to 812 sqm. Typically, broadhectare lot sizes are 33% larger across the municipal area of Shepparton compared to the selected regional centres However, it is observed that broadhectare lot production activity across the municipal area of Shepparton has produced a diverse range of lot sizes. With the projected increase of smaller household types and ageing of the population, it is likely there will be increased demand for smaller residential allotments.

It is highlighted that there is existing significant development activity for lifestyle/retirement villages, where housing densities are around 245 sqm

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

For both the urban centres of Shepparton and Tatura, there will be a need in the short-term (over next 2-3 years) to increase the stock of **zoned** broadhectare residential land to ensure ample zoned stocks are available to ensure a competitive land supply industry. There is ample identified unzoned (Urban Growth Area) stock in both urban centres to meet this need.

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

Any opening or restriction of residential land supply opportunities within specific parts of the urban centre of Shepparton will see the transfer of demand within the regional centre. It is imperative that ample zoned residential supply opportunities are provided within each major identified housing market within Shepparton 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.

Whilst currently there is ample broadhectare residential land supply opportunities within the residential growth areas of Shepparton and Tatura to meet immediate and medium term demand requirements. There is an immediate need to progress strategically identified unzoned residential land stocks through the structure planning and rezoning process to maintain to ensure ongoing ample supply to ensure the objective of a competitive land supply environment.

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.

In terms of total residential broadhectare land for both Shepparton and Tatura (zoned and Urban Growth Area), there is well in advance of over 25 years supply respectively.

Based on this current level of stock, there is no need for detailed strategic planning work to investigate and identify additional areas for residential broadhectare expansion.

1.0 INTRODUCTION

1.1 Context

The following report is the residential land component of the land supply assessment for the City of Greater Shepparton. A separate report provides analysis for the industrial component. This report is an update of the report completed in September 2012 under the Urban Development Program – Regional banner.

The assessment includes:

- the identification of historical and current residential lot construction activity by supply type;
- identification of all zoned major lot stock including estimates of lot yields on a project by project basis;
- identification of all future major (unzoned) lot stock including estimates of lot yields on a project by project basis;
- identification of all vacant lot stock;
- assessment of potential future demand scenarios;
- rural residential lot capacity;
- identification of anticipated broadhectare residential lot construction activity (development timing); and
- estimation of the years of supply of future (unzoned) residential lot stocks.

The assessment provides a robust and transparent assessment of the supply and demand for residential land across the municipal area. Where appropriate, comparisons to other regional Victorian municipalities are provided to further inform the relative 'state of play". 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 City 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 AND METHODOLOGY

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

Future Dwelling Requirements

The Victorian State Government population and household projections - *Victoria in Future 2015* (VIF2015) provide a sound basis for comparison to other potential alternative dwelling projections as they are developed in the context of State population growth. For this report we have also used the id Consulting population and dwelling forecasts (id2015). For strategic planning purposes it is prudent to use a range of demand scenarios to test the requirements of land supply.

Supply Type Definitions

For this project, there are three major supply types considered for residential land: *broadhectare; established urban area*; and *rural residential.*

Broadhectare is defined as new development on greenfield sites (sites that have not been used for urban development previously or previously subdivided for normal density development), typically on the fringe of the established urban area.

Minor Infill (Vacant Urban Lots) is defined as vacant land within the existing urban area or within broadhectare land release areas, zoned for residential development, and existing lot sized less than 5,000sqm.

Urban Growth Area (Potential Residential) is land identified by Council for future residential development and current zoning not supportive of 'normal density' residential development.

Investigation Areas is land which has been identified by Council for possible future urban development. Investigation areas are progressively being assessed to determine land conditions, servicing and development potential before future zoning options can be fully assessed and determined.

Rural Residential is defined through the zoning, in particular Low Density Rural Residential (LDRZ) and Rural Living (RLZ) zones.

Future Rural Residential is land identified by Council for future rural residential development with current zoning not supportive of such residential development. Future rural residential lands can be for the purpose of either Low Density Rural Residential (LDRZ) or Rural Living (RLZ) development.

Geography

The following geographic areas are utilised to report and assess the land supply assessment. A map at the end of the report illustrates the following geographic areas.

Urban Centres: Existing townships that include the existing urban area and undeveloped (zoned & future) land adjacent or in close proximity to the existing township, including rural residential land stocks.

Housing Market: Only applied to the urban centre of Shepparton are idForecast Small Areas which are a 'logical' grouping of suburbs that were used as the basis to undertake small area population projections. These were developed by id Consulting for the population projections commissioned by the City of Greater Shepparton.

LGA: The municipal area of Shepparton.

These boundaries are illustrated at the end of Section Two

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.

Construction activity has been assessed on an annual basis as at July of each year from 2008 to 2015, additional analysis has been included to identify lot construction to March 2016.

Lot Yields
Lot yields have been established on a parcel by parcel basis for the following land supply types: major infill, broadhectare and potential residential (unzoned).

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 sewered, existing studies such as structure plans, municipal strategic statements etc.

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 site of the land parcel i.e. a 1ha site will have less take-outs than say a 50ha site. Further intelligence and verification is sourced from local council planning officers.

A small number of supply sites have been allocated a zero lot yield due to a number of varying factors, these include but not limited to:

- unlikely to be developed over the next 15 years due to issues such as significant ownership fragmentation on relatively small parcels of land;
- subdivision restricted until sewerage is provided;
- the site is within an area of low demand and is unlikely to be developed with any certainty within the foreseeable future; and
- potential/likely lot density could be low.

Sites with a zero lot yield have been identified and are summarised by location and area.

In addition, existing and future (unzoned) rural residential land stocks were assessed in terms of possible lot yields.

Development Timing
Staging for lot construction or development timing has been established for four broad time periods, namely:

- 0 to 2 years (March 2016 – March 2018);
- 3 to 5 years (2018–2021);
- 6 to 10 years (2021–2026);
- 11 years or more (2026 and beyond); and
- No timing.

Land identified for development over the next 2 years is available for residential purposes, and the required permits to subdivide the land generally exist and are being implemented.

Land parcels identified for development in 3 to 5 years are normally zoned, or may have rezonings finalised or approaching finalisation. They may also have permits to subdivide the land. Some degree of confidence can be applied to the timing and staging of these developments.

Confidence about lot yields and staging declines for developments proposed beyond 5 years as it is industry practice to regard developments beyond this period with less certainty in terms of exact staging, timing and yields.

A no timing category has been established for potential residential development sites that are within low demand areas (generally small outlying settlements). These sites typically are also allocated a zero potential lot yield. They are identified as potential and are measured by area.

Where land has been identified as 'Urban Growth Area' there are no associated timings, as timing cannot be confidently applied until such time the land is zoned to allow residential development to occur.

It should also be noted that timing of lot construction is cyclical, and highly dependent on underlying demand, economic cycles and industry capacity. This can mean that stated development intentions will vary from on-the-ground construction activity over time and by location. However, it is highly accurate in terms of the general direction and amount of growth.

Development timings have only been established for zoned broadhectare land stocks only.

Anticipated development timings are primarily sourced from existing planning permits, historic and current market activity, knowledge of industry capacity, projected demand and most importantly information and guidance from local council staff and the land development industry.

Rural Residential

Rural residential allotments have been established via the assessment of the cadastre and zoning information. All allotments zoned either Rural Living (RLZ) and Low Density Residential (LDRZ) are included. This information has primarily been assessed via aerial imagery interpretation and validation via the relevant municipality's valuation database.

Adequacy (Years of Supply)

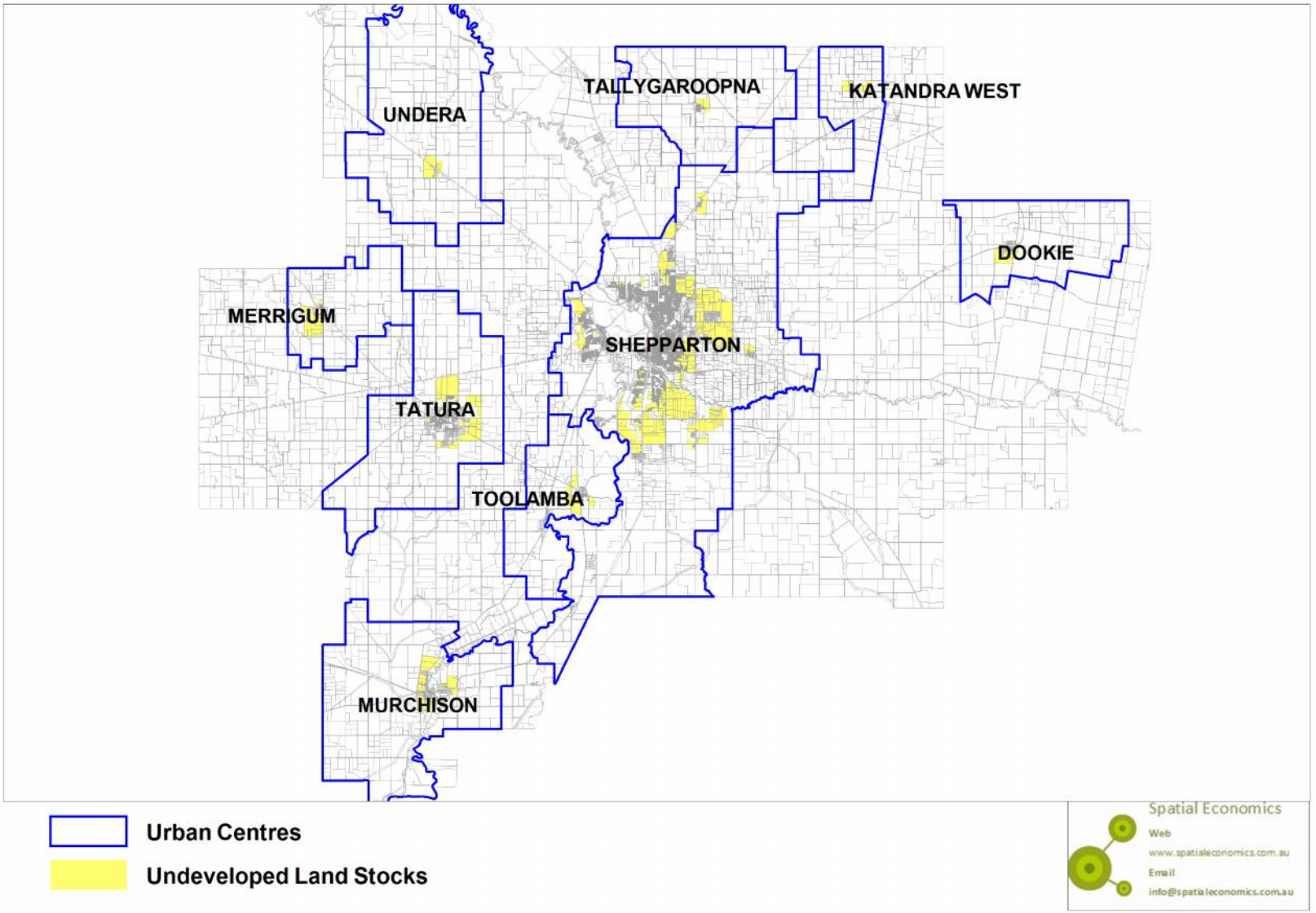
With the amount of supply and demand estimated, adequacy is described in years of supply. For example it can be stated that there are X years of supply based on projected demand within a given urban centre or region and by supply type (i.e. zoned and unzoned). In the last decade the Victorian

State Government has used a broad benchmark for land supply for residential land at a municipal level of at least 15 years.

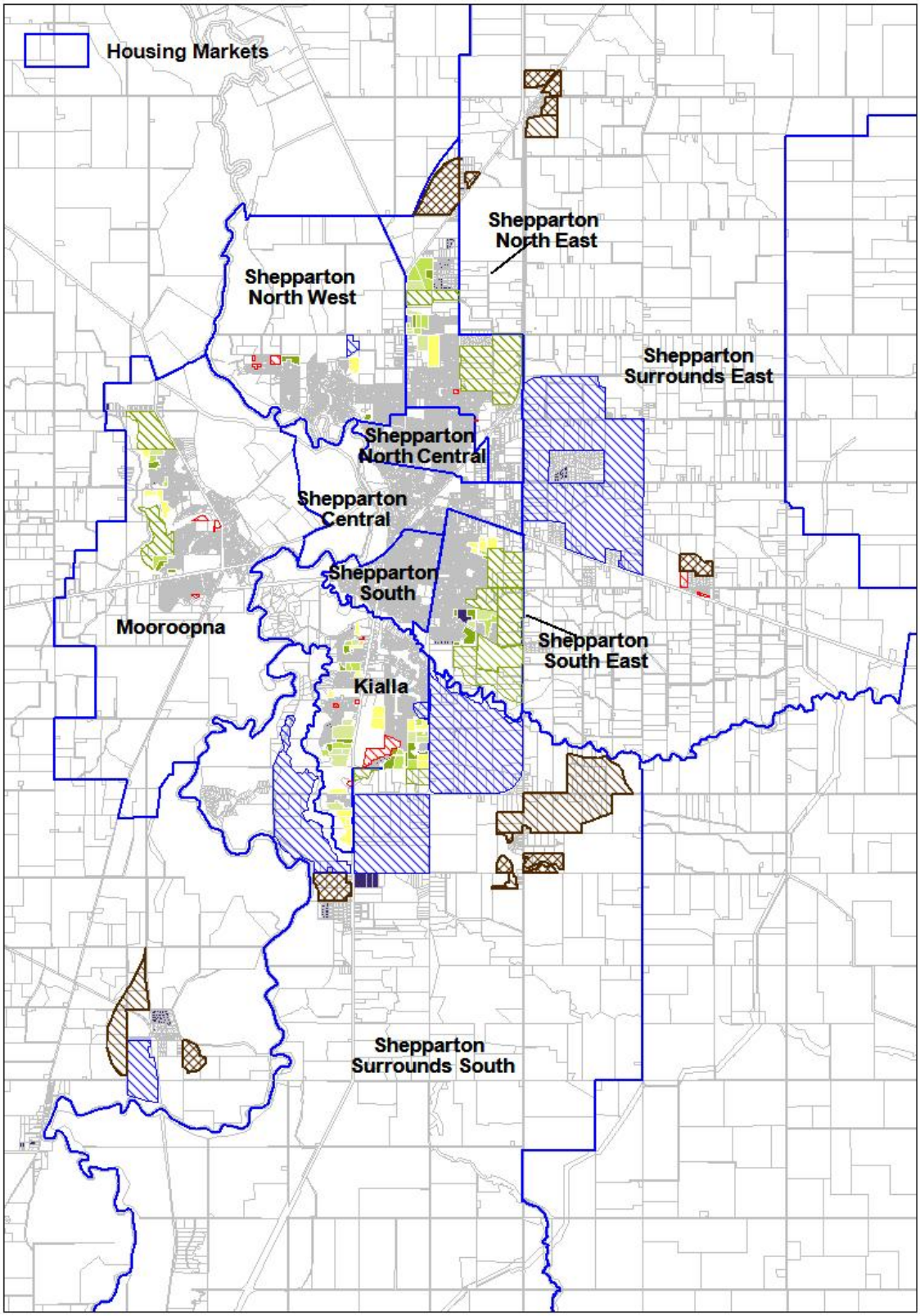
In assessing the number of years of broadhectare and designated Urban Growth Areas (unzoned) residential land supply, only a component of the total projected demand is apportioned to estimate future demand. The remainder is apportioned for future demand of other forms of residential supply such as minor infill and rural residential.

Adequacy has been determined for the land supply assessment areas of Shepparton urban centre and Tatura.

Map 1: Urban Centres – City of Greater Shepparton



Map 2: Housing Markets – Shepparton



2.0 RESIDENTIAL DEVELOPMENT ACTIVITY

Key Findings

As measured from July 2008 to July 2015 residential building approval activity within the municipal area of Shepparton has averaged 368 per annum. This compares to 320 lots per annum that were constructed (the difference is that not all building approvals are constructed). Of this lot construction (66%) was broadhectare, followed by dispersed infill lot construction at 15%, 14% aged care/retirement village, 2% Township and rural residential at 2%.

Residential lot construction activity was concentrated within the urban centre of Shepparton (90% of activity). Within the urban centre of Shepparton, residential lot construction activity was mainly located in Shepparton South East (22% of activity), Kialla (21%), Shepparton North West (19%) and Shepparton North East (13%). From July 2008 to March 2016 there were 173 residential lots constructed in Tatura, representing 7% of all residential lot construction activity across the municipal area.

The majority of **dispersed infill** projects (65%) resulted in 1 or 2 net additional dwellings/lots. Of all of the dispersed infill lots/dwellings constructed since July 2008, 48% were constructed on 'parent' lots sized less than 1,200 sqm. The typical density pre development was 926 sqm, post development – 362 sqm. This equates to a net addition of 2.5 lots/dwellings post redevelopment.

Broadhectare lot construction for the same period averaged 212 lots per annum. Of this lot construction activity, the vast majority (92%) were located in the urban centre of Shepparton, the remainder in Tatura. Of the broadhectare lots constructed in Shepparton:

- 67 per annum were located in Kialla;
- 52 per annum were located in Shepparton North West;
- 38 per annum were located in Shepparton North East;
- 21 per annum were located in Shepparton South East; and
- 19 per annum were located in Mooroopna.

From July 2008 to March 2016 broadhectare lots construction achieved median lot sizes from 740 sqm to 812 sqm. Typically, (51%) broadhectare lot production has resulted in lots constructed from 500 to 800 sqm. In addition, around 35% of all lot production activity has resulted in lots ranging in size from 800 to 1,200sqm. There has been 136 broadhectare lots constructed sized less than 500 sqm.

As measured from July 2008 to March 2016 there was a total of 56 rural residential lots constructed – or 2% of total residential lot construction activity. Typically, rural residential lot construction was 4,500 sqm in size.

This section of the report covers the trends and shifts in building activity across the City of Greater Shepparton (the Study Area) and provides an insight into proposed future residential development activity.

The information in this section has been compiled resulting from a number of comprehensive consultations with key representatives from the City of Greater Shepparton, Goulburn Valley Water and local residential land development consultants. It is supported by datasets from the Australian Bureau of Statistics and primary data collection undertaken by Spatial Economics.

This section of the report details the recent activity of residential lot construction and dwelling approvals achieved across the Study Area. Residential lot construction activity is detailed from July 2008 to March 2016 and is presented at a small area (id Forecast boundaries, urban locality

and a municipal level. Residential lot construction is further analysed by supply type/location, namely:

- Dispersed Infill;
- Retirement Village;
- Township;
- Broadhectare; and
- Rural Residential.

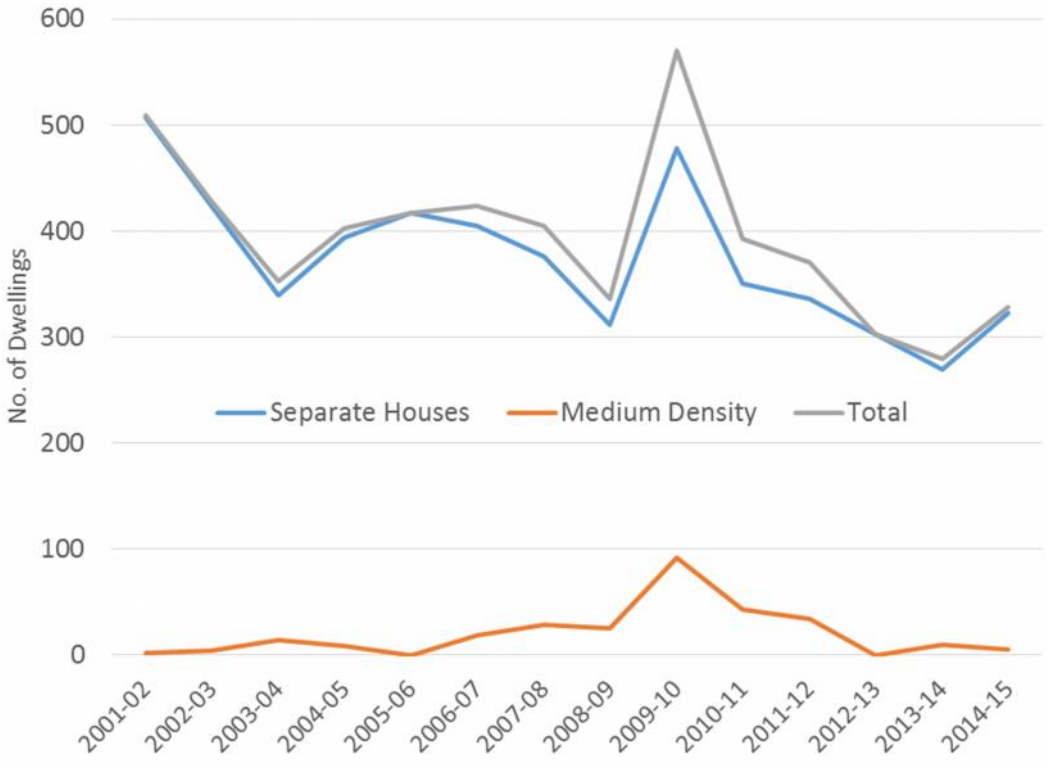
2.1 Residential Building Approvals

As measured from July 2008 to July 2015 residential building approval activity within the municipal area of Shepparton has averaged 368 per annum, the amount of building approval activity as measured on an annual basis has illustrated a degree of variability. In 2009/10 there was a peak of 570 residential building approvals, steadily decreasing since this point annually to a low of 279 approvals in 2013/14, increasing slightly to 328 approvals in 2014/15. For the 9 months of 2015/16, there have been 270 residential building approvals

Graph 1 illustrates the amount of building approval activity by dwelling type on an annual basis for the municipal area of Shepparton.

The vast majority of building approvals (92%) since July 2008 have been for separate houses.

Graph 1: Number of Residential Building Approvals



Source: Australian Bureau of Statistics, Catalogue No.8731.0

2. 2 Residential Lot Construction

Analysis has been undertaken to determine on a lot by lot basis the location, supply type, densities and quantum of residential lot construction activity from July 2008 to March 2016. Lot

construction activity has been classified into distinct supply types and or supply locations as defined above.

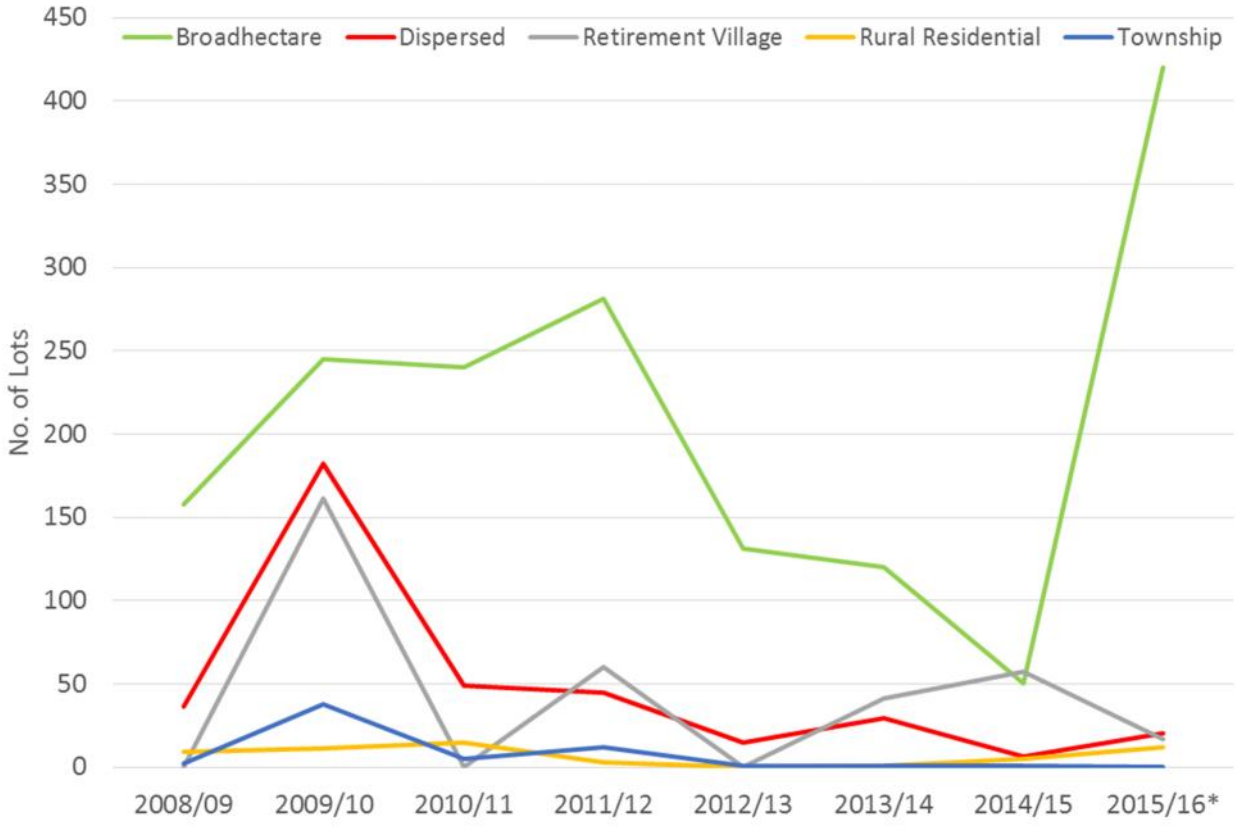
Graph 2 summarises the amount of residential lot construction by supply type across the municipal area of Shepparton. From July 2008 to March 2016 there was an average annual residential lot construction of 320. Of this lot construction (66%) was broadhectare, followed by dispersed infill lot construction at 15%, 14% aged care/retirement village, 2% Township and rural residential at 2%.

In comparison to the annual volume of residential building approvals, residential lot construction varies considerably. Residential lot construction was the lowest in 2012/13 at 147 lots and 'peaked' in 2009/10 at 637 lots. In recent years, lot construction activity has averaged around the 240 mark.

The lot construction variance over-time is a typical trend illustrated from the land development industry and indicates no significant supply or policy issues.

Residential lot construction activity was concentrated within the urban centre of Shepparton (90% of activity). Within the urban centre of Shepparton, residential lot construction activity was mainly located in Shepparton South East (22% of activity), Kialla (21%), Shepparton North West (19%) and Shepparton North East (13%). From July 2008 to March 2016 there were 173 residential lots constructed in Tatura, representing 7% of all residential lot construction activity across the municipal area.

Graph 2: Number of Residential Lots Constructed by Supply Type, July 2006 to March 2016



*to March Quarter 2016
Source: Spatial Economics Pty Ltd

2.2.1 Dispersed Infill Lot Construction

Dispersed infill lot construction activity as measured from July 2008 to March 2016 across the municipal area of Shepparton has averaged 49 lots per annum. This represents 15% of all residential lot construction activity.

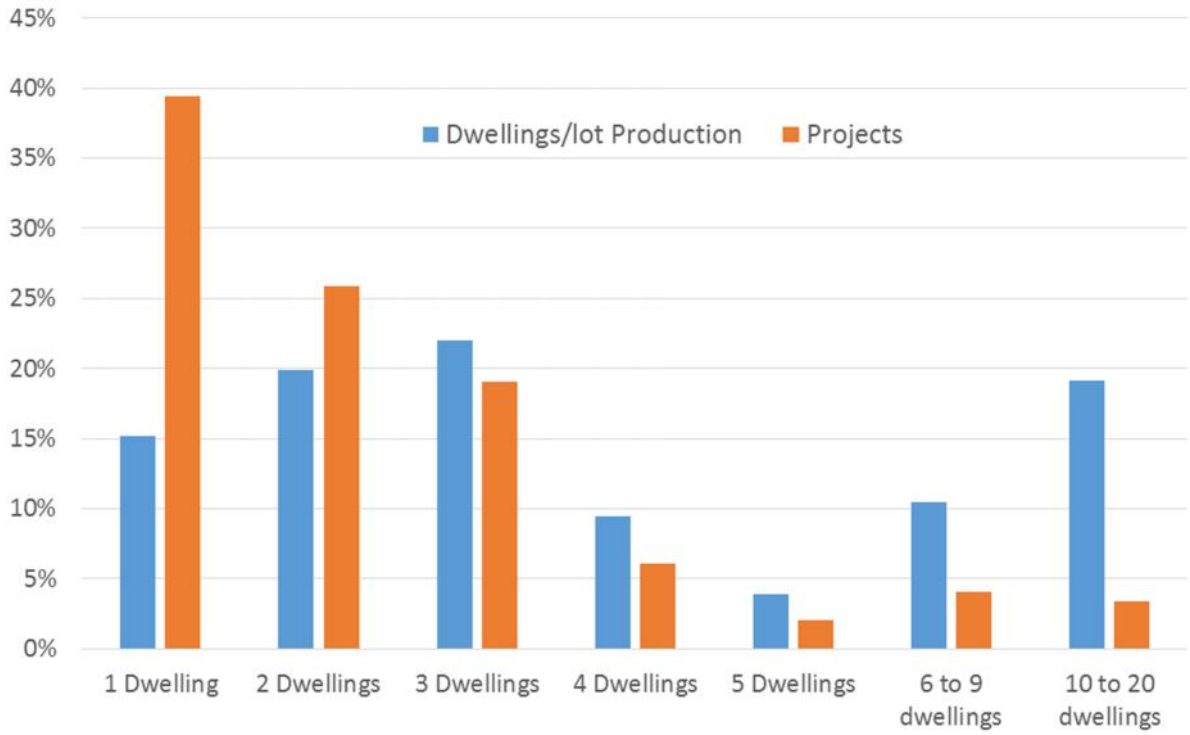
Dispersed infill lot construction activity was primarily located in the established urban area of Shepparton. Dispersed infill lot construction was primarily located within the idForecast small areas of Shepparton North Central (80 lots in total), Shepparton Central (66 lots) and Shepparton North West (64 lots).

There were 33 dispersed infill lots constructed over the 2008 to 2016 period within the urban area of Tatura, representing 9% of all dispersed infill lot construction across the municipal area.

Project Size

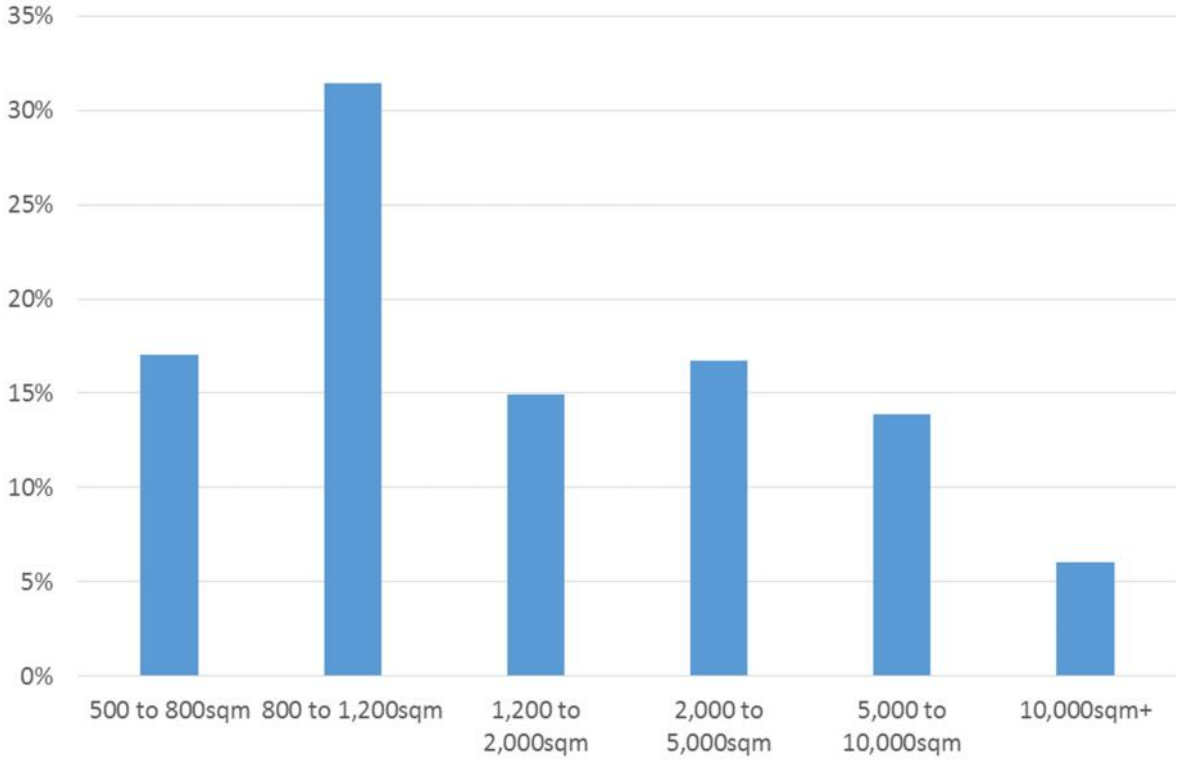
Analysis has been undertaken to establish the dwelling/lot (net) yield or project size of dispersed infill residential development projects. The net measure in this instance refers to the statistical removal of lots/dwellings remaining from the original/parent lot, specifically if an allotment is subdivided and the original dwelling remains, this is statistically ignored in terms of the analysis. The measures specifically identifies new lot and new dwelling construction from July 2008 to March 2016.

Graph 3: Dwelling/Lot Yield (net) by Project Size for Dispersed Infill Projects, 2008 to 2016



Source: Spatial Economics Pty Ltd

Graph 4: Parent Lot Size of Dispersed Infill Lot Subdivision, July 2008 to March 2016



Source: Spatial Economics Pty Ltd

The majority of dispersed infill **projects** (65%) resulted in 1 or 2 net additional dwellings/lots, in terms of **dwelling/ lot** contribution this accounted for 35% of net additional dispersed infill lots/dwellings. Whereas, dispersed infill projects that yield 10 to 20 lots/dwellings represented only 3% of projects but 19% of the net dwellings/lots.

Parent Lot Size

Of all of the dispersed infill lots/dwellings constructed since July 2008, 48% were constructed on 'parent' lots sized less than 1,200 sqm. There were 64 net lots/dwellings constructed (17%) on parent lots sized from 2,000 to 5,000sqm. Only 74 lots/dwellings were constructed on 'parent' lots sized greater than 5,000 sqm (20% of activity). This illustrates that the vast majority of dispersed infill activity is on typical existing lots across the municipality. Graph 4 summarises the volume of dispersed infill projects by 'parent' lot size cohorts. Note: - parent lot size refers to the size of the allotment prior to subdivision.

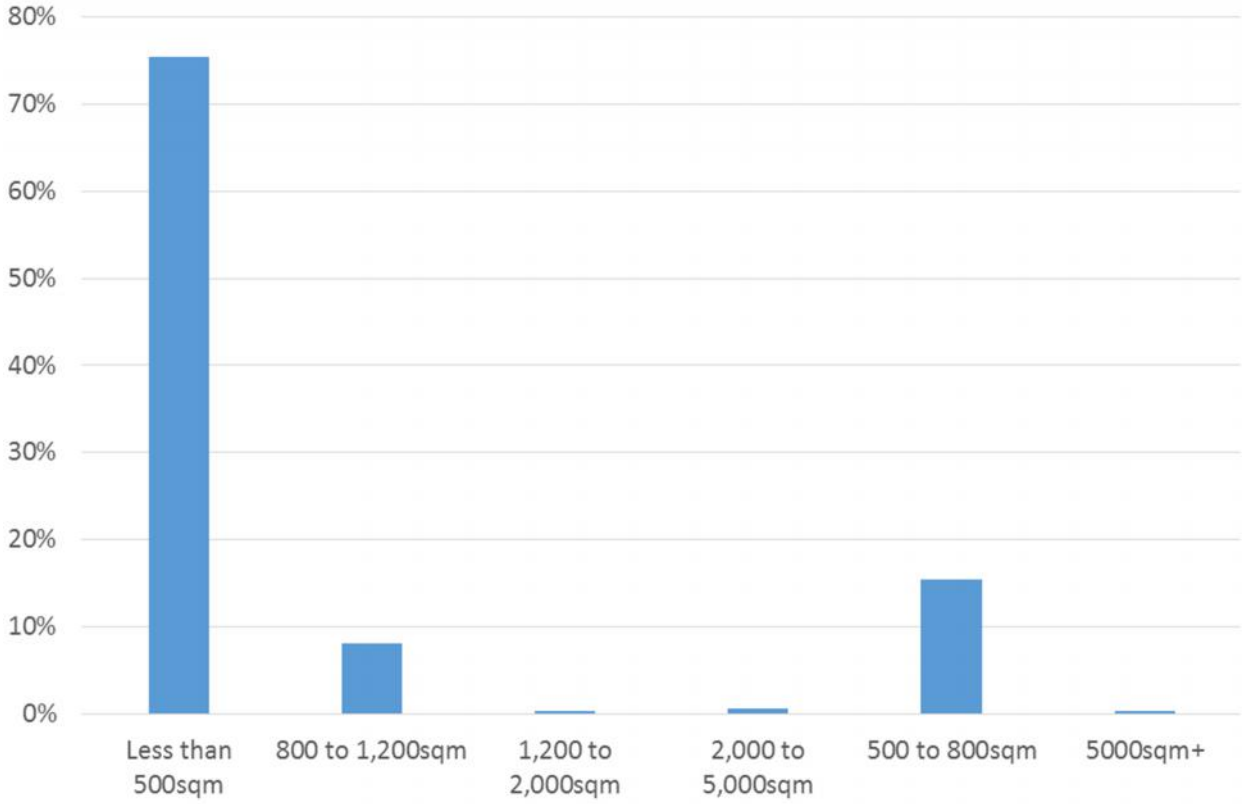
Post Development Density

Analysis of dispersed infill projects from July 2008 to March 2016 illustrates the typical post density (median) i.e. what was the resultant density achieved.

Across the municipality the typical density pre development was 926 sqm, post development – 362 sqm. This equates to a net addition of 2.5 lots/dwellings post redevelopment.

Graph 5 summarises the resultant density ranges for dispersed infill development across the municipal area of Shepparton. The vast majority (75%) of all residential infill projects resulted in lot/dwelling densities less than 500 sqm per dwelling.

Graph 5: Post Density Development (sqm) - Dispersed Infill, July 2008 to March 2016



Source: Spatial Economics Pty Ltd

2.2.2 Broadhectare Lot Construction

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- 21 per annum were located in Shepparton South East; and
- 19 per annum were located in Mooroopna.

As measured annually from July 2008 to March 2016, the amount of broadhectare lot construction activity has varied significantly. In 2008/09 there was approximately 158 broadhectare lots constructed, increasing to of 245 in 2009/10. From 2011/12 to 2014/15, lot production was relatively 'subdued', averaging around 145 per annum. However, as measured for the 9 months of 2015/16, there were 420 broadhectare lots constructed.

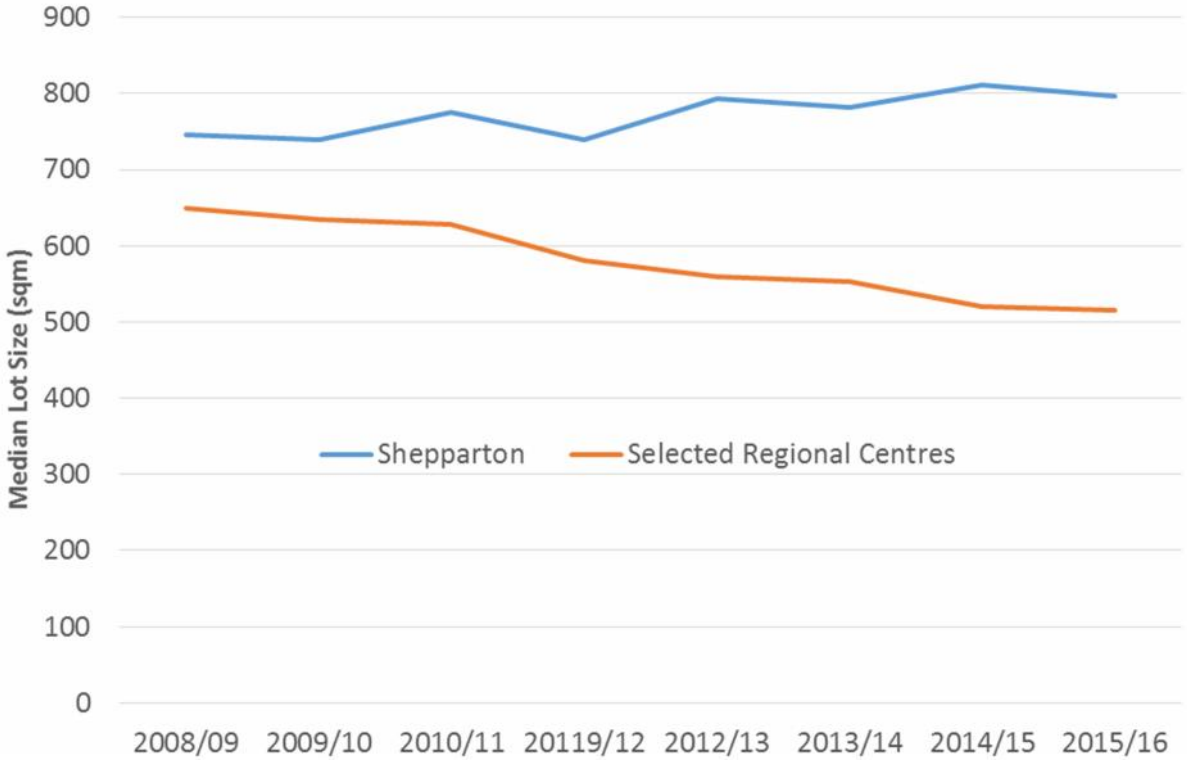
The size of broadhectare lot construction varies significantly across the differing active and completed broadhectare housing estates. However, there is an underlying relatively constant to increasing trend in terms achieved broadhectare lot density. From July 2008 to March 2016 broadhectare lots construction achieved median lot sizes from 740 sqm to 812 sqm. The graph below illustrates the median lot size of broadhectare lot construction activity for the municipal area of Shepparton and in comparison to selected regional centres (Warrnambool, Wodonga, Ballarat, Bendigo and Geelong).

Typically, broadhectare lot sizes are 33% larger across the municipal area of Shepparton compared to the selected regional centres as measured from 2008 to 2016. However, it is observed that broadhectare lot production activity across the municipal area of Shepparton has produced a diverse range of lot sizes as illustrated in Graph 6.

Typically, (51%) broadhectare lot production has resulted in lots constructed from 500 to 800 sqm. In addition, around 35% of all lot production activity has resulted in lots ranging in size from 800 to 1,200sqm. There has been 136 broadhectare lots constructed sized less than 500 sqm.

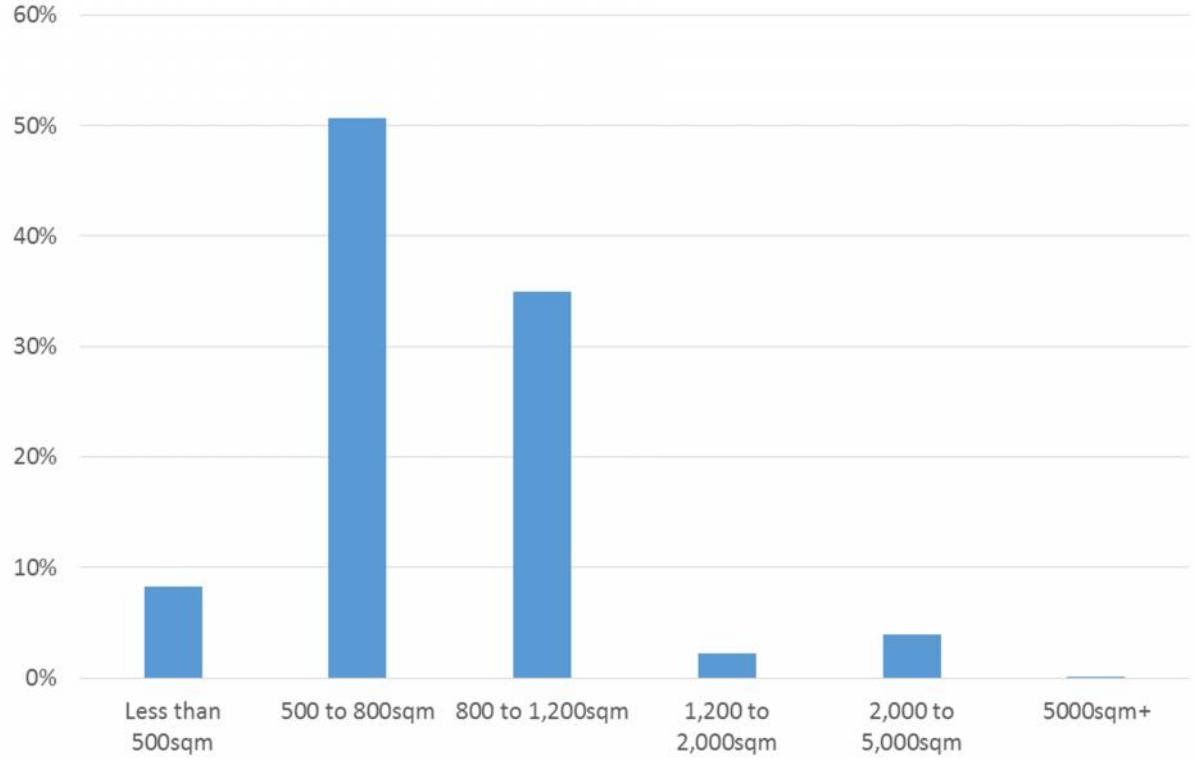
It is important to highlight, that there is a significant proportion of lots constructed across 'typically' broadhectare localities that are best described as 'lifestyle/retirement' villages. These developments offer relatively compact development (in terms of densities), this is outlined in the proceeding section.

Graph 6: Median Lot Size of Broadhectare Lot Construction (sqm)



Source: Spatial Economics Pty Ltd

Graph 7: Broadhectare lots constructed – lot size profile, 2008 to 2016



Source: Spatial Economics Pty Ltd

2.2.3 Lifestyle/Retirement Village Lot Construction Activity

From July 2008 to March 2016, there were 336 lots/dwellings constructed for the purpose of lifestyle/retirement village housing, all of which are located in typical broadhectare locations. This form dwelling/lot construction activity represented 14% of all residential lot construction activity across the municipality.

Typically lots/dwellings constructed within these estates have a residential density of 245 sqm.

2.2.4 Township Lot Construction Activity

A separate assessment has been undertaken to establish the location, volume and density of lot construction within small townships across the municipal area of Shepparton. This lot construction activity is classified as lots zoned Township (TZ) and is most likely for the purpose of residential dwelling construction.

From July 2008 to March 2016, there were 60 lots constructed on land zoned Township – 2% of all lot construction activity. Lot constructions sizes vary significantly. However, the typical size of lots constructed were around 4,500 sqm, similar size to lots constructed on land zoned LDRZ.

Township lot construction activity was concentrated within the townships of:

- Katandra West – 20 Lots;
- Toolamba - 24 lots;
- Merrigum – 7 Lots; and
- Murchison – 7 Lots.

2.2.5 Rural Residential Lot Construction

Rural residential lot construction is limited, relative to total construction activity and demand levels within a major regional municipality. As measured from July 2008 to March 2016 there was a total of 56 rural residential lots constructed – or 2% of total residential lot construction activity.

Of this lot construction activity – 95% was zoned Low Density Residential (LDRZ), the residual zoned Rural Living (RLZ).

Typically, LDRZ rural residential lot construction was 4,500 sqm in size.

Key Issues

Median lot sizes within new broadhectare estates for the respective years have been relatively consistent varying from 740 sqm to 812 sqm. Typically, broadhectare lot sizes are 33% larger across the municipal area of Shepparton compared to the selected regional centres as measured from 2008 to 2016. However, it is observed that broadhectare lot production activity across the municipal area of Shepparton has produced a diverse range of lot sizes. With the projected increase of smaller household types and ageing of the population, it is likely there will be increased demand for smaller residential allotments.

It is highlighted that there is existing significant development activity for lifestyle/retirement villages, where housing densities are around 245 sqm.

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

Dispersed infill development, although limited in terms of total lot/dwelling contribution, illustrates similar trends to that across other comparable regional cities. The majority of dispersed infill **projects** (65%) resulted in 1 or 2 net additional dwellings/lots, in terms of **dwelling/ lot** contribution this accounted for 35% of net additional dispersed infill lots/dwellings. Whereas, dispersed infill projects that yield 10 to 20 lots/dwellings represented only 3% of projects but 19% of the net dwellings/lots.

Specifically, larger infill projects will account for the bulk of the dwelling contribution, whilst smaller dispersed infill projects are numerous, they do not represent the bulk of net dwelling contribution.

The typical pre-development density for infill development was 926 sqm, post development 362 sqm. On average this results on 2.5 lots per development. This again reinforces that this type of infill development is likely to continue to occur in Shepparton due to the configuration of the existing lot stock. However, larger sites (existing or through lot amalgamation) will result in higher yielding/density projects and a higher contribution in terms of the number of dwellings.

3.0 RESIDENTIAL LAND SUPPLY

Key Findings

In total there is a total residential lot supply of approximately 15,954. This is comprised of:

- 7,366 unzoned broadhectare lots – Urban Growth Area (46% of supply);
- 4,797 zoned broadhectare lots (30% of supply);
- 2,490 unzoned future rural residential lots (16% of supply);
- 686 vacant urban residential lots (4% of supply); and
- 615 vacant zoned rural residential lot capacity (4% of supply).

As at February 2016, there was 686 minor infill lots identified. Of these lots, 557 were Located within the existing urban area of Shepparton. Vacant residential lot stock outside of the major urban centre of Shepparton was concentrated within the townships of:

- Tatura – 46 lots;
- Katandra West - 25 lots;
- Toolamba – 21 lots;
- Murchison – 14 lots; and
- Dookie – 9 lots.

As at March 2016, there was a residential lot capacity within zoned broadhectare sites of approximately 4,797.

The location of zoned broadhectare residential land stocks is primarily located within the following small area localities within Shepparton:

- Kialla – 1,957 lots (41% of supply);
- Shepparton North East – 802 lots (17% of supply);
- Shepparton South East – 775 lots (16% of supply); and
- Mooroopna – 478 lots (10% of supply).

There were 329 broadhectare lots located within the urban centre of Tatura (7% of total broadhectare stocks).

Over the next five years, it is estimated that on average 440 lots/dwellings per annum will be constructed within existing zoned broadhectare areas. Historically, broadhectare lot construction has averaged 212 per annum. However, in the nine months of 2015/16, there has been 420 broadhectare lots constructed.

There is in terms of unzoned – Urban Growth Area residential broadhectare lot potential of approximately 7,366 across the municipal area. The majority (6,596 lots) are located within the Shepparton urban centre and 770 in Tatura.

As at February 2016 across the City of Greater Shepparton there was a total lot stock of rural residential allotments of 1,224. Of this stock, 110 lots were vacant, a lot vacancy rate of 9%. Of the vacant rural residential lot stock the total area is approximately 505 hectares, of which 354 hectares is zoned RLZ and 151 hectares is zoned RLZ.

The capacity of designated future rural residential stock was assessed. In total across the municipal area of Shepparton there is a net lot/dwelling potential of approximately 2,500, of this potential – 2,000 lots are identified for future LDRZ and the remaining RLZ.

This section of the report details the stock (measured in lots) of residential land across the municipal area of Shepparton as at March 2016. Residential lot stock/supply is presented at a locality, urban and municipal area level. Residential land supply is further analysed by supply type/location, namely:

- Minor Infill (vacant 'urban' lots);
- Broadhectare;
- Future Residential (unzoned);
- Rural Residential (vacant lots);
- Rural Residential (development capacity) and
- Future Rural Residential (unzoned).

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 emphasized that the timing presented is a guide. It will not equate to full completion of activity, but rather a guide to broad likely development construction initiation or likely potential to commence within the stated time frame. The quantum of estimated development within each timing category over the next five years is highly correlated to the quantum of recent construction. Development timing is presented to illustrate likely development activity spatially.

It is considered, that the level of actual lot construction activity will align closely to recent construction trends (particularly in the short to medium term). However, the location of the anticipated lot construction activity illustrated will generally commence development (e.g. 0-2 years), although complete 'build-out' will not be achieved within the stated time-frames.

Table 1 details the residential land supply, measured in lots, by supply type across the City of Greater Shepparton as at March 2016. In total there is a total residential lot supply of approximately 15,954. This is comprised of:

- 7,366 unzoned broadhectare lots – Urban Growth Area (46% of supply);
- 4,797 zoned broadhectare lots (30% of supply);
- 2,490 unzoned future rural residential lots (16% of supply);
- 686 vacant urban residential lots (4% of supply); and
- 615 vacant zoned rural residential lot capacity (4% of supply).

Each of the supply types are further detailed below, including maps of broadhectare supply, including the location of recent residential lot construction activity. It is highlighted that dispersed infill redevelopment dwelling supply potential is not included in the assessment.

Table 1: Residential Lot Potential by Supply Type, March 2016

Urban Centre/Supply Type	Vacant Urban Lots	Zoned Broadhectare (lots)	Urban Growth Area- (lots)	Zoned Rural Residential Capacity (lots)	Future (unzoned) Rural Residential (lots)	Total Supply (lots)
Dookie	9				173	**182**
Katandra West	25				62	**87**
Merrigum	13				149	**162**
Murchison	14				462	**476**
Shepparton	557	4428	6596	294	682	**12557**
Tallygaroopna	1	40			55	**96**
Tatura	46	329	770	301	750	**2196**
Toolamba	21			20	75	**116**
Undera					82	**82**
Shepparton LGA	**686**	**4797**	**7366**	**615**	**2490**	**15954**

Source: Spatial Economics Pty Ltd

3.1 Dispersed Infill Supply

A parcel by parcel assessment was undertaken to identify minor infill supply, specifically zoned vacant allotments sized less than 5,000sqm that is likely for 'normal' density development (i.e. lots zoned township that are un-sewered are unlikely to be suitable for 'normal' density development). All vacant allotments are zoned to support urban residential development (e.g. GRZ, RGZ, NRZ, TZ & ACZ). The assessment is based on information sourced from the Housing Development Data as at February 2016. The identification of vacant allotments sized does not provide an estimated dwelling yield. Rather it simply identifies the vacant allotment by lot size and location.

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

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

As at February 2016, there was 686 minor infill lots identified. Of these lots, 557 were Located within the existing urban area of Shepparton.

Of this vacant lot stock across the urban area of Shepparton, 53% was sized less than 800sqm. In addition there were:

- 180 vacant lots sized between 800 to 1,200sqm;
- 32 vacant lots sized between 1,200 to 2,000 sqm; and
- 50 lots sized from 2,000 to 5,000 sqm.

Graph 8 summarises the size distribution of identified minor infill supply within the urban settlement of Shepparton. Vacant lot stock was concentrated within the idForecast small areas

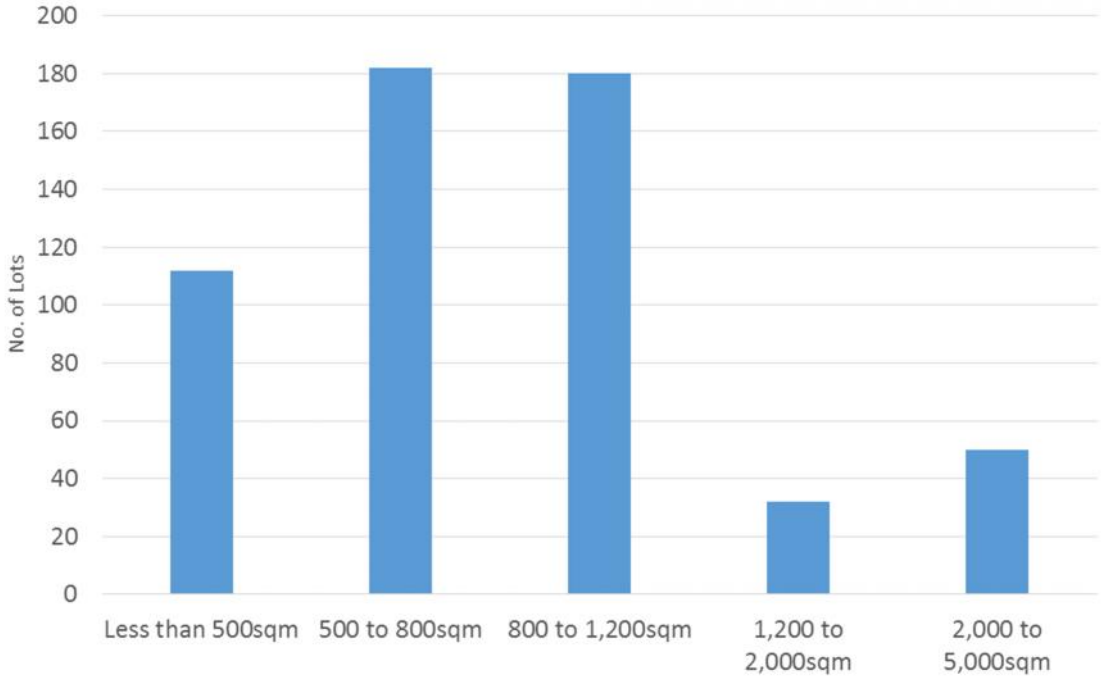
of: Shepparton North West (136 lots), Kialla (130 lots), Shepparton North East (78 lots) and Shepparton Central (61 lots).

Vacant residential lot stock outside of the major urban centre of Shepparton was concentrated within the townships of:

- Tatura – 46 lots;
- Katandra West - 25 lots;
- Toolamba – 21 lots;
- Murchison – 14 lots; and
- Dookie – 9 lots.

Typically, vacant lots within these townships are sized greater than 1,200sqm.

Graph 8: Minor Infill Supply – Number of Vacant Zoned Residential Allotments, by Lot Size Cohort – Shepparton Urban Centre, 2016



Source: Spatial Economics Pty Ltd

3.2 Broadhectare Supply

As at March 2016, there was a residential lot capacity within zoned broadhectare sites of approximately 4,797.

The location of zoned broadhectare residential land stocks is primarily located within the following small area localities within Shepparton:

- Kialla – 1,957 lots (41% of supply);
- Shepparton North East – 802 lots (17% of supply);
- Shepparton South East – 775 lots (16% of supply); and
- Mooroopna – 478 lots (10% of supply).

There were 329 broadhectare lots located within the urban centre of Tatura (7% of total broadhectare stocks).

Table 2 identifies the lot yield and estimated development timing of zoned broadhectare lot stock.

Table 2: Anticipated Broadhectare Lot Construction Activity, 2016

Urban Centre/Housing Market	Anticipated Development Timing					Total Zoned Lots	Urban Growth Area (Unzoned)	Total Lots
	0-2 years	3-5 years	6-10 years	No Timing	11+ years			
Shepparton	**1106**	**914**	**1039**	**392**	**977**	**4428**	**6596**	**11024**
Kialla	*341*	*346*	*492*	*237*	*541*	***1957***		***1957***
Mooroopna	*136*	*127*	*153*	*33*	*29*	***478***	*1086*	***1564***
Shepparton North East	*53*	*313*	*223*	*23*	*190*	***802***	*2000*	***2802***
Shepparton North West	*200*			*70*	*74*	***344***		***344***
Shepparton South		*43*				***43***		***43***
Shepparton South East	*376*	*85*	*171*		*143*	***775***	*3320*	***4095***
Shepparton Surrounds East				*29*		***29***		***29***
Shepparton Surrounds South						***0***	*190*	***190***
Tallygaroopna	**40**					**40**		**40**
Tatura	**72**	**67**		**35**	**155**	**329**	**770**	**1099**
City of Greater Shepparton	**1218**	**981**	**1039**	**427**	**1132**	**4797**	**7366**	**12163**

Source: Spatial Economics Pty Ltd

Based on existing planning permits, recent construction activity and primarily Council feedback it is anticipated that over the next five years, on average 440 lots/dwellings per annum will be constructed within existing zoned broadhectare areas. Historically, broadhectare lot construction has averaged 212 per annum. However, in the nine months of 2015/16, there has been 420 broadhectare lots constructed.

It is considered that the quantum of anticipated broadhectare lot construction is unlikely, however, it does illustrate there is sufficient zoned broadhectare land that is likely to be developed relative to existing demand levels.

In addition to the identified zoned broadhectare land stocks with an estimated development timing, there is broadhectare/major infill 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, low demand areas – likely development timing is highly speculative. Similarly, in many instances no yield estimates have been applied, as due to their location, the potential dwelling yield could vary significantly.

The 'No Timing" status has been applied to much of the residential land stocks in the small townships surrounding the urban centre of Shepparton. In total, there is 307 hectares of zoned residential land within these townships that is suitable for residential purpose development. Residential land stocks with a 'No Timing' or development yield allocated include:

- Murchison – 158 hectares;
- Merrigum – 60 hectares;
- Undera – 60 hectares;
- Tallygaroopna – 13 hectares;
- Katandra West – 6.5 hectares; and
- Dookie – 6.3 hectares.

In addition to the above described residential land stocks, there are additional residential land supply sources outlined below.

3.3 Future Residential Land Supply (unzoned - normal residential density)

Consultation and analysis has been undertaken in conjunction with municipal planning officers to identify the location and associated lot yield of future residential land stocks. Future residential land stocks (Urban Growth Area) are identified by the City of Greater Shepparton council officers, and contained within various municipal planning policy and strategy planning documents.

Future residential land stocks are not zoned to support immediate 'normal' residential development, and rezoning and structure planning processes are required before normal residential development proceeds.

Across the municipal area there is a total broadhectare lot potential within identified unzoned future broadhectare sites of approximately 7,366. The majority (6,596 lots) are located within the Shepparton urban centre and 770 in Tatura.

3.4 Zoned Rural Residential Lot Stock

The stock of both occupied and vacant rural residential allotments have been determined on a lot by lot basis as at February 2016. A Rural Residential allotment is defined as all allotments that are zoned Low Density Residential (LDRZ) and Rural Living (RLZ). Occupied is defined as evidence of a 'habitable' dwelling and vacant is defined as no evidence of a habitable dwelling via the interpretation of aerial imagery.

As at February 2016 across the City of Greater Shepparton there was a total lot stock of rural residential allotments of 1,224. Of this stock, 110 lots were vacant, a lot vacancy rate of 9%. Graph 9 summarises the stock (lots) of both occupied and vacant rural residential allotments by urban centre.

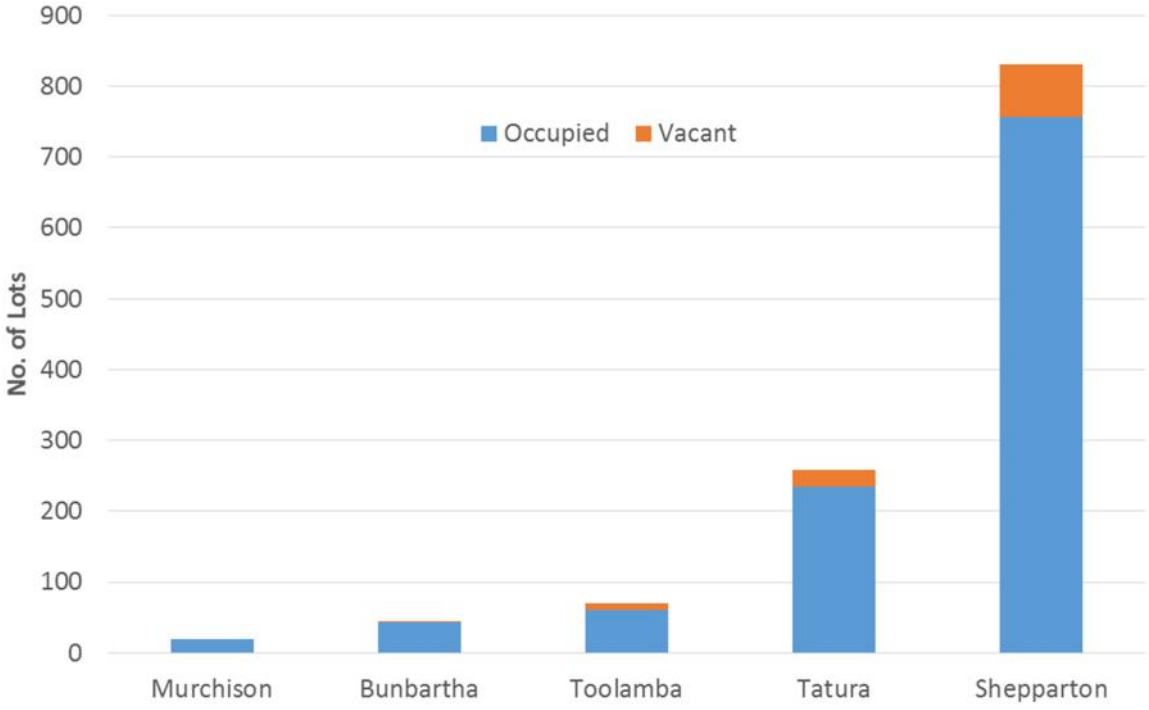
By zone type, as at February 2016 there were 1,049 Low Density Residential (LDRZ) allotments, of which 78 were vacant across the municipality, a lot vacancy of 7%. In comparison, there were a total of 175 Rural Living (RLZ) zoned allotments, of which 32 were vacant – a lot vacancy rate of 18%.

The location of the majority of rural residential lots across the municipality includes:

- Shepparton - total 831 lots (lot vacancy of 9%);
- Tatura - total 259 lots (lot vacancy of 10%); and
- Toolamba - total 70 lots (lot vacancy of 13%).

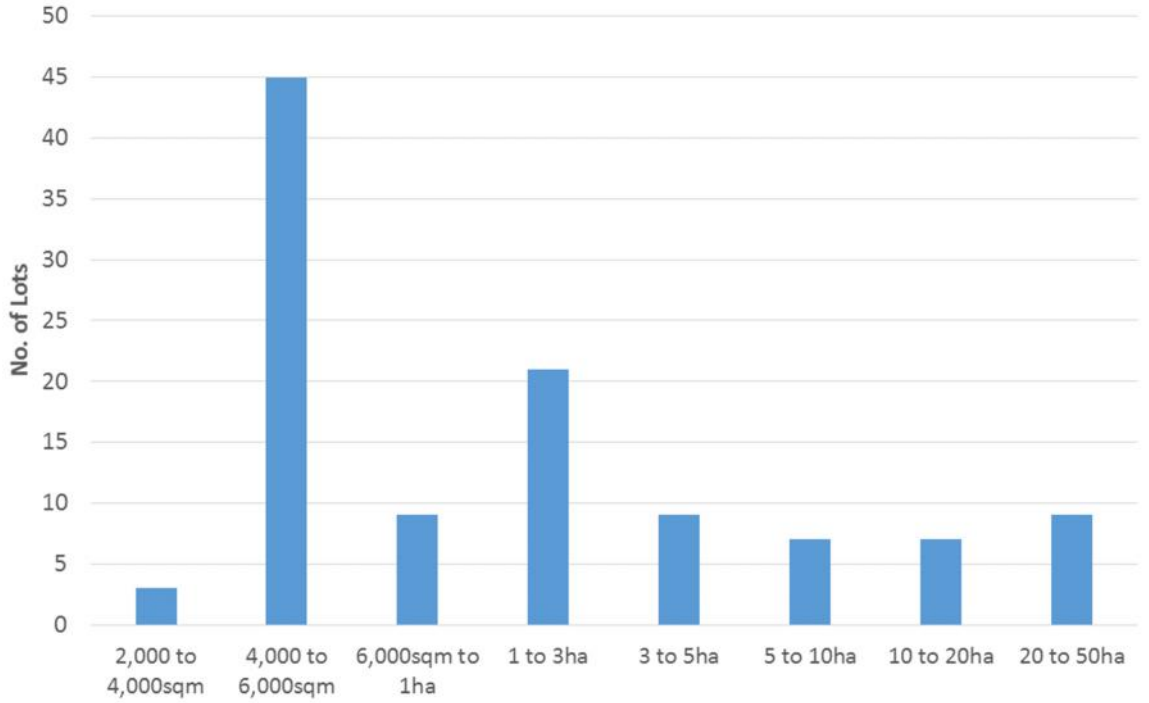
Of the vacant rural residential lot stock the total area is approximately 505 hectares, of which 354 hectares is zoned RLZ and 151 hectares is zoned RLZ. Graph 10 summarises the size distribution of vacant rural residential allotments across the municipality.

Graph 9: Stock of Rural Residential' Allotments, 2016



Source: Spatial Economics Pty Ltd

Graph 10: Stock of Vacant Rural Residential' Allotments by Lot Size Cohort, 2016



Source: Spatial Economics Pty Ltd

3.4.1 Zoned Vacant Rural Residential Lot Stock - Lot/Dwelling Capacity

The stock of vacant rural residential allotments does not represent the final lot/dwelling yield or capacity. Particularly the larger vacant allotments have significant subdivision capacity and existing vacant allotments have land development constraints that will impact the potential yield.

A detailed assessment on a parcel by parcel basis was undertaken to ascertain likely development yields on land zoned rural residential. The assessment only considered existing vacant rural residential lot stocks and parcels (with an existing dwelling) that have known development intentions. It is highly acknowledged that existing occupied rural residential land parcels (particularly larger parcels) are likely and have the capacity for subdivision.

This is a deliberate conservative approach to estimate the likely minimum rural residential land supply levels.

The capacity assessment is based on known land development constraints, existing subdivision plans, standard land development take-outs (roads) depending on the size of the allotment and existing road patterns, provision of sewer and differing density assumptions.

It is also highlighted that not all vacant rural residential lot stock will be subdivided, rather due to such factors as consumer preference the lots will remain un-subdivided i.e. preference for large allotments.

Low Density Residential (LDRZ)
As stated previously, existing or planned subdivision plans remain a constant assumption in terms of site yields. However, two density scenarios are presented in terms of development densities, specifically 2,000 sqm and 4,000 sqm. Where sewer is not available the development density assumption of 4,000 sqm is a constant assumption.

Zoned and vacant Low Density Residential lot capacity range from 477 to 717 lots across the municipal area, by major urban centre the lot/dwelling capacity ranges from:

- 300 to 425 lots in Tatura;
- 160 to 270 lots in Shepparton; and
- 19 to 21 lots in Toolamba.

Rural Residential (RLZ)
As stated previously, existing or planned subdivision plans remain a constant assumption in terms of site yields. A development density of 2 hectares is assumed.

Zoned and vacant Rural Residential lot capacity is estimated at 138, this supply is primarily located in Shepparton.

3.5 Future Rural Residential Supply

A detailed assessment on a parcel by parcel basis was undertaken to ascertain likely development yields on land designated for future rural residential development – both LDRZ and RLZ.

The capacity assessment is based on known land development constraints, existing subdivision plans, existing uses, standard land development take-outs (roads) depending on the size of the allotment and existing road patterns, provision of sewer and differing density assumptions. Density assumptions are detailed for each identified future rural residential area. Future rural residential land stocks are illustrated in the land supply maps at the end of the report.

Table 3 summarises the estimated lot/dwelling yield by urban centre.

In total across the municipal area of Shepparton there is a net lot/dwelling potential of approximately 2,500, of this potential – 2,000 lots are identified for future LDRZ and the remaining RLZ.

Future LDRZ areas equate to approximately 885 hectares and 1,136 hectares for future RLZ.

Table 3: Estimated Lot Capacity for Future Rural Residential (unzoned) Land Stocks, 2016

Urban Centre/Zone Type	Potential Low Density	Potential Rural Living	Total lots
Dookie	148	25	173
Katandra West	30	32	62
Merrigum	93	56	149
Murchison	429	33	462
Shepparton	550	132	682
Tallygaroopna	40	15	55
Tatura	631	119	750
Toolamba	35	40	75
Undera	41	41	82
Shepparton LGA	**1997**	**493**	**2490**

Source: Spatial Economics Pty Ltd

3.6 Investigation Areas

Investigation Areas is land which has been identified by Council for possible future urban development. Investigation areas are progressively being assessed to determine land conditions, servicing and development potential before future zoning options can be fully assessed and determined.

No assessment has been undertaken to determine land suitability, future land use or dwelling/lot yields for this report.

Key Issues

There are 15,000 residential lots identified across Shepparton. This is a conservative estimate due to the exclusion of infill lots, the inclusion of 'no timing' on some lots the opportunity of subdivision within rural residential allotments and the conservative yields put on broadhectare supplies.

There is a high capacity for dispersed infill redevelopment within the Study Area that is not captured in the analysis of vacant lot stock. This means that there are readily alternative residential land supply stocks outside of undeveloped broadhectare estates - therefore a feasible opportunity to decrease the reliance on broadhectare land. There is ample opportunity for infill within the exiting urban area in Shepparton due to the existing lot configuration. As in other areas, minor infill projects (1-3 lot subdivisions) are dominant although larger infill projects provide significant dwelling numbers from only a few projects.

Estimates of broadhectare land supply capacity are essentially based on recent trends, planning permits and short to medium terms market expectations. Over the last ten years, the median size of broadhectare lot construction across many large regional centres across Victoria has dramatically declined. Therefore the estimate of broadhectare lot capacity can be seen as conservative. In the medium to longer term, it would be reasonable to expect broadhectare lot densities to increase, and thus, an increase in lot/dwelling capacity.

There are also identified zoned land stocks where no yield has been allotted, as the likely yield is highly variable due to a range of factors such as their location. This also understates the number of potential lots/dwellings.

There is a good supply and spatially diverse supply of broadhectare lots across urban Shepparton.

Anticipated broadhectare lot construction is high in the short term. If the recent trend of high broadhectare construction continues then there will be increased pressure on existing broadhectare land stocks.

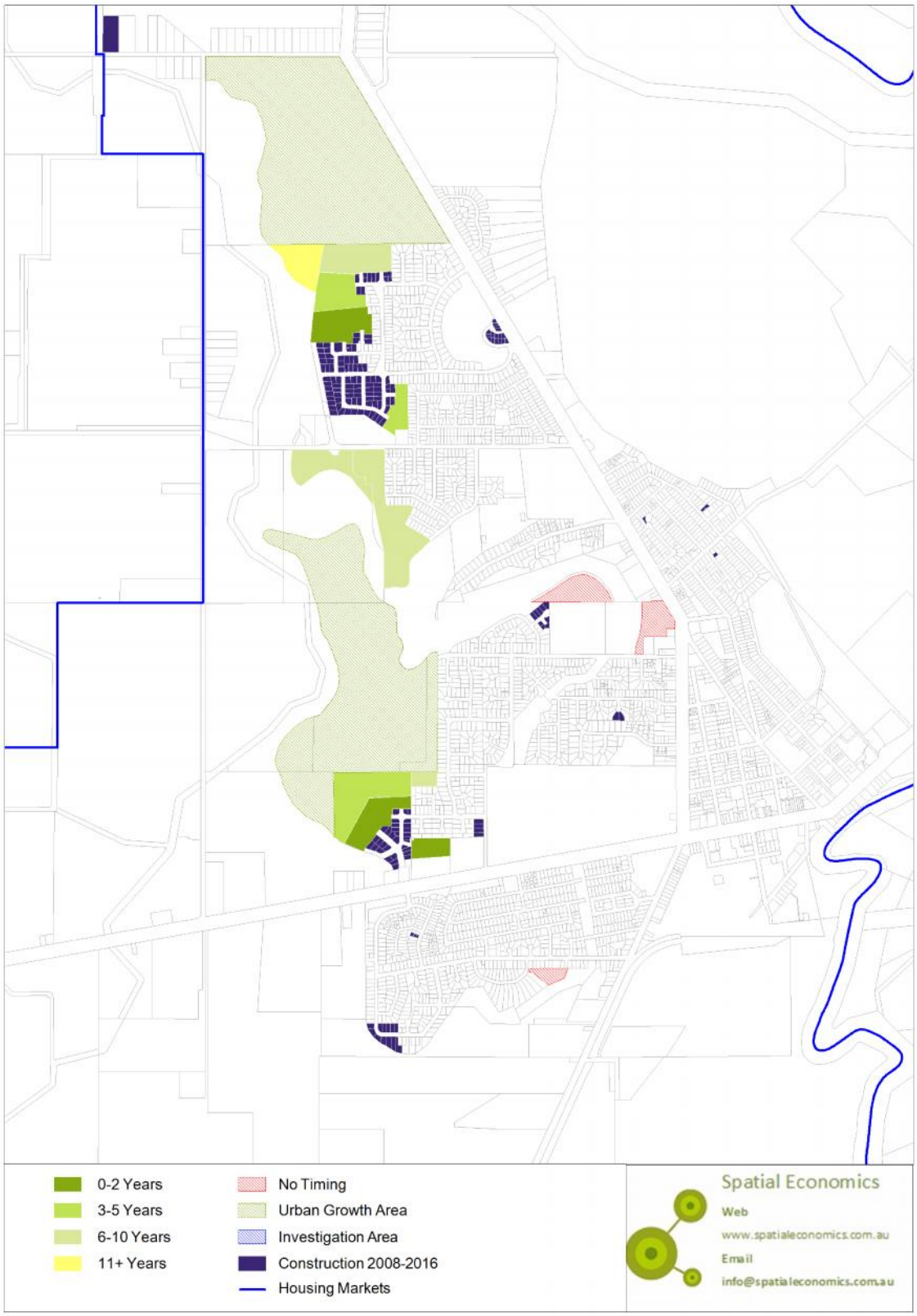
Urban lot sizes are generally larger in Shepparton than other Regional centres. There is a likelihood that lot sizes demanded over time will fall which will increase the existing supply of residential lots as the lot yields are estimated using existing lot configuration.

There is a plentiful supply of identified future residential land in both Tatura and Shepparton suggesting that there is no immediate requirement to investigate further residential land.

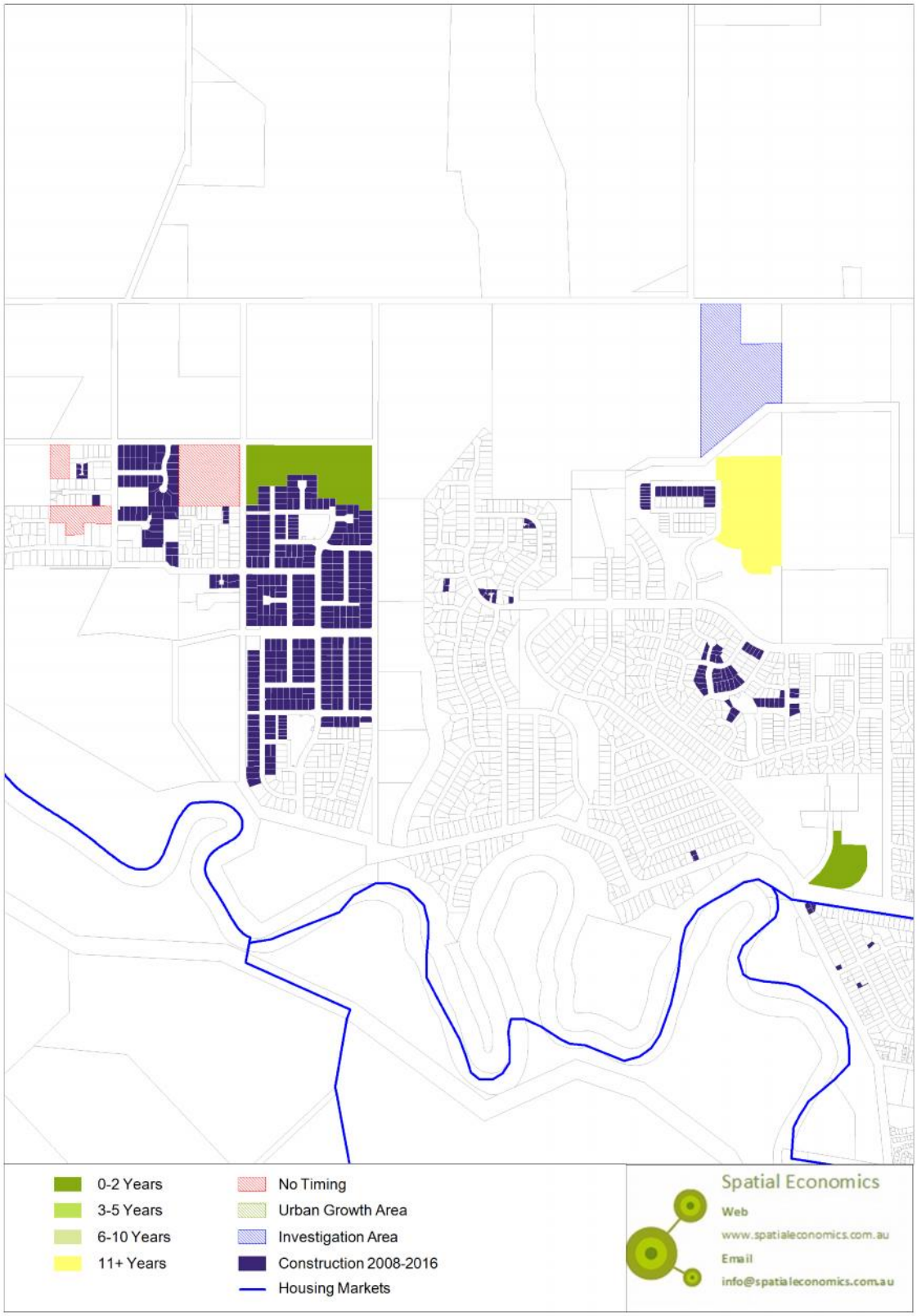
Retirement Living is on the increase reflecting changing demographics and preferences. Future broadhectare areas will need to accommodate this type of development.

There is a significant supply of future rural residential land identified with over 2,000 hectares identified across the municipality

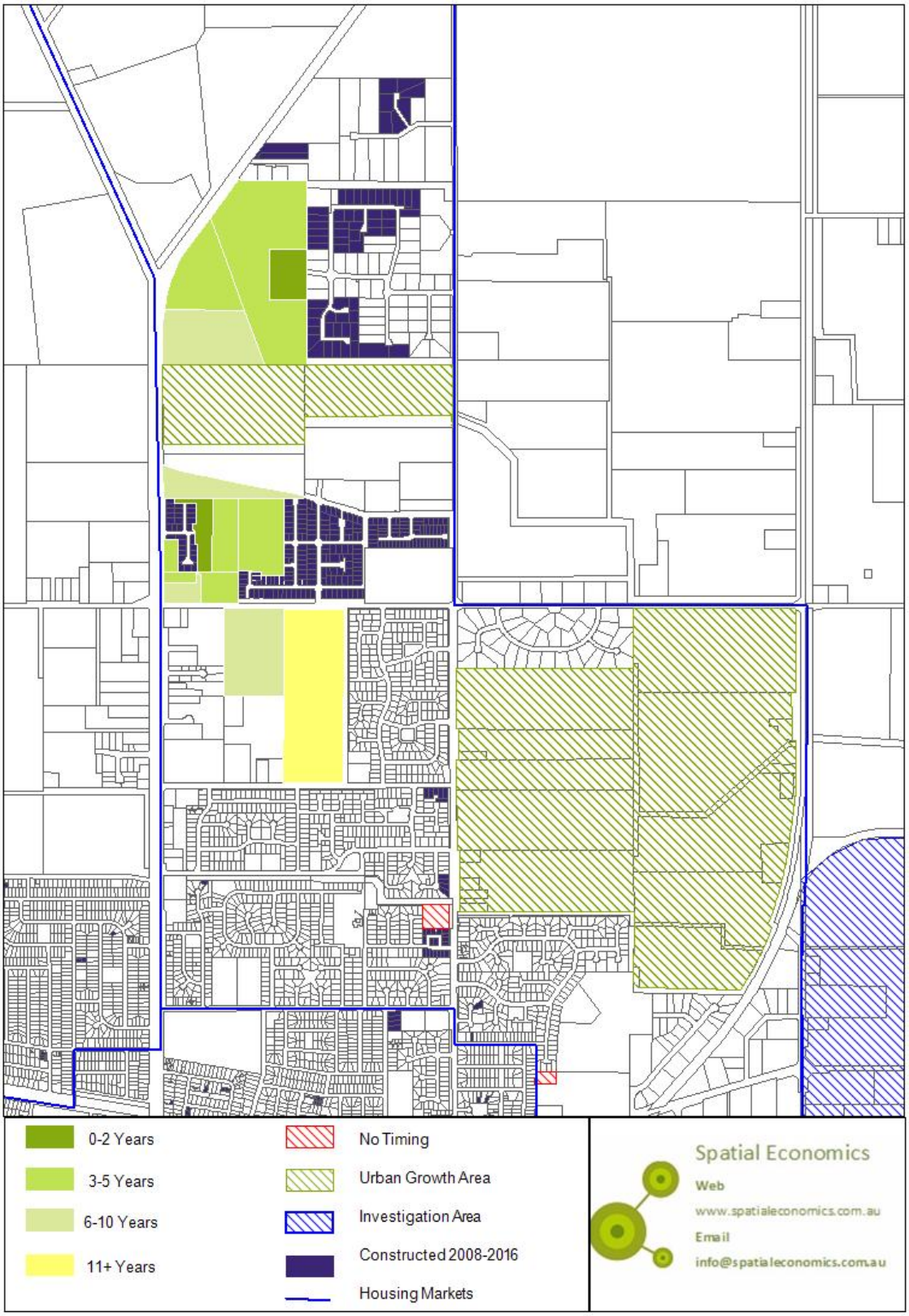
Map 3: Urban Residential Land Supply - Mooroopna



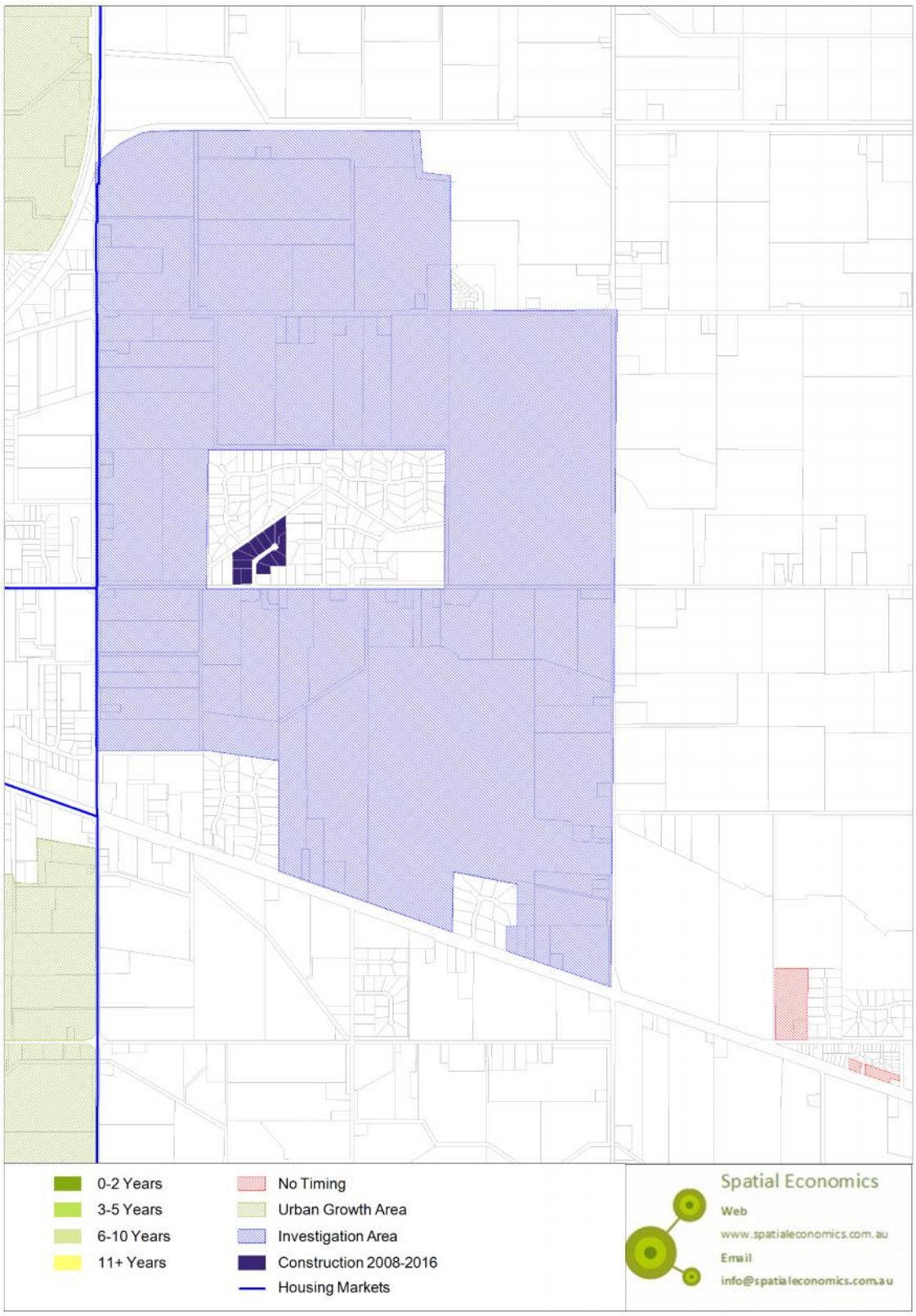
Map 4 Urban Residential Land Supply – Shepparton North West



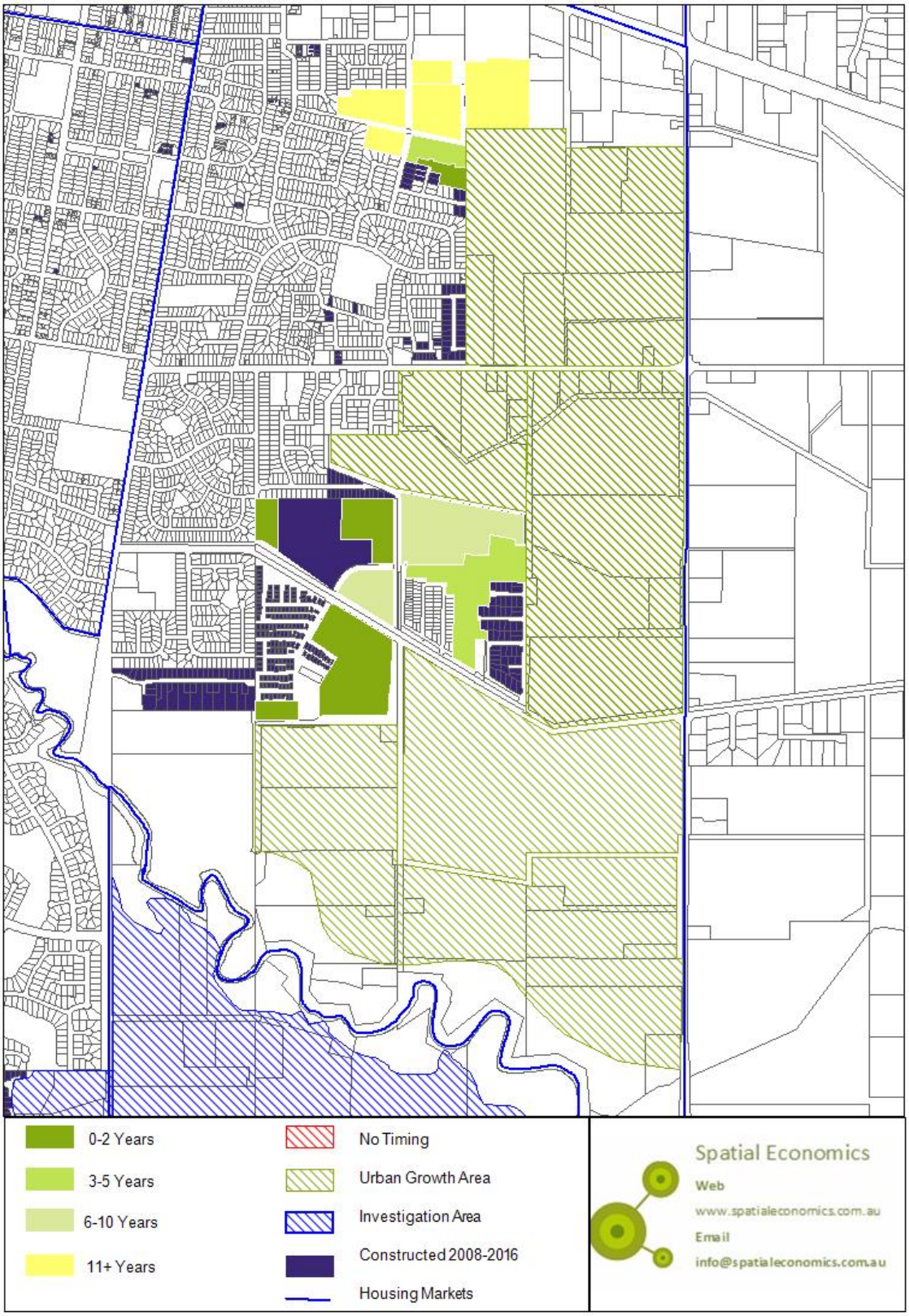
Map 5: Urban Residential Land Supply - Shepparton North East



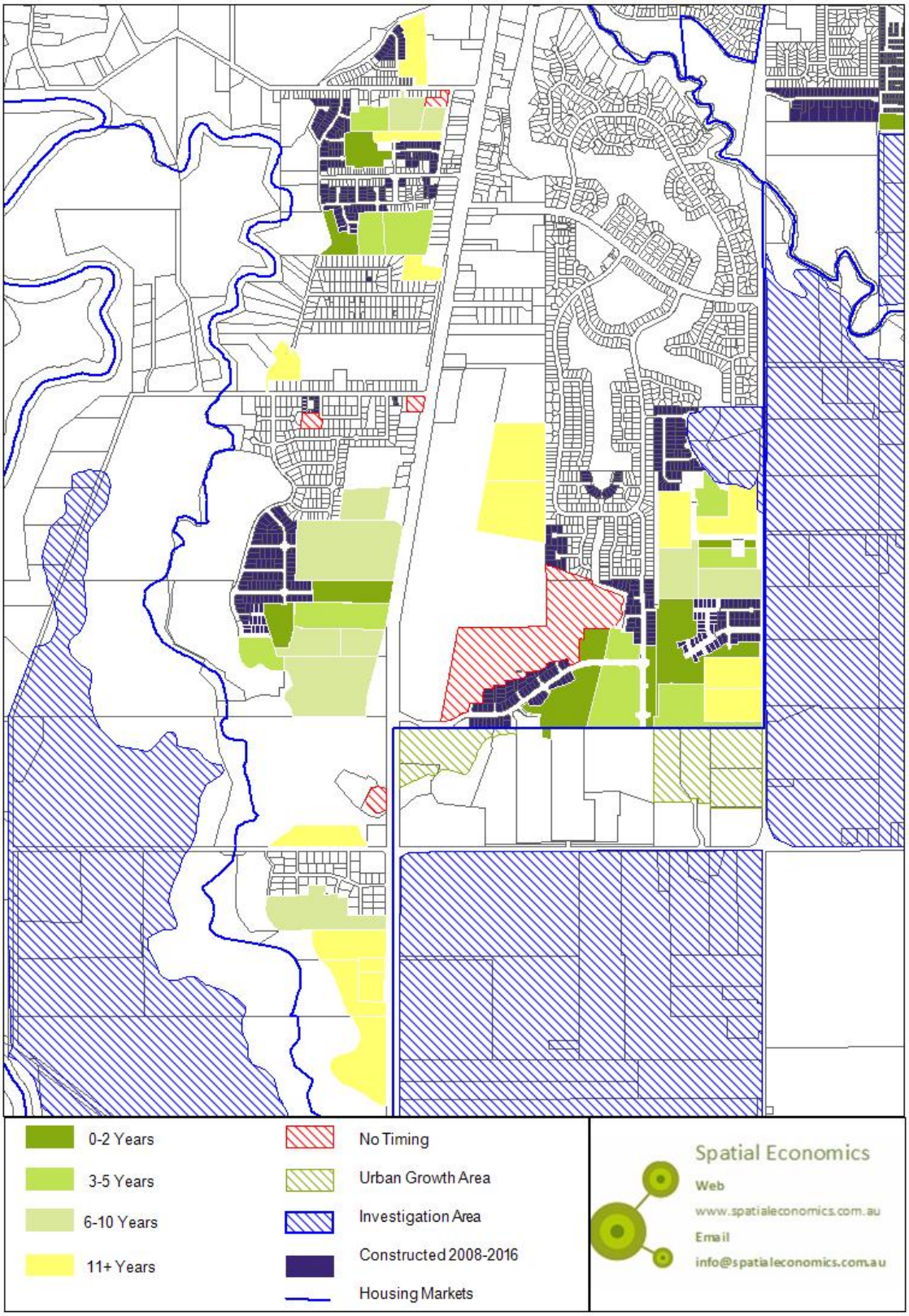
Map 6: Urban Residential Land Supply - Shepparton East



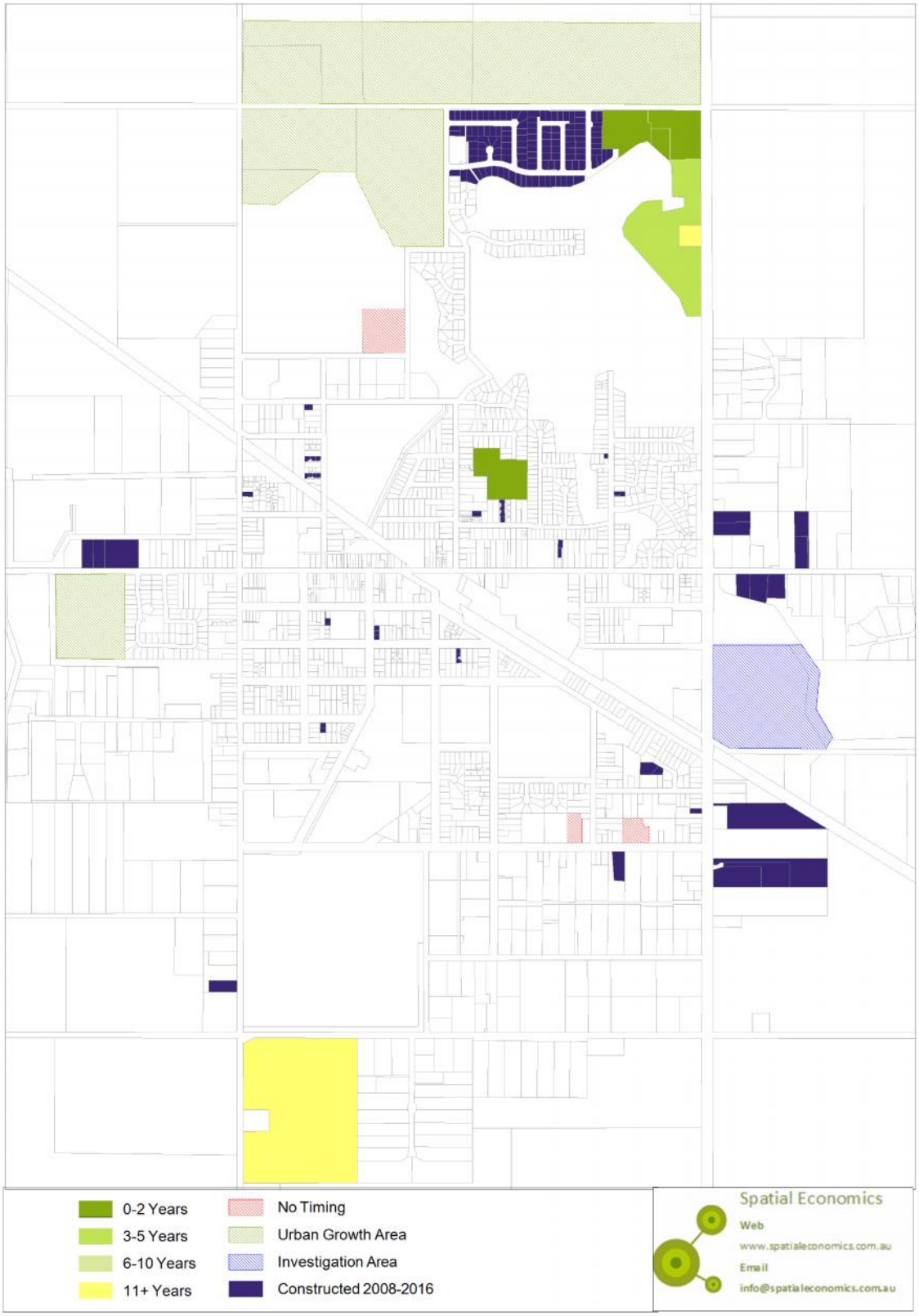
Map 7: Urban Residential Land Supply - Shepparton South East



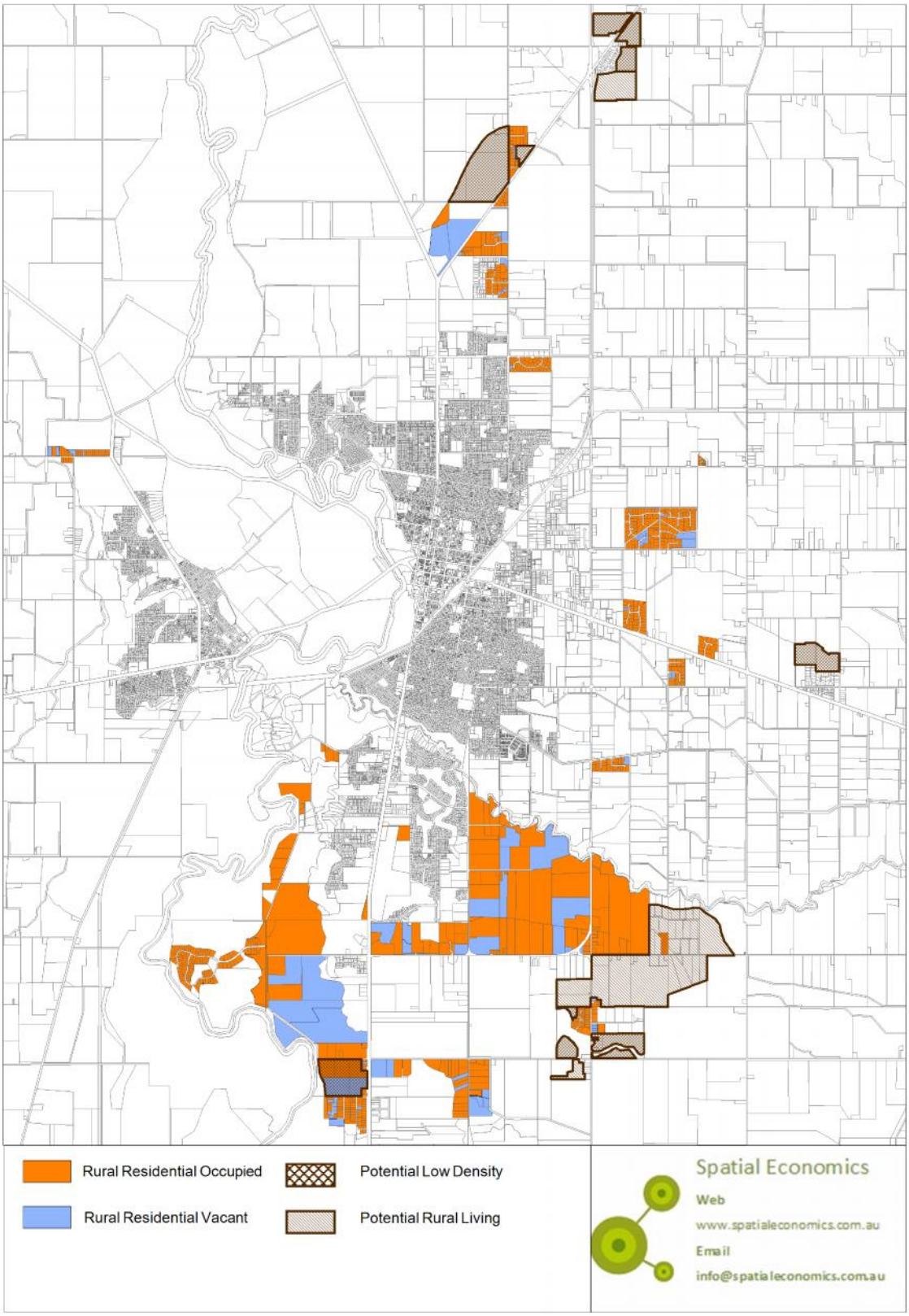
Map 8: Urban Residential Land Supply - Kialla



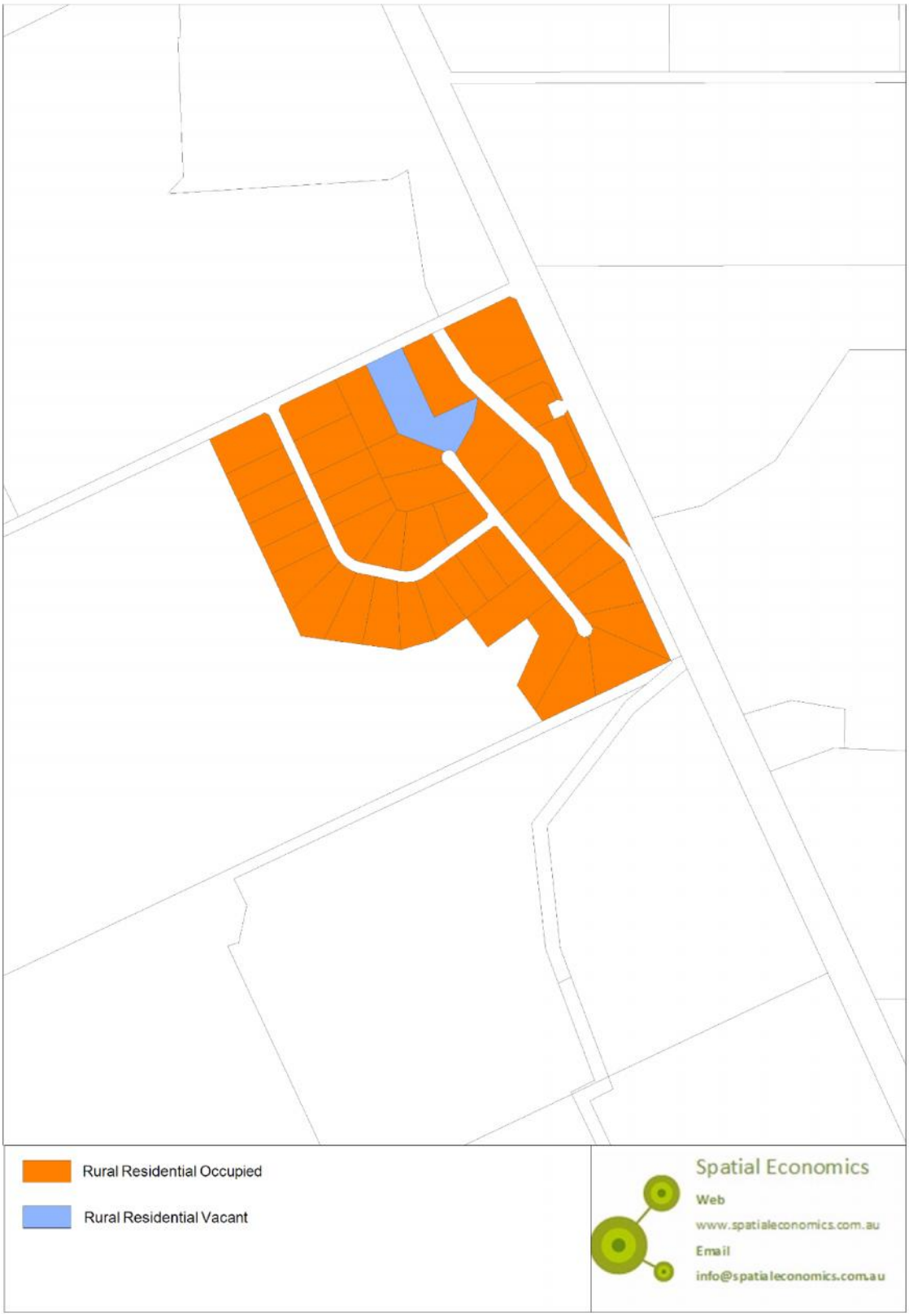
Map 9: Urban Residential Land Supply - Tatura



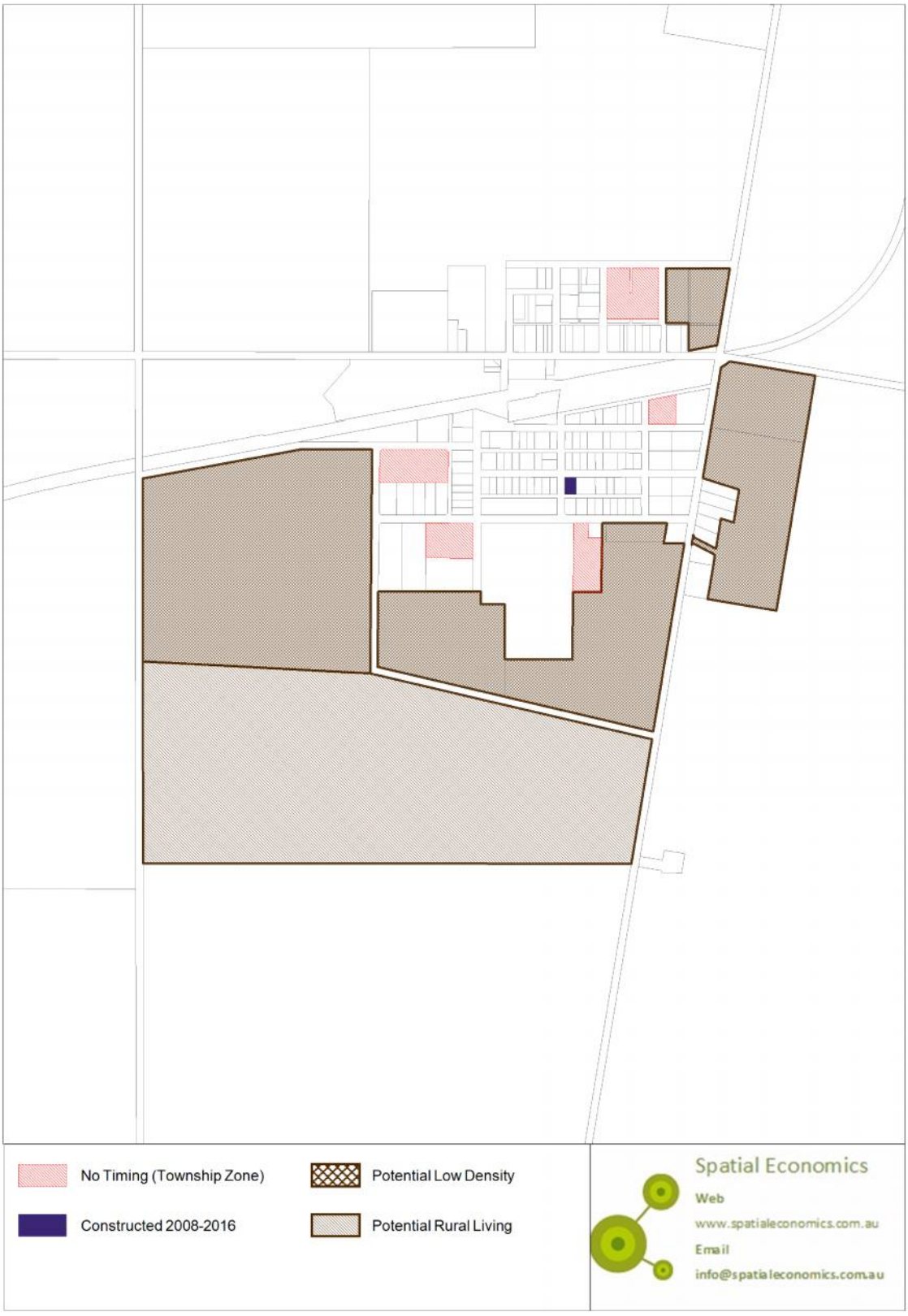
Map 10: Shepparton Rural Residential



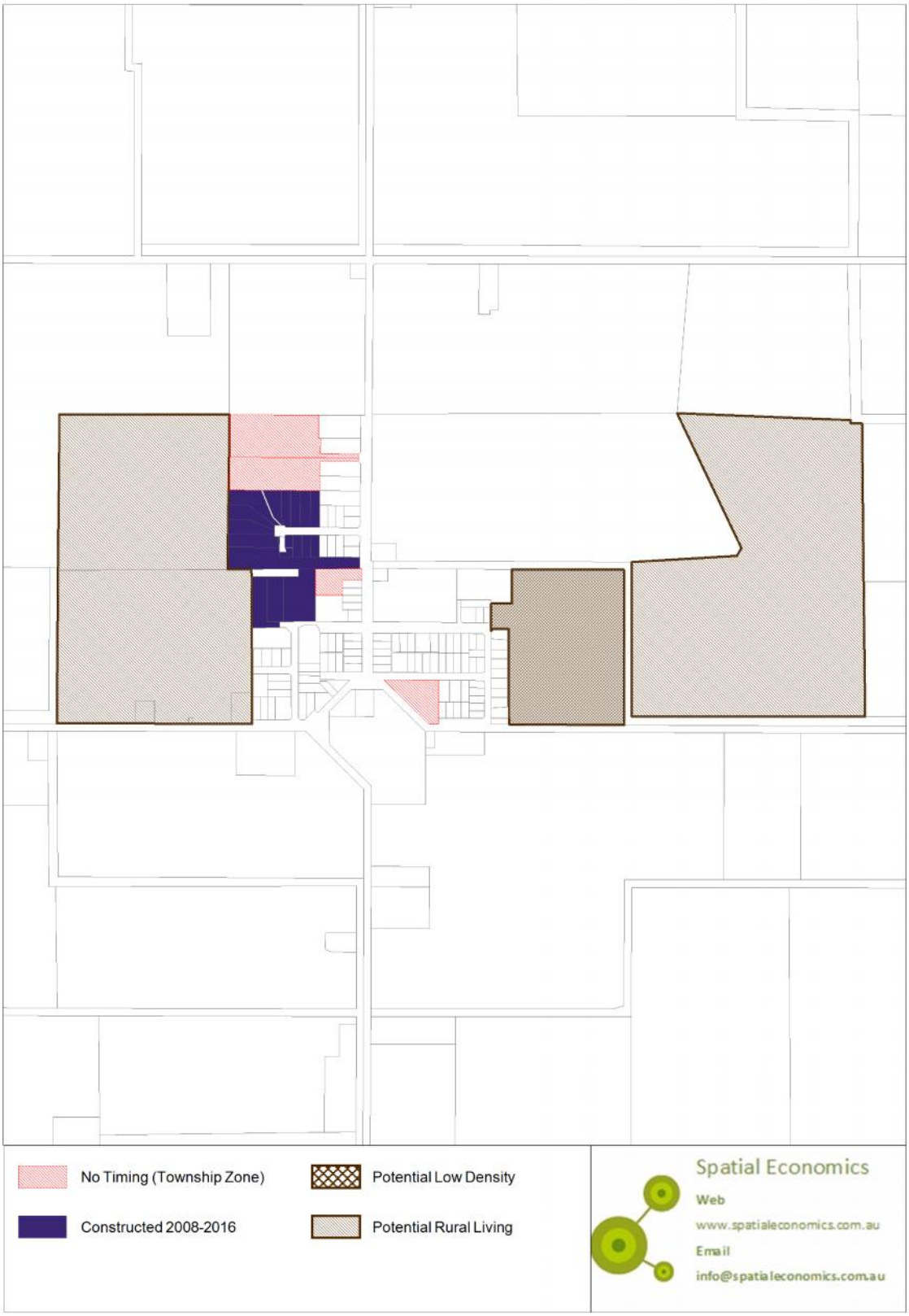
Map 11: Bunbartha



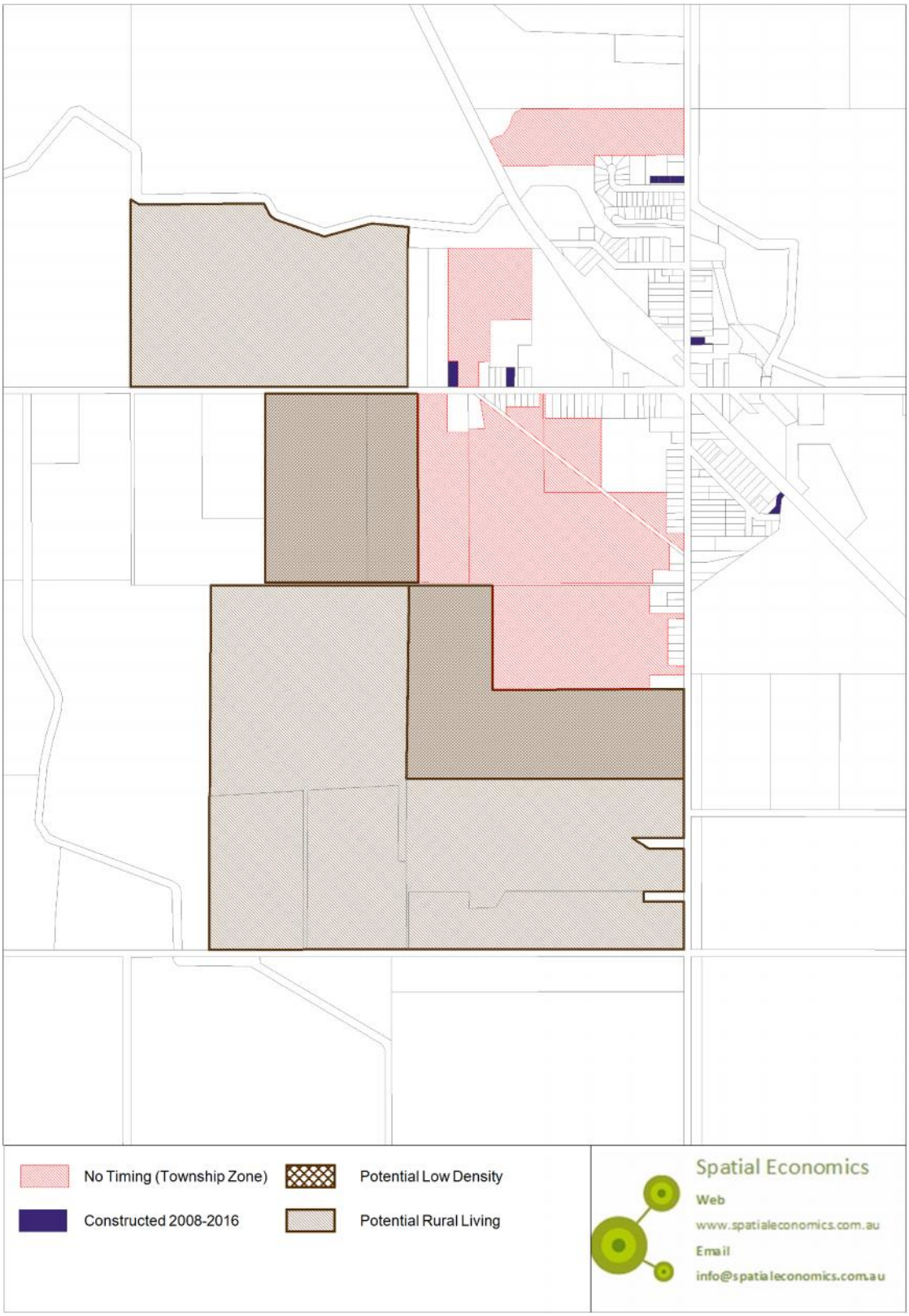
Map 12: Dookie



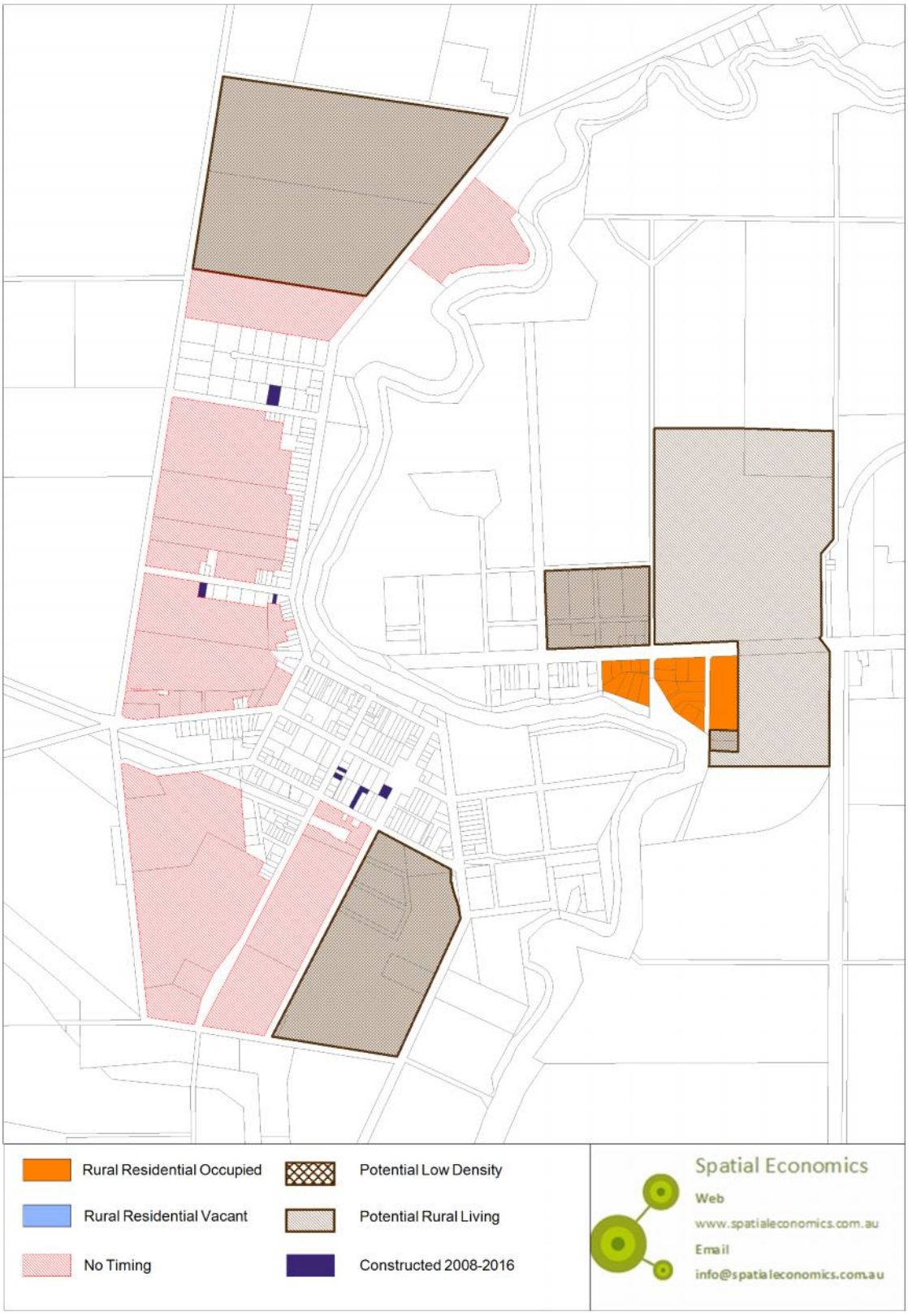
Map 13: Katandara West



Map 14: Merrigum

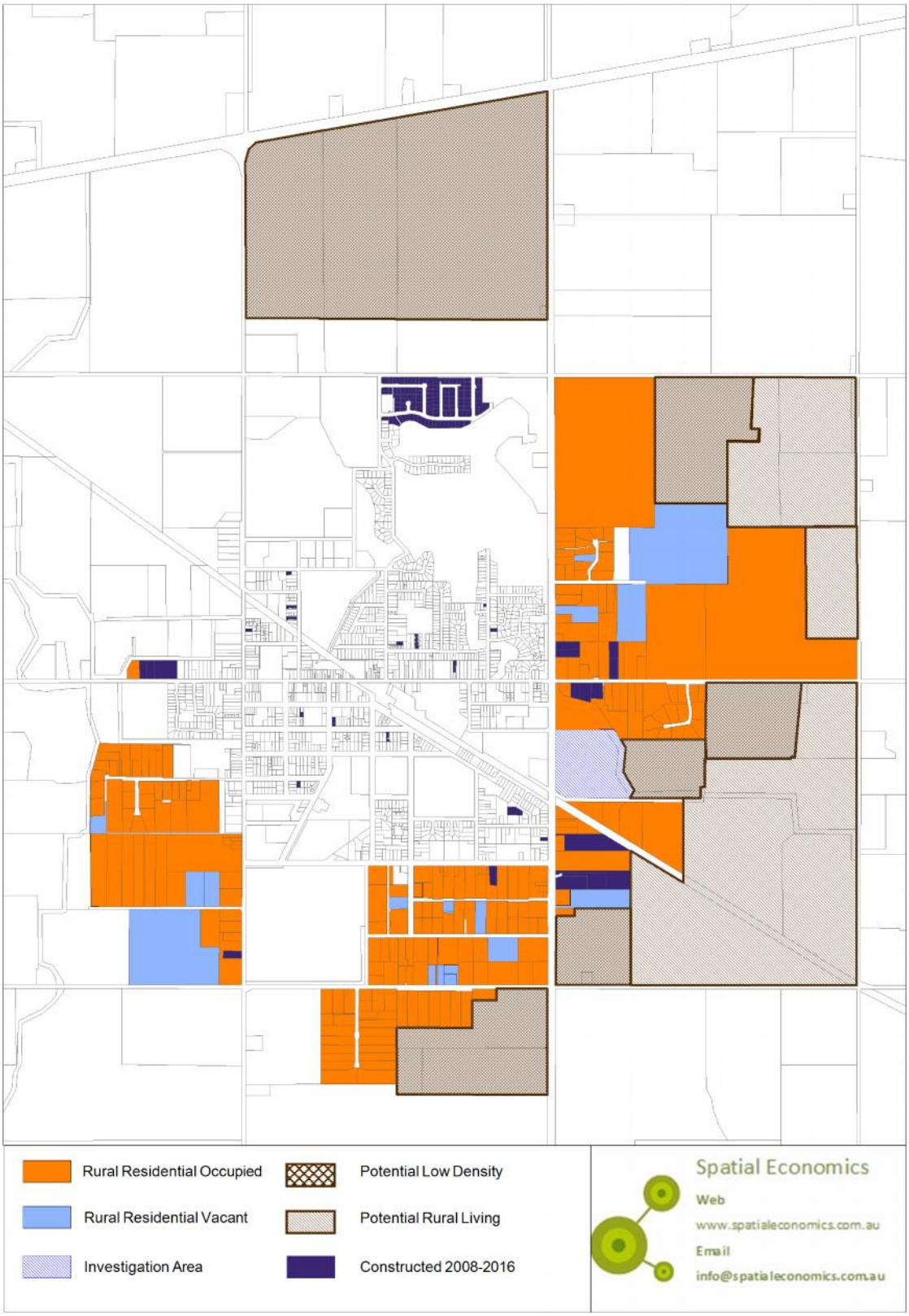


Map 15: Murchison

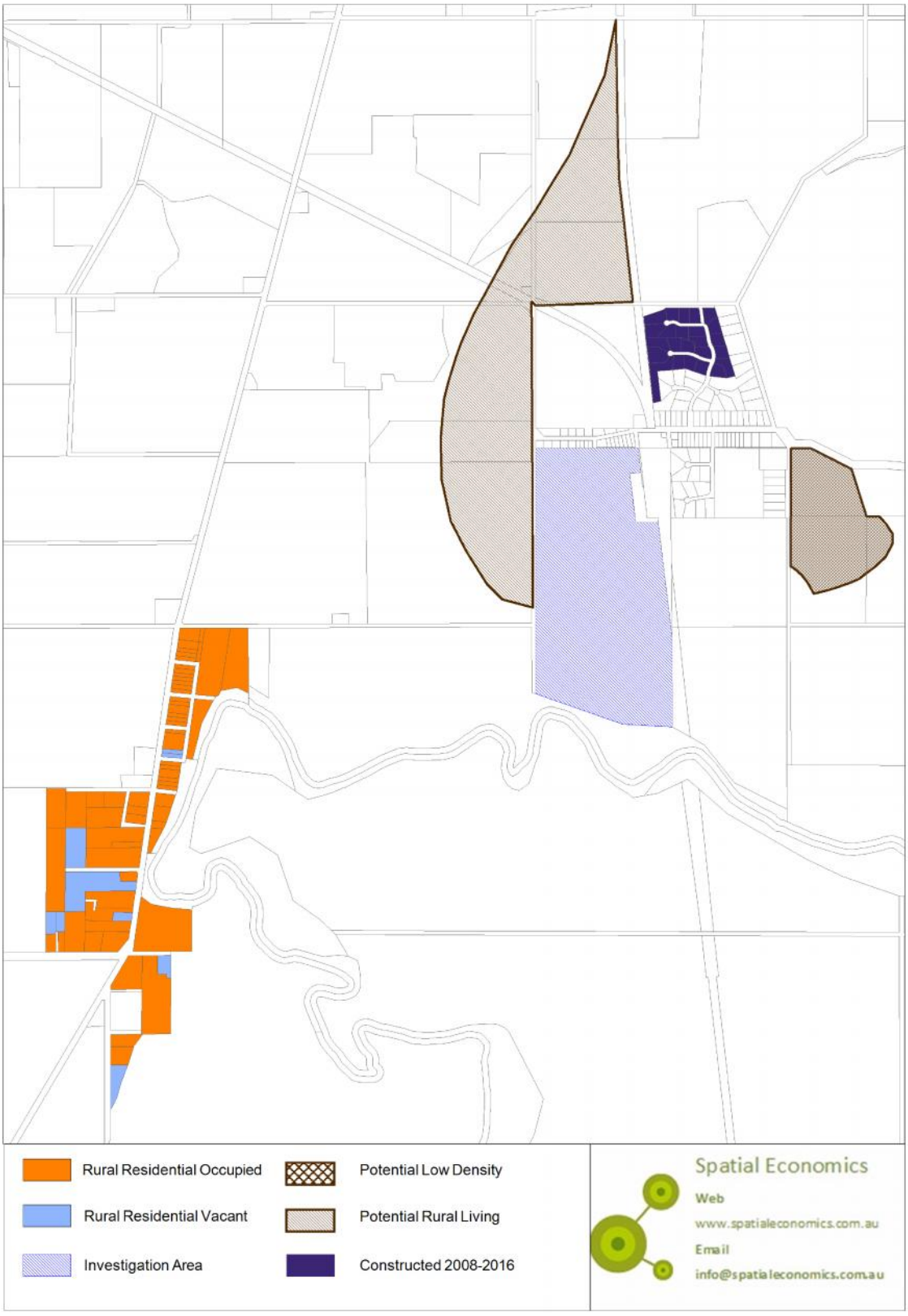


Map 16: Tallygaroopna

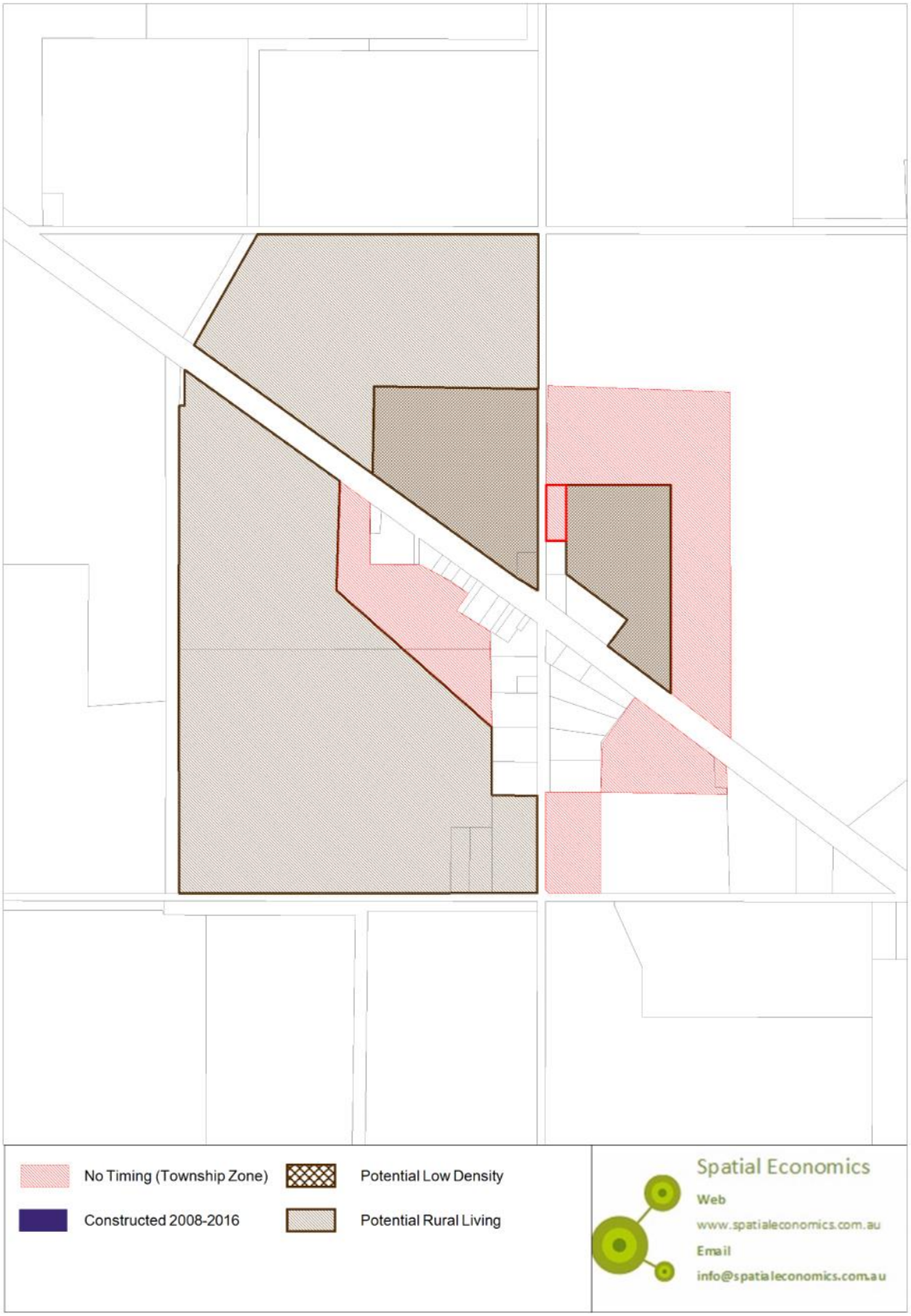
Map 17: Tatura – Rural Residential



Map 18: Toolamba



Map 19: Undera



4.0 RESIDENTIAL LAND DEMAND

Key Findings

Projected dwelling requirements sourced from VIF 2015 indicate that from 2016 to 2031 there will be a total dwelling requirement of 6,892 across the municipal area (459 average per annum or 1.5% growth rate). VIF 2015 illustrate that 86% of the projected dwelling requirement will be located within the urban centre of Shepparton.

Projected dwelling requirements sourced from id 2015 indicate that from 2016 to 2031 there will be a total dwelling requirement of 5,663 across the municipal area (378 average per annum or 1.3% growth rate). id 2015 illustrate that 89% of the projected dwelling requirement will be located within the urban centre of Shepparton.

The largest and fastest growth in households across the municipal area of Shepparton will be both *lone person* households and *couples without dependents*, growing by growing at an average annual rate of 1.4% per annum respectively from 2016 and 2036. These two household types are projected to increase the most in terms of actual household growth at 109 and 113 households respectively per annum.

This report incorporates the most recently available demand figures to project dwelling requirements and future adequacy of residential land. These figures currently use published population and household projections contained in Victoria in Future 2015 (VIF 2015) undertaken by the Department of Environment, Land, Water & Planning as the basis for projected dwelling requirements.

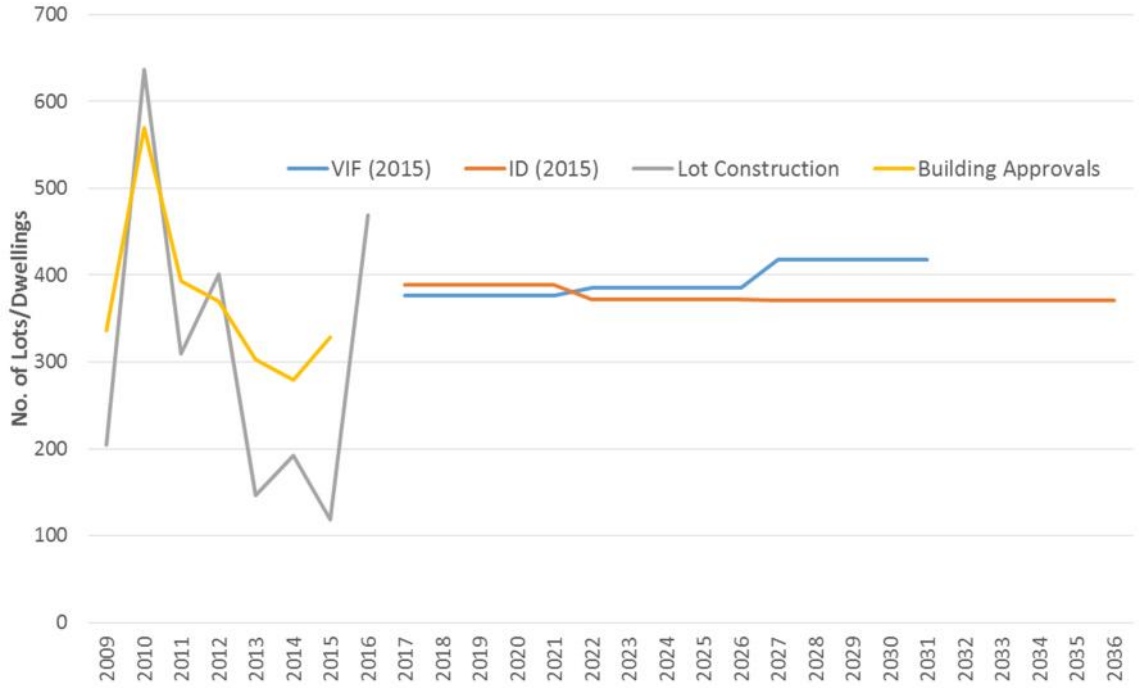
The projections detail state-wide, regional and metropolitan areas as well as local government areas population, household and dwelling projections that encompass the latest available trends such as changes to levels of immigration or economic conditions, or changes to policy affecting population growth locations and levels, and subsequent demand for housing.

In addition, population and dwelling projections undertaken by idForecast (id 2015) for the City of Greater Shepparton has been included as an additional demand projection/scenario.

4.1 Dwelling Projections

Graph 11 summarises the projected population based demand scenarios for residential dwellings across the municipal area of Shepparton. In addition, it highlights historic actual lot construction and residential building approvals – both measure of historic expressed demand for dwellings.

Graph 11: Historic and Projected Demand for Residential Dwellings, 2008 to 2036



Source: DELW&P Victoria in Future 2015: Population and Household Projections.
Australian Bureau of Statistics, Catalogue No.8731.0.
I.d Forecast Population & Dwelling Projections – City of Greater Shepparton
Spatial Economics Pty Ltd

VIF2015 Demand Projections

Projected dwelling requirements sourced from VIF 2015 indicate that from 2016 to 2031 there will be a total dwelling requirement of 6,892 across the municipal area (459 average per annum). VIF 2015 illustrate that 86% of the projected dwelling requirement will be located within the urban centre of Shepparton. For specific time cohorts average annual dwelling requirements include:

- 2016 to 2021 – 440;
- 2021 to 2026 – 456; and
- 2026 to 2031 – 483.

The above dwelling requirements equate to an average annual 1.5% dwelling growth requirement (measured from 2016 to 2031).

ID(2015) Demand Projections

Projected dwelling requirements sourced from id 2015 indicate that from 2016 to 2031 there will be a total dwelling requirement of 5,663 across the municipal area (378 average per annum). id 2015 illustrate that 89% of the projected dwelling requirement will be located within the urban centre of Shepparton. For specific time cohorts average annual dwelling requirements include:

- 2016 to 2021 – 389;
- 2021 to 2026 – 372; and
- 2026 to 2031 – 371.

The above dwelling requirements equate to an average annual 1.3% dwelling growth requirement (measured from 2016 to 2031).

There are significant differences in terms of the two dwelling forecasts (VIF 2015 versus id 2015), essentially VIF2015 has projected dwelling growth across the municipality will accelerate at a faster pace than id 2015, 1.5% per annum as compared to 1.3%. This results in a total dwelling requirement difference of 1,230 measured from 2016 to 2031.

It is important to highlight that the dwelling projections presented by id 2015 closely align to recent residential construction activity.

4.2 Household Type Projections

Projections by household type are also available for Shepparton from 'forecast.id'. id use the term 'dependents' rather than 'children' to denote persons living in the household that are dependent on the adults in the household (usually, but not always parents of children).

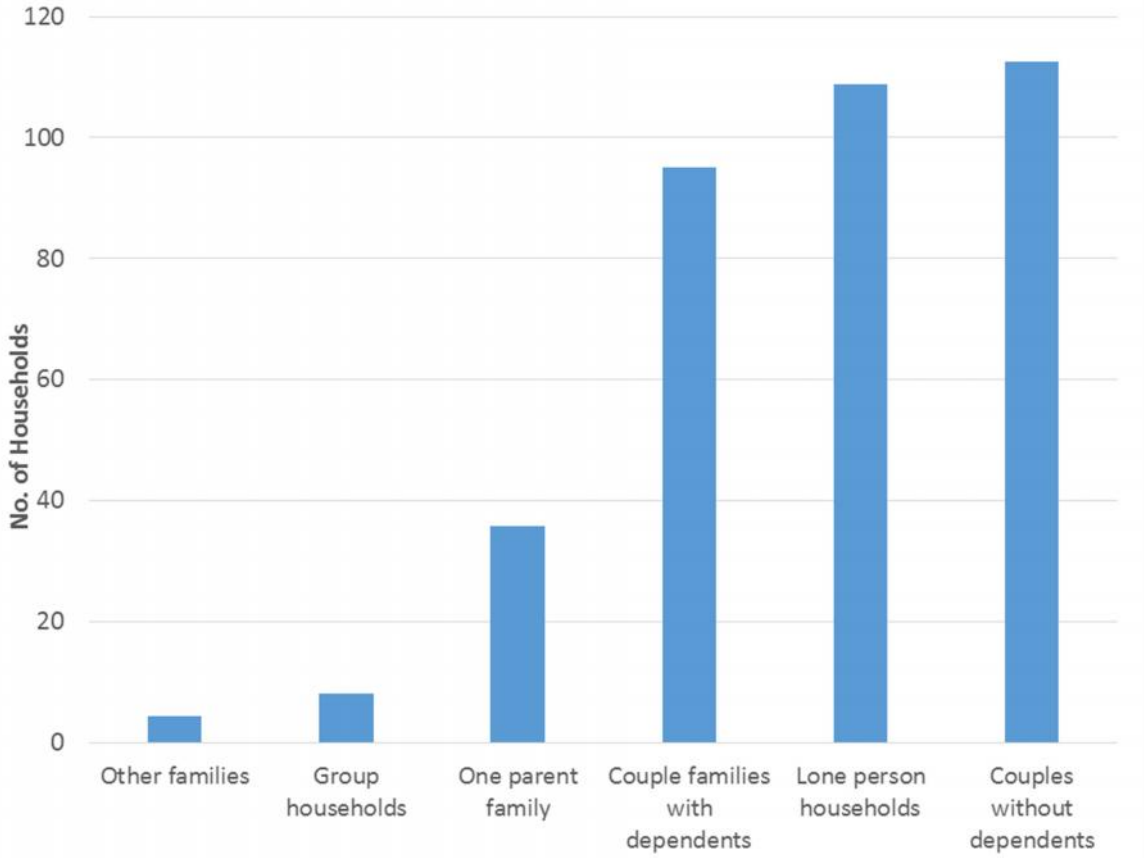
The largest and fastest growth in households across the municipal area of Shepparton will be both *lone person* households and *couples without dependents*, growing by growing at an average annual rate of 1.4% per annum respectively from 2016 and 2036. These two household types are projected to increase the most in terms of actual household growth at 109 and 113 households respectively per annum.

This will be closely followed by *couple families with dependents and one parent families with dependents*, growing by 95 and 36 households per annum. *Couple family with dependents and one parent families with dependents* is the largest household type representing around 40% of all household types.

This data indicates that around 61 per cent of household growth across the municipal area of Shepparton from 2016 to 2036 will be in smaller one or two person households (*lone person* and *couples without dependents*). While much of this is likely to be empty nesters, it will also in part be due to households that have not yet had children or never will.

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

Graph 12: Projected Annual Average Change in Households by Type, City of Greater Shepparton – 2016 to 2036



Source: I.d Forecast Population & Dwelling Projections – City of Greater Shepparton

Key Issues

Population, household and dwelling projections are a central input to analysing possible future housing demand. When using them for strategic planning purposes it is important to understand that they are 'projections' and are based on the most recent data/trends/information available – and are developed through a set of comprehensive assumptions. These assumptions will inevitably change in the future. It is critical that any projections are routinely and continually monitored and updated as major demographic trends, and therefore assumptions change.

Caution is highlighted in using all projections. Any formulation and subsequent implementation of planning/policy/strategy projects should consider bother upper and lower growth ranges to a presented set of demand projections to encompass a range of possible future growth outcomes.

The rate of growth in housing demand across the municipal area of Shepparton will, to a large degree, be dependent on macro level demand, i.e. national, state, metropolitan and regional population growth. Housing demand across the City of Greater Shepparton will not be independent of population growth at higher order geographic areas.

Two major population, household and dwelling projections were assessed, namely id Consulting 'forecast.id' and the State Government's – *Victoria in Future 2015*. Both of these projections are highly regarded within the land use planning industry and related.

All household types will grow strongly particularly *lone person* and *couples without dependents* households. Additionally there will be steady strong growth in *couple family with dependents* households, which will remain the most prevalent household type.

The significant rate of growth of smaller one and two person households (*lone person* and *couples without dependents)* households may have some impact on dwelling type demand. Together with the ageing population, smaller, affordable and low-maintenance dwellings may see increasing demand, although this demand is likely to remain for separate houses or semi-detached units.

5.0 ADEQUACY OF BROADHECTARE LAND STOCKS

Key Findings

Shepparton Urban Centre - 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 **14 to 16 years** of demand for the urban centre of Shepparton.

In terms of Urban Growth Area (unzoned) land supply stocks, there is sufficient land to satisfy an additional 20 to 24 years of demand.

Tatura Urban Centre - 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 around **16 years** of demand for the urban centre of Tatura.

In terms of Urban Growth Area (unzoned) land supply stocks, there is sufficient land to satisfy over 25 years of demand.

For both the urban centres of Shepparton and Tatura, there will be a need in the short-term (over next 2-3 years) to increase the stock of **zoned** broadhectare residential land to ensure ample zoned stocks are available to ensure a competitive land supply industry. There is ample identified unzoned (Urban Growth Area) stocks in both urban centres to meet this need.

This report incorporates the most recently available demand figures to project dwelling requirements and future adequacy of residential land. The two main projections available for the City of Greater Shepparton and small-areas within the municipality are the Victorian State Government 'Victoria in Future 2015' (VIF2015) projections released in August 2014 and 'forecast.id' produced by 'id Consultants (id), released in 2015.

VIF 2015 Demand Projections

At a municipal level, projected dwelling requirements sourced from VIF2015 indicate that from **2016 to 2031** there will be a total dwelling requirement of 6,892 (459 average per annum or 1.5% growth rate).

For the Shepparton urban centre, projected dwelling requirements indicate that from **2016 to 2031** there will be a total dwelling requirement of 5,901 (393 average per annum or 1.7% growth rate).

VIF2015 have not undertaken population or dwellings projections for the urban centre of Tatura.

id Forecast Demand Projections

At a municipal level, projected dwelling requirements sourced from id Forecast indicate that from **2016 to 2031** there will be a total dwelling requirement of 5,663 (378 average per annum or 2.6% growth rate).

For the Shepparton urban centre, projected dwelling requirements indicate that from **2016 to 2031** there will be a total dwelling requirement of 5,053 (337 average per annum or 1.4% growth rate).

For Tatura, projected dwelling requirements indicate that from **2016 to 2031** there will be a total dwelling requirement of 405 (27 average per annum or 1.2% growth rate).

5.1 Adequacy of Residential Broadhectare Land Stocks

Analysis has been undertaken to estimate the years of residential broadhectare land supply for the urban centre of Shepparton and Tatura. In estimating the years of residential land supply only zoned broadhectare and future (Urban Growth Areas) residential land supply types are considered. In the assessment of adequacy or establishing the estimated years of supply, the demand component for the above supply types are estimated via the assessment of historic construction.

Table 4, Graph 13 and 14 summarise the estimated years of supply by demand scenario for residential broadhectare stocks across the urban centres of Shepparton and Tatura.

Shepparton Urban Centre - 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 **14 and 16 years** of demand for the urban centre of Shepparton.

In terms of Urban Growth Area (unzoned) land supply stocks, there is sufficient land to satisfy an additional 20 to 24 years of demand.

Table 4: Estimated Years of Residential Broadhectare Land Supply, 2016

Shepparton - Urban Centre

	Total Zoned Lots	Urban Growth Area - unzoned (lots)	**Total Lots**
VIF (2015	14 years	20 years	**25+ years**
id (2015)	16 years	24 years	**25+ years**

Tatura - Urban Centre

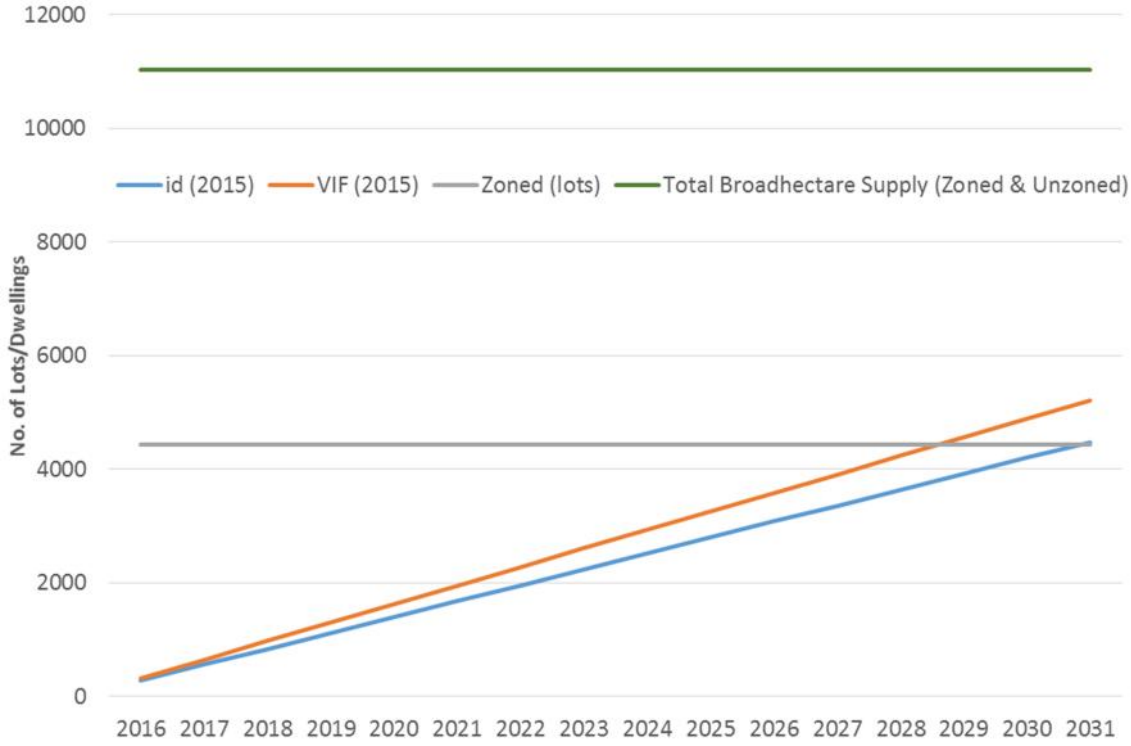
	Total Zoned Lots	Urban Growth Area - unzoned (lots)	**Total Lots**
id (2015)	16 years	25+ years	**25+ years**

Source: Spatial Economics Pty Ltd

Tatura Urban Centre - 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 around **16 years** of demand for the urban centre of Tatura.

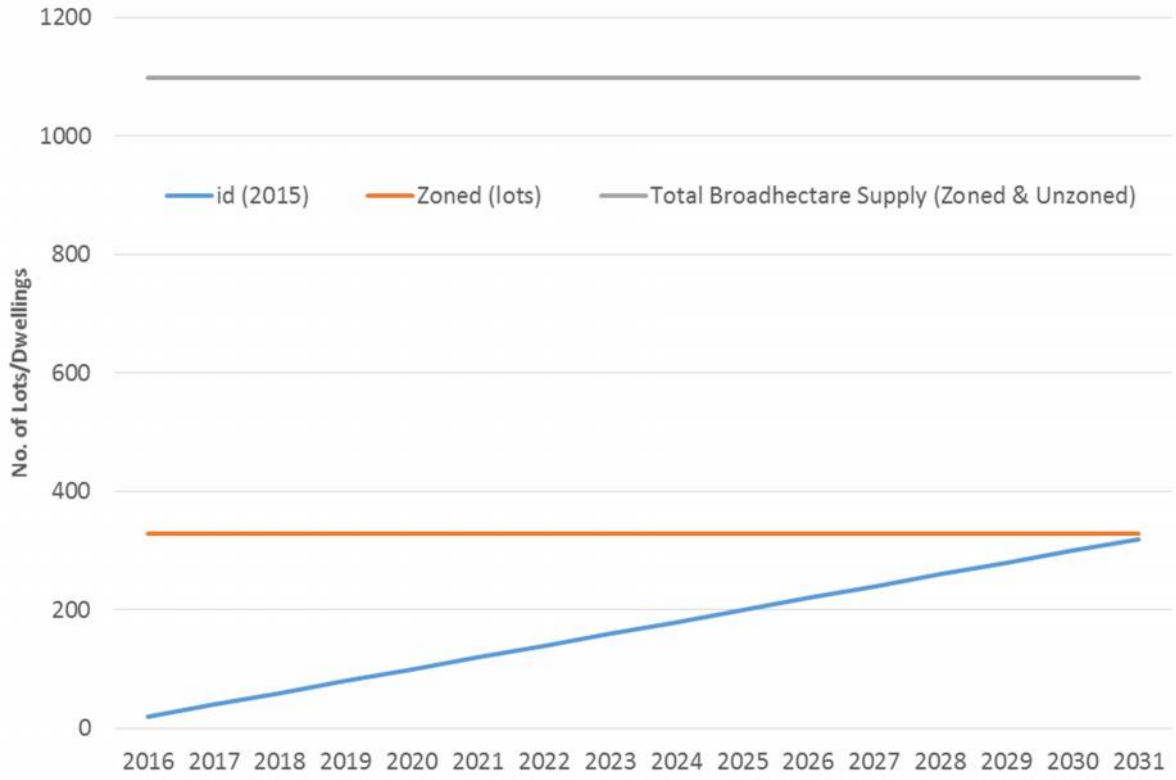
In terms of Urban Growth Area (unzoned) land supply stocks, there is sufficient land to satisfy over 25 years of demand.

Graph 13: Adequacy of Broadhectare Land Stocks – Shepparton Urban Centre, 2016



Source: DELWP: VIF2015: Population and Household Projections.
forecast.id Population and Household Projections

Graph 14: Adequacy of Broadhectare Land Stocks – Tatura, 2016



Source: DELWP: VIF2015: Population and Household Projections.
forecast.id Population and Household Projections

Key Issues

A range of scenarios have been produced reflecting the uncertainty around demand and supply. Demand has the capacity to accelerate and reduce the years of supply. Conversely, there is potential for dispersed infill to increase which would reduce demand for broadhectare land and subsequently increase the years of supply.

Assumptions pertaining to broadhectare land capacity is largely based on recent trends, current permit activity and a short/medium term view on broadhectare development densities. If densities that are currently being achieved within other comparable regional Victorian cities, the years of broadhectare supply will be substantially extended. This may have a flow on impact (increased densities) of altering demand levels.

For both the urban centres of Shepparton and Tatura, there will be a need in the short-term (over next 2-3 years) to increase the stock of **zoned** broadhectare residential land to ensure ample zoned stocks are available to ensure a competitive land supply industry. There is ample identified unzoned (Urban Growth Area) stocks in both urban centres to meet this need.

In terms of total residential broadhectare land for both Shepparton and Tatura (zoned and Urban Growth Area), there is well in advance of over 25 years supply respectively. Based on this current level of stock, there is no need for detailed strategic planning work to investigate and identify additional areas for residential broadhectare expansion.

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

Any opening or restriction of residential land supply opportunities within specific parts of the urban centre of Shepparton will see the transfer of demand within the regional centre. It is imperative that ample zoned residential supply opportunities are provided within each major identified housing market within Shepparton 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.

Whilst currently there is ample broadhectare residential land supply opportunities within the residential growth areas of Shepparton and Tatura to meet immediate and medium term demand requirements. There is an immediate need to progress strategically identified unzoned residential land stocks through the structure planning and rezoning process to maintain to ensure ongoing ample supply to ensure the objective of a competitive land supply environment.

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 MONITORING PROJECT

City of Greater Shepparton

June 2016

Final

Spatial Economics

12/07/2016
Final Version 1.0
Spatial Economics Pty Ltd
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EXECUTIVE SUMMARY

The following report is the industrial land component of the land supply assessment for the City of Greater Shepparton. A separate report provides analysis for the residential component. This report is an update of the report completed in September 2012 under the Urban Development Program – Regional banner.

The overall study area is defined within the Greater Shepparton municipal boundary. The report analyses the industrial zones: Industrial 1 (IN1Z) and Industrial 3 (IN3Z) and the Special Use Zones that are utilised for industrial purposes: these are SUZ6, SUZ9 and SUZ11 (in Greater Shepparton).

Supply of Industrial Land

Industrial land has been analysed through identified industrial precincts.

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

- East Shepparton;
- North West Shepparton;
- Lemnos;
- South West Shepparton;
- Kialla;
- Tatura; and
- North Shepparton.

As at March 2016, there was a total of 796 hectares of zoned industrial land stocks, of which 412 hectares were assessed as available (supply) for industrial purpose development. This represents a vacancy rate of 52%

The main industrial precinct of East Shepparton comprises 312 hectares of industrial land. There is also a significant area of land in South West Shepparton (262 hectares) but 227 hectares of this land is zoned Special Use for the GV Link Freight Logistics Centre. The rest of the industrial land is fairly evenly spread across the other five precincts

There is no available industrial land in Tatura and only limited available land in Lemnos (4.7 hectares - an 8% vacancy rate).

There are four sites identified as future industrial land, one located in the North Shepparton precinct (178.6 hectares), one in South West Shepparton (47 hectares) and two sites in Tatura (25 hectares).

There are two industrial zones (IN1Z and IN3Z) across the Shepparton municipality with 506 hectares of land zoned Industrial 1 (IN1Z) and 39 hectares zoned IN3Z. The IN1Z is predominantly located in East Shepparton (306 hectares) and 58.4 hectares in Lemnos. There is an overall vacancy rate of 34% for land zoned Industrial 1. There are areas of land zoned IN1Z in all precincts except Kialla.

There is 39 hectares of land zoned Industrial 3 (IN3Z) with an overall vacancy rate of 34%. Land zoned IN3 is located in three precincts, East Shepparton, Kialla and Tatura.

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.

The areas zones SUZ9 and SUZ11 are designated for Tatura Milk Industries and Unilever respectively.

Of the 925 lots, 77% were less than 0.5 in size with 285 lots below 0.1 hectares. Of the 148 lots that are available, 86 are in the 0.1 to 0.5 hectare size range. The East Shepparton Industrial Precinct has 109 lots available with 68 in the 0.1 to 0.5 hectare size range. There are a low percentage of lots available (6%) in the less than 0.1 hectare range with only East Shepparton and South West Shepparton having lots available in this range.

There are a considerable number of large lots spread across the different precincts with 27 lots available above 1 hectare and 13 above 5 hectares. These are spread around the different precincts with the exception of Tatura where there are no available lots.

Of the 412 hectares of zoned industrial land supply, the majority is located in the GV Link SUV area (227 hectares). There is 98 hectares available in the East Shepparton precinct (IN1Z). There is 13 hectares available in Kialla (IN3Z) and 17.2 hectares available in North Shepparton (IN1Z). Besides the GV Link land there is 8 hectares available in the South West Shepparton precinct (IN1Z) and there is 43.8 hectares available in the North West Shepparton precinct (IN1Z). There is no available land in Tatura.

There is also 250.9 hectares of land identified for future industrial use.

In total, for zoned industrial land supply across the municipal area there are approximately 157 net developable hectares for IN1Z and IN3Z land and 159 hectares for the GV Link site (SUZ6). In terms of future identified industrial land stocks (unzoned) there is an estimated 113 net developable hectares.

Recent Activity

From July 2011 to December 2015 there was an estimated $194 million of industrial building activity. This equates to an average of $43 million per year. The majority of this activity was in the precincts of East Shepparton and Kialla.

From July 2008 to March 2016 there were a total of 100 zoned industrial land subdivisions, activity located in only three of the seven industrial precincts with East Shepparton accounting for the large majority (80) and Kialla (14) and Lemnos (6).

The vast majority (77%) of subdivisions are between 0.1 and 0.5 hectare, with 14% (14 lots) between 0.5 and 1 hectare in size. There were only 2 subdivisions below 0.1 hectares.

Land Consumption

Recent consumption of industrial land has averaged 2.1 hectares per annum. In total this equates to 12.3 hectares of industrial land consumed over the 5.75 year period under review. This consumption of industrial land has been predominantly in the East Shepparton precinct which accounts for 10.3 hectares of the consumption (1.8 hectares per annum). There has been 1.5 hectares of industrial land consumed in Kialla with 0.5 hectares consumed in Tatura over the 5.75 year period.

Adequacy

In total, there is in excess of 25 years industrial zoned land across the municipality of Shepparton based on the average annual rate of land consumption in the period 2009 to 2016. In terms of future (unzoned) industrial land stocks it is estimated that there is 25+ years of additional supply.

There is over 25 years of supply for each industrial precinct with the exception of Tatura which is supply constrained.

There is also over 25 year's supply of future (unzoned) industrial land for the municipality.

Key Issues

There is an ample supply of industrial land of all zone types across the municipality. There is 185 hectares of land zoned IN1Z and IN3Z that is currently available as supply. In the main industrial precinct of East Shepparton there is 98 hectares of land available. All the precincts have ample supplies except Tatura which has no available supply.

There is limited land remaining at Lemnos (4.7 hectares) but there has been no recent consumption hence there is no immediate pressure to provide extra land and there is readily substitutable industrial land available in the East Shepparton and North Shepparton industrial precincts.

There are four sites across the municipality identified for future industrial purposes, two of these sites are in Tatura.

The rate of consumption for industrial land in the City of Greater Shepparton is consistent with other comparable regional Victorian cities. There has been limited industrial land consumption outside of the main industrial precinct of East Shepparton indicating limited demand. With the development of the GV Link Freight and Logistics Centre there will be less pressure on the other industrial 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 is likely that the larger lots will be subdivided for smaller industrial land users.

It is recommended that the two future industrial precincts within Tatura are rezoned as a priority to ensure adequate supply levels.

1.0 INTRODUCTION

1.1 Context

The following report is the industrial land component of the land supply assessment for the City of Greater Shepparton. A separate report provides analysis for the residential component. This report is an update of the report completed in September 2012 under the Urban Development Program – Regional banner.

The overall study area is defined within the Greater Shepparton municipal boundary. The report analyses the industrial zones: Industrial 1 (IN1Z) and Industrial 3 (IN3Z) and the Special Use Zones that are utilised for industrial purposes: these are SUZ6, SUZ9 and SUZ11 (in Greater Shepparton).

1.2 Purpose

The monitoring of land supply is a key tool to assist in the management and development of growth across the City of 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 residential and industrial land supply, demand and consumption. This in turn assists decision-makers in:

- maintaining an adequate supply of industrial land for future housing and 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 AND 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.

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 definition used by the State Government in the Metropolitan and Regional Urban Development Program, the zones that are considered primarily for industrial use are: Industrial 1 Zone (IN1Z); Industrial 2 Zone (IN2Z); Industrial 3 Zone (IN3Z); and Special Use Zones (SUZ)

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.

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

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

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

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 available 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.

Industrial Lot Construction
Analysis of the cadastral database on land zoned for industrial purposes from July 2008 to March 2016 was undertaken to determine the location, volume and resultant lot size of industrial lot subdivisions.

Industrial Land Consumption
To determine industrial land consumption, examination of aerial imagery between specific periods was undertaken and updated to March 2016 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.

Industrial land consumption for the City of Greater Shepparton was calculated from aerial imagery capture dates at 2009 and 2015. Consumption of industrial land was updated to March 2016 via a land use survey.

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, two additional demand scenarios are presented, namely a 25% and 50% increase in the demand for industrial land.

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

Adequacy of Industrial Land Stocks
Industrial land supply adequacy is illustrated using the number of years of supply through the interaction of 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 to account for potential higher levels of future demand, to take into account either higher population growth or specific changes to the employment/industrial land market.

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 Shepparton municipality the following industrial precincts have been identified (also refer Figure 1 within Section 5 of the report), and subsequently land supply information reported and assessed at an industrial precinct and municipal level.

- East Shepparton;
- North West Shepparton;
- Lemnos;
- South West Shepparton;
- Kialla;
- Tatura; and
- North Shepparton.

3.0 BUILDING APPROVAL ACTIVITY AND INDUSTRIAL SUBDIVISION ACTIVITY

Key Findings

From July 20211 to December 2015 there was an estimated $194 million of industrial building activity. This equates to an average of $43 million per year. The majority of this industrial activity was in the industrial precincts of East Shepparton and Kialla.

From July 2008 to March 2016 there were a total of 100 zoned industrial land subdivisions. Subdivision activity was located in only three of the seven industrial precincts - with East Shepparton accounting for the large majority (80 lots), Kialla (14 lots) and Lemnos (6 lots).

The vast majority (77%) of subdivisions are between 0.1 hectares and 0.5 hectare with 14% (14) between 0.5 and 1 hectare in size. There were only 2 subdivisions sized below 0.1 hectares.

3.1 Building Approval Activity

A variety of factors influence the level of industrial building activity. In regional locations the key factors include:

- the investment and business activity behaviour of the private sector;
- trends in the global and local economy;
- the availability of credit and borrowings for business decisions such as a decision to make a capital investment in property for a business;
- levels of land supply in the area;
- economic activity within the region; and
- the degree to which other regional centres compete for investment.

The following provides an overview of Industrial Building Approval activity within the City of Greater Shepparton from July 2011 to December 2015.

Table 1: Value ($ million) of all Industrial Building Approvals by Year

SA2/LGA	2011/12	2012/13	2013/14	2014/15	2015/16*
Mooroopna	1.1	3.5	0.0	1.0	
Shepparton - North	13.0	14.2	7.2	25.4	
Shepparton - South	16.3	6.4	12.4	23.0	
Shepparton Region - East	11.8	0.6	1.0	0.9	
Shepparton Region - West	7.3	9.4	15.1	9.4	
Shepparton LGA	***38.9***	***34.1***	***35.6***	***59.7***	***25.9***

*6 months from July 2015 to December 2015. Only available for entire municipality for this period

Table 1 summarises the estimated construction value of industrial building approval activity from July 2011 to December 2015. In total there was an estimated total value of approximately $194 million or an average of $43 million per annum.

The Shepparton North SA2 which includes the industrial precincts of East Shepparton and North Shepparton accounts for 36% of Industrial Building Approval by value over the period 2011 to 2015, whereas the East Shepparton precinct accounts for 86% of industrial land consumption. The Shepparton – South SA2 accounts for 35% of Building Approvals by value over the same period. This SA2 includes the Kialla industrial precinct and a small part of the East Shepparton precinct.

3.2 Industrial Subdivision Activity

Detailed analysis of the cadastral database across industrial zoned areas was undertaken to establish the location, volume and resultant lot size of industrial subdivision activity. Table 2 summarises the results of this analysis. Figure 1 (within Section 5 of the report) illustrates the location of the industrial precincts across the municipal area of Shepparton.

From July 2008 to March 2016 there were a total of 100 zoned industrial land subdivisions, activity was located in only three of the seven industrial precincts with East Shepparton accounting for the large majority (80 lots), Kialla (14 lots) and Lemnos (6 lots).

The vast majority (77%) of subdivisions were sized between 0.1 to 0.5 hectare, with 14% (14) between 0.5 and 1 hectare in size. There were only 2 subdivisions sized below 0.1 hectare.

Of the 100 recently constructed industrial lots, 69 remain vacant as at March 2016.

Table 2: Number of Industrial Subdivisions by Lot Size, 2008 to 2016[1]

Industrial Precinct/LGA	Less than 0.1 hectares	0.1 to 0.5 hectares	0.5 to 1 hectares	1 to 5 hectares	5 to 10 hectares	Total
East Shepparton	2	64	9	3	2	**80**
Kialla		12	2			**14**
Lemnos		1	3	2		**6**
Shepparton LGA	**2**	**77**	**14**	**5**	**2**	**100**

Source: Spatial Economics Pty Ltd

1: Subdivision from July 2008 to March 2016

Key Issues

There has been very little subdivision of lots smaller than 0.1 hectare (1000 sqm) with only two occurring across the municipality in the last seven years. As discussed in section 4.3, there are a substantial number of existing industrial zoned lots below 1000 sqm but only 16 available across the municipality.

In other regional centres there has been substantial demand for lots of these sizes. For example over a similar period over 50% of industrial lots created in the City of Greater Geelong have been below 1000 sqm.

This suggests that future requirements might be overstated as new subdivisions sizes decrease as demand changes and land is utilised more efficiently.

4.0 INDUSTRIAL LAND STOCKS

Key Findings

As at March 2016, there was a total of 796 hectares of zoned industrial land stocks, of which 412 hectares were assessed as available (supply) for industrial purpose development. This represents a vacancy rate of 52%

The main industrial precinct - East Shepparton, comprises 312 hectares of industrial land. There is also a significant area of land in South West Shepparton (262 hectares), 227 hectares of this land is zoned Special Use. The rest of the industrial land stocks is fairly evenly spread across the other five industrial precincts.

There is no available industrial land in Tatura and only limited available land in Lemnos (4.7 hectares representing an 8% vacancy rate).

There are four sites identified for future (currently unzoned) industrial purposes, one located in the North Shepparton precinct (178.6 hectares), one in South West Shepparton (47 hectares) and two sites in Tatura (25 hectares).

There are two industrial zones (IN1Z and IN3Z) across the Shepparton municipality with 506 hectares of land zoned Industrial 1 (IN1Z) and 39 hectares zoned IN3Z. The IN1Z is predominantly located in East Shepparton (306 hectares) and 58.4 hectares in Lemnos. There is an overall vacancy rate of 34% for land zoned Industrial 1. There are areas of land zoned IN1Z in all precincts except Kialla.

IN3Z is located in three precincts, East Shepparton, Kialla and Tatura.

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. The areas zones SUZ9 and SUZ11 are designated for Tatura Milk Industries and Unilever respectively.

Of the total 925 industrial lots, 77% were less than 0.5 in size with 285 lots below 0.1 hectares. Of the 148 lots that are identified as supply, 86 are in the 0.1 to 0.5 hectare size range. The East Shepparton industrial precinct has 109 lots available with 68 in the 0.1 to 0.5 hectare size range. There are a low percentage of lots available (6%) in the less than 0.1 hectare range, with only the East Shepparton and South West Shepparton industrial precincts having lots available in this size.

There are a considerable number of large lots spread across the different precincts with 27 lots available above 1 hectare and 13 above 5 hectares. These are spread around the different precincts with the exception of Tatura, where there are no available lots.

Of the 412 hectares of zoned industrial land supply, the majority is located in the GV Link SUV area (227 hectares). There is 98 hectares available in the East Shepparton precinct. There is 13 hectares available in Kialla and 17.2 hectares available in North Shepparton. Besides the GV Link land there is 8 hectares available in the South West Shepparton precinct and there is 43.8 hectares available in the North West Shepparton precinct. There is no available land in Tatura.

There is 250.9 hectares of land identified for future industrial use.

In total for zoned industrial land supply across the municipal area there are approximately 157 net developable hectares for IN1Z and IN3Z land and 159 hectares for the GV Link sites (SUZ6). In terms of future identified industrial land stocks (unzoned) there is an estimated 113 net developable hectares.

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 in the City of Greater Shepparton is spread across the municipality. For this report, seven industrial precincts have been established based primarily on distinct localities (see Figure 1 within Section 7 of the report). There are industrial precincts within the towns/suburbs of East Shepparton, Kialla, Lemnos, Tatura, North Shepparton, South West Shepparton and North West Shepparton. The largest is the East Shepparton precinct.

4.1 Industrial Land Stocks - Area

As at March 2016, there was a total of 796 hectares of zoned industrial land stocks, of which 412 hectares were assessed as available (supply) for industrial purpose development. This amount of zoned industrial supply relative to unavailable industrial land stocks equates to a total land area vacancy rate of 52%. Table 3 summarises the gross area of industrial land stocks by status and zone type across the municipal area of Shepparton.

The main industrial precinct of East Shepparton comprises 312 hectares of industrial land. There is also a significant industrial land stocks in the South West Shepparton precinct (262 hectares), however, 227 hectares of this land is zoned Special Use. The rest of the industrial land is fairly evenly spread across the other five precincts.

Overall there is a 52% industrial land vacancy rate that includes the 227 hectares of SUZ land in South West Shepparton precinct. The overall land vacancy rate excluding SUZ land is 34% - which is comparable to other major Victorian regional centres. The East Shepparton industrial precinct has 98 hectares of available land and the North West Shepparton precinct with 44 hectares.

There is no available industrial land in Tatura and only limited available land in Lemnos (4.7 hectares, representing an 8% vacancy rate).

There are four sites identified for future industrial purposes (currently unzoned), one located in the North Shepparton precinct (178.6 hectares), one in the South West Shepparton precinct (47 hectares) and two sites in Tatura (25 hectares).

4.2 Industrial Land Stocks - Zones

There are two industrial zones (IN1Z and IN3Z) across the Shepparton municipality with 506 hectares of land zoned Industrial 1 (IN1Z) and 39 hectares zoned IN3Z. The IN1Z is predominantly located in East Shepparton (306 hectares) and 58.4 hectares in Lemnos. There is an overall vacancy rate of 34% for land zoned Industrial 1. There are areas of land zoned IN1Z in all precincts except Kialla.

There is 39 hectares of land zoned Industrial 3 (IN3Z) with an overall vacancy rate of 34%. IN3Z is located in three precincts, East Shepparton, Kialla and Tatura. There is no IN3Z land available in Tatura and very limited land East Shepparton (0.15 hectares). There is 13 hectares of IN3Z land available in Kialla representing 53% of the total zoned industrial land in the precinct.

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.

Table 3: Gross Area (hectares) of Industrial Land Stocks, 2016

Industrial Precinct/LGA	IN1Z			IN3Z			SUZ			Total Zoned Stocks			Future Supply (unzoned)
	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	207.6	98	32%	5.7	0.2	3%				**213.3**	**98.4**	325	
Kialla										**11.8**	**13.1**	53%	
Lemnos	53.7	4.7	8%	11.8	13.1	53%				**53.7**	**4.7**	8%	
North Shepparton	14.2	17.2	55%							**14.2**	**17.2**	55%	178.6
North West Shepparton	10.6	43.8	81%							**10.6**	**43.8**	81%	
South West Shepparton	26.8	8.3	24%				0	226.5	100%	**26.8**	**234.8**	90%	47.1
Tatura	20.9	0	0%	8.5	0	0%	23.9	0	0%	**53.4**	**0**	0%	25.2
Shepparton LGA	**333.8**	**172.2**	**34%**	**26**	**13.3**	**34%**	**23.9**	**226.5**	**90%**	**383.7**	**411.9**	**52%**	**250.9**

Source: Spatial Economics Pty Ltd

4.3 Industrial Land Stocks – Lot Size Distribution

Table 4 below details the number of zoned industrial lots by selected lot size cohorts. As at March 2016, there was a total of 925 zoned industrial allotments, of which 148 lots were identified as available supply representing a lot vacancy rate of 16%. The overall lot vacancy rate is similar to rates found in other regional centres.

Of the 925 lots, 77% were less than 0.5 in size with 285 lots below 0.1 hectare in size. Of the 148 lots that are available, 86 are in the 0.1 to 0.5 hectare size range. The East Shepparton industrial precinct has 109 lots available with 68 in the 0.1 to 0.5 hectare size range. There are a low percentage of lots available (6%) sized less than 0.1 hectare, with only the East Shepparton and South West Shepparton industrial precincts having lots available in this size range.

There are a considerable number of large lots spread across the different precincts with 27 lots available sized above 1 hectare and 13 above 5 hectares. These are spread around the different precincts with the exception of Tatura where there are no available lots.

Table 4: Number of Industrial Allotments by Lot Size Cohort, 2016

Industrial Precinct/ LGA	Less than 0.1 hectares			0.1 to 0.5 hectares			0.5 to 1 hectares			1 to 5 hectares			5 to 10 hectares			10+ hectares			Total Lots		
	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %	Unavailable	Supply	Lot Vacancy Rate %
East Shepparton	205	12	6%	268	68	20%	47	12	20%	35	10	22%	4	7	64%	1		0%	**560**	**109**	**16%**
Kialla				125	9	43%	2	2	50%	3	3	50%							**17**	**144**	**45%**
Lemnos				4	2	33%	5	1	17%	5	1	17%	2		0%	1		0%	**17**	**5**	**19%**
North Shepparton				3	1	25%	6		0%	3	2	40%		2	100%				**12**	**1**	**29%**
NorthWest Shepparton				8		0%	3		0%	3		0%					1	100%	**14**	**15**	**7%**
SouthWest Shepparton	47	4	8%	16	6	27%	3	1	25%	7	1	13%		1	100%		2	100%	**73**	**1**	**17%**
Tatura	17		0%	37		0%	16		0%	13		0%	1		0%				**84**	**0**	**0%**
Shepparton **LGA**	**269**	**16**	**6%**	**348**	**86**	**20%**	**82**	**16**	**16%**	**69**	**17**	**20%**	**7**	**10**	**59%**	**2**	**3**	**60%**	**777**	**148**	**16%**

Source: Spatial Economics Pty Ltd

4.4 Supply of Industrial Land

As previously outlined, there was at March 2016, 412 gross hectares of zoned industrial land supply and 251 gross hectares of land identified for future industrial development (unzoned).

Of the 412 hectares of zoned industrial land supply, the majority is located in the GV Link SUV area (227 hectares). There is 98 hectares available in the East Shepparton precinct. There is 13 hectares available in Kialla and 17.2 hectares available in North Shepparton. Besides the GV Link land there is 8 hectares available in the South West Shepparton precinct and there is 43.8 hectares available in the North West Shepparton precinct. There is no available land in Tatura.

There is also 250.9 hectares of land identified for future industrial use (currently unzoned to support industrial development.

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

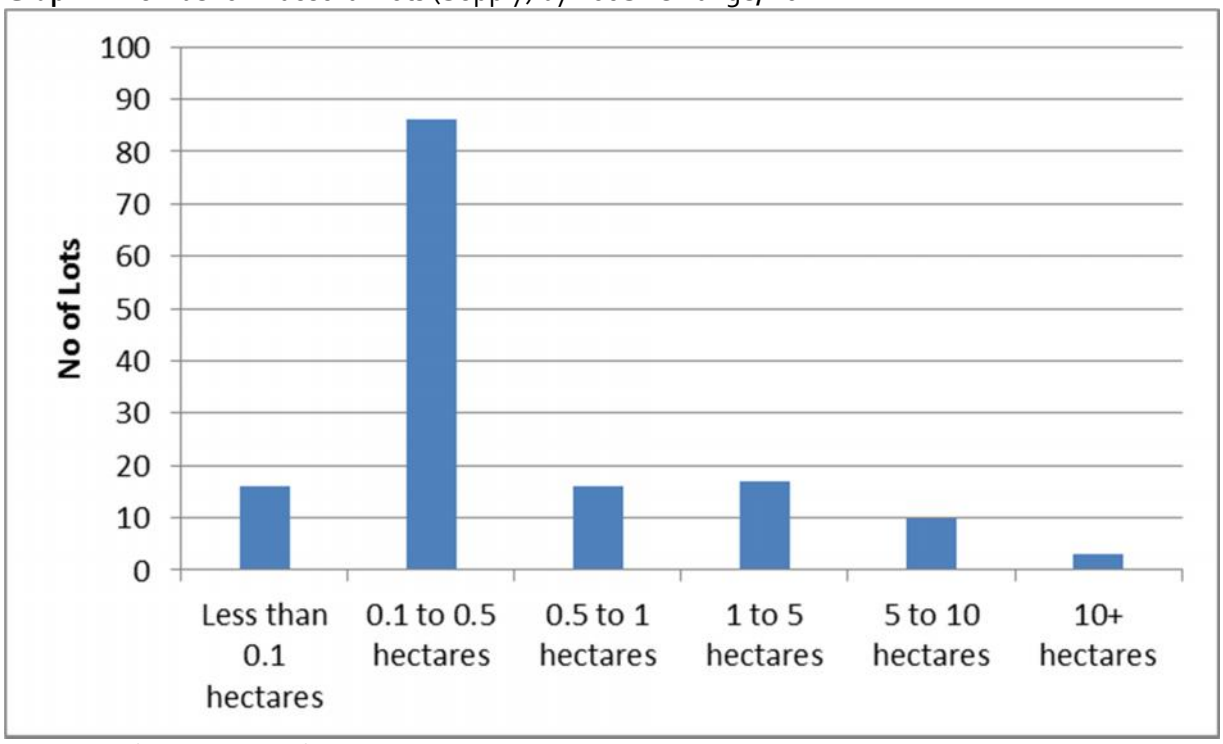
Specific land development take-outs have been assessed on a parcel by parcel basis and results in an estimate of the net developable area i.e. the area available for actual industrial site development.

In total for zoned industrial land supply across the municipal area there are approximately 157 net developable hectares for IN1Z and IN3Z land and 159 hectares for the GV Link sites (SUZ6). In terms of future identified industrial land stocks (unzoned) there is an estimated 113 net developable hectares.

The graph below illustrates the supply of industrial allotments by selected lot size cohort. The majority (69%) of the allotments identified as supply are less than 0.5 hectares in size. There are 86 lots available as supply sized between 0.1 and 0.5 hectares representing 58% of lots.

There are 13 lots available sized over 5 hectares and 112 lots between 0.1 and 0.5 hectares. Besides Tatura, given recent consumption rates and the size distribution of subdivision activity there is ample land for further subdivision or for larger industrial land users.

Graph 1: Number of Industrial Lots (Supply) by Lot Size Range, 2016



Source: Spatial Economics Pty Ltd

Key Issues

There is an ample supply of industrial land by zone type and lot size across the City of Greater Shepparton. There is 185 hectares of land zoned IN1Z or IN3Z that is currently available as supply. In the main industrial precinct of East Shepparton there is 98 hectares of land available.

There is only one precinct with significant supply of IN3Z land which is in Kialla. The demand for this land has not been strong averaging only 0.3 hectares per year, hence there is no pressure to provide more land zoned IN3Z.

There is no industrial land currently available in Tatura for development. It is recommended that the land identified for future industrial purposes in Tatura are rezoned to support existing and potential future industrial activity.

There is limited land remaining at Lemnos (4.7 hectares) but there has been no recent land consumption. Hence there is no immediate pressure to provide extra land and there is readily substitutable industrial land available in the East Shepparton and North Shepparton industrial precincts.

5.0 CONSUMPTION OF INDUSTRIAL LAND

Key Findings

Recent consumption of industrial land has averaged 2.1 hectares per annum. In total this equates to 12.3 hectares of industrial land consumed over the 5.75 year period under review. This consumption of industrial land has been predominantly in the East Shepparton precinct which accounts for 10.3 hectares of the consumption (1.8 hectares per annum).

There has been 1.5 hectares of industrial land consumed in Kialla with 0.5 hectares consumed in Tatura over the 5.75 year period. This suggests (relative to existing land stocks) that there are ample supplies of industrial land in all precincts. Although as Tatura is supply is constrained there may be unmet demand for this precinct.

Detailed analysis of existing and historic aerial imagery combined with zoning and cadastral information from 2009 to 2016 has been used to establish the consumption of industrial land. The consumption of industrial land has been supplemented with information gathered from consultation with municipal officers and comprehensive land use surveys.

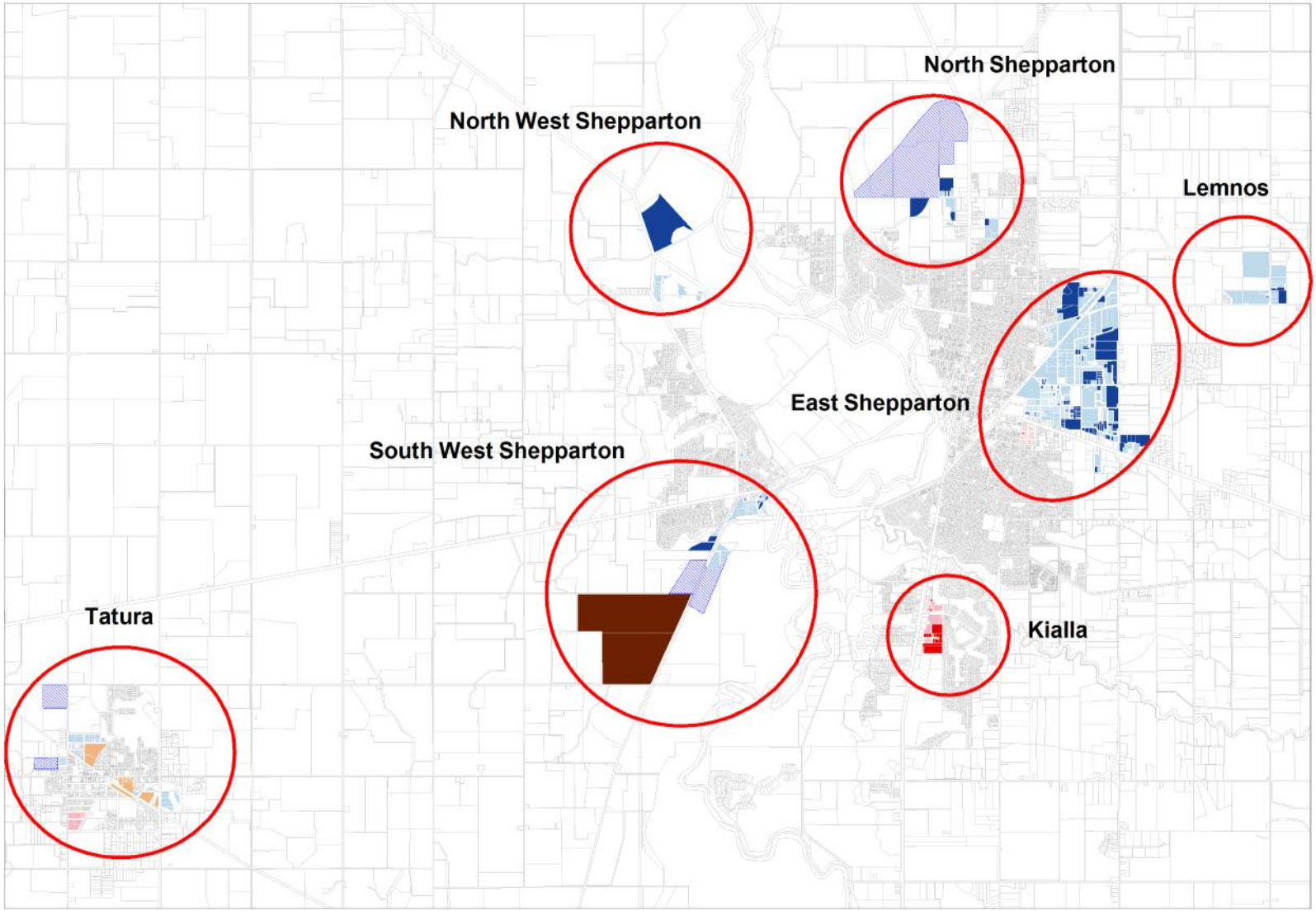
Consumption of industrial land refers to the construction on or use of previously unoccupied industrial land over-time.

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.

From 2009 to 2016 on an average annual basis, 2.1 hectares per annum of industrial land has been consumed. The range for regional towns of equivalent size is around 1.5 to 2.5 hectares per year; hence consumption is consistent with towns of this size. For example, Bairnsdale has averaged 1.95 hectares of industrial land consumption over a similar time frame.

In total this equates to 12.3 hectares of industrial land consumed over the 5.75 year period under review. This consumption of industrial land has been predominantly in the East Shepparton industrial precinct which accounts for 10.3 hectares of the consumption (1.8 hectares per annum). There has been 1.5 hectares of industrial land consumed in Kialla (0.3 hectares per year) and 0.5 hectares consumed in total in Tatura with no consumption in the other precincts. This suggests that there are ample supplies of industrial land in all precincts although as Tatura is supply constrained there may be unmet demand for this precinct.

Figure 1: Industrial Precincts - Shepparton



6.0 ADEQUACY OF INDUSTRIAL LAND STOCKS

Key Findings

In total, there is in excess of 25 years industrial zoned land supply across the municipality of Shepparton based on the average annual rate of land consumption in the period of 2009 to 2016. In terms of future (unzoned) industrial land stocks it is estimated that there is an extra 25+ years of additional supply.

There is over 25 years of supply for each industrial precinct with the exception of Tatura which is supply constrained.

There is also over 25 year's supply of future industrial land for the municipality.

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.

Tables 5 and 6 below summarises the estimated years of supply by location and supply type.

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.

In total, there is in **excess of 25 years** industrial zoned land across the municipality of Shepparton based on the average annual rate of land consumption in the period 2009 to 2016. In terms of future (unzoned) industrial land stocks it is estimated that there is **an extra 25+ years** of additional supply**.**

To a large extent the industrial precincts, are substitutable to each other, particularly the industrial precincts across the Shepparton urban areas. This suggests that there is ample supply of industrial land to meet future demand for the municipality of Shepparton with the exception of Tatura – as there is currently no zoned available land stocks.

Table 5: Adequacy (years of supply) of Industrial Land Stocks – Industrial Precinct, 2016

Industrial Precinct/LGA	Total Zoned	Future	Total
East Shepparton	25+	n.a	25+
Kialla	25+		25+
Lemnos	25+		25+
North Shepparton	25+	25+	25+
North West Shepparton	25+		25+
South West Shepparton	25+	25+	25+
Tatura	0	25+	25+*
Greater Shepparton)	**25+**	**25+**	**25+**

Source: Spatial Economics Pty Ltd

Table 6: Adequacy (years of supply) of Industrial Land Stocks – Industrial Zone Type, 2016

Zone Type/LGA	IN1Z	IN3Z	SUZ6	SUZ9	SUZ11	Total Zoned	Future Industrial	Total
Greater Shepparton)	25+	25+	25+	0	0	**25+**	25+	**25+**

Source: Spatial Economics Pty Ltd

At an industrial precinct level the estimated years of industrial land supply based on historic consumption rates are:

- East Shepparton
  - Zoned (IN1Z, and IN3Z) – 25+ years;
- Kialla
  - Zoned (IN3Z) – 25+ years;
- Lemnos
  - Zoned (IN1Z) – 25+ years;
- North Shepparton
  - Zoned (IN1Z and Future) – 25+ years;
- North West Shepparton
  - Zoned (IN1Z) – 25+ years;
- South West Shepparton
  - Zoned (IN1Z, SUZ6 and Future) – 25+ years; and
- Tatura
  - Zoned (IN1Z, IN3Z, SUZ9 and Future) – zero supply for zoned and 25+ years for Future;

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 increase 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. Due to this uncertainty relating to forecasting industrial land requirements two demand scenarios and related adequacies are presented, namely a 25% and 50% increase in the demand for industrial land.

These two demand scenarios are chosen as they are a simple, transparent and 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.

Even with these increases in demand for both scenarios, there is still 25+ years of supply of zoned industrial land for the whole municipality of Shepparton.

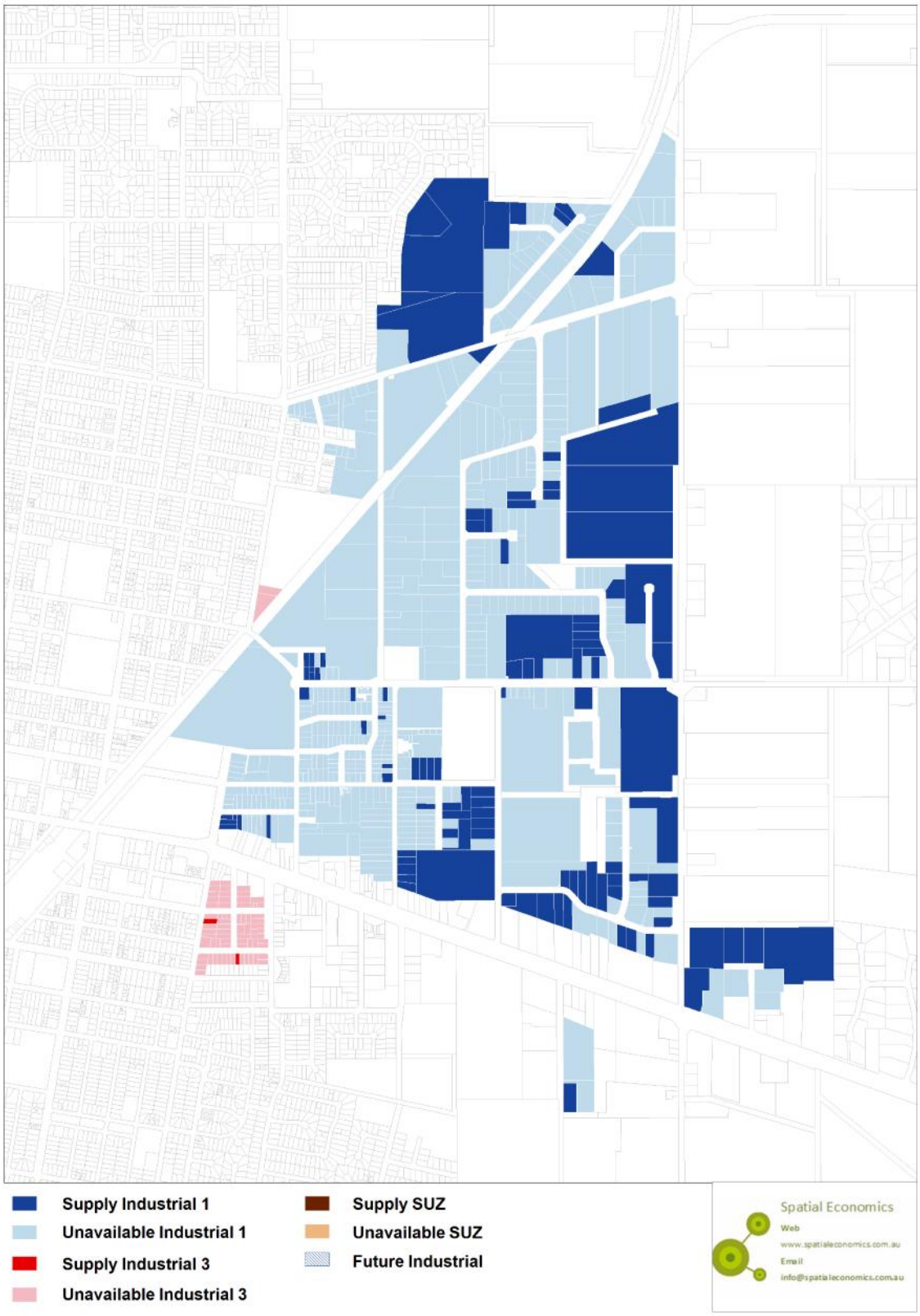
Key Issues

The rate of consumption for industrial land across the City of Greater Shepparton is consistent with other comparable regional cities. There has been limited consumption outside the main industrial precinct of East Shepparton indicating limited demand. With the development of the GV Link Freight and Logistics Centre the 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 is likely that the larger lots will be subdivided for smaller uses.

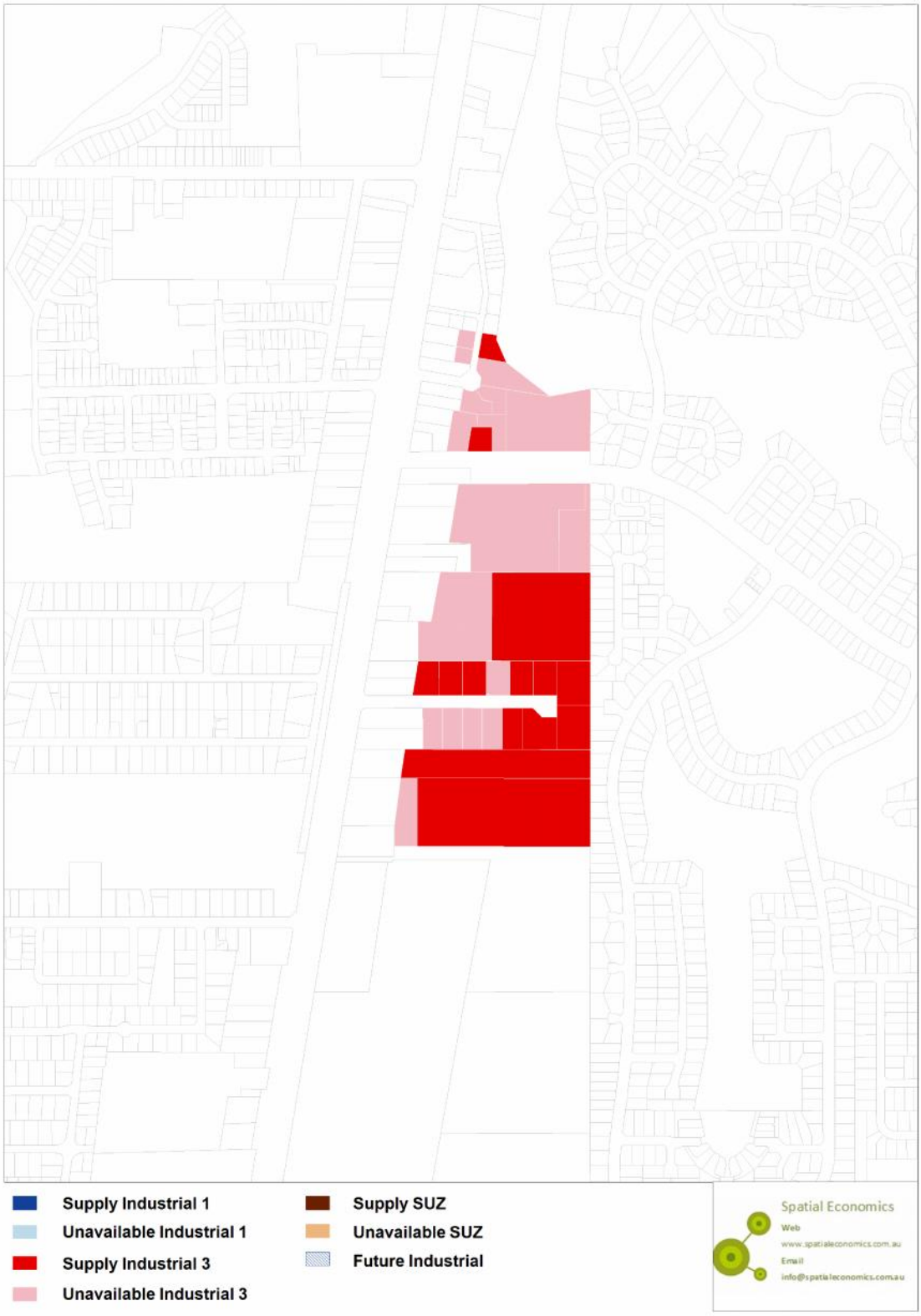
There is ample supply for both zoned and future industrial land with the exception of Tatura. It is recommended rezoning of the future industrial land in Tatura is commenced as soon as possible.

Even with a significant increase in demand there is sufficient industrial land. This scenario also holds for the individual precincts with all precincts (except Tatura) providing in excess of 25 years supply even with an increase in demand by 50%.

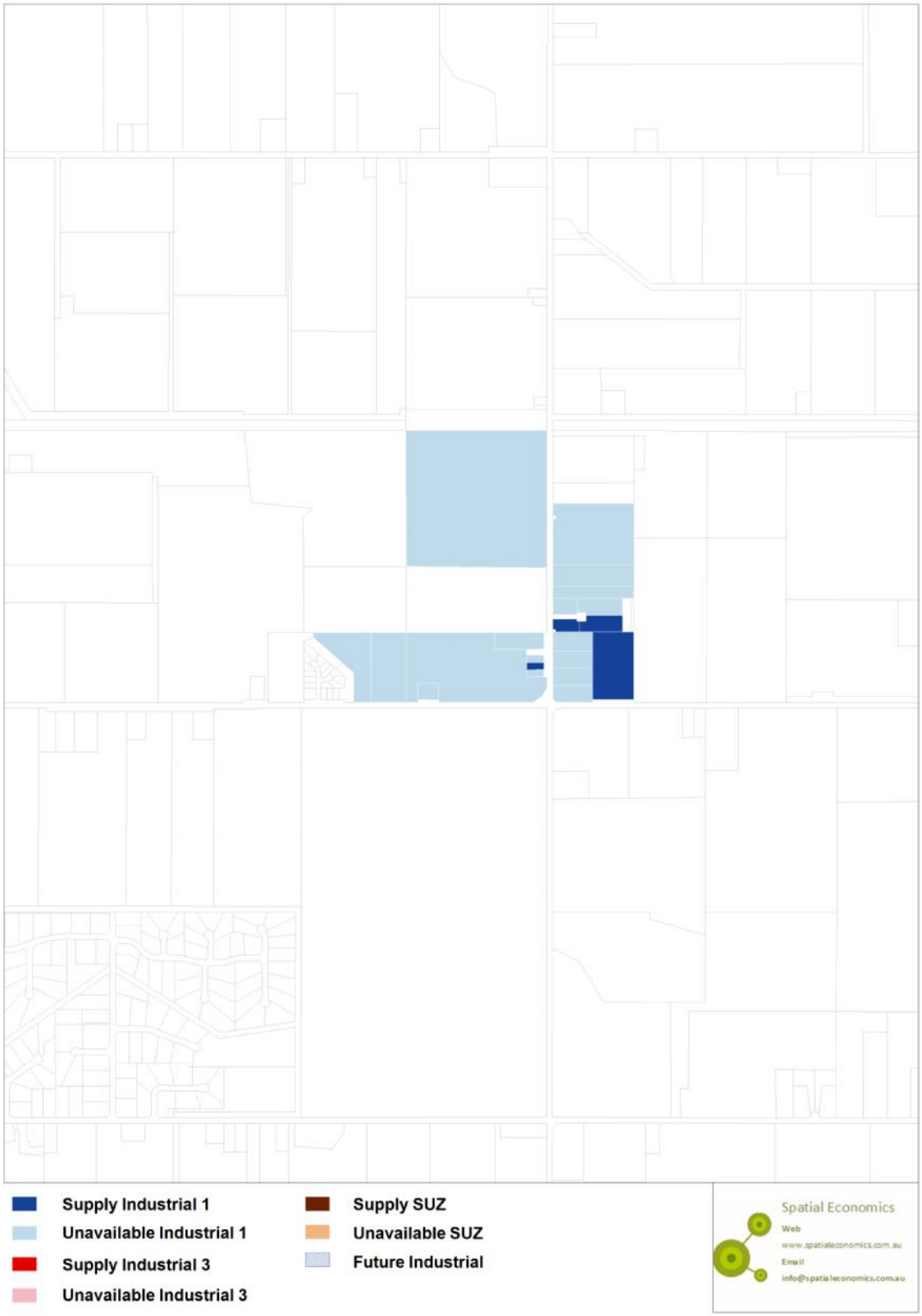
Map 1: Industrial Land Stocks – East Shepparton



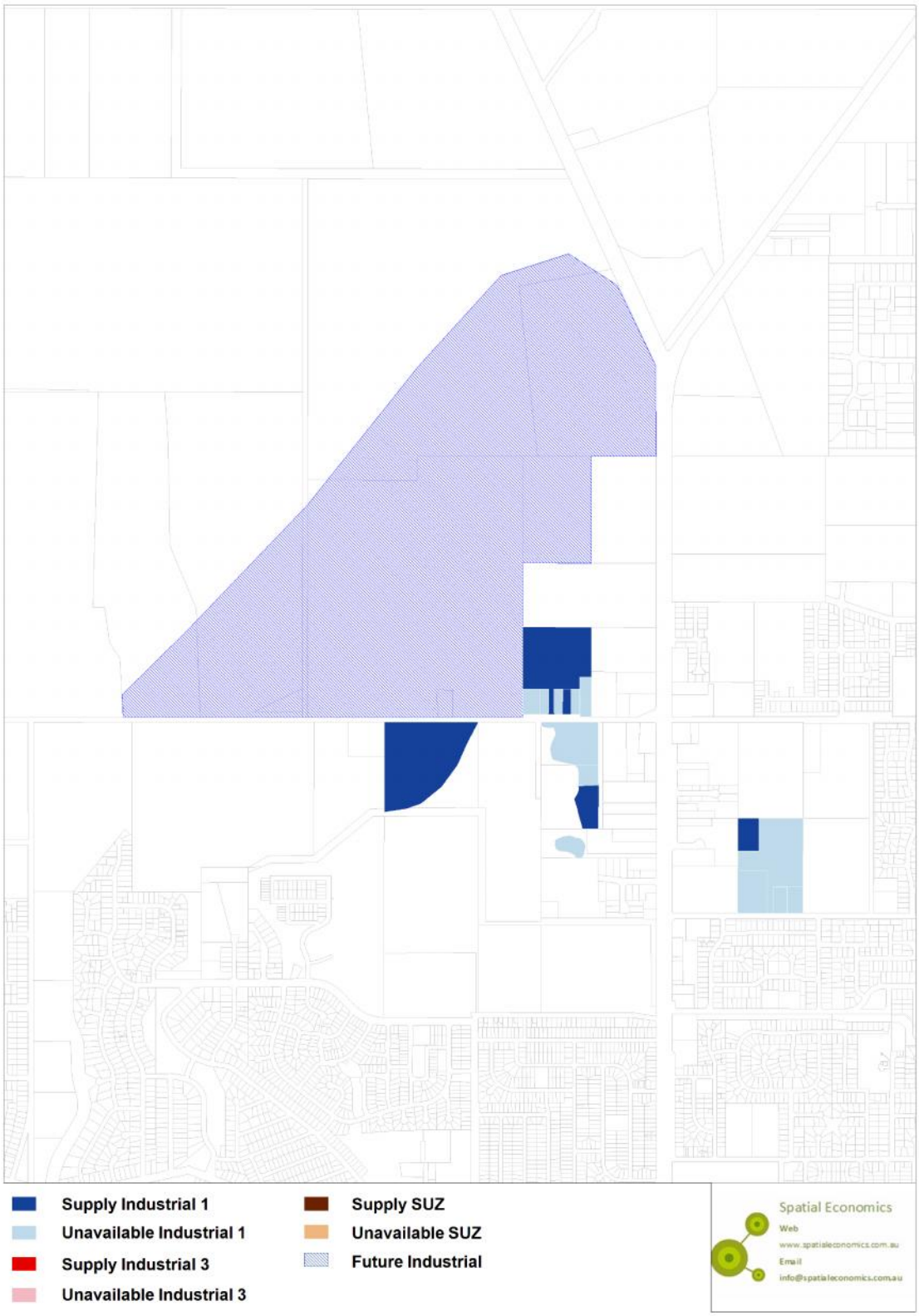
Map 2: Industrial Land Stocks – Kialla



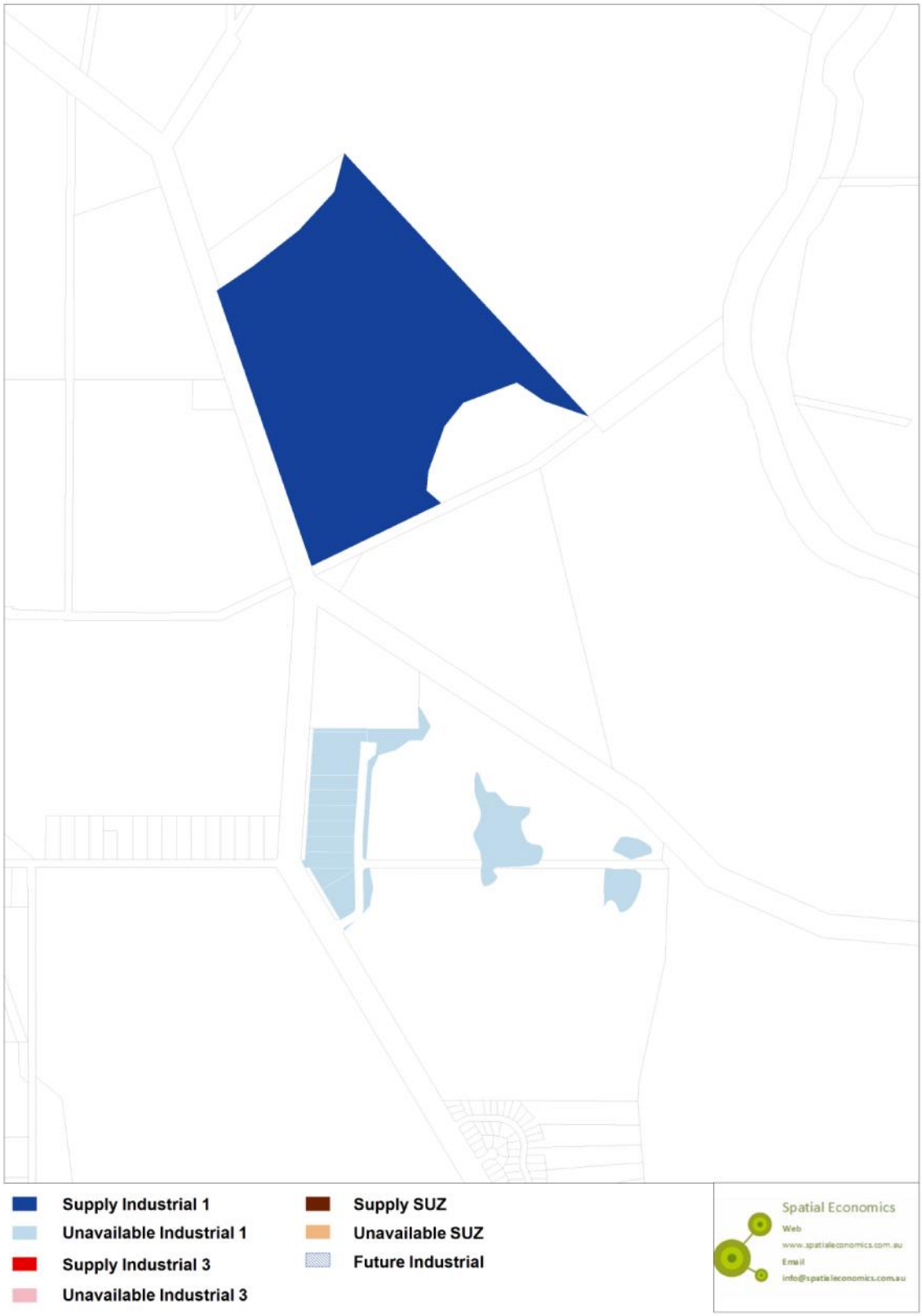
Map 3: Industrial Land Stocks – Lemnos



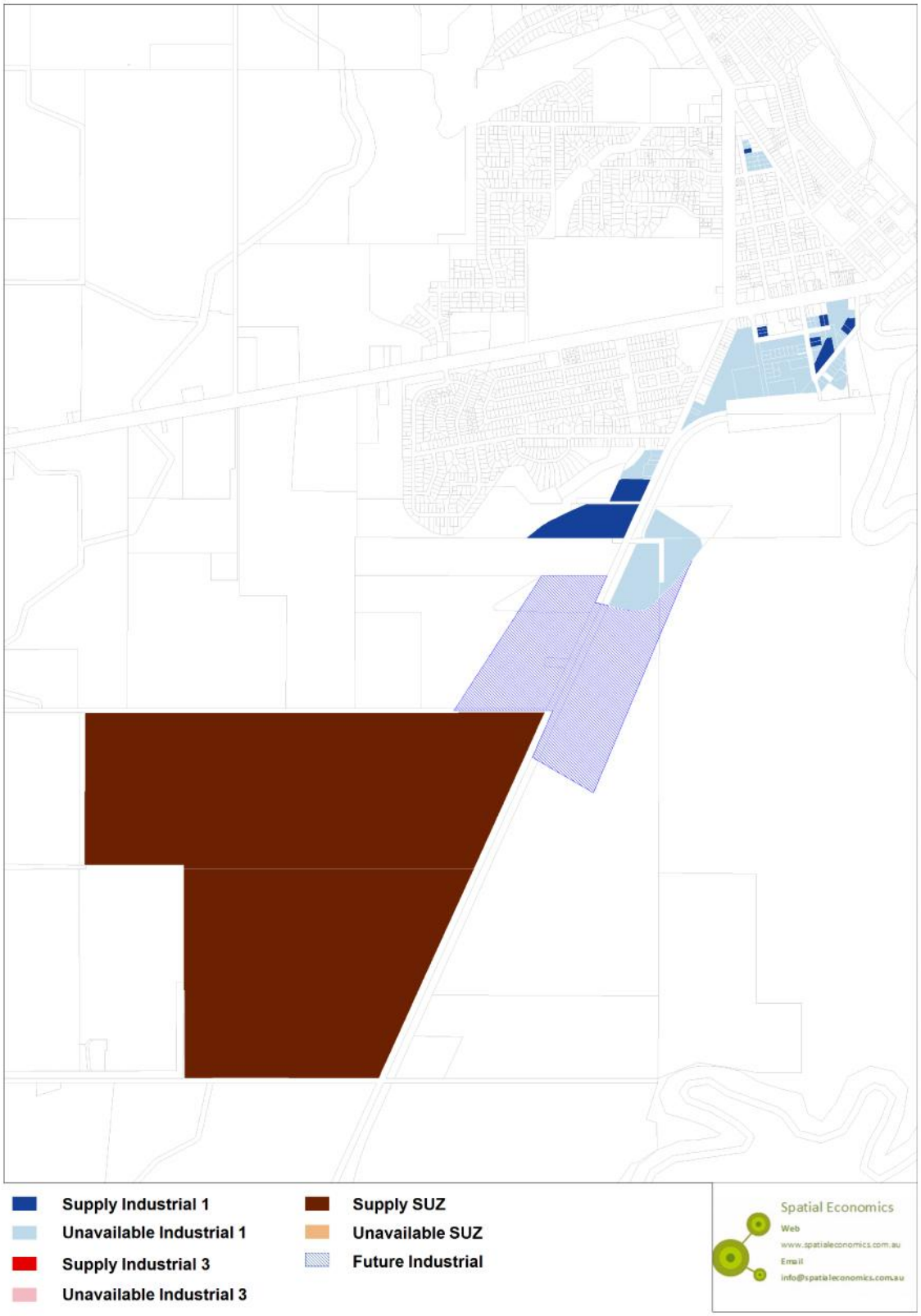
Map 4: Industrial Land Stocks – North Shepparton



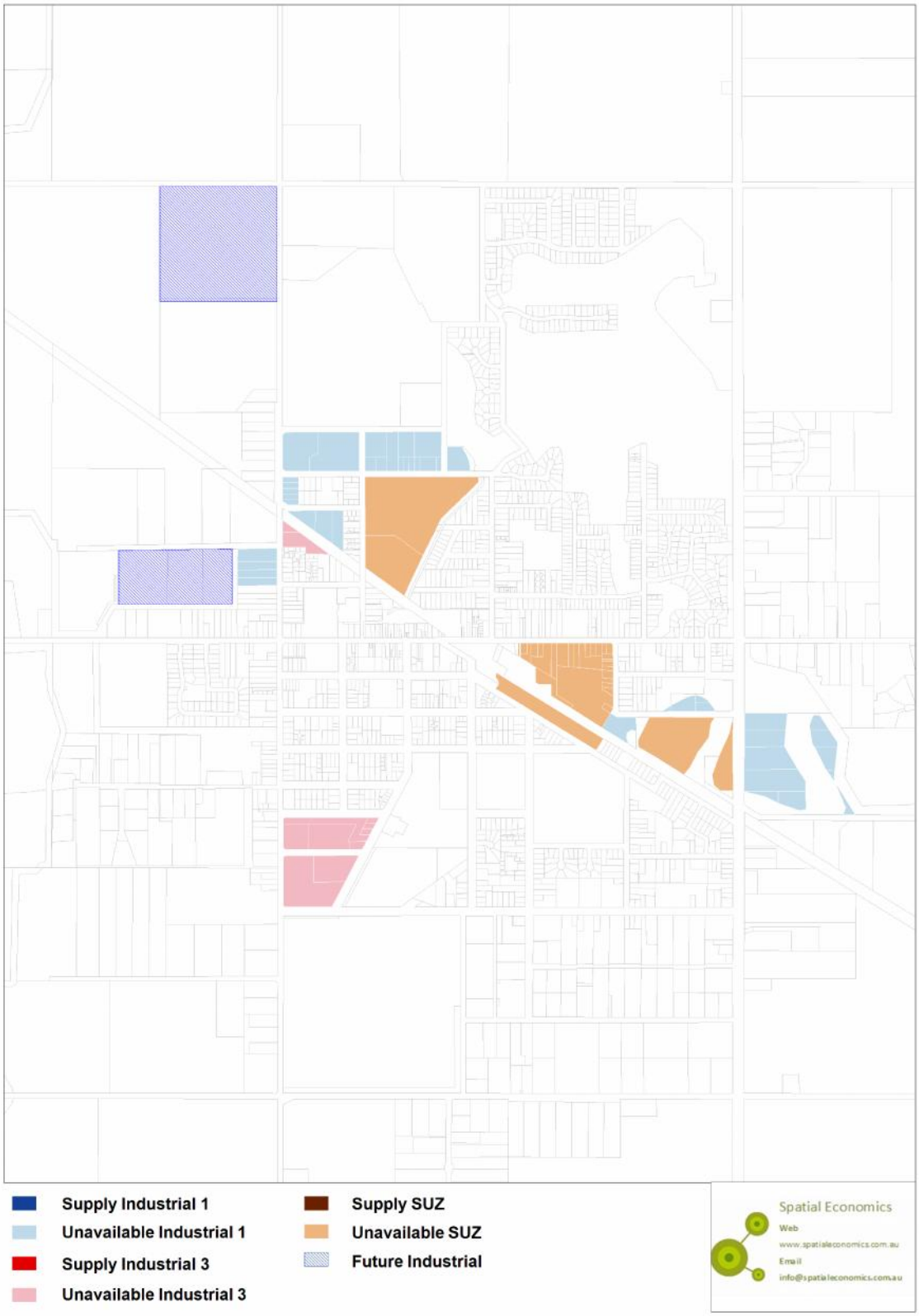
Map 5: Industrial Land Stocks – North West Shepparton



Map 6: Industrial Land Stocks – South West Shepparton



Map 7: Industrial Land Stocks – Tatura



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.

Local Government Area (LGA)
A geographical area that is administered by a local council.

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.